The Residences at Readville Station

Mixed-Use Residential / Commercial Development

PROJECT NOTIFICATION FORM **January 2019**

Submitted Pursuant to Article 80B of the Boston Zoning Code

SUBMITTED BY

AD MELIORA LLC
Two Oliver Street, 10th Floor
Boston, MA 02109

SUBMITTED TO

Boston Planning and Development Agency
One City Hall Square, 9th Floor
Boston, MA 02201

PREPARED BY

Mitchell L. Fischman ("MLF") Consulting LLC
41 Brush Hill Road
Newton, MA 02461

IN ASSOCIATION WITH

The Architectural Team
Copley Wolff Design Group
Goulston & Storrs
Howard Stein Hudson
H. W. Moore Associates, Inc.
Tech Environmental, Inc.
Soden Sustainability Consulting
ESS Group
Co-Urbanize

MLF
CONSULTING LLC
Mitchell L. Fischman Consulting LLC
41 Brush Hill Road
Newton, MA 02461

January 2019

Mr. Brian Golden, Director
Boston Planning and Development Agency
One City Hall Square, 9th Floor
Boston, MA 02201
Attn: Lance Campbell, Senior Project Manager

RE: Project Notification Form
Proposed Mixed-Use Residential / Commercial Development
1717-1725 Hyde Park Avenue, Hyde Park

Dear Director Golden:

On behalf of Ad Meliora LLC, a Massachusetts Limited Liability Company (the "Proponent"), as developer of 119,626 square feet ("sf") of unoccupied industrial property, bounded by Hyde Park Avenue, Milton Street, and the AMTRAK Mainline and MBTA Commuter Rail Tracks in the Hyde Park neighborhood (the "Project Site"), we are pleased to submit this Project Notification Form ("PNF") for **The Residences at Readville Station** to the Boston Planning and Development Agency ("BPDA") in accordance with the Article 80B-2 Large Project Review requirements of the Boston Zoning Code. The proposal is approximately 305 multi-family rental and condominium/home ownership units, one building being for-sale condos and the second building being rental units, and including approximately 4,200 sf of restaurant/retail space, with a total overall project floor area of approximately 348,395 gsf. Also planned is a total of 221 garage parking spaces to be accessed from Hyde Park Avenue, a pocket park and other public realm improvements ("Proposed Project"). Loading and service will also be from Hyde Park Avenue. The Project will include an on-site bicycle storage room for approximately 305 bicycles.

With the residential units being in close proximity to the Readville MBTA commuter rail station, the proposed development is very much a transit-oriented development. It is expected that a large majority of residents will utilize the commuter rail, mitigating traffic impacts.

In accordance with BPDA requirements, a public notice for the PNF appears in the *Boston Herald*.

The Proposed Project will exceed the 50,000 square foot size threshold of Article 80 for a project within a Boston neighborhood, and therefore requires several additional filings pursuant to Large Project Review regulations. A Letter of Intent to File a Project Notification Form was filed with the BPDA on September 13, 2018 (attached hereto as Appendix "A" to the PNF).

In support of the Article 80 Large Project Review process, the Proponent has conducted, and continues to conduct, community outreach with neighbors and abutters of the site, including meetings and discussions with elected representatives and other officials. The Proponent has also made presentations to residents of the surrounding neighborhood sponsored by relevant local civic associations.

On behalf of the entire project team, we would like to thank you and the BPDA staff assigned to the 1717-1725 Hyde Park Avenue Project, particularly the Project Manager, Lance Campbell, and the reviewing BPDA Urban Designers, Michael Cannizzo and Matthew Martin, for their invaluable assistance to date in assisting the development team in shaping the Proposed Project and in completing this comprehensive PNF filing.

We believe that the Proposed Project will constitute a significant positive addition to the Hyde Park neighborhood, by revitalizing this underutilized site with much-needed new mixed-use housing and neighborhood related commercial development in an attractive and thoughtfully designed building. We look forward to continuing the Large Project Review process and advancing the Proposed Project through public review with the cooperation of the BPDA, other City officials, members of the Impact Advisory Group, and the Hyde Park community.

In accordance with BPDA requirements, please find attached ten (10) copies of the PNF plus a CD containing the electronic PNF file to be uploaded to the BPDA's online portal for public review.

Very truly yours,
MITCHELL L. FISCHMAN ("MLF") CONSULTING LLC

Mitchell L. Fischman, Principal

Table of Contents

APPENDICES

List of Tables

List of Figures

1.0 EXECUTIVE SUMMARY

1.1 Introduction

Ad Meliora LLC (the "Proponent") is submitting, this Project Notification Form ("PNF") for "**The Residences at Readville Station**" development project at 1717-1725 Hyde Park Avenue in the Hyde Park neighborhood, a residential/supporting retail services development with both condominium and rental units (the "Proposed Project"), in accordance with the Article 80 requirements of the Boston Zoning Code ("Code").

The Proposed Site is a 2.5 acre (119,626 SF) partially occupied industrial property, bounded by Hyde Park Avenue, Milton Street, and the AMTRAK Mainline and MBTA Commuter Rail Tracks. The Proposed Project is expected to include approximately 305 multi-family condominium/home ownership and rental units, one building being for-sale condominiums, and the second building for rental units, and approximately 4,200 SF of restaurant/retail space, with a total overall project floor area of approximately 348,395 GSF. Also planned is a total of approximately 221 garage parking spaces, a pocket park and other public realm improvements. Please see **Figures 1-1** through **1-8.**

Ad Meliora is proud bring to life to the corner of Hyde Park Avenue and the Milton Street Bridge, also known as the Father Hart bridge. After participating in and funding the design of traffic upgrades in this area and nearby Walcott Square in coordination with the residents of Hyde Park, elected officials, the Boston Transportation Department and other governmental authorities, the project is ready to be set in motion.

With units being in close proximity to the Readville MBTA commuter rail station, it is very much a transit-oriented development. It is expected that a large majority of residents will utilize the commuter rail, mitigating traffic impacts.

A Letter of Intent to File a Project Notification Form was filed with the Boston Planning and Development Agency for the proposed mixed-use development project on September 13, 2018 (See **Appendix A**).

The project developer is seeking feedback and ideas from the community surrounding this new venture. Feedback will be collected utilizing a new platform, coUrbanize allowing online engagement with the community during the approval phase and continuing into the construction phase.

According to Ad Meliora Logistics Coordinator, Haley Yoke, "The idea is to make information readily accessible to the community, and really hear their concerns and suggestions. We're looking forward to partnering with our neighbors and transforming the current underutilized land into a beautiful living environment for the residents and the entire Hyde Park neighborhood."

1717- 1725 Hyde Park Avenue

Figure 1-1. Project Locus-
1717- 1725 Hyde Park Avenue

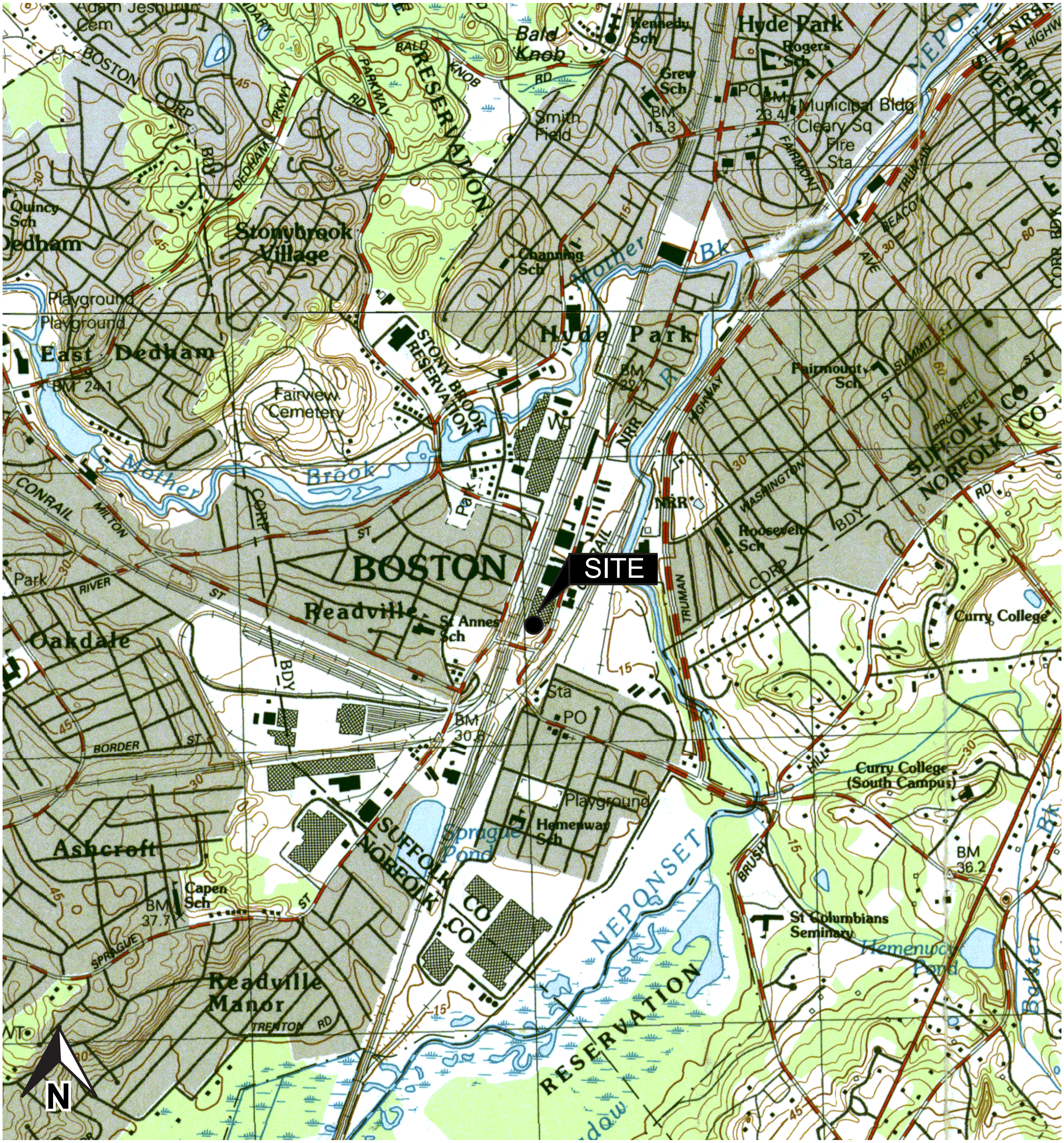
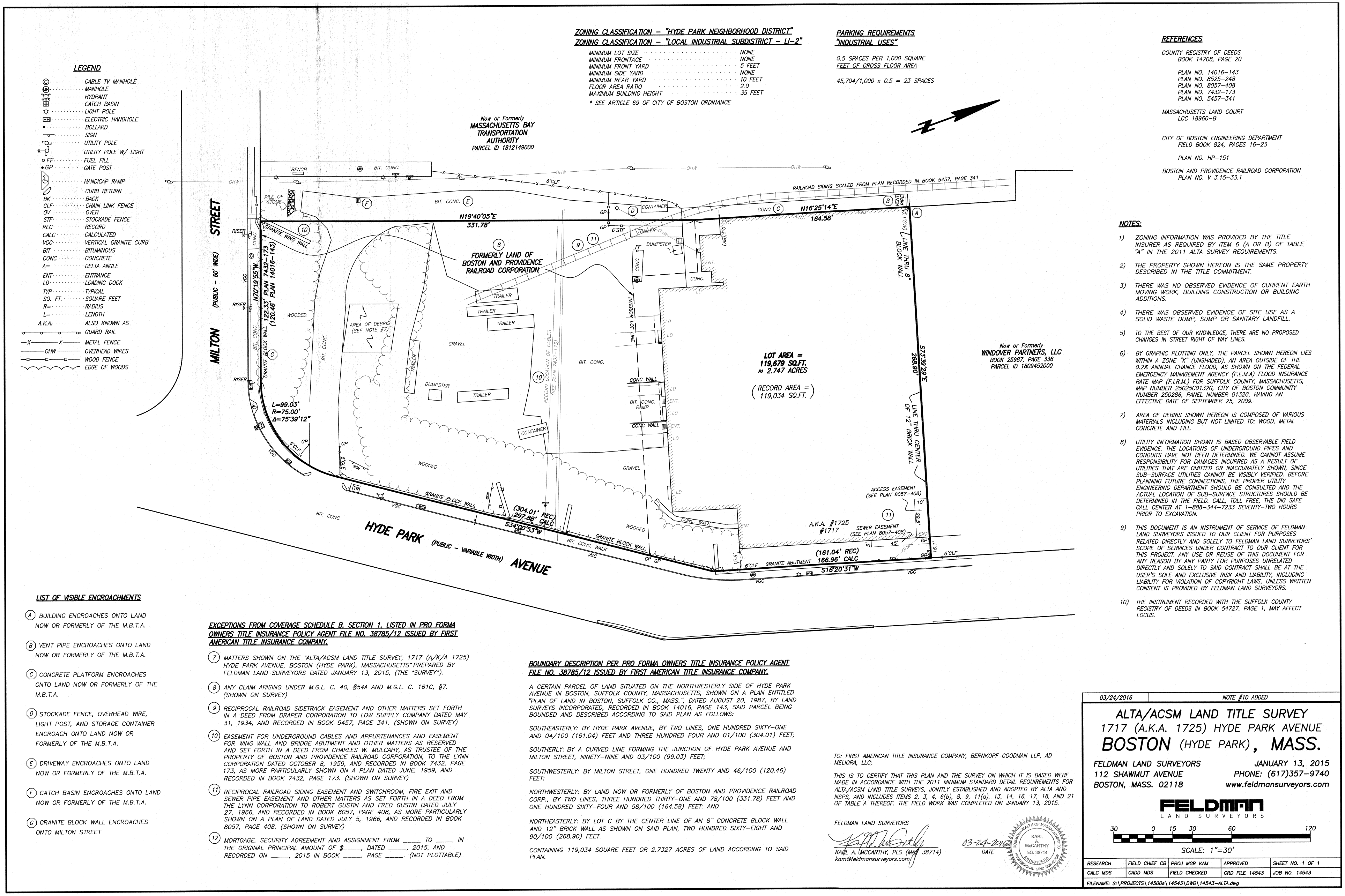


Figure 1-2. USGS Map-
1717-1725 Hyde Park Avenue



MLF CONSULTING LLC

Figure 1-3. Existing Conditions

Figure 1-4. Existing Site Photos

Hyde Park Avenue in Front of Site

Existing Site From Across AMTRAK Main Line

Figure 1-5. Existing Site Photos

Existing Site Building From Across AMTRAK Main Line

Milton Street Bridge and Hyde Park Avenue

Figure 1-6. Existing Site Photos

Milton Street Bridge Wall Adjacent to Site

Existing Bus Stop Along Hyde Park Avenue
in Front of Site

Figure 1-7. Existing Site Photos

Bus Stop Opposite Side Along Hyde Park Avenue

Adjacent 1715 Hyde Park Avenue

Figure 1-8. Existing Site Photos

Nearby MBTA Readville Commuter Station Parking Lot

Nearby Walcott Square

1.2 Detailed Project Description

The Proposed Project is expected to include approximately 305 multi-family rental units, approximately 4,200 gsf of supporting restaurant and retail space, and a total of approximately 221 garage parking spaces. The Proposed Site is a 2.5 acre (119,626 sf) partially occupied industrial property bounded by Hyde Park Avenue, Milton Street, and the AMTRAK Mainline and MBTA Commuter Rail Tracks. See Project Dimensions in **Table 1-1** below

Table 1-1. Approximate Project Dimensions of Proposed Project

Lot Area	**2.5 acres / 119,626 square feet**
Gross Floor Area	**348,395 +/- gsf**
FAR	**2.91**
Floors	**6-Floors**
Height	**60.4 +/- Feet**

The breakdown of residential units includes approximately 43 studios, approximately 141 one-bedroom units, approximately 111 two-bedroom units, and approximately 10 three-bedroom units, as referenced in **Table 1-2** below.

Table 1-2. Proposed Residential Units by Bedroom Size

Floor Level/ Unit Types	Studio	1-BR	2-BR	3-BR	Approx. Total Units Per Floor
1st Floor	8	18	17	1	**44**
2nd Floor	7	23	16	1	**47**
3rd Floor	7	25	20	2	**53**
4th Floor	7	25	20	2	**53**
5th Floor	7	25	20	2	**53**
6th Floor	7	25	18	2	**51**
Approx. Total	**43 Units**	**141 Units**	**111 Units**	**10 Units**	**305 Units**

The Site circulation plan is designed to create a safe and pleasant entry to the Proposed Project from Hyde Park Avenue and a front door vehicle drop off. Service access and the parking garage (1 level below the street) will also be accessed from Hyde Park Avenue.

1.3 Summary of Project Impacts and Mitigation

1.3.1 Urban Design

The Residences at Readville Station is comprised of two new 6-story residential buildings located between Hyde Park Avenue and the MBTA commuter line railroad tracks, at the corner of Milton Street. The new buildings will establish an urban street wall edge where there was none previously, and are arranged around a large, central courtyard. Both buildings sit atop a single level of parking. The parking is at the railroad track level, which is below grade and concealed along the street sides. Due to the varied existing grades across the site, the central courtyard has 3 levels, and steps down from the street level to the railroad tracks. The uppermost (arrival) level of the courtyard includes a public plaza with ‘pocket park’ and the building main entrances, along with a proposed restaurant with outdoor seating area. The middle level of the courtyard contains the main outdoor amenity spaces for the residents, including pool deck and landscaped areas, while the lowest level contains on-grade surface parking and a vehicular connector between buildings at the parking level.

The building massing constitutes a unified whole while also providing variety and visual interest. It is composed of 2 basic exterior cladding systems that break down the overall scale of the project into smaller sections. The primary cladding system is composed of articulated, horizontal fiber-cement panels. The secondary cladding system is a simpler, more background-like façade expression, with more conventional, neutral-colored fiber cement panels. Operable and fixed regular glazing units, along with bay windows, and strategically located “super bays” with integral balconies and projecting elements provide further visual interest and complete the exterior design.

1.3.2 Landscape Design

The public realm landscape and hardscape design for the proposed development, The Residences at Readville Station consists of improvements to the streetscape along Hyde Park Avenue and Milton Street, the implementation of a pick-up/drop-off auto court for residents, and the creation of a public pocket park off of Hyde Park Avenue that acts not only as a buffer between the auto court and pedestrian sidewalk, but provides much needed respite along Hyde Park Avenue.

The sidewalk along Hyde Park Avenue will comprise of foundation planting against the building face, an 8 ft wide concrete paved sidewalk, and a 4 ft wide permeable paving strip to locate streetscape furnishings such as bicycle racks, street lights, and street trees located every 30 ft. The permeable pavers that make up the furnishing strip are to be repurposed stone from the Works Progress Administration (WPA) walls that are located along Hyde Park Avenue and Milton Street. At 5 ft to 8 ft wide, the sidewalk along Milton Street is narrower than at Hyde Park Avenue and will consist only of concrete paving and a retaining wall to account for the 3 ft to 10 ft grade change between the sidewalk and the site as Milton Street rises.

1.3.3 Sustainable Design / Energy Conservation

To meet the City of Boston Requirements the Proposed Project is demonstrating the compliance with the LEED BD&C v4 criteria. The project is currently tracking 53 points in the YES column with 22 in the study column as presented in **Figure 3-26** in **Section 3.0** Further study over the coming weeks and months will determine final credit achievement. We have outlined in the narrative below, how the project intends to achieve the prerequisites and credits for the LEED BD&C v4 certification

1.3.4 Pedestrian Wind Analysis

Because of the significant site topography, the Proposed Project will only rise 5 to 6-stories in height along Hyde Park Avenue, which should not result in any pedestrian level wind impacts. In addition, because of the northern building placement, north and northeasterly winter winds will be mitigated and buffer the site’s open areas as well as for pedestrians walking along Hyde Park Avenue.

1.3.5 Shadow Impact Analysis

The Architectural Team, the Proposed Project's architects, prepared a shadow study to assess the potential shadow impacts of the Proposed Project on the surrounding area (see **Section 4.2**). With a proposed height of 6-floors above grade, the Proposed Project's shadow impacts are generally minimal to moderate. New shadow for most of the year is primarily limited to the railroad tracks to the west and small sections of Hyde Park Avenue to the east. During the evening hours in spring and fall, and during the morning and evening hours in winter, some shadows will extend to nearby properties. Overall, the Proposed Project's shadow impacts will not adversely impact the Project site and surroundings.

1.3.6 Daylight Analysis

Although the Proposed Project would cause an increase in daylight obstruction when compared to the existing conditions at the partially vacant site, the Proposed Project is adjacent to the AMTRAK Mainline/MBTA Commuter rail tracks and on a hillside reaching up to Hyde Park Avenue. The proposed building heights along Hyde Park Avenue were designed to establish a reasonable (6-stories / 60 feet) street wall precedent for potential futures buildings, assuming that the underutilized industrial parcels will one day be re-developed. While daylight obstruction values from the Proposed Project will be greater than those currently present in this specific location, they are expected to be consistent with, and typical to, the future character of Hyde Park Avenue and portions of the surrounding area closest to the MBTA commuter line stations.

1.3.7 Solar Glare

It is not expected that the Proposed Project will include the use of reflective glass or other reflective materials on the building facades that would result in adverse impacts from reflected solar glare.

1.3.8 Air Quality Analysis

Tech Environmental, Inc., the Proposed Project's air quality consultant, conducted analyses to evaluate the existing air quality in the Project area, predict the worst-case air quality impacts from the Proposed Project's fuel combustion equipment and standby generator, and evaluate the potential impacts of project-generated traffic on the air quality at the most congested local intersections (See **Section 4.3**).

Recent representative air quality measurements from the Massachusetts Department of Environmental Protection (DEP) monitors reveal that the existing air quality in the Proposed Project area is in compliance with Massachusetts and National Ambient Air Quality Standards (NAAQS) for all of the criteria air pollutants.

The worst-case air quality impacts from the Proposed Project's enclosed parking garage will not have an adverse impact on air quality. The maximum one-hour and eight-hour ambient CO impacts from the parking garage, at all locations around the Proposed Project site, including background CO concentrations, are predicted to be safely in compliance with the NAAQS for CO.

A microscale CO air quality analysis was conducted for four intersections in the Proposed Project area that meet the Boston Planning and Development Agency (BPDA)/DEP selection criteria. Three cases were analyzed: 2018 Existing, 2025 No-Build, and 2025 Build. The worst-case impacts for all three cases are safely in compliance with the NAAQS for CO at all modeled receptors.

1.3.9 Noise Analysis

Tech Environmental, Inc., the Proposed Project's noise consultant, conducted a noise study to determine whether the operation of the Proposed Project will comply with the Massachusetts DEP Noise Policy and City of Boston Noise Regulations (See **Section 4.4**).

This acoustical analysis involved five steps: (1) establishment of pre-construction ambient sound levels in the vicinity of the Site; (2) identification of potential major noise sources; (3) development of noise source terms based on manufacturer specifications (where available) and similar project designs; (4) conservative predictions of maximum sound level impacts at sensitive locations using industry standard acoustic methodology; and (5) the incorporation of mitigation measures to ensure compliance with applicable City of Boston noise regulations, ordinances and guidelines and with the DEP Noise Policy.

Nighttime ambient baseline sound level (L_{90}) monitoring was conducted at two locations deemed to be representative of the nearby residential areas, during the time period when human activity is at a minimum and any future noise would be most noticeable. The lowest nighttime L_{90} measured in the Proposed Project area was 41.2 dBA.

The potential significant sources of exterior sound from the Proposed Project have been identified as:

Rooftop air handling units (AHUs);

Rooftop exhaust fans (EFs); and

Rooftop energy recovery units (ERUs).

<u>Noise Mitigation</u>

The Proponent is committed to implementing the following sound level mitigation measures for the Proposed Project, as necessary, to comply with the applicable sound level limits:

Specification of air handling units with sound shields: The AHUs will be fitted with sound shields.

With the mitigation outlined in this PNF, the Proposed Project will not create a noise nuisance condition and will fully comply with the most stringent sound level limits set by the Massachusetts DEP Noise Policy, City of Boston Noise Regulations, and HUD's Residential Site Acceptability Standards.

1.3.10 Stormwater Management and Water Quality

The *Residences at Readville Station* is expected to reduce the volume of stormwater runoff leaving the site as well as substantially improve the water quality (See **Section 4.5**). The Proposed Project will meet Boston Water and Sewer Commission (BWSC) standards for stormwater management.

The volume of stormwater runoff leaving the site will be reduced dues to the construction of a subsurface infiltration/ detention system. It is expected that rooftop runoff from the proposed building will be collected and conveyed to a subsurface infiltration system. The infiltration system will have an overflow tied into the drain system in the adjacent MBTA property. It is anticipated that the equivalent of 1-inch over the site's impervious area can be recharged as prescribed in BWSC's Site Plan Requirements.

Stormwater runoff will be treated through the use of water quality treatment units. An operation and maintenance plan will be developed to support the long-term functionality of the proposed stormwater management system.

Erosion and sediment controls will be used during construction to protect adjacent properties, the municipal storm drain system, and the on-site storm drain system. A stormwater pollution prevention plan will be prepared for use during construction including during demolition activity.

1.3.11 Solid and Hazardous Waste

<u>Solid Waste</u>

During the preparation of the site, debris, including asphalt, trash, and demolition debris will be removed from the Proposed Project site. The Proponent will ensure that waste removal and disposal during construction and operation will be in conformance with the City and DEP's Regulations for Solid Waste.

In order to meet the requirements for the Boston Environmental Department and the LEED^{TM} rating system, the Project will include space dedicated to the storage and collection of recyclables, including dedicated dumpsters at the loading area. The recycling program will meet or exceed the City's guidelines, and provide-areas for waste paper and newspaper, metal, glass, and plastics (21 through 27, co-mingled).

Hazardous Waste

Various due diligence and focused environmental assessments and investigations have been completed on the Proposed Project site (1988-2015) with the objective of identifying environmental conditions of concern, specifically those related to oil and/or hazardous materials (OHM) in the subsurface and structures containing petroleum products or hazardous substances. Firstly, these studies have shown that the Proposed Project site is not listed with MassDEP as a location where an OHM release has occurred and no known off-Site OHM releases are believed to have adversely impacted environmental conditions on the Proposed Project site. Property-specific environmental conditions identified by these studies primarily include: the presence of underground and aboveground storage tanks (UST, ASTs), impacted Historic Fill at certain areas and suspected presence in some hazardous materials (e.g., asbestos) on/with the existing building.

The Proponent has considered these environmental findings during the Proposed Project planning process and will undertake the appropriate actions to further assess and mitigation such conditions. Overall, the Proponent will provide MCP and Licensed Site Professional (LSP) support services and engage licensed remedial contractors during property redevelopment activities in order to comply with applicable local, state and federal regulations and guidelines that govern the environmental conditions identified on the Proposed Project site. Additional information on these sites is discussed in more detail in **Section 4.6.1.**

1.3.12 Geotechnical/Groundwater Impacts Analysis

The ground surface across the relatively level portion of the Proposed Project site is understood to be underlain by a fill layer and organic deposit that extends to depths ranging from about 5 to 16 feet below the existing ground surface. It is noted that the ground surface along the perimeter of the site, adjacent to Hyde Park Avenue and Milton Street, consist of landscaped areas that slope upward from the level portion of the Project site towards Hyde Park Avenue and Milton Street, hence the depth of fill material below the ground surface within the slope areas of the site is anticipated to be consistent with the rise in grade associated with construction of Hyde Park Avenue and Milton Street. Where the earth slopes are not present, granite block retaining walls, which are understood to be associated with the construction of the Hyde Park Avenue and Milton Street are present along the perimeter of the site. The fill layer and organic deposit is anticipated to be underlain by a natural glacial till deposit which is in-turn underlain by bedrock. Groundwater is anticipated to be located at depths ranging from about 7.5 to 10 feet below the existing ground surface across level portion of the Proposed Project site and the current design elevation of the lowest level of the proposed building.

Given the proposed building configuration and the subsurface conditions, it is anticipated that the proposed building will be supported by conventional spread footing foundations in conjunction with a soil-supported slab-on-grade after the existing unsuitable fill and organic soils within the footprint of the proposed building are improved. The existing unsuitable soils within the footprint of the proposed buildings will be improved using ground improvement methods consisting of aggregate piers (AP). Perimeter foundation and underslab drainage will be installed to protect the below-grade areas of the proposed building which are located adjacent to Hyde Park Avenue and Milton Street against groundwater intrusion.

Rather than incurring premium costs associated with the off-site disposal/reuse of excavated soil, to the extent possible the excavated soils generated as part of the redevelopment of the Proposed Project site will be reused on-site. Construction mitigation measures will be incorporated into the Proposed Project to avoid the potential for ground movement and settlement during excavation, and potential impacts on adjacent buildings, utility lines and the roadways. Additional geotechnical information and analysis is provided in **Section 4.6.**

1.3.13 Construction Impacts Analysis

Section 4.7 describes impacts likely to result from the Proposed Project's construction and the steps that will be taken to avoid or minimize environmental and transportation-related impacts. The Proponent will employ a construction manager that will be responsible for developing a construction phasing and staging plan and for coordinating construction activities with all appropriate regulatory agencies. The Proposed Project's geotechnical consultant will provide consulting services associated with foundation design recommendations, prepare geotechnical specifications, and review the construction contractor's proposed procedures.

Construction is expected to commence in the 3rd quarter 2019 and will require approximately 18 months to complete.

The Proponent will comply with applicable state and local regulations governing construction of the Proposed Project. The Proponent will require that the general contractor comply with the Construction Management Plan ("CMP") developed in consultation with and approved by the Boston Transportation Department ("BTD"), prior to the commencement of construction. The construction manager will be bound by the CMP, which will establish the guidelines for the duration of the Proposed Project and will include specific mitigation measures and staging plans to minimize impacts on abutters.

Most construction activities will be accommodated within the current site boundaries. Details of the overall construction schedule, working hours, number of construction workers, worker transportation and parking, number of construction vehicles, and routes will be addressed in detail in a Construction Management Plan to be filed with BTD in accordance with the City's transportation maintenance plan requirements. To minimize transportation impacts during the construction period, there will be limited construction worker parking on-site, carpooling will be encouraged, secure on-site spaces will be provided for workers' supplies and tools so they do not have to be brought to the site each day, and subsidies for MBTA passes will be considered. The Construction Management Plan to be executed with the City prior to commencement of construction will document all committed measures.

1.3.14 Wetlands/Flood Hazard Zone

The existing Proposed Project site is not a part of a wetland resource area regulated by the Massachusetts Wetland Protection Act. Based on the Preliminary Flood Insurance Rate Maps (FIRM) for Suffolk County, the Proposed Project site is not located in a special flood hazard area, floodway area, or other flood area. It is located on Sheet City of Boston No. 250286, effective 03/16/16 as Flood Zone X, Area of Minimal Flood Hazard.

1.3.15 Historic Resources Component

According to files at the Massachusetts Historical Commission, there are no on-site structures listed in the National or State Register of Historic Places, or the Inventory of Historical and Archaeological Assets of the Commonwealth. It is not expected that the Proposed Project will cause adverse impacts on the historic or architectural elements of nearby historic resources outside the Proposed Project site (see **Section 5.0**).

1.3.16 Infrastructure Systems Component

An infrastructure system's analysis (**Section 6.0**) was completed by H.W. Moore Associates, the Proposed Project's Civil Engineer. The existing infrastructure surrounding the site appears sufficient to service the needs of the Proposed Project. This section describes the existing sewer, water, and drainage systems surrounding the site and explains how these systems will service the development. This analysis also discusses any anticipated project-related impacts on the utilities and identifies mitigation measures to address these potential impacts.

1.3.17 Transportation Component

Section 7.0 presents the comprehensive transportation study completed by HSH for the Proposed Project in conformance with the BTD Transportation Access Plan Guidelines (2001). The study analyzes existing conditions within the Proposed Project study area, as well as conditions forecast to be in place under the seven-year planning horizon of 2018.

Vehicular access/egress to the underground parking garage will be provided by a driveway along a Hyde Park Avenue to the north of the building. A second access/egress driveway will be provided for vehicles to an auto court also along Hyde Park Avenue. The parking garage will have approximately 221 parking spaces for a parking ratio of 0.74 parking spaces per residential unit and the auto court will have an additional approximately 6 parking spaces for short-term parking, loading, and pick-up/drop off operations.

The analysis employs mode use data for the area surrounding the Proposed Project site based on the 2016 American Community Survey and BTD data for Area 12 – Hyde Park, and identifies the number of trips generated by the Project.

The Proposed Project is projected to add up to 1,458 new vehicle trips on a daily basis, with 98 additional trips during the a.m. peak hour (37 entering/61 exiting) and 117 additional trips during the p.m. peak hour (66 entering/51 exiting) during the p.m. peak hour. The Proponent participated in and funded the design of traffic upgrades in the vicinity of the Proposed Project and nearby Walcott Square.

Loading and service operations will occur at an internal loading dock, with an access/egress curb cut provided along Hyde Park Avenue, just to the south of the garage driveway. The loading dock will include two loading bays for single-unit trucks and smaller delivery vehicles. Some smaller and more frequent loading and delivery vehicles will use the designated auto court to make deliveries.

The Proponent is committed to implementing a transportation demand management ("TDM") program that supports the City's efforts to reduce dependency on the automobile by encouraging alternatives to driving alone, especially during peak travel periods. Proposed measures include, but are not limited to, providing transit information (schedules, maps, and fare information) to residents and visitors, providing on-site secure, covered bicycle storage for every residential unit, The Proponent will designate a full-time, on-site employee as the transportation coordinator. The transportation coordinator will oversee all transportation issues including managing vehicular operations, parking, service and loading, and TDM programs. The detailed agreement of full TDM measures will be defined and codified in the Transportation Access Plan Agreement (TAPA).

1.3.18 Response to Climate Change Questionnaire

Please see **Appendix E** for the Proponent's Response to the City of Boston's Climate Change Questionnaire.

1.3.19 Response to City of Boston Accessibility Guidelines

Please see **Appendix F** for the Proponent's Response to the City of Boston's Accessibility Guidelines.

1.3.20 Response to BPDA Broadband Questionnaire

Please see **Appendix G** for the Proponent's Response to the BPDA Broadband Questionnaire.

2.0 General Information

2.1 Applicant Information

2.1.1 Project Proponent

The Project Proponent is Ad Meliora LLC, a Boston-based real estate and investment firm, formed in 2011. Ad Meliora strives to provide private investors with a reliable alternative investment in the United States real estate market. Ad Meliora has invested in Boston neighborhoods including Charlestown, South Boston, and now Hyde Park. The firm aims to improve neighborhoods by renovating distressed structures, and developing underutilized land. Ad Meliora also acquires financially challenged projects that result in projects with positive community impacts. Currently, Ad Meliora manages approximately $200 million in assets, with Jan Steenbrugge as the firm's President and CEO.

2.1.2 Project Team

Project Name	The Residences at Readville Station
Property Owner / Developer	**Ad Meliora LLC** Two Oliver Street, 10th Floor Boston, MA 02109 Jan Steenbrugge Jan.steenbrugge@admelioralIc.com Paul Soughley paul.soughley@admeliorallc.com Tel: 617-202-3266 X102 Haley Yoke hyoke@admeliorallc.com Tel: 617-202-3266
Article 80 Permitting Consultant	**Mitchell L. Fischman Consulting (“MLF Consulting”) LLC** 41 Brush Hill Road Newton, MA 02461 Mitchell Fischman mitchfischman@gmail.com Tel: 781-760-1726

Legal Counsel	**Goulston & Storrs PC** 400 Atlantic Avenue Boston, MA 02110-333 Tel: 617-482-1776 Matthew Kiefer mkiefer@goulstonstorrs.com David Linhart dlinhart@goulstonstorrs.com
Architect	**The Architectural Team** 50 Commandants Way at Admiral Hill Chelsea, MA 02150 Tel: 617-889-4402 Michael Binette, AIA mbinette@architecturalteam.com Michael Doherty mdoherty@architecturalteam.com
Landscape Architect	**Copley Wolff Design Group** 10 Post Office Square, Suite 1315 Boston, MA 02109 Tel: 617-654-9000 John Copley jcopley@copley-wolff.com Marcus Cantu mcantu@copley-wolff.com
Transportation Planner / Engineer	**Howard Stein Hudson** 11 Beacon Street, Suite 1010 Boston, MA 02108 Tel: 617-482-7080 Keri Pyke kpyke@hshsassoc.com Mike Littman mlittman@hshassoc.com
Civil Engineer	**H. W. Moore Associates, Inc.** 112 Shawmut Avenue Boston, MA 02118 Tel: 617-357-8145 Robert K. Carter rcarter@hwmoore.com

Noise and Air Consultant	**Tech Environmental, Inc.** Hobbs Brook Office Park 303 Wyman Street, Suite 295 Waltham, MA 02451 Tel: 781-890-2220 Marc C. Wallace mwallace@techenv.com Tel: 781-890-2220 x30
Sustainability Consultant	**Soden Sustainability Consulting** 19 Richardson Street Winchester, MA 01890 Tel: 617-372-7857 Colleen Ryan Soden, LEED AP BD+C colleen@sodensustainability.com
Environmental / 21E Engineer	**ESS Group** 100 5th Avenue Waltham, MA 02461 Tel: 781-419-7705 William Chapman bchapman@essgroup.com
Geotechnical Engineer	**McPhail Associates, LLC** 2269 Massachusetts Avenue Cambridge, MA 02140 Harry J. Berlis Senior Project Manager hjb@mcphailgeo.com Tel: 617-868-1420, ext. 320
Surveyor	**Feldman Survey** 152 Hampden Street Boston, MA 02119 Sean McDonagh smcdonagh@feldmansurveyors.com Tel: 617-357-9740
Media Consultant	**coUrbanize** Alo Mukerji alo@courbanize.com Tel: 617-290-8012

Construction Commencement	3rd Quarter 2019
Construction Completion	1st Quarter 2021
Status of Project Design	Schematic

2.1.3 Legal Information

Legal Judgments or Actions Pending Concerning the Proposed Project

To the Proponent's knowledge, there are no legal judgments or actions pending concerning the Proposed Project.

History of Tax Arrears on Property Owned in Boston by the Applicant

There are no known tax arrears on property in Boston owned by the Proponent.

Nature and Extent of Any and All Public Easements

There are many utility easements for sewer, electric, cable, telephone and gas on or adjacent to the Proposed Project site based on the existing survey. Final design plans will accommodate these easements.

2.2 Public Benefits

The Proposed Project will provide the following substantial benefits to the City and its residents:

The residences will complement and enhance a very active transportation node that includes a major MBTA commuter station, while also improving a derelict industrial property;

The residences will support Mayor Walsh's 2030 Plan for establishing new residential units in Boston and will provide on-site income restricted housing in compliance with the Inclusionary Development Policy;

The pedestrian experience will be enhanced with establishment of a new open space and new street trees and other streetscape amenities;

The Proposed Project will provide additional real estate tax revenue to the City; and

The Proposed Project will create new construction jobs over an approximate 18-month period.

2.3 Regulatory Controls and Permits

Large Project Review

Because the Project involves new construction in excess of 50,000 square feet of Gross Floor Area, the Project is subject to Large Project Review pursuant to Article 80B of the Boston Zoning Code. On September 13, 2018, the Applicant filed a Letter of Intent to file this Project Notification Form to commence study of the potential impacts of the Project. Under the Mayor's Executive Order dated October 10, 2000, and amended on April 3, 2001, regarding mitigation for development projects, the Mayor has appointed an Impact Advisory Group to advise the BPDA on mitigation measures for projects undergoing Large Project Review. In connection with Large Project Review, the Project will be subject to, among other requirements, Boston Civic Design Commission review and the green building requirements of Article 37 of the Boston Zoning Code.

Zoning District

The Project Site is located entirely within a Local Industrial (LI-2) Subdistrict of the Hyde Park Neighborhood Zoning District, governed by Article 69 of the Boston Zoning Code. There are no applicable overlay districts.

Under such underlying zoning, multifamily dwelling use is forbidden. Local retail business, certain service and restaurant uses are allowed with certain limitations. The maximum building height is 35 feet and the maximum floor area ratio is 2.0. Parking and loading requirements are determined through Large Project Review requirements.

Related relief required from the Zoning Board of Appeal is set forth below.

The following table provides additional detail regarding use and dimensional zoning requirements for the Project Site.

Table 2-1. 1717-1725 Hyde Park Avenue - Local Industrial (LI-2) Subdistrict- Dimensional Requirements

Use / Dimensional Element	LI-2 District Requirement	Proposed	Relief Required
Multifamily Use	Forbidden	Approx. 305 units	Variance
Local Retail Business Use	Allowed, except conditional if open to public midnight – 6:30AM or if merchandise sold or displayed out of doors	Up to 4,200 SF	No
Restaurant Use	Allowed, except forbidden if open to public 1:00 – 6:00AM	Up to 4,200 SF	No
Max. Floor Area Ratio	2.0	2.91	Variance
Max. Building Height	35 feet	60.4 feet	Variance
Minimum Front Yard	5 feet	5 feet	No
Minimum Side Yard	None	10 feet	No

Use / Dimensional Element	LI-2 District Requirement	Proposed	Relief Required
Minimum Rear Yard	**10 feet**	**10 feet**	**No**
Minimum Parking	**Determined Through Large Project Review**	**221 spaces**	**No**
Minimum Loading	**Determined Through Large Project Review**	**1 Loading Dock**	**No**

1. The dimensions described in this above table may change as the Proposed Project undergoes design review with the BPDA.

2.3.1 Preliminary List of Permits or Other Approvals Which May be Sought

Preliminary List of Permits or Other Approvals Which May be Sought

The table below presents a preliminary list of governmental permits and approvals that are expected to be required for the proposed redevelopment of 1717-1725 Hyde Park Avenue. This preliminary list is based on currently available information and is subject to change as the redevelopment program and design evolve.

MEPA Review

The Proponent anticipates that the Project will not require review by the Massachusetts Environmental Policy Act Office of the Massachusetts Office of Energy and Environmental Affairs.

Agency Name	Permit or Action
City of Boston	
Boston Planning & Development Agency	Large Project Review and associated reviews and agreements (including Cooperation Agreement, Affordable Housing Agreement, Boston Residents Construction Employment Plan, Green Building Review, Response to Climate Change Preparedness and Resiliency Checklist, Response to Accessibility Questionnaire, and Response to Broadband Questionnaire); Section 80B-6 Certificate of Compliance

Boston Civic Design Commission	Advisory Design Review
Boston Transportation Department	Transportation Access Plan Agreement Construction Management Plan
Zoning Board of Appeal	Zoning Relief
Boston Landmarks Commission	Demolition Delay (Article 85)
Boston Water and Sewer Commission	Site Plan Review Water and Sewer Connection Permits
Boston Public Safety Commission, Committee on Licenses	Inflammables Storage License/Garage Permit
Public Improvement Commission	Specific Repair Plan approval for changes to the public right of way
Public Works Department	Curb Cut and Street/Sidewalk Opening Permits
Boston Inspectional Services Department	Building/Occupancy Permits
Commonwealth of Massachusetts	
Massachusetts Historical Commission	State Register Review (if required)
Massachusetts Department of Transportation	Chapter 40, Section 54A determination of inapplicability
Federal	
Environmental Protection Agency	Coverage under National Pollutant Discharge Elimination System Permit - General Permit
Federal Aviation Administration	Determination of No Hazard to Air Navigation (if required for cranes)

2.4 Public Review Process and Agency Coordination

Preliminary plans for the Proposed Project have been discussed with Hyde Park elected officials and will be more fully discussed with the Hyde Park neighborhood during the Article 80 public review process.

The Proponent has also discussed the Proposed Project with representatives of the Boston Planning and Development Agency ("BPDA") prior to filing this Project Notification Form in order to identify issues/concerns as well as design requirements related to the Project.

In accordance with Article 80 requirements, an Impact Advisory Committee ("IAG") has been formed and neighborhood meeting will be scheduled to review the PNF and receive community comments on the Project during the PNF public review period.

Discussions for redevelopment of the Proposed site for residential reuse has been ongoing since 2015 by the same developer, with outreach at pre-filing community meetings and a presentation to the Hyde Park Board of Trade. The Proponent will continue to meet with public agencies, neighborhood representatives, local business organizations, abutting property owners, and other interested parties, and will follow the requirements of Article 80 pertaining to the public review process.

2.5 Development Impact Payment ("DIP") Status

Based on current schematic design plans, it is not anticipated that Development Impact Payments ("DIP"), in accordance with Article 80B-7 of the Code, will be required as the Proposed Project use is not identified as a DIP eligible project.

3.0 URBAN DESIGN AND SUSTAINABILITY COMPONENT

3.1 Urban Design Overview

The Residences at Readville Station consists of two connected six-story residential buildings (buildings “A” and “B”), with a single level of garage parking beneath. The main lobbies arrival courtyard (technically level 2 of the project) will be accessed from a landscaped “pocket park” and drop-off area located at the highest point of the site (El. 88) on Hyde Park Avenue, and will contain leasing offices (in building A), approximately 4,200 sf of restaurant/retail space (in building B), and 47 residential units. The lower level parking garage (El. 62), is at-grade along the railroad tracks in the back, has 221 parking spaces, and is accessed from Hyde Park at a ramp which begins at level 1 (El. 77). Amenity spaces for the tenants, storage, mechanical space, the loading area, the main trash room and bicycle parking, landscaped courtyard areas with pool deck and 44 residential units are all located on level 1 (El. 77), which connects buildings A and B under the arrival courtyard (El. 88). The second through the fifth floors have 54 residential units on each floor. The sixth floor has another 52 units and a roof deck where the building steps down a floor at the corner of Milton Street.

3.2 Building Design, Streetscape And Massing

Well-situated for public transportation near the MBTA Readville Station, the project will begin to establish an urban street wall edge along Hyde Park Avenue. The proposed new streetscape improvements, along with the “pocket park” and proposed new restaurant will benefit this stretch of Hyde Park Avenue by establishing a pedestrian-friendly zone. And assuming that, over a period of time, there will be future re-development of some of the adjacent remaining industrial sites, this building will help ‘set the stage’ for the kind of additional future streetscape improvements that will continue to benefit the neighborhood as it gradually changes from an industrial area to a place offering varied residential and commercial opportunities for the local citizenry.

The massing for both buildings is tied together at a brick masonry ‘base’ that clads the parking level (on the sides where it’s exposed) and much of the 1st level along the street. The residential floors above the base are organized using 2 basic exterior cladding systems that break down the overall scale of the project into smaller sections. The primary cladding system is intended as a series of expressive ‘masonry-like’ articulated, horizontal fiber-cement panels. The secondary cladding system is a simpler, more background-like façade expression, with more conventional, neutral-colored fiber cement clapboards and panels. Operable and fixed regular glazing units, along with bay windows, and strategically located “super bays” with larger areas of glazing, integral balconies and projecting elements provide further visual interest and complete the exterior design.

There will be small private outdoor space at grade for the units (at El. 77) that face the landscaped courtyard and pool deck areas. The design also proposes balconies for the units at the expressively articulated ends of both buildings, that include the aforementioned “super bays”. A green roof and common roof deck are also planned overlooking the corner of Milton Street, where the building A façade locally steps down to 5 stories above grade.

The back of the building along the railroad tracks is organized with a two-part 'base' that contains the parking level (El. 62) and the 1st residential floor (El. 77), with the more articulated residential floors (levels 2-5) having a series of projecting bay windows while the uppermost (6th) floor has a more low-key, simple 'top' expression. The cantilevered "super bays" provide visual hierarchy and interest, along with helping break-down the scale of the facades.

The urban design drawings, perspectives, and LEED v4 for BD+C Checklist are included at the end of this section (**Figures 3-1** thru **3-26**).

3.3 Landscape Design

The public realm landscape and hardscape design for the proposed development, *The Residences at Readville Station*, consists of improvements to the streetscape along Hyde Park Avenue and Milton Street, the implementation of a pick-up/drop-off auto court for residents, and the creation of a public pocket park off of Hyde Park Avenue that acts not only as a buffer between the auto court and pedestrian sidewalk, but provides much needed respite along Hyde Park Avenue.

The sidewalk along Hyde Park Avenue will comprise of foundation planting against the building face, an 8 ft wide concrete paved sidewalk, and a 4 ft wide permeable paving strip to locate streetscape furnishings such as bicycle racks, street lights, and street trees located every 30 ft. The permeable pavers that make up the furnishing strip are to be repurposed stone from the Works Progress Administration (WPA) walls that are located along Hyde Park Avenue and Milton Street. At 5 ft to 8 ft wide, the sidewalk along Milton Street is narrower than at Hyde Park Avenue, and will consist only of concrete paving and a retaining wall to account for the 3 ft to 10 ft grade change between the sidewalk and the site as Milton Street rises.

The auto court is located in between the two proposed buildings along Hyde Park Avenue and fronts both building entries. Vehicles enter the auto court from Hyde Park Avenue via a 20 ft minimum driveway. The auto court is meant primarily for pick-up/drop-off, but it will have 6 short term parking spaces. All long-term parking is provided for in the parking garage. Both parking garage and loading entries are located off of Hyde Park Avenue at the northern end of the site. Vehicles exit the auto court on a second driveway that wraps around the pocket park back on to Hyde Park Avenue.

The pocket park totals roughly 2,000 sf. Special paving will be used to define its limits and bollards will flank either side to safely separate pedestrians from vehicles entering and exiting the auto court. The park will be furnished with ample seating, rich planting and a feature wall that separates its inhabitants from the auto court. Trees will be placed within the park in coordination with the street trees to create a connected canopy that draws one in from the sidewalk. Hyde Park Avenue will also be activated by outdoor restaurant seating at the North Building. One will also be able to view the approximately 2,800 sf private amenity space that centers the development. This will help to visually break up the massing of the development

3.4 Sustainable Design/Energy Conservation

The Proposed Project involves developing a new 348,395 GSF residential complex with 305 units on a site located at 1717- 1725 Hyde Park Avenue in Hyde Park.

To meet the City of Boston Requirements the project is demonstrating the compliance with the LEED BD&C v4 criteria. The project is currently tracking 53 points in the YES column with 22 in the study column. Further study over the coming weeks and months will determine final credit achievement. We have outlined in the narrative below, how the project intends to achieve the prerequisites and credits for the LEED BD&C v4 certification (See **Figure 3-26** at the end of this section**).**

3.4.1 Introduction

Sustainability informs every design decision. Enduring and efficient buildings conserve embodied energy and preserve natural resources. The project embraces the opportunity to positively influence the urban environment. Its urban location takes advantage of existing infrastructure while some access to mass transportation will reduce dependence on single occupant vehicle trips and minimize transportation impacts.

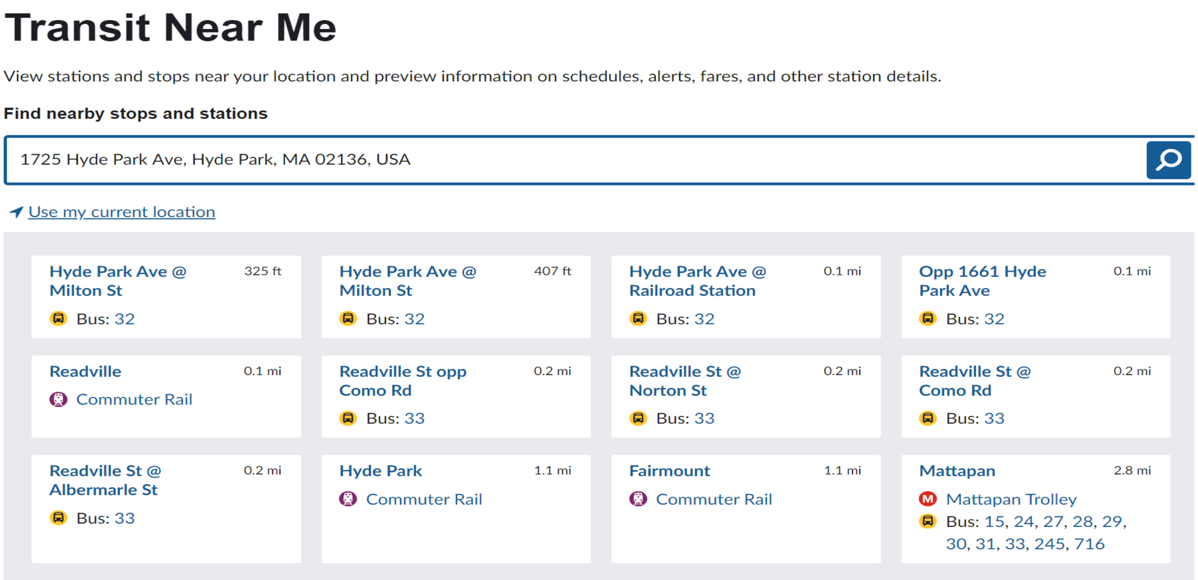
The Proponent and the Project design team are committed to an integrated design approach and are using the LEED Building Design and Construction v4 rating system and intend to meet certification as presented above. This rating will meet or exceed Boston's Green Building standard. The LEED rating system tracks the sustainable features of the project by achieving points in following categories: Location & Transportation; Sustainable Sites; Water Efficiency; Energy and Atmosphere; Materials and Resources; Indoor Environmental Quality; and Innovation and Design Process.

3.4.2 Location and Transportation

The Location and Transportation credit category encourages development on previously developed land, minimizing a building's impact on ecosystems and waterways, regionally appropriate landscaping, smart transportation choices.

The site is located on a site that has been previously developed earning sensitive land protection. The site is also located on a site with some soil contamination may be present. The project is undergoing Phase II assessment. If contamination is found, we will perform remediation to the meet the requirements.

The site is located on a site whose surrounding existing density within a ¼-mile [400-meter] radius of the project boundary and provided dozens of amenities within .5 mile of the project site. The Proposed Project provides access to quality transit as the project is located within 0.1 mile of the Commuter Rail and commuter rail and within 0.2 miles of 2 bus lines. The site has access to 205 weekday, 110 weekend trips are provided.



Transit Near Me

View stations and stops near your location and preview information on schedules, alerts, fares, and other station details.

Find nearby stops and stations

1725 Hyde Park Ave, Hyde Park, MA 02136, USA

Use my current location

Hyde Park Ave @ Milton St — 325 ft Bus: 32	Hyde Park Ave @ Milton St — 407 ft Bus: 32	Hyde Park Ave @ Railroad Station — 0.1 mi Bus: 32	Opp 1661 Hyde Park Ave — 0.1 mi Bus: 32
Readville — 0.1 mi Commuter Rail	Readville St opp Como Rd — 0.2 mi Bus: 33	Readville St @ Norton St — 0.2 mi Bus: 33	Readville St @ Como Rd — 0.2 mi Bus: 33
Readville St @ Albermarle St — 0.2 mi Bus: 33	Hyde Park — 1.1 mi Commuter Rail	Fairmount — 1.1 mi Commuter Rail	Mattapan — 2.8 mi Mattapan Trolley Bus: 15, 24, 27, 28, 29, 30, 31, 33, 245, 716

The Proposed Project provides access to quality transit as the project is located within .1 mile of the Commuter Rail and commuter rail and within 0.2 miles of 2 bus lines. The site has access to 205 weekday, 110 weekend trips are provided.

The Proposed Project is providing bicycle facilities and showers for the occupants of the building along with bicycle parking spots for visitors, far exceeding the LEED requirement. The project also achieves a 62% parking reduction from the LEED baseline, achieving exemplary performance.

3.4.3 Sustainable Sites

The development of sustainable sites is at the core of sustainable design, stormwater runoff management, and reduction of erosion, light pollution, heat island effect, and pollution related to construction and site maintenance are critical to lessening the impact of development.

The Proposed Project will create and implement an erosion and sedimentation control plan for all construction activities associated with the project. The plan will conform to the erosion and sedimentation requirements of the 2012 U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) or local equivalent, whichever is more stringent. Careful assessment of the site and location selection is part of our site assessment analysis for LEED.

In order to reduce the impact of urban heat island effect all the roofing and hardscape material will be low SRI or vegetated. The project is also pursuing Light Pollution Reduction.

3.4.4 Water Efficiency

Buildings are major users of our potable water supply and conservation of water preserves a natural resource while reducing the amount of energy and chemicals used for sewage treatment. The goal of the Water Efficiency credit category is to encourage smarter use of water, inside and out. Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside and water-wise landscaping outside. To satisfy the requirements of the Water Use Reduction Prerequisite and credit, the project will incorporate water conservation strategies that include low flow plumbing fixtures for water closets and faucets. The landscape will be designed so it will reduce the need for potable water for irrigation and select plant material that is native and adaptive.

The Proposed Project is targeting a minimum 45% indoor water use reduction from the baseline. All newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling will have the Water Sense label. We anticipate needing irrigation for foundation plantings, if required this will be a highly efficient drip system achieving greater than a 50% reduction in potable water use.

The Proposed Project will install permanent water meters that measure the total potable water use for the building and associated grounds in addition to water meters for two or more of the following water subsystems, as applicable to the Proposed Project: Irrigation, Indoor plumbing fixtures and fittings, Domestic hot water, Boiler. Metering data will be compiled into monthly and annual summaries; and will be shared with USGBC the resulting whole-project water usage data.

3.4.5 Energy & Atmosphere

According to the U.S. Department of Energy, buildings use 39% of the energy and 74% of the electricity produced each year in the United States. The Energy and Atmosphere credit category encourages a wide variety of energy strategies: commissioning; energy use monitoring; efficient design and construction; efficient appliances, systems and lighting; the use of renewable and clean sources of energy, generated on-site or off-site; and other innovative practices.

Fundamental Commissioning and Enhanced commissioning will be pursued for the Proposed Project. Envelope commissioning will also be evaluated as an alternative.

A preliminary whole-building energy simulation was performed for the Proposed Project demonstrating a minimum improvement of 14% energy cost savings according to ANSI/ASHRAE/IESNA Standard 90.1–2010, Appendix G, with errata. The team will continue to analyze efficiency measures during the design process and account for the results in design decision making.

The Proposed Project will install new or use existing building-level energy meters, or submeters that can be aggregated to provide building-level data representing total building energy consumption (electricity, natural gas, chilled water, steam, fuel oil, propane, biomass, etc.). Prereq 4- Fundamental refrigerant management. The Proposed Project will not use chlorofluorocarbon (CFC)-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration (HVAC&R) systems.

The Proposed Project will evaluate renewable energy production. If it is not possible, the building will be solar ready. The Proposed Project is also evaluating the Advanced Energy Metering.

The Proposed Project will select refrigerants that are used in heating, ventilating, air-conditioning, and refrigeration (HVAC&R) equipment to minimize or eliminate the emission of compounds that contribute to ozone depletion and climate change. The Proposed Project will perform the calculations once systems are selected.

The Proposed Project will also consider engaging in a contract for 50% or 100% of the Proposed Project's energy from green power, carbon offsets, or renewable energy certificates (RECs).

3.4.6 Materials & Resources

During both construction and operations, buildings generate tremendous waste and use many materials and resources. This credit category encourages the selection of sustainable materials, including those that are harvested and manufactured locally, contain high-recycled content, and are rapidly renewable. It also promotes the reduction of waste through building and material reuse, construction waste management, and ongoing recycling programs.

The Proposed Project will provide dedicated areas accessible to waste haulers and building occupants for the collection and storage of recyclable materials for the entire building. Collection and storage areas may be separate locations. Recyclable materials will include mixed paper, corrugated cardboard, glass, plastics, and metals. The Proposed Project will also take appropriate measures for the safe collection, storage, and disposal of two of the following: batteries, mercury-containing lamps, and electronic waste.

The Proposed Project will develop and implement a construction and demolition waste management plan that will identifying at least five materials (both structural and nonstructural) targeted for diversion. approximate a percentage of the overall project waste that these materials represent. The Proposed Project will divert at least 75% of the total construction and demolition material; diverted materials must include at least four material streams. The Proposed Project will also consider completing a life-cycle assessment.

Careful material selection will be performed for the Proposed Project. Where possible the Proposed Project hopes to integrate products that have Environmental Product Declarations (EPD), Sourcing of raw materials and corporate sustainability reporting, and Material Ingredients disclosures.

3.4.7 Indoor Environmental Quality

The U.S. Environmental Protection Agency estimates that Americans spend about 90% of their day indoors, where the air quality can be significantly worse than outside. The Indoor Environmental Quality credit category promotes strategies that can improve indoor air through low emitting materials selection and increased ventilation. It also promotes access to natural daylight and views.

The Proposed Project will meet the minimum requirements of ASHRAE Standard 62.1–2010, Sections 4–7, Ventilation for Acceptable Indoor Air Quality (with errata), or a local equivalent, whichever is more stringent.

The Proposed Project will provide enhanced indoor air quality strategies. The Proposed Project will provide entryway systems design systems, interior cross-contamination prevention and filtration. The Proposed Project is also targeting increased ventilation.

The Proposed Project will target Low emitting materials for all materials within the building interior is defined as everything within the waterproofing membrane. This includes requirements for product manufacturing volatile organic compound (VOC) emissions in the indoor air and the VOC content of materials.

The Proposed Project will develop and implement an indoor air quality (IAQ) management plan for the construction and preoccupancy phases of the building, meeting or exceeding all applicable recommended control measures of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings under Construction, 2nd edition, 2007, ANSI/SMACNA 008–2008, Chapter 3. The Proposed Project will protect absorptive materials stored on-site and installed from moisture damage.

The Proposed Project prohibits the use of all tobacco products inside the building and within 25 feet (8 meters) of the building entrance during construction. Daylight will be evaluated for energy efficiency opportunities and benefits for the occupants.

The Proposed Project will achieve a direct line of sight to the outdoors for at least 75% of all regularly occupied floor area. View glazing in the contributing area will provide a clear image of the exterior, not obstructed by frits, fibers, patterned glazing, or added tints that distort color balance.

3.4.8 Innovation and Design Process

The Innovation in Design and Innovation in Operations credit categories provide additional points for projects that use new and innovative technologies, achieve performance well beyond what is required by LEED credits, or utilize green building strategies that are not specifically addressed elsewhere in LEED. This credit category also rewards projects for including a LEED Accredited Professional on the team to ensure a holistic, integrated approach to design, construction, operations and maintenance. Five credits are being pursued and could include the following:

- Innovation in Design: EP Reduced Parking Footprint
- Innovation in Design: Green Housekeeping
- Innovation in Design: Walkable Sites
- Innovation in Design: Integrated Pest Management
- Innovation in Design: Education

Regional Priority:

- Regional Priority: High Priority Site (yes)
- Regional Priority: Indoor water use reduction (yes)
- Regional Priority: Optimize Energy (maybe)
- Regional Priority: Renewable Energy (maybe)

3.5 Urban Design Drawings and LEED Checklist

Urban design drawings and renderings depicting the Proposed Project and the LEED v4 for BD+C Checklist include:

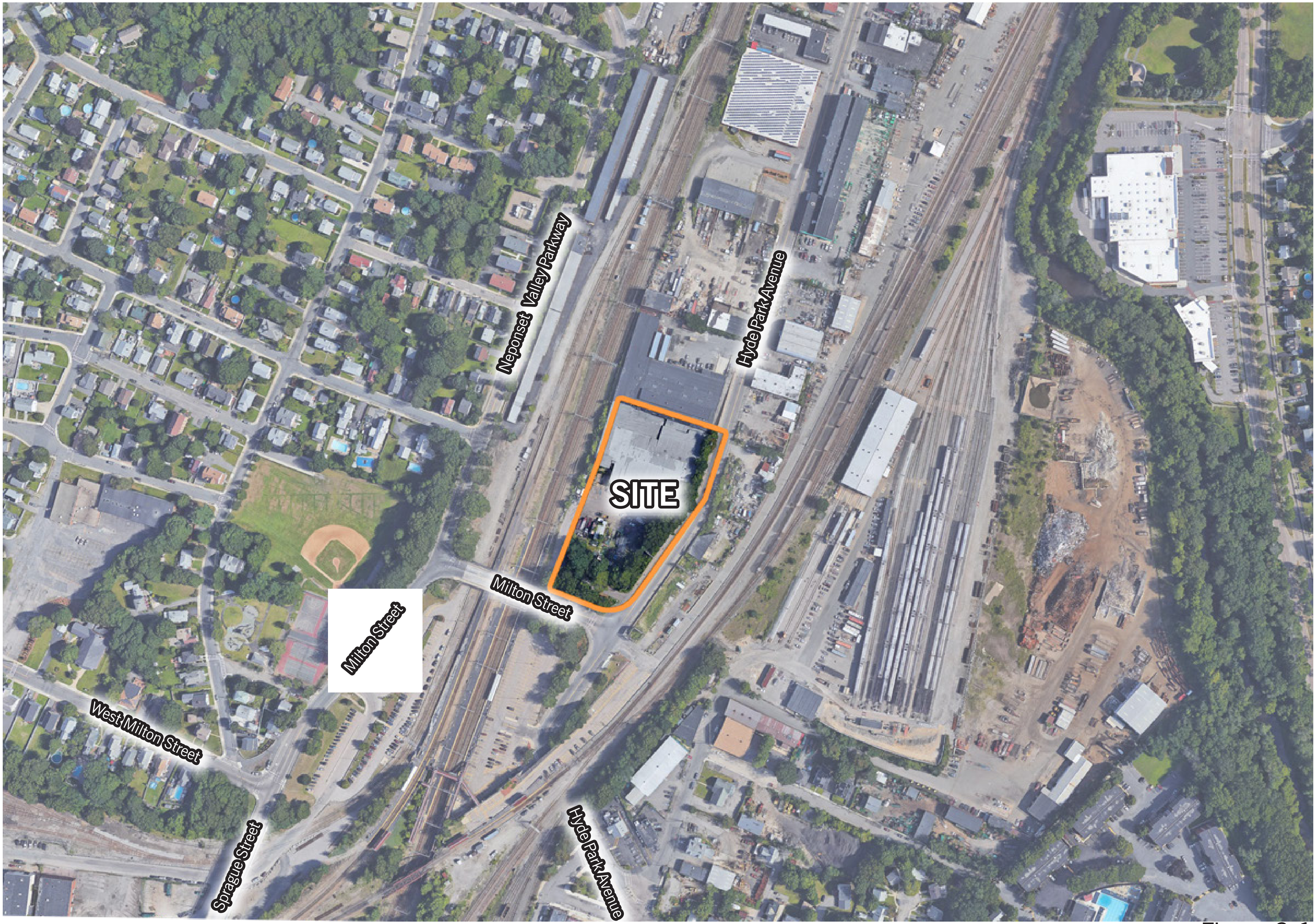


Figure 3-1

1717 - 1725 Hyde Park Avenue

Project Locus

Boston, MA | October 23, 2018 | 17105 | © The Architectural Team, Inc.

AD MELIORA

C W D G

tat

Figure 3-2

1717 - 1725 Hyde Park Avenue

Aerial Perspective - Existing Conditions

Boston, MA | October 23, 2018 | 17105 |

AD MELIORA

C W D G

tat

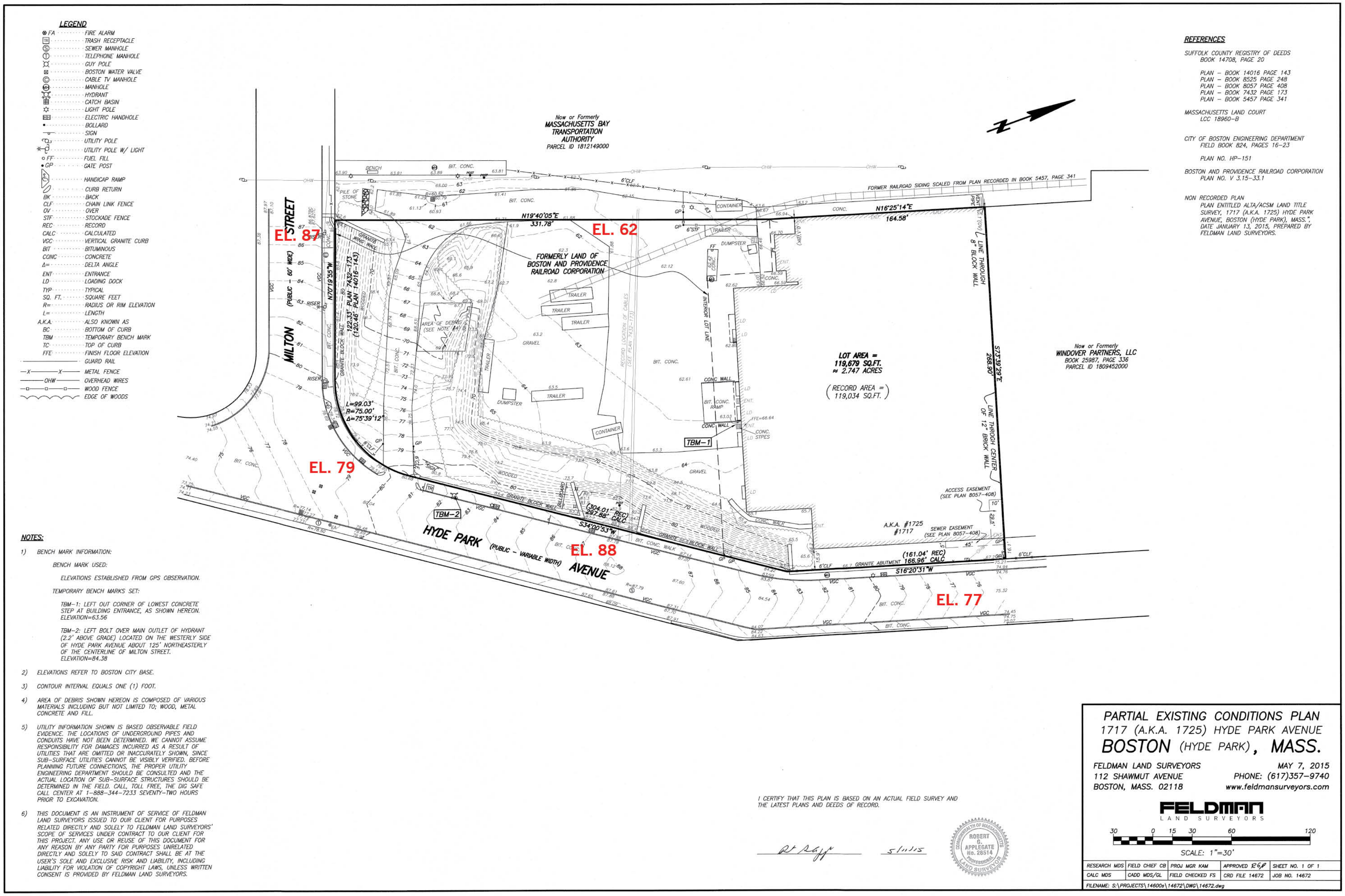


Figure 3-3

1717 - 1725 Hyde Park Avenue

Existing Conditions Survey

AD MELIORA

C W D G

tat

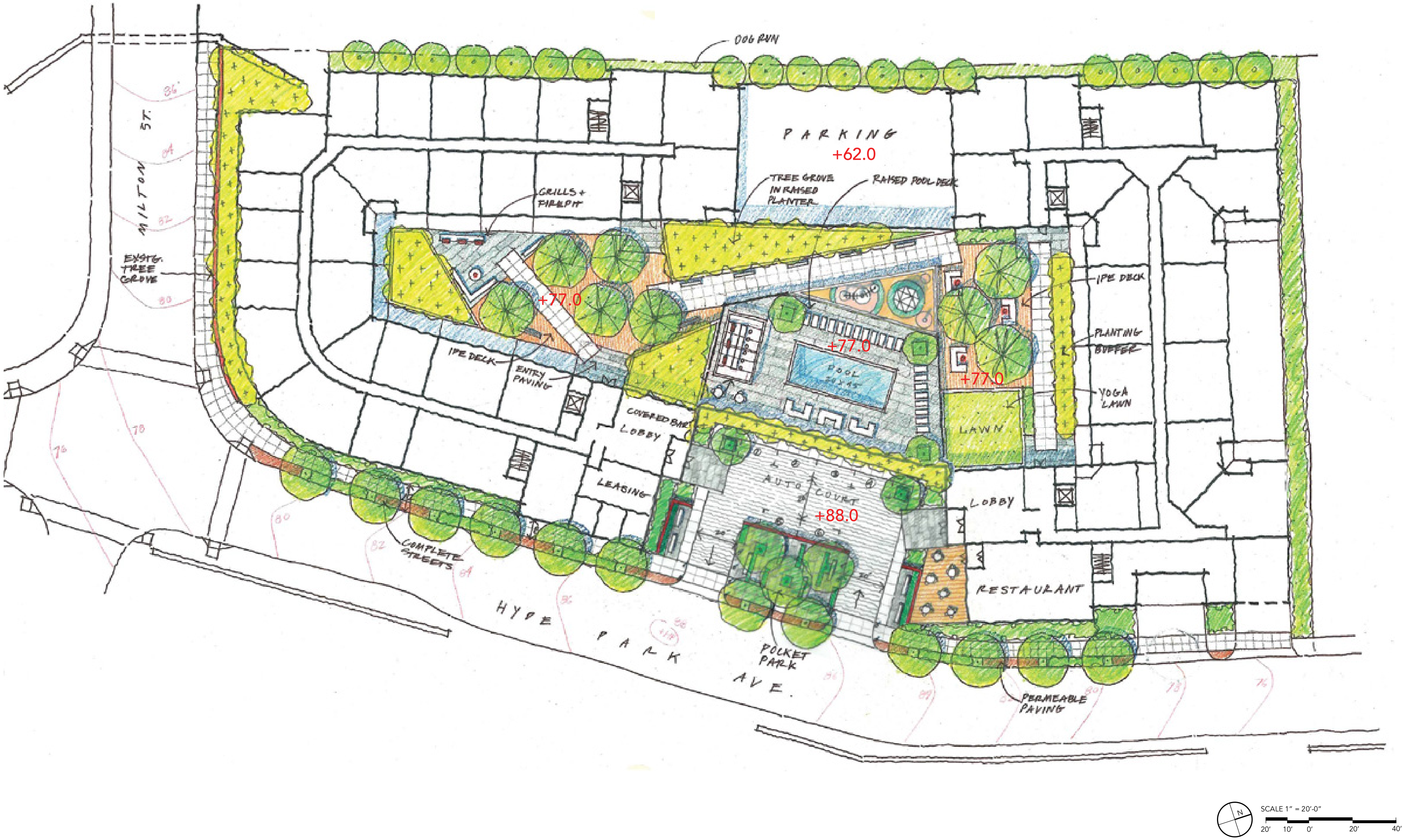


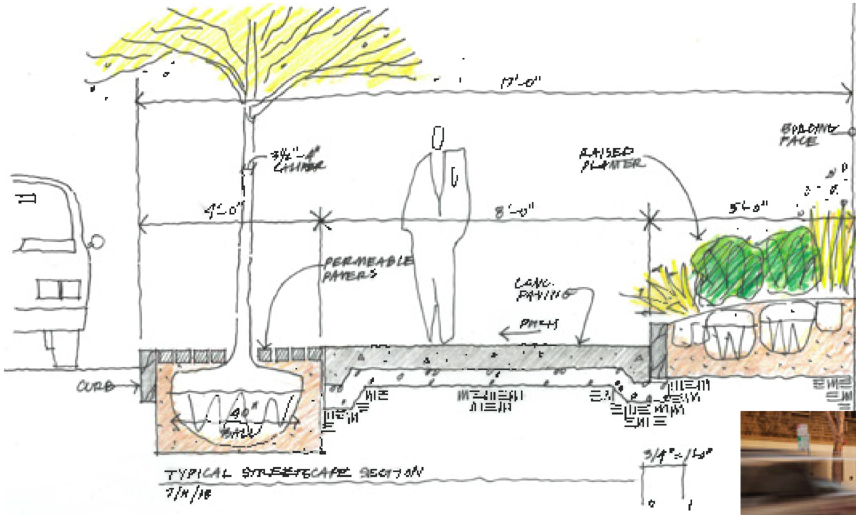
Figure 3-4

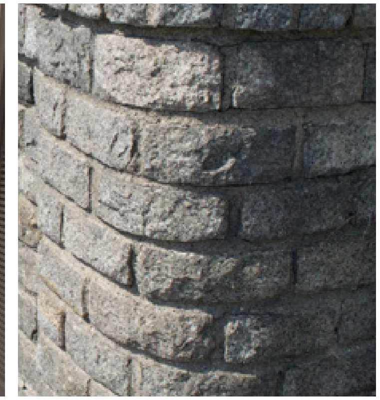
AD MELIORA | CWDG | tat

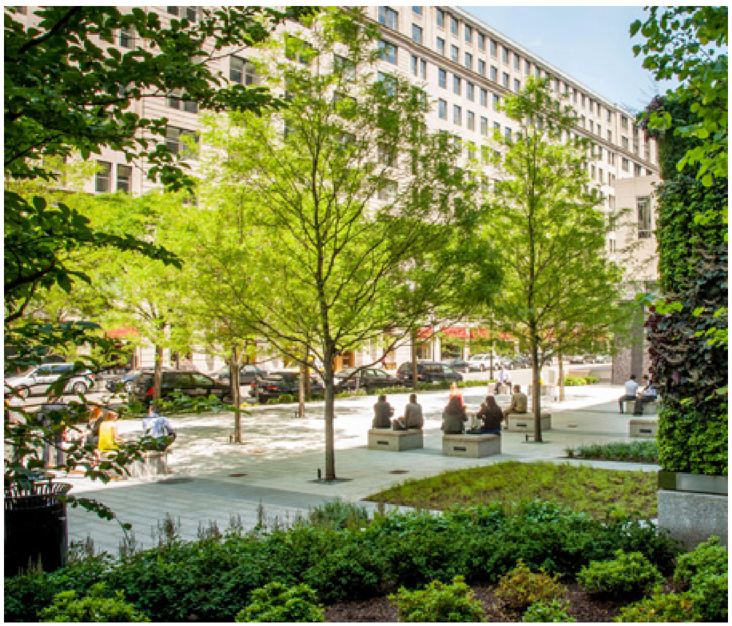
1717 - 1725 Hyde Park Avenue

Proposed Landscape Plan

Boston, MA | October 23, 2018 | 17105 |







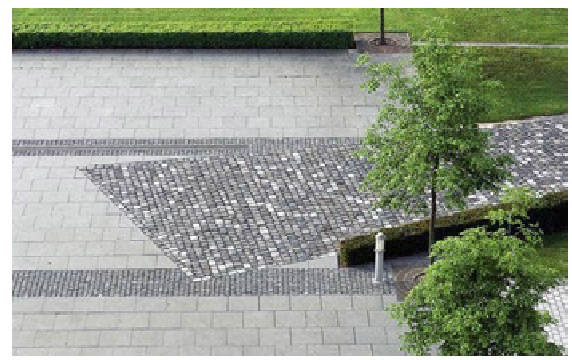


Figure 3-5

1717 - 1725 Hyde Park Avenue

Public Realm Concepts

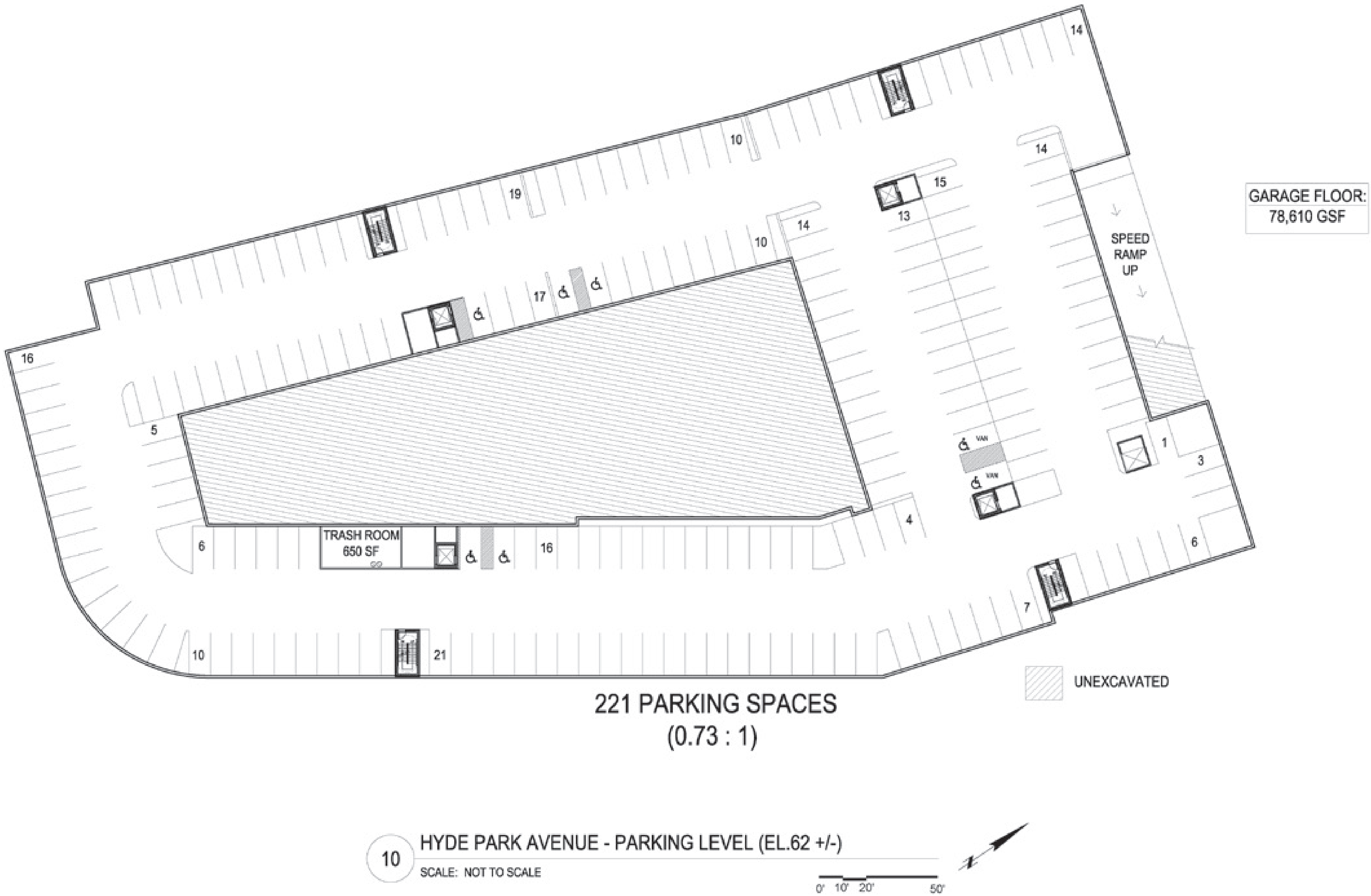
Boston, MA | October 23, 2018 | 17105 |

AD MELIORA

CWDG

tat

Figure 3-6



Parking Level Plan

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 | © The Architectural Team, Inc.

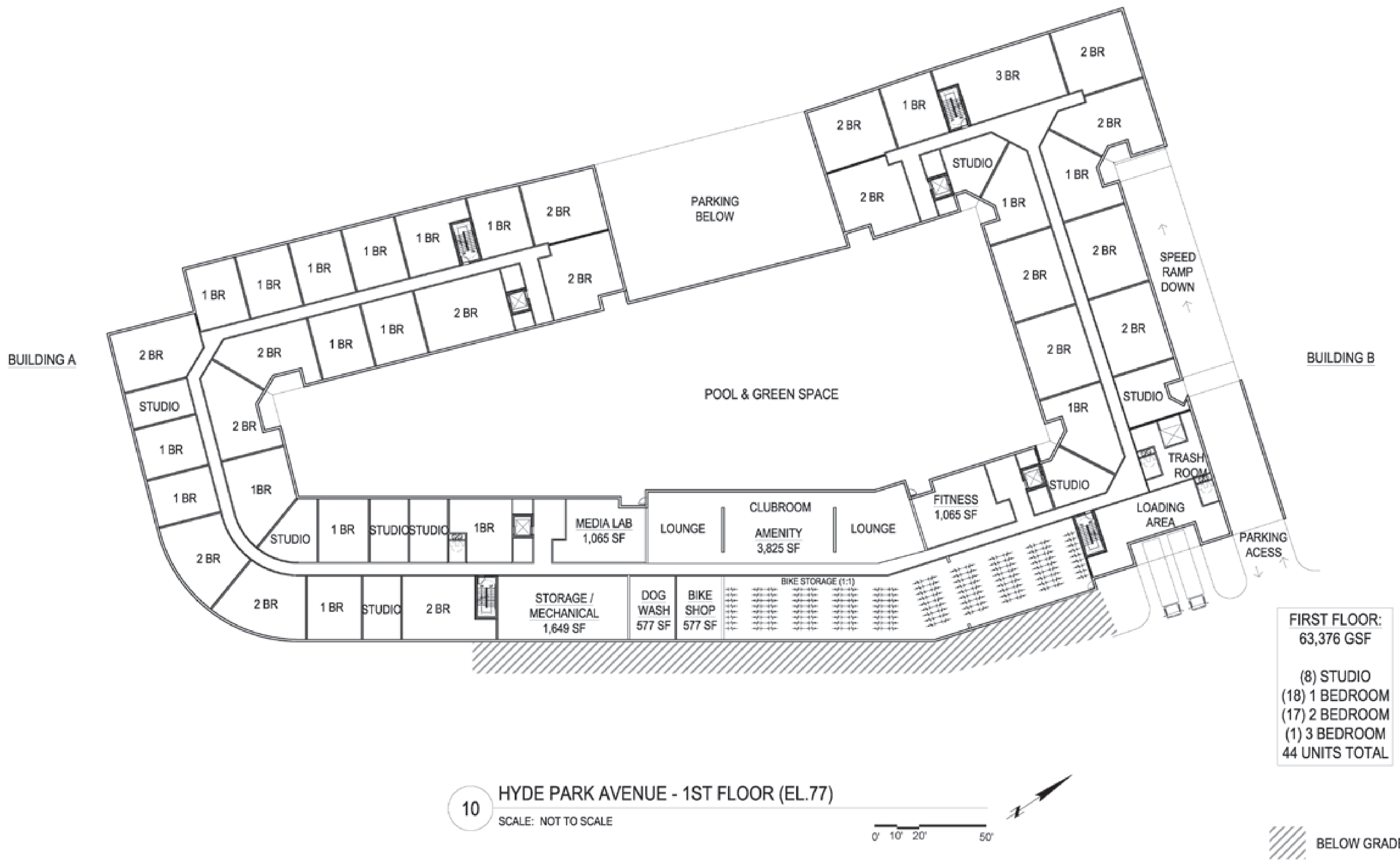


Figure 3-7

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 | © The Architectural Team, Inc.

First Floor Plan

AD MELIORA

CWDG

tat

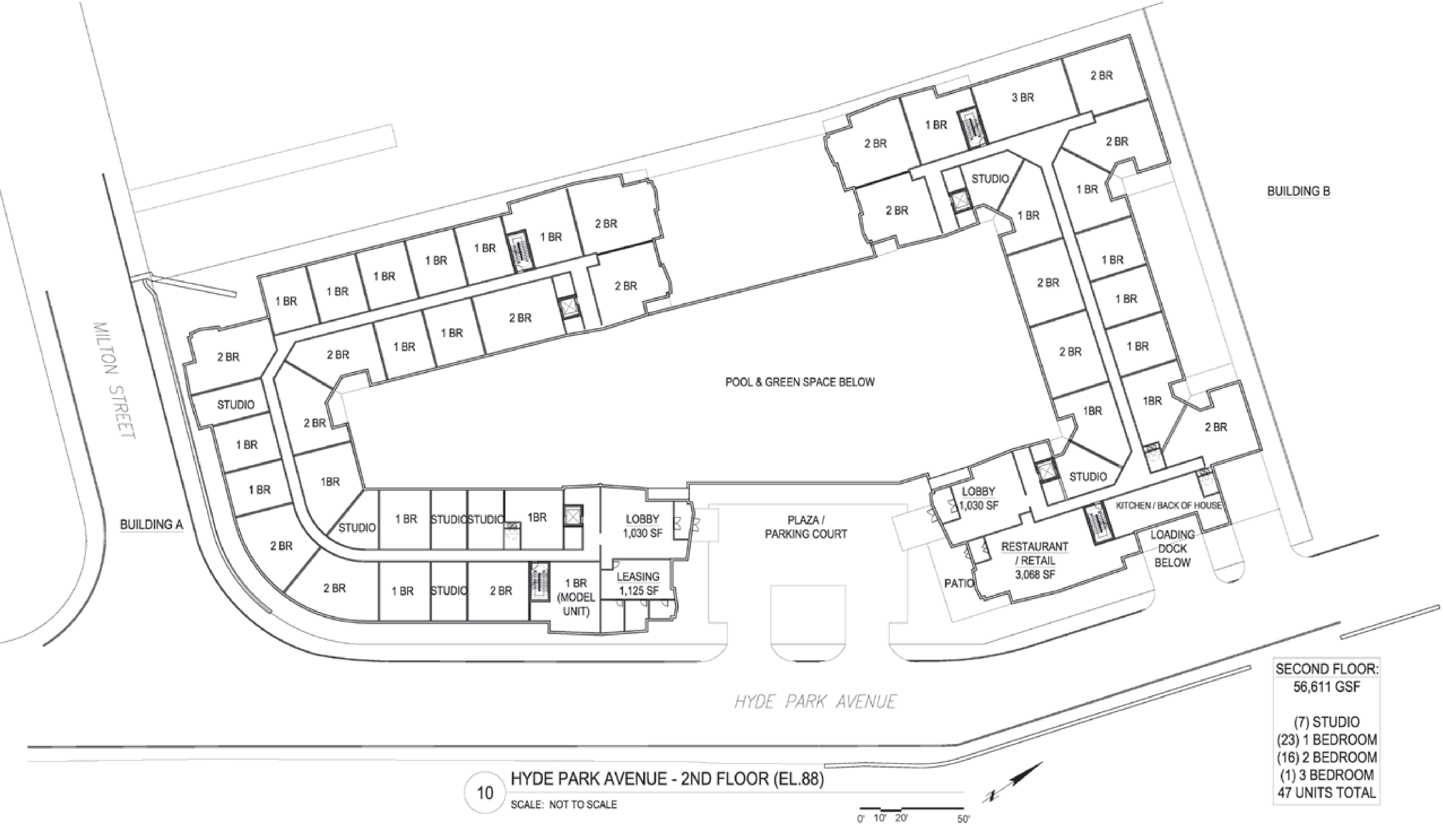


Figure 3-8

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 | © The Architectural Team, Inc.

Second Floor Plan

AD MELIORA

C W D G

tat

10 HYDE PARK AVENUE - TYPICAL LEVEL - 3RD THRU 5TH FLOOR (EL.VARIES)

SCALE: NOT TO SCALE

0' 10' 20' 50'

Figure 3-9

1717 - 1725 Hyde Park Avenue

Third - Fifth Floor Plans

Boston, MA | October 23, 2018 | 17105 | © The Architectural Team, Inc.

AD MELIORA CWDG tat

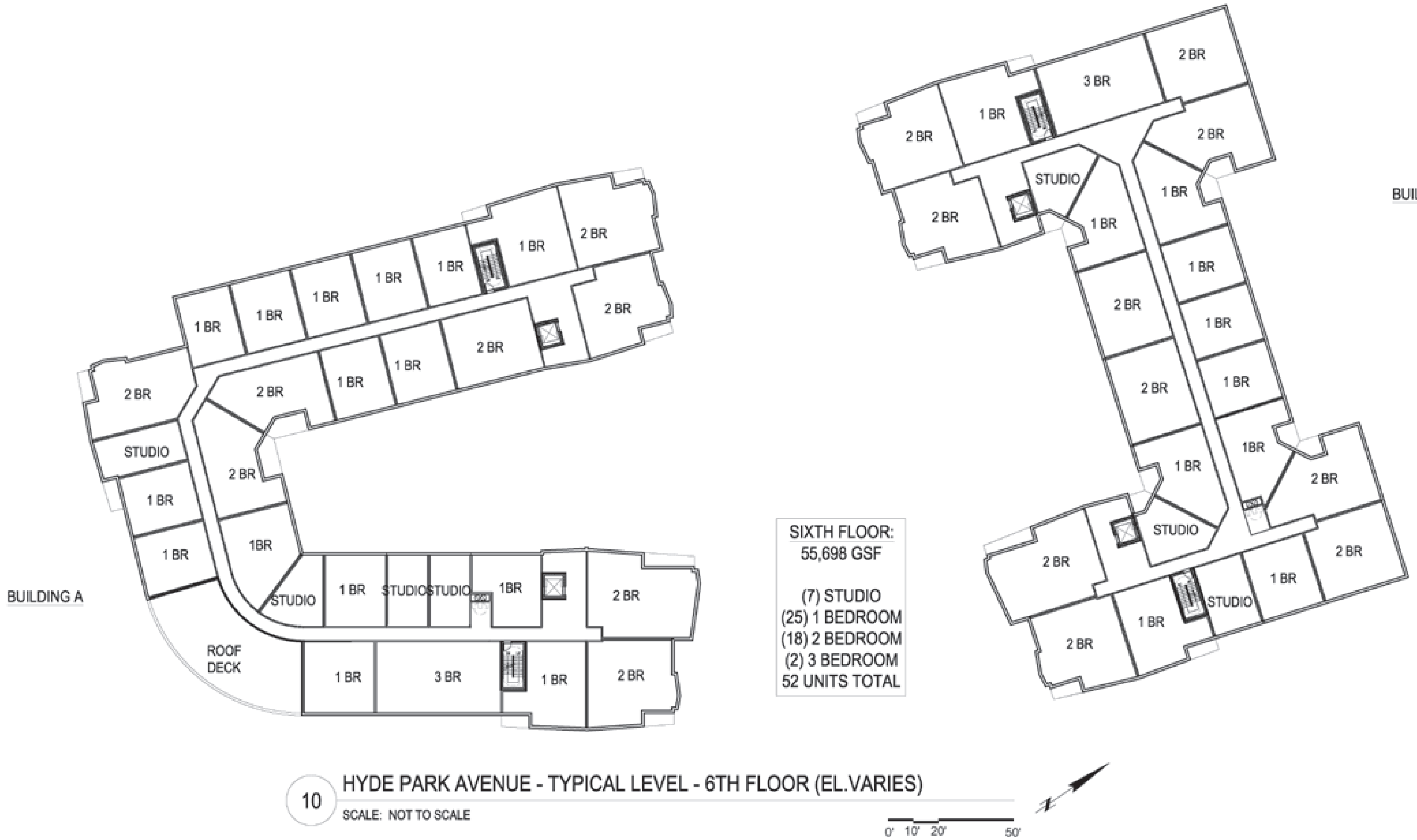


Figure 3-10

1717 - 1725 Hyde Park Avenue

Sixth Floor Plan

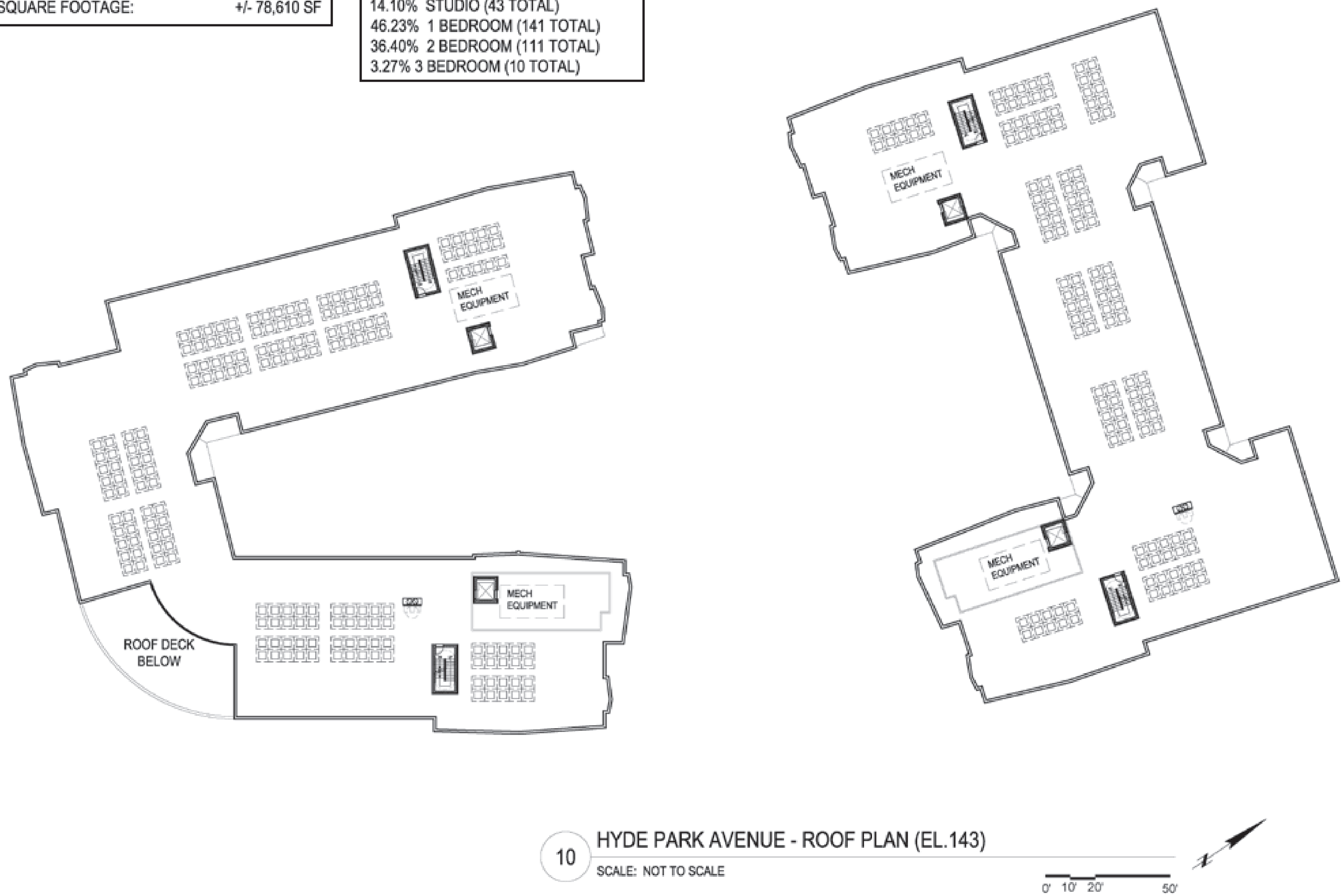
Boston, MA | October 23, 2018 | 17105 | © The Architectural Team, Inc.

DATA SUMMARY	
SITE SQUARE FOOTAGE:	+/- 119,626 SF
GROSS FLOOR AREA:	+/- 348,395 SF
F.A.R. (BUILDING GFA / SITE SF):	APPROXIMATELY 2.91
HEIGHT OF PROPOSED BUILDING:	+/- 60.4 FT
TOTAL USABLE OPEN SPACE:	+/- 45,622 SF
USABLE OPEN SPACE PER UNIT:	+/- 150 SF
PARKING GARAGE SQUARE FOOTAGE:	+/- 78,610 SF

UNIT SUMMARY	
1ST FLOOR	44 UNITS
2ND FLOOR	47 UNITS
3RD FLOOR	54 UNITS
4TH FLOOR	54 UNITS
5TH FLOOR	54 UNITS
6TH FLOOR	52 UNITS
	305 UNITS TOTAL

14.10% STUDIO (43 TOTAL)
46.23% 1 BEDROOM (141 TOTAL)
36.40% 2 BEDROOM (111 TOTAL)
3.27% 3 BEDROOM (10 TOTAL)

PARKING SUMMARY	
TOTAL UNIT COUNT:	305 UNITS
TOTAL PARKING COUNT:	221 SPACES
PARKING RATIO:	0.73 : 1



10 HYDE PARK AVENUE - ROOF PLAN (EL.143)
SCALE: NOT TO SCALE

Figure 3-11

1717 - 1725 Hyde Park Avenue

Roof Plan

Boston, MA | October 23, 2018 | 17105 |

East Elevation

North Elevation

South Elevation

West Elevation

Figure 3-12

1717 - 1725 Hyde Park Avenue

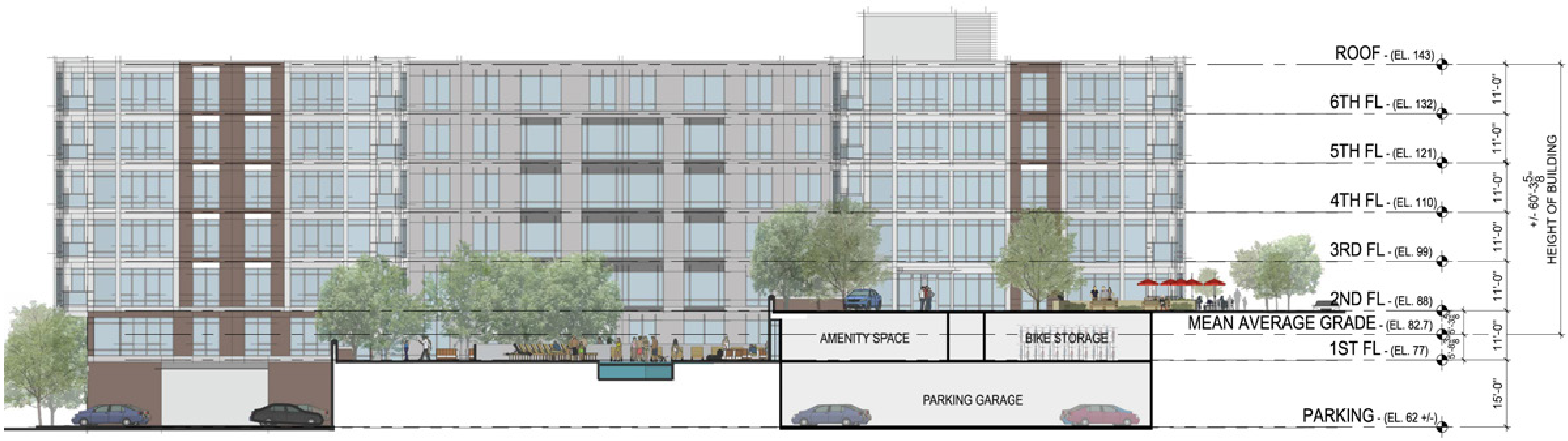
Building Elevations

Boston, MA | October 23, 2018 | 17105 | © The Architectural Team, Inc.

AD MELIORA

C W D G

tat



10 HYDE PARK AVENUE - SECTION THROUGH SITE

SCALE: NOT TO SCALE

0' 10' 20' 50'

Figure 3-13

1717 - 1725 Hyde Park Avenue

Building Section

AD MELIORA

CWDG

tat

Figure 3-14

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

Aerial Perspective Looking Northwest
Proposed Building

AD MELIORA

C W D G

tat

Figure 3-15

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View from Hyde Park Avenue Looking South
Existing Conditions

AD MELIORA

Figure 3-16

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View from Hyde Park Avenue Looking South
Proposed Building

AD MELIORA C W D G tat

Figure 3-17

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View from Hyde Park Avenue Looking North
Existing Conditions

AD MELIORA

C W D G

tat

Figure 3-18

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View from Hyde Park Avenue Looking North
Proposed Building

AD MELIORA CWDG tat

Figure 3-19

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View from Milton Street Looking Northeast
Existing Conditions

AD MELIORA

C W D G

tat

Figure 3-20

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View from Milton Street Looking Northeast
Proposed Building

AD MELIORA

C W D G

tat

Figure 3-21

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View from Chesterfield Street Looking East
Existing Conditions

AD MELIORA

C W D G

tat

Figure 3-22

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View from Chesterfield Street Looking East
Proposed Building

AD MELIORA

C W D G

tat

Figure 3-23

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View Along Hyde Park Avenue of Pocket Park & Upper Courtyard

AD MELIORA

CW DG

tat

Figure 3-24

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View Along Hyde Park Avenue of Pocket Park / Arrival Area / Cafe

AD MELIORA

C W D G

tat

Figure 3-25

1717 - 1725 Hyde Park Avenue

Boston, MA | October 23, 2018 | 17105 |

View Looking South in Lower Courtyard Amenity Pool Area

AD MELIORA

C W D G

tat

LEED v4 for BD+C: New Construction and Major Renovation

Figure 3-26

Project Checklist

Project Name: 1717 Hyde Park Ave
Date: 22-Oct-18

Y	?	N	Type	Credit	Points
1			Credit	Integrative Process	1

Y	?	N	Type	Location and Transportation	16
14	0	2		**Location and Transportation**	**16**
			Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
2			Credit	High Priority Site	2
5			Credit	Surrounding Density and Diverse Uses	5
3		2	Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
1			Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

Y	?	N	Type	Sustainable Sites	10
4	1	6		**Sustainable Sites**	**10**
Y			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
	1	1	Credit	Open Space	1
		3	Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1

Y	?	N	Type	Water Efficiency	11
7	2	2		**Water Efficiency**	**11**
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
1	1		Credit	Outdoor Water Use Reduction	2
5	1		Credit	Indoor Water Use Reduction	6
		2	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

Y	?	N	Type	Energy and Atmosphere	33
10	13	10		**Energy and Atmosphere**	**33**
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
3	3		Credit	Enhanced Commissioning	6
5	5	8	Credit	Optimize Energy Performance	18
	1		Credit	Advanced Energy Metering	1
		2	Credit	Demand Response	2
	3		Credit	Renewable Energy Production	3
	1		Credit	Enhanced Refrigerant Management	1
2			Credit	Green Power and Carbon Offsets	2

Y	?	N	Type	Materials and Resources	13
2	2	9		**Materials and Resources**	**13**
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
		5	Credit	Building Life-Cycle Impact Reduction	5
	1	1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
		2	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
	1	1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

Y	?	N	Type	Indoor Environmental Quality	16
7	2	7		**Indoor Environmental Quality**	**16**
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
		3	Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
1	1		Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
1		1	Credit	Interior Lighting	2
	1	2	Credit	Daylight	3
1			Credit	Quality Views	1
		1	Credit	Acoustic Performance	1

Y	?	N	Type	Innovation	6
6	0	0		**Innovation**	**6**
5			Credit	Innovation - EP Reduced Parking, Green Housekeeping, Education, IPM, Walkable S	5
1			Credit	LEED Accredited Professional	1

Y	?	N	Type	Regional Priority	4
2	2	0		**Regional Priority**	**4**
1			Credit	Regional Priority: Building Indoor Water Use Reduction	1
1			Credit	Regional Priority: High Priority Site	1
	1		Credit	Regional Priority: Optimize Energy	1
	1		Credit	Regional Priority: Renewable	1

Y	?	N			
53	22	36		**TOTALS**	Possible Points: **110**

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110

4.0 ENVIRONMENTAL PROTECTION COMPONENT

4.1 Shadow Impacts Analysis

4.1.1 Introduction

The following shadow study describes and graphically depicts anticipated new shadow impacts from the Proposed Project compared to shadows from existing buildings. The study presents the existing and built conditions for the Proposed Project for the hours 9:00 AM, 12:00 Noon, and 3:00 PM for the vernal equinox, summer solstice, autumnal equinox, and winter solstice. In addition, shadows are depicted for 6:00 PM during the vernal equinox, summer solstice and autumnal equinox.

4.1.2 Vernal Equinox (March 21)

Figures 4-1 through **4-4** depict shadows on March 21.

At 9:00 AM, shadows are cast in a westerly direction onto portions of the MBTA and commuter line railroad tracks

At 12:00 Noon, new shadow is cast in a northwesterly direction mostly onto the rear portion of the Proposed Project site.

At 3:00 PM, new shadow from the Proposed Project is cast in a northeasterly direction mostly onto the Proposed Project site and a small section of the adjacent industrial property to the north.

At 6:00 PM, new shadow from the Proposed Project is cast in an easterly direction across Hyde Park Avenue and onto the neighboring industrial storage parcels and the adjacent MBTA tracks.

4.1.3 Summer Solstice (June 21)

Figures 4-5 through **4-8** depict shadow impacts on June 21.

At 9:00 AM, shadows are cast in a westerly direction onto portions of onto portions of the MBTA and commuter line railroad tracks

At 12:00 Noon, new shadow is cast in a northwesterly direction onto portions of the Proposed Project site.

At 3:00 PM, new shadow from the Proposed Project is cast in a northeasterly direction mostly onto the Proposed Project site and a small section of Hyde Park Avenue.

At 6:00 PM, new shadow from the Proposed Project is cast in an easterly direction across Hyde Park Avenue and onto the neighboring industrial storage parcels.

4.1.4 Autumnal Equinox (September 21)

Figures 4-9 through **4-12** depict shadow impacts on September 21.

At 9:00 AM, shadows are cast in a westerly direction onto portions of the MBTA and commuter line railroad tracks

At 12:00 Noon, new shadow is cast in a northwesterly direction mostly onto the rear portion of the Proposed Project site.

At 3:00 PM, new shadow from the Proposed Project is cast in a northeasterly direction mostly onto the Proposed Project site and a small section of the adjacent industrial property to the north.

At 6:00 PM, new shadow from the Proposed Project is cast in an easterly direction across Hyde Park Avenue and onto the neighboring industrial storage parcels and the adjacent MBTA tracks.

4.1.5 Winter Solstice (December 21)

Figures 4-13 through **4-15** depict shadow impacts on December 21. Winter sun casts the longest shadows of the year.

At 9:00 AM, shadows are cast in a northwesterly direction across the MBTA and commuter line railroad tracks and onto Neponset Valley Parkway and portions of the neighboring properties.

At 12:00 Noon, new shadow is cast in a northwesterly direction mostly onto the rear portion of the Proposed Project site, but partially onto the commuter rail tracks and the adjacent industrial property to the north.

At 3:00 PM, new shadow from the Proposed Project is cast in a north-northeasterly direction mostly onto the adjacent industrial property to the north and a small section of Hyde Park Avenue.

4.1.6 Summary

With a proposed height of 6-floors above grade, the Proposed Project's shadow impacts are generally minimal to moderate. New shadow for most of the year is primarily limited to the railroad tracks to the west and small sections of Hyde Park Avenue to the east. During the evening hours in spring and fall, and during the morning and evening hours in winter, some shadows will extend to nearby properties. Overall, the Proposed Project's shadow impacts will not adversely impact the Proposed Project Site and surroundings.

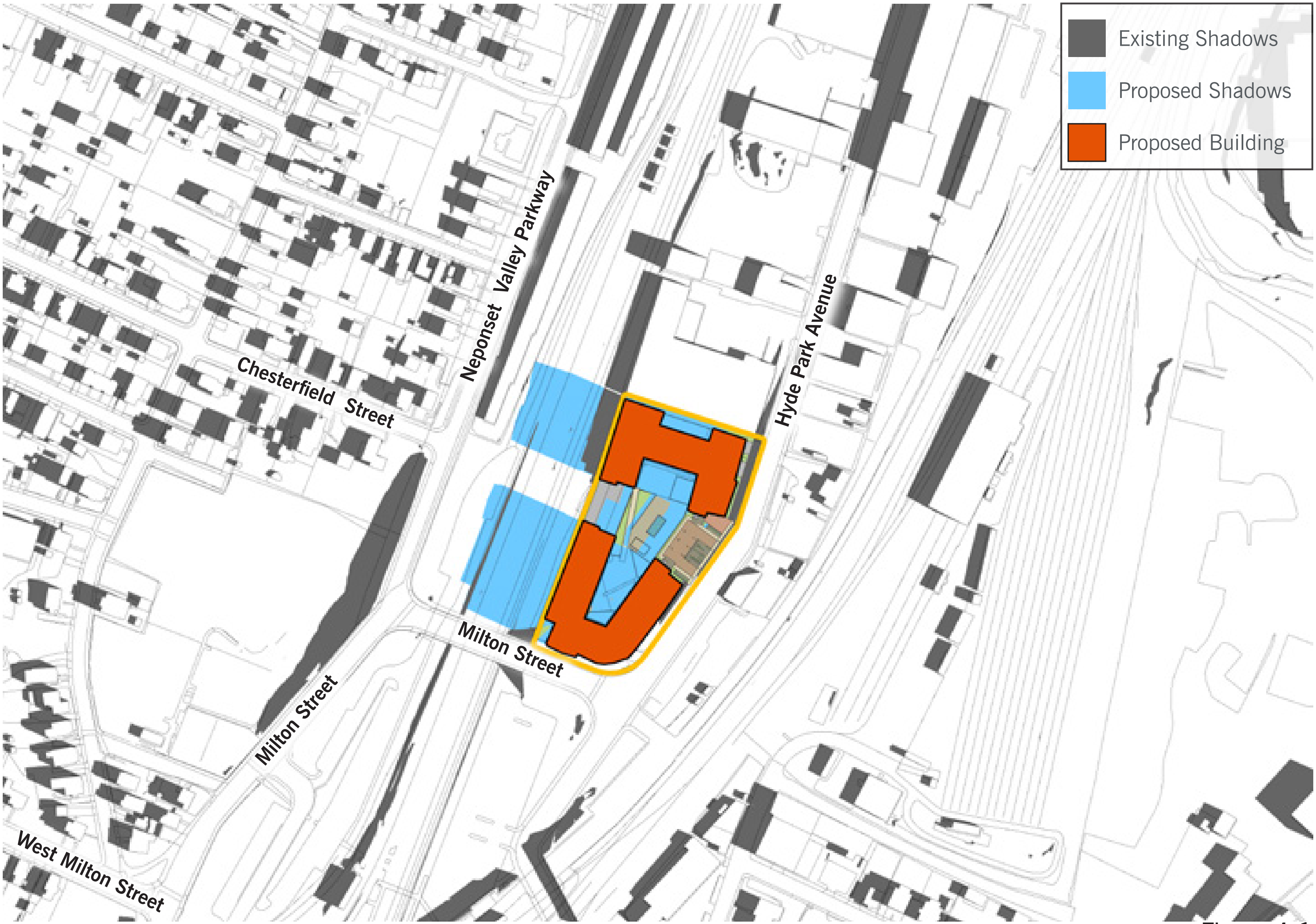


Figure 4-1

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 |

Shadow Study - March 21 @ 9:00 AM

Azimuth: 112.7 ° | Altitude: 23.45 °

AD MELIORA CWDG tat

Figure 4-2

AD MELIORA

C W D G

tat

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 | © The Architectural Team, Inc.

Shadow Study - March 21 @ 12:00 PM

Azimuth: 161.18 ° | Altitude: 46.49 °

Figure 4-3

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 |

Shadow Study - March 21 @ 3:00 PM

Azimuth: 223.33° | Altitude: 39.11 °

AD MELIORA

C W D G

tat

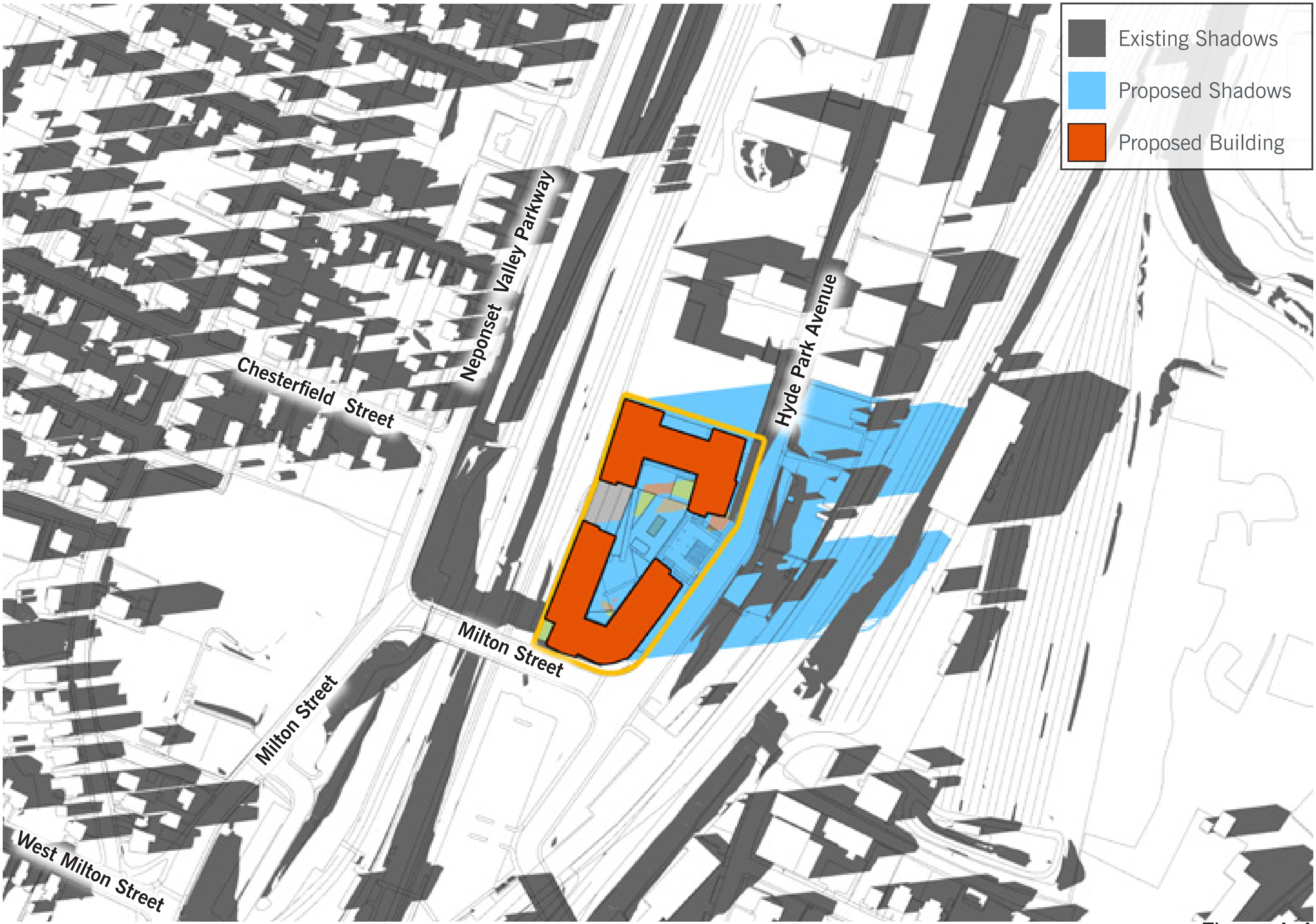


Figure 4-4

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 | © The Architectural Team, Inc.

Shadow Study - March 21 @ 6:00 PM

Azimuth: 261.65 ° | Altitude: 9.85 °

AD MELIORA

Figure 4-5

AD MELIORA | CWDG | tat

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 | © The Architectural Team, Inc.

Shadow Study - June 21 @ 9:00 AM

Azimuth: 95.53 ° | Altitude: 39.97 °

Figure 4-6

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 |

Shadow Study - June 21 @ 12:00 PM

Azimuth: 149.58 ° | Altitude: 68.81 °

Figure 4-7

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 |

Shadow Study - June 21 @ 3:00 PM

Azimuth: 246.36 ° | Altitude: 56.46 °

Figure 4-8

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 | © The Architectural Team, Inc.

Shadow Study - June 21 @ 6:00 PM

Azimuth: 280.73 ° | Altitude: 23.82 °

AD MELIORA C W D G tat

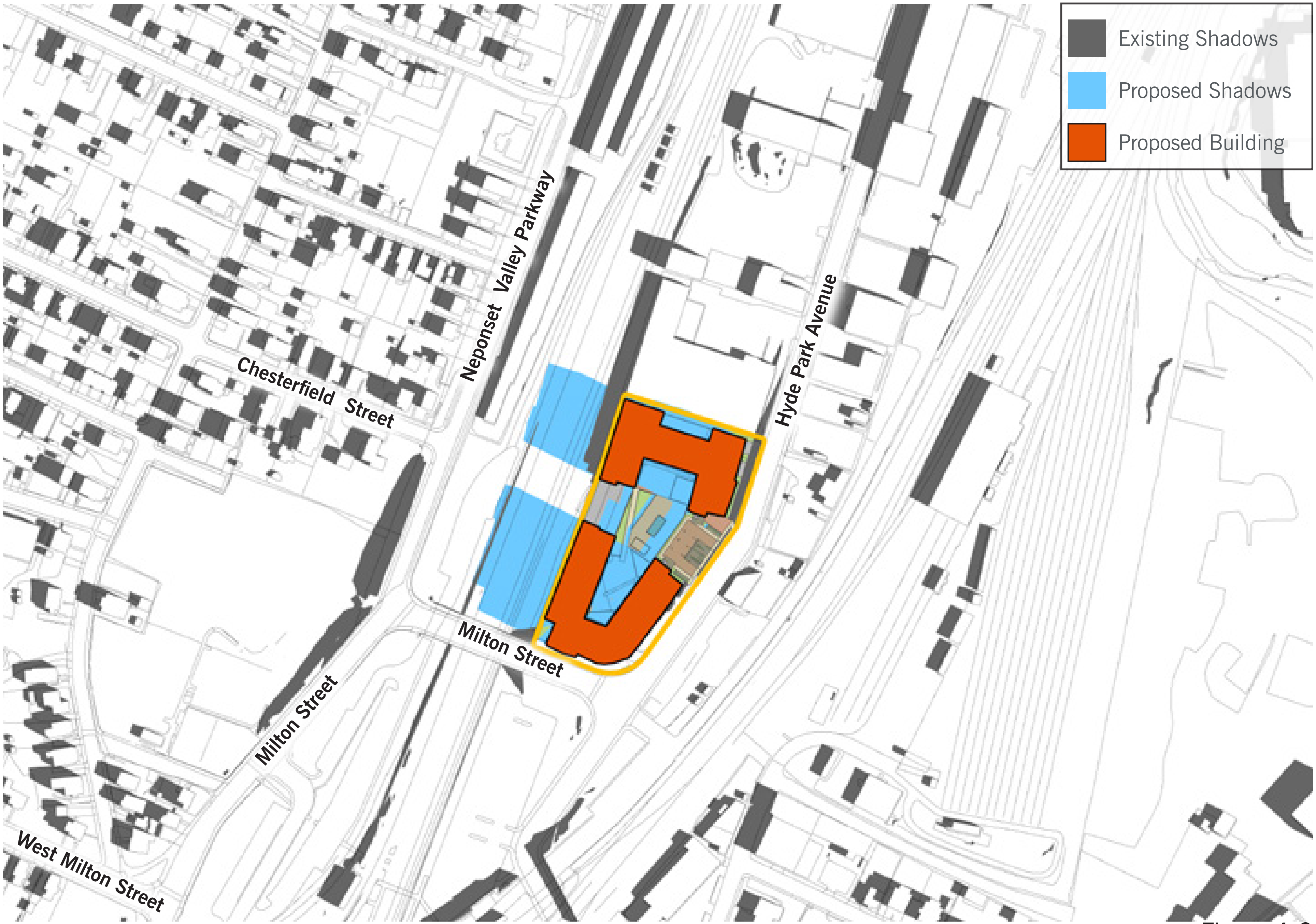


Figure 4-9

AD MELIORA

C W D G

tat

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 |

Shadow Study - September 21 @ 9:00 AM

Azimuth: 115.36° | Altitude: 26.01 °

Figure 4-10

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 | © The Architectural Team, Inc.

Shadow Study - September 21 @ 12:00 PM

Azimuth: 166.17° | Altitude: 47.38 °

AD MELIORA C W D G tat

Figure 4-11

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 |

Shadow Study - September 21 @ 3:00 PM

Azimuth: 227.18 ° | Altitude: 37.32°

AD MELIORA

C W D G

tat

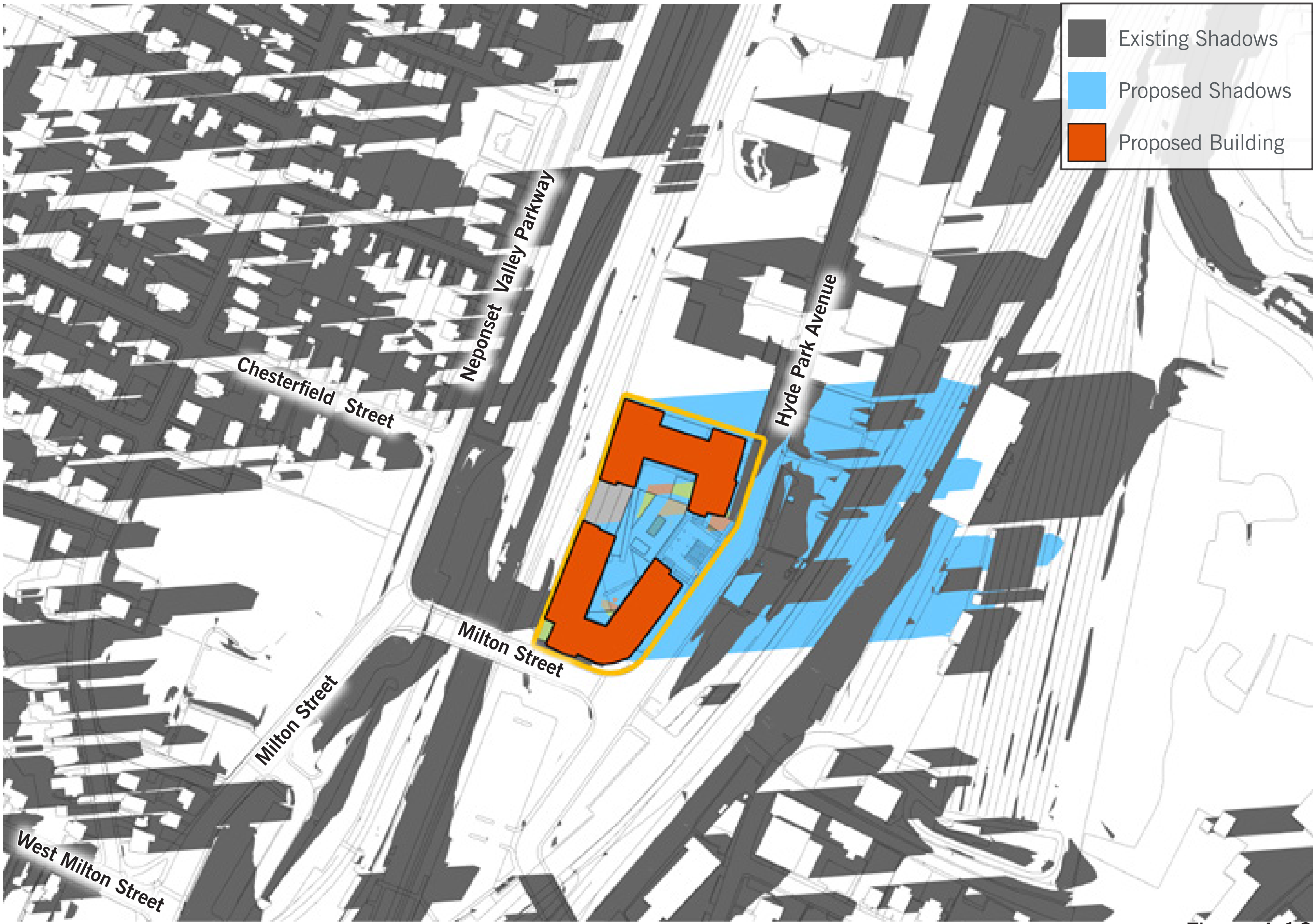


Figure 4-12

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 | © The Architectural Team, Inc.

Shadow Study - September 21 @ 6:00 PM

Azimuth: 264.04° | Altitude: 7.27°

AD MELIORA

C W D G

tat

Figure 4-13

1717 - 1725 Hyde Park Avenue

Shadow Study - December 21 @ 9:00 AM

Boston, MA | November 5, 2018 | 17105 |

Azimuth: 130.36° | Altitude: 6.75°

AD MELIORA

CWDG

tat

Figure 4-14

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 |

Shadow Study - December 21 @ 12:00 PM

Azimuth: 169.4° | Altitude: 23.52°

AD MELIORA

C W D G

tat

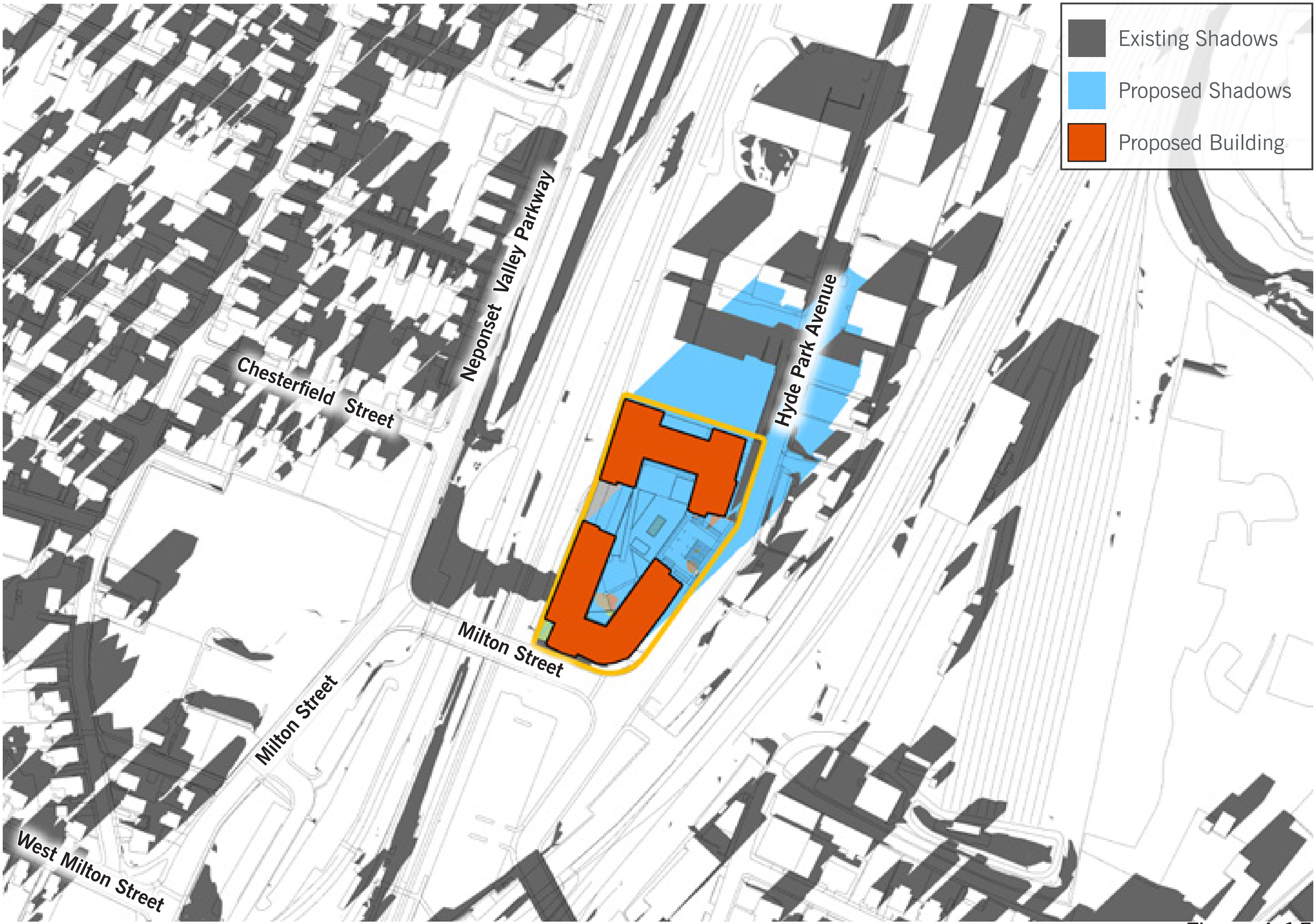


Figure 4-15

1717 - 1725 Hyde Park Avenue

Boston, MA | November 5, 2018 | 17105 |

Shadow Study - December 21 @ 3:00 PM

Azimuth: 212.81° | Altitude: 17°

AD MELIORA C W D G tat

4.2 Air Quality

Tech Environmental, Inc. performed air quality analyses for the proposed residential/supporting retail services development at 1717- 1725 Hyde Park Avenue in the Hyde Park neighborhood. These analyses consisted of: 1) an evaluation of existing air quality; 2) an evaluation of potential carbon monoxide (CO) impacts from the operation of the Proposed Project's enclosed parking garage, and 3) a microscale CO analysis for intersections in the Proposed Project area that meet the BPDA criteria for requiring such an analysis.

4.2.1 Existing Air Quality

The City of Boston is currently classified as being in attainment of the Massachusetts and National Ambient Air Quality Standards ("NAAQS") for all of the criteria air pollutants except ozone (see **Table 4.2-1**). These air quality standards have been established to protect the public health and welfare in ambient air, with a margin for safety.

The Massachusetts Department of Environmental Protection ("DEP") currently operates air monitors in various locations throughout the city. The closest, most representative, DEP monitors for carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), fine particulate matter ($PM_{2.5}$), coarse particulate matter (PM_{10}), ozone (O_3), and lead are located at Dudley Square (Harrison Avenue).

Table 4.2-2 summarizes the DEP air monitoring data, for the most recent available, complete, three-year period (2014-2016), that are considered to be representative of the Proposed Project area. **Table 4.2-2** shows that the existing air quality in the Proposed Project area is generally much better than the NAAQS. The highest impacts relative to a NAAQS are for ozone, NO_2 and $PM_{2.5}$. Ozone is a regional air pollutant on which the small amount of additional traffic generated by this Proposed Project will have an insignificant impact. The Proposed Project's operations will not have a significant impact on local NO_2 and $PM_{2.5}$ concentrations.

Table 4.2-1. Massachusetts and National Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Time	NAAQS ($\mu g/m^3$)
Sulfur Dioxide (SO_2)	1-hour[P] 3-hour[S] Annual[P] (Arithmetic Mean)	196[a] 1,300[b] 80
Carbon Monoxide (CO)	1-hour[P] 8-hour[P]	40,000[b] 10,000[b]
Nitrogen Dioxide (NO_2)	1-hour[P] Annual[P/S] (Arithmetic Mean)	188[c] 100
Coarse Particulate Matter (PM_{10})	24-hour[P/S]	150
Fine Particulate Matter ($PM_{2.5}$)	24-hour[P/S] Annual[P] (Arithmetic Mean) Annual[S] (Arithmetic Mean)	35[d] 12[e,f] 15
Ozone (O_3)	8-hour[P/S]	137[g]
Lead (Pb)	Rolling 3-Month Avg.[P/S]	0.15

P = primary standard; S = secondary standard.

[a] 99th percentile 1-hour concentrations in a year (average over three years).

[b] One exceedance per year is allowed.

[c] 98th percentile 1-hour concentrations in a year (average over three years).

[d] 98th percentile 24-hour concentrations in a year (average over three years).

[e] Three-year average of annual arithmetic means.

[f] As of March 18, 2013, the U.S. EPA lowered the $PM_{2.5}$ annual standard from 15 ug/m^3 to 12 ug/m^3.

[g] Three-year average of the annual 4th-highest daily maximum 8-hour ozone concentration must not exceed 0.070 ppm (137 ug/m^3) (effective December 28, 2015); the annual PM_{10} standard was revoked in 2006.

Table 4.2-2. Representative Existing Air Quality in the Project Area

Pollutant, Averaging Period	Monitor Location	Value (↘g/m^3)	NAAQS (↘g/m^3)	Percent of NAAQS
CO, 1-hour	Harrison Avenue, Boston	2,760	40,000	7%
CO, 8-hour	Harrison Avenue, Boston	1,375	10,000	14%
NO_2, 1-hour	Harrison Avenue, Boston	96.0	188	51%
NO_2, Annual	Harrison Avenue, Boston	29.7	100	30%
Ozone, 8-hour	Harrison Avenue, Boston	110	137	80%
PM_{10}, 24-hour	Harrison Avenue, Boston	61	150	41%
$PM_{2.5}$, 24-hour	Harrison Avenue, Boston	14.0	35	40%
$PM_{2.5}$, Annual	Harrison Avenue, Boston	6.0	12	50%
Lead, Quarterly	Harrison Avenue, Boston	0.017	1.5	1%
SO_2, 1-hour	Harrison Avenue, Boston	23.1	196	12%

Source: MassDEP, http://www.mass.gov/eea/agencies/massdep/air/quality/air-monitoring-reports-and-studies.html, downloaded September 19, 2018.

Notes:

(1) Annual averages are highest measured during the most recent three-year period for which data are available (2014 - 2016). Values for periods of 24-hours or less are highest, second-highest over the three-year period unless otherwise noted.

(2) The eight-hour ozone value is the 3-year average of the annual fourth-highest values, the 24-hour $PM_{2.5}$ value is the 3-year average of the 98th percentile values, the annual $PM_{2.5}$ value is the 3-year average of the annual values – these are the values used to determine compliance with the NAAQS for these air pollutants.

(3) The one-hour NO_2 value is the -year average of the 98th percentile values and the one-hour SO_2 value is the -year average of the 99th percentile values.

(4) Three-year average of the annual 4th-highest daily maximum 8-hour ozone concentration must not exceed 0.070 ppm (137 ug/m^3) (effective December 28, 2015); the annual PM_{10} standard was revoked in 2006 and the 3-hour SO_2 standard was revoked by the US EPA in 2010.

4.2.2 Impacts from Parking Garage

The Proposed Project also includes an enclosed ground level parking garage designed to provide parking spaces for 221 vehicles. An analysis of the worst-case air quality impacts from the proposed parking garage was performed (see **Appendix B**). The procedures used for this analysis are consistent with U.S. EPA's Volume 9 guidance.[1] The objective of this analysis was to

[1] US EPA, "Guidelines for Air Quality Maintenance Planning and Analysis Volume 9 (Revised): Evaluating Indirect Sources," EPA-450/4-78-001, September 1978.

determine the maximum CO concentrations inside the garage and at the closest sensitive receptors surrounding the Project. These closest sensitive receptors include: air intakes located on the proposed building and nearby existing buildings and pedestrians at ground level anywhere near the Proposed Project. CO emissions from motor vehicles operating inside the garage were calculated and the CO concentrations inside the garage and surrounding the Proposed Project were based on morning and afternoon peak traffic periods.

The objective of this analysis was to determine the maximum CO concentrations at the closest sensitive receptors surrounding the Proposed Project. These closest sensitive receptors include: air intakes located on the proposed building and nearby existing buildings, and pedestrians at ground level anywhere near the Proposed Project. The parking garage CO emissions were modeled using an U.S. EPA-approved air model.

Garage Ventilation System

The proposed parking garage will require mechanical ventilation. The garage ventilation system will be designed to provide adequate dilution of the motor vehicle emissions before they are vented outside. The design of the garage ventilation system will meet all building code requirements. Full ventilation of the garage will require a maximum flow of approximately 114,000 cubic feet per minute (cfm) of fresh air. This quantity of air is designed to meet the building code and will be more than adequate to dilute the emissions inside the parking garage to safe levels before they are vented outside. The garage ventilation exhausts will likely be located at two side vents.

Peak Garage Traffic Volumes

The peak morning and afternoon one-hour entering and exiting traffic volumes for the garage are shown in **Table 4.2-3**.

Table 4.2-3. Peak-Hour Garage Traffic Volumes

Period	Entering (vehicles/hour)	Exiting (vehicles/hour)	Total (vehicles/hour)
Morning Peak Hour	37	61	98
Afternoon Peak Hour	66	51	117

Source: Howard-Stein Hudson, Inc.

Motor Vehicle Emission Rates

The U.S. Environmental Protection Agency (EPA) MOVES2014b emission factor model was used to calculate single vehicle CO emissions rates, for a vehicle speed of 5 mph. The inputs to the MOVES2014b model followed the latest guidance from the DEP and were performed for the future traffic year of 2025. The CO emission rate calculated by MOVES2014b, for vehicles moving at 5 miles per hour (mph), was 2.821 grams per vehicle-mile for each entering and exiting vehicle. These emission rates apply to wintertime conditions when motor vehicle CO emissions are greatest due to cold temperatures. MOVES2014b model output is provided in the **Appendix B.**

To determine the maximum one-hour CO emissions inside the garage it was necessary to estimate the amount of time each motor vehicle will be in the parking garage with its engine running. To be conservative, it was assumed that every car entering or leaving the garage will be operating during that peak hour and traveling to or from the garage at the furthest parking spot. The calculations in **Appendix B** show how long each vehicle will be operating in the garage for both the morning and afternoon peak periods.

Peak Garage CO Emission Rate and CO Concentration Inside the Garage

The peak one-hour CO emission rate for the parking garage was calculated to be 0.78 grams per minute for the morning peak hour and 0.94 grams per minute for the afternoon peak hour. Applying the maximum volumetric garage ventilation flow rate for the parking garage, the peak one-hour CO concentration inside the garage was calculated to be 0.21 parts of CO per million parts of air (ppm) for the morning peak hour and 0.25 ppm for the afternoon peak hour. Therefore, the peak one-hour CO concentration inside the garage will be 0.25 ppm with a peak one-hour emission rate of 0.94 grams/minute (0.016 grams/second), corresponding to the afternoon peak period. These predictions represent conservative estimates of the peak garage CO emissions and concentrations.

Peak Ambient CO Concentration

Worst-case concentrations of CO from the parking garage was predicted for locations around the building using AERMOD model (Version18081) in screening-mode. The results of the air quality analysis for locations outside and around the building are summarized in **Table 4.2-4**. The results in **Table 4.2-4** represent all outside locations on and near the Proposed Project Site, including nearby building air intakes and nearby residences. **Appendix B** contains the AERMOD model output.

The AERMOD model in screening-mode was used to predict the maximum concentration of CO by modeling the parking garage emissions as volume sources using worst-case meteorological conditions for an urban area. The screening-mode option simulates modeling results predicted by AERMOD. The predicted concentrations presented here represent the worst-case air quality impacts from the parking garage at all locations on and around the Proposed Project. AERMOD predicted one-hour average concentrations of air pollutants.

AERMOD predicted that the maximum one-hour CO concentration from the parking garage will be 0.11 ppm (130.5 $\mu g/m^3$). This concentration represents the maximum CO concentration at any location surrounding the Proposed Project. AERSCREEN guidance allows the maximum eight-hour CO impact to be conservatively estimated by multiplying the maximum one-hour impact by a factor of 0.9 (i.e. the eight-hour impact is 90% of the one-hour impact). The maximum predicted eight-hour CO concentration was determined to be approximately 0.099 ppm (0.11 ppm x 0.9).

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare in ambient air, with a margin for safety. The NAAQS for CO are 35 ppm for a one-hour average and 9 ppm for an eight-hour average. The Commonwealth of Massachusetts has established the same standards for CO. The CO background values of 2.4 ppm for a one-hour period and 1.2 ppm for an eight-hour period were added to the maximum predicted garage ambient impacts to represent the CO contribution from other, more distant, sources. With the background concentration added, the peak, total, one-hour and eight-hour CO impacts from the parking garage, at any location around the building, will be no larger than 2.5 ppm and 1.3 ppm, respectively. These maximum predicted total CO concentrations (garage exhaust impacts plus background) are safely in compliance with the NAAQS. This analysis demonstrates that the operation of the parking garage will not have an adverse impact on air quality.

Table 4.2-3. Peak Predicted Parking Garage Air Quality Impacts

Location	Peak Predicted One-Hour Impact (ppm)	One-Hour NAAQS (ppm)	Peak Predicted Eight-Hour Impact (ppm)	Eight-Hour NAAQS (ppm)
Outside – Surrounding the Building*	2.5	35 (NAAQS)	1.3	9 (NAAQS)

NAAQS = Massachusetts and National Ambient Air Quality Standards for CO (ppm = parts per million)
* Representative of maximum CO impact at all nearby residences, buildings, and sidewalks.

Conclusions

A conservative air quality analysis demonstrates that there will be no adverse air quality impacts from the operation of the Proposed Project's proposed parking garage.

4.2.3 Microscale CO Analysis for Selected Intersections

The Boston Planning and Development Agency (BPDA) and the Massachusetts DEP typically require a microscale air quality analysis for any intersection in the Proposed Project study area where the level of service (LOS) is expected to deteriorate to D and the Proposed Project causes a 10% increase in traffic or where the level of service is E or F and the Proposed Project contributes to a reduction in LOS. For such intersections, a microscale air quality analysis is required to examine the carbon monoxide (CO) concentrations at sensitive receptors near the intersection.

A microscale CO air quality analysis was performed to predict the maximum one-hour and eight-hour CO concentrations for sensitive receptors at the four intersections in the Proposed Project area that meet the BPDA selection criteria. The analysis was performed for three cases: 2018 Existing, 2025 No-Build, and 2025 Build. Estimation of CO levels at the intersections that meet the BPDA/DEP selection criteria under the 2018 Build scenario provides a good indication of whether the Proposed Project will interfere with the maintenance of the NAAQS for CO. Since CO levels are highest near intersections where the worst traffic congestion occurs, compliance with the NAAQS at these intersections and receptors protects public health elsewhere in the community.

Dispersion Model

The latest version of the U.S. EPA CAL3QHC model[2] (Version 2.0, dated October 1995) was used to predict maximum one-hour CO concentrations at each intersection from both moving and idling vehicles. This model includes the U.S. EPA CALINE-3 dispersion model[3] along with methods for estimating queue lengths and the contribution of emissions from idling vehicles at intersections. The Air Quality Appendix (**Appendix B)** contains the CAL3QHC model output.

Meteorological Inputs

The following meteorological parameters were selected for the CAL3QHC modeling, in accordance with U.S. EPA and Massachusetts DEP guidance:

Roughness Length: 108 cm (single family residential)

Mixing Height: 1,000 meters

Wind Speed: 1.0 m/s (minimum)

Wind Direction: 360^{o} in 10^{o} increments

Stability Class: Class D.

Intersections

Eight intersections were included in the transportation study area, and each of these intersections was considered for a microscale CO air quality analysis. Table 4.5-5 shows a summary of the 2018 Build LOS analysis for each intersection. The Proposed Project will generate a total of 98 motor vehicle trips during the morning peak traffic period and 117 motor vehicle trips during the afternoon peak traffic period. Based on data presented in Section (summarized in **Table 4.3-4**), four intersections meet the DEP/BPDA criteria for a microscale analysis:

1. Hyde Park Avenue & Father Hart Bridge/Commuter Rail Parking Lot
2. Milton Street/Neponset Valley Parkway & Father Hart Bridge
3. Milton Street & Industrial Drive
4. Sprague Street/Milton Street & West Milton Street

[2] U.S. EPA, User's Guide to CAL3QHC Version 2.0: A Modeling Methodology for Predicting Pollution Concentrations Near Roadway Intersections, Office of Air Quality Planning and Standards, September 1995.
[3] California Department of Transportation, CALINE-3, A Versatile Dispersion Model for Predicting Air Pollutant Levels Near Highways and Arterial Streets, FHWA/CA/TL-79/23, Sacramento, CA, November 1979.

Table 4.2-4. Summary of Build Case Level of Service

Intersection	Build LOS (AM/PM)	Requires Analysis?
Wolcott Sq. & Hyde Park Ave/Wolcott Ct & Hyde Park Ave – signalized	C/B	NO
Neponset Valley Parkway & Truman Parkway - signalized	C/C	NO
Hyde Park Ave & Father Hart Bridge/Commuter Rail Parking Lot – signalized	D/D	YES
Milton St/Neponset Valley Pkwy & Father Hart Bridge - signalized	D/C	YES
Milton St & Industrial Drive - unsignalized	F/F	YES
Sprague St/Milton St & West Milton St - unsignalized	F/D	YES
Hyde Park Avenue & Reservation Road - unsignalized	B/B	NO
Hyde Park Avenue & Site Drive - unsignalized	B/B	NO

The LOS shown represents the overall delay at each signalized intersection and the worst approach at the unsignalized intersection. Percentages shown for LOS D are percent increase in traffic from the Proposed Project.
*Proposed Project does not contribute to reduction in level of service.

Source: Howard/Stein-Hudson Associates, Inc.

Receptors

Receptors are the locations where the CAL3QHC model predicts CO concentrations. Receptors were placed at regular intervals along each modeled roadway, where the public could have access. These receptors conservatively cover all of the locations where the general public may have frequent and prolonged access to the ambient air at each intersection. Figures 1, 2, 3 and 4 in the **Appendix B** show the locations of the receptors that were modeled at each of the four analyzed intersections. Following U.S. EPA guidance, all receptors were placed at a height of 1.8 meters and were located at least 3 meters from roadway curbsides.

Modeled Roadways

Each roadway approach was modeled as a free-flow (moving vehicles), line source. The width of each free-flow link was set equal to the roadway width (excluding the parking areas) plus 3 meters on each side. Composite CO emission rates, in units of grams per mile, were applied to each free-flow link.

Each roadway approach with traffic signal control was also modeled as a queue link (vehicles waiting for a traffic signal to turn green). The width of each queue link was modeled as the actual approach lane width. The length of each queue was calculated by the CAL3QHC model. An idle CO emission factor, in grams per hour, was applied to each queue link.

The CAL3QHC model requires the input of signal timing for signalized intersections. All four of the intersections are currently unsignalized and were modeled as being unsignalized for the 2018 Existing case. Under the 2025 No-Build and Build cases, the Hyde Park Avenue & Father Hart Bridge/Commuter Rail Parking Lot and Milton Street/Neponset Valley Parkway & Father Hart Bridge will be converted to signalized intersections. Signal timings were provided by Howard/Stein-Hudson Associates, Inc., the Proposed Project's transportation consultant, and are shown in the **Appendix B** for the peak periods that were modeled.

Eight-Hour Average CO Concentrations

Peak eight-hour CO concentrations from roadway traffic were calculated by multiplying the model predicted one-hour CO values (without an added background concentration) by a persistence factor of 0.7.[4] The persistence factor takes into account that the intensity of the traffic during the peak eight-hour period will be less than that which will occur during the peak one-hour period. It also takes into account that the worst-case meteorological conditions (i.e. low wind speed blowing directly from the source to the receptor), corresponding to the peak one-hour concentrations, will not persist for an entire eight-hour period.

Background CO Concentrations

The one-hour and eight-hour traffic-related CO concentrations predicted by the CAL3QHC model were added to conservative one-hour and eight-hour background CO concentrations of 2.4 parts of CO ppm and 1.2 ppm, respectively, for the existing case. Background concentrations for the year 2018 will likely be lower than the existing background CO concentrations. To be conservative, the same background concentrations were used for the 2025 No-Build and Build cases. The sums of the CAL3QHC modeled CO concentrations plus background were compared to the NAAQS for CO.

CO Emission Factors

The U.S. Environmental Protection Agency (EPA) MOVES2014 emission factor model was used to calculate CO emissions factors. The inputs to the MOVES2014 model followed the latest guidance from the DEP and were performed for the existing (2018) and future (2025) traffic years. Both free flow and idling emissions factors were calculated for each traffic year. The free flow emission rate for vehicles traveling on the roadways was based on a vehicle speed of 25 mph for all of the modeled roadways. The free flow CO emission rates for a traffic speed of 25 mph were predicted to be 2.45 grams/mile in 2018 and 1.66 grams/mile in 2025. The CO emission rate calculated by MOVES2014, for idling vehicles, was 6.67 grams/mile in 2018 and 3.04 grams/mile in 2025. The CO emission rate calculated by MOVES2014, for queued vehicles at unsignalized intersections, was 5.31 grams/mile in 2018 and 3.47 grams/mile in 2025. These

[4] U.S. EPA, Guideline for Modeling Carbon Monoxide from Roadway Intersections, EPA-454/R-92-005, Office of Air Quality Planning and Standards, November 1992.

emission rates apply to wintertime conditions when motor vehicle CO emissions are greatest due to cold temperatures. MOVES2014 model output is provided in the **Appendix B.**

Traffic Information

Traffic volume data were available for the peak weekday morning and afternoon periods. Traffic data for the period with the worst LOS (i.e. largest traffic congestion and vehicle delays) at each intersection were modeled to reflect the potential worst-case air quality impacts.

Predicted Project Impacts

The microscale air quality analysis predicted maximum one-hour and eight-hour CO concentrations for sensitive receptors for four intersections in the Proposed Project area which meet the BPDA/DEP selection criteria. The highest predicted CO concentrations for the one-hour and eight-hour periods, which consist of the sum of the maximum predicted impacts from intersection traffic and a conservative background CO concentration, are summarized in Tables **4.2-5 and 4.2-6**. The results in these tables do not represent typical air pollution levels in the Proposed Project area. Rather, they represent the highest concentrations that could exist during the joint occurrence of worst-case meteorology and peak roadway traffic.

2018 Existing Case: The maximum predicted one-hour and eight-hour CO concentrations, including conservative background concentrations of CO, for the 2018 Existing case are 2.9 ppm and 1.6 ppm, respectively. These maximum air quality impacts are predicted to occur at three of the four analyzed intersections, and are in compliance with the NAAQS for CO.

2025 No-Build Case: For the 2025 No-Build case, the maximum predicted one-hour and eight-hour CO concentrations, including conservative background concentrations of CO, are 2.7 ppm and 1.4 ppm, respectively. These maximum air quality impacts are predicted to occur at two of the four analyzed intersections. These maximum concentrations are less than those predicted for the 2018 Existing case and comply with the one-hour and eight-hour NAAQS for CO.

2025 Build Case: For the 2025 Build case, the maximum predicted one-hour and eight-hour CO concentrations, including conservative background concentrations of CO, are 2.7 and 1.4 ppm, respectively. These maximum concentrations are less than those predicted for the 2018 Existing case and are equivalent to the 2025 No-Build case. The predicted CO impacts at all receptors are safely in compliance with the one-hour and eight-hour NAAQS for CO. These maximum air quality impacts are predicted to occur at three of the four analyzed intersections. These results demonstrate that the Proposed Project will not have an adverse impact on air quality at the most congested intersections in the Proposed Project area.

Table 4.2-5. Maximum Predicted One-Hour CO Concentrations at Sensitive Receptors (ppm)

Intersection	2018 Existing	2025 No-Build	2025 Build
Hyde Park Ave & Father Hart Bridge/Commuter Rail Parking Lot	2.9	2.6	2.7
Milton St/Neponset Valley Pkwy & Father Hart Bridge	2.9	2.7	2.7
Milton St & Industrial Drive	2.7	2.6	2.6
Sprague St/Milton St & West Milton St	2.9	2.7	2.7
NAAQS	**35**	**35**	**35**

Note: Maximum predicted one-hour concentrations include background concentrations. The added one-hour average background CO concentration is 2.4 ppm in 2018 and 2025.

Table 4.2-6. Maximum Predicted Eight-Hour CO Concentrations at Sensitive Receptors (ppm)

Intersection	2018 Existing	2025 No-Build	2025 Build
Hyde Park Ave & Father Hart Bridge/Commuter Rail Parking Lot	1.6	1.3	1.4
Milton St/Neponset Valley Pkwy & Father Hart Bridge	1.6	1.4	1.4
Milton St & Industrial Drive	1.4	1.3	1.3
Sprague St/Milton St & West Milton St	1.6	1.4	1.4
NAAQS	**9**	**9**	**9**

Note: Maximum predicted eight-hour concentrations include background concentrations. The added eight-hour average background CO concentration is 1.2 ppm in 2018 and 2025.

The maximum predicted CO impacts for the 2025 No-Build and Build cases are less than those predicted for the 2018 Existing Case. This is a result of the lower CO emission rates for motor vehicles predicted by the MOVES2014 model for 2025, compared to 2018. The reduction in motor vehicle CO emission rates is primarily a result of the improved motor vehicle emission controls, and occurs as newer vehicles with lower CO emissions replace older vehicles on the road. The maximum predicted CO impacts for the 2025 Build case is the same or slightly greater than those predicted for the 2025 No-Build Case. However, the results show that the Proposed Project will not have a significant impact on the air quality at the analyzed intersections.

The worst-case air quality impacts at the Proposed Project site can be conservatively represented by the highest predicted one-hour and eight-hour CO concentrations of 2.7 ppm and 1.4 ppm, respectively. Adding in the impacts from the parking garage, the conservative estimate of the worst-case total one-hour and eight-hour CO impacts at the Proposed Project site will be 2.8 ppm and 1.5 ppm, respectively. These values are safely in compliance with the NAAQS for CO and indicate that the Proposed Project will not have an adverse impact on local air quality.

Conclusions

The microscale CO air quality dispersion modeling analysis clearly indicates that the worst-case traffic generated by the Proposed Project will not cause or contribute to any violations of the NAAQS for CO, and will not significantly affect air quality. Total CO impacts at the intersections with the largest delays and at the Proposed Project site, including the impacts from the parking garage, are predicted to be safely in compliance with the NAAQS for CO.

4.3 Noise Impacts

Tech Environmental, Inc., performed a noise study to determine whether the operation of the Proposed Project will comply with the City of Boston Noise Regulations and the Massachusetts Department of Environmental Protection ("DEP") Noise Policy.

4.3.1 Common Measures of Community Noise

The unit of sound pressure is the decibel (dB). The decibel scale is logarithmic to accommodate the wide range of sound intensities to which the human ear is subjected. A property of the decibel scale is that the sound pressure levels of two separate sounds are not directly additive. For example, if a sound of 70 dB is added to another sound of 70 dB, the total is only a 3-decibel increase (or 73 dB), not a doubling to 140 dB. Thus, every 3 dB increase represents a doubling of sound energy. For broadband sounds, a 3 dB change is the minimum change perceptible to the human ear. **Table 4.3-1** gives the perceived change in loudness of different changes in sound pressure levels.[5]

Table 4.3-1. Subjective Effects of Changes in Sound Pressure Levels

Change in Sound Level	Apparent Change in Loudness
3 dB	Just perceptible
5 dB	Noticeable
10 dB	Twice (or half) as loud

[5] American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 1989 ASHRAE Handbook--Fundamentals (I-P) Edition, Atlanta, GA, 1989.

Non-steady noise exposure in a community is commonly expressed in terms of the A-weighted sound level (dBA); A-weighting approximates the frequency response of the human ear. Levels of many sounds change from moment to moment. Some are sharp impulses lasting 1 second or less, while others rise and fall over much longer periods of time. There are various measures of sound pressure designed for different purposes. To establish the background ambient sound level in an area, the L_{90} metric, which is the sound level exceeded 90 percent of the time, is typically used. The L_{90} can also be thought of as the level representing the quietest 10 percent of any time period. Similarly, the L_{10} can also be thought of as the level representing the quietest 90 percent of any time period. The L_{10} and L_{90} are broadband sound pressure measures, i.e., they include sounds at all frequencies.

Sound level measurements typically include an analysis of the sound spectrum into its various frequency components to determine tonal characteristics. The unit of frequency is Hertz (Hz), measuring the cycles per second of the sound pressure waves, and typically the frequency analysis examines nine octave bands from 32 Hz to 8,000 Hz. A source is said to create a pure tone if acoustic energy is concentrated in a narrow frequency range and one octave band has a sound level 3 dB greater than both adjacent octave bands.

The acoustic environment in an urban area such as the Proposed Project area results from numerous sources. Observations show that major contributors to the background sound level in the Proposed Project area include motor vehicle traffic on local and distant streets, aircraft over-flights, mechanical equipment on nearby buildings, and general city noises such as street sweepers and police/fire sirens. Typical sound levels associated with various activities and environments are presented in **Table 4.3-2**.

4.3.2 Noise Regulations

<u>Commonwealth Noise Policy</u>

The DEP regulates noise through 310 CMR 7.00, “Air Pollution Control.” In these regulations “air contaminant” is defined to include sound and a condition of “air pollution” includes the presence of an air contaminant in such concentration and duration as to “cause a nuisance” or “unreasonably interfere with the comfortable enjoyment of life and property.”

Regulation 7.10 prohibits “unnecessary emissions” of noise. The DEP DAQC Policy Statement 90-001 (February 1, 1990) interprets a violation of this noise regulation to have occurred if the noise source causes either:

1. An increase in the broadband sound pressure level of more than 10 dBA above the ambient level; or
2. A “pure tone” condition.

The ambient background level is defined as the L_{90} level as measured during equipment operating hours. A "pure tone" condition occurs when any octave band sound pressure level exceeds both of the two adjacent octave band sound pressure levels by 3 dB or more.

The DEP does not regulate noise from motor vehicles accessing a site or the equipment backup notification alarms. Therefore, the provisions described above only apply to a portion of the sources that may generate sound following construction of the Proposed Project.

Local Regulations

The City of Boston Environment Department regulates noise through the Regulations for the Control of Noise as administered by the Air Pollution Control Commission. The Proposed Project is located in an area consisting of commercial and residential uses. The Proposed Project will have low-rise residential uses to the north, east, and south. The Proposed Project must comply with Regulation 2.2 for noise levels in Residential Zoning Districts at these residential locations**.** **Table 4.3-3** lists the maximum allowable octave band and broadband sound pressure levels for residential and business districts. Daytime is defined by the City of Boston Noise Regulations as occurring between the hours of 7:00 a.m. and 6:00 p.m. daily except Sunday. Compliance with the most restrictive nighttime residential limits will ensure compliance for other land uses with equal or higher noise limits.

Table 4.3-2. Common Indoor and Outdoor Sound Levels

Outdoor Sound Levels	Sound Pressure (μPa)	Sound Level (dBA)	Indoor Sound Levels
	6,324,555	110	Rock Band at 5 m
Jet Over-Flight at 300 m		105	
	2,000,000	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		95	
	632,456	90	Food Blender at 1 m
Diesel Truck at 15 m		85	
Noisy Urban Area—Daytime	200,000	80	Garbage Disposal at 1 m
		75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		65	Normal Speech at 1 m
	20,000	60	
Quiet Urban Area—Daytime		55	Quiet Conversation at 1m
	6,325	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		45	
	2,000	40	Empty Theater or Library
Quiet Suburb—Nighttime		35	
	632	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		25	Empty Concert Hall
Rustling Leaves	200	20	Average Whisper
		15	Broadcast and Recording Studios
	63	10	
		5	Human Breathing
Reference Pressure Level	20	0	Threshold of Hearing

Notes: μPa, or micro-Pascals, describes sound pressure levels (force/area). DBA, or A-weighted decibels, describes sound pressure on a logarithmic scale with respect to 20 μPa (reference pressure level).

Table 4.3-3. Maximum Allowable Sound Pressure Levels (dB) City of Boston

Octave Band (Hz)	Zoning District		
	Residential (Daytime)	Residential (All Other Times)	Business (anytime)
32 Hz	76	68	79
63 Hz	75	67	78
125 Hz	69	61	73
250 Hz	62	52	68
500 Hz	56	46	62
1000 Hz	50	40	56
2000 Hz	45	33	51
4000 Hz	40	28	47
8000 Hz	38	26	44
Broadband (dBA)	**60**	**50**	**65**

4.3.3 Pre-Construction Sound Level Measurements

Existing baseline sound levels in the Proposed Project area were measured during the quietest overnight period when human activity and street traffic were at a minimum, and when the Proposed Project's mechanical equipment (the principal sound sources) could be operating. Since the Proposed Project's mechanical equipment may operate at any time during a 24-hour day, a weekday between 11:00 p.m. and 4:00 a.m. was selected as the worst-case time period, i.e., the time period when project-related sounds may be most noticeable due to the quieter background sound levels. Establishing an existing background (L_{90}) during the quietest hours of the facility operation is a conservative approach for noise impact assessment and is required by the DEP Noise Policy.

The nighttime noise measurement locations are as follows (see the **Figure 1** in the **Appendix C**):

Monitoring Location #1: Hyde Park Avenue at Milton Street

Monitoring Location #2: 13 Chesterfield Street

Monitoring Location #3: 101-105 Readville Street

Broadband (dBA) and octave band sound level measurements were made with a Larson Davis model 831 (LD 831)environmental sound level analyzer, at each monitoring location, for a duration of approximately thirty minutes. The full octave band frequency analysis was performed on the frequencies spanning 16 to 16,000 Hertz. A time-integrated statistical analysis of the data used to quantify the sound variation was also performed, including the calculation of the L_{90}, which is used to set the ambient background sound level.

The LD 831 is equipped with a ½" precision condenser microphone and has an operating range of 5 dB to 140 dB and an overall frequency range of 3.5 Hz to 20,000 Hz. This meter meets or exceeds all requirements set forth in the ANSI S1.4-1983 Standards for Type 1 quality and accuracy and the State and City requirements for sound level instrumentation. Prior to any measurements, this sound analyzer was calibrated with an ANSI Type 1 calibrator that has an accuracy traceable to the National Institute of Standards and Technology (NIST). During all measurements, the LD 831 was tripod mounted at approximately five feet above the ground in open areas away from vertical reflecting surfaces.

The sound level monitoring was conducted on Thursday, May 31, 2018 and Friday, June 1, 2018. Weather conditions during the sound survey were conducive to accurate sound level monitoring: the temperature was 65ºF, the skies were partly cloudy, and the winds were 0 to 10 mph. The microphone of the sound level analyzer was fitted with a 7-inch windscreen to negate any effects of wind-generated noise.

The nighttime sound level measurements taken in the vicinity of the Proposed Project Site reveal sound levels that are typical for an urban area. A significant source of existing sound at all locations is motor vehicle traffic on nearby highways and local streets, residential and commercial air handling equipment, MBTA and AMTRAK trains and aircraft over-flights.

The results of the nighttime baseline sound level measurements are presented in **Table 4.3-4**, and the complete measurement printouts are provided in **Appendix C**. The nighttime background L_{90} level was 41.2 dBA at Location #3 and 50.4 dBA at Location #1. The octave band data in **Table 4.3-4** show that no pure tones were detected in the nighttime noise measurements.

Noise monitoring at the Proposed Project Site during the morning peak traffic period was used to evaluate the existing ambient sound levels and to evaluate conformance with the Site Acceptability Standards established by HUD for residential development. The purpose of the HUD guidelines is to provide standards for determining the acceptability of residential project locations with regards to existing sound levels. The HUD criteria regarding the day-night average sound level (L_{dn}) are listed below. These standards apply to L_{dn} measurements taken several feet from the building in the direction of the predominant source of noise.

- Normally Acceptable – L_{dn} not exceeding 65 dBA
- Normally Unacceptable – L_{dn} above 65 dBA but not exceeding 75 dBA
- Unacceptable – L_{dn} above 75 dBA.

These HUD standards do not apply to this Proposed Project, but are used as guidance regarding the suitability of the Proposed Project area with regard to background sound levels.

Daytime sound level measurements were taken to help estimate the L_{dn} for the Proposed Project Site. A 30-minute sound level measurement was taken during the morning, on Thursday, May 17, 2018 between 9:08 a.m. and 9:38 a.m. at Hyde Park Avenue at Milton Street (Location #1) representing the closest location to the Proposed Project site. The weather conditions during the sound survey were conducive to accurate sound level monitoring: the temperature was 58ºF; the skies were cloudy, and the winds were 6 mph. The microphone of the sound level analyzer was fitted with a 7-inch windscreen to negate any effects of wind-generated noise.

The daytime sound level measurements taken in the vicinity of the Proposed Project site reveal sound levels that are typical for an urban area. The main sources of noise during the peak morning traffic period sound level measurement were motor vehicle traffic on the Hyde Park and Milton Street, MBTA buses and the adjacent MBTA Commuter and AMTRAK Mainline activity. The L_{eq} measured during the morning period was 71.1 dBA. The L_{eq} sound level measured during the nighttime at the same location was 70.5 dBA. Using both the daytime and nighttime L_{eq} sound levels, the calculated L_{dn} for the site is 77.0 dBA, which is above the HUD guideline noise limit of 65 dBA primarily due to the vehicle traffic and MBTA buses and MBTA and AMTRAK trains.

It is assumed that standard building construction practices will result in at least a 30-dBA reduction of sound from outdoor sound levels. The Proponent will incorporate sound mitigation, as necessary, to assure that MBTA buses and trains do not result in noise impacts greater than 45 dBA inside the residential units closest to the rail lines.

Table 4.3-4. Nighttime Baseline Sound Level Measurements, May 31 and June 1, 2018

Sound Level Measurement	(Location #1) Hyde Park Ave./Milton St. 11:09 - 11:39 p.m.	(Location #2) 13 Chesterfield St. 11:50 p.m. - 12:20 a.m.	(Location #3) 101-105 Readville St. 12:24- 12:55 a.m.
Broadband (dBA)			
Background (L_{90})	50.4	44.0	41.2
Octave Band L_{90} (dB)			
16 Hz	73.1	69.2	62.1
32 Hz	74.1	63.3	53.7
63 Hz	70.9	58.0	53.1
125 Hz	53.7	50.2	44.9
250 Hz	49.6	44.7	40.5
500 Hz	46.8	41.4	39.2
1000 Hz	43.2	37.2	35.9
2000 Hz	37.2	31.6	30.2
4000 Hz	31.0	31.5	25.9
8000 Hz	23.7	19.1	21.5
16000 Hz	17.7	16.6	16.6
Pure Tone?	No	No	No

4.3.4 Reference Data and Candidate Mitigation Measures

The mechanical systems for the Proposed Project are in the early design stage. Typical sound power data for the equipment of the expected size and type for the Proposed Project have been used in the acoustic model to represent the Proposed Project's mechanical equipment. The sound levels from all potential significant project noise sources are discussed in this section.

The design for the Proposed Project is expected to include the following significant mechanical equipment:

Rooftop air handling units (AHUs)

Rooftop exhaust fans (EFs)

Rooftop energy recovery units (ERUs)

The equipment listed above, which will be located on two separate building roof levels, was included in the noise impact analysis. The Proposed Project's traffic was not included in the noise analysis because motor vehicles are exempt under both the City of Boston and DEP noise regulations.

The sound generation profiles for the mechanical equipment noise sources operating <u>concurrently</u> under <u>full-load</u> conditions were used to determine the maximum possible resultant sound levels from the Proposed Project Site as a whole, to define a worst-case scenario. To be in compliance with City and DEP regulations, the resultant sound level must not exceed the allowable octave band limits in the City of Boston noise regulation and must be below the allowable incremental noise increase, relative to existing noise levels, as required in the DEP Noise Policy.

This sound level impact analysis was performed using sound generation data for representative equipment to demonstrate compliance with noise regulations. As the building design evolves, the sound generation for the actual equipment selected may differ from the values that were utilized for the analysis.

To minimize the sound level at nearby residences, the following noise mitigation specifications will be incorporated into the final engineering design of the Proposed Project, as necessary, to comply with the applicable sound level criteria:

Specification of air handling units with sound shields: The AHUs will be fitted with sound shields.

4.3.5 Calculated Future Sound Levels

<u>Methodology</u>

Future maximum sound levels at the upper floors of all existing residences bordering the Proposed Project were calculated with acoustic modeling software assuming simultaneous operation of all mechanical equipment at their maximum loads.

The Cadna-A computer program, a comprehensive 3-dimensional acoustical modeling software package was used to calculate project generated sound propagation and attenuation.[6] The model is based on ISO 9613, an internationally recognized standard specifically developed to ensure the highly accurate calculation of environmental noise in an outdoor environment. ISO 9613 standard incorporates the propagation and attenuation of sound energy due to divergence with distance, surface and building reflections, air and ground absorption, and sound wave diffraction and shielding effects caused by barriers, buildings, and ground topography.

<u>Receptors</u>

The closest/worst-case sensitive (residential) location is to the west of the Proposed Project area at 173 Neponset Valley Parkway. This location was selected based on the proximity of the equipment (smaller distances correspond to larger noise impacts) and the amount of shielding by other buildings (taller nearby residential locations will experience less shielding from the Proposed Project's rooftop mechanical equipment, which may result in larger potential noise impacts from the Proposed Project). This location is expected to receive the largest sound level

[6] <u>Cadna-A Computer Aided Noise Abatement Program</u>, Version 4.3

impacts from the Proposed Project's rooftop mechanical equipment. It can be classified as a residential zone.

The sound level impacts from the building's mechanical equipment were predicted at the closest residential location, as well as at residential buildings to the south (55 Milton Street), southeast (20-22 Wolcott Street), and southwest (1080 Truman Parkway). Figure 1 in Appendix C shows the locations of the modeled noise receptors. Noise impacts at other nearby noise-sensitive locations (residences, parks, etc.) farther from the Proposed Project Site will be less than those predicted for these receptors.

4.3.6 Compliance with State and Local Noise Standards

The City of Boston and DEP noise standards apply to the operation of the mechanical equipment at the Proposed Project. The details of the noise predictions are presented in **Tables 4.3-6** through **4.3-9**. The sound impact analysis includes the simultaneous operation of the Proposed Project's rooftop HVAC equipment. The predicted sound levels are worst-case predictions that represent all hours of the day, as the analysis assumes full operation of the mechanical equipment 24-hours a day. The typical sound level impacts from the mechanical equipment will likely be lower than what is presented here, since most of the mechanical equipment will operate at full-load only during certain times of the day and during the warmer months of the year, it is not likely that all of the mechanical equipment will operate at the same time. Sound level impacts at locations farther from the Proposed Project (e.g. other residences, etc.) will be lower than those presented in this report.

City of Boston Noise Standards

The noise impact analysis results, presented in **Tables 4.3-6** through **4.3-9**, reveal that the sound level impact at the closest residences will be between 32 and 40 dBA. The smallest sound level impact of 32 dBA is predicted to occur at the 1080 Truman Parkway. The largest sound level impact of 40 dBA is predicted to occur at the at 173 Neponset Valley Parkway. Noise impacts predicted at all locations are in compliance with the City of Boston's nighttime noise limit (50 dBA) for a residential area. Note that sound levels from the Proposed Project will be below the residential nighttime limits at all times. The results also demonstrate compliance with the City of Boston, residential, non-daytime, octave band noise limits at both closest locations.

The City of Boston noise limits for business areas are significantly higher than the nighttime noise limits for residential areas (see **Table 4.3-3**). The Proposed Project will also easily comply with the City of Boston business area noise limits at all surrounding commercial properties.

DEP Noise Regulations

The predicted sound level impacts at the worst-case property line and the worst-case residential locations were added to the measured L_{90} value of the quietest daily hour to test compliance with DEP's noise criteria. Assuming the Proposed Project's mechanical noise is constant throughout the day, the Proposed Project will cause the largest increase in sound levels during the period when the lowest background noise occurs. Minimum background sound levels (diurnal) typically occur between 12:00 a.m. and 4:00 a.m.

The predicted sound level impacts at the worst-case property line and the closest residences were added to the L_{90} values measured during the period with the least amount of background noise to test compliance with DEP's noise criteria. The predicted noise impacts at the property line and the closest residences were added to the most-representative measured L_{90} values to determine the largest possible increase in the sound level at each location during the quietest hour at the Proposed Project Site.

As shown in **Tables 4.3-6** through **4.3-9**, the Proposed Project is predicted to produce a less than 2 dBA change in the background sound levels at all modeled locations. Therefore, the Proposed Project's worst-case sound level impacts during the quietest nighttime periods will be in compliance with the Massachusetts DEP allowed noise increase of 10 dBA. The noise predictions for each octave band indicate that the mechanical equipment will not create a pure tone condition at any location.

Table 4.3-6. Estimated Future Sound Level Impacts – Anytime, 173 Neponset Valley Parkway (Closest Residence) – Location R1

Octave Bands	Residential Nighttime Noise Standards	Maximum Predicted Sound Levels*
32 Hz	68	51
63 Hz	67	49
125 Hz	61	48
250 Hz	52	41
500 Hz	46	37
1000 Hz	40	35
2000 Hz	33	31
4000 Hz	28	19
8000 Hz	26	0
Broadband (dBA)	**50**	**40**
Compliance with the City of Boston Noise Regulation?		Yes

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location # 2)	44.0
Proposed Project*	40.2
Calculated Combined Future Sound Level	45.5
Calculated Incremental Increase	+1.5
Compliance with DEP Noise Policy?	Yes

* Assumes full-load operation of all mechanical equipment.
Note: DEP Policy allows a sound level increase of up to 10 dBA

Table 4.3-7. Estimated Future Sound Level Impacts – Anytime, 55 Milton Street – Location R2

Octave Bands	Residential Nighttime Noise Standards	Maximum Predicted Sound Levels*
32 Hz	68	45
63 Hz	67	44
125 Hz	61	44
250 Hz	52	38
500 Hz	46	33
1000 Hz	40	32
2000 Hz	33	27
4000 Hz	28	13
8000 Hz	26	0
Broadband (dBA)	**50**	**37**
Compliance with the City of Boston Noise Regulation?		Yes

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location # 2)	44.0
Proposed Project*	36.6
Calculated Combined Future Sound Level	44.7
Calculated Incremental Increase	+0.7
Compliance with DEP Noise Policy?	Yes

*Assumes full-load operation of all mechanical equipment.
Note: DEP Policy allows a sound level increase of up to 10 dBA.

Table 4.3-8. Estimated Future Sound Level Impacts – Anytime, 20-22 Wolcott Street – Location R3

Octave Bands	Residential Nighttime Noise Standards	Maximum Predicted Sound Levels*
32 Hz	68	46
63 Hz	67	45
125 Hz	61	46
250 Hz	52	39
500 Hz	46	34
1000 Hz	40	33
2000 Hz	33	28
4000 Hz	28	15
8000 Hz	26	0
Broadband (dBA)	**50**	**38**

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location # 2)	44.0
Proposed Project*	37.7
Calculated Combined Future Sound Level	44.9
Calculated Incremental Increase	+ 0.9
Compliance with DEP Noise Policy?	Yes

*Assumes full-load operation of all mechanical equipment.

Note: DEP Policy allows a sound level increase of up to 10 dBA.

Table 4.3-9. Estimated Future Sound Level Impacts – Anytime, 1080 Truman Parkway – Location R4

Octave Bands	Residential Nighttime Noise Standards	Maximum Predicted Sound Levels*
32 Hz	68	40
63 Hz	67	39
125 Hz	61	40
250 Hz	52	33
500 Hz	46	28
1000 Hz	40	26
2000 Hz	33	22
4000 Hz	28	3
8000 Hz	26	0
Broadband (dBA)	**50**	**32**
Compliance with the City of Boston Noise Regulation?		Yes

Sound Level Metric	Maximum Sound Levels* (dBA)
Existing Nighttime Background, L_{90} (Location # 3)	41.2
Proposed Project*	31.6
Calculated Combined Future Sound Level	41.6
Calculated Incremental Increase	+ 0.4
Compliance with DEP Noise Policy?	Yes

*Assumes full-load operation of all mechanical equipment.
Note: DEP Policy allows a sound level increase of up to 10 dBA.

4.3.7 Conclusions

Sound levels at all nearby sensitive locations and at all property lines will fully comply with the most stringent City of Boston and DEP daytime and nighttime sound level limits.

This acoustic analysis demonstrates that the Proposed Project’s design will meet the applicable acoustic criteria.

4.4 Stormwater Management and Water Quality

The Proposed Project is expected to reduce the volume of stormwater runoff leaving the site as well as substantially improve the water quality. The Proposed Project will meet Boston Water and Sewer Commission (BWSC) standards for stormwater management.

4.4.1 Existing Stormwater Drainage system

The existing site is 119,679 square feet or 2.75 acres in size, of which approximately 60% is covered with an existing roof and pavement. From record plans, the stormwater runoff from the entire Proposed Project site including roof and parking areas drain to a catch basin southwest of the Proposed Project on MBTA property. This catch basin connects to the closed conduit drain system on the MBTA property which discharges to a 48-inch BWSC drain line in Hyde Park Avenue south of the Proposed Project. The 48-inch BWSC drain line eventually discharges to the Neponset River.

4.4.2 Proposed Storm Drainage System

The stormwater drainage system will be designed with the intent of maintaining the same general predevelopment drainage patterns as the existing drainage patterns. The proposed stormwater management system will be compliance with all BWSC regulations.

The Proposed Project will incorporate stormwater Best Management Practices (BMPs) to improve the quantity and quality of the stormwater runoff, to promote infiltration to groundwater, and to reduce the peak rates of runoff to be at or below existing rates. Stormwater runoff from the Proposed Project will be collected and treated, as necessary, onsite and routed through an infiltration system to mitigate any impacts to the existing drainage system.

4.4.3 Groundwater Conservation Overlay District

The Proposed Project site is <u>not</u> located within the Groundwater Conservation Overlay District (GCOD) as outlined in Article 32 of the City of Boston Zoning Code.

4.4.4 Water Quality and Construction Stormwater Management

The Proposed Project will incorporate water quality devices into the storm drainage system to provide effective treatment of stormwater runoff from the Proposed Project site. Stormwater will flow through water quality devices prior to discharge into the proposed stormwater infiltration/ detention system.

The Proposed Project will not impact the water quality of nearby water bodies. Erosion and sedimentation control measures will be implemented during construction to preclude the transport of sediment to abutting properties and Hyde Park Avenue. Erosion control barriers will be staked around the perimeter of the site to prevent sediment from washing off site. Existing catch basins will be wrapped in filter fabric and / or equipped with silt sacks to keep sediment out of the storm drains. These controls will be inspected and maintained throughout the course of construction until all surfaces are landscaped and stabilized.

A National Pollutant Discharge Elimination System (NPDES) permit is required for the Proposed Project because construction will disturb over one acre of land. A Stormwater Pollution Prevention Plan will be implemented to ensure that the Proposed Project will be in compliance with the NPDES Construction General Permit (CGP).

4.5 Solid and Hazardous Waste Materials

4.5.1 Solid Waste

During the preparation of the Site, buildings and debris from the existing lot will be removed from the Proposed Project Site. The Proponent will ensure that waste removal and disposal during construction and operation will be in conformance with the City and DEP's Regulations for Solid Waste.

Upon completion of construction, the Proposed Project is estimated to generate approximately 555 tons of solid waste per year, based on the assumption that each of the 300 units will generate approximately 1.8 tons per year, and the retail/restaurant uses will generate .02 lbs / sf / day. The restaurant waste is expected to be contained in a trash compactor and removed by a licensed waste hauler contracted by building management. A significant portion of the waste will be recycled. The Proposed Project will also include ambitious goals for construction waste management in order to meet the requirements for the LEED™ rating system. This strategy will also divert demolition and construction waste by reusing and recycling materials.

In order to meet the requirements for the Boston Environmental Department and the LEED™ rating system, the Proposed Project will include space dedicated to the storage and collection of recyclables. The recycling program will meet or exceed the City's guidelines, and provide areas for waste paper and newspaper, metal, glass, and plastics (21 through 27, co-mingled).

4.5.2 Hazardous Waste and Materials

Various assessments and investigations have been completed on the Proposed Project site to identify environmental conditions of concern and included: An Environmental Assessment (TGG Environmental, Inc.; April 1988), a Phase I Environmental Site Assessment (FSL Associates, Inc.; February 2015) and a Phase II Environmental Site Assessment (ESS Group, Inc.; March 2015). The Proposed Project site is not listed with MassDEP as a location where a release of oil and/or hazardous materials (OHM) has occurred and no known off-Site OHM releases are believed to have adversely impacted environmental conditions on the Proposed Project site. The significant findings of the above-listed studies and the proposed mitigation measures are as follows:

Condition - A 5,000-gallon No. 2 fuel oil underground storage tank (UST) is located on the exterior grounds south of the loading dock on the northwestern portion of the Proposed Project site. A second UST, consisting of a closed in-place 11,310-gallon No. 6 fuel tank, is located beneath the concrete floor inside the building's northeastern corner. A 5,000-gallon No. 2 fuel oil aboveground storage tank (AST) is located in the boiler room within the building.

Mitigation Measure – The two USTs will be removed in accordance with all local, state, and federal laws, rules and regulations specifically MassDEP's "Underground Storage Tank Regulations" (310 CMR 80.00) and associated with documents and MassDEP's "Underground Storage Tank Closure Assessment Manual" (Policy #WSC-402-96). If a petroleum release(s) is identified during the UST removal program, notification to MassDEP of the identified condition(s) may apply. Any identified petroleum release will be assessed and remediated pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000; MCP) so that a condition of No Significant Risk (as defined by the MCP) can be achieved. The AST will also be removed/closed in accordance with applicable local, state and federal regulations and policies.

Condition – Lead, arsenic and various polynuclear aromatic hydrocarbons (PAHs) have been detected in select soils collected and analyzed from the Proposed Project site (ESS – 2015 and TGG – 1988). Some of these constituents were detected at concentrations above applicable RCS-1 limits, as established in the MCP, but are predominantly within the range of Background Concentrations for Historic Fill, pursuant to MassDEP's "Technical Update – Background Levels of Polycyclic Aromatics Hydrocarbons and Metals in Soils". Therefore, the detected concentrations of lead, arsenic and PAHs in the subsurface Historic Fill are considered exempt from release notification to MassDEP, pursuant to 310 CMR 40.0317(9). Historic Fill, which consisted of varying amounts of fine to coarse sand and gravel, brick, concrete, glass, wood, coal and ash, was encountered during the various soil boring programs at approximately 3 to 10 feet below grade on exterior grounds of the Proposed Project site and at 1 to 3 feet beneath on existing building. Historic Fill is expected to exist across the majority of Proposed Project site.

Mitigation Measures – (i) Based on the soil analytical testing results, no specific MCP remedial response action is necessary; (ii) placement of geotextile fabric and clean soil on future pervious areas of the Site (i.e., landscape/grassed areas) is being considered as a conservative risk reduction measure in order to eliminate potential direct contact by future Site occupants to residual metals and PAHs in Historic Fill; and (iii) based on a preliminary cut-and-fill analysis completed for the Proposed Project (Moore; 2018), certain amounts of soil/Historic Fill will require proper off-site management. A soil pre-characterization study will be performed prior to construction and earthwork activities to allow to-be-excavated soil to be characterized for the acceptance disposal parameters typically required by in-state landfills. Soil data will be compared to MassDEP's Policy No. COMM-97-001 "Reuse and Disposal of Contaminated Soil at Massachusetts Landfills" to determine if soils can be disposed of or re-used at in-state landfills (lined or unlined). Assuming that the soil pre-characterization study obtains the appropriate number of samples and satisfied a facility analytical testing requires, the selected general contractor will be allowed to 'live-load' soils for transportation of the selected facility (as compared to on-property stockpiling).

Condition - The on-site building may contain asbestos-containing materials, lead-based paint, polychlorinated biphenyls, mercury, petroleum products and/or other hazardous substances on or within certain types of building materials and equipment.

Mitigation Measure - A hazardous building material survey will be performed prior to the building demolition in to determine the absence or presence of such materials and to subsequently develop proper abatement plans and management protocols pursuant to applicable state and federal requirements/regulations.

Condition - Groundwater samples collected from the Proposed Project site (ESS; 2015) did not detect any constituents above MCP RCGW-2 Reportable Concentrations. Dissolved barium and ethyl ether were the only two constituents detected in select groundwater samples but were at concentration well below the MCP RCGW-2 limits.

Mitigation Measure - Based on the groundwater analytical testing results, no specific MCP remedial response action is necessary. Groundwater removed from certain future construction excavations may be subject to pre-treatment prior to a stormwater system and in accordance with a Dewatering Discharge Permit (BWSC) and/or a Remediation General Permit (EPA). Future groundwater quality testing will dedicate the need for pre-treatment prior to discharge and which permits are required.

4.6 Geotechnical/Groundwater Impacts Analysis

The following provides a summary of the geotechnical and groundwater impacts on the proposed building construction. Previous subsurface explorations consisting of borings performed at the Proposed Project site between 1988 and 2015 indicate that the ground surface across the relatively level portion of the Proposed Project site, situated between approximately Elevation +62 and +64, is underlain by a fill layer and organic deposit that extend to depths ranging from about 5 to 16 feet below the existing ground surface. It is noted that the ground surface along the perimeter of the site, adjacent to Hyde Park Avenue and Milton Street, consist of landscaped areas that slope upward from the level portion of the Proposed Project site towards Hyde Park Avenue and Milton Street, hence the depth of fill material below the ground surface within the slopes areas of the site is anticipated to be consistent with the rise in grade associated with construction of Hyde Park Avenue and Milton Street. Where the earth slopes are not present, granite block retaining walls, which are understood to be associated with the construction of the

Hyde Park Avenue and Milton Street, are present along the perimeter of the site. The fill layer and organic deposit is anticipated to be underlain by a natural glacial till deposit which is in-turn underlain by bedrock. Groundwater is anticipated to be located about 7.5 to 10 feet below the existing ground surface across level portion of the Proposed Project site and the current design elevation of the lowest level of the proposed building.

Given the proposed building construction, the level of the lowest level floor slab to be located at about Elevation +62, and the subsurface conditions described above, it is anticipated that the proposed building will be supported by conventional spread footing foundations in conjunction with a soil-supported slab-on-grade after the existing unsuitable fill and organic soils within the footprint of the proposed building are improved with the use of ground improvement methods consisting of aggregate piers (AP). The AP-improved soils will extend to below the building entrances and walkways adjacent to the proposed building to mitigate the potential for differential settlements near the building that could result in tripping hazards.

Perimeter foundation and underslab drainage will be installed to protect the below grade areas against groundwater intrusion. All localized depressions in the lowest level slab, such as elevator pits, should be provided with properly tied continuous waterstops in all construction joints and cementitious waterproofing to protect against groundwater intrusion.

4.6.1 Groundwater Control

It is anticipated that limited dewatering during construction will be required and when necessary will be accomplished using filtered sumps. Temporary construction dewatering effluent will be recharged to the ground on-site, or if necessary will be discharged off-site under a National Pollutant Discharge Elimination System (NPDES) general or exclusion permit. Temporary construction dewatering effluent will be treated before discharge as required by the permit.

Furthermore, construction of the proposed foundations, lowest level, and the installation of the perimeter and underslab drainage systems, are not expected to have adverse short or long-term impact on the existing groundwater conditions. A groundwater recharge system will be installed as part the development of the site.

4.6.2 Probable Project Impacts and Mitigation Measures

Based on the anticipated groundwater levels and the proposed scope of construction, it is anticipated that there will be negligible impact to groundwater levels due to this project.

Mitigation measures will include the use of appropriate excavation support methods to minimize the potential for ground movement and settlement during excavation, and potential impacts on utility lines and roadways located adjacent to the Proposed Project site. However, excavation during construction may result in limited settlements of the adjacent ground surface and utilities.

Where construction for the perimeter foundations require excavation into the existing earth slopes located along and adjacent to Hyde Park Avenue and Milton Street, temporary earth support will be installed, as required, for the construction of the perimeter foundations. Based on the proposed building configuration, it is anticipated that the temporary earth support system (where required) will be located within the limits of the Proposed Project site. Should the installation of the temporary earth support system extend onto City property, the Proposed Project will obtain the necessary approval from the City of Boston Public Improvement Commission (PIC).

The project documents will require that ground vibrations be monitored during the installation of the earth support and ground improvement measures, for the purpose of monitoring that ground vibrations are maintained below the generally acceptable levels which are anticipated to cause damage to properties and structures located adjacent to the Proposed Project site. Should the ground vibration levels be detected above the acceptable levels referred to above, alternative methods would be evaluated which are not anticipated to produce ground vibration levels above the generally acceptable levels anticipated to cause damage to properties and structures located adjacent to the Proposed Project site. Where temporary earth support is required along the property lines, the project documents will require that a settlement monitoring program of the ground surface of the adjacent public and private properties be performed.

4.7 Construction Impact

The following section describes impacts likely to result from the South Boston Hotel Project construction and the steps that will be taken to avoid or minimize environmental and transportation-related impacts. The Proponent will employ a construction manager that will be responsible for developing a construction phasing and staging plan and for coordinating construction activities with all appropriate regulatory agencies. The Proposed Project's geotechnical consultant will provide consulting services associated with foundation design recommendations, prepare geotechnical specifications, and review the construction contractor's proposed procedures.

4.7.1 Construction Management Plan

The Proponent will comply with applicable state and local regulations governing construction of the Proposed Project. The Proponent will require that the general contractor comply with the Construction Management Plan, ("CMP") developed in consultation with and approved by the Boston Transportation Department ("BTD"), prior to the commencement of construction. The construction manager will be bound by the CMP, which will establish the guidelines for the duration of the Proposed Project and will include specific mitigation measures and staging plans to minimize impacts on abutters.

Proper pre-construction planning with the neighborhood will be essential to the successful construction of this Proposed Project. Construction methodologies that will ensure safety will be employed, signage will include construction manager contact information with emergency contact numbers.

Proponent will also coordinate construction with other ongoing projects in the neighborhood.

4.7.2 Proposed Construction Program

Construction Activity Schedule

The construction period for the proposed Proposed Project is expected to last approximately 18 months, beginning in the 3rd Quarter 2019 and reaching completion in the 1st Quarter 2021. The City of Boston Noise and Work Ordinances will dictate the normal work hours, which will be from 7:00 AM to 6:00 PM, Monday through Friday.

Perimeter Protection/Public Safety

The CMP will describe any necessary sidewalk closures, pedestrian re-routings, and barrier placements and/or fencing deemed necessary to ensure safety around the Site perimeter. If possible, the sidewalk will remain open to pedestrian traffic during the construction period. Barricades and secure fencing will be used to isolate construction areas from pedestrian traffic. In addition, sidewalk areas and walkways near construction activities will be well marked and lighted to ensure pedestrian safety.

Proper signage will be placed at every corner of the Proposed Project as well as those areas that may be confusing to pedestrians and automobile traffic.

The Proponent will continue to coordinate with all pertinent regulatory agencies and representatives of the surrounding neighborhoods to ensure they are informed of any changes in construction activities.

4.7.3 Construction Traffic Impacts

Construction Vehicle Routes

Estimated truck deliveries and routes are identified in at the end of this section. Specific truck routes will be established with BTD through the CMP. These established truck routes will prohibit travel on any residential side streets. Construction contracts will include clauses restricting truck travel to BTD requirements. Maps showing approved truck routes will be provided to all suppliers, contractors, and subcontractors. It is anticipated that all deliveries will be via Hyde Park Avenue and not passing through local residential areas.

Construction Worker Parking

The number of workers required for construction of the Proposed Project will vary during the construction period. However, it is anticipated that all construction workers will arrive and depart prior to peak traffic periods.

Limited parking in designated areas of the Proposed Project Site and lay-down area(s) will be allowed. Parking will be discouraged in the immediate neighborhood. Further, public transit use will be encouraged with the Proponent and construction manager working to ensure the construction workers are informed of the public transportation options serving the area. Terms and conditions related to worker parking will be written into each subcontractor's contract. The contractor will provide a weekly orientation with all new personnel to ensure enforcement of this policy.

Pedestrian Traffic

The Site abuts sidewalks on two streets. Pedestrian traffic may be temporarily impacted in these areas. The Construction Manager will minimize the impact the construction of the proposed building will have and the adjacent sidewalks. The contractor will implement a plan that will clearly denote all traffic patterns. Safety measures such as jersey barriers, fencing, and signage will be used to direct pedestrian traffic around the construction site and to secure the work area.

4.7.4 Construction Environmental Impacts and Mitigation

Construction Air Quality

Construction activities may generate fugitive dust, which will result in a localized increase of airborne particle levels. Fugitive dust emission from construction activities will depend on such factors as the properties of the emitting surface (e.g. moisture content), meteorological variables, and construction practices employed.

To reduce the emission of fugitive dust and minimize impacts on the local environment the construction contractor will adhere to a number of strictly enforceable mitigation measures. These measures may include:

- Using wetting agents to control and suppress dust from construction debris;
- Ensuring that all trucks traveling to and from the Proposed Project Site will be fully covered;
- Removing construction debris regularly;
- Monitoring construction practices closely to ensure any emissions of dust are negligible;
- Cleaning streets and sidewalks to minimize dust and dirt accumulation;
- Monitoring construction activities by the job site superintendent and safety officer; and
- Wheel-washing trucks before they leave the Proposed Project Site during the excavation phase.

Construction Noise Impacts

To reduce the noise impacts of construction on the surrounding neighborhood, a number of noise mitigation measures will be included in the CMP. Some of the measures that may be taken to ensure a low level of noise emissions include:

Initiating a proactive program for compliance to the City of Boston's noise limitation impact;

Scheduling of work during regular working hours as much as possible;

Using mufflers on all equipment and ongoing maintenance of intake and exhaust mufflers;

Muffling enclosures on continuously operating equipment, such as air compressors and welding generators;

Scheduling construction activities so as to avoid the simultaneous operation of the noisiest construction activities;

Turning off all idling equipment;

Reminding truck drivers that trucks cannot idle more than five (5) minutes unless the engine is required to operate lifts of refrigeration units;

Locating noisy equipment at locations that protect sensitive locations and neighborhoods through shielding or distance;

Installing a site barricade at certain locations;

Identifying and maintaining truck routes to minimize traffic and noise throughout the Proposed Project;

Replacing specific construction techniques by less noisy ones where feasible-e.g., using vibration pile driving instead of impact driving if practical and mixing concrete off-site instead of on-site; and

Maintaining all equipment to have proper sound attenuation devices.

4.7.5 Rodent Control

The City of Boston enforces the requirements established under Massachusetts State Sanitary Code, Chapter 11, 105 CMR 410.550. This policy establishes that the elimination of rodents is required for issuance of any building permits. During construction, rodent control service visits will be made by a certified rodent control firm to monitor the situation.

4.7.6 Utility Protection During Construction

The contractor will notify the utility companies and will contact "Dig Safe" prior to any excavation at the Proposed Project site. During construction, the infrastructure will be protected using sheeting and shoring, temporary relocations and construction staging as required. The contractor will be required to coordinate all protection measures, temporary supports, and temporary shutdowns of all utilities with the appropriate utility company and / or agency. The contractor will also be required to provide adequate notification to the utility company prior to any work commencing on their utility. Also, in the event that a utility cannot be maintained in service during switch over to a temporary or permanent system, the contractor will be required to coordinate the shutdown with the utility company and Proposed Project abutters to minimize impacts and inconveniences.

5.0 HISTORIC RESOURCES COMPONENT

This section provides a discussion of the history of the Proposed Project site and the historic resources/ districts in the Proposed Project vicinity.

5.1 Historic Resources on the Proposed Project Site and Property History

The Hyde Park area remained a sparsely settled and developed area until the mid-19th century. From Massachusetts Historical Commission (MHC) files, the organizers of Hyde Park, known as the "Twenty Associates" were Boston mechanics, workers, and small business people, thus accounting for the industrial character of early development in Hyde Park. In 1912, the pressures of further expansion of suburban Boston resulted in Hyde Park's annexation to Boston.

The Proposed Project site is located within the Readville Industrial Area (MHC # BOS.RQ) included within the Inventory of Historic and Archaeological Assets of the Commonwealth (Inventory). The Readville Industrial Survey Area in Hyde Park is comprised of approximately 215 acres that surrounds the Proposed Project Site. Buildings in this industrial area were constructed between 1866 and 1950. Building types include foundries, machine shops, and warehouses. The condition of the buildings in this area range from excellent to poor, with most in fair to good condition based on a July 1997 survey. The area was not recommended for listing as a potential historic district.

Based on a review of buildings identified in this area, there were no buildings inventoried on site.

In summary, according to files at the Massachusetts Historical Commission, the on-site structures are not listed in the National or State Register of Historic Places, or the Inventory of Historical and Archaeological Assets of the Commonwealth. It is not expected that the Proposed Project will cause adverse impacts on any historic or architectural elements of nearby historic resources outside the Proposed Project Site (see **Figure 5-1** for identifications of historic resources in the Proposed Project vicinity).

5.2 Historic Resources Within the Vicinity of the Proposed Project Site

The Proposed Project site is located in the vicinity of several historic resources listed in the State and National Registers of Historic Places or included in the Inventory of Historic and Archaeological Assts of the Commonwealth. The adjacent building to the north at 1693-1715 Hyde Park (E.C. Morris Safe Co. Building (MHC 10984, 1893) is listed in the Inventory. In the 1890's, industrial firms had been relocating to Hyde Park and E.C. Morris was one of these firms. This sprawling multi-component building was considered in fair condition and is thought to be a typical example of 19th century brick industrial building, with details such as window shape brick trim, and eaves similar to other such example buildings from the same time period in the inventoried industrial area.

The historic resources within ¼ mile radius of the Proposed Project are summarized in **Table 5-1** that follows.

Table 5.1 Historic Resources in the Vicinity of the Proposed Project Site (Mapped on Figure 5-1)

No.	Historic Resource	Address	Designation
A	Readville Industrial Area	Begins at former Readville Car Shops (MHC 11076; 12907-16; 1902) at the Dedham/Hyde Park border, and continues north toward Milton	INV
B	10-25 Hamilton Street and Neponset Valley Parkway	Hamilton Street	INV
C	Saint Anne Roman Catholic Church Complex	Approximately bounded by West Milton St, Pine Ave, Como Rd, and Readville St	INV
	Neponset Valley Parkway	Parkway extends from Blue Hills Reservation through Neponset River Reservation to Stoney Brook Reservation	NRDIS, NRMPS
1	Old Colony Railroad Bridge	Neponset Valley Parkway	NRDIS, NRMPS
2	John Hart Bridge	Neponset Valley Parkway	NRDIS, NRMPS
3	Hart Bridge Wing Walls	Neponset Valley Parkway	NRDIS, NRMPS
4	Segment Two/Neponset Street-Neponset Ave	Neponset Valley Parkway	NRDIS, NRMPS

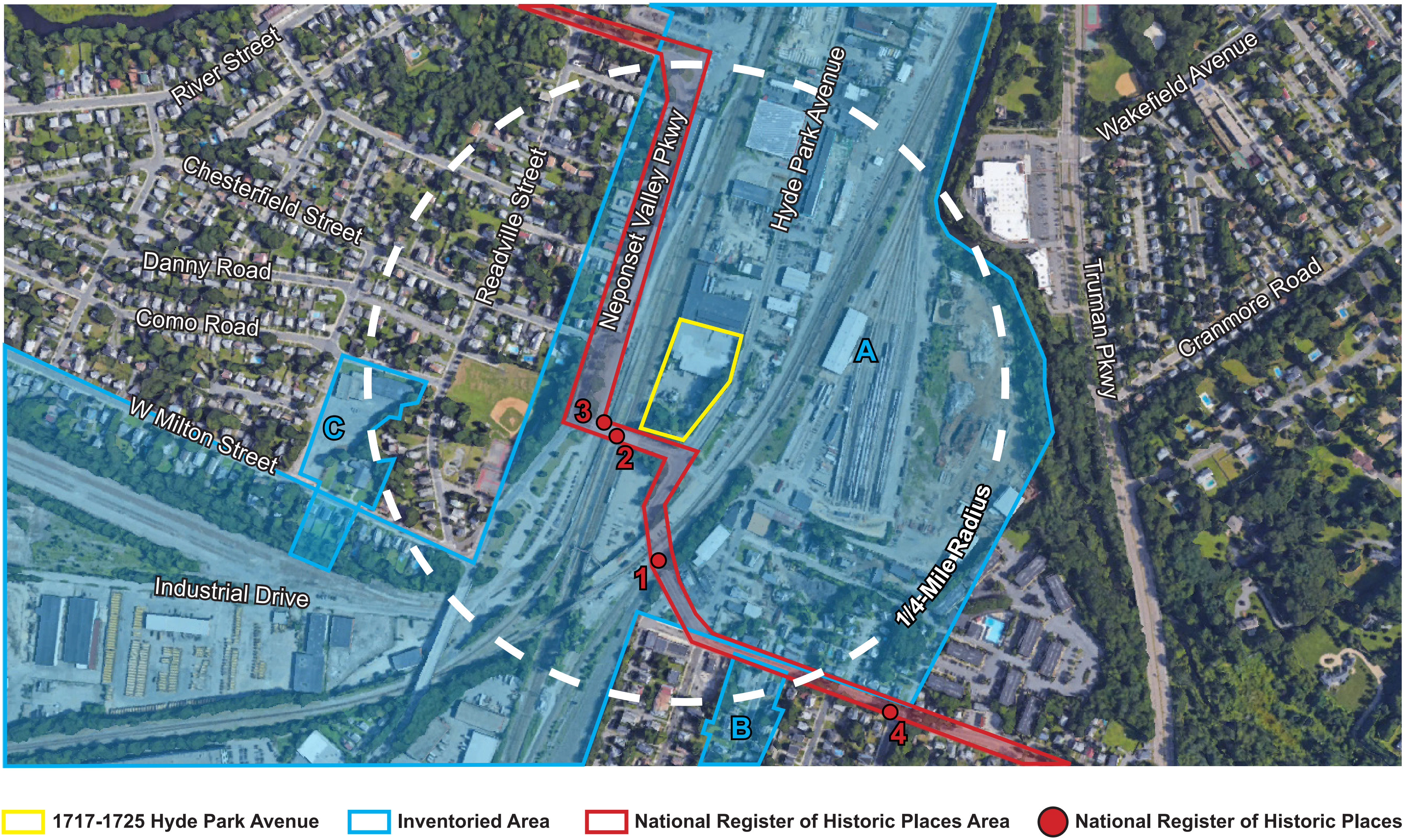
*Designation Legend

NRDIS National Register of Historic Places historic district
NRMPS Multiple Property Submission
INV Inventory

The Proposed Project is not expected to have any material adverse impact on any of the listed historically significant resources in **Table 5-1.**

5.3 Archaeological Resources

The Proposed Project site has been disturbed with existing and prior uses.



MLF CONSULTING LLC

Figure 5-1. Historic Resources

Historic Resources Component

6.0 INFRASTRUCTURE SYSTEMS COMPONENT

6.1 Overview of Utility Services

This section provides a description of the existing utility systems in the vicinity of the Proposed Project site and evaluates potential impacts to those systems. The existing infrastructure surrounding the site appears sufficient to service the needs of the Proposed Project. The following sections describe the existing sewer, water, and drainage systems surrounding the site and explain how these systems will service the development. Appropriate mitigation measures are discussed to address project related impacts. The Proposed Project is in the early design phases and as more definitive design evolves, the proponent will coordinate with the various utility companies to ensure full service for the new multi-family residential building.

The Proposed Project is located on Hyde Park Avenue, abutting Milton Street to the south, MBTA train tracks to the west, and 1715 Hyde Park Avenue to the north. As shown on **Figures 6-1** and **6-2,** there are existing utilities located within Hyde Park Avenue, Milton Street, and the MBTA property around the Proposed Project. Utilities in Hyde Park Avenue include two separate water mains, one sewer line, a dedicated drain line, a gas main, and underground electric conduits. Utilities in Milton Street include a water main, gas main, electric conduit, and overhead electric. The MBTA property contains a dedicated drain line which currently collects the stormwater runoff from the existing project.

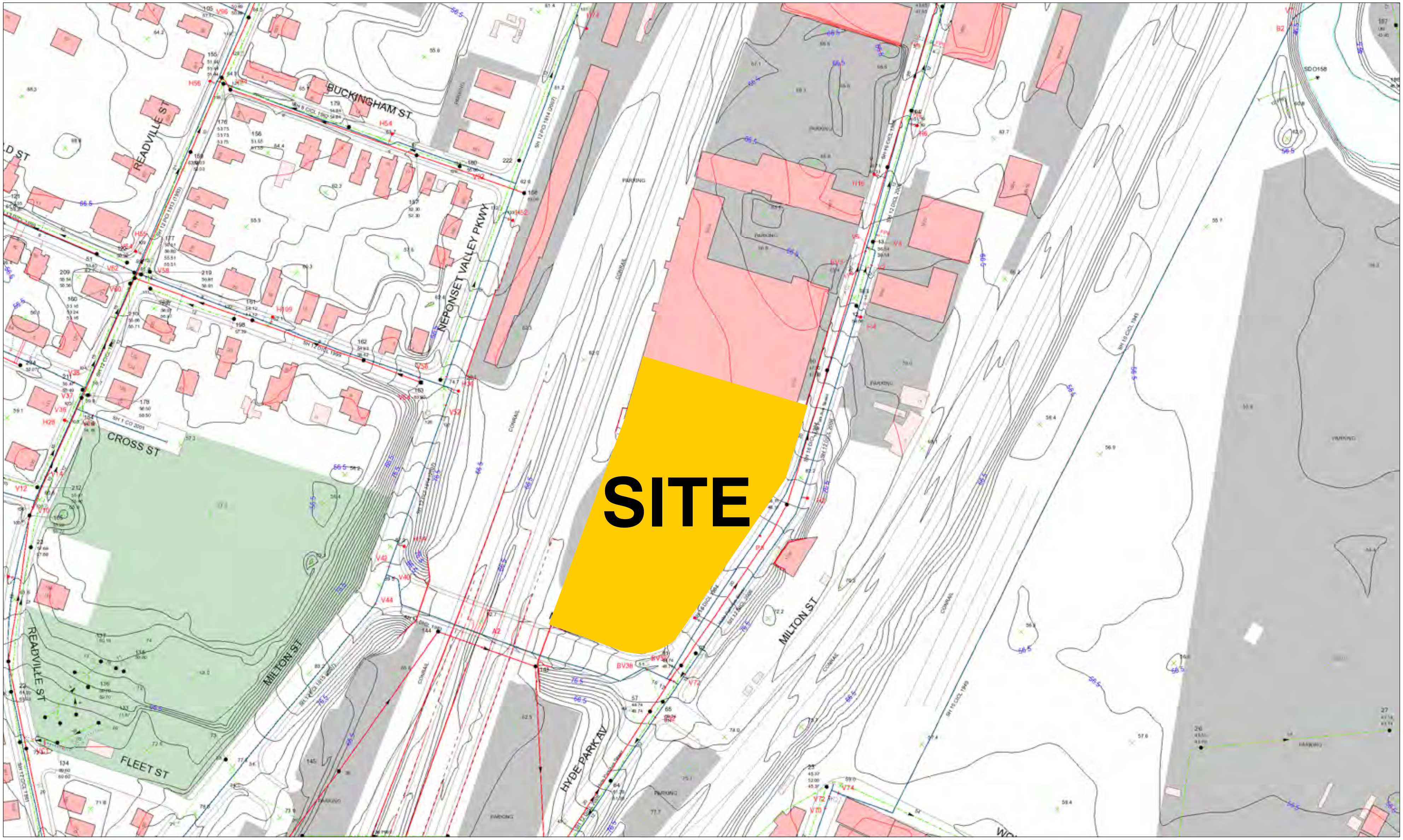
The water, drain, and sewer lines are all Boston Water and Sewer Commission (BWSC) Utilities and the other utilities are privately owned by their respective utility companies.

Permits and approvals for the Proposed Project may include approvals from the Boston Water and Sewer Commission (BWSC) and the U.S. Environmental Protection Agency (EPA). Boston Water and Sewer Commission (BWSC) Site Plans and General Service Application will be required for the proposed new water and sewer connections, and the stormwater management system will be designed in conformance with BWSC's design standards. The gas, electric and telecommunications utilities will be coordinated with their respective companies.

6.2 Sanitary Sewer Service

6.2.1 Existing Sanitary Sewer Services

In the vicinity of the Proposed Project site, the BWSC owns, operates and maintains the local sanitary sewer system (see **Figure 6-1)**. In front of the Proposed Project in Hyde Park Avenue, there is a 20-inch sanitary sewer line owned by the BWSC. The sewer line is located the center of Hyde Park Avenue and flows in a northerly direction.



BOSTON WATER AND SEWER

1717 Hyde Park Ave

MLF CONSULTING LLC

H.W. Moore ASSOCIATES, INC. CIVIL ENGINEERING | LAND PLANNING

Figure 6-1.
BWSC Sewer Plan

1717-1725 Hyde Park Avenue

The local BWSC sanitary sewer system ultimately flows to the Massachusetts Resources Authority's (MWRA's) Deer Island Treatment Plant, where it is treated and discharged to Cape Cod Bay.

6.2.2 Estimated Proposed Project Wastewater Generation

The Massachusetts Department of Environmental Protection (MassDEP) has specified certain sewerage generation rates for a variety of building establishments and uses in the Sewer System Extension and Connection Program, under their regulations 314 CMR 7.15.

The Proposed Project is anticipated to generate 53,210 gallons per day (gpd) of sanitary sewage. **Table 6-1** shows a breakdown of the sewage generation:

Table 6-1. Projected Sanitary Sewer Flows

Dwelling Unit	Number of Units	Number of Bedrooms	Sewerage Generation	Flow
Studio	43	43	110 gal/bedroom	4,730
1-Bedroom	141	141	110 gal/bedroom	15,510
2-Bedroom	111	222	110 gal/bedroom	24,420
3- Bedroom	10	30	110 gal/bedroom	3,300
Sub-Total	305	436		**47,960**

Restaurant	Number of Seats		Sewerage Generation	Flow
	150		35gal/seat	5,250
Sub-Total	150			**5,250**

Total	**53,210 GPD**

Pursuant to MassDEP regulations 314 CMR7.00 Sewer System Extension and Connection Permit Program, the Proposed Project does not require the issuance of a MassDEP Sewer Connection or Extension Permit. The sewer connection review and approval process will be through BWSC.

6.2.3 Sanitary Sewer Connection

The Proposed Project is in the preliminary design stages and a detailed plan of the proposed site utilities has not been developed. However, it is anticipated that the Proposed Project will connect to the 20-inch sanitary sewer located in the center of Hyde Park Avenue. Floor drains from the enclosed parking garage will be collected and routed through an MWRA approved oil-water separator prior to discharge to the 20-inch sanitary sewer.

6.2.4 Wastewater Flow Mitigation

To help conserve water and reduce the amount of wastewater generated by the Proposed Project, the Proposed Project is anticipated to include water conservation measures such as low flow toilets, restricted flow aerators in faucets and showerheads and water saving appliances.

In addition, since the Proposed Project generates more than 53,200 gpd, it is anticipated that Inflow/Infiltration (I/I) reduction will be required by BWSC. Currently BWSC requires I/I reduction at a 4:1 ratio (4-gallons of I/I removed for every 1-gallon of wastewater added). Currently BWSC charges a fee of $2.41 per gallon of I/I removed or $9.64 per gallon of new wastewater added to their system, in order to pay for I/I removal and other improvements to BWSC’s sewer system.

6.3 Water Supply System

6.3.1 Existing Water Supply

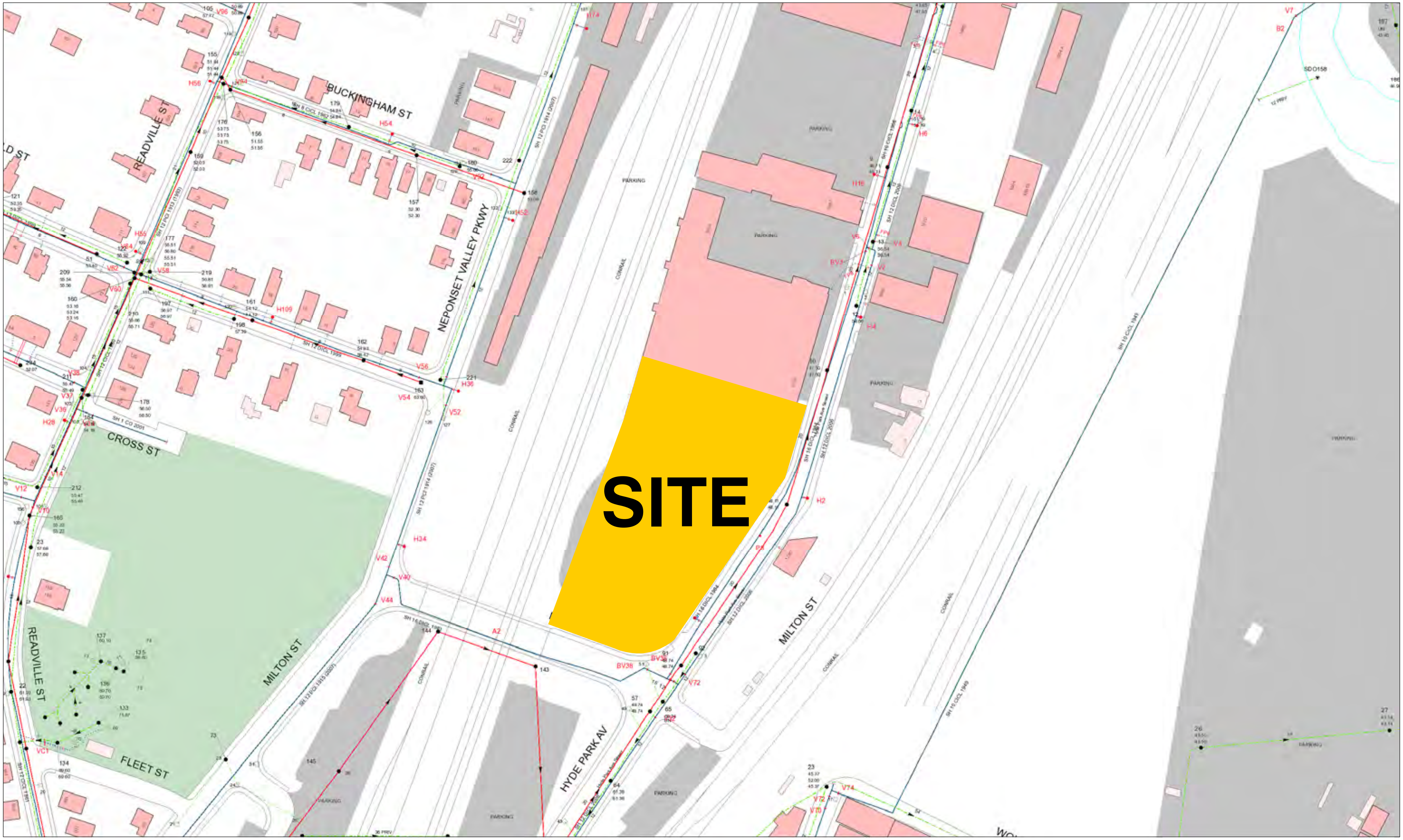
BWSC owns, operates and maintains the water distribution system in the vicinity of the Proposed Project (see **Figure 6-2**). According to record plans, there are two water mains located in front of the Proposed Project in Hyde Park Avenue and one water main in Milton Street. There is a 16-inch ductile iron cement lined water main located on the western side of Hyde Park Avenue that was installed in 1984, and an 12-inch ductile iron cement lined water main on the east side of Hyde Park Avenue that was installed in 2006. Both water mains are on the southern high pressure service system. There is a fire hydrant directly in front of the Proposed Project on the west side of Hyde Park Avenue that is fed by the 16-inch southern high water main.

6.3.2 Proposed Water Service

It is anticipated that the Proposed Project will be served with a single domestic and a single fire protection water service. Both of these services will be connected to the 16-inch high pressure water main in Hyde Park Avenue. The domestic water service will be metered in accordance with BWSC requirements, including the installation of a meter transmission unit (MTU) to comply with BWSC’s automatic meter reading system. The domestic service will be equipped with an appropriate gate valve. The fire protection service will also be equipped with an appropriate gate valve and a backflow prevention device to prevent potential backflow of non-portable water or other contaminants into the public water distribution system. Final design of the fire protection system will be coordinated with the Boston Fire Department.

It is anticipated that that the existing fire hydrant located in front of the Proposed Project will be adequate for the Proposed Project.

The proposed water system is based on early schematic designs and will be refined as the Proposed Project design advances. During the BWSC Site Plan Review process, final sizing of



BOSTON WATER AND SEWER

N W E S

0 45 90 180 270 360
Feet

1717 Hyde Park Ave

MLF CONSULTING LLC

H.W. Moore ASSOCIATES, INC. CIVIL ENGINEERING | LAND PLANNING

Figure 6-2.
BWSC Water Plan

1717-1725 Hyde Park Avenue

the domestic and fire protection services will be determined, along with water meter sizing, backflow preventer devices and exact locations of the actual connections.

6.3.3 Estimated Proposed Project Water Consumption

The estimated water consumption for the Proposed Project is 58,531 gpd. This estimate is based on DEP's Standard wastewater generation plus 10% or 110% of the wastewater generation discussed in **Section 6.2.2** above.

There are no known water capacity issues in the vicinity of the Proposed Project. This will be confirmed later in the design process when fire flow tests are conducted. Water demand and availability will be coordinated with BWSC during the Site Plan Review process to ensure the Proposed Project's needs are met, while maintaining adequate water flows to the surrounding neighborhood.

6.3.4 Water Supply Conservation and Mitigation

To help conserve water used by the Proposed Project, it is anticipated that the Proposed Project will incorporate water conservation measures such as low flow toilets, restricted flow aerations in faucets and showerheads, and water saving appliances.

6.4 Storm Drainage System

6.4.1 Existing Stormwater Drainage system

The existing site is 119,679 square feet or 2.75 acres in size, of which approximately 60% is covered with an existing roof and pavement. From record plans, the stormwater runoff from the entire project site including roof and parking areas drain to a catch basin southwest of the Proposed Project on MBTA property. This catch basin connects to the closed conduit drain system on the MBTA property which discharges to a 48-inch BWSC drain line in Hyde Park Avenue south of the Proposed Project. The 48-inch BWSC drain line eventually discharges to the Neponset River.

6.4.2 Proposed Storm Drainage System

The stormwater drainage system will be designed with the intent of maintaining the same general predevelopment drainage patterns as the existing drainage patterns. The proposed stormwater management system will be compliance with all BWSC regulations.

The Proposed Project will incorporate stormwater Best Management Practices (BMPs) to improve the quantity and quality of the stormwater runoff, to promote infiltration to groundwater, and to reduce the peak rates of runoff to be at or below existing rates. Stormwater runoff from the Proposed Project will be collected and treated, as necessary, onsite and routed through an infiltration system to mitigate any impacts to the existing drainage system.

6.5 Electrical Systems

Eversource provides electric service in the City of Boston. A new electric service will be required to service the Proposed Project. It is anticipated that the new underground electric service for the Proposed Project will be provided from the existing electric conduits located in Hyde Park Avenue.

The electrical, space heating, and energy systems for the Proposed Project have not yet been fully designed. When the design loads are determined, electrical power supply designs will be coordinated with Eversource. Energy saving measures will be incorporated into the building designs and project construction. The Proponent will investigate the installation of energy efficient lighting, heating and cooling systems in the design of the building.

6.6 Telecommunications Systems

Existing telecommunications systems are located in the vicinity of the Proposed Project. The Proponent will work with the various providers to determine the appropriate services and connection locations to support the Proposed Project. It is anticipated that services will be underground to Hyde Park Avenue.

6.7 Natural Gas System

National Grid provides natural gas service to the Proposed Project area. There are two existing 12-inch gas mains located in Hyde Park Avenue. The Proponent will work with National Grid to confirm that the system has adequate capacity and to coordinate final design details.

6.8 Utility Protection During Construction

The contractor will notify the utility companies and will contact “Dig Safe” prior to any excavation at the Proposed Project. During construction, the infrastructure will be protected using sheeting and shoring, temporary relocations and construction staging as required. The contractor will be required to coordinate all protection measures, temporary supports, and temporary shutdowns of all utilities with the appropriate utility company and / or agency. The contractor will also be required to provide adequate notification to the utility company prior to any work commencing on their utility. Also, in the event that a utility cannot be maintained in service during switch over to a temporary or permanent system, the contractor will be required to coordinate the shutdown with the utility company and Proposed Project abutters to minimize impacts and inconveniences.

7.0 TRANSPORTATION COMPONENT

7.1 Introduction

Howard Stein Hudson (HSH) has conducted an evaluation of the transportation impacts of a proposed development containing residential and retail uses located off Hyde Park Avenue in Boston's Readville neighborhood (the "Proposed Project"). This transportation study adheres to the Boston Transportation Department (BTD) *Transportation Access Plan Guidelines* and the Boston Redevelopment Authority's (BRA) Article 80 development review process. This study includes an evaluation of existing conditions, future conditions with and without the Proposed Project, projected parking demand, loading operations, transit services, and pedestrian activity.

7.2 Project Description

The Residences at Readville Station site is located at 1725 Hyde Park Avenue in the Readville neighborhood of Boston. The Project site is bounded by Hyde Park Avenue to the east, the Milton Street bridge to the south, and the MBTA railroad tracks to the west. Vehicular access will be provided along Hyde Park Avenue, to the north of the site. The Proposed Project consists of the construction of two six-story buildings with 305 residential units, with approximately 4,200 of ground floor restaurant space, and 221 parking spaces in an underground garage. The Proposed Project will contain 305 indoor secure bicycle parking spaces, a large central open space with a pool and landscaping, an auto court with six additional parking spaces, a pocket park open to the public, and direct access to the MBTA commuter rail platform at the back of the site for residents. The auto court will be able to accommodate pick-up/drop-off needs and all Transportation Network Companies (TNCs), such as Uber and Lyft. The Proposed Project will also have an on-site loading area that can accommodate a 36-foot, box truck for most residential deliveries and move-in/move-out activity.

7.2.1 Study Area

The study area is generally bounded by Neponset Valley Parkway to the east\, Truman Parkway to the west, Reservation Road to the north, and Sprague Street and Hyde Park Avenue to the south. The study area includes the following seven intersections, shown in **Figure 7-1**:

- Wolcott Square (Hyde Park Avenue/Neponset Valley Parkway/Wolcott Court/Wolcott Square) (signalized);
- Neponset Valley Parkway/Truman Parkway (signalized);
- Milton Street/Hyde Park Avenue/MBTA Parking Driveway (unsignalized);
- Milton Street/Neponset Valley Parkway (unsignalized);
- Milton Street/Industrial Drive (unsignalized);
- Sprague Street/West Milton Street/Milton Street (unsignalized); and
- Hyde Park Avenue/Reservation Road (unsignalized).

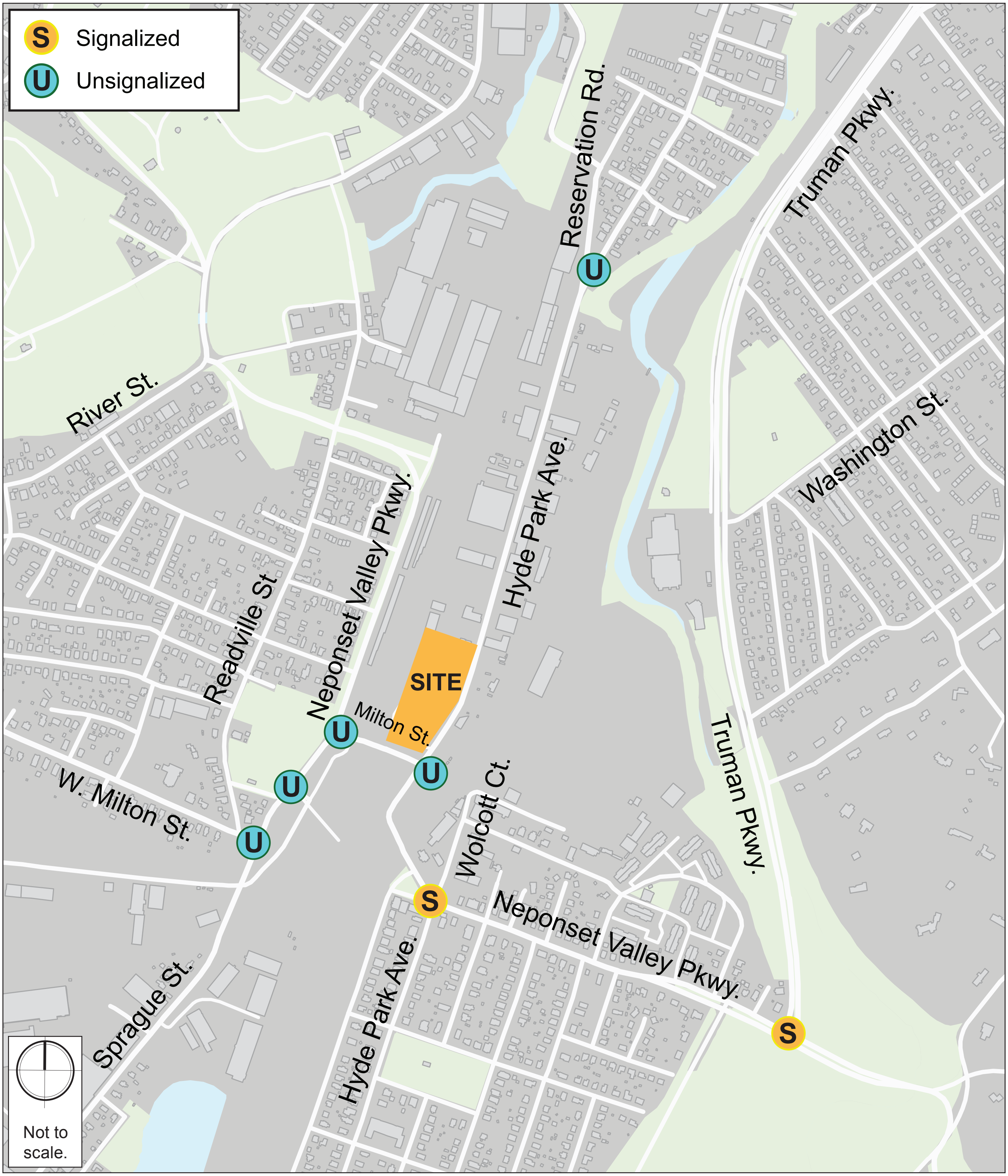


Figure 7-1.
Study Area Intersections

MLF CONSULTING LLC

HOWARD STEIN HUDSON
Engineers + Planners

1717-1725 Hyde Park Avenue

7.2.2 Study Methodology

The Existing (2018) Condition analysis includes an inventory of the existing transportation condition such as traffic characteristics, parking, curb usage, transit, pedestrian circulation, bicycle facilities, loading, and site condition. Existing counts for vehicles, bicycles, and pedestrians were collected at the study area intersections. The traffic data collection effort forms the basis for the transportation analysis conducted as part of this evaluation.

The future transportation condition analysis evaluates potential transportation impacts associated with the Proposed Project. Long-term impacts are evaluated for the year 2025, based on a seven-year horizon from the year of the filing of this traffic study.

The No-Build (2025) Condition includes general background traffic growth, traffic growth associated with specific developments (not including this Proposed Project), and transportation improvements that are planned in the vicinity of the Proposed Project site.

The Build (2025) Condition includes a net increase in traffic volume due to the addition of project-generated trip estimates to the traffic volumes developed as part of the No-Build (2025) Condition. Expected roadway, parking, transit, pedestrian, and bicycle accommodations, as well as loading capabilities and deficiencies are identified.

The final part of the transportation study identifies measures to mitigate project-related impacts and to address any traffic, pedestrian, bicycle, transit, safety, or construction related issues that are necessary to accommodate the Proposed Project.

An evaluation of short-term traffic impacts associated with construction activities is also provided.

7.3 Existing (2018) Condition

This section includes descriptions of existing study area roadway geometries, intersection traffic control, peak-hour vehicular and pedestrian volumes, average daily traffic volumes, transit availability, parking, curb usage, and loading condition.

7.3.1 Existing Roadway Condition

The study area includes the following roadways, which are categorized according to the Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning functional classifications:

Neponset Valley Parkway is a two-way, two-lane roadway located to the south and west of the Proposed Project site. Neponset Valley Parkway is classified as an urban minor arterial roadway under DCR jurisdiction between River Street to the north and Milton Street to the south. Neponset Valley Parkway is classified as an urban principal arterial roadway under DCR jurisdiction between Wolcott Square to the west and Blue Hill Avenue to the east. Sidewalks are generally provided along both sides of the roadway. Parking is restricted along both sides of this section of Neponset Valley Parkway.

Hyde Park Avenue is a two-way, two-lane roadway located adjacent to the east of the Proposed Project site. Hyde Park Avenue is classified as an urban principal arterial roadway and is under BTD jurisdiction north of Milton Street and DCR jurisdiction between Milton Street and Wolcott Square. Hyde Park Avenue runs in a north-south direction between Forest Hills Station to the north and Wolcott Square to the south. Sidewalks are provided along both sides of the roadway. Parking is prohibited on Hyde Park Avenue to the north of Wolcott Square, and parking is provided along both sides of the roadway to the south of Wolcott Square.

Milton Street is a two-way, two-lane roadway located adjacent to the south of the Proposed Project site. Milton Street is classified as an urban principal arterial roadway under BTD jurisdiction, however the Milton Street Bridge (Also called the Father Heart Bridge) over the railroad tracks is under MassDOT jurisdiction. Milton Street runs in a generally north-south direction between Neponset Valley Parkway and Hyde Park Avenue to the north and West Milton Street to the south. Sidewalks are provided, and parking is prohibited along both sides of Milton Street.

West Milton Street is a two-way, two-lane roadway located southwest of the Proposed Project site. West Milton Street is classified as an urban principal arterial roadway under BTD jurisdiction and runs in a predominately east-west direction between Sprague Street to the east and the Dedham town line to the west. Sidewalks are provided, and parking is prohibited along both sides of West Milton Street.

Truman Parkway is a two-way, four-lane roadway located to the east of the Proposed Project site. Truman Parkway is classified as an urban minor arterial roadway under DCR jurisdiction. The Neponset River Greenway, a shared-use path, is located along the west side of Truman Parkway. It also has a five-foot grass median separating the directions of travel. Truman Parkway runs in a north-south direction between Brush Hill Road to the north and Neponset Valley Parkway to the south. Sidewalks are provided and parking is prohibited along both sides of Truman Parkway.

Sprague Street is a two-way, two-lane roadway located to the east side of the Proposed Project site. Sprague Street is classified as an urban minor arterial roadway under BTD jurisdiction, however the Sprague Street Bridge over the rail tracks is under MassDOT jurisdiction. Sprague Street runs in a predominately north-south direction between West Milton Street to the north and

Cedar Street in Dedham to the south. Sidewalks are provided, and parking is prohibited along both sides of Sprague Street.

Reservation Road is a two-way, two-lane roadway located to the north of the Proposed Project site. Reservation Road is classified as an urban minor arterial roadway under BTD jurisdiction, however the Reservation Road bridge over the rail tracks is under MassDOT jurisdiction. Reservation Road runs in a primarily north-south direction between West Smithfield Road to the north and Hyde Park Avenue to the south. Sidewalks are provided along both sides of Reservation Road. Parking is prohibited on both sides of the roadway except for the east side of the road between Hyde Park Avenue and the Reservation Road Bridge, where it is unrestricted.

Industrial Drive is a two-way, two-lane roadway located to the southwest of the Proposed Project site. Industrial Drive is classified as a local roadway under BTD jurisdiction. Industrial Drive runs in a northeast-southwest direction between Milton Street to the northeast with no outlet to the southwest. Sidewalks are not provided, and parking is prohibited along both sides of Industrial Drive.

Wolcott Court is a two-way, two-lane roadway located to the east of the Proposed Project site. Wolcott Court is classified as a local roadway under BTD jurisdiction. Wolcott Court runs in a primarily north-south direction to the north of the intersection of Hyde Park Avenue/Neponset Valley Parkway/Wolcott Court/Wolcott Square. Sidewalks are provided within approximately 125 feet of the intersection of Hyde Park Avenue/Neponset Valley Parkway/Wolcott Court/Wolcott Square but not provided on the rest of the roadway. Parking is unrestricted along both sides of Wolcott Court.

Wolcott Square is a two-way, two-lane roadway located to the south of the Proposed Project site. Wolcott Square is classified as a local roadway under BTD jurisdiction. Wolcott Square runs in a primarily east-west direction between Wolcott Square intersection to the east, then makes an approximately 60-degree turn and intersects with Hyde Park Avenue to the north.

7.3.2 Existing Intersection Condition

The existing study area intersections are described below. Intersection characteristics such as traffic control, lane usage, pedestrian facilities, pavement markings, and adjacent land use are described.

Wolcott Square (Hyde Park Avenue/Neponset Valley Parkway/Wolcott Court/Wolcott Square) is a five-legged, signalized intersection with five approaches. The Hyde Park Avenue eastbound approach consists of one wide shared left-turn/through/right-turn lane and an MBTA Bus stop. This approach can operate as two lanes during periods of congestion. The Neponset Valley Parkway westbound approach consists of one lane, operating as a shared left-turn/through/right-turn lane. The Hyde Park Avenue northbound approach consists of one lane, a shared left-turn/through/right-turn lane. The Wolcott Court southbound approach consists of two lanes, a stop controlled channelized right-turn lane and a shared left-turn/through/right-turn lane. The Wolcott Square north-eastbound approach consists of one lane, operating as a shared left-turn/through lane/right-turn lane. Crosswalks, curb ramps, and pedestrian signal equipment are provided across all legs of the intersection. Parking is prohibited on all approaches except the Wolcott Square eastbound approach.

Neponset Valley Parkway/Truman Parkway is a three-legged, signalized intersection with three approaches. The Neponset Valley Parkway eastbound approach consists of two lanes, a shared left-turn/through lane and a through lane. The Neponset Valley Parkway westbound approach consists of two lanes, a through lane and a shared through/right-turn lane. The directions of travel of Neponset Valley Parkway are separated by a 25-foot grass median that breaks at the intersection. The Truman Parkway southbound approach consists of three lanes, two left-turn lanes and a channelized right-turn lane. The directions of travel of Truman Parkway are separated by a five-foot grass median. Crosswalks, curb ramps, and pedestrian signal equipment are provided across the westbound and southbound approaches.

Milton Street/Hyde Park Avenue/MBTA Parking Driveway is a four-legged, unsignalized intersection with four approaches. The Milton Street eastbound approach is stop controlled and consists of two lanes, a shared left-turn/through lane and a right-turn only lane. The MBTA Parking Driveway westbound approach is stop controlled and consists of one lane, a shared left-turn/through/right-turn lane. The Hyde Park Avenue northbound approach is a free movement and consists of two lanes, a left-turn only lane and a shared through/right-turn lane. The Hyde Park Avenue southbound approach is a free movement and consists of two lanes, a shared left-turn/through lane and a right-turn only lane. MBTA bus stops are provided along the Hyde Park Avenue northbound and southbound approaches to the intersection. A crosswalk with non-compliant curb ramps is provided across the eastbound approach to the intersection and parking is prohibited on all approaches.

Milton Street/Neponset Valley Parkway is a three-legged, unsignalized intersection with three approaches. The Milton Street westbound approach is stop controlled and consists of two lanes, a left-turn only lane and a right-turn only lane. The Milton Street northbound approach is a free movement and consists of one lane, a shared through/right-turn lane. The Neponset Valley Parkway southbound approach is a free movement and consists of one lane, a shared left-turn/through lane. A crosswalk with non-compliant curb ramps is provided across the westbound approach to the intersection. Parking is prohibited on all approaches.

Milton Street/Industrial Drive is a three-legged, unsignalized intersection with three approaches. The Industrial Drive westbound approach is stop controlled and consists of one lane, a shared left-turn/right-turn lane. The Milton Street northbound approach is a free movement and consists of one lane, a shared through/right-turn lane. The Milton Street southbound approach is a free movement and consists of one lane, a shared left-turn/through lane. Crosswalks and curb ramps are provided across all approaches. Parking is prohibited along all approaches.

Sprague Street/West Milton Street/Milton Street is a three-legged, unsignalized intersection with three approaches. The West Milton Street eastbound approach is stop controlled and consists of one lane, a shared left-turn/right-turn lane. The Sprague Street northbound approach is stop controlled and consists of one lane, a shared left-turn/through lane. The Milton Street southbound approach is stop controlled and consists of two lanes, a through lane and an exclusive right-turn lane. Crosswalks and curb ramps are provided across the eastbound and southbound approaches to the intersection. Parking is prohibited along all approaches.

Hyde Park Avenue/Reservation Road is a three-legged, unsignalized intersection with three approaches. The Hyde Park Avenue northbound approach is a free movement and consists of one lane, a shared left-turn/through lane. An MBTA bus stop is located along the Hyde Park Avenue northbound approach. The Hyde Park Avenue southbound approach is a free movement and consists of two lanes, a through lane and a channelized right turn lane. An MBTA bus stop is located along the Hyde Park Avenue southbound approach. The Reservation Road south-eastbound approach is stop controlled and consists of one lane, a shared left-turn/through lane. Crosswalks and parking are not provided along any of the approaches.

7.3.3 Existing Parking and Curb Use

On-street parking in the proximity of the Proposed Project site generally consists of unrestricted parking to the north and west of the Proposed Project site. Two-hour parking is provided to the south of the Proposed Project site at Wolcott Square. The existing on-street parking regulations are shown in **Figure 7-2**.

Off-street parking is provided near the Proposed Project site at the Readville Commuter Rail station. Approximately 354 off-street parking spaces are currently provided at the station at a cost of $4.00 per day. Based on field observations, there is excess capacity at the station parking lot on a typical weekday.

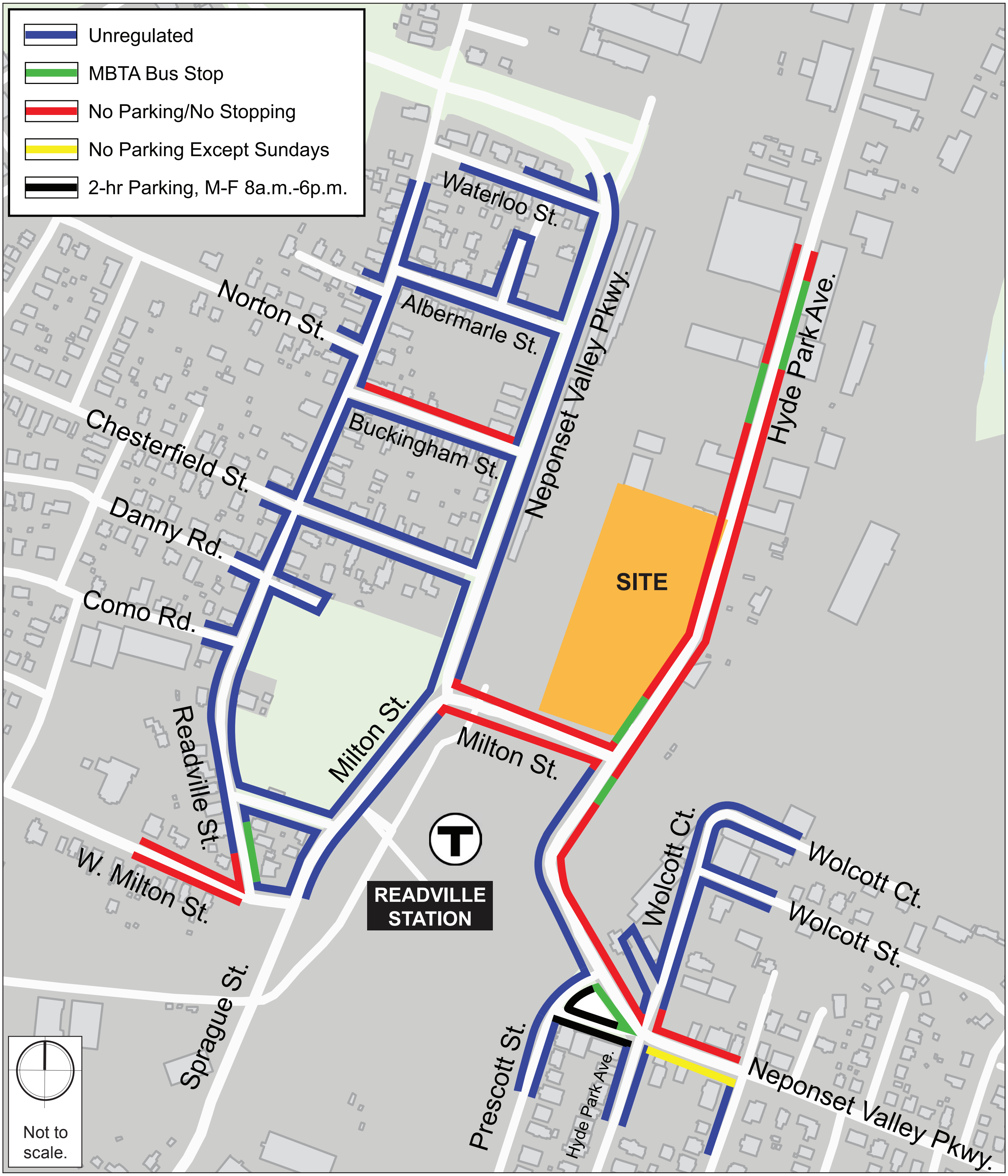


Figure 7-2.
On-Street Parking Regulations

7.3.4 Car Sharing Services

Car sharing enables easy access to short-term vehicular transportation. Vehicles are rented on an hourly or daily basis, and all vehicle costs (gas, maintenance, insurance, and parking) are included in the rental fee. Vehicles are checked out for a specific time period and returned to their designated location. Car sharing, predominantly served by Zipcar in the Boston area, provides easy access to vehicular transportation for those who do not own cars. The closest car sharing station are in Hyde Park, just over one mile from the Proposed Project site.

7.3.5 Existing Traffic Data

Traffic volume data was collected in the study area intersections on March 1, 2017, March 8, 2017, and April 11, 2018. Turning Movement Counts (TMCs) were conducted during the weekday a.m. and p.m. peak periods (7:00 – 9:00 a.m. and 4:00 – 6:00 p.m., respectively) at the study area intersections. The TMCs collected vehicle classification including car, heavy vehicle, pedestrian, and bicycle movements. Based on the TMC data, the vehicular traffic peak hours for the study area intersection are generally 7:15 a.m. – 8:15 a.m. and 4:45 p.m. – 5:45 p.m. The detailed traffic counts are provided in **Appendix D.**

In order to account for seasonal variation in traffic volumes throughout the year, data provided by MassDOT were reviewed. The most recent (2011) MassDOT Weekday Seasonal Factors were used to determine the need for seasonal adjustments to the April 2018 TMCs. The seasonal adjustment factor for roadways similar to the study area (Group 6 – Urban Arterials) during the month of April is 0.92. This indicates that average month traffic volumes are approximately eight percent lower than the traffic volumes that were collected. The traffic counts were not adjusted downward to reflect average month condition in order to provide a conservatively high analysis consistent with the peak season traffic volumes. The MassDOT 2011 Weekday Seasonal Factors table is provided in **Appendix D**.

7.3.6 Existing (2018) Traffic Volumes

The traffic data collected in 2017 was adjusted by an annual growth rate of one-quarter of a percent to reflect a conservative analysis. Then the existing traffic volumes were balanced, where necessary, to develop the Existing (2018) Condition vehicular traffic volumes. The Existing (2018) Condition weekday a.m. and p.m. peak hour traffic volumes are shown in **Figure 7-3** and **Figure 7-4**, respectively.

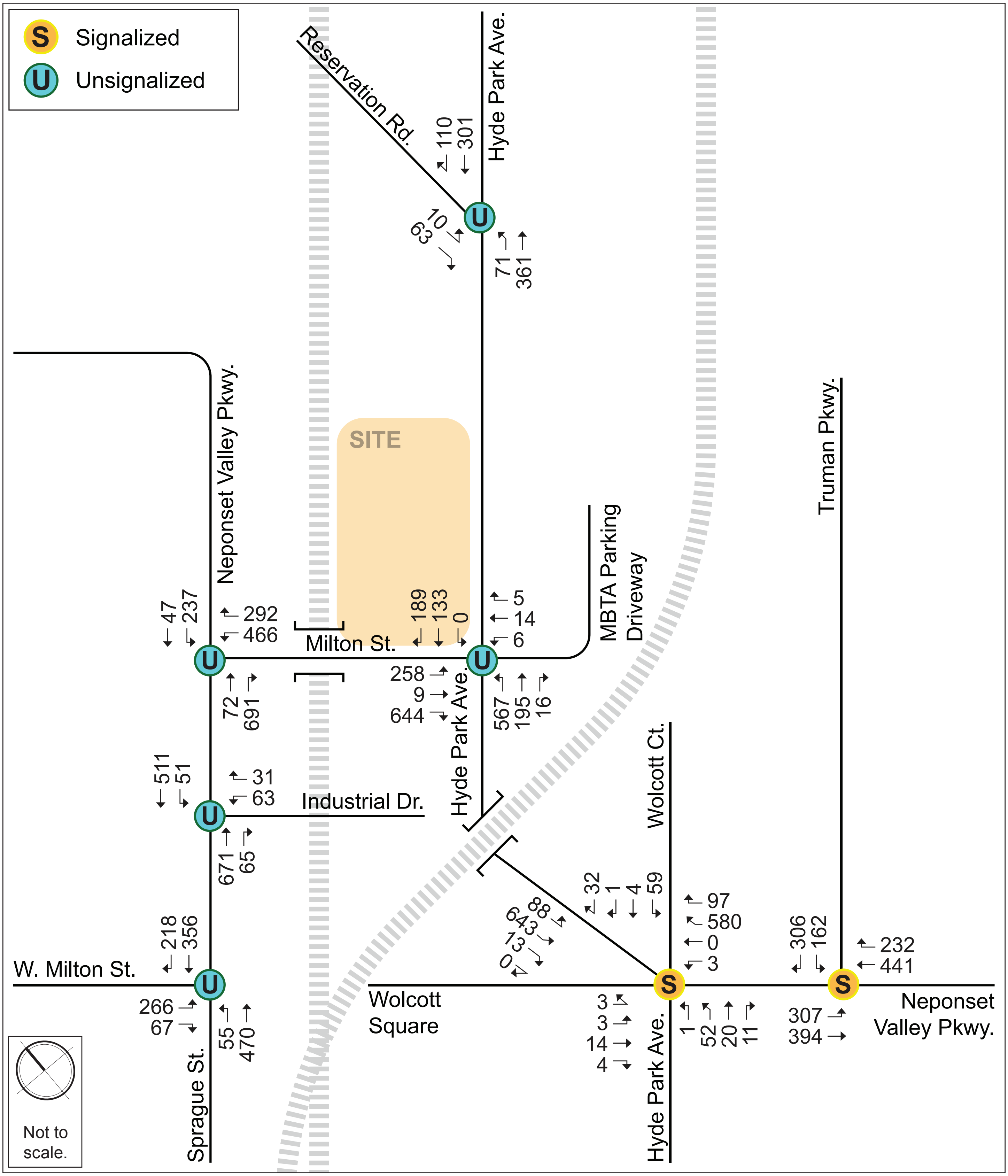


Figure 7-3.
Existing (2018) Condition Traffic Volumes, Weekday a.m. Peak Hour

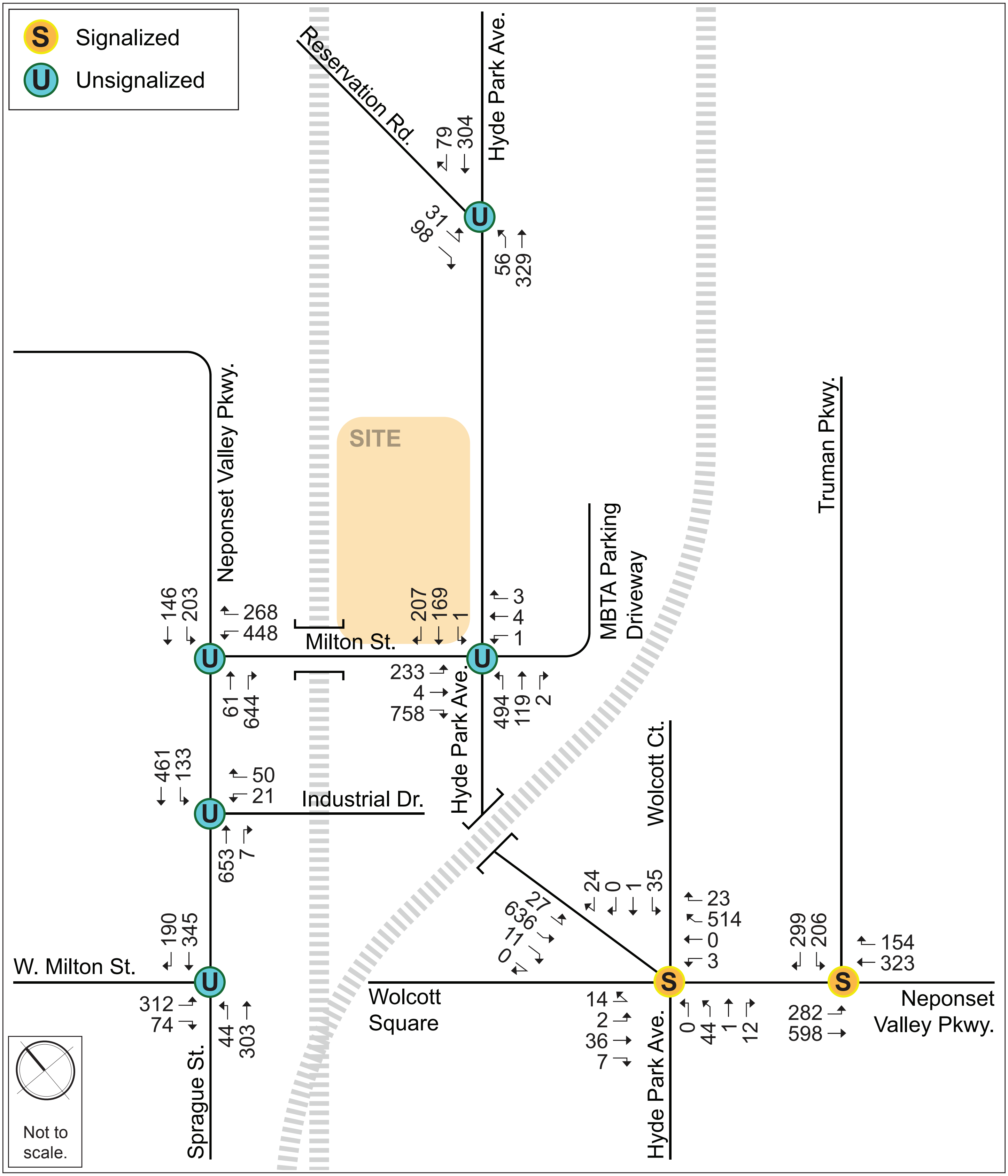


Figure 7-4.
Existing (2018) Condition Traffic Volumes, Weekday p.m. Peak Hour

7.3.7 Existing Pedestrian Condition

Sidewalks are typically provided along both sides of the roadways in the study area. In general, the sidewalks provided along nearby roadways are in fair condition with cracks, uneven grades, or cross slopes. In some areas there is overgrown vegetation or physical impediments such as utility poles or signs restricting the clear zone for pedestrian travel. Also, at times the sidewalks are constructed with asphalt instead of concrete. Crosswalks are only provided at limited locations at the study area intersection. Wheelchair ramps are typically provided at all crosswalks, but most are outdated and do not conform to current standards or damaged. Pedestrians have limited ability to walk due to the major barriers around the site including two railroad corridors and the Neponset River. The Glenwood Avenue Overpass, a pedestrian bridge, is provided less than one-mile to the north, allowing pedestrians to cross over the Neponset River and the Fairmont Line commuter rail corridor.

To determine the amount of pedestrian activity within the study area, pedestrian counts were conducted concurrent with the TMCs on July 1, 2015, March 1, 2017, March 8, 2018, and April 11, 2018 at the study area intersection. The weekday a.m. and p.m. peak hours pedestrian volumes are presented in **Figure 7-5**. As shown, the heaviest pedestrian volumes occur at Readville Station and Wolcott Square.

7.3.8 Existing Bicycle Condition

In recent years, bicycle use has increased dramatically throughout the City of Boston. The following roadways within the study have designated bicycle infrastructure. The Neponset River Greenway is located along the west side of Truman Parkway. The Neponset River Greenway is five-mile shared use path along the Neponset River extending from Dorchester through Milton. In the section, the path is approximately 8-feet wide and physically protected from vehicles. Bicycle volumes are light throughout the study area.

Bicycle counts were conducted concurrent with the vehicular TMCs on March 1, 2017, March 8, 2017, and April 11, 2018 and are presented in **Figure 7-6**.

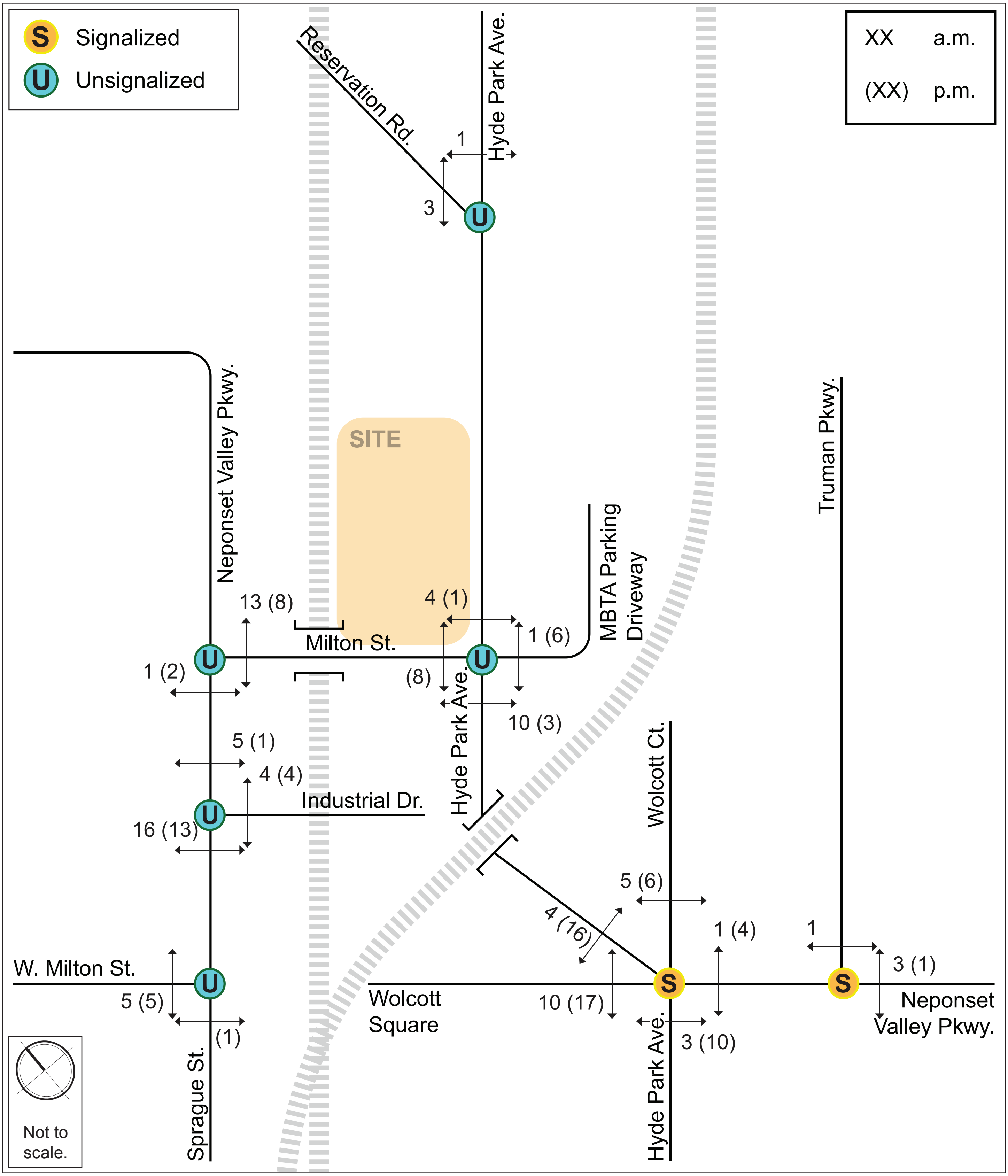


Figure 7-5.
Existing (2018) Condition Pedestrian Volumes, Weekday a.m. and p.m. Peak Hours

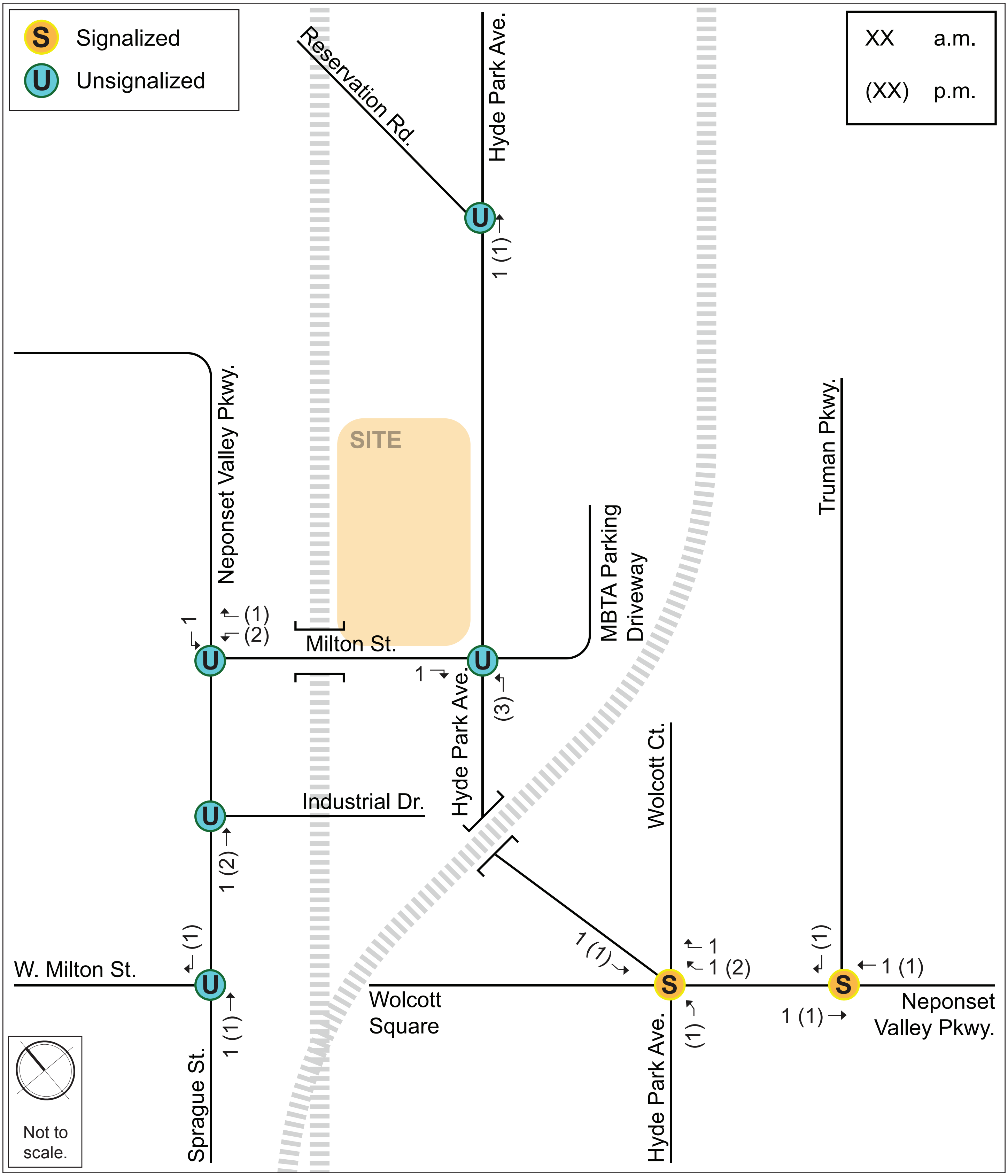


Figure 7-6.
Existing (2018) Condition Bicycle Volumes, Weekday a.m. and p.m. Peak Hours

7.3.9 Existing Public Transportation

The Proposed Project site is located in Boston's Readville neighborhood with several public transportation opportunities. The Proposed Project site is adjacent to the Readville Commuter Rail Station and near two MBTA bus routes. Readville Station provides access to the Fairmont Line and Franklin Line of the MBTA Commuter Rail. Readville Station is a Zone 2 Fare of the commuter rail and it costs $2.00 per day to park at the station. **Table 7-1** describes each public transportation route located in the vicinity of the Proposed Project site, with a map of the nearby public transportation services shown in **Figure 7-7**. The Providence/Stoughton Commuter Rail Line and the Amtrak Northeast Regional Line both bypass the Readville Station.

MBTA Bus Route 32 operates along Hyde Park Avenue and stops near the Readville Station and Wolcott Square. Route 32 provides a route to Forest Hills Station, connecting to the MBTA Orange Line. Bus Route 33 provides service between Readville and Mattapan and operates along West Milton Street and Milton Street with stops near the Sprague Street/West Milton Street/Milton Street Intersection.

Table 7-1. Existing Public Transportation

MBTA Transit Service	Description	Weekday Service Duration	Peak-Hour Headway (minutes)
Commuter Rail Routes			
Franklin	Forge Park / 495 – South Station	3:50 a.m. – 12:53 a.m.	60-90
Fairmont	Readville – South Station	5:39 a.m. – 11:50 p.m.	40
Local Bus Routes			
24	Wakefield Ave. & Truman Hwy. – Mattapan	5:07 a.m. – 1:28 a.m.	20
32	Wolcott Square – Forest Hills Station	4:28 a.m. – 1:34 a.m.	7-8
33	Dedham Line – Mattapan Station	4:35 a.m. – 1:28 a.m.	30

Headway is the time between service, Headways vary.

7.4 No-Build (2025) Condition

The No-Build (2025) Condition reflects a future scenario that incorporates anticipated traffic volume changes associated with background traffic growth independent of any specific project, traffic associated with other planned specific developments, and planned infrastructure improvements that will affect travel patterns throughout the study area. Infrastructure improvements include roadway, public transportation, pedestrian, and bicycle improvements. See **Figure 7-8**. The No-Build (2025) Condition does not include the impact of the Proposed Project.

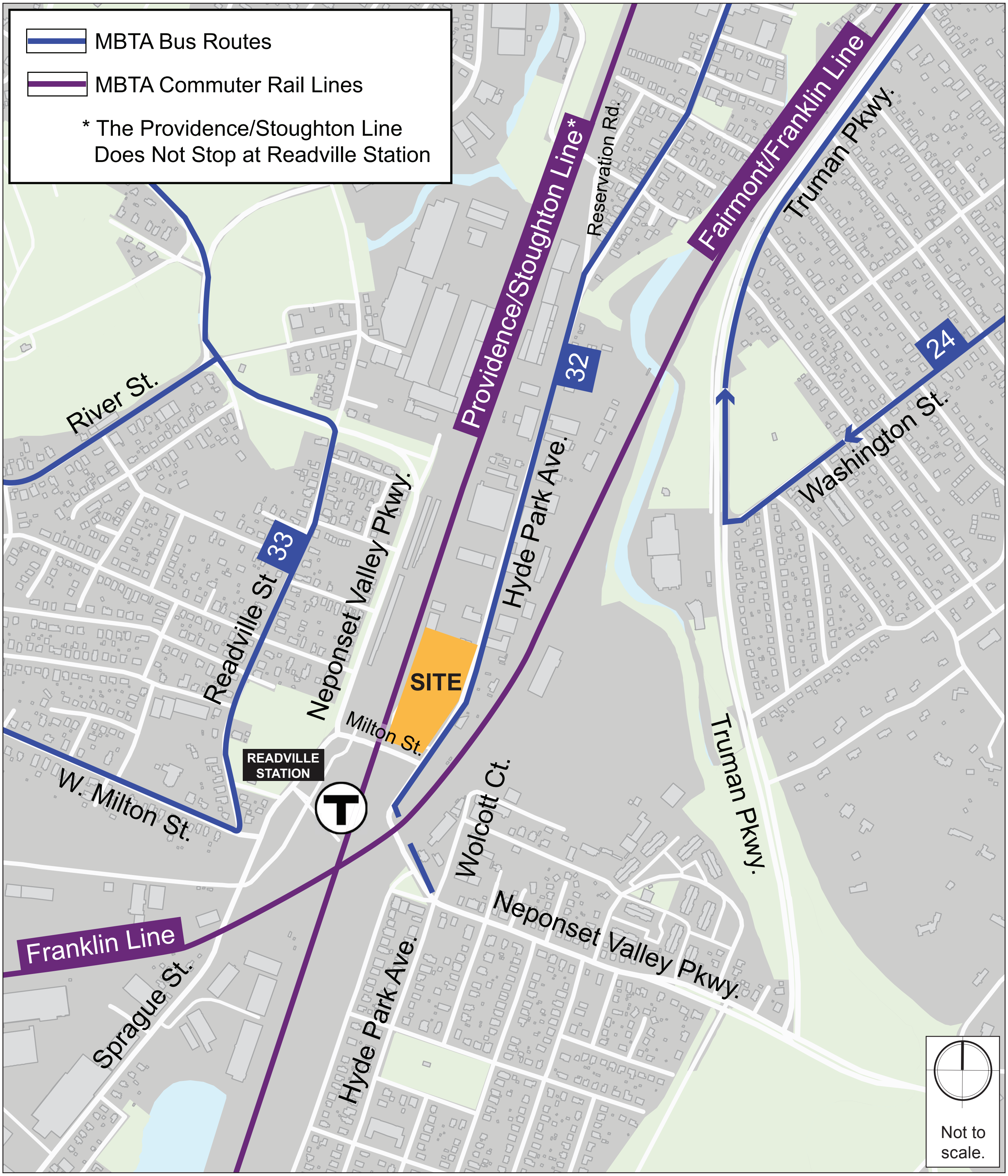


Figure 7-7.
Public Transporation

Figure 7-8.
Specifc Development Projects

7.4.1 Background Traffic Growth

The methodology to account for generic future background traffic growth, independent of large development projects, may be affected by changes in demographics, smaller scale development projects, or projects unforeseen at this time. Based on a review of recent and historic traffic data collected recently and to account for any additional unforeseen traffic growth, a one-half percent per year annual traffic growth rate was used.

7.4.2 Specific Development Traffic Growth

Traffic volumes associated with the larger or closer known development projects can affect traffic patterns throughout the study area within the future analysis time horizon. Two projects have been identified and were specifically accounted for in the future traffic. **Figure 7-9** show the specific development programs accounted for, which are summarized as follows:

Readville Yards – This project is located to the southwest of the Proposed Project site and includes the construction of six buildings including the approximately 375,000 sf of light-industrial space and 42,000 sf of office space. The light-industrial space will consist of approximately 51 units, each one will be provided with approximately three parking spaces and two to three loading spaces for trailers. In addition, 75 parking spaces will be provided for the office uses on the Site. The project is under construction.

36-70 Sprague Street – This project is located to the south of the Proposed Project site. The 36-70 Sprague Street project includes the demolition of one- and two-story industrial and commercial buildings and the constriction of four new buildings including approximately 521 residential units, 6,000 sf of restaurant space, and 532 parking spaces at and below grade. The project is currently under BPDA review.

7.4.3 Proposed Infrastructure Improvements

A review of planned improvements to roadway, transit, bicycle, and pedestrian facilities was conducted to determine if there are any nearby improvement projects in the vicinity of the study area. One infrastructure improvement project has been identified in the vicinity of the site.

Readville Transportation Improvements – The City of Boston invested $1.4 million to improve safety and traffic at three key intersection in the Readville neighborhood. The improvements include new traffic signals at Milton Street/Hyde Park Avenue, Milton Street/Neponset Valley Parkway, and signal upgrades at Wolcott Square. The project also includes new ADA compliant wheelchair ramps, new crosswalks, larger sidewalks, improved bus circulation, and improved intersection geometry increasing safety and comfort. Lastly, the three signalized intersections will be connected to the Traffic Management Center at City Hall. To

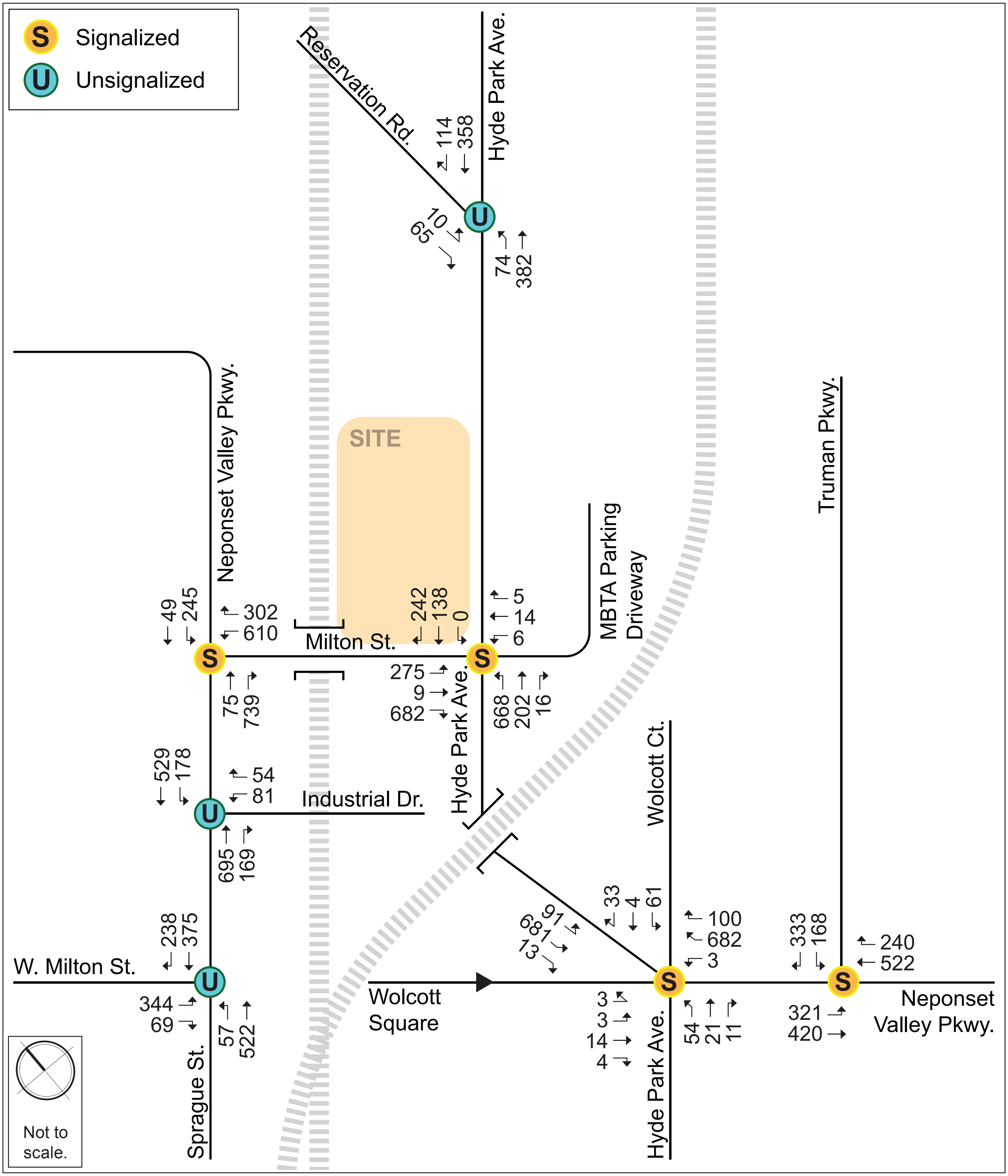


Figure 7-9.
No-Build (2025) Condition Traffic Volumes, Weekday a.m. Peak Hour

account for these improvements, the improvements were included in the future operations analyses.

7.4.4 No-Build (2025) Condition Traffic Volumes

The one-half percent per year annual growth rate was applied to the Existing (2018) Condition traffic volumes, then the traffic volumes associated with the background development project listed above was added to develop the No-Build (2025) Condition traffic volumes. The No-Build (2025) weekday a.m. and p.m. peak hour traffic volumes are shown on **Figure 7-10** and **Figure 7-11**, respectively.

7.5 Build (2025) Condition

As previously summarized, The Proposed Project consists of the construction of two, six-story buildings with 305 residential units, with approximately 4,200 SF of ground floor restaurant space and approximately 221 parking spaces in an underground garage. The Proposed Project will contain 305 indoor secure bicycle parking spaces, a large central open space with a pool and landscaping, an auto court with six additional parking spaces, a pocket park open to the public, and direct access to the MBTA commuter rail platform at the back of the site for residents. The auto court will be able to accommodate pick-up/drop-off needs and all TNCs, such as Uber and Lyft. The Proposed Project will also have an on-site loading area that can accommodate a 36-foot box truck for most residential deliveries and move-in/move-out activity.

7.5.1 Site Access and Circulation

Vehicular access to the site will be provided via two curb along Hyde Park Avenue. The northern curb cut, located at the north end of the site, will provide access to the parking garage and loading area. Hyde Park Avenue is at its lowest elevation providing the best opportunity to construct a ramp with the least impact to the building with the smallest grade change. The southern curb cut, located at the middle of the site, will provide access to the pick-up/drop-off auto court. The auto court will include staging for all pick-up/drop-off activity, especially for TNC vehicles such as Uber and Lyft, and will be able to accommodate temporary parking for up to six vehicles.

Pedestrian access to each building will be provided via two main entrances located on either side of the auto court. A third access point will be provided at the southwest corner of the site adjacent to the MBTA platform, at the garage level. Residents that wish to use a bicycle will be able to access the secure indoor bicycle parking area directly from Hyde Park Avenue, between the loading area and the auto court. The ground floor plan is shown in **Figure 7-12** on **Page 7-28.**

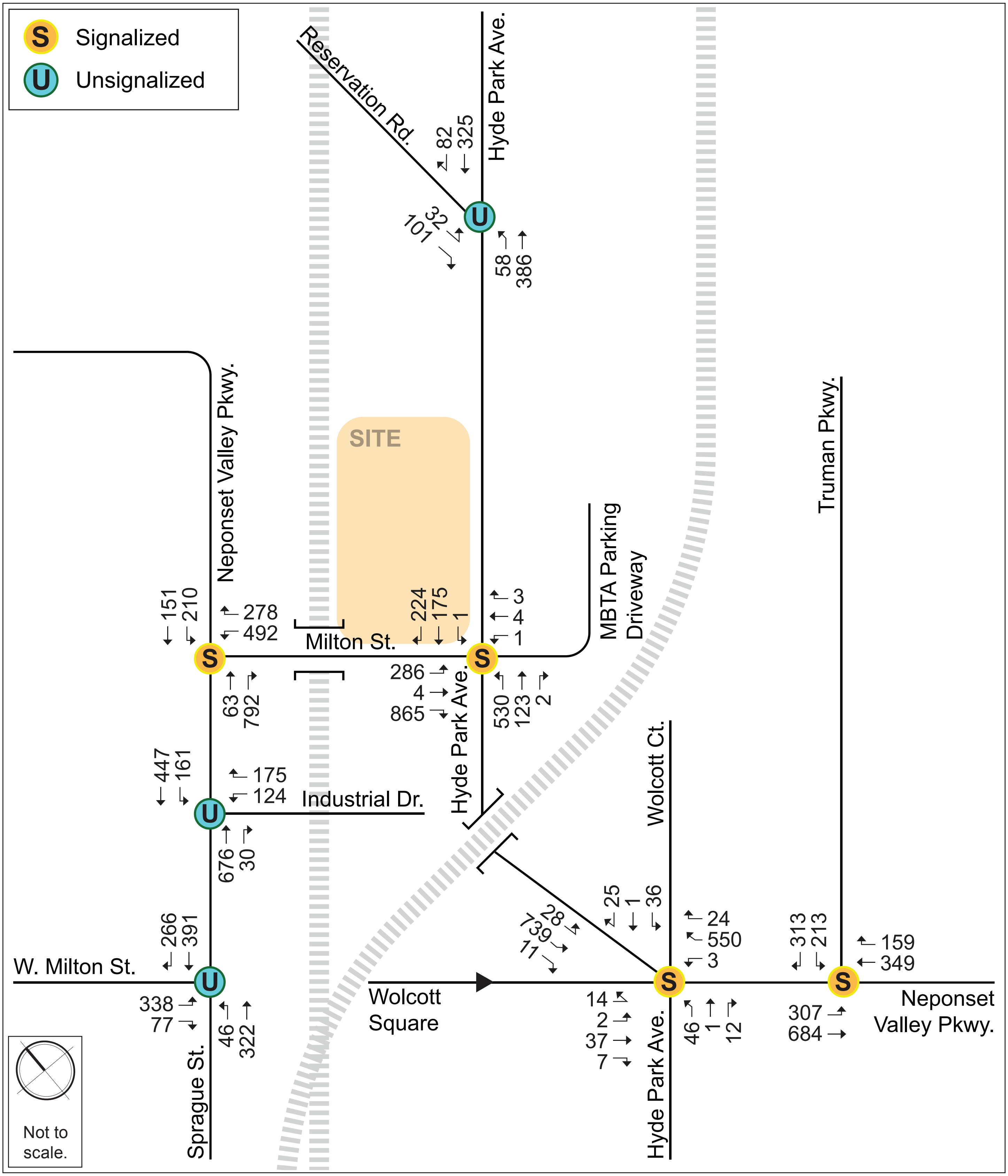


Figure 7-10.
No-Build (2025) Condition Traffc Volumes, Weekday p.m. Peak Hour

Figure 7-11.
Site Plan

7.5.2 Parking

The parking goals developed by the BTD for Readville are a maximum of 1.0 to 1.5 parking spaces per residential unit. As previously mentioned, the Proposed Project will include 221 below-grade parking spaces. This results in a residential parking ratio of approximately 0.72 parking spaces per residential unit, consistent with the BTD parking ratio maximum for the area.

7.5.3 Loading and Service Accommodations

Residential units primarily generate delivery trips related to small packages and prepared food. Loading and service operations will occur on-site, located in the designated loading area to the south of the driveway. Deliveries to the Proposed Project site will be limited to 36 foot long box trucks (SU-36) or smaller delivery vehicles. Residential move-in/move-out activity will take place within the site.

7.5.4 Bicycle Accommodations

BTD has established guidelines requiring projects subject to Transportation Access Plan Agreements to provide secure bicycle parking for residents. Based on BTD guidelines, the Proposed Project will supply 305 secure bicycle parking/storage spaces, at a rate of one secure indoor bicycle parking spaces for every three residential units. Residents will have direct access to Hyde Park Avenue from the storage room without the need to bike through the garage or walk down a hallway. Bicycle racks for visitors will also be provided throughout the site, where necessary.

7.5.5 Trip Generation Methodology

Determining the future trip generation of the Proposed Project is a complex, multi-step process that produces an estimate of vehicle trips, transit trips, walk trips, and bicycle trips associated with a proposed development and a specific land use program. A project's location and proximity to different travel modes determines how people will travel to and from a project site.

To estimate the number of trips expected to be generated by the Proposed Project, data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*[7] were used. ITE provides data to estimate the total number of unadjusted vehicular trips associated with the Proposed Project. In an urban setting well-served by transit, adjustments are necessary to account for other travel mode shares such as walking, bicycling, and transit. To estimate the unadjusted number of vehicular trips for the Proposed Project, the following ITE land use code (LUCs) was used:

[7] Trip Generation Manual, 10th Edition; Institute of Transportation Engineers; Washington, D.C., 2012.

Land Use Code 221 – Multifamily Housing (Mid-Rise). Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and ten floors. The trip generation estimates are based on the average rate per dwelling units.

Land Use Code 932 – High Turnover (Sit-Down) Restaurant. This land use consists of sit-down, full service eating establishments with typical duration of stay of approximately one hour. This type of restaurant is usually moderately priced and frequently belongs to a restaurant chain. Generally, lunch and dinner are both served but some may also serve breakfast or brunch on the weekends. Patrons are seated, served by a waiter, order from a menu, and pay after their meal. Most locations also contain a bar that serves alcoholic drinks. The trip generation estimates are based on the average rate per 1,000 sf.

7.5.6 Mode Share

BTD provides vehicle, transit, and walking mode share rates for different areas of Boston. The Proposed Project is located within designated Area 12 – Hyde Park. The residential mode share was adjusted based on the American Community Survey (ACS)[8] data to account for the transit-oriented nature of the Proposed Project. The unadjusted vehicular trips were converted to person trips by using vehicle occupancy rates published by the Federal Highway Administration (FHWA)[9]. The person trips were then distributed to different modes according to the mode shares shown in **Table 7-2**.

[8] American Community Survey 5-Year Estimates (2012-2016) Table: B08141 Means of Transportation to Work Census Tract 1402.01 and 1402.02

[9] *Summary of Travel Trends: 2009 National Household Travel Survey*; FHWA; Washington, D.C.; June 2011.

Table 7-2. Travel Mode Shares

Land Use		*Transit Share[1]*	*Walk/Bicycle Share[1]*	*Auto Share[1]*	*Vehicle Occupancy Rate[1]*
Daily					
Residential	In	22%	6%	72%	1.13
	Out	22%	6%	72%	1.13
Restaurant	In	4%	14%	82%	2.20
	Out	4%	14%	82%	2.20
a.m. Peak					
Residential	In	12%	7%	81%	1.13
	Out	31%	5%	64%	1.13
Restaurant	In	3%	15%	82%	2.20
	Out	8%	14%	78%	2.20
p.m. Peak					
Residential	In	31%	5%	64%	1.13
	Out	12%	7%	81%	1.13
Restaurant	In	8%	14%	78%	2.20
	Out	3%	15%	82%	2.20

Based on rates published by the Boston Transportation Department for Area 12 – Hyde Park. The residential mode share was adjusted based on the American Community Survey.

The mode share percentages shown in **Table 7-2** were applied to the number of person trips to develop walk/bicycle, transit, and vehicle trip generation estimates. The trip generation for the Proposed Project by mode is shown in **Table 7-3**. The detailed trip generation information is provided in **Appendix D.**

Table 7-3. Trip Generation Summary

Land Use		Walk/Bicycle Trips[1]	Transit Trips[1]	Private Auto Trips[1]
Daily				
Residential	In	56	206	598
	Out	56	206	598
	Total	112	412	1,196
Restaurant	In	73	21	193
	Out	73	21	193
	Total	146	42	386
Total	In	129	227	791
	Out	129	227	791
	Total	258	454	1,582
a.m. Peak Hour				
Residential	In	2	4	24
	Out	5	29	51
	Total	7	33	75
Restaurant	In	8	2	19
	Out	6	3	15
	Total	14	5	34
Total	In	10	6	43
	Out	11	32	66
	Total	21	38	109
p.m. Peak Hour				
Residential	In	5	29	52
	Out	4	7	42
	Total	9	36	94
Restaurant	In	8	4	20
	Out	5	1	13
	Total	13	5	33
Total	In	13	33	72
	Out	9	8	55
	Total	22	41	127

1. Based on ITE LUC 221 – Multifamily Housing (Mid-rise), 305 dwelling units, average rate.
2. Based on ITE LUC 932 – High Turnover (Sit-Down) Restaurant, 4,200 sf, average rate.

The Proposed Project is expected to generate approximately 1,582 new daily vehicle trips with 109 new vehicle trips (43 entering and 66 exiting) during the weekday a.m. peak hour and 127 new vehicle trips (72 entering and 55 exiting) during the weekday p.m. peak hour. The Proposed Project is also expected to generate 258 new daily pedestrian/bicycle trips (21 during the morning peak hour and 22 during the evening peak hour) and 454 new daily transit trips (38 during the morning peak hour and 41 during the evening peak hour).

7.5.7 Trip Distribution

The vehicle trip distribution identifies the various travel paths for vehicles arriving and leaving the Proposed Project site. Trip distribution patterns for the Proposed Project were based on BTD's origin-destination data for Area 12 – Hyde Park. The origin-destination data specifies the percentage of trips traveling between Readville and other areas within Boston and the metropolitan area. The trip distribution patterns for the Proposed Project are illustrated in **Figure 7-12**.

7.5.8 Build (2025) Traffic Volumes

The Proposed Project-generated vehicle trips were assigned to the study area roadway network based on the trip distribution patterns and are shown in **Figure 7-13** and **Figure 7-14** for the a.m. and p.m. peak hours, respectively. The Proposed Project-generated trips were added to the No-Build (2025) Condition traffic volumes to develop the Build (2025) Condition peak hour traffic volume networks and are shown in **Figure 7-15** and **Figure 7-16** for the a.m. and p.m. peak hours, respectively.

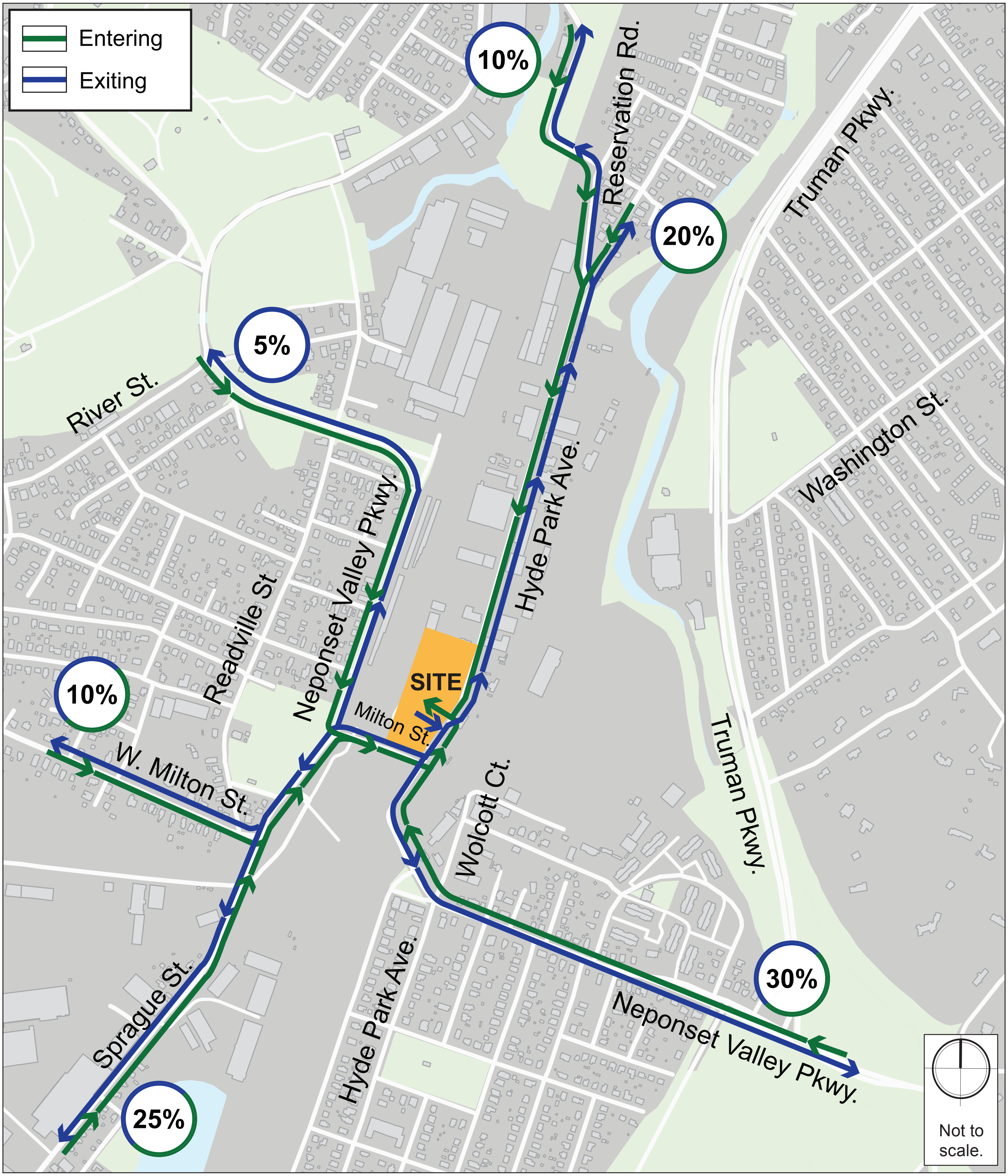


Figure 7-12.
Trip Distribution

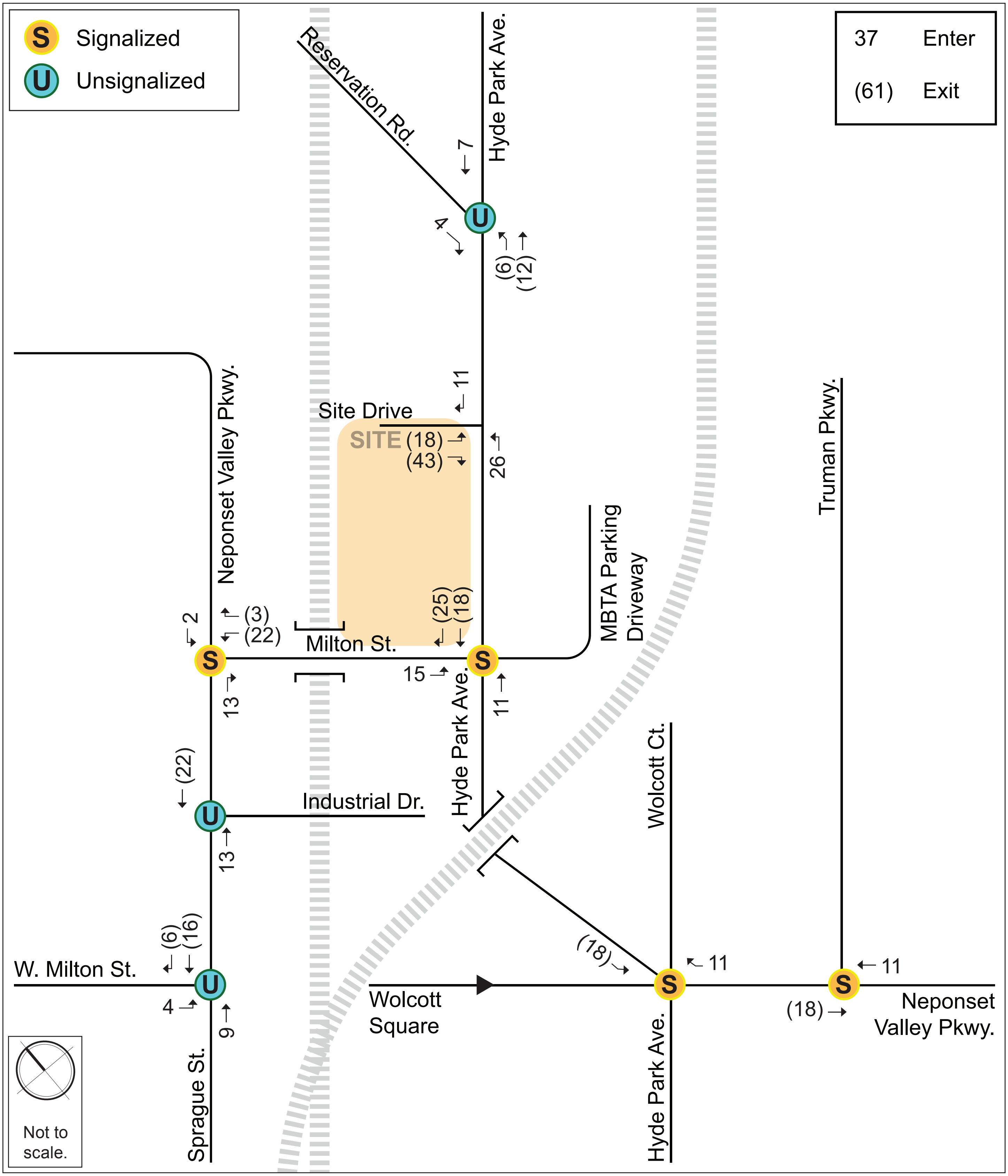


Figure 7-13.
Project-generated Trips, a.m. Peak Hour

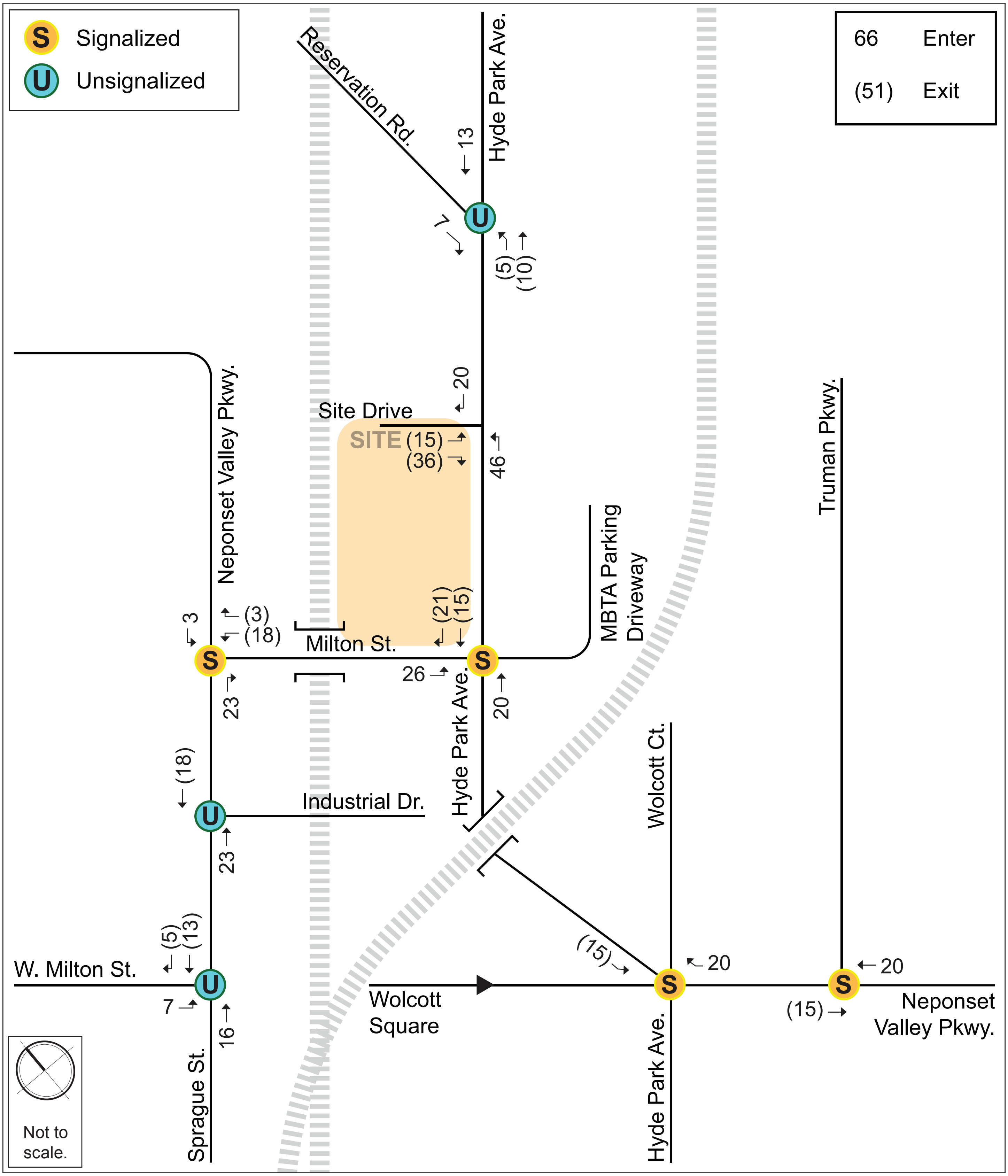


Figure 7-14.
Project-generated Trips, p.m. Peak Hour

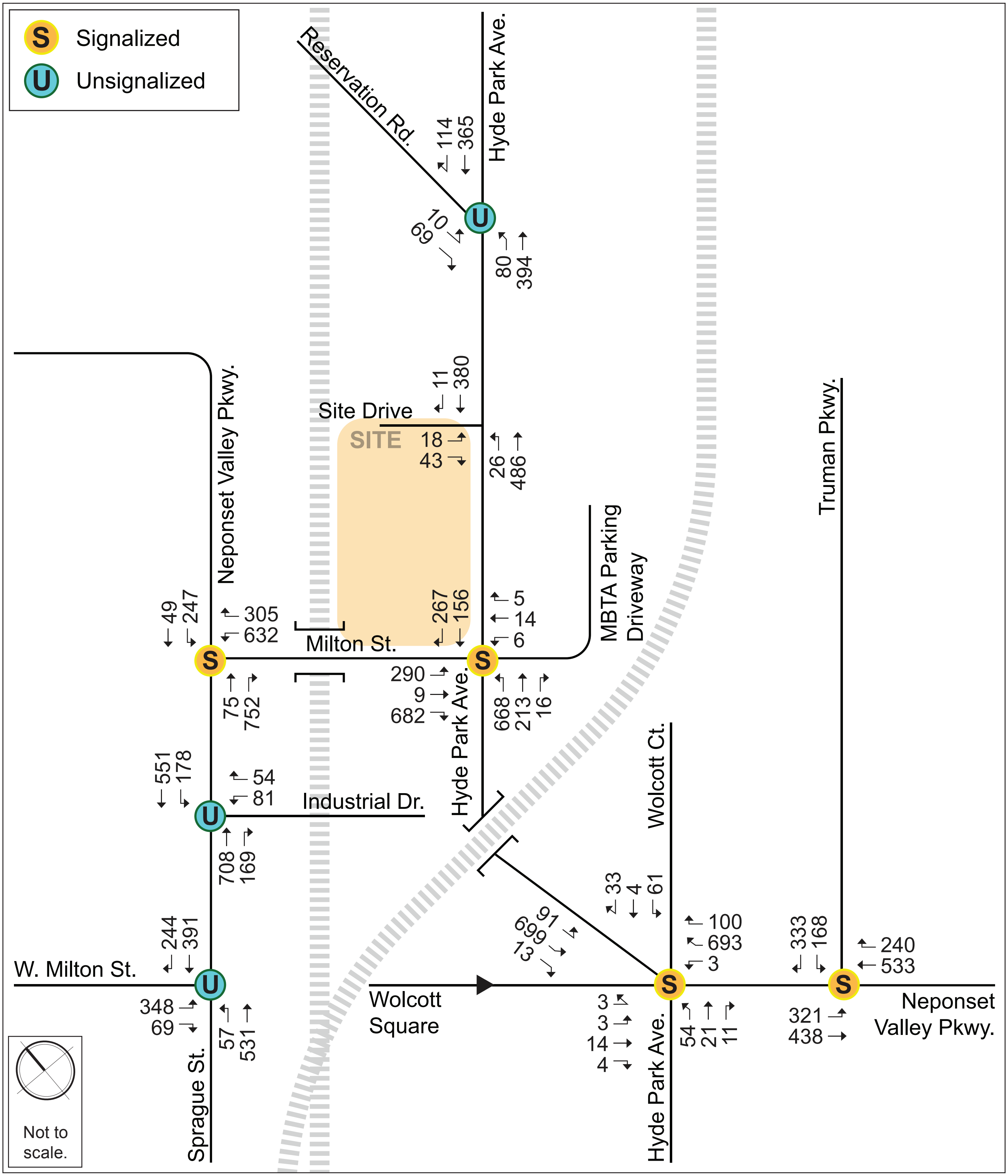


Figure 7-15.
Build (2025) Condition Traffic Volumes, Weekday a.m. Peak Hour

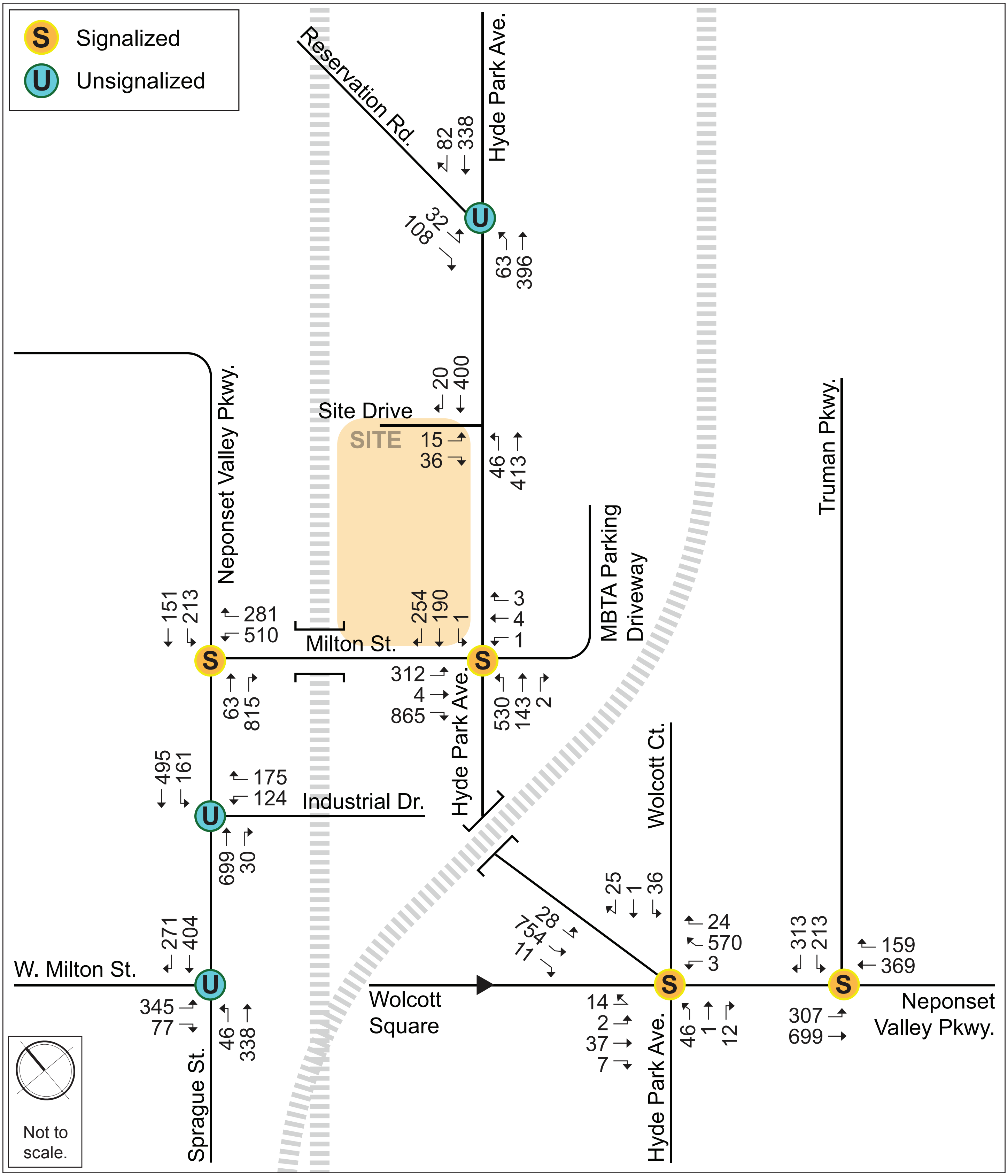


Figure 7-16.
Build (2025) Condition Traffic Volumes, Weekday p.m. Peak Hour

7.6 Traffic Operation Analysis

Trafficware's Synchro (version 9) software package was used to calculate average delay and associated LOS at the study area intersections. This software is based on the traffic operational analysis methodology of the Transportation Research Board's 2010 Highway Capacity Manual (HCM).

LOS designations are based on average delay per vehicle for all vehicles entering an intersection. **Table 7-4** displays the intersection LOS criteria. LOS A indicates the most favorable condition, with minimum traffic delay, while LOS F represents the worst condition, with significant traffic delay. LOS D or better is typically considered acceptable in an urban area. However, LOS E or F is often typical for a stop controlled minor street that intersects a major roadway.

Table 7-4. Vehicle Level of Service Criteria

Level of Service	Average Stopped Delay (sec/veh)	
	Signalized Intersection	Unsignalized Intersection
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Source: 2010 Highway Capacity Manual, Transportation Research Board.

In addition to delay and LOS, the operational capacity and vehicular queues are calculated and used to further quantify traffic operations at intersections. The following describes these other calculated measures.

The volume-to-capacity (v/c) ratio is a measure of congestion at an intersection approach. A v/c ratio below one indicates that the intersection approach has adequate capacity to process the arriving traffic volumes over the course of an hour. A v/c ratio of one or greater indicates that the traffic volume on the intersection approach exceeds capacity.

The 50th percentile queue length, measured in feet, represents the maximum queue length during a cycle of the traffic signal with typical (or median) entering traffic volumes.

The 95th percentile queue length, measured in feet, represents the farthest extent of the vehicle queue (to the last stopped vehicle) upstream from the stop line during five percent of all signal cycles. The 95th percentile queue will not be seen during each cycle. The queue would be this long only five percent of the time and would typically not occur during off-peak hours. Since volumes fluctuate throughout the hour, the 95th percentile queue represents what can be considered a "worst case" scenario. Queues at the intersection are generally below the 95th percentile queue throughout the course of the peak hour. It is also unlikely that the 95th percentile queues for each approach to the intersection will occur simultaneously.

Table 7-5 and **Table 7-6** summarize the Existing (2018) Condition, the No-Build (2025) Condition, and the Build (2025) Condition capacity analysis for the study area intersection during the weekday a.m. and p.m. peak hours, respectively. The detailed analysis of the Synchro results is provided in **Appendix D.**

Table 7-5. Capacity Analysis Summary, Weekday a.m. Peak Hour

Intersection/ Movement	Existing (2018) Condition					No-Build (2025) Condition					Build (2025) Condition				
	LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)		LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)		LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)	
				50th	95th				50th	95th				50th	95th
Signalized Intersections															
Wolcott Square	**C**	**28.8**	-	-	-	**C**	**25.2**	-	-	-	**C**	**25.4**	-	-	-
Hyde Park Ave EB L	C	27.8	0.40	12	#122	B	18.2	0.33	41	m97	B	18.0	0.33	40	m95
Hyde Park Ave EB T/R	C	26.0	0.72	110	#686	C	20.6	0.61	462	661	C	20.7	0.63	481	688
Neponset Pkwy WB L/T/R	C	31.2	0.83	138	#760	C	22.9	0.78	514	#781	C	23.5	0.79	529	#847
Hyde Park Ave NB L/T/R	D	41.7	0.58	32	89	E	67.5	0.71	95	115	E	67.5	0.71	95	115
Wolcott Ct SB L/T	D	36.3	0.38	20	78	D	53.7	0.43	58	97	D	53.7	0.43	58	97
Wolcott Ct SB R	A	0.0	0.03	0	0	A	0.1	0.03	0	0	A	0.1	0.03	0	0
Wolcott Sq NEB L/T/R	A	0.6	0.10	0	0	A	1.7	0.16	0	0	A	1.7	0.16	0	0
Neponset Pkwy/Truman Pkwy	**C**	**22.1**	-	-	-	**C**	**29.5**	-	-	-	**C**	**33.6**	-	-	-
Neponset Pkwy EB L/T | T	C	21.5	0.72	74	#285	B	19.9	0.68	78	#311	B	19.5	0.66	81	#323
Neponset Pkwy WB T | T/R	C	30.5	0.81	87	#364	D	50.9	0.97	117	#438	E	62.0	1.02	123	#447
Truman Pkwy SB L | L	C	27.1	0.32	23	79	C	28.1	0.35	26	81	C	28.5	0.36	26	81
Truman Pkwy SB R	A	2.3	0.34	0	32	A	2.3	0.35	0	33	A	2.2	0.35	0	33
	Unsignalized Intersections					**Signalized Intersections**									
Milton St/Hyde Park Ave/ MBTA Drive	-	-	-	-	-	**D**	**44.4**	-	-	-	**D**	**45.8**	-	-	-
Milton St EB L/T	F	Err	10.66	-	Err	E	75.3	0.91	241	#409	F	84.9	0.96	256	#439
Milton St EB R	C	23.1	0.80	-	214	A	3.0	0.62	6	84	A	3.1	0.62	8	90
MBTA Drive WB L/T/R	F	Err	4.12	-	Err	C	28.5	0.09	19	31	C	28.5	0.09	19	31
Hyde Park Ave NB L	B	11.0	0.51	-	74	F	95.2	0.97	481	#793	F	96.3	0.99	486	#811
Hyde Park Ave NB T/R	A	0.0	0.13	-	0	C	24.8	0.23	120	m225	C	24.9	0.25	128	m234
Hyde Park Ave SB L/T	A	0.0	0.00	-	0	D	41.7	0.33	84	184	D	42.4	0.37	96	#211
Hyde Park Ave SB R	A	0.0	0.12	-	0	A	8.8	0.44	0	79	A	9.0	0.47	0	83
Milton St/Neponset Pkwy	-	-	-	-	-	**D**	**36.8**	-	-	-	**D**	**37.6**	-	-	-
Milton St WB L	F	947.1	2.97	-	1098	F	88.2	0.89	468	m551	F	89.2	0.91	503	m563
Milton St WB R	C	16.7	0.50	-	69	C	22.3	0.48	194	m272	C	22.5	0.48	192	m271
Milton St NB T/R	A	0.0	0.47	-	0	-	-	-	-	-	-	-	-	-	-
Milton St NB T	-	-	-	-	-	C	24.2	0.09	34	87	C	24.4	0.10	34	87
Milton St NB R	-	-	-	-	-	A	3.2	0.51	0	316	A	3.3	0.52	0	328
Neponset Pkwy SB L/T	B	10.4	0.34	-	38	C	33.9	0.59	193	#421	C	34.6	0.61	196	#423
Unsignalized Intersections															
Milton St/Industrial Dr	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Dr WB L/R	F	59.4	0.68	-	101	F	446.1	1.74	-	347	F	489.6	1.84	-	359
Milton St NB T/R	A	0.0	0.44	-	0	A	0.0	0.51	-	0	A	0.0	0.52	-	0
Milton St SB L/T	A	1.8	0.07	-	5	A	6.5	0.26	-	26	A	6.6	0.26	-	27

Intersection/ Movement	Existing (2018) Condition					No-Build (2025) Condition					Build (2025) Condition				
	LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)		LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)		LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)	
				50th	95th				50th	95th				50th	95th
Sprague St/West Milton St/ Milton St	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
West Milton St EB L/R	F	58.1	0.97	-	335	F	111.2	1.14	-	508	F	122.0	1.16	-	540
Sprague St NB L/T	C	22.5	0.66	-	123	E	36.2	0.86	-	203	E	37.7	0.87	-	210
Milton St SB T	C	23.7	0.69	-	133	D	30.8	0.80	-	165	D	34.5	0.83	-	185
Milton St SB R	B	12.5	0.38	-	43	B	14.6	0.46	-	55	B	15.0	0.47	-	58
Hyde Park Ave/ Reservation Rd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyde Park Ave NB L/T	A	2.0	0.07	-	6	A	2.1	0.08	-	6	A	2.2	0.08	-	7
Hyde Park Ave SB T/R	A	0.0	0.25	-	0	A	0.0	0.29	-	0	A	0.0	0.29	-	0
Reservation Rd SEB L/T	B	12.7	0.15	-	13	B	13.6	0.16	-	15	B	13.8	0.18	-	16
Hyde Park Ave/Site Drive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Site Drive EB L/R	-	-	-	-	-	-	-	-	-	-	B	14.6	0.15	-	13
Hyde Park Ave NB T/L	-	-	-	-	-	-	-	-	-	-	A	0.7	0.02	-	2
Hyde Park Ave SB T/R	-	-	-	-	-	-	-	-	-	-	A	0.0	0.25	-	0

Grey shaded cells indicate a decrease in LOS from Existing to LOS E or F.
Black shaded cells indicate an increase in LOS.
m Volume for 95th percentile queue is metered by upstream signal.
\# 95th percentile volume exceeds capacity, queue may be longer.

Table 7-6. Capacity Analysis Summary, Weekday p.m. Peak Hour

Intersection/ Movement	Existing (2018) Condition					No-Build (2025) Condition					Build (2025) Condition				
	LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)		LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)		LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)	
				50th	95th				50th	95th				50th	95th
Signalized Intersections															
Wolcott Square	**C**	**29.3**	-	-	-	**B**	**18.5**	-	-	-	**B**	**18.9**	-	-	-
Hyde Park Ave EB L	C	22.6	0.11	11	33	B	10.5	0.08	9	m10	B	10.9	0.08	9	m11
Hyde Park Ave EB T/R	C	32.3	0.73	~422	#672	B	17.2	0.69	376	m515	B	17.7	0.70	384	m537
Neponset Pkwy WB L/T/R	C	28.8	0.64	310	#555	B	16.9	0.55	275	428	B	17.3	0.57	290	450
Hyde Park Ave NB L/T/R	D	40.1	0.42	30	66	D	42.2	0.31	42	81	D	42.2	0.31	42	81
Wolcott Ct SB L/T	D	42.4	0.37	35	45	D	47.3	0.29	45	54	D	47.3	0.29	45	54
Wolcott Ct SB R	A	0.0	0.03	0	0	A	0.0	0.03	0	0	A	0.0	0.03	0	0
Wolcott Sq NEB L/T/R	A	1.8	0.23	0	0	B	12.3	0.33	0	31	B	12.3	0.33	0	31
Neponset Pkwy/Truman Pkwy	**B**	**15.0**	-	-	-	**C**	**22.7**	-	-	-	**C**	**23.6**	-	-	-
Neponset Pkwy EB L/T | T	B	12.1	0.62	52	271	C	24.9	0.80	126	#488	C	26.0	0.82	131	#503
Neponset Pkwy WB T | T/R	C	23.0	0.56	52	#221	C	27.9	0.67	71	#247	C	29.0	0.70	75	#265
Truman Pkwy SB L | L	C	27.0	0.38	28	94	C	30.1	0.45	35	97	C	30.1	0.45	35	97
Truman Pkwy SB R	A	2.3	0.32	0	31	A	2.1	0.32	0	32	A	2.1	0.32	0	32
	Unsignalized Intersections					**Signalized Intersections**									
Milton St/Hyde Park Ave/ MBTA Drive	-	-	-	-	-	**D**	**35.4**	-	-	-	**D**	**41.9**	-	-	-
Milton St EB L/T	F	Err	5.81	-	Err	E	74.7	0.93	261	#406	F	92.8	1.01	~295	#456
Milton St EB R	F	68.5	1.05	-	531	B	16.4	0.88	160	237	B	17.5	0.89	179	223
MBTA Drive WB L/T/R	F	Err	Err	-	Err	C	23.4	0.04	7	10	C	23.4	0.04	7	10
Hyde Park Ave NB L	B	11.6	0.52	-	77	E	61.9	0.95	179	#555	E	77.3	0.97	198	#557
Hyde Park Ave NB T/R	A	0.0	0.08	-	0	A	9.7	0.15	23	52	A	9.7	0.17	26	58
Hyde Park Ave SB L/T	A	0.0	0.00	-	0	D	36.7	0.33	100	215	D	37.3	0.36	110	233
Hyde Park Ave SB R	A	0.0	0.14	-	0	A	7.4	0.40	0	72	A	7.5	0.43	0	76
Milton St/Neponset Pkwy	-	-	-	-	-	**C**	**26.2**	-	-	-	**C**	**30.8**	-	-	-
Milton St WB L	F	902.9	2.88	-	1108	E	59.7	0.84	399	m483	E	76.5	0.85	425	m492
Milton St WB R	C	15.9	0.47	-	64	C	23.0	0.49	162	m272	C	23.4	0.49	169	m271
Milton St NB T/R	A	0.0	0.46	-	0	-	-	-	-	-	-	-	-	-	-
Milton St NB T	-	-	-	-	-	C	23.3	0.08	28	80	C	23.7	0.08	29	80
Milton St NB R	-	-	-	-	-	A	3.9	0.58	0	415	A	4.1	0.59	0	448
Neponset Pkwy SB L/T	A	7.8	0.28	-	29	C	33.0	0.63	228	#531	C	34.0	0.65	236	#538
Unsignalized Intersections															
Milton St/Industrial Dr	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Dr WB L/R	D	27.3	0.33	-	35	F	491.1	1.95	-	635	F	544.2	2.06	-	660
Milton St NB T/R	A	0.0	0.40	-	0	A	0.0	0.42	-	0	A	0.0	0.44	-	0
Milton St SB L/T	A	3.9	0.16	-	14	A	4.8	0.20	-	18	A	4.9	0.20	-	19
Sprague St/West Milton St/ Milton St	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection/ Movement	Existing (2018) Condition					No-Build (2025) Condition					Build (2025) Condition				
	LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)		LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)		LOS	Delay (s)	V/C ratio	%ile Queue Length (ft)	
				50th	95th				50th	95th				50th	95th
West Milton St EB L/R	C	21.6	0.67	-	125	D	28.2	0.75	-	165	D	32.2	0.79	-	190
Sprague St NB L/T	C	23.8	0.71	-	145	D	32.9	0.81	-	200	E	36.2	0.83	-	218
Milton St SB T	C	21.1	0.66	-	118	D	30.9	0.78	-	180	E	35.3	0.82	-	205
Milton St SB R	B	11.4	0.32	-	35	B	14.6	0.48	-	65	C	15.2	0.50	-	68
Hyde Park Ave/ Reservation Rd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyde Park Ave NB L/T	A	1.6	0.05	-	4	A	1.5	0.05	-	4	A	1.6	0.05	-	4
Hyde Park Ave SB T/R	A	0.0	0.23	-	0	A	0.0	0.24	-	0	A	0.0	0.25	-	0
Reservation Rd SEB L/T	B	13.6	0.25	-	24	B	14.5	0.27	-	27	B	15.0	0.29	-	30
Hyde Park Ave/Site Drive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Site Drive EB L/R	-	-	-	-	-	-	-	-	-	-	B	14.4	0.13	-	11
Hyde Park Ave NB T/L	-	-	-	-	-	-	-	-	-	-	A	1.3	0.05	-	4
Hyde Park Ave SB T/R	-	-	-	-	-	-	-	-	-	-	A	0.0	0.27	-	0

Grey shaded cells indicate a decrease in LOS from Existing to LOS E or F.
Black shaded cells indicate an increase in LOS.
m Volume for 95th percentile queue is metered by upstream signal.
\# 95th percentile volume exceeds capacity, queue may be longer.
~ Volume exceeds capacity

As shown in **Tables 7-5** and **7-6**, all intersections and the majority of approaches have acceptable operations (LOS D or better) under all conditions with the following exceptions:

The **Wolcott Square** intersection operates at a LOS C during both the weekday morning and evening peak hours under the Existing (2018) Condition. The intersection continues to operate at LOS C during the weekday morning peak hour under the No-Build (2025) Condition and Build (2025) Condition and improves from LOS C to LOS B during the weekday evening peak hour under the No-Build (2025) Condition and Build (2025) Condition. The Hyde Park Avenue northbound left/thru/right movement will decrease from LOS D to LOS E during the weekday morning peak hour under the No-Build (2025) Condition. This is due to increase in traffic projected from the background traffic growth and the trips generated by other projects. The longest queue lengths occur at the Neponset Valley Parkway westbound left/thru/right movement during the weekday morning peak hour and range from 138 feet to 847 feet (6 to 34 vehicles) and at the Hyde Park Avenue eastbound thru/right movement during weekday evening peak hour ranging from 376 feet to 672 feet (15 to 27 vehicles).

The **Neponset Valley Parkway/Truman Parkway** intersection operates at a LOS C during the weekday morning peak hour and at LOS B during the weekday evening peak hour under the Existing (2018) Condition. The intersection continues to operate at LOS C during the weekday morning peak hour under the No-Build (2025) Condition and Build (2025) Condition and decreases from LOS B to LOS C during the weekday evening peak hour under the No-Build (2025) Condition and Build (2025) Condition. The Neponset Valley Parkway westbound thru | thru/right movement LOS D to LOS E during the weekday morning peak under the Build (2025) Condition. This is due to an increase of an estimated 11 vehicles traveling through the westbound approach and 18 vehicles traveling through the eastbound approach. The westbound movement receives only 13 seconds of green time and is the only approach that is over capacity as the next busiest movement is the Neponset Valley Parkway left/thru | thru movement at a 0.66 volume to capacity ratio. The longest queue lengths occur at the Neponset Valley Parkway westbound thru | thru/right movement during the weekday morning peak hour and range from 87 feet to 447 feet (3 to 18 vehicles) and at the Neponset Valley Parkway eastbound left/thru | thru movement during the weekday evening peak hour and range from 52 feet to 503 feet (2 to 20 vehicles).

The **Milton Street/Hyde Park Avenue/MBTA Parking Driveway** unsignalized intersection is proposed to be reconstructed as a signalized intersection, within the future time horizon. The Milton Street eastbound left/thru movement and the MBTA Driveway westbound left/thru/right movement operate at LOS F during both the weekday morning and evening peak hours. The Milton Street eastbound right movement also operates at LOS F during the weekday evening peak hour. This is due to the high volume of vehicles that travel along Hyde Park Avenue, which makes it difficult for vehicles along waiting at Milton Street and the MBTA driveway to find a gap and join the traffic stream. Under the No-Build (2025) Condition, the intersection will operate under signalized control. The Milton Street eastbound left/thru movement will improve from LOS F to LOS E and the MBTA driveway westbound left/thru/right movement will improve from LOS F to LOS C during both the weekday morning and evening peak hours. The Milton Street eastbound right movement will improve from LOS F to LOS B during the weekday evening peak hour. The Hyde Park Avenue northbound left movement will decrease to LOS F during the weekday morning peak hour and LOS E during the weekday evening peak hour. This is due to the conversion from an unsignalized intersection to a signalized intersection. The Milton Street eastbound left/thru movement will decrease from LOS E to LOS F during both the weekday morning and evening peak hours under the Build (2025) Condition. Although the Milton Street eastbound left turning vehicles will have a permissive left turn, the conflicting traffic from the MBTA driveway is low, and therefore will function more as a protected left-turn. The longest queue lengths when the intersection is under signalized control occur at the Hyde Park Avenue northbound left approach during both the weekday morning and evening peak hours and range from 179 feet to 811 feet (7 to 23 vehicles).

The **Milton Street/Neponset Valley Parkway** unsignalized intersection is proposed to be reconstructed as a signalized intersection, within the future time horizon. The Milton Street westbound left approach will operate at LOS F during the weekday morning and evening peak hours under the Existing (2018) Condition. The intersection will operate at LOS D during the weekday morning peak hour and at LOS C during the weekday evening peak hour under both the No-Build (2025) Condition and the Build (2025) Condition. The Milton Street westbound left will continue to operate at LOS F during the weekday morning peak hour and operate at LOS E during the weekday evening peak hour. Thought this movement will operate at LOS F, the average delay per vehicle will be reduced from approximately 950 seconds to about 90 seconds, more than ten times shorter of a delay. The longest queue lengths will occur at the Milton Street westbound left movement during the weekday morning peak hour ranging from 468 feet to 563 feet (18 to 22 vehicles) and at the Neponset Valley Parkway southbound left/thru movement during the weekday evening peak hour and range from 228 feet to 538 feet (9 to 22 vehicles).

At the unsignalized **Milton Street/Industrial Drive** intersection, the Industrial Drive westbound left/right movement operates at LOS F during the weekday morning peak hour under the Existing (2018) Condition and will decrease from LOS D to LOS F during the weekday evening peak hour under the No-Build (2025) Condition. This is due to the queue spillback from the Milton Street/Neponset Valley Parkway intersection and background traffic growth. The longest queue lengths occur at the Industrial Drive westbound approach during both the weekday morning and evening peak hours and range from 35 feet to 660 feet (2 to 26 vehicles).

At the unsignalized **Sprague Street/West Milton Street/Milton Street intersection**, the West Milton Street eastbound left/right movement operates at LOS F during the weekday morning peak hour under the Existing (2018) Condition and the Sprague Street northbound left/thru movement will decrease from LOS C to LOS E under the No-Build (2025) Condition. This is due to the high volumes at an intersection with all-way stop control, the queue spillback from the Milton Street/Neponset Valley Parkway intersection, and background traffic growth. The Sparge Street northbound left/thru movement and the Milton Street southbound thru movement will both decrease from LOS D to LOS E during the weekday evening peak hour under the Build (2025 Condition. This is due to an increase of 41 vehicles per hour at the intersection. The average delay increases only approximately 4 seconds per vehicle and the queue lengths increase minimally, indicating that there will not be new excessive delays at the approaches. During both the weekday morning and evening peak hours under all conditions, the queue lengths are projected to be under 25 feet long (less than 1 vehicle).

7.7 Transportation Demand Management

The Proponent is committed to implementing Transportation Demand Management (TDM) measures to minimize automobile usage and Project related traffic impacts. TDM will be facilitated by the nature of the Project (which does not generate significant peak hour trips) and its proximity to numerous public transit alternatives.

On-site management will keep a supply of transit information (schedules, maps, and fare information) to be made available to the residents of the Proposed Project. The Proponent will work with the City to develop a TDM program appropriate to the Proposed Project and consistent with its level of impact.

The Proponent is prepared to take advantage of the good transit access in marketing the site to future residents by working with them to implement the following demand management measures to encourage the use of non-vehicular modes of travel.

TDM measures for the Proposed Project may include but are not limited to the following:

The Proponent will designate a transportation coordinator to oversee transportation issues, including parking, service/loading and deliveries, and move-in/move-out activity, as well as raise awareness of public transportation, bicycling, and walking opportunities;

The Proponent will provide orientation packets to new residents containing information on available transportation choices, including public transportation routes/schedules, nearby vehicle sharing and bicycle sharing locations, and walking opportunities;

The Proponent will provide an annual (or more frequent) newsletter or bulletin summarizing transit, ride-sharing, bicycling, alternative work schedules, and other travel options;

The Building will display information on travel alternatives for residents and visitors via the Internet in the building lobbies;

The Proponent will join and participate in a local Transportation Management Association on behalf of the residents;

Bicycle Accommodation: The building will provide one covered, secure bicycle storage space for every residential unit with direct access to Hyde Park Avenue for easy access as well as several external bicycle racks located near the building entrances;

The Building will provide electric vehicle charging stations to accommodate 5% of the total parking and sufficient infrastructure capacity for future accommodation of at least 15% of the total parking spaces;

The Proponent will explore the feasibility of providing spaces in the garage for a car sharing service such as Zipcar for residents and the general public;

The Proponent will explore the feasibility of providing direct access to the MBTA platform to the west of the Proposed Project site for residents of the building; and

The Proponent will explore the feasibility of providing MBTA monthly subway or commuter rail passes for residents.

7.8 Transportation Mitigation Measures

While the traffic impacts associated with the new trips are minimal, the Proponent will continue to work with the City of Boston to create a project that efficiently serves vehicle trips, improves the pedestrian environment, and encourages transit and bicycle use. As part of the Proposed Project, the Proponent has funded the design for the Readville Capital Improvement Project. The Proponent's actions to initiate the design has jump started the City of Boston to assess critical safety improvements at the Father Hart Bridge. The intersections are currently unsignalized and difficult to drive through during the peak hour. The Proposed Project is expected to begin construction soon.

The Proponent will also bring all abutting sidewalks and pedestrian ramps to the City of Boston standards in accordance with the Boston Complete Streets design guidelines. This will include the reconstruction and widening of the sidewalks where possible, the installation of new, accessible ramps, improvements to street lighting where necessary, planting of street trees, and providing bicycle storage racks surrounding the site, where appropriate.

The Proponent is responsible for preparation of the Transportation Access Plan Agreement (TAPA), a formal legal agreement between the Proponent and the BTD. The TAPA formalizes the findings of the transportation study, mitigation commitments, elements of access and physical design, travel demand management measures, and any other responsibilities that are agreed to by both the Proponent and the BTD. Because the TAPA must incorporate the results of the technical analysis, it must be executed after these other processes have been completed. The proposed measures listed above and any additional transportation improvements to be undertaken as part of this Proposed Project will be defined and documented in the TAPA.

The Proponent will also produce a Construction Management Plan (CMP) for review and approval by BTD. The CMP will detail the schedule, staging, parking, delivery, and other associated impacts of the construction of the Proposed Project.

7.9 Evaluation of Short-Term Construction Impacts

Most construction activities will be accommodated within the current site boundaries. Details of the overall construction schedule, working hours, number of construction workers, worker transportation and parking, number of construction vehicles, and routes will be addressed in detail in a Construction Management Plan to be filed with BTD in accordance with the City’s transportation maintenance plan requirements.

To minimize transportation impacts during the construction period, the following measures will be considered for the Construction Management Plan:

- Limited construction worker parking on-site;
- Encouragement of worker carpooling;
- Consideration of a subsidy for MBTA passes for full-time employees; and
- Providing secure spaces on-site for workers' supplies and tools so they do not have to be brought to the site each day.

The Construction Management Plan to be executed with the City prior to commencement of construction will document all committed measures.

8.0 COORDINATION WITH GOVERNMENTAL AGENCIES

8.1 Architectural Access Board Requirements

This Proposed Project will comply with the requirements of the Architectural Access Board. The Proposed Project will also be designed to comply with the Standards of the Americans with Disabilities Act.

8.2 Massachusetts Environmental Policy Act

Based on information currently available, the Proponent anticipates that the Proposed Project will not require review by the Massachusetts Environmental Policy Act Office of the Massachusetts Office of Energy and Environmental Affairs.

8.3 Boston Civic Design Commission

The Proposed Project will exceed the 100,000 gross square feet size threshold requirement for review by the Boston Civic Design Commission.

8.4 Massachusetts Historical Commission

Because of permits required from the Commonwealth of Massachusetts, the Proposed Project may require MHC State Register Review.

9.0 Project Certification

This form has been circulated to the Boston Planning and Development Agency as required by Article 80 of the Boston Zoning Code.

AD MELIORA LLC

01/11/19

Signature of Proponent

Date

MITCHELL L. FISCHMAN ("MLF") CONSULTING LLC

01/11/19

Signature of Preparer
Mitchell L. Fischman, Principal

Date

APPENDIX A – LETTER OF INTENT TO FILE PNF, SEPTEMBER 13, 2018

goulston&storrs
counsellors at law

Matthew J. Kiefer, Esq.
mkiefer@goulstonstorrs.com
(617) 574-6587 Tel

September 13, 2018

Mr. Brian P. Golden, Director
Boston Planning & Development Agency
One City Hall Square, 9th Floor
Boston, MA 02201
Attention: Lance Campbell, Project Manager

Re: Letter of Intent to File Project Notification Form
1717-1725 Hyde Park Avenue, Hyde Park

Dear Brian:

On behalf of Ad Meliora, LLC, and in accordance with the Executive Order Relative to the Provision of Mitigation by Development Projects in Boston issued on October 10, 2000, as amended on April 3, 2001, this letter will notify you of our intent to submit a Project Notification Form under Article 80B of the Boston Zoning Code for a proposed residential redevelopment project located at 1717-1725 Hyde Park Avenue in Hyde Park (the "Project"), as further described below.

The Project site is an approximately 2.5 acre (119,034 square foot) industrial property bounded by Hyde Park Avenue, Milton Street, and the MBTA commuter rail tracks. The proposed redevelopment program includes the construction of approximately 305 residential units in two new buildings, providing a mix of rental and homeownership opportunities, with accessory parking spaces, amenities and services for building residents. The Project also will provide a pocket park and other public realm improvements and will advance the housing creation goals of Mayor Walsh's 2030 Housing Plan.

We anticipate submitting a Project Notification Form in October. We look forward to working with your staff, elected officials, community members, and the Impact Advisory Group that will review the Project.

Sincerely,

AD MELIORA, LLC,
By its Attorneys,
Goulston & Storrs PC

By: ______________________
Matthew J. Kiefer, Esq.

cc by email: Jan Steenbrugge and Paul Soughley, Ad Meliora, LLC

APPENDIX B – AIR QUALITY APPENDIX

APPENDIX B
AIR QUALITY

1717-1725 HYDE PARK AVENUE
PROJECT NOTIFICATION FORM

```
                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =     21048.0 ;  Urban Roughness Length =  1.000 m
 **Non-DFAULT option to ignore morning transition from nighttime urban boundary layer (NoUrbTran) selected.

 **Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Assumes Receptors on FLAT Terrain.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Full Conversion Assumed for NO2.
        6. Urban Roughness Length of 1.0 Meter Used.

 **Other Options Specified:
        NOCHKD   - Suppresses checking of date sequence in meteorology files
        SCREEN   - Use screening option
 which forces calculation of centerline values

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  CO

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and     673 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date: 16126

 **Output Options Selected:
         Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     5.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                               ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          CO_5yrs_CO.DTA
```

```
**Output Print File:            CO_5yrs_CO.LST

**File for Summary of Results:   W:\Apps\aermod\4012\CO_5yrs_CO.SUM
*** AERMOD - VERSION  18081 ***   *** 1725 Hyde Park                                                          ***        09/27/18
*** AERMET - VERSION 16126  ***   *** CO 1-Hour Screening Modeling                                            ***        19:15:27
                                                                                                                         PAGE   2
*** MODELOPTs:    NonDFAULT  CONC  FLAT  NOCHKD  SCREEN  NODRYDPLT  NOWETDPLT  URBAN  NoUrbTran

                                         *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                          (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

                               *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                       (METERS/SEC)

                                              1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION  18081 ***   *** 1725 Hyde Park                                                          ***        09/27/18
*** AERMET - VERSION 16126  ***   *** CO 1-Hour Screening Modeling                                            ***        19:15:27
                                                                                                                         PAGE   3
*** MODELOPTs:    NonDFAULT  CONC  FLAT  NOCHKD  SCREEN  NODRYDPLT  NOWETDPLT  URBAN  NoUrbTran

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   Urban.sfc                                                                 Met Version: 16126
  Profile file:   Urban.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:    11111                 Upper air station no.:    22222
                Name: UNKNOWN                                 Name: UNKNOWN
                Year:   2010                                  Year:   2010

 First 24 hours of scalar data
```

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
10	01	01	1	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	10.	10.0	255.2	2.0
10	01	02	2	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	20.	10.0	255.2	2.0
10	01	03	3	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	30.	10.0	255.2	2.0
10	01	04	4	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	40.	10.0	255.2	2.0
10	01	05	5	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	50.	10.0	255.2	2.0
10	01	06	6	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	60.	10.0	255.2	2.0
10	01	07	7	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	70.	10.0	255.2	2.0
10	01	08	8	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	80.	10.0	255.2	2.0
10	01	09	9	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	90.	10.0	255.2	2.0
10	01	10	10	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	100.	10.0	255.2	2.0
10	01	11	11	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	110.	10.0	255.2	2.0
10	01	12	12	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	120.	10.0	255.2	2.0
10	01	13	13	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	130.	10.0	255.2	2.0
10	01	14	14	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	140.	10.0	255.2	2.0
10	01	15	15	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	150.	10.0	255.2	2.0
10	01	16	16	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	160.	10.0	255.2	2.0
10	01	17	17	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	170.	10.0	255.2	2.0
10	01	18	18	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	180.	10.0	255.2	2.0
10	01	19	19	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	190.	10.0	255.2	2.0
10	01	20	20	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	200.	10.0	255.2	2.0
10	01	21	21	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	210.	10.0	255.2	2.0
10	01	22	22	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	220.	10.0	255.2	2.0
10	01	23	23	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	230.	10.0	255.2	2.0
10	01	24	24	01	-1.2	0.043	-9.000	0.020	-999.	21.	5.5	1.00	1.62	0.21	0.50	240.	10.0	255.2	2.0

```
 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
```

```
 10 01 01 01   10.0 1   10.    0.50   255.3   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION  18081 ***   *** 1725 Hyde Park                                                     ***        09/27/18
 *** AERMET - VERSION 16126  ***   *** CO 1-Hour Screening Modeling                                       ***        19:15:27
                                                                                                                     PAGE   4
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  NOCHKD  SCREEN  NODRYDPLT  NOWETDPLT  URBAN  NoUrbTran

                                                *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***

                                    ** CONC OF CO       IN MICROGRAMS/M**3                          **

                                                      DATE                                                                  NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS     130.46168  ON 10020102: AT (  324029.50,  4678580.30,     5.00,     5.00,    0.00)  DC
         HIGH   2ND HIGH VALUE IS     130.46168  ON 10020402: AT (  324029.50,  4678580.30,     5.00,     5.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION  18081 ***   *** 1725 Hyde Park                                                     ***        09/27/18
 *** AERMET - VERSION 16126  ***   *** CO 1-Hour Screening Modeling                                       ***        19:15:27
                                                                                                                     PAGE   5
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  NOCHKD  SCREEN  NODRYDPLT  NOWETDPLT  URBAN  NoUrbTran

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           3 Warning Message(s)
 A Total of           0 Informational Message(s)

 A Total of       18504 Hours Were Processed

 A Total of           0 Calm Hours Identified

 A Total of           0 Missing Hours Identified (  0.00 Percent)

    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***
```

INDOOR GARAGE ANALYSIS PROGRAM

PROJECT: 1725 HYDE PARK GARAGE PEAK PM HOUR - YEAR: 2025

DISTANCE IN:	274 METERS
DISTANCE OUT:	274 METERS
NUMBER OF EXIT LANES:	1 LANE(S)
PEAK VOLUME:	117 VEH/HOUR
CO RATE:	2.821 GRAMS CO/MILE
SPEED IN GARAGE:	5.0 M.P.H.
VENT CFM:	114,000 CFM

TOTAL CO EMISSIONS = 0.94 GRAMS/MIN = 0.016 GRAMS/SEC
TOTAL VENTILATION = 3,230 CU. M/MIN

PEAK 1-HOUR CO CONCENTRATION FROM VEHICLES: 0.25 PPM

MOVES2014B OUTPUT

Road Type ID	Link Length (miles)	Link Volume (Vehicles/Hr)	Link Avg Speed (Miles/Hr)	Pollutant	Emission Factor (Grams/veh-mi)
5	0.17	98	5	CO	2.821
5	0.17	117	5	CO	2.821

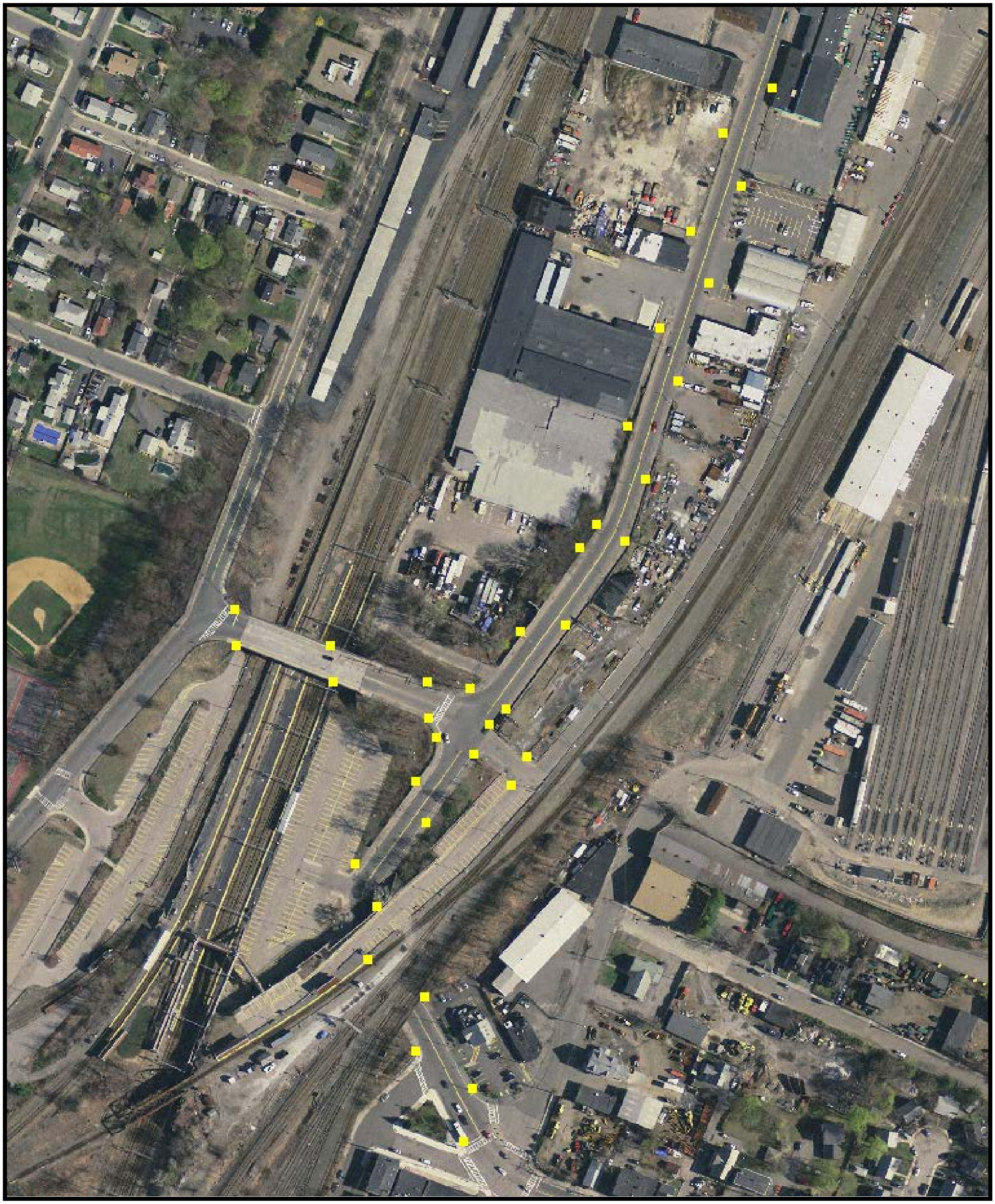


Figure 1
Microscale Receptor Locations
Hyde Park Ave & Father Hart Bridge/Commuter Rail Parking Lot

Figure 2
Microscale Receptor Locations
Milton St/Neponset Valley Pkwy & Father Hart Bridge

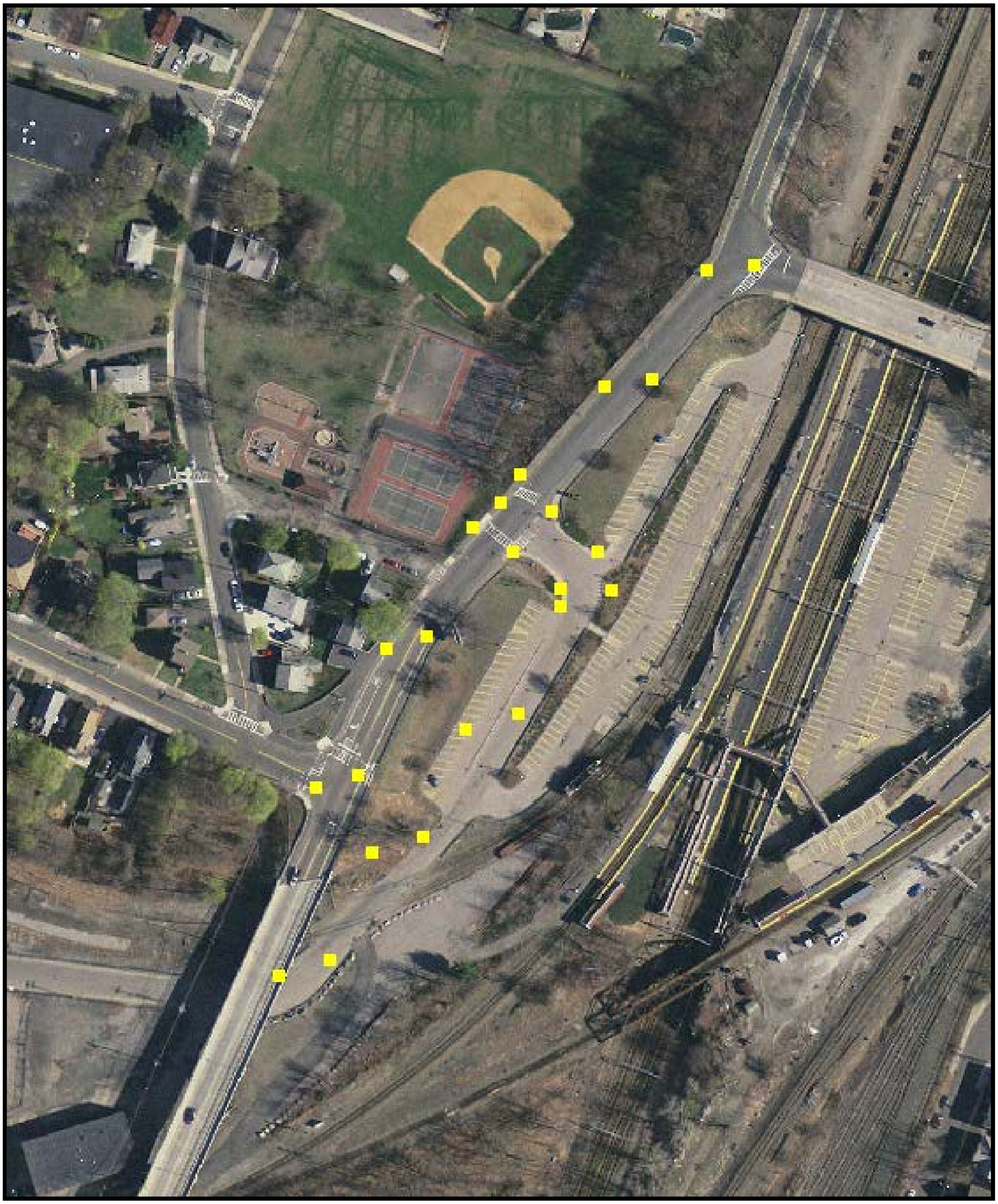


Figure 3
Microscale Receptor Locations
Milton St & Industrial Drive

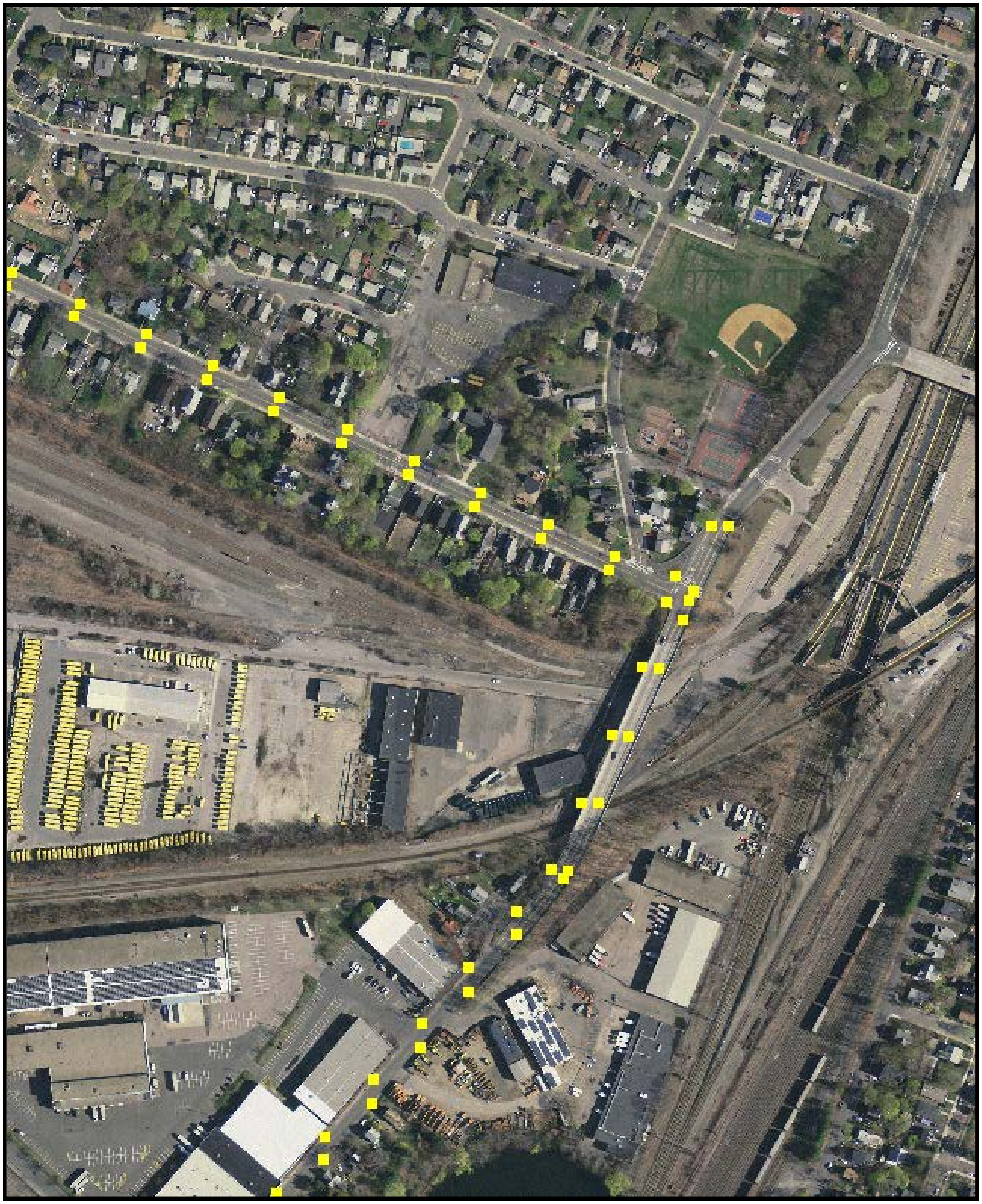


Figure 4
Microscale Receptor Locations
Sprague St/Milton St & West Milton St

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0
(C) COPYRIGHT 1993-2000, TRINITY CONSULTANTS

Run Began on 9/19/2018 at 16:20:48

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2018 EXISING AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:20:48

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE HYDE PARK S	*	324071.6	********	324020.8	********	*	87.	216.	AG	1561.	2.4	0.0	10.0		
2. FREE HYDE PARK S	*	324020.8	********	324016.5	********	*	17.	195.	AG	1561.	2.4	0.0	10.0		
3. FREE HYDE PARK S	*	324016.5	********	324074.0	********	*	124.	152.	AG	1561.	2.4	0.0	10.0		
4. FREE HYDE PARK N	*	324071.9	********	324138.7	********	*	115.	35.	AG	780.	2.4	0.0	10.0		
5. FREE HYDE PARK N	*	324138.7	********	324209.6	********	*	230.	18.	AG	780.	2.4	0.0	10.0		
6. FREE MBTA	*	324072.9	********	324101.0	********	*	39.	134.	AG	50.	2.4	0.0	10.0		
7. FREE MILTON	*	324071.1	********	324053.5	********	*	21.	302.	AG	1681.	2.4	0.0	10.0		
8. FREE MILTON	*	324053.5	********	323952.8	********	*	108.	291.	AG	1681.	2.4	0.0	10.0		
9. QUEUE MILTON EBLT	*	324052.6	********	323937.8	********	*	123.	292.	AG	267.	5.3	0.0	3.0		
10. QUEUE MILTON EBR	*	324051.0	********	323990.4	********	*	65.	292.	AG	644.	5.3	0.0	3.0		
11. QUEUE MBTA WBLTR	*	324078.5	********	324103.5	********	*	32.	129.	AG	25.	5.3	0.0	3.0		
12. QUEUE HYDE PARK NBL	*	324065.8	********	324052.8	********	*	23.	215.	AG	567.	5.3	0.0	3.0		

DATE : 09/19/ 0
TIME : 16:20:48

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	*	X	Y	Z	*
1.	*	324079.6	********	1.8	*
2.	*	324048.8	********	1.8	*
3.	*	324025.1	********	1.8	*
4.	*	324048.2	********	1.8	*
5.	*	324071.4	********	1.8	*
6.	*	324066.9	********	1.8	*
7.	*	324043.7	********	1.8	*
8.	*	324020.5	********	1.8	*
9.	*	324014.3	********	1.8	*
10.	*	324043.6	********	1.8	*
11.	*	324069.9	********	1.8	*
12.	*	324094.3	********	1.8	*
13.	*	324123.3	********	1.8	*
14.	*	324131.4	********	1.8	*
15.	*	324146.9	********	1.8	*
16.	*	324162.3	********	1.8	*
17.	*	324177.8	********	1.8	*
18.	*	324193.2	********	1.8	*
19.	*	324217.2	********	1.8	*
20.	*	324201.8	********	1.8	*
21.	*	324186.4	********	1.8	*
22.	*	324170.9	********	1.8	*
23.	*	324155.5	********	1.8	*
24.	*	324145.2	********	1.8	*
25.	*	324116.3	********	1.8	*
26.	*	324087.3	********	1.8	*
27.	*	324049.9	********	1.8	*
28.	*	324003.2	********	1.8	*
29.	*	323956.5	********	1.8	*
30.	*	323955.7	********	1.8	*
31.	*	324002.4	********	1.8	*
32.	*	324049.1	********	1.8	*
33.	*	324053.9	********	1.8	*
34.	*	324071.9	********	1.8	*
35.	*	324090.4	********	1.8	*
36.	*	324097.4	********	1.8	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	*	CONCENTRATION (PPM)																			
0.	*	0.1	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10.	*	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20.	*	0.1	0.3	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
30.	*	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
50.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
60.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0
150.	*	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0

160. *	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
170. *	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
180. *	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
190. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
200. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
210. *	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
220. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
230. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
240. *	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
250. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
260. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
270. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
280. *	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
290. *	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
300. *	0.3	0.1	0.1	0.2	0.2	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	0.1
310. *	0.1	0.1	0.1	0.2	0.2	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	0.1
320. *	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
330. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
340. *	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
350. *	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MAX *	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	280	20	160	170	300	0	0	10	50	60	180	40	30	20	20	20	30	40	200	0

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) *	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
10. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0
20. *	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
30. *	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
40. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
50. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0
60. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0
70. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
80. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
90. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
100. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
110. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0
120. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.0
130. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.3	0.1	0.1	0.0	0.0	0.0
140. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.3	0.1	0.1	0.0	0.0	0.0
150. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.3	0.2	0.1	0.0	0.0	0.0
160. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.3	0.1	0.0	0.0	0.0
170. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0
180. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0
190. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0
200. *	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0
210. *	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0
220. *	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
230. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.3	0.0	0.0
240. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.3	0.0	0.1
250. *	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.3	0.1	0.1
260. *	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.2	0.1	0.1
270. *	0.1	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.2	0.1	0.1
280. *	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.1	0.1
290. *	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1
300. *	0.1	0.1	0.1	0.0	0.1	0.1	0.5	0.2	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.2
310. *	0.1	0.1	0.1	0.0	0.1	0.1	0.5	0.3	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0
320. *	0.1	0.1	0.1	0.0	0.1	0.1	0.4	0.3	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0
330. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.0
340. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0
350. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0
MAX *	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.4	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2
DEGR. *	0	0	0	0	220	270	310	90	80	120	130	160	50	230	300	300

THE HIGHEST CONCENTRATION OF 0.50 PPM OCCURRED AT RECEPTOR REC27.

DATE : 09/19/ 0
TIME : 16:20:48

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) ANGLE (DEGREES)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK # *	280	20	160	170	300	0	0	10	50	60	180	40	30	20	20	20	30	40	200	0
1 *	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 *	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	0.0	0.0	0.0	0.0
3 *	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 *	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6 *	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	0.0	0.0	0.0	0.0
7 *	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8 *	0.1	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	0.0	0.0	0.0
9 *	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	0.0	0.0	0.0	0.0
10 *	0.1	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	0.0	0.0	0.0
11 *	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	0.0	0.0	0.0	0.0
12 *	0.0	0.1	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	0.0	0.0

DATE : 09/19/ 0
TIME : 16:20:48

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) ANGLE (DEGREES)	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
LINK # *	0	0	0	0	220	270	310	90	80	120	130	160	50	230	300	300

1	*	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0
2	*	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
3	*	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
4	*	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
5	*	0.1	0.1	0.1	0.1	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	*	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
7	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1
8	*	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1
9	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
11	*	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
12	*	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	0.1	0.0	0.0

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:22:15

JOB: 1717-1725 HYDE PARK AVE - INTER #3   RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:22:15

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S   VD = 0.0 CM/S   Z0 = 11. CM
U = 1.0 M/S   CLAS = 4 (D)   ATIM = 60. MINUTES   MIXH = 1000. M   AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE HYDE PARK S	324071.6	********	324020.8	********	87.	216.	AG	1543.	2.4	0.0	10.0		
2. FREE HYDE PARK S	324020.8	********	324016.5	********	17.	195.	AG	1543.	2.4	0.0	10.0		
3. FREE HYDE PARK S	324016.5	********	324074.0	********	124.	152.	AG	1543.	2.4	0.0	10.0		
4. FREE HYDE PARK N	324071.9	********	324138.7	********	115.	35.	AG	732.	2.4	0.0	10.0		
5. FREE HYDE PARK N	324138.7	********	324209.6	********	230.	18.	AG	732.	2.4	0.0	10.0		
6. FREE MBTA	324072.9	********	324101.0	********	39.	134.	AG	8.	2.4	0.0	10.0		
7. FREE MILTON	324071.1	********	324053.5	********	21.	302.	AG	1698.	2.4	0.0	10.0		
8. FREE MILTON	324053.5	********	323952.8	********	108.	291.	AG	1698.	2.4	0.0	10.0		
9. QUEUE MILTON EBLT	324052.6	********	323937.8	********	123.	292.	AG	235.	5.3	0.0	3.0		
10. QUEUE MILTON EBR	324051.0	********	323900.7	********	162.	292.	AG	758.	5.3	0.0	3.0		
11. QUEUE MBTA WBLTR	324078.5	********	324103.5	********	32.	129.	AG	8.	5.3	0.0	3.0		
12. QUEUE HYDE PARK NBL	324065.8	********	324052.3	********	24.	215.	AG	494.	5.3	0.0	3.0		

JOB: 1717-1725 HYDE PARK AVE - INTER #3   RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:22:15

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	324079.6	********	1.8
2.	324048.8	********	1.8
3.	324025.1	********	1.8
4.	324048.2	********	1.8
5.	324071.4	********	1.8
6.	324066.9	********	1.8
7.	324043.7	********	1.8
8.	324020.5	********	1.8
9.	324014.3	********	1.8
10.	324043.6	********	1.8
11.	324069.9	********	1.8
12.	324094.3	********	1.8
13.	324123.3	********	1.8
14.	324131.4	********	1.8
15.	324146.9	********	1.8
16.	324162.3	********	1.8
17.	324177.8	********	1.8
18.	324193.2	********	1.8
19.	324217.2	********	1.8
20.	324201.8	********	1.8
21.	324186.4	********	1.8
22.	324170.9	********	1.8
23.	324155.5	********	1.8
24.	324145.2	********	1.8
25.	324116.3	********	1.8
26.	324087.3	********	1.8
27.	324049.9	********	1.8
28.	324003.2	********	1.8
29.	323956.5	********	1.8
30.	323955.7	********	1.8
31.	324002.4	********	1.8
32.	324049.1	********	1.8
33.	324053.9	********	1.8
34.	324071.9	********	1.8
35.	324090.4	********	1.8
36.	324097.4	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #3   RUN: 2018 EXISING PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	0.1	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10.	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
30.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
60.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
90.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
110.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
120.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0
140.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
150.	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0

160. *	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
170. *	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
180. *	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
190. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
200. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
210. *	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
220. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
230. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
240. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
250. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
260. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
270. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
290. *	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
300. *	0.3	0.1	0.1	0.1	0.2	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
310. *	0.1	0.1	0.1	0.2	0.2	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	0.1
320. *	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
330. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
340. *	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
350. *	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MAX *	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	290	10	160	170	300	0	0	10	50	70	180	50	30	20	20	20	30	40	200	0

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) *	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0
10. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.0	0.0
20. *	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0
30. *	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0
40. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
50. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
60. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
70. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
80. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0
90. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0
100. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0
110. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0
120. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.0
130. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.1	0.1	0.0	0.0	0.0
140. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.1	0.1	0.0	0.0	0.0
150. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.2	0.1	0.0	0.0	0.0
160. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.3	0.1	0.0	0.0	0.0
170. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.1	0.0	0.0	0.0
180. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.1	0.0	0.0	0.0
190. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.3	0.1	0.0	0.0	0.0
200. *	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.1	0.0	0.0	0.0
210. *	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0
220. *	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.0	0.0
230. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.2	0.0	0.0
240. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.3	0.0	0.1
250. *	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.3	0.3	0.0	0.3	0.1	0.1
260. *	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.3	0.3	0.0	0.2	0.1	0.1
270. *	0.0	0.0	0.0	0.1	0.1	0.4	0.0	0.0	0.0	0.1	0.3	0.3	0.0	0.2	0.1	0.1
280. *	0.1	0.1	0.1	0.0	0.1	0.3	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.1	0.0	0.0
290. *	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.2	0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.2
300. *	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.3	0.2	0.0	0.0	0.0	0.2	0.3	0.2	0.3
310. *	0.1	0.1	0.1	0.0	0.1	0.1	0.4	0.4	0.2	0.0	0.0	0.0	0.2	0.3	0.1	0.0
320. *	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.4	0.2	0.0	0.0	0.0	0.2	0.3	0.0	0.0
330. *	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.0	0.0
340. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.0	0.0
350. *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.0	0.0
MAX *	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.3
DEGR. *	0	0	0	0	0	270	300	80	90	120	130	160	50	240	300	300

THE HIGHEST CONCENTRATION OF 0.40 PPM OCCURRED AT RECEPTOR REC28.

DATE : 09/19/ 0
TIME : 16:22:15

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK # *	290	10	160	170	300	0	0	10	50	70	180	50	30	20	20	20	30	40	200	0
1 *	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 *	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	0.0	0.0	0.0	0.0
3 *	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 *	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6 *	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	0.0	0.0	0.0	0.0
7 *	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8 *	0.1	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	0.0	0.0	0.0
9 *	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	0.0	0.0	0.0	0.0
10 *	0.1	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	0.0	0.0	0.0
11 *	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	0.0	0.0	0.0	0.0
12 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DATE : 09/19/ 0
TIME : 16:22:15

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES)	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
LINK # *	0	0	0	0	0	270	300	80	90	120	130	160	50	240	300	300

1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0
2	*	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
3	*	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
4	*	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
5	*	0.1	0.1	0.1	0.1	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	*	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
7	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1
8	*	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1
9	*	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
10	*	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1
11	*	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
12	*	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	0.1	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0
(C) COPYRIGHT 1993-2000, TRINITY CONSULTANTS

Run Began on 9/19/2018 at 16:27:47

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:27:47

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE HYDE PARK S	324071.6	********	324020.8	********	87.	216.	AG	1712.	1.7	0.0	10.0		
2. FREE HYDE PARK S	324020.8	********	324016.5	********	17.	195.	AG	1712.	1.7	0.0	10.0		
3. FREE HYDE PARK S	324016.5	********	324074.0	********	124.	152.	AG	1712.	1.7	0.0	10.0		
4. FREE HYDE PARK N	324071.9	********	324138.7	********	115.	35.	AG	862.	1.7	0.0	10.0		
5. FREE HYDE PARK N	324138.7	********	324209.6	********	230.	18.	AG	862.	1.7	0.0	10.0		
6. FREE MBTA	324072.9	********	324101.0	********	39.	134.	AG	50.	1.7	0.0	10.0		
7. FREE MILTON	324071.1	********	324053.5	********	21.	302.	AG	1890.	1.7	0.0	10.0		
8. FREE MILTON	324053.5	********	323952.8	********	108.	291.	AG	1890.	1.7	0.0	10.0		
9. QUEUE MILTON EBLT	324052.6	********	324051.7	********	1.	292.	AG	0.	100.0	0.0	3.0	0.24	0.2
10. QUEUE MILTON EBR	324051.0	********	324048.9	********	2.	291.	AG	0.	100.0	0.0	3.0	0.47	0.4
11. QUEUE MBTA WBLTR	324078.5	********	324078.6	********	0.	49.	AG	0.	100.0	0.0	3.0	0.02	0.0
12. QUEUE HYDE PARK NBL	324065.8	********	324063.9	********	3.	215.	AG	0.	100.0	0.0	3.0	0.67	0.6
13. QUEUE HYDE PARK NBTR	324068.5	********	324067.9	********	1.	215.	AG	0.	100.0	0.0	3.0	0.14	0.2
14. QUEUE HYDE PARK SBLT	324075.7	********	324076.0	********	0.	38.	AG	0.	100.0	0.0	3.0	0.09	0.1
15. QUEUE HYDE PARK SBR	324072.8	********	324073.3	********	1.	38.	AG	0.	100.0	0.0	3.0	0.17	0.1

PAGE 2

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:27:47

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. QUEUE MILTON EBLT	120	2	5.0	284	1276	3.04	2	3
10. QUEUE MILTON EBR	120	2	5.0	682	1583	3.04	2	3
11. QUEUE MBTA WBLTR	120	2	5.0	25	1704	3.04	2	3
12. QUEUE HYDE PARK NBL	120	3	5.5	668	1091	3.04	2	3
13. QUEUE HYDE PARK NBTR	120	3	5.5	218	1749	3.04	2	3
14. QUEUE HYDE PARK SBLT	120	2	5.0	138	1727	3.04	2	3
15. QUEUE HYDE PARK SBR	120	2	5.0	242	1538	3.04	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	324079.6	********	1.8
2.	324048.8	********	1.8
3.	324025.1	********	1.8
4.	324048.2	********	1.8
5.	324071.4	********	1.8
6.	324066.9	********	1.8
7.	324043.7	********	1.8
8.	324020.5	********	1.8
9.	324014.3	********	1.8
10.	324043.6	********	1.8
11.	324069.9	********	1.8
12.	324094.3	********	1.8
13.	324123.3	********	1.8
14.	324131.4	********	1.8
15.	324146.9	********	1.8
16.	324162.3	********	1.8
17.	324177.8	********	1.8
18.	324193.2	********	1.8
19.	324217.2	********	1.8
20.	324201.8	********	1.8
21.	324186.4	********	1.8
22.	324170.9	********	1.8
23.	324155.5	********	1.8
24.	324145.2	********	1.8
25.	324116.3	********	1.8
26.	324087.3	********	1.8
27.	324049.9	********	1.8
28.	324003.2	********	1.8
29.	323956.5	********	1.8
30.	323955.7	********	1.8
31.	324002.4	********	1.8
32.	324049.1	********	1.8
33.	324053.9	********	1.8
34.	324071.9	********	1.8
35.	324090.4	********	1.8
36.	324097.4	********	1.8

PAGE 3

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 NO BUILD AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) / CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
30.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0

60.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.	*	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.	*	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
170.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
180.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
190.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0
200.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
210.	*	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
220.	*	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
230.	*	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
240.	*	0.1	0.1	0.1	0.1	0.1	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	0.1	0.1
250.	*	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	0.2	0.1	0.1	0.1	0.1	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
300.	*	0.2	0.1	0.1	0.1	0.1	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
310.	*	0.0	0.1	0.1	0.1	0.1	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
320.	*	0.0	0.1	0.1	0.1	0.1	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
330.	*	0.0	0.1	0.1	0.1	0.1	0.1	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
340.	*	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
350.	*	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MAX	*	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	*	230	0	0	160	170	0	0	0	150	50	190	50	30	20	20	30	30	50	200	0

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 NO BUILD AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
10.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.0
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
170.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
180.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
190.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
200.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0
210.	*	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
220.	*	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
230.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
240.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
250.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
260.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
270.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
280.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
290.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
300.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1
310.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
320.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
340.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0
350.	*	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0
MAX	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.0	0.1
DEGR.	*	0	0	0	0	0	0	0	0	0	130	120	130	10	300	0	300

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC30.

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:27:47

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	* CO/LINK (PPM) ANGLE (DEGREES)	REC1 230	REC2 0	REC3 0	REC4 160	REC5 170	REC6 0	REC7 0	REC8 0	REC9 150	REC10 50	REC11 190	REC12 50	REC13 30	REC14 20	REC15 20	REC16 30	REC17 30	REC18 50	REC19 200	REC20 0
1	*	0.2	0.1	0.1	0.0	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	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6	*	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	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	*	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	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0
10	*	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	0.0	0.0	0.0	0.0
11	*	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	0.0	0.0	0.0	0.0
12	*	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	0.0	0.0	0.0	0.0
13	*	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	0.0	0.0	0.0	0.0
14	*	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	0.0	0.0	0.0	0.0
15	*	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	0.0	0.0	0.0	0.0

DATE : 09/19/ 0
TIME : 16:27:47

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
	0	0	0	0	0	0	0	0	0	130	120	130	10	300	0	300
1	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	0.1	0.0	0.0
2	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
3	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
4	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	0.0	0.0
5	0.1	0.1	0.1	0.1	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	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
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.1
9	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
10	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
11	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
12	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
13	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
14	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
15	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

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:29:21

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 NO BUILD PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:29:21

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE HYDE PARK S	324071.6	********	324020.8	********	87.	216.	AG	1696.	1.7	0.0	10.0		
2. FREE HYDE PARK S	324020.8	********	324016.5	********	17.	195.	AG	1696.	1.7	0.0	10.0		
3. FREE HYDE PARK S	324016.5	********	324074.0	********	124.	152.	AG	1696.	1.7	0.0	10.0		
4. FREE HYDE PARK N	324071.9	********	324138.7	********	115.	35.	AG	812.	1.7	0.0	10.0		
5. FREE HYDE PARK N	324138.7	********	324209.6	********	230.	18.	AG	812.	1.7	0.0	10.0		
6. FREE MBTA	324072.9	********	324101.0	********	39.	134.	AG	15.	1.7	0.0	10.0		
7. FREE MILTON	324071.1	********	324053.5	********	21.	302.	AG	1913.	1.7	0.0	10.0		
8. FREE MILTON	324053.5	********	323952.8	********	108.	291.	AG	1913.	1.7	0.0	10.0		
9. QUEUE MILTON EBLT	324052.6	********	324051.7	********	1.	290.	AG	0.	100.0	0.0	3.0	0.24	0.2
10. QUEUE MILTON EBR	324051.0	********	324048.3	********	3.	291.	AG	0.	100.0	0.0	3.0	0.58	0.5
11. QUEUE MBTA WBLTR	324078.5	********	324078.5	********	0.	90.	AG	0.	100.0	0.0	3.0	0.00	0.0
12. QUEUE HYDE PARK NBL	324065.8	********	324064.3	********	3.	215.	AG	0.	100.0	0.0	3.0	0.59	0.4
13. QUEUE HYDE PARK NBTR	324068.5	********	324068.2	********	1.	214.	AG	0.	100.0	0.0	3.0	0.08	0.1
14. QUEUE HYDE PARK SBLT	324075.7	********	324076.0	********	1.	36.	AG	0.	100.0	0.0	3.0	0.10	0.1
15. QUEUE HYDE PARK SBR	324072.8	********	324073.3	********	1.	39.	AG	0.	100.0	0.0	3.0	0.17	0.1

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. QUEUE MILTON EBLT	120	2	5.0	290	1330	3.04	2	3
10. QUEUE MILTON EBR	120	2	5.0	865	1599	3.04	2	3
11. QUEUE MBTA WBLTR	120	2	5.0	8	1962	3.04	2	3
12. QUEUE HYDE PARK NBL	120	3	5.5	530	991	3.04	2	3
13. QUEUE HYDE PARK NBTR	120	3	5.5	124	1774	3.04	2	3
14. QUEUE HYDE PARK SBLT	120	2	5.0	176	1825	3.04	2	3
15. QUEUE HYDE PARK SBR	120	2	5.0	224	1404	3.04	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	324079.6	********	1.8
2.	324048.8	********	1.8
3.	324025.1	********	1.8
4.	324048.2	********	1.8
5.	324071.4	********	1.8
6.	324066.9	********	1.8
7.	324043.7	********	1.8
8.	324020.5	********	1.8
9.	324014.3	********	1.8
10.	324043.6	********	1.8
11.	324069.9	********	1.8
12.	324094.3	********	1.8
13.	324123.3	********	1.8
14.	324131.4	********	1.8
15.	324146.9	********	1.8
16.	324162.3	********	1.8
17.	324177.8	********	1.8
18.	324193.2	********	1.8
19.	324217.2	********	1.8
20.	324201.8	********	1.8
21.	324186.4	********	1.8
22.	324170.9	********	1.8
23.	324155.5	********	1.8
24.	324145.2	********	1.8
25.	324116.3	********	1.8
26.	324087.3	********	1.8
27.	324049.9	********	1.8
28.	324003.2	********	1.8
29.	323956.5	********	1.8
30.	323955.7	********	1.8
31.	324002.4	********	1.8
32.	324049.1	********	1.8
33.	324053.9	********	1.8
34.	324071.9	********	1.8
35.	324090.4	********	1.8
36.	324097.4	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0

WIND ANGLE (DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
60.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.	*	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.	*	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
180.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
190.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0
200.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0
210.	*	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
220.	*	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
230.	*	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
240.	*	0.1	0.1	0.1	0.1	0.1	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
250.	*	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	0.2	0.1	0.1	0.1	0.1	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
300.	*	0.2	0.1	0.1	0.1	0.1	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
310.	*	0.0	0.1	0.1	0.1	0.1	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
320.	*	0.0	0.1	0.1	0.1	0.1	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
330.	*	0.0	0.1	0.1	0.1	0.1	0.1	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
340.	*	0.0	0.1	0.1	0.0	0.0	0.1	0.1	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
350.	*	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MAX	*	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	*	280	0	0	160	170	0	0	0	150	50	190	50	180	20	30	30	30	170	200	0

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 NO BUILD PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
10.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
110.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0
120.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0
130.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.0
140.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
150.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0
160.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
170.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
180.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
190.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0
210.	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
220.	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
230.	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
250.	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
260.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
270.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.0
280.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
290.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
300.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1
310.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
330.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
340.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0
350.	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0
MAX	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.0	0.1
DEGR.	0	0	0	0	0	0	0	0	0	130	120	150	10	300	0	300

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC30.

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 NO BUILD PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:29:21

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) ANGLE (DEGREES)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK # *	280	0	0	160	170	0	0	0	150	50	190	50	180	20	30	30	30	170	200	0
1 *	0.0	0.1	0.1	0.0	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	0.0
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 *	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 *	0.0	0.0	0.0	0.0	0.0	0.0	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
5 *	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6 *	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	0.0	0.0	0.0	0.0
7 *	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8 *	0.1	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	0.0	0.0	0.0
9 *	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	0.0	0.0	0.0	0.0
10 *	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	0.0	0.0	0.0	0.0
11 *	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	0.0	0.0	0.0	0.0
12 *	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	0.0	0.0	0.0	0.0
13 *	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	0.0	0.0	0.0	0.0
14 *	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	0.0	0.0	0.0	0.0
15 *	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	0.0	0.0	0.0	0.0

DATE : 09/19/ 0
TIME : 16:29:21

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
	0	0	0	0	0	0	0	0	0	130	120	150	10	300	0	300
1	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	0.1	0.0	0.0
2	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
3	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
4	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	0.0	0.0
5	0.1	0.1	0.1	0.1	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	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
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1
9	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
10	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
11	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
12	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
13	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
14	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
15	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

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:12:17

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:12:17

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE HYDE PARK S	324071.6	********	324020.8	********	87.	216.	AG	1741.	1.7	0.0	10.0		
2. FREE HYDE PARK S	324020.8	********	324016.5	********	17.	195.	AG	1741.	1.7	0.0	10.0		
3. FREE HYDE PARK S	324016.5	********	324074.0	********	124.	152.	AG	1741.	1.7	0.0	10.0		
4. FREE HYDE PARK N	324071.9	********	324138.7	********	115.	35.	AG	931.	1.7	0.0	10.0		
5. FREE HYDE PARK N	324138.7	********	324209.6	********	230.	18.	AG	931.	1.7	0.0	10.0		
6. FREE MBTA	324072.9	********	324101.0	********	39.	134.	AG	50.	1.7	0.0	10.0		
7. FREE MILTON	324071.1	********	324053.5	********	21.	302.	AG	1930.	1.7	0.0	10.0		
8. FREE MILTON	324053.5	********	323952.8	********	108.	291.	AG	1930.	1.7	0.0	10.0		
9. QUEUE MILTON EBLT	324052.6	********	324051.7	********	1.	290.	AG	0.	100.0	0.0	3.0	0.25	0.2
10. QUEUE MILTON EBR	324051.0	********	324048.9	********	2.	291.	AG	0.	100.0	0.0	3.0	0.47	0.4
11. QUEUE MBTA WBLTR	324078.5	********	324078.6	********	0.	49.	AG	0.	100.0	0.0	3.0	0.02	0.0
12. QUEUE HYDE PARK NBL	324065.8	********	324063.4	********	4.	215.	AG	0.	100.0	0.0	3.0	0.72	0.7
13. QUEUE HYDE PARK NBTR	324068.5	********	324067.8	********	1.	215.	AG	0.	100.0	0.0	3.0	0.14	0.2
14. QUEUE HYDE PARK SBLT	324075.7	********	324076.0	********	1.	37.	AG	0.	100.0	0.0	3.0	0.10	0.1
15. QUEUE HYDE PARK SBR	324072.8	********	324073.4	********	1.	39.	AG	0.	100.0	0.0	3.0	0.19	0.1

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:12:17

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. QUEUE MILTON EBLT	120	2	5.0	299	1274	3.04	2	3
10. QUEUE MILTON EBR	120	2	5.0	682	1583	3.04	2	3
11. QUEUE MBTA WBLTR	120	2	5.0	25	1698	3.04	2	3
12. QUEUE HYDE PARK NBL	120	3	5.5	668	1020	3.04	2	3
13. QUEUE HYDE PARK NBTR	120	3	5.5	229	1751	3.04	2	3
14. QUEUE HYDE PARK SBLT	120	2	5.0	156	1727	3.04	2	3
15. QUEUE HYDE PARK SBR	120	2	5.0	267	1538	3.04	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	324079.6	********	1.8
2.	324048.8	********	1.8
3.	324025.1	********	1.8
4.	324048.2	********	1.8
5.	324071.4	********	1.8
6.	324066.9	********	1.8
7.	324043.7	********	1.8
8.	324020.5	********	1.8
9.	324014.3	********	1.8
10.	324043.6	********	1.8
11.	324069.9	********	1.8
12.	324094.3	********	1.8
13.	324123.3	********	1.8
14.	324131.4	********	1.8
15.	324146.9	********	1.8
16.	324162.3	********	1.8
17.	324177.8	********	1.8
18.	324193.2	********	1.8
19.	324217.2	********	1.8
20.	324201.8	********	1.8
21.	324186.4	********	1.8
22.	324170.9	********	1.8
23.	324155.5	********	1.8
24.	324145.2	********	1.8
25.	324116.3	********	1.8
26.	324087.3	********	1.8
27.	324049.9	********	1.8
28.	324003.2	********	1.8
29.	323956.5	********	1.8
30.	323955.7	********	1.8
31.	324002.4	********	1.8
32.	324049.1	********	1.8
33.	324053.9	********	1.8
34.	324071.9	********	1.8
35.	324090.4	********	1.8
36.	324097.4	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) / CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
30.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0

60. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
70. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
80. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150. *	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
160. *	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
170. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
180. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
190. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0
200. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
210. *	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
220. *	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
230. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
240. *	0.1	0.1	0.1	0.1	0.1	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	0.1	0.1
250. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
260. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.2	0.1	0.1	0.1	0.1	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
300. *	0.3	0.1	0.1	0.1	0.1	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
310. *	0.1	0.1	0.1	0.1	0.1	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
320. *	0.0	0.1	0.1	0.1	0.1	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
330. *	0.1	0.1	0.1	0.1	0.1	0.1	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	0.1
340. *	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
350. *	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MAX *	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	300	0	0	160	170	0	0	0	150	50	190	50	30	20	20	30	30	40	200	0

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE * (DEGR)*	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
10. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
20. *	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
30. *	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
40. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
50. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0
60. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
70. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
90. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
100. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
110. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0
120. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0
130. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.0
140. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
150. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0
160. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
170. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
180. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
190. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
200. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0
210. *	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
220. *	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
230. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
240. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
250. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
260. *	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
270. *	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.0
280. *	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.0
290. *	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
300. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1
310. *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0
320. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
330. *	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
340. *	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0
350. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0
MAX *	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1
DEGR. *	0	0	0	0	0	260	310	0	0	130	120	150	50	300	310	300

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC1 .

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:12:17

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK # *	300	0	0	160	170	0	0	0	150	50	190	50	30	20	20	30	30	40	200	0
1 *	0.0	0.1	0.1	0.0	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	0.0
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 *	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 *	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6 *	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	0.0	0.0	0.0	0.0
7 *	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8 *	0.1	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	0.0	0.0	0.0
9 *	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	0.0	0.0	0.0	0.0
10 *	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	0.0	0.0	0.0	0.0
11 *	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	0.0	0.0	0.0	0.0
12 *	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	0.0	0.0	0.0	0.0
13 *	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	0.0	0.0	0.0	0.0
14 *	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	0.0	0.0	0.0	0.0
15 *	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:12:17

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
	0	0	0	0	0	260	310	0	0	130	120	150	50	300	310	300
1	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	0.1	0.0	0.0
2	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
3	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
4	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
5	0.1	0.1	0.1	0.1	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	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
7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1
9	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
10	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
11	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
12	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
13	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
14	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
15	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

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:18:50

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:18:50

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE HYDE PARK S	324071.6	********	324020.8	********	87.	216.	AG	1731.	1.7	0.0	10.0		
2. FREE HYDE PARK S	324020.8	********	324016.5	********	17.	195.	AG	1731.	1.7	0.0	10.0		
3. FREE HYDE PARK S	324016.5	********	324074.0	********	124.	152.	AG	1731.	1.7	0.0	10.0		
4. FREE HYDE PARK N	324071.9	********	324138.7	********	115.	35.	AG	894.	1.7	0.0	10.0		
5. FREE HYDE PARK N	324138.7	********	324209.6	********	230.	18.	AG	894.	1.7	0.0	10.0		
6. FREE MBTA	324072.9	********	324101.0	********	39.	134.	AG	15.	1.7	0.0	10.0		
7. FREE MILTON	324071.1	********	324053.5	********	21.	302.	AG	1960.	1.7	0.0	10.0		
8. FREE MILTON	324053.5	********	323952.8	********	108.	291.	AG	1960.	1.7	0.0	10.0		
9. QUEUE MILTON EBLT	324052.6	********	324051.6	********	1.	293.	AG	0.	100.0	0.0	3.0	0.26	0.2
10. QUEUE MILTON EBR	324051.0	********	324048.3	********	3.	291.	AG	0.	100.0	0.0	3.0	0.58	0.5
11. QUEUE MBTA WBLTR	324078.5	********	324078.5	********	0.	90.	AG	0.	100.0	0.0	3.0	0.00	0.0
12. QUEUE HYDE PARK NBL	324065.8	********	324064.3	********	3.	215.	AG	0.	100.0	0.0	3.0	0.62	0.4
13. QUEUE HYDE PARK NBTR	324068.5	********	324068.1	********	1.	214.	AG	0.	100.0	0.0	3.0	0.09	0.1
14. QUEUE HYDE PARK SBLT	324075.7	********	324076.1	********	1.	36.	AG	0.	100.0	0.0	3.0	0.11	0.1
15. QUEUE HYDE PARK SBR	324072.8	********	324073.3	********	1.	38.	AG	0.	100.0	0.0	3.0	0.19	0.1

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:18:50

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. QUEUE MILTON EBLT	120	2	5.0	316	1330	3.04	2	3
10. QUEUE MILTON EBR	120	2	5.0	865	1599	3.04	2	3
11. QUEUE MBTA WBLTR	120	2	5.0	8	1958	3.04	2	3
12. QUEUE HYDE PARK NBL	120	3	5.5	530	943	3.04	2	3
13. QUEUE HYDE PARK NBTR	120	3	5.5	145	1774	3.04	2	3
14. QUEUE HYDE PARK SBLT	120	2	5.0	191	1825	3.04	2	3
15. QUEUE HYDE PARK SBR	120	2	5.0	245	1404	3.04	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	324079.6	********	1.8
2.	324048.8	********	1.8
3.	324025.1	********	1.8
4.	324048.2	********	1.8
5.	324071.4	********	1.8
6.	324066.9	********	1.8
7.	324043.7	********	1.8
8.	324020.5	********	1.8
9.	324014.3	********	1.8
10.	324043.6	********	1.8
11.	324069.9	********	1.8
12.	324094.3	********	1.8
13.	324123.3	********	1.8
14.	324131.4	********	1.8
15.	324146.9	********	1.8
16.	324162.3	********	1.8
17.	324177.8	********	1.8
18.	324193.2	********	1.8
19.	324217.2	********	1.8
20.	324201.8	********	1.8
21.	324186.4	********	1.8
22.	324170.9	********	1.8
23.	324155.5	********	1.8
24.	324145.2	********	1.8
25.	324116.3	********	1.8
26.	324087.3	********	1.8
27.	324049.9	********	1.8
28.	324003.2	********	1.8
29.	323956.5	********	1.8
30.	323955.7	********	1.8
31.	324002.4	********	1.8
32.	324049.1	********	1.8
33.	324053.9	********	1.8
34.	324071.9	********	1.8
35.	324090.4	********	1.8
36.	324097.4	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
30.	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0

60. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
70. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150. *	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160. *	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
170. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
180. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
190. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0
200. *	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
210. *	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
220. *	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
230. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
240. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
250. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.2	0.1	0.1	0.1	0.1	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
300. *	0.2	0.1	0.1	0.1	0.1	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
310. *	0.0	0.1	0.1	0.1	0.1	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
320. *	0.0	0.1	0.1	0.1	0.1	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
330. *	0.0	0.1	0.1	0.1	0.1	0.1	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
340. *	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
350. *	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MAX *	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	230	0	0	160	170	0	0	0	150	50	190	50	30	20	20	30	30	40	200	0

PAGE 4

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) * CONCENTRATION (PPM)	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
10. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
20. *	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
30. *	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0
40. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
50. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0
60. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
70. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
90. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
100. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
110. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0
120. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0
130. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.0
140. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
150. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0
160. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
170. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
180. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
190. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
200. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0
210. *	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
220. *	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
230. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
240. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
250. *	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
260. *	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
270. *	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.0
280. *	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.0
290. *	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
300. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1
310. *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0
320. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
330. *	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
340. *	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0
350. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0
MAX *	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1
DEGR. *	0	0	0	0	0	0	310	0	90	130	120	150	50	300	310	300

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC33.

PAGE 5

JOB: 1717-1725 HYDE PARK AVE - INTER #3 RUN: 2025 BUILD PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:18:50

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK # *	230	0	0	160	170	0	0	0	150	50	190	50	30	20	20	30	30	40	200	0
1 *	0.2	0.1	0.1	0.0	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	0.0
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 *	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6 *	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	0.0	0.0	0.0	0.0
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8 *	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	0.0	0.0	0.0	0.0
9 *	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	0.0	0.0	0.0	0.0
10 *	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	0.0	0.0	0.0	0.0
11 *	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	0.0	0.0	0.0	0.0
12 *	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	0.0	0.0	0.0	0.0
13 *	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	0.0	0.0	0.0	0.0
14 *	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	0.0	0.0	0.0	0.0
15 *	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	0.0	0.0	0.0	0.0

PAGE 6

DATE : 09/19/ 0
TIME : 16:18:50

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
	0	0	0	0	0	0	310	0	90	130	120	150	50	300	310	300
1	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	0.1	0.0	0.0
2	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
3	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
4	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
5	0.1	0.1	0.1	0.1	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	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
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1
9	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
10	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
11	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
12	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
13	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
14	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
15	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

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:35:59

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2018 EXISING AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:35:59

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON E	323942.3	********	324058.2	********	125.	112.	AG	1686.	2.4	0.0	10.0		
2. FREE MILTON S	323940.0	********	323835.7	********	161.	221.	AG	1276.	2.4	0.0	10.0		
3. FREE MILTON S	323835.7	********	323741.2	********	228.	204.	AG	1276.	2.4	0.0	10.0		
4. FREE NEPONSET	323940.4	********	324045.8	********	303.	20.	AG	648.	2.4	0.0	10.0		
5. QUEUE MILTON WBL	323954.4	********	324266.0	********	335.	111.	AG	466.	5.3	0.0	3.0		
6. QUEUE MILTON WBR	323955.4	********	323974.9	********	21.	112.	AG	292.	5.3	0.0	3.0		
7. QUEUE NVPKWY SBLT	323941.0	********	323945.1	********	12.	20.	AG	284.	5.3	0.0	3.0		

DATE : 09/19/ 0
TIME : 16:35:59

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323990.7	********	1.8
2.	324037.2	********	1.8
3.	324056.4	********	1.8
4.	324009.8	********	1.8
5.	323963.3	********	1.8
6.	323943.6	********	1.8
7.	323911.3	********	1.8
8.	323878.8	********	1.8
9.	323846.3	********	1.8
10.	323840.0	********	1.8
11.	323819.2	********	1.8
12.	323798.5	********	1.8
13.	323777.8	********	1.8
14.	323757.1	********	1.8
15.	323736.7	********	1.8
16.	323757.4	********	1.8
17.	323778.1	********	1.8
18.	323798.8	********	1.8
19.	323819.5	********	1.8
20.	323831.9	********	1.8
21.	323864.4	********	1.8
22.	323896.9	********	1.8
23.	323929.4	********	1.8
24.	323935.7	********	1.8
25.	323953.1	********	1.8
26.	323970.5	********	1.8
27.	323987.9	********	1.8
28.	324005.3	********	1.8
29.	324022.7	********	1.8
30.	324040.1	********	1.8
31.	324050.5	********	1.8
32.	324033.1	********	1.8
33.	324015.7	********	1.8
34.	323998.3	********	1.8
35.	323980.9	********	1.8
36.	323963.5	********	1.8
37.	323951.2	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.0	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.1
40.	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.2
50.	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
60.	0.0	0.0	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
70.	0.0	0.0	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
80.	0.0	0.0	0.1	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
90.	0.0	0.0	0.1	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
100.	0.1	0.0	0.1	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
110.	0.3	0.2	0.1	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
120.	0.5	0.4	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
130.	0.5	0.4	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	0.1	0.1	0.1	0.1	0.1
140.	0.3	0.3	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	0.1	0.1	0.1	0.1	0.1
150.	0.3	0.3	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	0.1	0.1	0.1	0.1	0.1
160.	0.3	0.3	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	0.1	0.1	0.1	0.1	0.1
170.	0.2	0.2	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	0.1	0.2	0.2	0.2	0.1
180.	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2
190.	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2

200. *	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.2
210. *	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1
220. *	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.3	0.3	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.3	0.3	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.3	0.3	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.3	0.3	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.4	0.5	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300. *	0.1	0.1	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310. *	0.0	0.0	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.3	0.3	0.3	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
MAX *	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2
DEGR. *	130	280	300	100	100	90	10	220	10	30	0	0	0	0	30	30	30	30	40	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) *	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
0. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
10. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
20. *	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
30. *	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50. *	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60. *	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70. *	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80. *	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90. *	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100. *	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110. *	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
120. *	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4
130. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4
140. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3
150. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
160. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
170. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
180. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
190. *	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200. *	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
210. *	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1
220. *	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
230. *	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
240. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
250. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
260. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0
270. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
280. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
290. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
300. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
310. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
320. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
330. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
340. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
350. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
MAX *	0.3	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
DEGR. *	210	50	100	110	20	20	20	20	20	100	200	0	0	0	0	210	120

THE HIGHEST CONCENTRATION OF 0.50 PPM OCCURRED AT RECEPTOR REC2 .

DATE : 09/19/ 0
TIME : 16:35:59

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES) LINK # *	REC1 130	REC2 280	REC3 300	REC4 100	REC5 100	REC6 90	REC7 10	REC8 220	REC9 10	REC10 30	REC11 0	REC12 0	REC13 0	REC14 0	REC15 30	REC16 30	REC17 30	REC18 30	REC19 40	REC20 40
1 *	0.3	0.3	0.3	0.3	0.3	0.2	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
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
3 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.0
4 *	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	0.0	0.0	0.0	0.0
5 *	0.2	0.2	0.1	0.1	0.1	0.1	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
6 *	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	0.0	0.0	0.0	0.0
7 *	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	0.0	0.0	0.0	0.0

DATE : 09/19/ 0
TIME : 16:35:59

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES) LINK # *	REC21 210	REC22 50	REC23 100	REC24 110	REC25 20	REC26 20	REC27 20	REC28 20	REC29 20	REC30 100	REC31 200	REC32 0	REC33 0	REC34 0	REC35 0	REC36 210	REC37 120
1 *	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2 *	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
3 *	0.1	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
4 *	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
5 *	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
6 *	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	0.1
7 *	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	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:37:40

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:37:40

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON E	323942.3	********	324058.2	********	125.	112.	AG	1563.	2.4	0.0	10.0		
2. FREE MILTON S	323940.0	********	323835.7	********	161.	221.	AG	1299.	2.4	0.0	10.0		
3. FREE MILTON S	323835.7	********	323741.2	********	228.	204.	AG	1299.	2.4	0.0	10.0		
4. FREE NEPONSET	323940.4	********	324045.8	********	303.	20.	AG	678.	2.4	0.0	10.0		
5. QUEUE MILTON WBL	323954.4	********	324268.8	********	338.	111.	AG	448.	5.3	0.0	3.0		
6. QUEUE MILTON WBR	323955.4	********	323973.5	********	20.	113.	AG	268.	5.3	0.0	3.0		
7. QUEUE NVPKWY SBLT	323941.0	********	323944.2	********	9.	21.	AG	349.	5.3	0.0	3.0		

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:37:40

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323990.7	********	1.8
2.	324037.2	********	1.8
3.	324056.4	********	1.8
4.	324009.8	********	1.8
5.	323963.3	********	1.8
6.	323943.1	********	1.8
7.	323911.3	********	1.8
8.	323878.8	********	1.8
9.	323846.3	********	1.8
10.	323840.0	********	1.8
11.	323819.2	********	1.8
12.	323798.5	********	1.8
13.	323777.8	********	1.8
14.	323757.1	********	1.8
15.	323736.7	********	1.8
16.	323757.4	********	1.8
17.	323778.1	********	1.8
18.	323798.8	********	1.8
19.	323819.5	********	1.8
20.	323831.9	********	1.8
21.	323864.4	********	1.8
22.	323896.9	********	1.8
23.	323929.4	********	1.8
24.	323935.7	********	1.8
25.	323953.1	********	1.8
26.	323970.5	********	1.8
27.	323987.9	********	1.8
28.	324005.3	********	1.8
29.	324022.7	********	1.8
30.	324040.1	********	1.8
31.	324050.5	********	1.8
32.	324033.1	********	1.8
33.	324015.7	********	1.8
34.	323998.3	********	1.8
35.	323980.9	********	1.8
36.	323963.5	********	1.8
37.	323951.2	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2018 EXISING PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.2	0.1
40.	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.2
50.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.2
60.	0.0	0.0	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.2
70.	0.0	0.0	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
80.	0.0	0.0	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
90.	0.0	0.0	0.1	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
100.	0.1	0.0	0.1	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
110.	0.3	0.2	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
120.	0.5	0.4	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
130.	0.5	0.3	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	0.1	0.1	0.1	0.1	0.1
140.	0.3	0.3	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	0.1	0.1	0.1	0.1	0.1
150.	0.3	0.3	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	0.1	0.1	0.1	0.1	0.1
160.	0.3	0.3	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	0.1	0.1	0.1	0.1	0.1
170.	0.2	0.2	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	0.2	0.2	0.2	0.2	0.1
180.	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2
190.	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2

200. *	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.3	0.2
210. *	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1
220. *	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.3	0.2	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.3	0.3	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.3	0.3	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.3	0.3	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.4	0.4	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300. *	0.1	0.1	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310. *	0.0	0.0	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.0	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
MAX *	0.5	0.4	0.4	0.4	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2
DEGR. *	130	120	300	100	100	0	10	220	30	30	210	0	0	20	30	30	30	30	40	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) *	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
0. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
10. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
20. *	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
30. *	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50. *	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60. *	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70. *	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80. *	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90. *	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100. *	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110. *	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
120. *	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3
130. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4
140. *	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3
150. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
160. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
170. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
180. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
190. *	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200. *	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
210. *	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1
220. *	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
230. *	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
240. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
250. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
260. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0
270. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
280. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
290. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
300. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
310. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
320. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
330. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
340. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
350. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
MAX *	0.3	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
DEGR. *	210	50	100	110	20	20	20	20	20	100	200	0	0	0	0	210	130

THE HIGHEST CONCENTRATION OF 0.50 PPM OCCURRED AT RECEPTOR REC1 .

DATE : 09/19/ 0
TIME : 16:37:40

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) ANGLE (DEGREES) LINK # *	REC1 130	REC2 120	REC3 300	REC4 100	REC5 100	REC6 0	REC7 10	REC8 220	REC9 30	REC10 30	REC11 210	REC12 0	REC13 0	REC14 20	REC15 30	REC16 30	REC17 30	REC18 30	REC19 40	REC20 40
1 *	0.3	0.2	0.3	0.3	0.3	0.1	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
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
3 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.0
4 *	0.0	0.0	0.0	0.0	0.0	0.1	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
5 *	0.2	0.2	0.1	0.1	0.1	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
6 *	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	0.0	0.0	0.0	0.0
7 *	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	0.0	0.0	0.0	0.0

DATE : 09/19/ 0
TIME : 16:37:40

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) ANGLE (DEGREES) LINK # *	REC21 210	REC22 50	REC23 100	REC24 110	REC25 20	REC26 20	REC27 20	REC28 20	REC29 20	REC30 100	REC31 200	REC32 0	REC33 0	REC34 0	REC35 0	REC36 210	REC37 130
1 *	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2 *	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
3 *	0.1	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
4 *	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
5 *	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
6 *	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	0.1
7 *	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	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0
(C) COPYRIGHT 1993-2000, TRINITY CONSULTANTS

Run Began on 9/19/2018 at 16:39:14

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:39:14

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON E	323942.3	********	324058.2	********	125.	112.	AG	1896.	1.7	0.0	10.0		
2. FREE MILTON S	323940.0	********	323835.7	********	161.	221.	AG	1473.	1.7	0.0	10.0		
3. FREE MILTON S	323835.7	********	323741.2	********	228.	204.	AG	1473.	1.7	0.0	10.0		
4. FREE NEPONSET	323940.4	********	324045.8	********	303.	20.	AG	671.	1.7	0.0	10.0		
5. QUEUE MILTON WBL	323954.4	********	323956.3	********	2.	110.	AG	0.	100.0	0.0	3.0	0.41	0.3
6. QUEUE MILTON WBR	323955.4	********	323956.3	********	1.	111.	AG	0.	100.0	0.0	3.0	0.22	0.2
7. QUEUE NVPKWY SBLT	323941.0	********	323941.3	********	1.	21.	AG	0.	100.0	0.0	3.0	0.24	0.2
8. QUEUE MILTON NBT	323933.7	********	323933.5	********	0.	219.	AG	0.	100.0	0.0	3.0	0.04	0.0

DATE : 09/19/ 0
TIME : 16:39:14

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
5. QUEUE MILTON WBL	120	2	5.0	610	1620	3.04	2	3
6. QUEUE MILTON WBR	120	2	5.0	302	1478	3.04	2	3
7. QUEUE NVPKWY SBLT	120	2	5.5	294	1306	3.04	2	3
8. QUEUE MILTON NBT	120	2	5.5	75	1881	3.04	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323990.7	********	1.8
2.	324037.2	********	1.8
3.	324056.4	********	1.8
4.	324009.8	********	1.8
5.	323963.3	********	1.8
6.	323943.2	********	1.8
7.	323911.3	********	1.8
8.	323878.8	********	1.8
9.	323846.3	********	1.8
10.	323840.0	********	1.8
11.	323819.2	********	1.8
12.	323798.5	********	1.8
13.	323777.8	********	1.8
14.	323757.1	********	1.8
15.	323736.7	********	1.8
16.	323757.4	********	1.8
17.	323778.1	********	1.8
18.	323798.8	********	1.8
19.	323819.5	********	1.8
20.	323831.9	********	1.8
21.	323864.4	********	1.8
22.	323896.9	********	1.8
23.	323929.4	********	1.8
24.	323935.7	********	1.8
25.	323953.1	********	1.8
26.	323970.5	********	1.8
27.	323987.9	********	1.8
28.	324005.3	********	1.8
29.	324022.7	********	1.8
30.	324040.1	********	1.8
31.	324050.5	********	1.8
32.	324033.1	********	1.8
33.	324015.7	********	1.8
34.	323998.3	********	1.8
35.	323980.9	********	1.8
36.	323963.5	********	1.8
37.	323951.6	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) * CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.0
40.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.1
50.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
60.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
70.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
80.	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
90.	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
100.	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
110.	0.2	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
120.	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
130.	0.2	0.2	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	0.1	0.1	0.1	0.1	0.1
140.	0.2	0.1	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	0.1	0.1	0.1	0.1	0.1

150.	*	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
160.	*	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
170.	*	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
180.	*	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
190.	*	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2
200.	*	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.2
210.	*	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1
220.	*	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	*	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DEGR.	*	110	130	290	80	80	10	30	20	20	20	10	10	10	10	30	30	30	30	30	50

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 NO BUILD AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
0.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
10.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
20.	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
30.	*	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.	*	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	0.1	0.1	0.1	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
80.	*	0.1	0.1	0.2	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
90.	*	0.1	0.1	0.2	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
100.	*	0.1	0.1	0.2	0.1	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
110.	*	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
120.	*	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
130.	*	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
140.	*	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
150.	*	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
160.	*	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
170.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
180.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
190.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200.	*	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
210.	*	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
220.	*	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
230.	*	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
240.	*	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	0.1	0.2
250.	*	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	0.0
260.	*	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	0.0
270.	*	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	0.0
280.	*	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	0.0
290.	*	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	0.0
300.	*	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	0.0
310.	*	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	0.0
320.	*	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	0.0
330.	*	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	0.0
340.	*	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	0.0
350.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
MAX	*	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
DEGR.	*	210	50	80	110	20	20	20	20	20	170	200	0	0	0	0	0	130

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC21.

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:39:14

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM) ANGLE (DEGREES) REC1 110	REC2 130	REC3 290	REC4 80	REC5 80	REC6 10	REC7 30	REC8 20	REC9 20	REC10 20	REC11 10	REC12 10	REC13 10	REC14 10	REC15 30	REC16 30	REC17 30	REC18 30	REC19 30	REC20 50
1	*	0.2	0.2	0.2	0.2	0.2	0.1	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
2	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
3	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0
4	*	0.0	0.0	0.0	0.0	0.0	0.1	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
5	*	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	0.0	0.0	0.0	0.0
6	*	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	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0
8	*	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:39:14

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM) ANGLE (DEGREES) REC21 210	REC22 50	REC23 80	REC24 110	REC25 20	REC26 20	REC27 20	REC28 20	REC29 20	REC30 170	REC31 200	REC32 0	REC33 0	REC34 0	REC35 0	REC36 0	REC37 130
1	*	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2	*	0.2	0.2	0.1	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

3	*	0.1	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
4	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
5	*	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	0.0
6	*	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	0.0
7	*	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	0.0
8	*	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	0.0

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:42:32

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 NO BUILD PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:42:32

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON E	323942.3	********	324058.2	********	125.	112.	AG	1772.	1.7	0.0	10.0		
2. FREE MILTON S	323940.0	********	323835.7	********	161.	221.	AG	1498.	1.7	0.0	10.0		
3. FREE MILTON S	323835.7	********	323741.2	********	228.	204.	AG	1498.	1.7	0.0	10.0		
4. FREE NEPONSET	323940.4	********	324045.8	********	303.	20.	AG	702.	1.7	0.0	10.0		
5. QUEUE MILTON WBL	323954.4	********	323955.9	********	2.	111.	AG	0.	100.0	0.0	3.0	0.34	0.3
6. QUEUE MILTON WBR	323955.4	********	323956.2	********	1.	114.	AG	0.	100.0	0.0	3.0	0.20	0.2
7. QUEUE NVPKWY SBLT	323941.0	********	323941.3	********	1.	21.	AG	0.	100.0	0.0	3.0	0.23	0.2
8. QUEUE MILTON NBT	323933.7	********	323933.6	********	0.	217.	AG	0.	100.0	0.0	3.0	0.04	0.0

DATE : 09/19/ 0
TIME : 16:42:32

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
5. QUEUE MILTON WBL	120	2	5.0	492	1574	3.04	2	3
6. QUEUE MILTON WBR	120	2	5.0	278	1507	3.04	2	3
7. QUEUE NVPKWY SBLT	120	2	5.5	294	1413	3.04	2	3
8. QUEUE MILTON NBT	120	2	5.5	63	1863	3.04	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323990.7	********	1.8
2.	324037.2	********	1.8
3.	324056.4	********	1.8
4.	324009.8	********	1.8
5.	323963.3	********	1.8
6.	323943.2	********	1.8
7.	323911.3	********	1.8
8.	323878.8	********	1.8
9.	323846.3	********	1.8
10.	323840.0	********	1.8
11.	323819.2	********	1.8
12.	323798.5	********	1.8
13.	323777.8	********	1.8
14.	323757.1	********	1.8
15.	323736.7	********	1.8
16.	323757.4	********	1.8
17.	323778.1	********	1.8
18.	323798.8	********	1.8
19.	323819.5	********	1.8
20.	323831.9	********	1.8
21.	323864.4	********	1.8
22.	323896.9	********	1.8
23.	323929.4	********	1.8
24.	323935.7	********	1.8
25.	323953.1	********	1.8
26.	323970.5	********	1.8
27.	323987.9	********	1.8
28.	324005.3	********	1.8
29.	324022.7	********	1.8
30.	324040.1	********	1.8
31.	324050.5	********	1.8
32.	324033.1	********	1.8
33.	324015.7	********	1.8
34.	323998.3	********	1.8
35.	323980.9	********	1.8
36.	323963.5	********	1.8
37.	323951.6	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1
40.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.1
50.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
60.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
70.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
80.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
90.	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
100.	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
110.	0.1	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
120.	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
130.	0.2	0.1	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	0.1	0.1	0.1	0.1	0.1
140.	0.2	0.1	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	0.1	0.1	0.1	0.1	0.1

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
150.	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
160.	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
170.	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
180.	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
190.	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2
200.	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.2
210.	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1
220.	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230.	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240.	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270.	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280.	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DEGR.	120	270	290	90	90	10	20	20	20	20	10	10	10	10	30	30	30	30	30	50

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) * CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
10.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
20.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	0.1	0.1	0.1	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
80.	0.1	0.1	0.2	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
90.	0.1	0.1	0.2	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
100.	0.1	0.1	0.2	0.1	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
110.	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
120.	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
130.	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
140.	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
150.	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
160.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
170.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
180.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
190.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200.	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
210.	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
220.	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
230.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
250.	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	0.0
260.	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	0.0
270.	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	0.0
280.	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	0.0
290.	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	0.0
300.	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	0.0
310.	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	0.0
320.	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	0.0
330.	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	0.0
340.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
350.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
MAX	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
DEGR.	210	50	80	110	20	20	20	20	20	160	200	0	0	0	0	0	220

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC21.

DATE : 09/19/ 0
TIME : 16:42:32

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	120	270	290	90	90	10	20	20	20	20	10	10	10	10	30	30	30	30	30	50
1	0.2	0.2	0.2	0.2	0.2	0.1	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
2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0
4	0.0	0.0	0.0	0.0	0.0	0.1	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
5	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	0.0	0.0	0.0	0.0
6	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	0.0	0.0	0.0	0.0
7	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	0.0	0.0	0.0	0.0
8	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	0.0	0.0	0.0	0.0

DATE : 09/19/ 0
TIME : 16:42:32

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
	210	50	80	110	20	20	20	20	20	160	200	0	0	0	0	0	220
1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2	0.2	0.2	0.1	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	0.1

3	*	0.1	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
4	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
5	*	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	0.0
6	*	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	0.0
7	*	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	0.0
8	*	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	0.0

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:32:58

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:32:58

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON E	323942.3	********	324058.2	********	125.	112.	AG	1936.	1.7	0.0	10.0		
2. FREE MILTON S	323940.0	********	323835.7	********	161.	221.	AG	1508.	1.7	0.0	10.0		
3. FREE MILTON S	323835.7	********	323741.2	********	228.	204.	AG	1508.	1.7	0.0	10.0		
4. FREE NEPONSET	323940.4	********	324045.8	********	303.	20.	AG	676.	1.7	0.0	10.0		
5. QUEUE MILTON WBL	323954.4	********	323956.4	********	2.	111.	AG	0.	100.0	0.0	3.0	0.42	0.4
6. QUEUE MILTON WBR	323955.4	********	323956.3	********	1.	113.	AG	0.	100.0	0.0	3.0	0.22	0.2
7. QUEUE NVPKWY SBLT	323941.0	********	323941.3	********	1.	20.	AG	0.	100.0	0.0	3.0	0.25	0.2
8. QUEUE MILTON NBT	323933.7	********	323933.5	********	0.	219.	AG	0.	100.0	0.0	3.0	0.04	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:32:58

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
5. QUEUE MILTON WBL	120	2	5.0	632	1620	3.04	2	3
6. QUEUE MILTON WBR	120	2	5.0	305	1478	3.04	2	3
7. QUEUE NVPKWY SBLT	120	2	5.5	296	1306	3.04	2	3
8. QUEUE MILTON NBT	120	2	5.5	75	1881	3.04	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323990.7	********	1.8
2.	324037.2	********	1.8
3.	324056.4	********	1.8
4.	324009.8	********	1.8
5.	323963.3	********	1.8
6.	323943.2	********	1.8
7.	323911.3	********	1.8
8.	323878.8	********	1.8
9.	323846.3	********	1.8
10.	323840.0	********	1.8
11.	323819.2	********	1.8
12.	323798.5	********	1.8
13.	323777.8	********	1.8
14.	323757.1	********	1.8
15.	323736.7	********	1.8
16.	323757.4	********	1.8
17.	323778.1	********	1.8
18.	323798.8	********	1.8
19.	323819.5	********	1.8
20.	323831.9	********	1.8
21.	323864.4	********	1.8
22.	323896.9	********	1.8
23.	323929.4	********	1.8
24.	323935.7	********	1.8
25.	323953.1	********	1.8
26.	323970.5	********	1.8
27.	323987.9	********	1.8
28.	324005.3	********	1.8
29.	324022.7	********	1.8
30.	324040.1	********	1.8
31.	324050.5	********	1.8
32.	324033.1	********	1.8
33.	324015.7	********	1.8
34.	323998.3	********	1.8
35.	323980.9	********	1.8
36.	323963.5	********	1.8
37.	323951.6	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 BUILD AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1
40.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.1
50.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
60.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
70.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
80.	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
90.	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
100.	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
110.	0.2	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
120.	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
130.	0.2	0.2	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	0.1	0.1	0.1	0.1	0.1
140.	0.2	0.2	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	0.1	0.1	0.1	0.1	0.1

150. *	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
160. *	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
170. *	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
180. *	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
190. *	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2
200. *	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.2
210. *	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1
220. *	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300. *	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310. *	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX *	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DEGR. *	110	130	300	80	80	10	20	20	20	20	10	10	10	10	30	30	30	30	30	50

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) *	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
0. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
10. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
20. *	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
30. *	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50. *	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60. *	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70. *	0.1	0.1	0.1	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
80. *	0.1	0.1	0.2	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
90. *	0.1	0.1	0.2	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
100. *	0.1	0.1	0.2	0.1	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
110. *	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
120. *	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
130. *	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
140. *	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
150. *	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
160. *	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
170. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
180. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
190. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200. *	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
210. *	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
220. *	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
230. *	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
240. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2
250. *	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	0.0
260. *	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	0.0
270. *	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	0.0
280. *	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	0.0
290. *	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	0.0
300. *	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	0.0
310. *	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	0.0
320. *	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	0.0
330. *	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	0.0
340. *	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	0.0
350. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
MAX *	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
DEGR. *	210	50	80	110	20	20	20	20	20	170	200	0	0	0	0	0	130

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC21.

DATE : 09/19/ 0
TIME : 16:32:58

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK # *	110	130	300	80	80	10	20	20	20	20	10	10	10	10	30	30	30	30	30	50
1 *	0.2	0.2	0.3	0.2	0.2	0.1	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
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
3 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0
4 *	0.0	0.0	0.0	0.0	0.0	0.1	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
5 *	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	0.0	0.0	0.0	0.0
6 *	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	0.0	0.0	0.0	0.0
7 *	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	0.0	0.0	0.0	0.0
8 *	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	0.0	0.0	0.0	0.0

DATE : 09/19/ 0
TIME : 16:32:58

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES)	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
LINK # *	210	50	80	110	20	20	20	20	20	170	200	0	0	0	0	0	130
1 *	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2 *	0.2	0.2	0.1	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

3	*	0.1	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
4	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
5	*	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	0.0
6	*	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	0.0
7	*	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	0.0
8	*	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	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/19/2018 at 16:34:41

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 BUILD PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:34:41

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON E	323942.3	********	324058.2	********	125.	112.	AG	1819.	1.7	0.0	10.0		
2. FREE MILTON S	323940.0	********	323835.7	********	161.	221.	AG	1539.	1.7	0.0	10.0		
3. FREE MILTON S	323835.7	********	323741.2	********	228.	204.	AG	1539.	1.7	0.0	10.0		
4. FREE NEPONSET	323940.4	********	324045.8	********	303.	20.	AG	708.	1.7	0.0	10.0		
5. QUEUE MILTON WBL	323954.4	********	323956.0	********	2.	110.	AG	0.	100.0	0.0	3.0	0.35	0.3
6. QUEUE MILTON WBR	323955.4	********	323956.3	********	1.	111.	AG	0.	100.0	0.0	3.0	0.20	0.2
7. QUEUE NVPKWY SBLT	323941.0	********	323941.4	********	1.	21.	AG	0.	100.0	0.0	3.0	0.28	0.2
8. QUEUE MILTON NBT	323933.7	********	323933.6	********	0.	217.	AG	0.	100.0	0.0	3.0	0.04	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 BUILD PM PEAK HOUR

DATE : 09/19/ 0
TIME : 16:34:41

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
5. QUEUE MILTON WBL	120	2	5.0	510	1574	3.04	2	3
6. QUEUE MILTON WBR	120	2	5.0	281	1507	3.04	2	3
7. QUEUE NVPKWY SBLT	120	2	5.5	364	1412	3.04	2	3
8. QUEUE MILTON NBT	120	2	5.5	63	1863	3.04	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323990.7	********	1.8
2.	324037.2	********	1.8
3.	324056.4	********	1.8
4.	324009.8	********	1.8
5.	323963.3	********	1.8
6.	323943.2	********	1.8
7.	323911.3	********	1.8
8.	323878.8	********	1.8
9.	323846.3	********	1.8
10.	323840.0	********	1.8
11.	323819.2	********	1.8
12.	323798.5	********	1.8
13.	323777.8	********	1.8
14.	323757.1	********	1.8
15.	323736.7	********	1.8
16.	323757.4	********	1.8
17.	323778.1	********	1.8
18.	323798.8	********	1.8
19.	323819.5	********	1.8
20.	323831.9	********	1.8
21.	323864.4	********	1.8
22.	323896.9	********	1.8
23.	323929.4	********	1.8
24.	323935.7	********	1.8
25.	323953.1	********	1.8
26.	323970.5	********	1.8
27.	323987.9	********	1.8
28.	324005.3	********	1.8
29.	324022.7	********	1.8
30.	324040.1	********	1.8
31.	324050.5	********	1.8
32.	324033.1	********	1.8
33.	324015.7	********	1.8
34.	323998.3	********	1.8
35.	323980.9	********	1.8
36.	323963.5	********	1.8
37.	323951.6	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #4 RUN: 2025 BUILD PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) * CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1
40.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.1
50.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
60.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
70.	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
80.	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
90.	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
100.	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
110.	0.2	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
120.	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
130.	0.2	0.2	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	0.1	0.1	0.1	0.1	0.1
140.	0.2	0.1	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	0.1	0.1	0.1	0.1	0.1

150. *	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
160. *	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
170. *	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
180. *	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
190. *	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2
200. *	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.2
210. *	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1
220. *	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300. *	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310. *	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX *	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DEGR. *	110	130	290	80	90	10	20	20	20	20	10	10	10	10	30	30	30	30	30	50

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) *	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
0. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
10. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
20. *	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
30. *	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50. *	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60. *	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70. *	0.1	0.1	0.1	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
80. *	0.1	0.1	0.2	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
90. *	0.1	0.1	0.2	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
100. *	0.1	0.1	0.2	0.1	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
110. *	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
120. *	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
130. *	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
140. *	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
150. *	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
160. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
170. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
180. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
190. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200. *	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
210. *	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
220. *	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
230. *	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
240. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
250. *	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	0.0
260. *	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	0.0
270. *	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	0.0
280. *	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	0.0
290. *	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	0.0
300. *	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	0.0
310. *	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	0.0
320. *	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	0.0
330. *	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	0.0
340. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
350. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
MAX *	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
DEGR. *	210	50	80	110	20	20	20	20	20	160	200	0	0	0	0	0	220

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC21.

DATE : 09/19/ 0
TIME : 16:34:41

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK # *	110	130	290	80	90	10	20	20	20	20	10	10	10	10	30	30	30	30	30	50
1 *	0.2	0.2	0.2	0.2	0.2	0.1	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
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
3 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0
4 *	0.0	0.0	0.0	0.0	0.0	0.1	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
5 *	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	0.0	0.0	0.0	0.0
6 *	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	0.0	0.0	0.0	0.0
7 *	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	0.0	0.0	0.0	0.0
8 *	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	0.0	0.0	0.0	0.0

DATE : 09/19/ 0
TIME : 16:34:41

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES) *	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37
LINK # *	210	50	80	110	20	20	20	20	20	160	200	0	0	0	0	0	220
1 *	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2 *	0.2	0.2	0.1	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	0.1

3	*	0.1	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
4	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
5	*	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	0.0
6	*	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	0.0
7	*	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	0.0
8	*	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	0.0

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/20/2018 at 9:46:22

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING AM PEAK HOUR

DATE : 09/20/ 0
TIME : 09:46:22

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323867.2	********	323941.6	********	111.	42.	AG	1264.	2.4	0.0	10.0		
2. FREE INDUSTRIAL W	323868.0	********	323895.2	********	34.	128.	AG	210.	2.4	0.0	10.0		
3. FREE INDUSTRIAL W	323895.2	********	323795.7	********	165.	217.	AG	210.	2.4	0.0	10.0		
4. FREE MILTON S	323865.9	********	323835.4	********	49.	219.	AG	1310.	2.4	0.0	10.0		
5. FREE MILTON S	323835.4	********	323808.5	********	60.	206.	AG	1310.	2.4	0.0	10.0		
6. QUEUE INDUSTRIAL WBL	323875.4	********	323900.1	********	31.	127.	AG	94.	5.3	0.0	3.0		
7. QUEUE MILTON SBLT	323871.2	********	323873.2	********	3.	39.	AG	562.	5.3	0.0	3.0		

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING AM PEAK HOUR

DATE : 09/20/ 0
TIME : 09:46:22

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323863.5	********	1.8
2.	323896.8	********	1.8
3.	323930.0	********	1.8
4.	323945.3	********	1.8
5.	323912.1	********	1.8
6.	323879.9	********	1.8
7.	323839.6	********	1.8
8.	323817.2	********	1.8
9.	323804.0	********	1.8
10.	323826.4	********	1.8
11.	323867.6	********	1.8
12.	323854.3	********	1.8
13.	323869.7	********	1.8
14.	323894.9	********	1.8
15.	323882.7	********	1.8
16.	323899.2	********	1.8
17.	323868.9	********	1.8
18.	323838.6	********	1.8
19.	323808.3	********	1.8
20.	323791.7	********	1.8
21.	323822.0	********	1.8
22.	323852.3	********	1.8
23.	323882.6	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
30.	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	0.2	0.1	0.1	0.0	0.2	0.1	0.2	0.0	0.2	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200.	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.	0.2	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	0.2	0.2	0.2	0.2	0.1	0.0	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.	0.1	0.0	0.0	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

340.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
DEGR.	40	50	190	220	10	0	10	0	30	40	10	210	50	10	10	0	0	0	0	0

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23
0.	0.1	0.0	0.0
10.	0.0	0.0	0.0
20.	0.0	0.0	0.0
30.	0.0	0.0	0.0
40.	0.0	0.0	0.0
50.	0.0	0.0	0.0
60.	0.0	0.0	0.0
70.	0.0	0.0	0.0
80.	0.0	0.0	0.0
90.	0.0	0.0	0.0
100.	0.0	0.0	0.0
110.	0.0	0.0	0.0
120.	0.0	0.0	0.0
130.	0.0	0.0	0.0
140.	0.0	0.0	0.0
150.	0.0	0.0	0.0
160.	0.0	0.0	0.0
170.	0.0	0.0	0.0
180.	0.0	0.0	0.0
190.	0.0	0.0	0.0
200.	0.0	0.0	0.0
210.	0.0	0.0	0.0
220.	0.0	0.0	0.0
230.	0.0	0.0	0.0
240.	0.0	0.0	0.0
250.	0.0	0.0	0.0
260.	0.0	0.0	0.0
270.	0.0	0.0	0.0
280.	0.0	0.0	0.0
290.	0.0	0.0	0.0
300.	0.0	0.0	0.0
310.	0.0	0.0	0.0
320.	0.0	0.0	0.0
330.	0.0	0.0	0.0
340.	0.1	0.0	0.0
350.	0.1	0.0	0.0
MAX	0.1	0.0	0.0
DEGR.	0	0	0

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC10.

DATE : 09/20/ 0
TIME : 09:46:22

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	40	50	190	220	10	0	10	0	30	40	10	210	50	10	10	0	0	0	0	0
1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
2	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	0.0	0.0	0.0	0.0
3	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	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	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	0.0	0.0	0.0	0.0
7	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	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 09:46:22

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21	REC22	REC23
	0	0	0
1	0.0	0.0	0.0
2	0.0	0.0	0.0
3	0.0	0.0	0.0
4	0.0	0.0	0.0
5	0.1	0.0	0.0
6	0.0	0.0	0.0
7	0.0	0.0	0.0

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/20/2018 at 10:13:47

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:13:47

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	*	323867.2	********	323941.6	********	*	111.	42.	AG	1297.	2.4	0.0	10.0		
2. FREE INDUSTRIAL W	*	323868.0	********	323895.2	********	*	34.	128.	AG	211.	2.4	0.0	10.0		
3. FREE INDUSTRIAL W	*	323895.2	********	323795.7	********	*	165.	217.	AG	211.	2.4	0.0	10.0		
4. FREE MILTON S	*	323865.9	********	323835.4	********	*	49.	219.	AG	1142.	2.4	0.0	10.0		
5. FREE MILTON S	*	323835.4	********	323808.5	********	*	60.	206.	AG	1142.	2.4	0.0	10.0		
6. QUEUE INDUSTRIAL WBL	*	323875.4	********	323884.0	********	*	11.	127.	AG	71.	5.3	0.0	3.0		
7. QUEUE MILTON SBLT	*	323871.2	********	323874.0	********	*	4.	43.	AG	594.	5.3	0.0	3.0		

(LINK COORDINATES (M): X1, Y1, X2, Y2)

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:13:47

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	*	X	Y	Z	*
1.	*	323863.5	********	1.8	*
2.	*	323896.8	********	1.8	*
3.	*	323930.0	********	1.8	*
4.	*	323945.3	********	1.8	*
5.	*	323912.1	********	1.8	*
6.	*	323879.9	********	1.8	*
7.	*	323839.6	********	1.8	*
8.	*	323817.2	********	1.8	*
9.	*	323804.0	********	1.8	*
10.	*	323826.4	********	1.8	*
11.	*	323867.6	********	1.8	*
12.	*	323854.3	********	1.8	*
13.	*	323869.7	********	1.8	*
14.	*	323894.9	********	1.8	*
15.	*	323882.7	********	1.8	*
16.	*	323899.2	********	1.8	*
17.	*	323868.9	********	1.8	*
18.	*	323838.6	********	1.8	*
19.	*	323808.3	********	1.8	*
20.	*	323791.7	********	1.8	*
21.	*	323822.0	********	1.8	*
22.	*	323852.3	********	1.8	*
23.	*	323882.6	********	1.8	*

(COORDINATES (M))

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
30.	*	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.2	0.1	0.1	0.0	0.2	0.1	0.2	0.0	0.2	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.	*	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	*	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200.	*	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.	*	0.2	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	*	0.2	0.2	0.2	0.2	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

340.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
DEGR.	40	50	190	220	10	0	20	0	30	40	10	50	50	10	0	0	0	0	0	0

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23
0.	0.1	0.0	0.0
10.	0.0	0.0	0.1
20.	0.0	0.0	0.0
30.	0.0	0.0	0.0
40.	0.0	0.0	0.0
50.	0.0	0.0	0.0
60.	0.0	0.0	0.0
70.	0.0	0.0	0.0
80.	0.0	0.0	0.0
90.	0.0	0.0	0.0
100.	0.0	0.0	0.0
110.	0.0	0.0	0.0
120.	0.0	0.0	0.0
130.	0.0	0.0	0.0
140.	0.0	0.0	0.0
150.	0.0	0.0	0.0
160.	0.0	0.0	0.0
170.	0.0	0.0	0.0
180.	0.0	0.0	0.0
190.	0.0	0.0	0.0
200.	0.0	0.0	0.0
210.	0.0	0.0	0.0
220.	0.0	0.0	0.0
230.	0.0	0.0	0.0
240.	0.0	0.0	0.0
250.	0.0	0.0	0.0
260.	0.0	0.0	0.0
270.	0.0	0.0	0.0
280.	0.0	0.0	0.0
290.	0.0	0.0	0.0
300.	0.0	0.0	0.0
310.	0.0	0.0	0.0
320.	0.0	0.0	0.0
330.	0.0	0.0	0.0
340.	0.0	0.0	0.0
350.	0.1	0.0	0.0
MAX	0.1	0.0	0.1
DEGR.	0	0	10

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC10.

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:13:47

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK #	40	50	190	220	10	0	20	0	30	40	10	50	50	10	0	0	0	0	0	0
1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
2	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	0.0	0.0	0.0	0.0
3	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	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	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	0.0	0.0	0.0	0.0
7	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:13:47

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

	REC21	REC22	REC23
LINK #	0	0	10
1	0.0	0.0	0.1
2	0.0	0.0	0.0
3	0.0	0.0	0.0
4	0.0	0.0	0.0
5	0.1	0.0	0.0
6	0.0	0.0	0.0
7	0.0	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/20/2018 at 10:15:43

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:15:43

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323867.2	********	323941.6	********	111.	42.	AG	1456.	1.7	0.0	10.0		
2. FREE INDUSTRIAL W	323868.0	********	323895.2	********	34.	128.	AG	482.	1.7	0.0	10.0		
3. FREE INDUSTRIAL W	323895.2	********	323795.7	********	165.	217.	AG	482.	1.7	0.0	10.0		
4. FREE MILTON S	323865.9	********	323835.4	********	49.	219.	AG	1474.	1.7	0.0	10.0		
5. FREE MILTON S	323835.4	********	323808.5	********	60.	206.	AG	1474.	1.7	0.0	10.0		
6. QUEUE INDUSTRIAL WBL	323875.4	********	323896.2	********	26.	127.	AG	135.	3.5	0.0	3.0		
7. QUEUE INDUSTRIAL WBL	323896.2	********	323847.9	********	80.	217.	AG	135.	3.5	0.0	3.0		
8. QUEUE MILTON SBLT	323871.2	********	323876.4	********	8.	41.	AG	707.	3.5	0.0	3.0		

DATE : 09/20/ 0
TIME : 10:15:43

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323863.5	********	1.8
2.	323896.8	********	1.8
3.	323930.0	********	1.8
4.	323945.3	********	1.8
5.	323912.1	********	1.8
6.	323879.9	********	1.8
7.	323839.6	********	1.8
8.	323817.2	********	1.8
9.	323804.0	********	1.8
10.	323826.4	********	1.8
11.	323867.6	********	1.8
12.	323854.3	********	1.8
13.	323869.7	********	1.8
14.	323894.9	********	1.8
15.	323882.7	********	1.8
16.	323899.2	********	1.8
17.	323868.9	********	1.8
18.	323838.6	********	1.8
19.	323808.3	********	1.8
20.	323791.7	********	1.8
21.	323822.0	********	1.8
22.	323852.3	********	1.8
23.	323882.6	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR) * CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
40.	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
50.	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200.	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	0.2	0.1	0.2	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
230.	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

330.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1
DEGR.	50	50	210	230	30	0	20	10	40	30	10	50	80	0	0	220	20	20	20	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23
0.	0.0	0.0	0.0
10.	0.0	0.0	0.0
20.	0.0	0.0	0.0
30.	0.0	0.0	0.0
40.	0.1	0.0	0.0
50.	0.1	0.1	0.0
60.	0.0	0.0	0.0
70.	0.0	0.0	0.0
80.	0.0	0.0	0.0
90.	0.0	0.0	0.0
100.	0.0	0.0	0.0
110.	0.0	0.0	0.0
120.	0.0	0.0	0.0
130.	0.0	0.0	0.0
140.	0.0	0.0	0.0
150.	0.0	0.0	0.0
160.	0.0	0.0	0.0
170.	0.0	0.0	0.0
180.	0.0	0.0	0.0
190.	0.0	0.0	0.0
200.	0.1	0.1	0.1
210.	0.0	0.1	0.1
220.	0.0	0.0	0.0
230.	0.0	0.0	0.0
240.	0.0	0.0	0.0
250.	0.0	0.0	0.0
260.	0.0	0.0	0.0
270.	0.0	0.0	0.0
280.	0.0	0.0	0.0
290.	0.0	0.0	0.0
300.	0.0	0.0	0.0
310.	0.0	0.0	0.0
320.	0.0	0.0	0.0
330.	0.0	0.0	0.0
340.	0.0	0.0	0.0
350.	0.0	0.0	0.0
MAX	0.1	0.1	0.1
DEGR.	40	50	200

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC8 .

DATE : 09/20/ 0
TIME : 10:15:43

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC1 50	REC2 50	REC3 210	REC4 230	REC5 30	REC6 0	REC7 20	REC8 10	REC9 40	REC10 30	REC11 10	REC12 50	REC13 80	REC14 0	REC15 0	REC16 220	REC17 20	REC18 20	REC19 20	REC20 40
1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	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	0.0	0.0	0.0	0.0
3	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	0.1	0.1	0.1	0.1	0.1
4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	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	0.0	0.0	0.0	0.0
7	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	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 10:15:43

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21 40	REC22 50	REC23 200
1	0.0	0.0	0.0
2	0.0	0.0	0.0
3	0.1	0.1	0.1
4	0.0	0.0	0.0
5	0.0	0.0	0.0
6	0.0	0.0	0.0
7	0.0	0.0	0.0
8	0.0	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/20/2018 at 10:17:07

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2025 NO BUILD PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:17:07

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

```
VS =   0.0 CM/S       VD =   0.0 CM/S      Z0 =  11. CM
 U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES     MIXH =  1000. M   AMB =  0.0 PPM
```

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323867.2	********	323941.6	********	111.	42.	AG	1489.	1.7	0.0	10.0		
2. FREE INDUSTRIAL W	323868.0	********	323895.2	********	34.	128.	AG	490.	1.7	0.0	10.0		
3. FREE INDUSTRIAL W	323895.2	********	323795.7	********	165.	217.	AG	490.	1.7	0.0	10.0		
4. FREE MILTON S	323865.9	********	323835.4	********	49.	219.	AG	1307.	1.7	0.0	10.0		
5. FREE MILTON S	323835.4	********	323808.5	********	60.	206.	AG	1307.	1.7	0.0	10.0		
6. QUEUE INDUSTRIAL WBL	323875.4	********	323896.2	********	26.	127.	AG	299.	3.5	0.0	3.0		
7. QUEUE INDUSTRIAL WBL	323896.2	********	323794.9	********	168.	217.	AG	299.	3.5	0.0	3.0		
8. QUEUE MILTON SBLT	323871.2	********	323874.8	********	5.	42.	AG	638.	3.5	0.0	3.0		

DATE : 09/20/ 0
TIME : 10:17:07

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323863.5	********	1.8
2.	323896.8	********	1.8
3.	323930.0	********	1.8
4.	323945.3	********	1.8
5.	323912.1	********	1.8
6.	323879.9	********	1.8
7.	323839.6	********	1.8
8.	323817.2	********	1.8
9.	323804.0	********	1.8
10.	323826.4	********	1.8
11.	323867.6	********	1.8
12.	323854.3	********	1.8
13.	323869.7	********	1.8
14.	323894.9	********	1.8
15.	323882.7	********	1.8
16.	323899.2	********	1.8
17.	323868.9	********	1.8
18.	323838.6	********	1.8
19.	323808.3	********	1.8
20.	323791.7	********	1.8
21.	323822.0	********	1.8
22.	323852.3	********	1.8
23.	323882.6	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
40.	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
50.	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200.	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
230.	0.1	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

330.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1
DEGR.	50	50	200	230	30	0	0	0	20	40	10	50	60	0	0	220	20	20	20	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23
0.	0.0	0.0	0.0
10.	0.0	0.0	0.0
20.	0.0	0.0	0.0
30.	0.0	0.0	0.0
40.	0.1	0.0	0.0
50.	0.1	0.1	0.0
60.	0.0	0.0	0.0
70.	0.0	0.0	0.0
80.	0.0	0.0	0.0
90.	0.0	0.0	0.0
100.	0.0	0.0	0.0
110.	0.0	0.0	0.0
120.	0.0	0.0	0.0
130.	0.0	0.0	0.0
140.	0.0	0.0	0.0
150.	0.0	0.0	0.0
160.	0.0	0.0	0.0
170.	0.0	0.0	0.0
180.	0.0	0.0	0.0
190.	0.0	0.0	0.0
200.	0.1	0.1	0.1
210.	0.0	0.1	0.1
220.	0.0	0.0	0.0
230.	0.0	0.0	0.0
240.	0.0	0.0	0.0
250.	0.0	0.0	0.0
260.	0.0	0.0	0.0
270.	0.0	0.0	0.0
280.	0.0	0.0	0.0
290.	0.0	0.0	0.0
300.	0.0	0.0	0.0
310.	0.0	0.0	0.0
320.	0.0	0.0	0.0
330.	0.0	0.0	0.0
340.	0.0	0.0	0.0
350.	0.0	0.0	0.0
MAX	0.1	0.1	0.1
DEGR.	40	50	200

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC5 .

DATE : 09/20/ 0
TIME : 10:17:07

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	CO/LINK (PPM) ANGLE (DEGREES) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	50	50	200	230	30	0	0	0	20	40	10	50	60	0	0	220	20	20	20	40
1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	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	0.0	0.0	0.0	0.0
3	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	0.1	0.1	0.1	0.1	0.1
4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	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	0.0	0.0	0.0	0.0
7	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	0.0	0.0	0.0	0.0
8	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	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 10:17:07

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	CO/LINK (PPM) ANGLE (DEGREES) REC21	REC22	REC23
	40	50	200
1	0.0	0.0	0.0
2	0.0	0.0	0.0
3	0.1	0.1	0.1
4	0.0	0.0	0.0
5	0.0	0.0	0.0
6	0.0	0.0	0.0
7	0.0	0.0	0.0
8	0.0	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0
(C) COPYRIGHT 1993-2000, TRINITY CONSULTANTS

Run Began on 9/20/2018 at 9:42:41

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 09:42:41

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323867.2	********	323941.6	********	111.	42.	AG	1491.	1.7	0.0	10.0		
2. FREE INDUSTRIAL W	323868.0	********	323895.2	********	34.	128.	AG	482.	1.7	0.0	10.0		
3. FREE INDUSTRIAL W	323895.2	********	323795.7	********	165.	217.	AG	482.	1.7	0.0	10.0		
4. FREE MILTON S	323865.9	********	323835.4	********	49.	219.	AG	1509.	1.7	0.0	10.0		
5. FREE MILTON S	323835.4	********	323808.5	********	60.	206.	AG	1509.	1.7	0.0	10.0		
6. QUEUE INDUSTRIAL WBL	323875.4	********	323896.2	********	26.	127.	AG	135.	3.5	0.0	3.0		
7. QUEUE INDUSTRIAL WBL	323896.2	********	323845.7	********	84.	217.	AG	135.	3.5	0.0	3.0		
8. QUEUE MILTON SBLT	323871.2	********	323876.5	********	8.	39.	AG	729.	3.5	0.0	3.0		

PAGE 2

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 09:42:41

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323863.5	********	1.8
2.	323896.8	********	1.8
3.	323930.0	********	1.8
4.	323945.3	********	1.8
5.	323912.1	********	1.8
6.	323879.9	********	1.8
7.	323839.6	********	1.8
8.	323817.2	********	1.8
9.	323804.0	********	1.8
10.	323826.4	********	1.8
11.	323867.6	********	1.8
12.	323854.3	********	1.8
13.	323869.7	********	1.8
14.	323894.9	********	1.8
15.	323882.7	********	1.8
16.	323899.2	********	1.8
17.	323868.9	********	1.8
18.	323838.6	********	1.8
19.	323808.3	********	1.8
20.	323791.7	********	1.8
21.	323822.0	********	1.8
22.	323852.3	********	1.8
23.	323882.6	********	1.8

PAGE 3

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2025 BUILD AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
40.	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
50.	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200.	0.2	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	0.2	0.1	0.2	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
230.	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
330.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1
DEGR.	50	50	200	230	30	0	20	10	40	30	10	50	60	0	0	220	20	20	20	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23
0.	0.1	0.0	0.0
10.	0.0	0.0	0.0
20.	0.0	0.0	0.0
30.	0.0	0.0	0.0
40.	0.1	0.0	0.0
50.	0.1	0.1	0.0
60.	0.0	0.0	0.0
70.	0.0	0.0	0.0
80.	0.0	0.0	0.0
90.	0.0	0.0	0.0
100.	0.0	0.0	0.0
110.	0.0	0.0	0.0
120.	0.0	0.0	0.0
130.	0.0	0.0	0.0
140.	0.0	0.0	0.0
150.	0.0	0.0	0.0
160.	0.0	0.0	0.0
170.	0.0	0.0	0.0
180.	0.0	0.0	0.0
190.	0.0	0.0	0.0
200.	0.1	0.1	0.1
210.	0.0	0.1	0.1
220.	0.0	0.0	0.0
230.	0.0	0.0	0.0
240.	0.0	0.0	0.0
250.	0.0	0.0	0.0
260.	0.0	0.0	0.0
270.	0.0	0.0	0.0
280.	0.0	0.0	0.0
290.	0.0	0.0	0.0
300.	0.0	0.0	0.0
310.	0.0	0.0	0.0
320.	0.0	0.0	0.0
330.	0.0	0.0	0.0
340.	0.0	0.0	0.0
350.	0.1	0.0	0.0
MAX	0.1	0.1	0.1
DEGR.	0	50	200

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC8 .

DATE : 09/20/ 0
TIME : 09:42:41

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	50	50	200	230	30	0	20	10	40	30	10	50	60	0	0	220	20	20	20	40
1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	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	0.0	0.0	0.0	0.0
3	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	0.1	0.1	0.1	0.1	0.1
4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	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	0.0	0.0	0.0	0.0
7	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	0.0	0.0	0.0	0.0
8	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	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 09:42:41

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21	REC22	REC23
	0	50	200
1	0.0	0.0	0.0
2	0.0	0.0	0.0
3	0.0	0.1	0.1
4	0.0	0.0	0.0
5	0.1	0.0	0.0
6	0.0	0.0	0.0
7	0.0	0.0	0.0
8	0.0	0.0	0.0

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/20/2018 at 9:45:07

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2025 BUILD PM PEAK HOUR

DATE : 09/20/ 0
TIME : 09:45:07

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323867.2	********	323941.6	********	111.	42.	AG	1530.	1.7	0.0	10.0		
2. FREE INDUSTRIAL W	323868.0	********	323895.2	********	34.	128.	AG	490.	1.7	0.0	10.0		
3. FREE INDUSTRIAL W	323895.2	********	323795.7	********	165.	217.	AG	490.	1.7	0.0	10.0		
4. FREE MILTON S	323865.9	********	323835.4	********	49.	219.	AG	1348.	1.7	0.0	10.0		
5. FREE MILTON S	323835.4	********	323808.5	********	60.	206.	AG	1348.	1.7	0.0	10.0		
6. QUEUE INDUSTRIAL WBL	323875.4	********	323896.2	********	26.	127.	AG	299.	3.5	0.0	3.0		
7. QUEUE INDUSTRIAL WBL	323896.2	********	323790.3	********	175.	217.	AG	299.	3.5	0.0	3.0		
8. QUEUE MILTON SBLT	323871.2	********	323875.0	********	6.	40.	AG	656.	3.5	0.0	3.0		

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2025 BUILD PM PEAK HOUR

DATE : 09/20/ 0
TIME : 09:45:07

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323863.5	********	1.8
2.	323896.8	********	1.8
3.	323930.0	********	1.8
4.	323945.3	********	1.8
5.	323912.1	********	1.8
6.	323879.9	********	1.8
7.	323839.6	********	1.8
8.	323817.2	********	1.8
9.	323804.0	********	1.8
10.	323826.4	********	1.8
11.	323867.6	********	1.8
12.	323854.3	********	1.8
13.	323869.7	********	1.8
14.	323894.9	********	1.8
15.	323882.7	********	1.8
16.	323899.2	********	1.8
17.	323868.9	********	1.8
18.	323838.6	********	1.8
19.	323808.3	********	1.8
20.	323791.7	********	1.8
21.	323822.0	********	1.8
22.	323852.3	********	1.8
23.	323882.6	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #5 RUN: 2025 BUILD PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
30.	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
40.	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
50.	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200.	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
230.	0.1	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
330.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1
DEGR.	50	50	200	230	30	0	0	0	20	30	10	50	50	0	0	220	20	20	20	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23
0.	0.0	0.0	0.0
10.	0.0	0.0	0.0
20.	0.0	0.0	0.0
30.	0.0	0.0	0.0
40.	0.1	0.0	0.0
50.	0.1	0.1	0.0
60.	0.0	0.0	0.0
70.	0.0	0.0	0.0
80.	0.0	0.0	0.0
90.	0.0	0.0	0.0
100.	0.0	0.0	0.0
110.	0.0	0.0	0.0
120.	0.0	0.0	0.0
130.	0.0	0.0	0.0
140.	0.0	0.0	0.0
150.	0.0	0.0	0.0
160.	0.0	0.0	0.0
170.	0.0	0.0	0.0
180.	0.0	0.0	0.0
190.	0.0	0.0	0.0
200.	0.1	0.1	0.1
210.	0.0	0.1	0.1
220.	0.0	0.0	0.0
230.	0.0	0.0	0.0
240.	0.0	0.0	0.0
250.	0.0	0.0	0.0
260.	0.0	0.0	0.0
270.	0.0	0.0	0.0
280.	0.0	0.0	0.0
290.	0.0	0.0	0.0
300.	0.0	0.0	0.0
310.	0.0	0.0	0.0
320.	0.0	0.0	0.0
330.	0.0	0.0	0.0
340.	0.0	0.0	0.0
350.	0.0	0.0	0.0
MAX	0.1	0.1	0.1
DEGR.	40	50	200

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC5 .

DATE : 09/20/ 0
TIME : 09:45:07

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	CO/LINK (PPM) ANGLE (DEGREES) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	50	50	200	230	30	0	0	0	20	30	10	50	50	0	0	220	20	20	20	40
1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	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	0.0	0.0	0.0	0.0
3	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	0.1	0.1	0.1	0.1	0.1
4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	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	0.0	0.0	0.0	0.0
7	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	0.0	0.0	0.0	0.0
8	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	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 09:45:07

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	CO/LINK (PPM) ANGLE (DEGREES) REC21	REC22	REC23
	40	50	200
1	0.0	0.0	0.0
2	0.0	0.0	0.0
3	0.1	0.1	0.1
4	0.0	0.0	0.0
5	0.0	0.0	0.0
6	0.0	0.0	0.0
7	0.0	0.0	0.0
8	0.0	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/20/2018 at 10:24:46

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2018 EXISING AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:24:46

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323810.6	********	323837.3	********	57.	28.	AG	1310.	2.4	0.0	10.0		
2. FREE MILTON N	323837.3	********	323868.4	********	48.	40.	AG	1310.	2.4	0.0	10.0		
3. FREE SPRAGUE S	323809.8	********	323726.6	********	204.	204.	AG	948.	2.4	0.0	10.0		
4. FREE SPRAGUE S	323726.6	********	323540.0	********	287.	220.	AG	948.	2.4	0.0	10.0		
5. FREE W MILTON W	323807.7	********	323355.5	********	500.	295.	AG	606.	2.4	0.0	10.0		
6. QUEUE SPRAGUE NBLT	323809.1	********	323766.6	********	102.	205.	AG	525.	5.3	0.0	3.0		
7. QUEUE W MILTON EBLR	323798.1	********	323764.5	********	37.	296.	AG	333.	5.3	0.0	3.0		
8. QUEUE MILTON SBT	323816.0	********	323833.0	********	40.	25.	AG	356.	5.3	0.0	3.0		
9. QUEUE MILTON SBR	323812.6	********	323819.0	********	13.	30.	AG	218.	5.3	0.0	3.0		

DATE : 09/20/ 0
TIME : 10:24:46

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323829.8	********	1.8
2.	323841.5	********	1.8
3.	323817.9	********	1.8
4.	323814.4	********	1.8
5.	323794.0	********	1.8
6.	323773.7	********	1.8
7.	323753.3	********	1.8
8.	323733.0	********	1.8
9.	323730.4	********	1.8
10.	323697.9	********	1.8
11.	323665.5	********	1.8
12.	323633.0	********	1.8
13.	323600.5	********	1.8
14.	323568.1	********	1.8
15.	323536.2	********	1.8
16.	323568.7	********	1.8
17.	323601.1	********	1.8
18.	323633.6	********	1.8
19.	323666.1	********	1.8
20.	323698.6	********	1.8
21.	323722.3	********	1.8
22.	323742.7	********	1.8
23.	323763.0	********	1.8
24.	323783.4	********	1.8
25.	323800.0	********	1.8
26.	323810.4	********	1.8
27.	323760.3	********	1.8
28.	323715.1	********	1.8
29.	323669.9	********	1.8
30.	323624.7	********	1.8
31.	323579.5	********	1.8
32.	323534.3	********	1.8
33.	323489.1	********	1.8
34.	323443.8	********	1.8
35.	323398.6	********	1.8
36.	323353.4	********	1.8
37.	323357.6	********	1.8
38.	323402.8	********	1.8
39.	323448.1	********	1.8
40.	323493.3	********	1.8
41.	323538.5	********	1.8
42.	323583.7	********	1.8
43.	323628.9	********	1.8
44.	323674.1	********	1.8
45.	323719.3	********	1.8

DATE : 09/20/ 0
TIME : 10:24:46

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
46.	323764.6	********	1.8
47.	323806.0	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0. *	0.0	0.1	0.3	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.2	0.3	0.2	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20. *	0.0	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30. *	0.1	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
40. *	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2
50. *	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1
60. *	0.2	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	0.2	0.2	0.2	0.2	0.2	0.1
70. *	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
80. *	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
90. *	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
100. *	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
110. *	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
120. *	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
130. *	0.2	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	0.1	0.1	0.1	0.1	0.1
140. *	0.2	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	0.1	0.1	0.1	0.1	0.1
150. *	0.2	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	0.1	0.1	0.1	0.1	0.1
160. *	0.2	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	0.1	0.1	0.1	0.1	0.1
170. *	0.2	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	0.1	0.1	0.1	0.1	0.1
180. *	0.3	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	0.1	0.1	0.1	0.1	0.1
190. *	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
200. *	0.4	0.1	0.2	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
210. *	0.1	0.3	0.2	0.3	0.5	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2
220. *	0.0	0.2	0.2	0.3	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2
230. *	0.0	0.3	0.2	0.1	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1
240. *	0.0	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.0	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.0	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.0	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300. *	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310. *	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX *	0.4	0.3	0.3	0.3	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DEGR. *	200	210	0	210	220	10	220	10	10	30	30	30	30	30	40	40	40	50	50	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)*	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
0. *	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.0	0.0	0.0	0.0	0.1	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
20. *	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
30. *	0.2	0.2	0.3	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
40. *	0.2	0.2	0.3	0.3	0.1	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
50. *	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
60. *	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
70. *	0.1	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
80. *	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
90. *	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
100. *	0.1	0.1	0.2	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
110. *	0.1	0.1	0.2	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
120. *	0.0	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130. *	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
140. *	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
150. *	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
160. *	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
170. *	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
180. *	0.1	0.1	0.1	0.2	0.2	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	0.1
190. *	0.1	0.2	0.2	0.3	0.2	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
200. *	0.1	0.1	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
210. *	0.2	0.2	0.1	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
220. *	0.2	0.0	0.0	0.0	0.0	0.3	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
230. *	0.1	0.0	0.0	0.0	0.0	0.2	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
240. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
250. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
260. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
270. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
280. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
290. *	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
300. *	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1
310. *	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
MAX *	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	30	30	30	40	160	210	100	0	0	0	0	20	0	0	20	60	110	110	110	110

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)*	REC41	REC42	REC43	REC44	REC45	REC46	REC47
0. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1

50.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
110.	*	0.1	0.1	0.1	0.1	0.0	0.0	0.1
120.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
140.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
150.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
160.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
170.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
180.	*	0.1	0.0	0.0	0.1	0.0	0.0	0.1
190.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2
200.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
210.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
220.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.1	0.0	0.0	0.1	0.0	0.0	0.0
240.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
250.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
260.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
270.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
280.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
290.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
300.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
310.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	*	0.1	0.1	0.1	0.1	0.1	0.1	0.2
DEGR.	*	110	110	110	110	120	120	190

THE HIGHEST CONCENTRATION OF 0.50 PPM OCCURRED AT RECEPTOR REC5 .

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2018 EXISING AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:24:46

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK #	*	200	210	0	210	220	10	220	10	10	30	30	30	30	30	40	40	40	50	50	40
1	*	0.2	0.2	0.2	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	0.0
2	*	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	0.0	0.0	0.0	0.0
3	*	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
5	*	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	0.0	0.0	0.0	0.0
6	*	0.0	0.0	0.0	0.1	0.3	0.2	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
7	*	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	0.0	0.0	0.0	0.0
8	*	0.1	0.0	0.1	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	0.0
9	*	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2018 EXISING AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:24:46

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

	*	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
LINK #	*	30	30	30	40	160	210	100	0	0	0	0	20	0	0	20	60	110	110	110	110
1	*	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	0.0	0.0	0.0	0.0
2	*	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	0.0	0.0	0.0	0.0
3	*	0.2	0.2	0.2	0.2	0.1	0.1	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
4	*	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	0.0	0.0	0.0	0.0
5	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6	*	0.0	0.0	0.1	0.1	0.1	0.2	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
7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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
8	*	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	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2018 EXISING AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:24:46

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

	*	REC41	REC42	REC43	REC44	REC45	REC46	REC47
LINK #	*	110	110	110	110	120	120	190
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/20/2018 at 10:26:01

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:26:01

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323810.6	********	323837.3	********	57.	28.	AG	1150.	2.4	0.0	10.0		
2. FREE MILTON N	323837.3	********	323868.4	********	48.	40.	AG	1150.	2.4	0.0	10.0		
3. FREE SPRAGUE S	323809.8	********	323726.6	********	204.	204.	AG	766.	2.4	0.0	10.0		
4. FREE SPRAGUE S	323726.6	********	323540.0	********	287.	220.	AG	766.	2.4	0.0	10.0		
5. FREE W MILTON W	323807.7	********	323355.5	********	500.	295.	AG	620.	2.4	0.0	10.0		
6. QUEUE SPRAGUE NBLT	323809.1	********	323793.3	********	38.	205.	AG	347.	5.3	0.0	3.0		
7. QUEUE W MILTON EBLR	323798.1	********	323758.3	********	44.	296.	AG	386.	5.3	0.0	3.0		
8. QUEUE MILTON SBT	323816.0	********	323831.0	********	36.	25.	AG	345.	5.3	0.0	3.0		
9. QUEUE MILTON SBR	323812.6	********	323817.9	********	10.	31.	AG	190.	5.3	0.0	3.0		

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:26:01

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323829.8	********	1.8
2.	323841.5	********	1.8
3.	323817.9	********	1.8
4.	323814.4	********	1.8
5.	323794.0	********	1.8
6.	323773.7	********	1.8
7.	323753.3	********	1.8
8.	323733.0	********	1.8
9.	323730.4	********	1.8
10.	323697.9	********	1.8
11.	323665.5	********	1.8
12.	323633.0	********	1.8
13.	323600.5	********	1.8
14.	323568.1	********	1.8
15.	323536.2	********	1.8
16.	323568.7	********	1.8
17.	323601.1	********	1.8
18.	323633.6	********	1.8
19.	323666.1	********	1.8
20.	323698.6	********	1.8
21.	323722.3	********	1.8
22.	323742.7	********	1.8
23.	323763.0	********	1.8
24.	323783.4	********	1.8
25.	323800.0	********	1.8
26.	323810.4	********	1.8
27.	323760.3	********	1.8
28.	323715.1	********	1.8
29.	323669.9	********	1.8
30.	323624.7	********	1.8
31.	323579.5	********	1.8
32.	323534.3	********	1.8
33.	323489.1	********	1.8
34.	323443.8	********	1.8
35.	323398.6	********	1.8
36.	323353.4	********	1.8
37.	323357.6	********	1.8
38.	323402.8	********	1.8
39.	323448.1	********	1.8
40.	323493.3	********	1.8
41.	323538.5	********	1.8
42.	323583.7	********	1.8
43.	323628.9	********	1.8
44.	323674.1	********	1.8
45.	323719.3	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2018 EXISING PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:26:01

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
46.	323764.6	********	1.8
47.	323806.0	********	1.8

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2018 EXISING PM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0. *	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20. *	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30. *	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
50. *	0.2	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	0.2	0.2	0.2	0.2	0.1	0.1
60. *	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
70. *	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
80. *	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
90. *	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
100. *	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
110. *	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
120. *	0.1	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	0.1	0.1	0.1	0.1	0.1
130. *	0.1	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	0.1	0.1	0.1	0.1	0.1
140. *	0.1	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	0.1	0.1	0.1	0.1	0.1
150. *	0.1	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	0.1	0.1	0.1	0.1	0.1
160. *	0.1	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	0.1	0.1	0.1	0.1	0.1
170. *	0.1	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	0.1	0.1	0.1	0.1	0.1
180. *	0.2	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	0.1	0.1	0.1	0.1	0.1
190. *	0.3	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	0.1	0.1	0.1	0.1	0.1
200. *	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
210. *	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2
220. *	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
230. *	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
240. *	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.0	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300. *	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310. *	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX *	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DEGR. *	190	20	10	210	0	0	0	0	230	230	0	0	0	30	50	50	50	50	210	210

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)*	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
0. *	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20. *	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
30. *	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
40. *	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50. *	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
60. *	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
70. *	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
80. *	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
90. *	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
100. *	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
110. *	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
120. *	0.0	0.1	0.1	0.1	0.1	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130. *	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
140. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
150. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
160. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
170. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
180. *	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
190. *	0.1	0.1	0.1	0.1	0.1	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
200. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
210. *	0.2	0.1	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
220. *	0.1	0.0	0.0	0.0	0.0	0.2	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
230. *	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
240. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
250. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
260. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
270. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
280. *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
290. *	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
300. *	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1
310. *	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
MAX *	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	30	20	20	20	300	310	100	0	0	0	0	0	0	0	0	60	110	110	110	110

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)*	REC41	REC42	REC43	REC44	REC45	REC46	REC47
0. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1

50.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
110.	*	0.1	0.1	0.1	0.1	0.0	0.0	0.1
120.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
140.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
150.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
160.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
170.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
180.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
190.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
210.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
220.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
240.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
250.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
260.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
270.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
280.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
290.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
300.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
310.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	*	110	110	110	110	120	120	40

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC3 .

DATE : 09/20/ 0
TIME : 10:26:01

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM) ANGLE (DEGREES)																			
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK #	*	190	20	10	210	0	0	0	0	230	230	0	0	0	30	50	50	50	50	210	210
1	*	0.2	0.0	0.2	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	0.0
2	*	0.0	0.2	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	0.0	0.0
3	*	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5	*	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	0.0	0.0	0.0	0.0
6	*	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0
8	*	0.1	0.0	0.1	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	0.0
9	*	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	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 10:26:01

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM) ANGLE (DEGREES)																			
	*	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
LINK #	*	30	20	20	20	300	310	100	0	0	0	0	0	0	0	0	60	110	110	110	110
1	*	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	0.0	0.0	0.0	0.0
2	*	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	0.0	0.0	0.0	0.0
3	*	0.2	0.1	0.1	0.1	0.0	0.1	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
4	*	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	0.0	0.0	0.0	0.0
5	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6	*	0.0	0.0	0.0	0.0	0.0	0.1	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
7	*	0.0	0.0	0.0	0.0	0.1	0.0	0.2	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
8	*	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	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 10:26:01

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM) ANGLE (DEGREES)						
	*	REC41	REC42	REC43	REC44	REC45	REC46	REC47
LINK #	*	110	110	110	110	120	120	40
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0

Run Began on 9/20/2018 at 10:27:16

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:27:16

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323810.6	********	323837.3	********	57.	28.	AG	1479.	1.7	0.0	10.0		
2. FREE MILTON N	323837.3	********	323868.4	********	48.	40.	AG	1479.	1.7	0.0	10.0		
3. FREE SPRAGUE S	323809.8	********	323726.6	********	204.	204.	AG	1023.	1.7	0.0	10.0		
4. FREE SPRAGUE S	323726.6	********	323540.0	********	287.	220.	AG	1023.	1.7	0.0	10.0		
5. FREE W MILTON W	323807.7	********	323355.5	********	500.	295.	AG	708.	1.7	0.0	10.0		
6. QUEUE SPRAGUE NBLT	323809.1	********	323744.8	********	155.	205.	AG	579.	3.5	0.0	3.0		
7. QUEUE W MILTON EBLR	323798.1	********	323742.5	********	62.	296.	AG	413.	3.5	0.0	3.0		
8. QUEUE MILTON SBT	323816.0	********	323837.1	********	50.	25.	AG	375.	3.5	0.0	3.0		
9. QUEUE MILTON SBR	323812.6	********	323820.9	********	17.	30.	AG	238.	3.5	0.0	3.0		

DATE : 09/20/ 0
TIME : 10:27:16

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323829.8	********	1.8
2.	323841.5	********	1.8
3.	323817.9	********	1.8
4.	323814.4	********	1.8
5.	323794.0	********	1.8
6.	323773.7	********	1.8
7.	323753.3	********	1.8
8.	323733.0	********	1.8
9.	323730.4	********	1.8
10.	323697.9	********	1.8
11.	323665.5	********	1.8
12.	323633.0	********	1.8
13.	323600.5	********	1.8
14.	323568.1	********	1.8
15.	323536.2	********	1.8
16.	323568.7	********	1.8
17.	323601.1	********	1.8
18.	323633.6	********	1.8
19.	323666.1	********	1.8
20.	323698.6	********	1.8
21.	323722.3	********	1.8
22.	323742.7	********	1.8
23.	323763.0	********	1.8
24.	323783.4	********	1.8
25.	323800.0	********	1.8
26.	323810.4	********	1.8
27.	323760.3	********	1.8
28.	323715.1	********	1.8
29.	323669.9	********	1.8
30.	323624.7	********	1.8
31.	323579.5	********	1.8
32.	323534.3	********	1.8
33.	323489.1	********	1.8
34.	323443.8	********	1.8
35.	323398.6	********	1.8
36.	323353.4	********	1.8
37.	323357.6	********	1.8
38.	323402.8	********	1.8
39.	323448.1	********	1.8
40.	323493.3	********	1.8
41.	323538.5	********	1.8
42.	323583.7	********	1.8
43.	323628.9	********	1.8
44.	323674.1	********	1.8
45.	323719.3	********	1.8

DATE : 09/20/ 0
TIME : 10:27:16

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
46.	323764.6	********	1.8
47.	323806.0	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.1	0.3	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40.	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
50.	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1
60.	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1
70.	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
80.	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
90.	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
100.	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
110.	0.1	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	0.1	0.1	0.1	0.1	0.1
120.	0.1	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	0.1	0.1	0.1	0.1	0.1
130.	0.1	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	0.1	0.1	0.1	0.1	0.1
140.	0.1	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	0.1	0.1	0.1	0.1	0.1
150.	0.1	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	0.1	0.1	0.1	0.1	0.1
160.	0.2	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	0.1	0.1	0.1	0.1	0.1
170.	0.2	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	0.1	0.1	0.1	0.1	0.1
180.	0.2	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	0.1	0.1	0.1	0.1	0.1
190.	0.3	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	0.1	0.1	0.1	0.1	0.1
200.	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
210.	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
220.	0.0	0.2	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
230.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
240.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270.	0.0	0.1	0.1	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280.	0.0	0.1	0.2	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.1	0.1	0.0	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	50	30	10	20	10	10	0	0	0	0	0	0	0	0	40	40	40	40	40	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
	CONCENTRATION (PPM)																			
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	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.0	0.1	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
20.	0.1	0.1	0.1	0.1	0.0	0.1	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
30.	0.1	0.2	0.1	0.1	0.1	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
40.	0.1	0.2	0.2	0.1	0.1	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
50.	0.1	0.2	0.2	0.2	0.1	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
60.	0.1	0.2	0.1	0.1	0.1	0.0	0.1	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
70.	0.1	0.1	0.1	0.1	0.0	0.0	0.1	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
80.	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
90.	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
100.	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
110.	0.0	0.1	0.1	0.1	0.0	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
120.	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130.	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
140.	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
150.	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
160.	0.1	0.1	0.1	0.1	0.1	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
170.	0.1	0.1	0.1	0.1	0.1	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
180.	0.1	0.1	0.2	0.2	0.1	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
190.	0.1	0.1	0.2	0.2	0.2	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
200.	0.1	0.1	0.1	0.1	0.1	0.1	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
210.	0.1	0.0	0.1	0.1	0.0	0.2	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
220.	0.1	0.0	0.0	0.0	0.0	0.2	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
230.	0.1	0.0	0.0	0.0	0.0	0.2	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
240.	0.0	0.0	0.0	0.0	0.0	0.2	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
250.	0.0	0.0	0.0	0.0	0.0	0.2	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
260.	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
270.	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
280.	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
290.	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
300.	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
310.	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
330.	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
340.	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	0.0	0.0	0.0	0.0	0.0
350.	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	0.0	0.0	0.0	0.0	0.0
MAX	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	20	30	40	50	190	210	110	80	80	80	80	80	80	80	80	80	110	110	110	110

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	REC41	REC42	REC43	REC44	REC45	REC46	REC47
	CONCENTRATION (PPM)						
0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.1

50.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
110.	*	0.1	0.0	0.0	0.0	0.0	0.0	0.1
120.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
140.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
150.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
190.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
210.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
270.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
280.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
290.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
300.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
310.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	*	110	120	120	120	120	120	40

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC3 .

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:27:16

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK #	*	50	30	10	20	10	10	0	0	0	0	0	0	0	0	40	40	40	40	40	40
1	*	0.1	0.0	0.2	0.2	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
2	*	0.1	0.2	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	0.0	0.0
3	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5	*	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	0.0	0.0	0.0	0.0
6	*	0.0	0.0	0.0	0.0	0.2	0.2	0.1	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
7	*	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	0.0	0.0	0.0	0.0
8	*	0.1	0.0	0.1	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	0.0
9	*	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:27:16

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

	*	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
LINK #	*	20	30	40	50	190	210	110	80	80	80	80	80	80	80	80	80	110	110	110	110
1	*	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	0.0	0.0	0.0	0.0
2	*	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	0.0	0.0	0.0	0.0
3	*	0.1	0.1	0.1	0.1	0.1	0.1	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
4	*	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	0.0	0.0	0.0	0.0
5	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6	*	0.0	0.1	0.1	0.1	0.1	0.1	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
7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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
8	*	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	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 NO BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:27:16

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

	*	REC41	REC42	REC43	REC44	REC45	REC46	REC47
LINK #	*	110	120	120	120	120	120	40
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0
(C) COPYRIGHT 1993-2000, TRINITY CONSULTANTS

Run Began on 9/20/2018 at 10:40:25

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 NO BUILD PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:40:25

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323810.6	********	323837.3	********	57.	28.	AG	1317.	1.7	0.0	10.0		
2. FREE MILTON N	323837.3	********	323868.4	********	48.	40.	AG	1317.	1.7	0.0	10.0		
3. FREE SPRAGUE S	323809.8	********	323726.6	********	204.	204.	AG	836.	1.7	0.0	10.0		
4. FREE SPRAGUE S	323726.6	********	323540.0	********	287.	220.	AG	836.	1.7	0.0	10.0		
5. FREE W MILTON W	323807.7	********	323355.5	********	500.	295.	AG	727.	1.7	0.0	10.0		
6. QUEUE SPRAGUE NBLT	323809.1	********	323788.2	********	50.	205.	AG	368.	3.5	0.0	3.0		
7. QUEUE W MILTON EBLR	323798.1	********	323743.2	********	61.	296.	AG	415.	3.5	0.0	3.0		
8. QUEUE MILTON SBT	323816.0	********	323839.1	********	55.	25.	AG	391.	3.5	0.0	3.0		
9. QUEUE MILTON SBR	323812.6	********	323822.4	********	20.	30.	AG	266.	3.5	0.0	3.0		

DATE : 09/20/ 0
TIME : 10:40:25

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323829.8	********	1.8
2.	323841.5	********	1.8
3.	323817.9	********	1.8
4.	323814.4	********	1.8
5.	323794.0	********	1.8
6.	323773.7	********	1.8
7.	323753.3	********	1.8
8.	323733.0	********	1.8
9.	323730.4	********	1.8
10.	323697.9	********	1.8
11.	323665.5	********	1.8
12.	323633.0	********	1.8
13.	323600.5	********	1.8
14.	323568.1	********	1.8
15.	323536.2	********	1.8
16.	323568.7	********	1.8
17.	323601.1	********	1.8
18.	323633.6	********	1.8
19.	323666.1	********	1.8
20.	323698.6	********	1.8
21.	323722.3	********	1.8
22.	323742.7	********	1.8
23.	323763.0	********	1.8
24.	323783.4	********	1.8
25.	323800.0	********	1.8
26.	323810.4	********	1.8
27.	323760.3	********	1.8
28.	323715.1	********	1.8
29.	323669.9	********	1.8
30.	323624.7	********	1.8
31.	323579.5	********	1.8
32.	323534.3	********	1.8
33.	323489.1	********	1.8
34.	323443.8	********	1.8
35.	323398.6	********	1.8
36.	323353.4	********	1.8
37.	323357.6	********	1.8
38.	323402.8	********	1.8
39.	323448.1	********	1.8
40.	323493.3	********	1.8
41.	323538.5	********	1.8
42.	323583.7	********	1.8
43.	323628.9	********	1.8
44.	323674.1	********	1.8
45.	323719.3	********	1.8

DATE : 09/20/ 0
TIME : 10:40:25

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
46.	323764.6	********	1.8
47.	323806.0	********	1.8

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30. *	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
50. *	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
60. *	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1
70. *	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
80. *	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
90. *	0.1	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	0.1	0.1	0.1	0.1	0.1
100. *	0.1	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	0.0	0.0	0.0
110. *	0.1	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	0.0	0.0	0.0
120. *	0.1	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	0.0	0.0	0.0
130. *	0.1	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	0.0	0.0	0.0
140. *	0.1	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	0.0	0.0	0.0
150. *	0.1	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	0.0	0.0	0.0
160. *	0.2	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	0.0	0.0	0.0
170. *	0.2	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	0.1	0.1	0.1	0.1	0.1
180. *	0.2	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	0.1	0.1	0.1	0.1	0.1
190. *	0.2	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	0.1	0.1	0.1	0.1	0.1
200. *	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
210. *	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
220. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
230. *	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.0	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.0	0.1	0.2	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	0.0
290. *	0.0	0.1	0.2	0.1	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
300. *	0.0	0.1	0.1	0.1	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
310. *	0.0	0.0	0.1	0.1	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
320. *	0.0	0.1	0.1	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	0.0
330. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX *	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	60	0	10	0	0	0	0	0	0	0	0	0	0	0	40	40	40	40	40	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR) *	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
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	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.0	0.0	0.0	0.0	0.1	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
20. *	0.1	0.1	0.1	0.0	0.0	0.1	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
30. *	0.1	0.1	0.1	0.1	0.1	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
40. *	0.1	0.1	0.1	0.1	0.1	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
50. *	0.1	0.1	0.1	0.1	0.1	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
60. *	0.1	0.1	0.1	0.1	0.1	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
70. *	0.1	0.1	0.1	0.1	0.0	0.0	0.1	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
80. *	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
90. *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
100. *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
110. *	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
120. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
140. *	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	0.1	0.1	0.1	0.1
150. *	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
160. *	0.0	0.1	0.1	0.1	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
170. *	0.1	0.1	0.1	0.1	0.1	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
180. *	0.1	0.1	0.1	0.1	0.1	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
190. *	0.1	0.1	0.1	0.1	0.1	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
200. *	0.1	0.1	0.1	0.1	0.1	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
210. *	0.1	0.0	0.0	0.1	0.0	0.2	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
220. *	0.1	0.0	0.0	0.0	0.0	0.2	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
230. *	0.0	0.0	0.0	0.0	0.0	0.2	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
240. *	0.0	0.0	0.0	0.0	0.0	0.2	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
250. *	0.0	0.0	0.0	0.0	0.0	0.1	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
260. *	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	0.0	0.1	0.1	0.1
270. *	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	0.0	0.1	0.1	0.1
280. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
290. *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
300. *	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
310. *	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350. *	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	0.0	0.0	0.0	0.0
MAX *	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	20	20	20	30	300	210	110	80	80	80	80	80	80	80	80	80	110	110	110	110

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR) *	REC41	REC42	REC43	REC44	REC45	REC46	REC47
0. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0

50. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1
90. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1
100. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1
110. *	0.1	0.1	0.1	0.1	0.0	0.0	0.1
120. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1
140. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1
150. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0
160. *	0.1	0.0	0.0	0.1	0.0	0.0	0.0
170. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190. *	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0
270. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0
280. *	0.1	0.1	0.1	0.1	0.1	0.1	0.1
290. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0
300. *	0.1	0.1	0.1	0.1	0.1	0.1	0.0
310. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350. *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX *	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR. *	110	110	110	110	120	120	50

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC1 .

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 NO BUILD PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:40:25

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK # *	60	0	10	0	0	0	0	0	0	0	0	0	0	0	40	40	40	40	40	40
1 *	0.1	0.0	0.1	0.1	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
2 *	0.1	0.1	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	0.0	0.0
3 *	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5 *	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	0.0	0.0	0.0	0.0
6 *	0.0	0.0	0.0	0.0	0.1	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
7 *	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	0.0	0.0	0.0	0.0
8 *	0.1	0.0	0.1	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	0.0
9 *	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 NO BUILD PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:40:25

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES) *	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
LINK # *	20	20	20	30	300	210	110	80	80	80	80	80	80	80	80	80	110	110	110	110
1 *	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	0.0	0.0	0.0	0.0
2 *	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	0.0	0.0	0.0	0.0
3 *	0.1	0.1	0.1	0.1	0.0	0.1	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
4 *	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	0.0	0.0	0.0	0.0
5 *	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6 *	0.0	0.0	0.0	0.0	0.0	0.1	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
7 *	0.0	0.0	0.0	0.0	0.1	0.0	0.2	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
8 *	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	0.0	0.0	0.0	0.0
9 *	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 NO BUILD PM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:40:25

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM) * ANGLE (DEGREES) *	REC41	REC42	REC43	REC44	REC45	REC46	REC47
LINK # *	110	110	110	110	120	120	50
1 *	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 *	0.1	0.1	0.1	0.1	0.1	0.1	0.0
6 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1 CAL3QHC - (DATED 95221)

CAL3QHC PC (32 BIT) VERSION 3.0.0
(C) COPYRIGHT 1993-2000, TRINITY CONSULTANTS

Run Began on 9/20/2018 at 10:18:49

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:18:49

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C	QUEUE (VEH)
1. FREE MILTON N	323810.6	********	323837.3	********	57.	28.	AG	1514.	1.7	0.0	10.0		
2. FREE MILTON N	323837.3	********	323868.4	********	48.	40.	AG	1514.	1.7	0.0	10.0		
3. FREE SPRAGUE S	323809.8	********	323726.6	********	204.	204.	AG	657.	1.7	0.0	10.0		
4. FREE SPRAGUE S	323726.6	********	323540.0	********	287.	220.	AG	657.	1.7	0.0	10.0		
5. FREE W MILTON W	323807.7	********	323355.5	********	500.	295.	AG	718.	1.7	0.0	10.0		
6. QUEUE SPRAGUE NBLT	323809.1	********	323740.6	********	164.	205.	AG	588.	3.5	0.0	3.0		
7. QUEUE W MILTON EBLR	323798.1	********	323740.5	********	64.	296.	AG	417.	3.5	0.0	3.0		
8. QUEUE MILTON SBT	323816.0	********	323839.7	********	57.	25.	AG	391.	3.5	0.0	3.0		
9. QUEUE MILTON SBR	323812.6	********	323821.3	********	17.	30.	AG	244.	10.0	0.0	3.0		

PAGE 2

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:18:49

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1.	323829.8	********	1.8
2.	323841.5	********	1.8
3.	323817.9	********	1.8
4.	323814.4	********	1.8
5.	323794.0	********	1.8
6.	323773.7	********	1.8
7.	323753.3	********	1.8
8.	323733.0	********	1.8
9.	323730.4	********	1.8
10.	323697.9	********	1.8
11.	323665.5	********	1.8
12.	323633.0	********	1.8
13.	323600.5	********	1.8
14.	323568.1	********	1.8
15.	323536.2	********	1.8
16.	323568.7	********	1.8
17.	323601.1	********	1.8
18.	323633.6	********	1.8
19.	323666.1	********	1.8
20.	323698.6	********	1.8
21.	323722.3	********	1.8
22.	323742.7	********	1.8
23.	323763.0	********	1.8
24.	323783.4	********	1.8
25.	323800.0	********	1.8
26.	323810.4	********	1.8
27.	323760.3	********	1.8
28.	323715.1	********	1.8
29.	323669.9	********	1.8
30.	323624.7	********	1.8
31.	323579.5	********	1.8
32.	323534.3	********	1.8
33.	323489.1	********	1.8
34.	323443.8	********	1.8
35.	323398.6	********	1.8
36.	323353.4	********	1.8
37.	323357.6	********	1.8
38.	323402.8	********	1.8
39.	323448.1	********	1.8
40.	323493.3	********	1.8
41.	323538.5	********	1.8
42.	323583.7	********	1.8
43.	323628.9	********	1.8
44.	323674.1	********	1.8
45.	323719.3	********	1.8

PAGE 3

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:18:49

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
46.	323764.6	********	1.8
47.	323806.0	********	1.8

PAGE 4

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 BUILD AM PEAK HOUR

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
		CONCENTRATION (PPM)																			
0.	*	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	0.0	0.1	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	0.0	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
50.	*	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1
60.	*	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1
70.	*	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1
80.	*	0.1	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	0.0	0.0	0.0
90.	*	0.1	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	0.0	0.0	0.0
100.	*	0.1	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	0.0	0.0	0.0
110.	*	0.1	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	0.0	0.0	0.0
120.	*	0.1	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	0.0	0.0	0.0
130.	*	0.1	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	0.0	0.0	0.0
140.	*	0.1	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	0.0	0.0	0.0
150.	*	0.1	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	0.0	0.0	0.0
160.	*	0.2	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	0.0	0.0	0.0
170.	*	0.2	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	0.0	0.0	0.0
180.	*	0.2	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	0.0	0.0	0.0
190.	*	0.3	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	0.1	0.1	0.1	0.1	0.1
200.	*	0.3	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
210.	*	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
220.	*	0.0	0.2	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1
230.	*	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.0	0.1	0.1	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	0.0	0.1	0.1	0.0	0.1	0.1	0.1	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
270.	*	0.0	0.1	0.1	0.0	0.1	0.1	0.1	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
280.	*	0.0	0.1	0.2	0.0	0.1	0.1	0.1	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
290.	*	0.0	0.1	0.2	0.1	0.1	0.1	0.1	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
300.	*	0.0	0.1	0.1	0.1	0.1	0.1	0.1	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
310.	*	0.0	0.1	0.1	0.0	0.1	0.1	0.1	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
320.	*	0.0	0.1	0.1	0.1	0.1	0.1	0.1	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
330.	*	0.0	0.1	0.1	0.1	0.1	0.1	0.1	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
340.	*	0.0	0.1	0.1	0.1	0.1	0.1	0.1	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
350.	*	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	*	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	*	50	30	10	10	10	10	0	20	0	10	10	10	10	10	40	40	40	40	40	50

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	*	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
		CONCENTRATION (PPM)																			
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	0.0	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0	0.0	0.1	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
20.	*	0.1	0.1	0.0	0.0	0.0	0.1	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
30.	*	0.2	0.2	0.1	0.1	0.1	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
40.	*	0.1	0.2	0.2	0.1	0.1	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
50.	*	0.1	0.2	0.2	0.2	0.1	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
60.	*	0.0	0.2	0.2	0.1	0.1	0.0	0.1	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
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
140.	*	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	0.1	0.1	0.1	0.1
150.	*	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	0.1	0.1	0.1	0.1
160.	*	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	0.0	0.0	0.0	0.0
170.	*	0.0	0.1	0.2	0.1	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
180.	*	0.0	0.1	0.2	0.2	0.1	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
190.	*	0.1	0.1	0.2	0.2	0.2	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
200.	*	0.1	0.1	0.1	0.1	0.0	0.1	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
210.	*	0.1	0.0	0.0	0.0	0.0	0.2	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
220.	*	0.1	0.0	0.0	0.0	0.0	0.2	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
230.	*	0.0	0.0	0.0	0.0	0.0	0.2	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
240.	*	0.0	0.0	0.0	0.0	0.0	0.1	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
250.	*	0.0	0.0	0.0	0.0	0.0	0.1	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
260.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
270.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
280.	*	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	0.0	0.0	0.1	0.1	0.1
290.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
300.	*	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
310.	*	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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
350.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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
MAX	*	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	*	30	30	40	50	190	210	110	80	80	80	80	80	80	80	80	80	110	110	110	110

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	*	REC41	REC42	REC43	REC44	REC45	REC46	REC47
		CONCENTRATION (PPM)						
0.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1

50.	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.2
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.2
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.2
90.	0.0	0.0	0.0	0.0	0.0	0.0	0.1
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.1
110.	0.1	0.0	0.1	0.1	0.0	0.0	0.1
120.	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130.	0.1	0.1	0.1	0.1	0.1	0.1	0.1
140.	0.1	0.1	0.1	0.1	0.1	0.1	0.1
150.	0.1	0.1	0.1	0.1	0.1	0.1	0.1
160.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.1	0.1	0.1	0.1	0.1	0.1	0.0
270.	0.1	0.1	0.1	0.1	0.1	0.1	0.0
280.	0.1	0.1	0.1	0.1	0.1	0.1	0.0
290.	0.1	0.1	0.1	0.1	0.1	0.1	0.0
300.	0.1	0.1	0.1	0.1	0.1	0.1	0.0
310.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.1	0.1	0.1	0.1	0.1	0.1	0.2
DEGR.	110	120	110	110	120	120	60

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC3 .

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:18:49

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	50	30	10	10	10	10	0	20	0	10	10	10	10	10	40	40	40	40	40	50
1	0.1	0.0	0.2	0.2	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
2	0.1	0.2	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	0.0	0.0
3	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5	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	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	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	0.0	0.0	0.0	0.0
8	0.1	0.0	0.1	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	0.0
9	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:18:49

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
	30	30	40	50	190	210	110	80	80	80	80	80	80	80	80	80	110	110	110	110
1	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	0.0	0.0	0.0	0.0
2	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	0.0	0.0	0.0	0.0
3	0.1	0.1	0.1	0.1	0.1	0.1	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
4	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	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6	0.1	0.1	0.1	0.1	0.1	0.1	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
7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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
8	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	0.0	0.0	0.0	0.0
9	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	0.0	0.0	0.0	0.0

JOB: 1717-1725 HYDE PARK AVE - INTER #6 RUN: 2025 BUILD AM PEAK HOUR

DATE : 09/20/ 0
TIME : 10:18:49

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

LINK #	REC41	REC42	REC43	REC44	REC45	REC46	REC47
	110	120	110	110	120	120	60
1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.1	0.1	0.1	0.1	0.1	0.1	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.1

```
1                    CAL3QHC - (DATED 95221)

            CAL3QHC  PC (32 BIT) VERSION 3.0.0
           (C) COPYRIGHT 1993-2000, TRINITY CONSULTANTS

 Run Began on  9/20/2018 at 10:20:05

      JOB: 1717-1725 HYDE PARK AVE - INTER #6                  RUN: 2025 BUILD PM PEAK HOUR

      DATE : 09/20/   0
      TIME : 10:20:05

         The MODE flag has been set to C for calculating CO averages.

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =   0.0 CM/S       VD =   0.0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES     MIXH =  1000. M   AMB =  0.0 PPM

       LINK VARIABLES
       --------------
         LINK DESCRIPTION     *          LINK COORDINATES (M)           *    LENGTH  BRG TYPE  VPH    EF      H  W    V/C QUEUE
                              *  X1        Y1        X2        Y2       *     (M)   (DEG)           (G/MI)   (M) (M)        (VEH)
      ------------------------*----------------------------------------*-----------------------------------------------------------
       1. FREE MILTON N       * 323810.6  ******** 323837.3  ******** *     57.    28. AG   1358.   1.7    0.0 10.0
       2. FREE MILTON N       * 323837.3  ******** 323868.4  ******** *     48.    40. AG   1358.   1.7    0.0 10.0
       3. FREE SPRAGUE S      * 323809.8  ******** 323726.6  ******** *    204.   204. AG    865.   1.7    0.0 10.0
       4. FREE SPRAGUE S      * 323726.6  ******** 323540.0  ******** *    287.   220. AG    865.   1.7    0.0 10.0
       5. FREE W MILTON W     * 323807.7  ******** 323355.5  ******** *    500.   295. AG    739.   1.7    0.0 10.0
       6. QUEUE SPRAGUE NBLT  * 323809.1  ******** 323785.0  ******** *     58.   205. AG    384.   3.5    0.0  3.0
       7. QUEUE W MILTON EBLR * 323798.1  ******** 323738.4  ******** *     66.   296. AG    422.   3.5    0.0  3.0
       8. QUEUE MILTON SBT    * 323816.0  ******** 323842.3  ******** *     63.    25. AG    404.   3.5    0.0  3.0
       9. QUEUE MILTON SBR    * 323812.6  ******** 323822.8  ******** *     20.    30. AG    271.   3.5    0.0  3.0
                                                                                                                 PAGE  2
      JOB: 1717-1725 HYDE PARK AVE - INTER #6                  RUN: 2025 BUILD PM PEAK HOUR

      DATE : 09/20/   0
      TIME : 10:20:05

       ADDITIONAL QUEUE LINK PARAMETERS
       --------------------------------
         LINK DESCRIPTION     *   CYCLE    RED    CLEARANCE  APPROACH  SATURATION   IDLE   SIGNAL   ARRIVAL
                              *   LENGTH   TIME   LOST TIME    VOL     FLOW RATE   EM FAC   TYPE     RATE
                              *    (SEC)   (SEC)    (SEC)      (VPH)     (VPH)    (gm/hr)
      ------------------------*----------------------------------------------------------------------------

       RECEPTOR LOCATIONS
       ------------------
                              *          COORDINATES (M)          *
         RECEPTOR             *      X           Y          Z     *
     -------------------------*-----------------------------------*
      1.                      *    323829.8  ********       1.8   *
      2.                      *    323841.5  ********       1.8   *
      3.                      *    323817.9  ********       1.8   *
      4.                      *    323814.4  ********       1.8   *
      5.                      *    323794.0  ********       1.8   *
      6.                      *    323773.7  ********       1.8   *
      7.                      *    323753.3  ********       1.8   *
      8.                      *    323733.0  ********       1.8   *
      9.                      *    323730.4  ********       1.8   *
     10.                      *    323697.9  ********       1.8   *
     11.                      *    323665.5  ********       1.8   *
     12.                      *    323633.0  ********       1.8   *
     13.                      *    323600.5  ********       1.8   *
     14.                      *    323568.1  ********       1.8   *
     15.                      *    323536.2  ********       1.8   *
     16.                      *    323568.7  ********       1.8   *
     17.                      *    323601.1  ********       1.8   *
     18.                      *    323633.6  ********       1.8   *
     19.                      *    323666.1  ********       1.8   *
     20.                      *    323698.6  ********       1.8   *
     21.                      *    323722.3  ********       1.8   *
     22.                      *    323742.7  ********       1.8   *
     23.                      *    323763.0  ********       1.8   *
     24.                      *    323783.4  ********       1.8   *
     25.                      *    323800.0  ********       1.8   *
     26.                      *    323810.4  ********       1.8   *
     27.                      *    323760.3  ********       1.8   *
     28.                      *    323715.1  ********       1.8   *
     29.                      *    323669.9  ********       1.8   *
     30.                      *    323624.7  ********       1.8   *
     31.                      *    323579.5  ********       1.8   *
     32.                      *    323534.3  ********       1.8   *
     33.                      *    323489.1  ********       1.8   *
     34.                      *    323443.8  ********       1.8   *
     35.                      *    323398.6  ********       1.8   *
     36.                      *    323353.4  ********       1.8   *
     37.                      *    323357.6  ********       1.8   *
     38.                      *    323402.8  ********       1.8   *
     39.                      *    323448.1  ********       1.8   *
     40.                      *    323493.3  ********       1.8   *
     41.                      *    323538.5  ********       1.8   *
     42.                      *    323583.7  ********       1.8   *
     43.                      *    323628.9  ********       1.8   *
     44.                      *    323674.1  ********       1.8   *
     45.                      *    323719.3  ********       1.8   *
                                                                                                                 PAGE  3
      JOB: 1717-1725 HYDE PARK AVE - INTER #6                  RUN: 2025 BUILD PM PEAK HOUR

      DATE : 09/20/   0
      TIME : 10:20:05


       RECEPTOR LOCATIONS
       ------------------
                              *          COORDINATES (M)          *
         RECEPTOR             *      X           Y          Z     *
     -------------------------*-----------------------------------*
     46.                      *    323764.6  ********       1.8   *
     47.                      *    323806.0  ********       1.8   *
                                                                                                                 PAGE  4
      JOB: 1717-1725 HYDE PARK AVE - INTER #6                  RUN: 2025 BUILD PM PEAK HOUR

       MODEL RESULTS
       -------------

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE:   0.-350.
```

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40.	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
50.	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
60.	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1
70.	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
80.	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1
90.	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1
100.	0.1	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	0.1	0.1	0.1	0.1	0.1
110.	0.1	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	0.0	0.0	0.0
120.	0.1	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	0.0	0.0	0.0
130.	0.1	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	0.1	0.1	0.1	0.1	0.1
140.	0.1	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	0.0	0.0	0.0
150.	0.2	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	0.0	0.0	0.0
160.	0.2	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	0.1	0.1	0.1	0.1	0.1
170.	0.2	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	0.1	0.1	0.1	0.1	0.1
180.	0.2	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	0.1	0.1	0.1	0.1	0.1
190.	0.2	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	0.1	0.1	0.1	0.1	0.1
200.	0.2	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
210.	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
220.	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
230.	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240.	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
250.	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
260.	0.0	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
270.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
280.	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.1	0.1	0.1	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
310.	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.1	0.1	0.0	0.1	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
330.	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	60	0	10	210	0	0	0	0	0	0	0	0	0	0	40	40	40	40	40	40

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36	REC37	REC38	REC39	REC40
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	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.0	0.1	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
20.	0.1	0.1	0.1	0.0	0.0	0.1	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
30.	0.1	0.1	0.1	0.1	0.1	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
40.	0.1	0.1	0.1	0.1	0.1	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
50.	0.1	0.1	0.1	0.1	0.1	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
60.	0.1	0.1	0.1	0.1	0.1	0.0	0.1	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
70.	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
80.	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
90.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
110.	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
120.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
140.	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	0.1	0.1	0.1	0.1
150.	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
160.	0.0	0.1	0.1	0.1	0.1	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	0.1	0.1
170.	0.1	0.1	0.1	0.1	0.1	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
180.	0.1	0.1	0.1	0.1	0.1	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
190.	0.1	0.1	0.1	0.1	0.1	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
200.	0.1	0.1	0.1	0.1	0.1	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
210.	0.1	0.0	0.0	0.1	0.0	0.2	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
220.	0.1	0.0	0.0	0.0	0.0	0.2	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
230.	0.0	0.0	0.0	0.0	0.0	0.2	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
240.	0.0	0.0	0.0	0.0	0.0	0.2	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
250.	0.0	0.0	0.0	0.0	0.0	0.2	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	0.1
260.	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	0.0	0.1	0.1	0.1
270.	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	0.0	0.1	0.1	0.1
280.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
290.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
300.	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
310.	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
330.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
350.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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
MAX	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	20	20	20	30	300	210	110	70	70	70	70	70	70	70	70	80	110	110	110	110

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	REC41	REC42	REC43	REC44	REC45	REC46	REC47
0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0

50.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
60.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
90.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
100.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
110.	*	0.1	0.1	0.1	0.1	0.0	0.0	0.1
120.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
130.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
140.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
150.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
160.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
170.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
200.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
210.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	0.1	0.0	0.1	0.1	0.0	0.1	0.0
260.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
270.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
280.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
290.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
300.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
310.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGR.	*	110	110	110	110	120	120	50

THE HIGHEST CONCENTRATION OF 0.30 PPM OCCURRED AT RECEPTOR REC1 .

DATE : 09/20/ 0
TIME : 10:20:05

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

LINK #	*	REC1 60	REC2 0	REC3 10	REC4 210	REC5 0	REC6 0	REC7 0	REC8 0	REC9 0	REC10 0	REC11 0	REC12 0	REC13 0	REC14 0	REC15 40	REC16 40	REC17 40	REC18 40	REC19 40	REC20 40
1	*	0.1	0.0	0.1	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	0.0
2	*	0.1	0.1	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	0.0	0.0
3	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5	*	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	0.0	0.0	0.0	0.0
6	*	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0
8	*	0.1	0.0	0.1	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	0.0
9	*	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	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 10:20:05

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

LINK #	*	REC21 20	REC22 20	REC23 20	REC24 30	REC25 300	REC26 210	REC27 110	REC28 70	REC29 70	REC30 70	REC31 70	REC32 70	REC33 70	REC34 70	REC35 70	REC36 80	REC37 110	REC38 110	REC39 110	REC40 110
1	*	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	0.0	0.0	0.0	0.0
2	*	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	0.0	0.0	0.0	0.0
3	*	0.1	0.1	0.1	0.1	0.0	0.1	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
4	*	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	0.0	0.0	0.0	0.0
5	*	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6	*	0.0	0.0	0.0	0.0	0.0	0.1	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
7	*	0.0	0.0	0.0	0.0	0.1	0.0	0.2	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
8	*	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	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0

DATE : 09/20/ 0
TIME : 10:20:05

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)

LINK #	*	REC41 110	REC42 110	REC43 110	REC44 110	REC45 120	REC46 120	REC47 50
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0

APPENDIX C – NOISE APPENDIX

APPENDIX C
NOISE

1717-1725 HYDE PARK AVENUE
PROJECT NOTIFICATION FORM

Page Contents

FIGURE 1
Modeling Receptor Locations
1717-1725 Hyde Park Avenue

TECH environmental

Cadna Noise Modeling Results

City of Boston Noise Ordinance Analysis

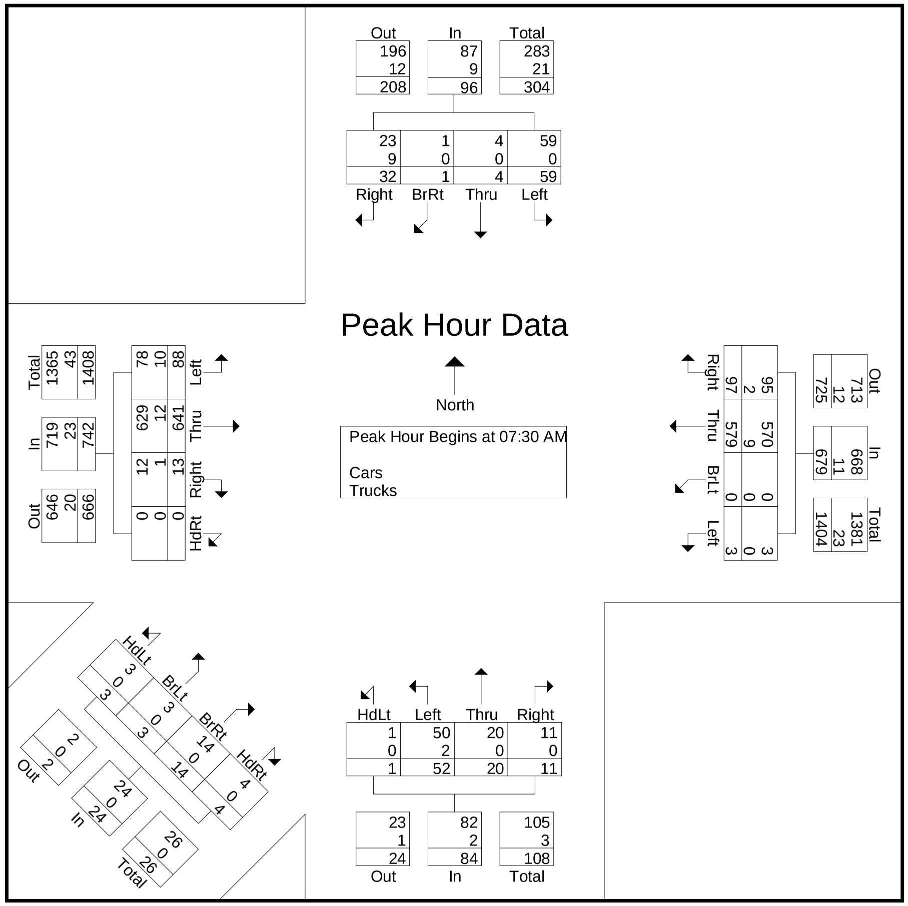
	31.5	63	125	250	500	1000	2000	4000	8000	A-Wtd	
Local Nighttime Limit	68	67	61	52	46	40	33	28	26	**50**	
NIGHTTIME RESULTS & CITY OF BOSTON ANALYSIS	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**A-Wtd**	**Complies Night?**
173 Neponset Valley	51	49	48	41	37	35	31	19	-2	40	**YES**
55 Milton St	45	44	44	38	33	32	27	13	-17	37	**YES**
20-22 Wolcott St	46	45	46	39	34	33	28	15	-11	38	**YES**
1080 Truman Pkwy	40	39	40	33	28	26	22	3	-45	32	**YES**
Max Impact	***52.4***	***51.1***	***49.8***	***42.4***	***37.1***	***35.0***	***30.6***	***19.2***	***0.4***		
Max Exceedance	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***		

MassDEP Noise Policy Analysis

NIGHTTIME RESULTS & MASSDEP ANALYSIS (< +10 dBA)	**Impact Level (dBA)**	**Background Level (dBA)**	***Total Level (dBA)***	***Increase (dBA)***	**Complies Night?**
173 Neponset Valley	40.2	44.0	45.5	**+1.5**	**YES**
55 Milton St	36.6	44.0	44.7	**+0.7**	**YES**
20-22 Wolcott St	37.7	44.0	44.9	**+0.9**	**YES**
1080 Truman Pkwy	31.6	41.2	41.6	**+0.4**	**YES**

APPENDIX D – TRANSPORTATION APPENDIX

Accurate Counts
978-664-2565



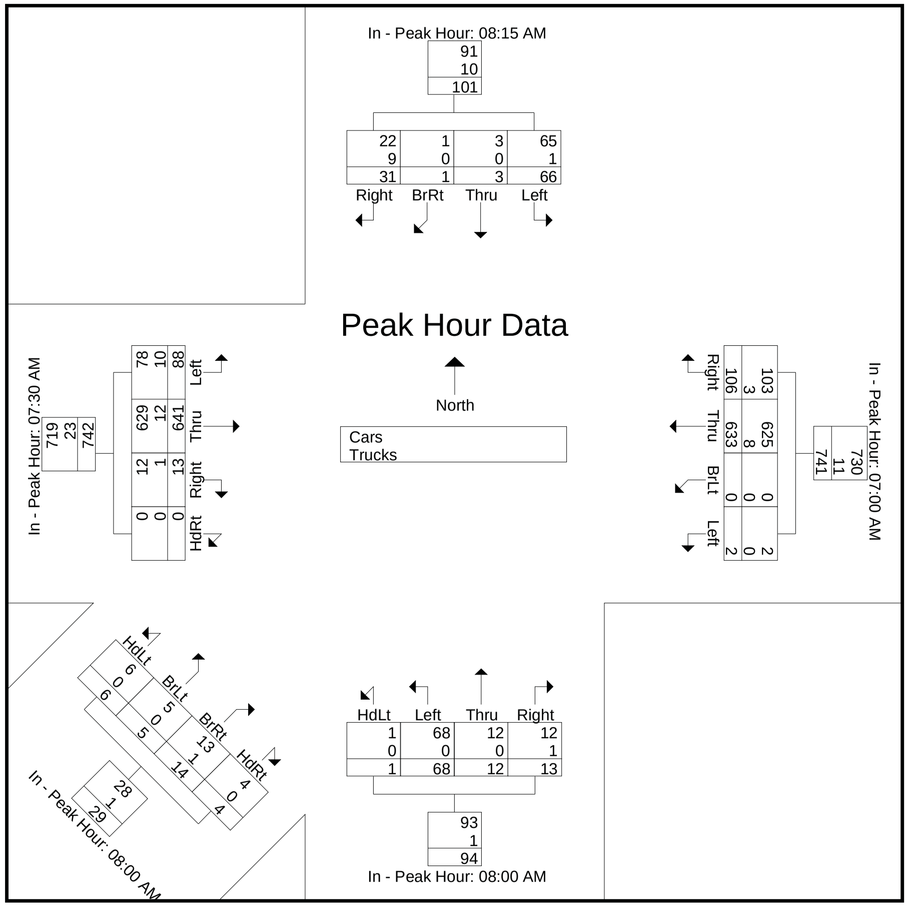
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:15 AM					07:00 AM					08:00 AM					08:00 AM					07:30 AM				
+0 mins.	18	**2**	**1**	9	30	**1**	0	159	**37**	197	**1**	12	2	1	16	1	0	**4**	**4**	**9**	**27**	152	2	0	181
+15 mins.	11	0	0	3	14	0	0	**165**	18	183	0	20	**6**	**6**	**32**	1	**3**	4	0	8	18	157	3	0	178
+30 mins.	**23**	0	0	**11**	**34**	0	0	147	14	161	0	**24**	1	4	29	**3**	1	3	0	7	20	161	**4**	0	185
+45 mins.	14	1	0	8	23	1	0	162	37	**200**	0	12	3	2	17	1	1	3	0	5	23	**171**	4	0	**198**
Total Volume	66	3	1	31	101	2	0	633	106	741	1	68	12	13	94	6	5	14	4	29	88	641	13	0	742
% App. Total	65.3	3	1	30.7		0.3	0	85.4	14.3		1.1	72.3	12.8	13.8		20.7	17.2	48.3	13.8		11.9	86.4	1.8	0	

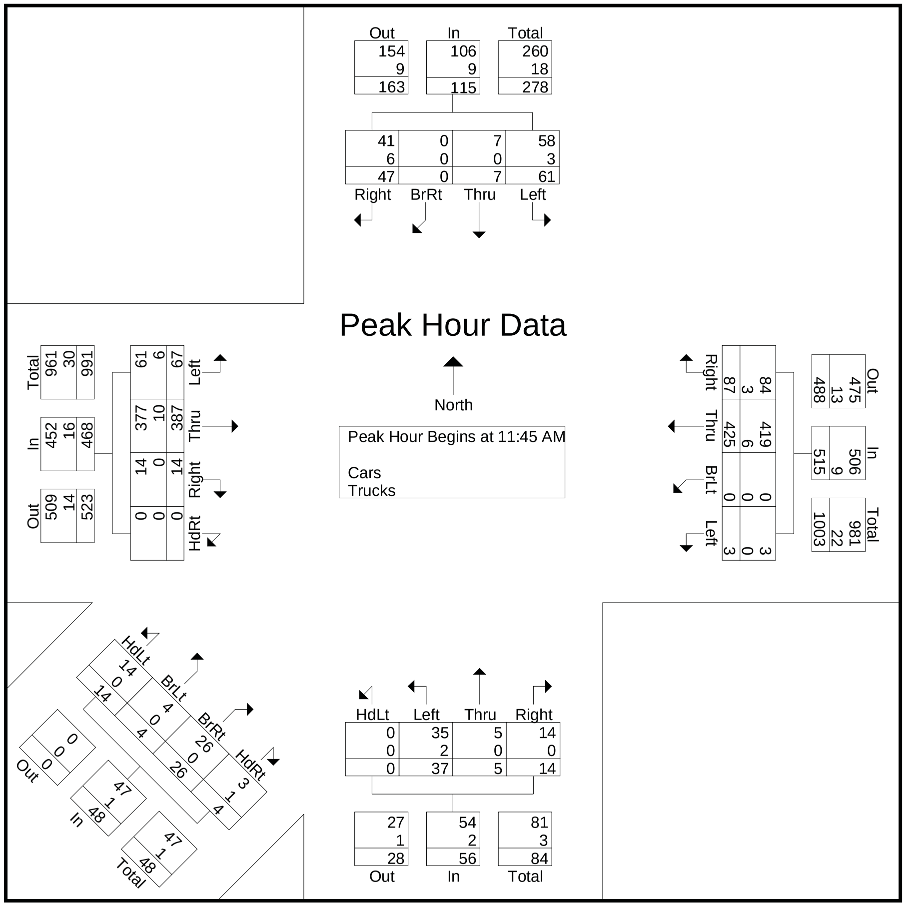
Accurate Counts

978-664-2565



Accurate Counts

978-664-2565



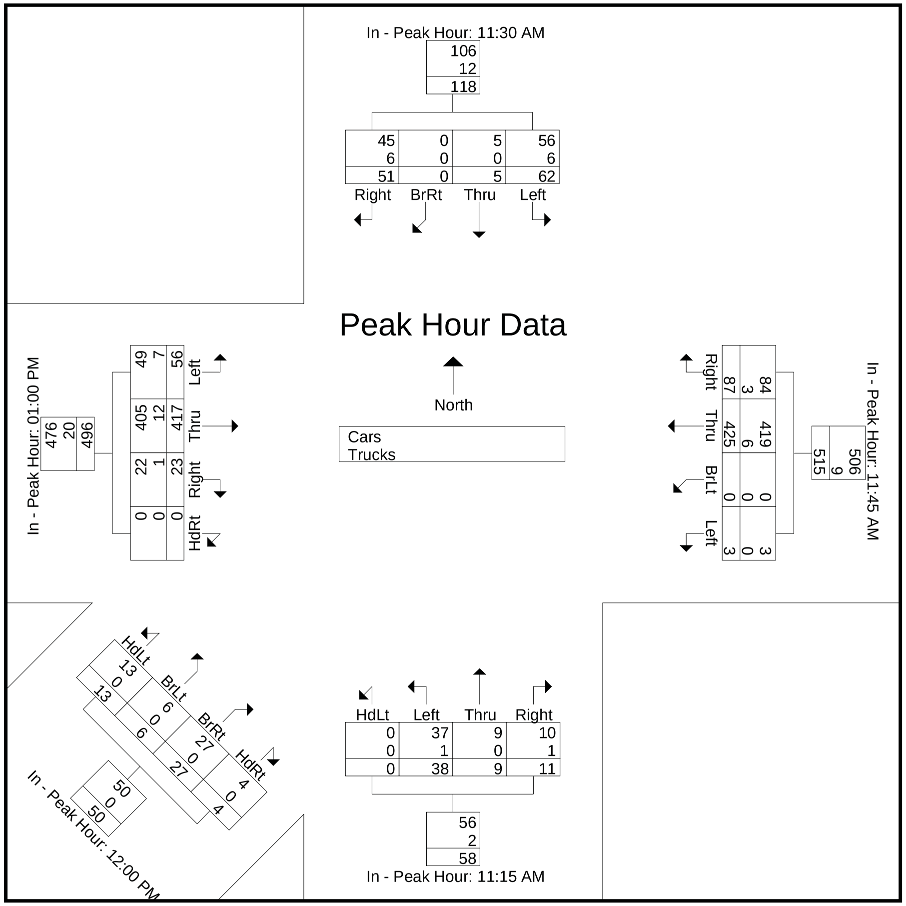
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

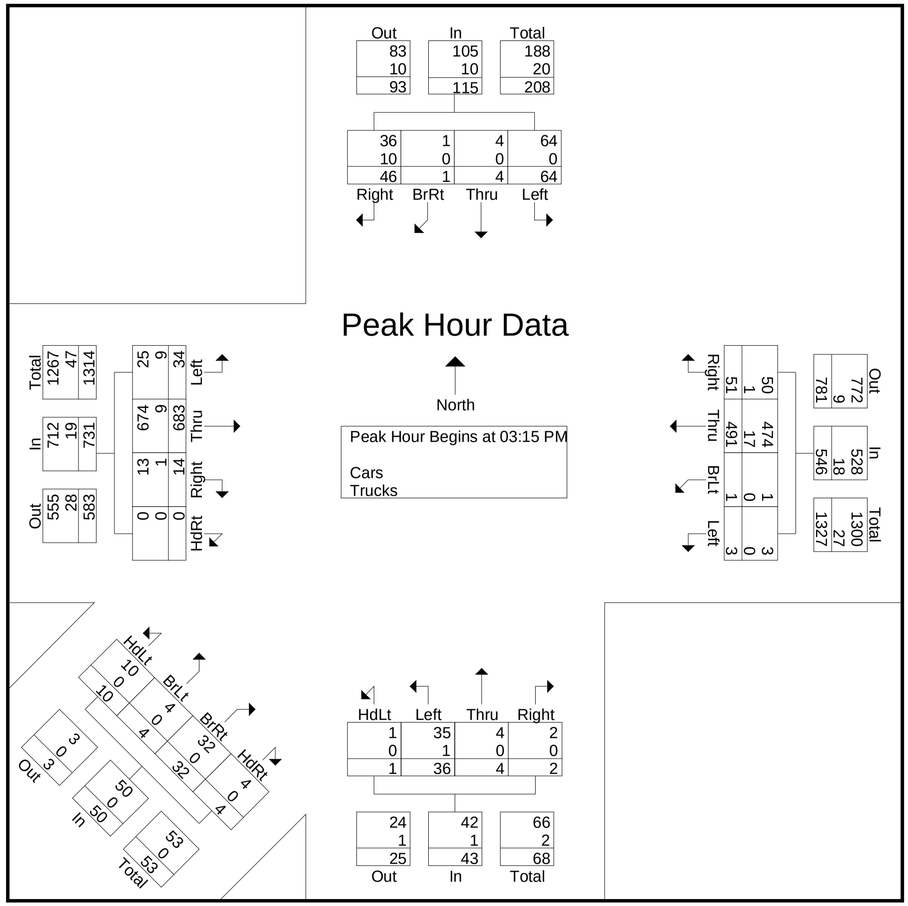
Peak Hour for Each Approach Begins at:

	11:30 AM					11:45 AM					11:15 AM					12:00 PM					01:00 PM				
+0 mins.	**21**	1	0	**16**	**38**	**1**	0	100	20	121	0	**11**	**4**	2	**17**	3	0	4	1	8	11	104	3	0	118
+15 mins.	15	**2**	0	12	29	1	0	88	16	105	0	11	3	2	16	**5**	1	8	0	14	**21**	**118**	5	0	**144**
+30 mins.	16	1	0	12	29	1	0	118	24	143	0	10	0	2	12	2	2	**9**	**2**	**15**	13	77	**11**	0	101
+45 mins.	10	1	0	11	22	0	0	**119**	**27**	**146**	0	6	2	**5**	13	3	**3**	6	1	13	11	118	4	0	133
Total Volume	62	5	0	51	118	3	0	425	87	515	0	38	9	11	58	13	6	27	4	50	56	417	23	0	496
% App. Total	52.5	4.2	0	43.2		0.6	0	82.5	16.9		0	65.5	15.5	19		26	12	54	8		11.3	84.1	4.6	0	

Accurate Counts

978-664-2565





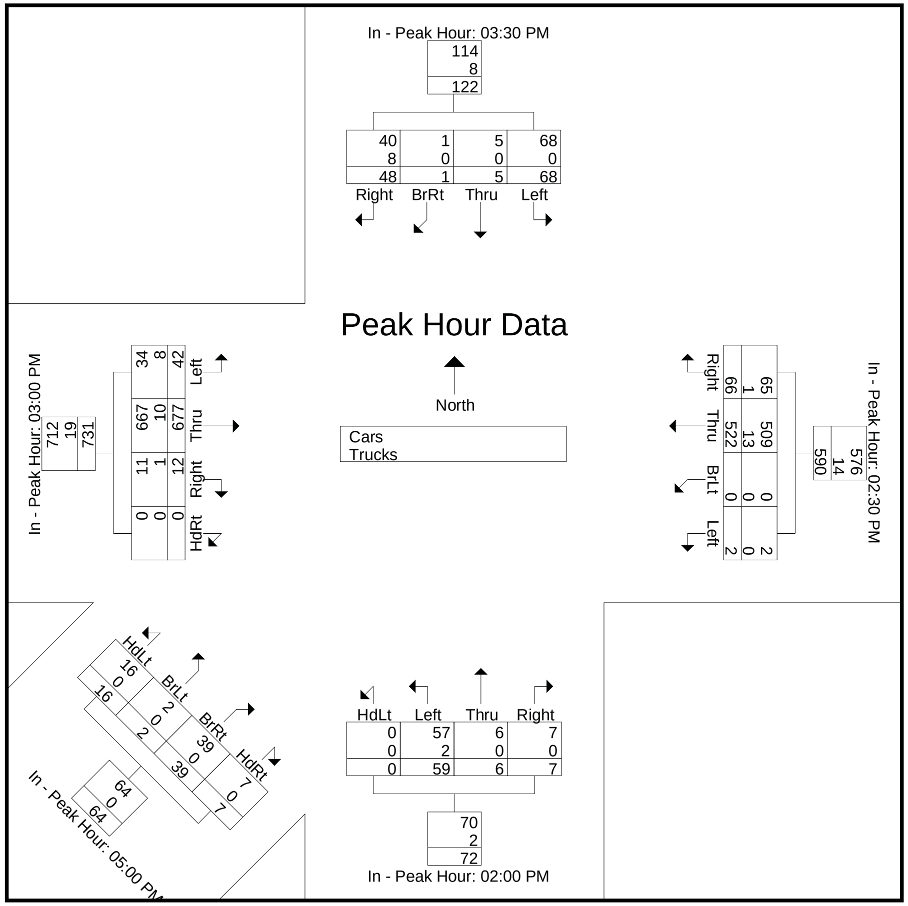
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

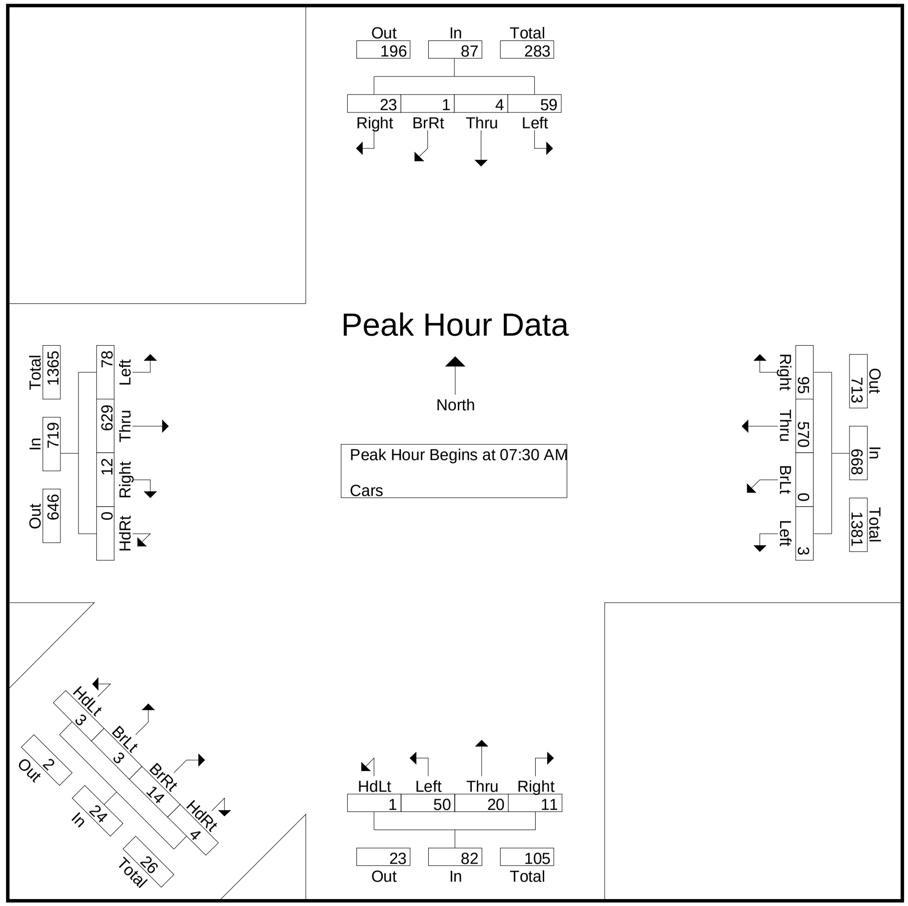
	03:30 PM					02:30 PM					02:00 PM					05:00 PM					03:00 PM				
+0 mins.	10	**2**	0	**12**	24	**1**	0	**146**	**25**	**172**	0	14	**2**	1	17	3	**1**	**12**	1	**17**	**13**	163	2	0	178
+15 mins.	20	1	0	12	33	0	0	124	12	136	0	**20**	2	**4**	**26**	4	0	9	1	14	12	155	2	0	169
+30 mins.	17	0	**1**	12	30	1	0	114	18	133	0	16	1	2	19	**5**	1	6	**4**	16	8	179	3	0	190
+45 mins.	**21**	2	0	12	**35**	0	0	138	11	149	0	9	1	0	10	4	0	12	1	17	9	**180**	**5**	0	**194**
Total Volume	68	5	1	48	122	2	0	522	66	590	0	59	6	7	72	16	2	39	7	64	42	677	12	0	731
% App. Total	55.7	4.1	0.8	39.3		0.3	0	88.5	11.2		0	81.9	8.3	9.7		25	3.1	60.9	10.9		5.7	92.6	1.6	0	

Accurate Counts
978-664-2565

Peak Hour Data



Accurate Counts
978-664-2565

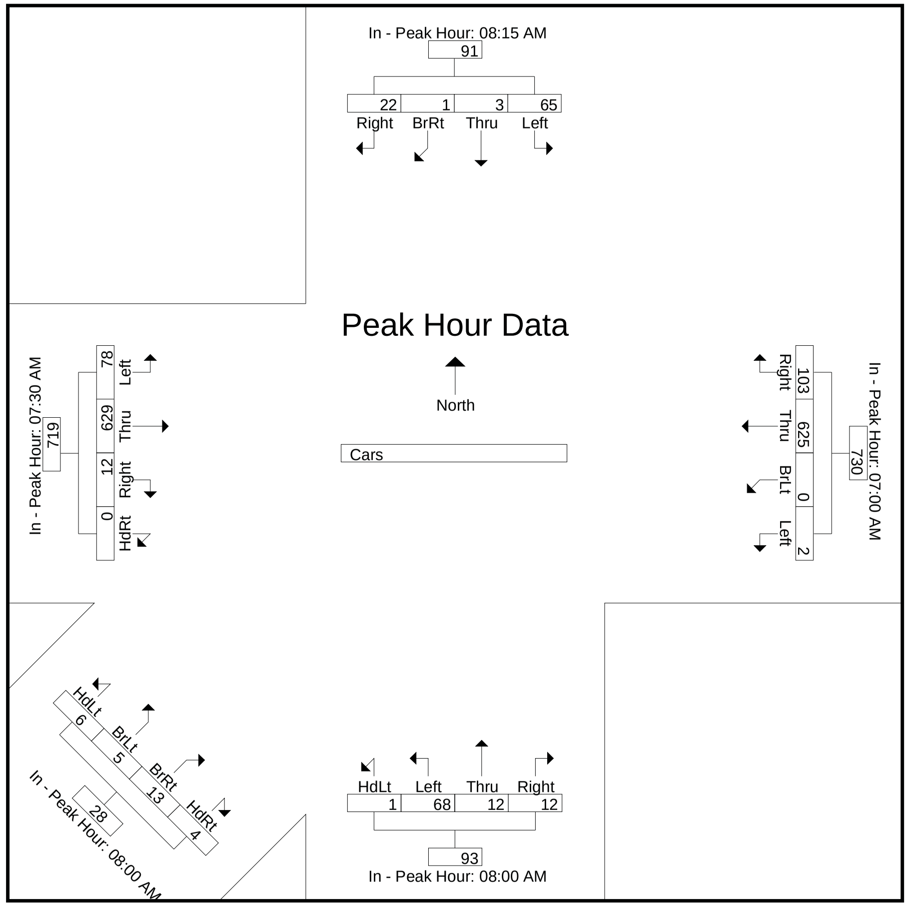


Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

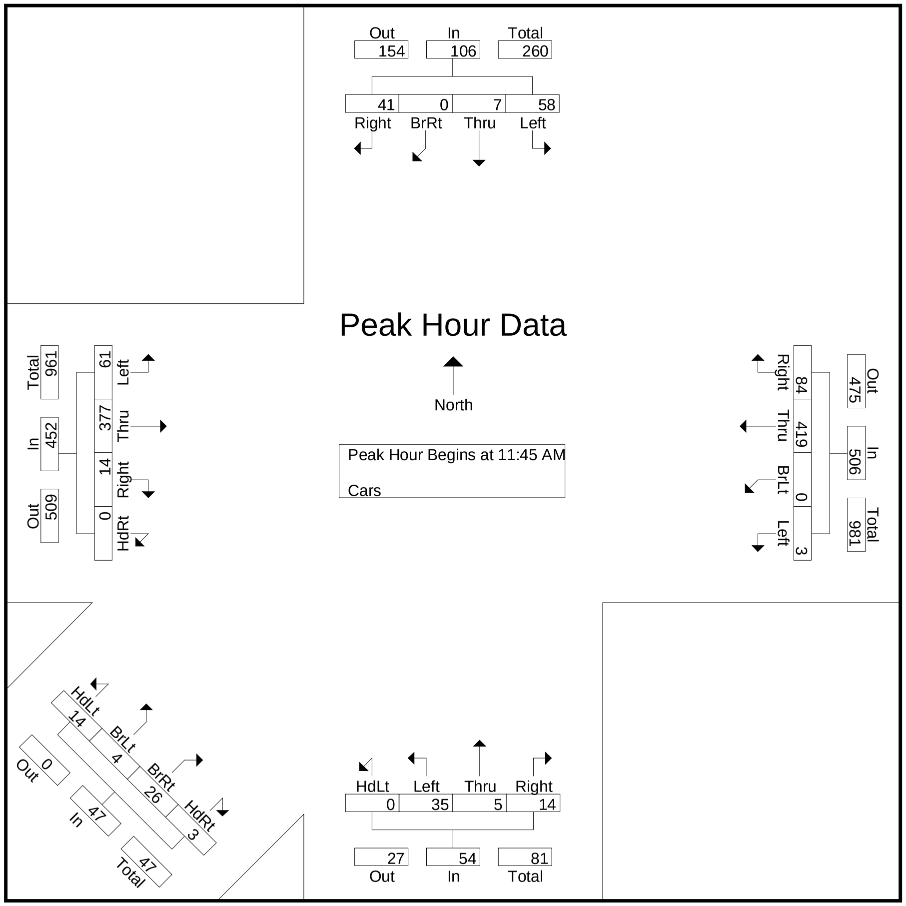
Peak Hour for Each Approach Begins at:

	08:15 AM					07:00 AM					08:00 AM					08:00 AM					07:30 AM				
+0 mins.	18	**2**	**1**	6	27	**1**	0	158	**36**	**195**	**1**	12	2	1	16	1	0	**4**	**4**	**9**	**25**	146	2	0	173
+15 mins.	10	0	0	2	12	0	0	**163**	18	181	0	20	**6**	**6**	**32**	1	**3**	4	0	8	16	153	2	0	171
+30 mins.	**23**	0	0	**8**	**31**	0	0	146	14	160	0	**24**	1	3	28	**3**	1	3	0	7	18	159	**4**	0	181
+45 mins.	14	1	0	6	21	1	0	158	35	194	0	12	3	2	17	1	1	2	0	4	19	**171**	4	0	**194**
Total Volume	65	3	1	22	91	2	0	625	103	730	1	68	12	12	93	6	5	13	4	28	78	629	12	0	719
% App. Total	71.4	3.3	1.1	24.2		0.3	0	85.6	14.1		1.1	73.1	12.9	12.9		21.4	17.9	46.4	14.3		10.8	87.5	1.7	0	

Accurate Counts
978-664-2565



Accurate Counts
978-664-2565

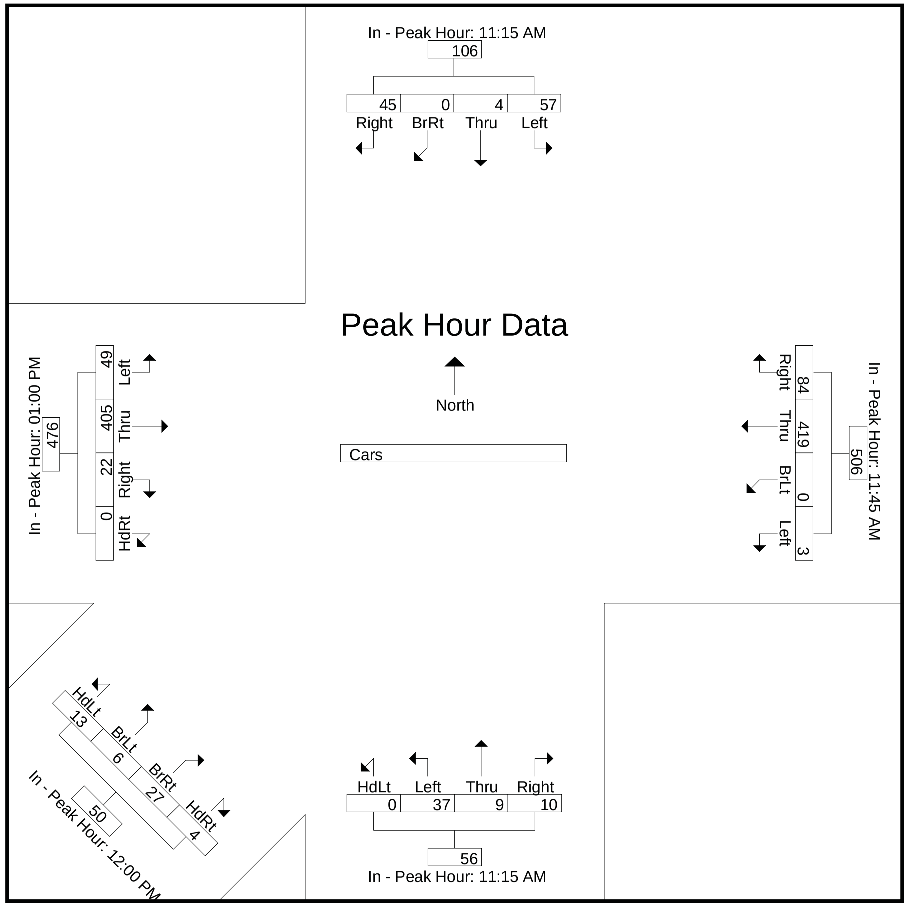


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

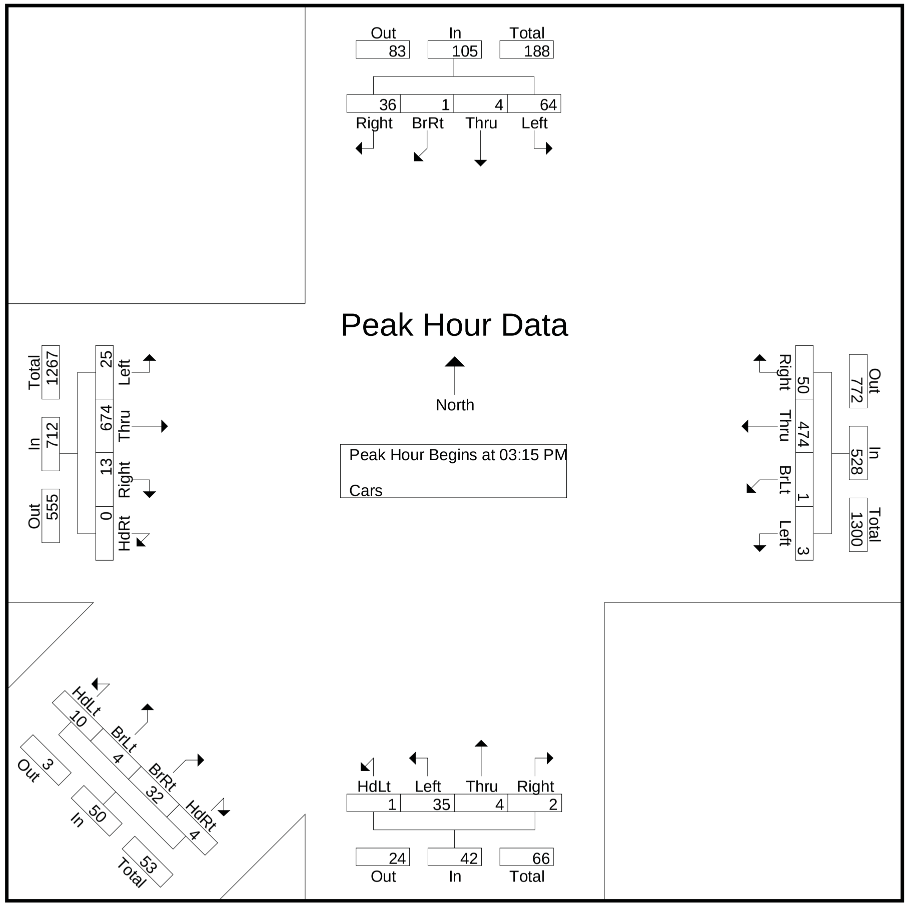
Peak Hour for Each Approach Begins at:

	11:15 AM					11:45 AM					11:15 AM					12:00 PM					01:00 PM				
+0 mins.	10	0	0	8	18	**1**	0	99	20	120	0	**11**	**4**	2	**17**	3	0	4	1	8	9	102	3	0	114
+15 mins.	**18**	1	0	**15**	**34**	1	0	86	15	102	0	11	3	1	15	**5**	1	8	0	14	**19**	114	5	0	**138**
+30 mins.	14	**2**	0	11	27	1	0	**117**	23	141	0	10	0	2	12	2	2	**9**	**2**	**15**	11	73	**10**	0	94
+45 mins.	15	1	0	11	27	0	0	117	**26**	**143**	0	5	2	**5**	12	3	**3**	6	1	13	10	**116**	4	0	130
Total Volume	57	4	0	45	106	3	0	419	84	506	0	37	9	10	56	13	6	27	4	50	49	405	22	0	476
% App. Total	53.8	3.8	0	42.5		0.6	0	82.8	16.6		0	66.1	16.1	17.9		26	12	54	8		10.3	85.1	4.6	0	

Accurate Counts
978-664-2565



Accurate Counts
978-664-2565

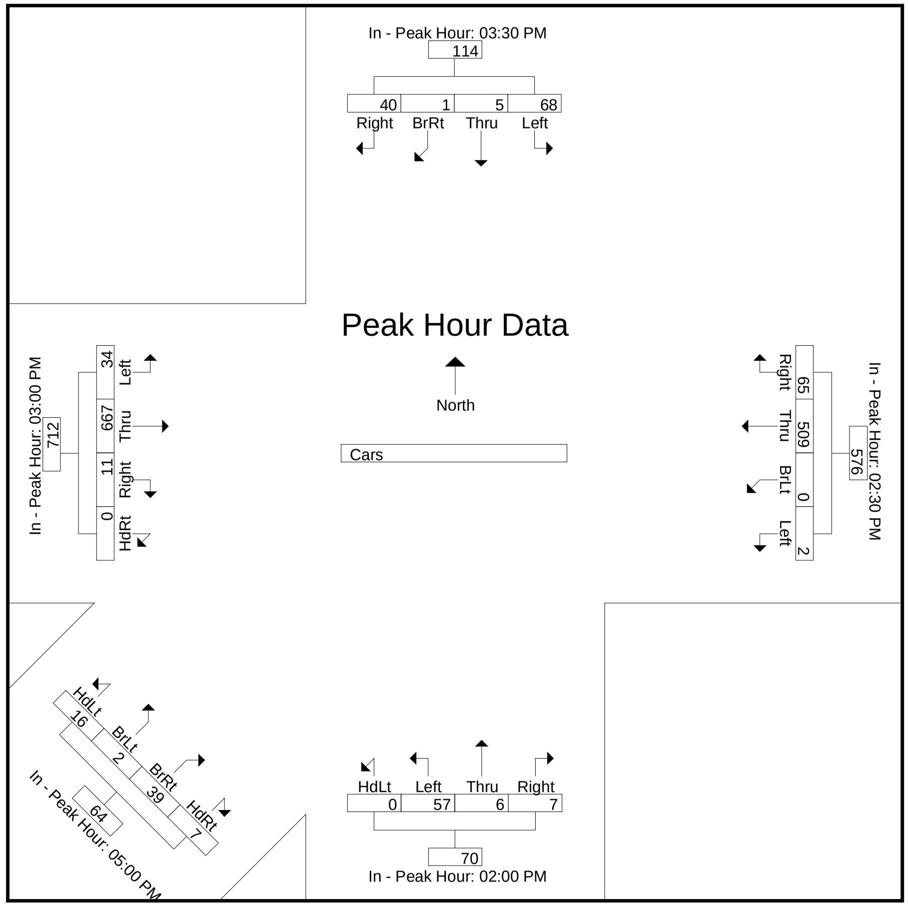


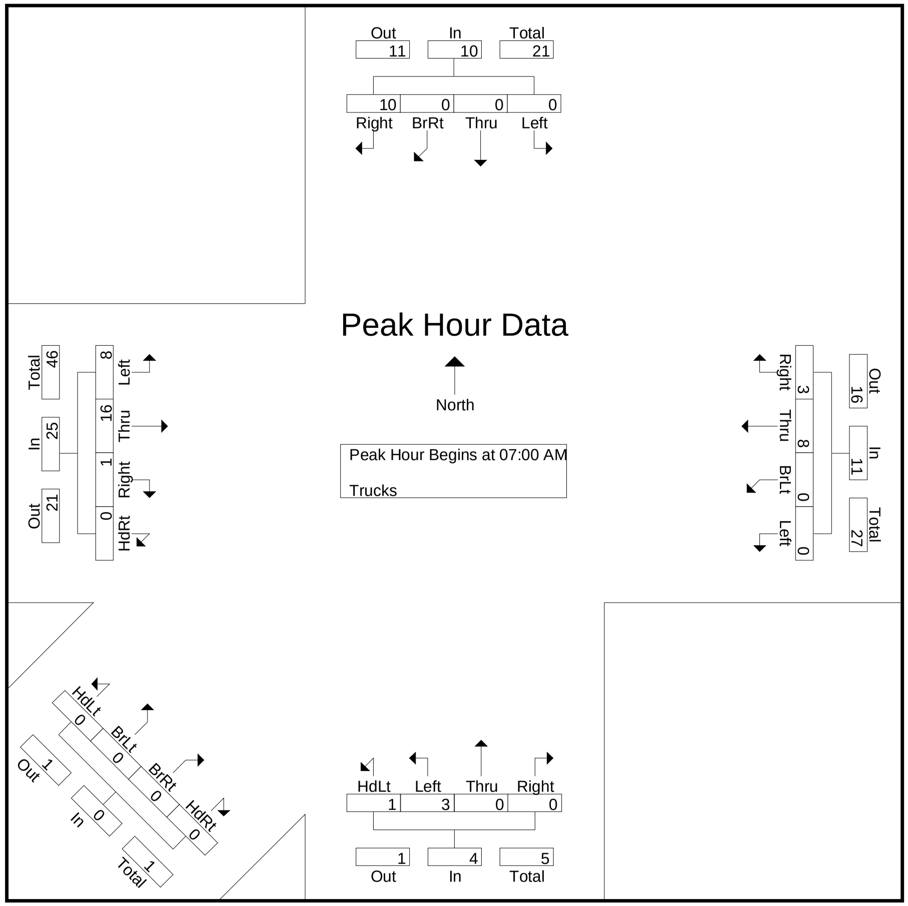
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:30 PM					02:30 PM					02:00 PM					05:00 PM					03:00 PM				
+0 mins.	10	**2**	0	9	21	**1**	0	**143**	**24**	**168**	0	14	**2**	1	17	3	**1**	**12**	1	**17**	**12**	160	2	0	174
+15 mins.	20	1	0	10	31	0	0	123	12	135	0	**18**	2	**4**	**24**	4	0	9	1	14	9	152	2	0	163
+30 mins.	17	0	**1**	10	28	1	0	112	18	131	0	16	1	2	19	**5**	1	6	**4**	16	6	177	3	0	186
+45 mins.	**21**	2	0	**11**	**34**	0	0	131	11	142	0	9	1	0	10	4	0	12	1	17	7	**178**	**4**	0	**189**
Total Volume	68	5	1	40	114	2	0	509	65	576	0	57	6	7	70	16	2	39	7	64	34	667	11	0	712
% App. Total	59.6	4.4	0.9	35.1		0.3	0	88.4	11.3		0	81.4	8.6	10		25	3.1	60.9	10.9		4.8	93.7	1.5	0	

Accurate Counts
978-664-2565



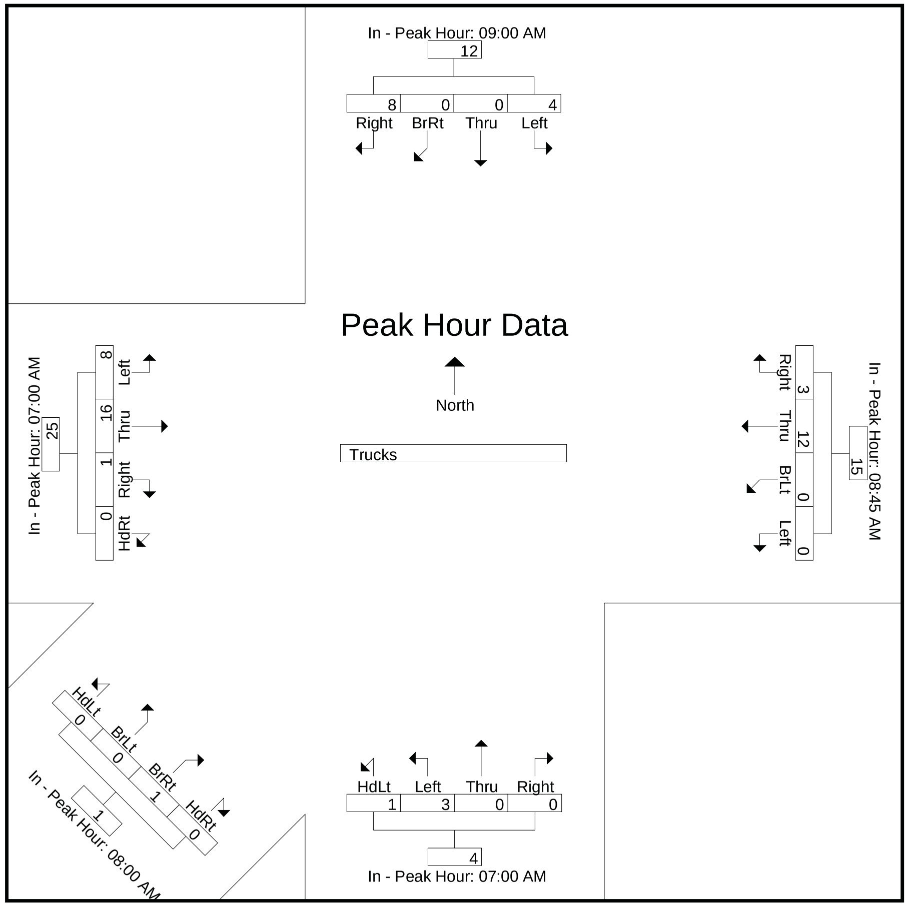


Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

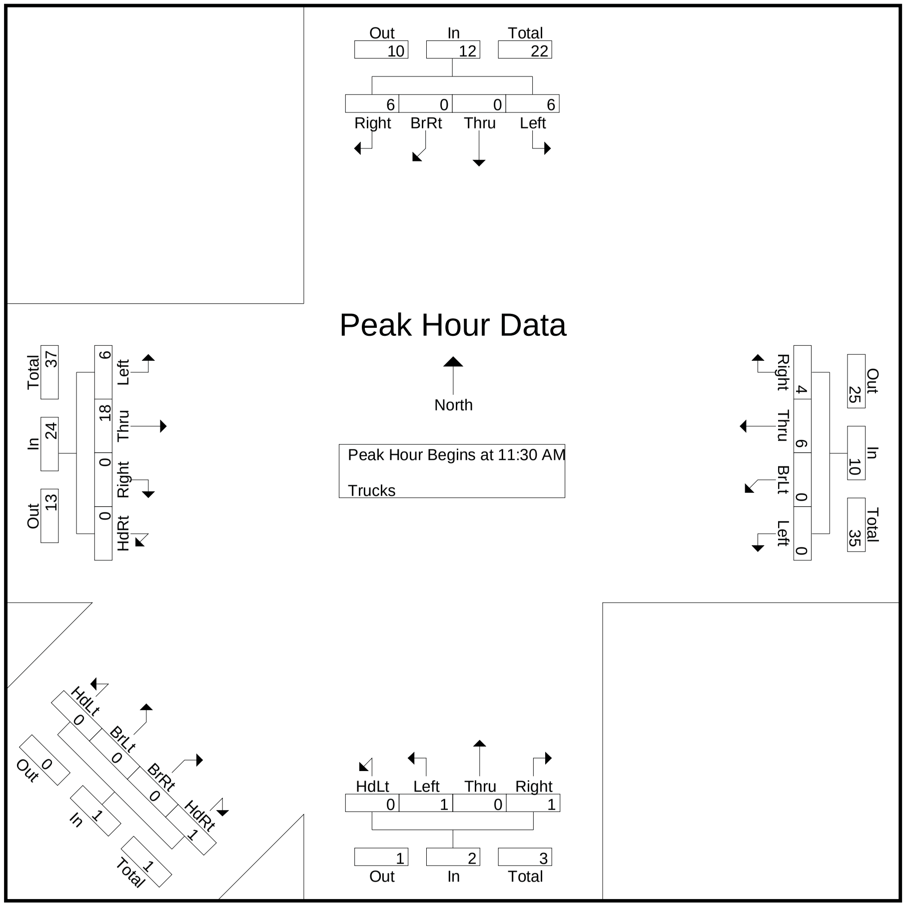
Peak Hour for Each Approach Begins at:

	09:00 AM					08:45 AM					07:00 AM					08:00 AM					07:00 AM				
+0 mins.	0	0	0	2	2	0	0	3	**2**	**5**	**1**	1	0	0	**2**	0	0	0	0	0	**2**	4	0	0	6
+15 mins.	0	0	0	2	2	0	0	**4**	0	4	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4
+30 mins.	1	0	0	**3**	**4**	0	0	1	0	1	0	**2**	0	0	2	0	0	0	0	0	2	**6**	0	0	**8**
+45 mins.	**3**	0	0	1	4	0	0	4	1	5	0	0	0	0	0	0	0	**1**	0	**1**	2	4	**1**	0	7
Total Volume	4	0	0	8	12	0	0	12	3	15	1	3	0	0	4	0	0	1	0	1	8	16	1	0	25
% App. Total	33.3	0	0	66.7		0	0	80	20		25	75	0	0		0	0	100	0		32	64	4	0	

Accurate Counts
978-664-2565



Accurate Counts
978-664-2565



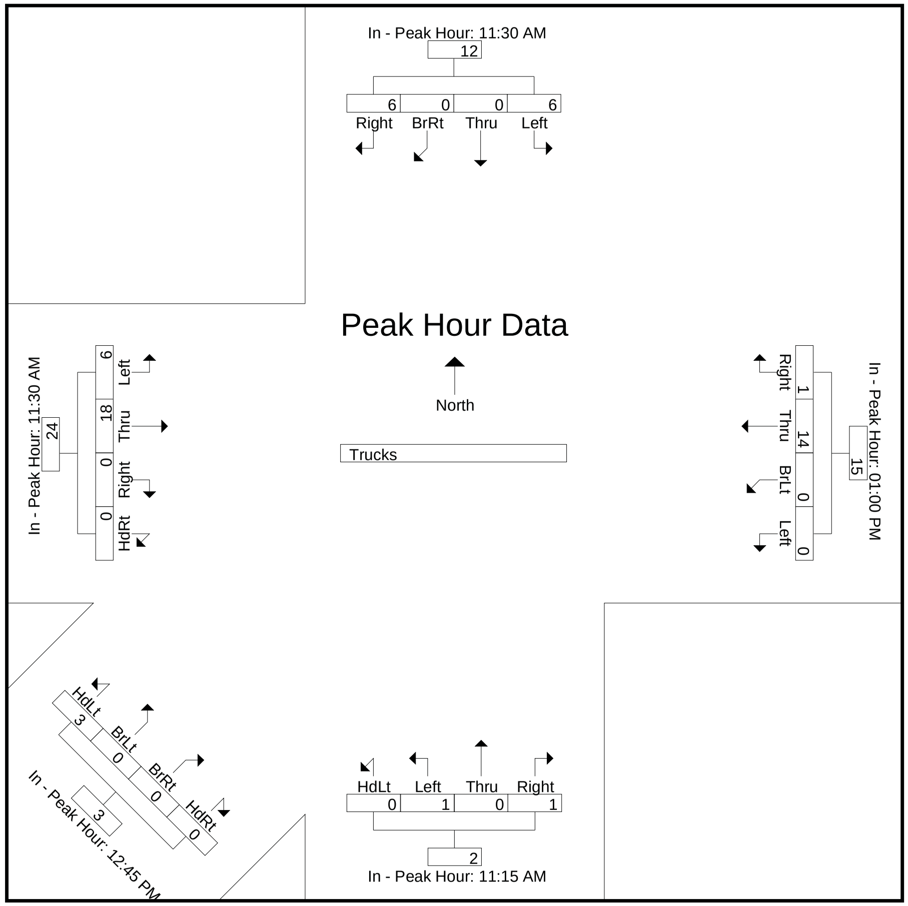
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

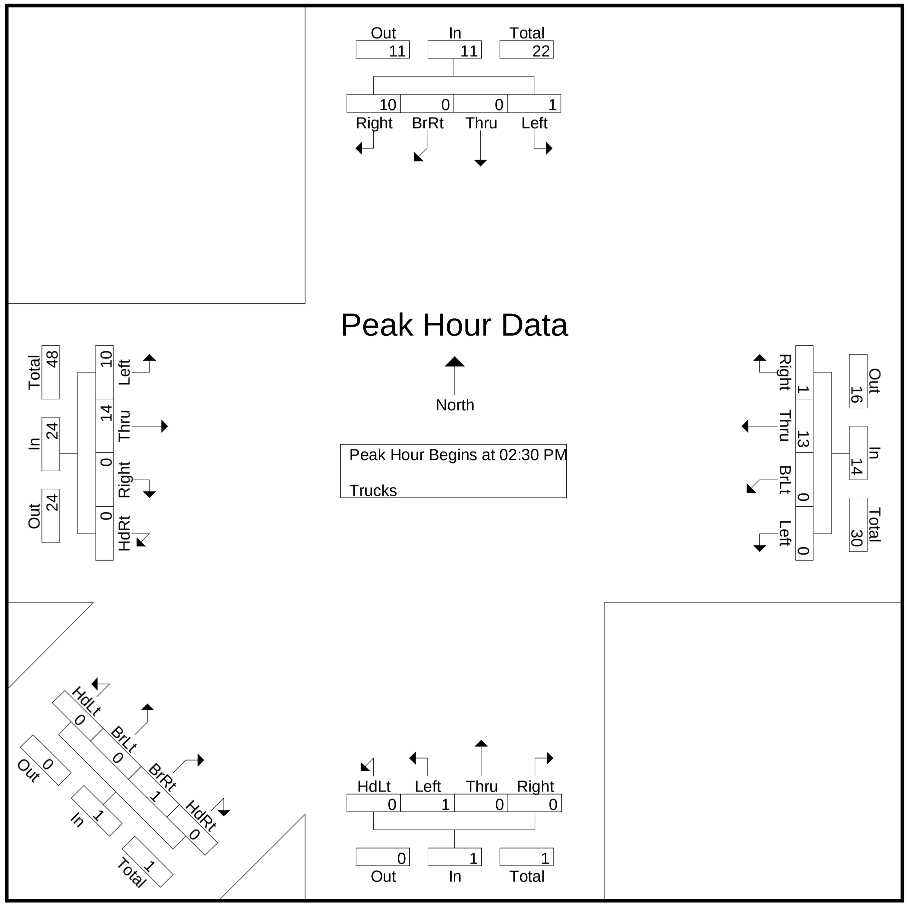
	11:30 AM					01:00 PM					11:15 AM					12:45 PM					11:30 AM				
+0 mins.	**3**	0	0	1	**4**	0	0	**5**	**1**	**6**	0	0	0	0	0	0	0	0	0	0	1	**8**	0	0	**9**
+15 mins.	1	0	0	1	2	0	0	3	0	3	0	0	0	**1**	**1**	0	0	0	0	0	1	3	0	0	4
+30 mins.	1	0	0	1	2	0	0	4	0	4	0	0	0	0	0	**2**	0	0	0	**2**	1	3	0	0	4
+45 mins.	1	0	0	**3**	4	0	0	2	0	2	0	**1**	0	0	1	1	0	0	0	1	**3**	4	0	0	7
Total Volume	6	0	0	6	12	0	0	14	1	15	0	1	0	1	2	3	0	0	0	3	6	18	0	0	24
% App. Total	50	0	0	50		0	0	93.3	6.7		0	50	0	50		100	0	0	0		25	75	0	0	

Accurate Counts

978-664-2565



Accurate Counts
978-664-2565

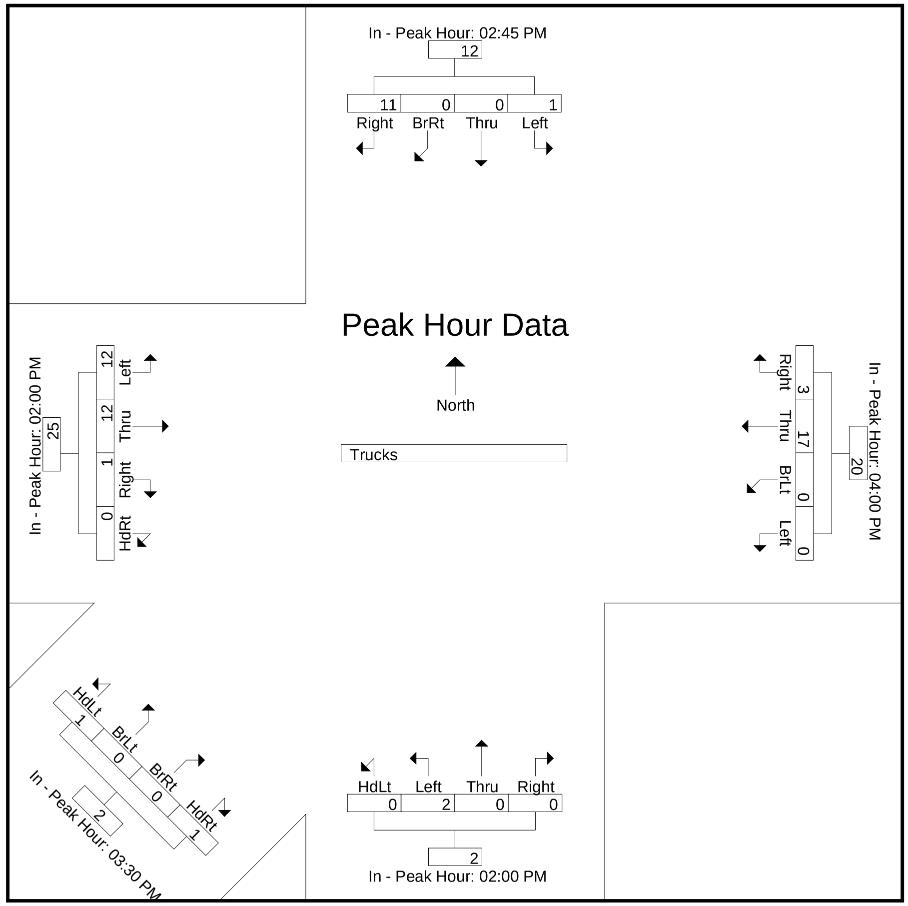


Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

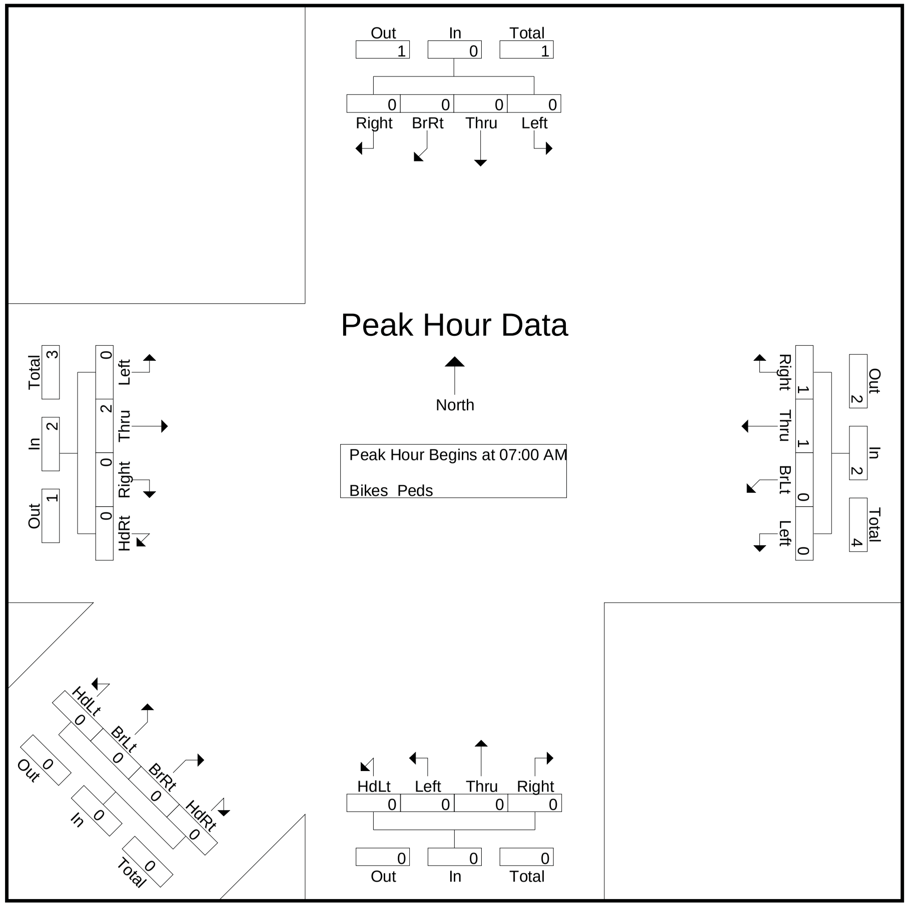
	02:45 PM					04:00 PM					02:00 PM					03:30 PM					02:00 PM				
+0 mins.	0	0	0	**3**	**3**	0	0	4	**1**	5	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4
+15 mins.	**1**	0	0	2	3	0	0	**5**	1	**6**	0	**2**	0	0	**2**	0	0	0	0	0	**5**	1	**1**	0	7
+30 mins.	0	0	0	3	3	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	2	**4**	0	0	6
+45 mins.	0	0	0	3	3	0	0	3	1	4	0	0	0	0	0	**1**	0	0	**1**	**2**	4	4	0	0	**8**
Total Volume	1	0	0	11	12	0	0	17	3	20	0	2	0	0	2	1	0	0	1	2	12	12	1	0	25
% App. Total	8.3	0	0	91.7		0	0	85	15		0	100	0	0		50	0	0	50		48	48	4	0	

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565



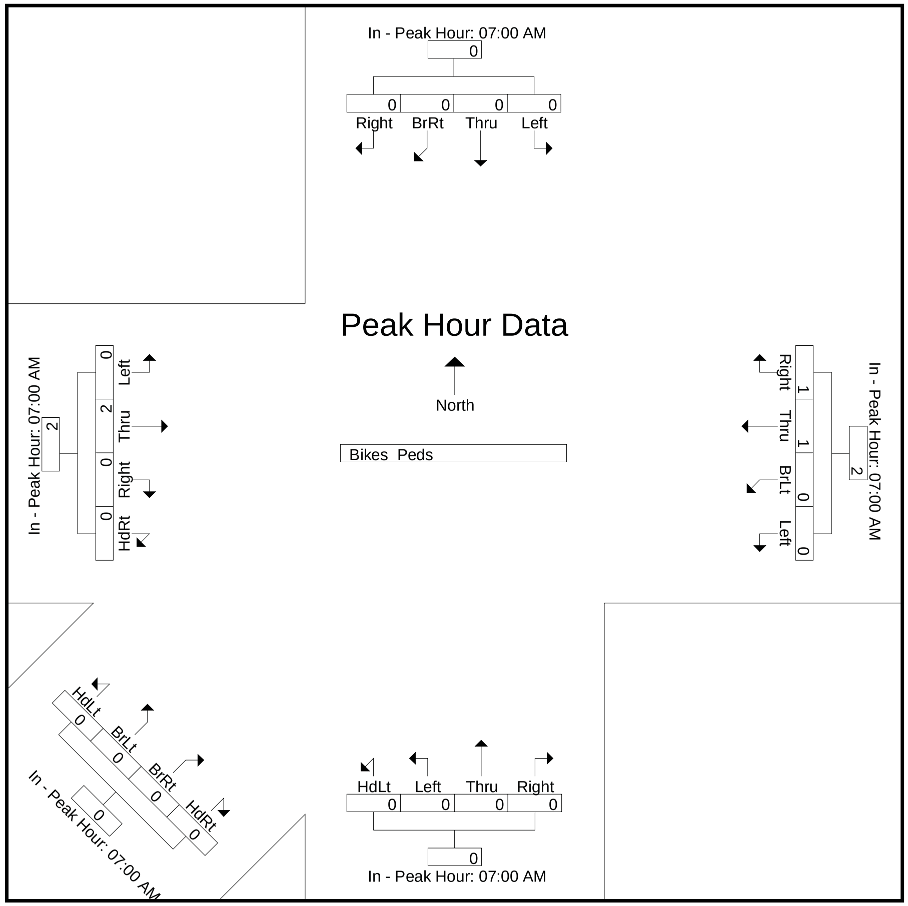
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

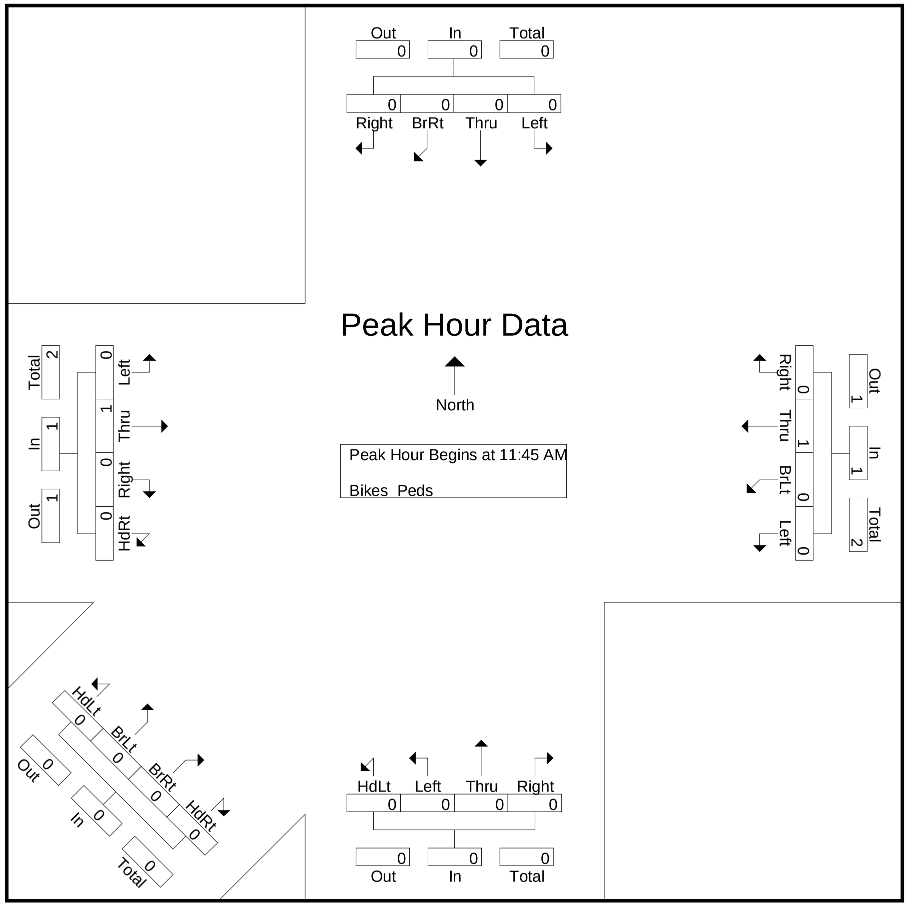
	07:00 AM					07:00 AM					07:00 AM					07:00 AM					07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
% App. Total	0	0	0	0		0	0	50	50		0	0	0	0		0	0	0	0		0	100	0	0	

Accurate Counts

978-664-2565



Accurate Counts
978-664-2565



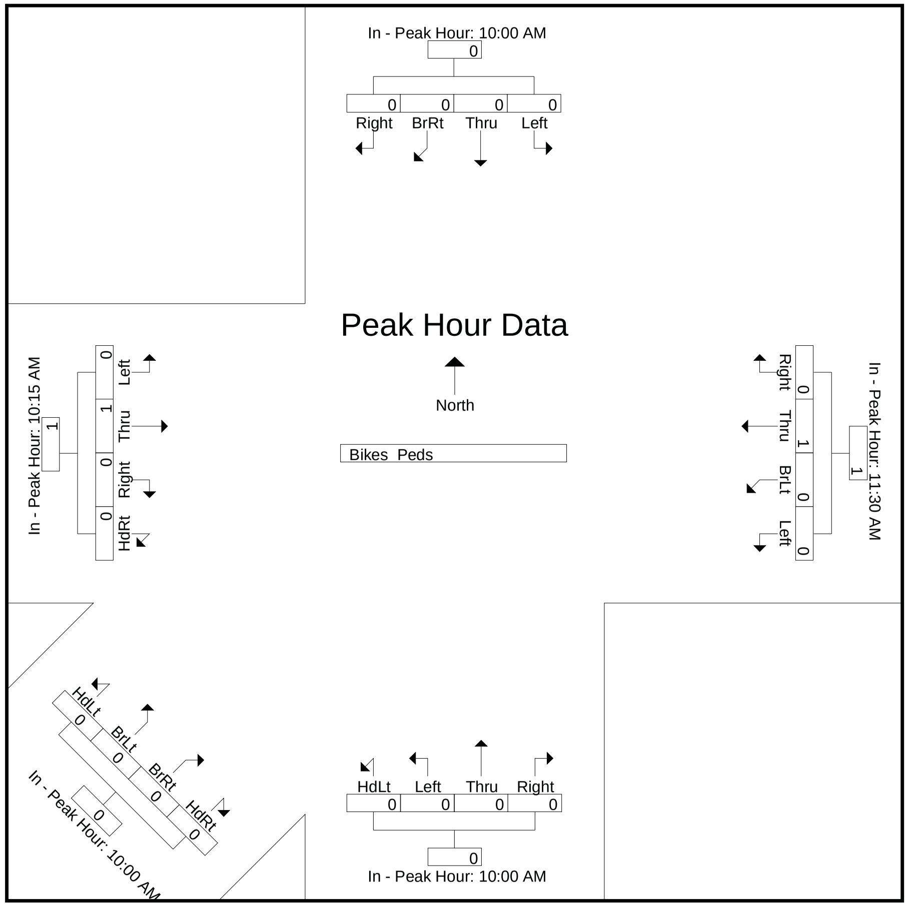
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

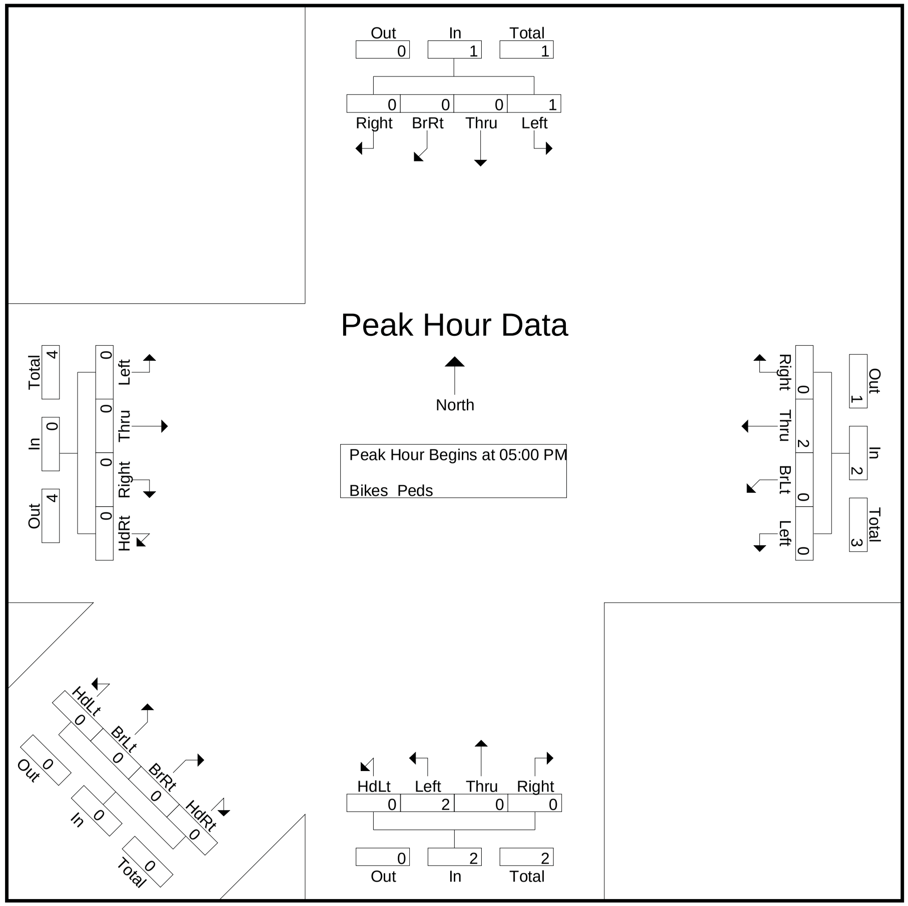
Peak Hour for Each Approach Begins at:

	10:00 AM					11:30 AM					10:00 AM					10:00 AM					10:15 AM				
+0 mins.	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
+15 mins.	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
+30 mins.	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
+45 mins.	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**
Total Volume	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
% App. Total	0	0	0	0		0	0	100	0		0	0	0	0		0	0	0	0		0	100	0	0	

Accurate Counts

978-664-2565





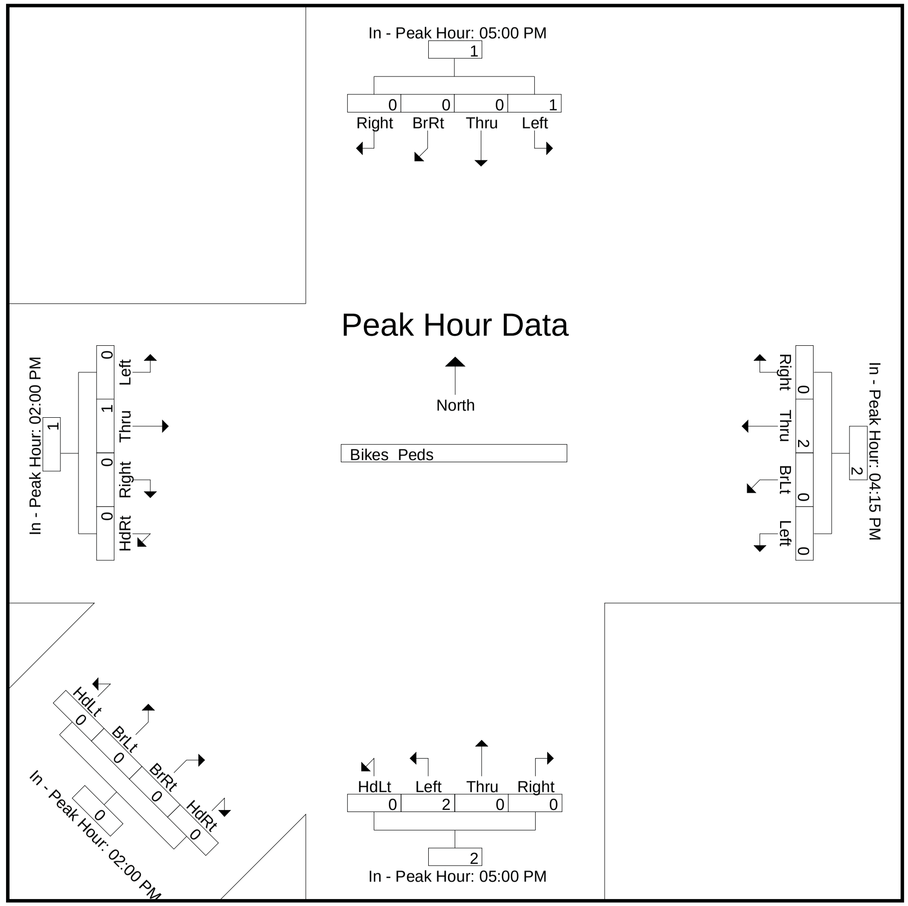
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM					04:15 PM					05:00 PM					02:00 PM					02:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	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
+30 mins.	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
+45 mins.	**1**	0	0	0	**1**	0	0	**2**	0	**2**	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	1	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1
% App. Total	100	0	0	0		0	0	100	0		0	100	0	0		0	0	0	0		0	100	0	0	

Accurate Counts

978-664-2565



BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

U-Turn	Left	Thru	Right
0	36	0	62
0	38	0	65
0	41	0	70
0	40	0	72
0	42	0	80
0	39	0	84
0	40	0	83
0	37	0	81

U-Turn	Left	Thru	Right
0	0	124	43
0	0	129	45
0	0	124	52
0	0	114	57
0	0	107	61
0	0	96	62
0	0	98	61
0	0	99	58

9:00 AM

U-Turn	Left	Thru	Right
0	52	0	58
0	55	0	56
0	54	0	64
0	52	0	69
1	53	0	75
0	51	0	78
0	50	0	77
0	53	0	73

U-Turn	Left	Thru	Right
0	0	78	33
0	0	81	35
0	0	82	38
1	0	79	37
0	0	81	40
0	0	82	39
0	0	81	38
0	0	79	36

6:00 PM

U-Turn	Left	Thru	Right
0	**162**	**0**	**306**
0.95			
0.0%	**1.2%**	**0.0%**	**1.0%**

U-Turn	Left	Thru	Right
0	**0**	**441**	**232**
0.96			
0.0%	**0.0%**	**2.3%**	**1.3%**

U-Turn	Left	Thru	Right
1	**206**	**0**	**299**
0.98			
0.0%	**1.0%**	**0.0%**	**0.7%**

U-Turn	Left	Thru	Right
1	**0**	**323**	**154**
0.99			
0.0%	**0.0%**	**1.9%**	**0.6%**

BOSTON TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

U-Turn	Left	Thru	Right
0	1	0	0
0	0	0	1
0	1	0	0
0	0	0	1
0	1	0	0
0	0	0	2
0	0	0	0
0	1	0	0

U-Turn	Left	Thru	Right
0	0	0	0
0	0	2	0
0	0	4	2
0	0	2	1
0	0	2	0
0	0	2	0
0	0	3	0
0	0	1	1

9:00 AM

U-Turn	Left	Thru	Right
0	0	0	0
0	1	0	0
0	0	0	3
0	1	0	1
0	0	0	0
0	0	0	0
0	1	0	1
0	0	0	0

U-Turn	Left	Thru	Right
0	0	1	0
0	0	2	0
0	0	2	1
0	0	3	0
0	0	0	1
0	0	2	0
0	0	1	0
0	0	1	0

6:00 PM

U-Turn	Left	Thru	Right
0	**2**	**0**	**3**
0.63			

U-Turn	Left	Thru	Right
0	**0**	**10**	**3**
0.54			

U-Turn	Left	Thru	Right
0	**2**	**0**	**4**
0.50			

U-Turn	Left	Thru	Right
0	**0**	**7**	**2**
0.75			

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

	Left	Thru	Right	PED	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	1	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	

	Left	Thru	Right	PED	
	0	0	0	0	
	0	0	0	0	
	0	0	0	2	
	0	0	0	0	
	0	1	0	0	
	0	0	0	1	
	0	0	0	0	
	0	0	0	0	

	Left	Thru	Right	PED	
	0	0	0	0	
	0	0	0	0	
	0	0	0	1	
	0	0	1	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	

	Left	Thru	Right	PED	
	0	0	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	2	0	0	

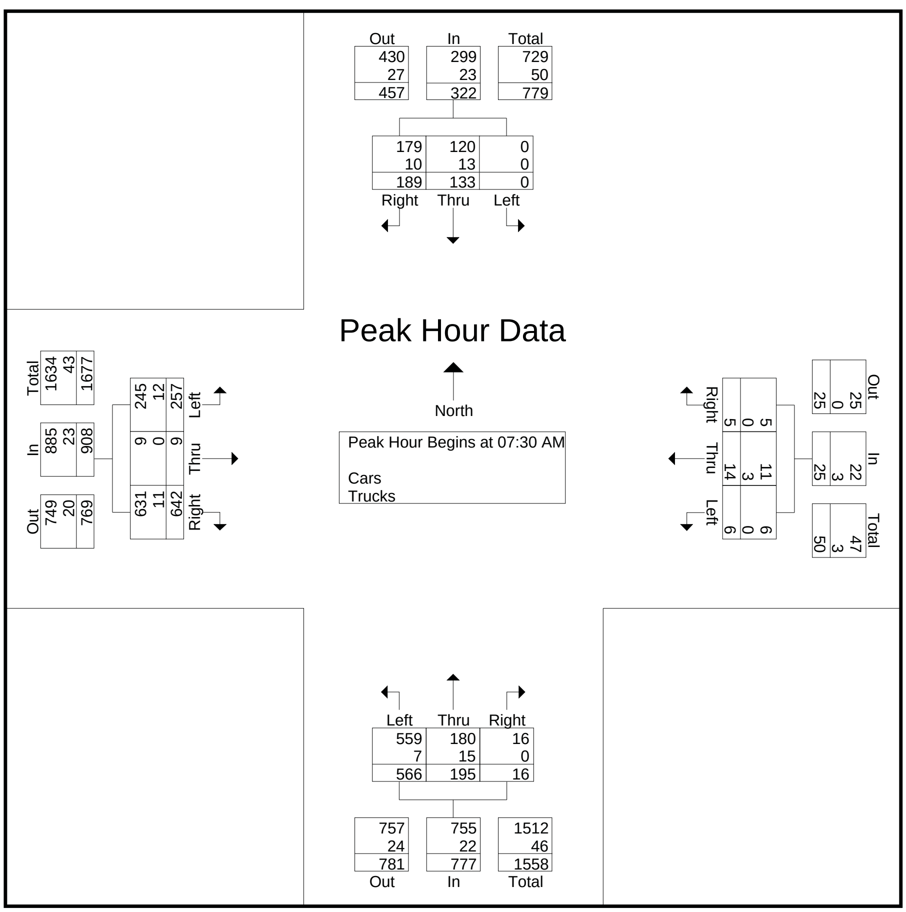
	Left	Thru	Right	PED	
	0	0	0	1	

	Left	Thru	Right	PED	
	0	1	0	3	

	Left	Thru	Right	PED	
	0	0	1	0	

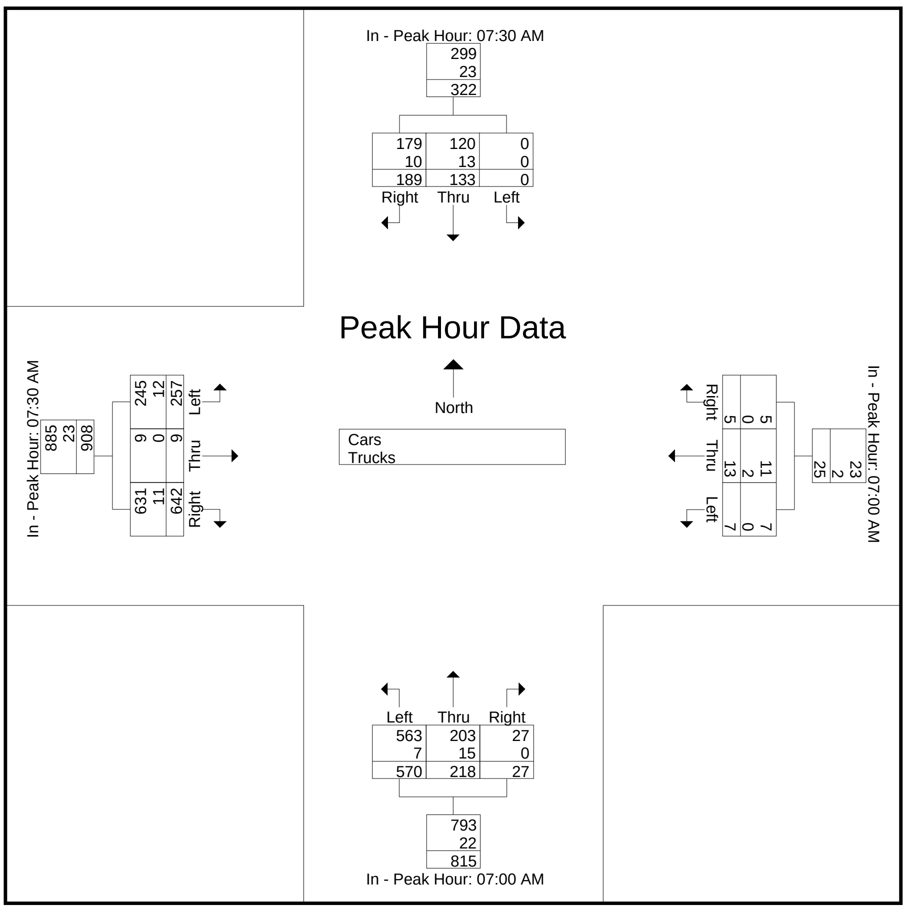
	Left	Thru	Right	PED	
	0	1	0	1	

Accurate Counts
978-664-2565



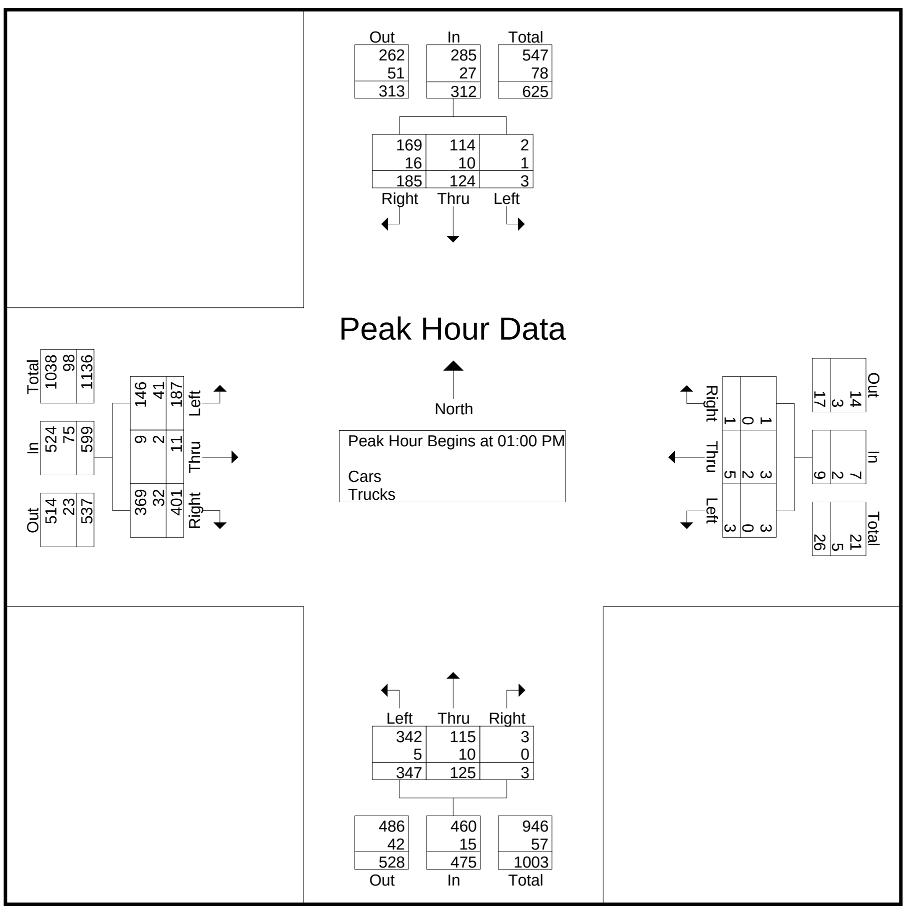
Accurate Counts

978-664-2565



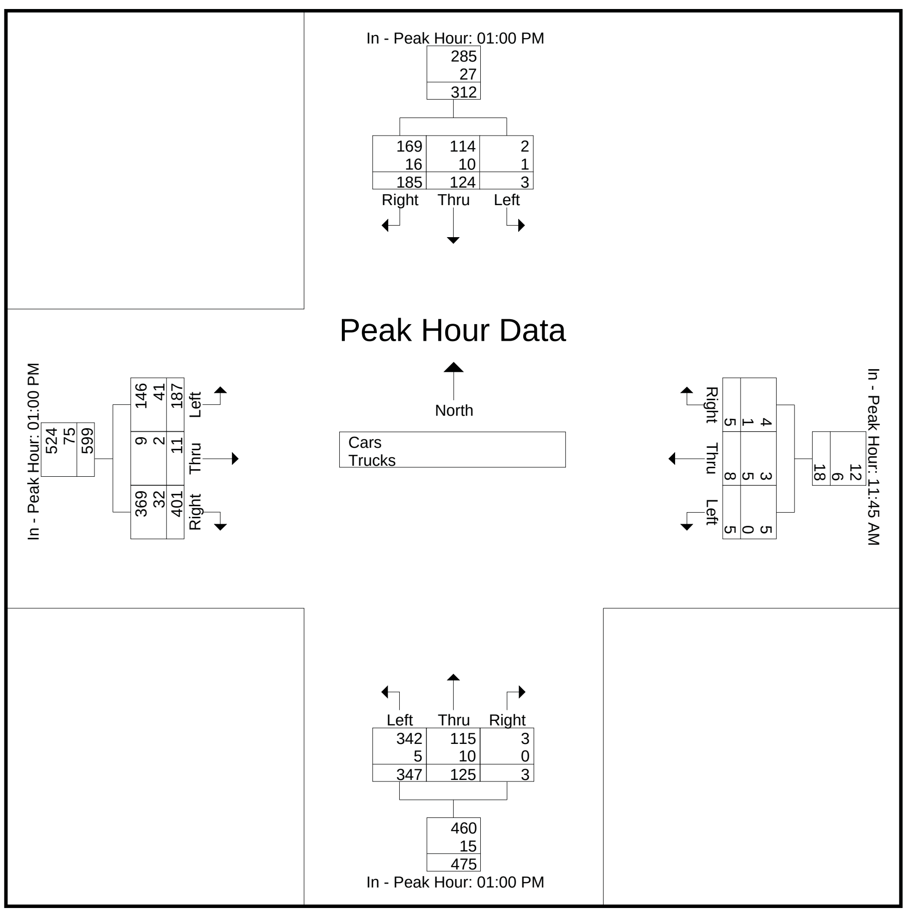
Accurate Counts

978-664-2565

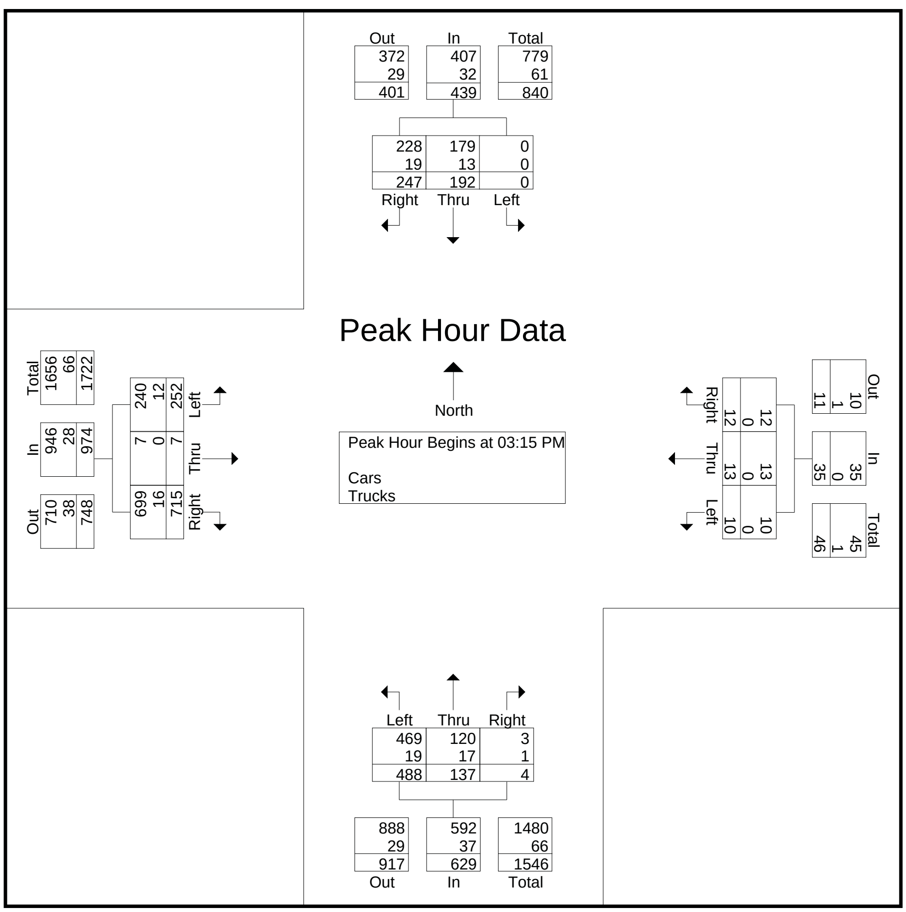


Accurate Counts

978-664-2565

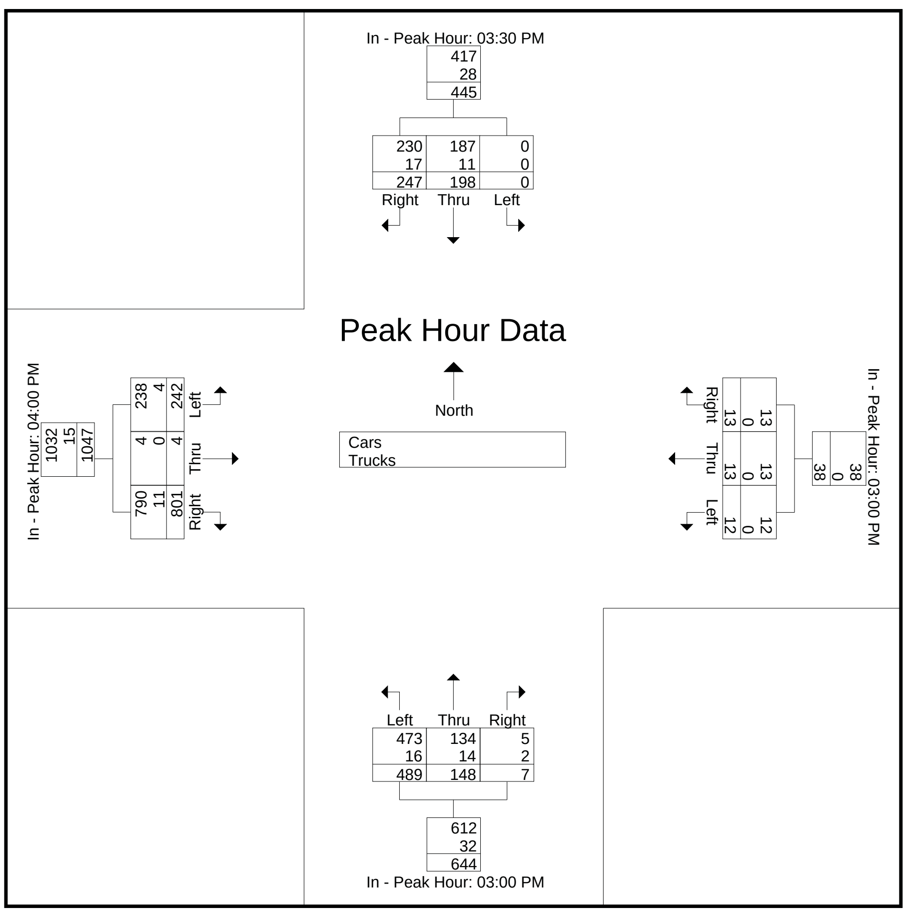


Accurate Counts
978-664-2565

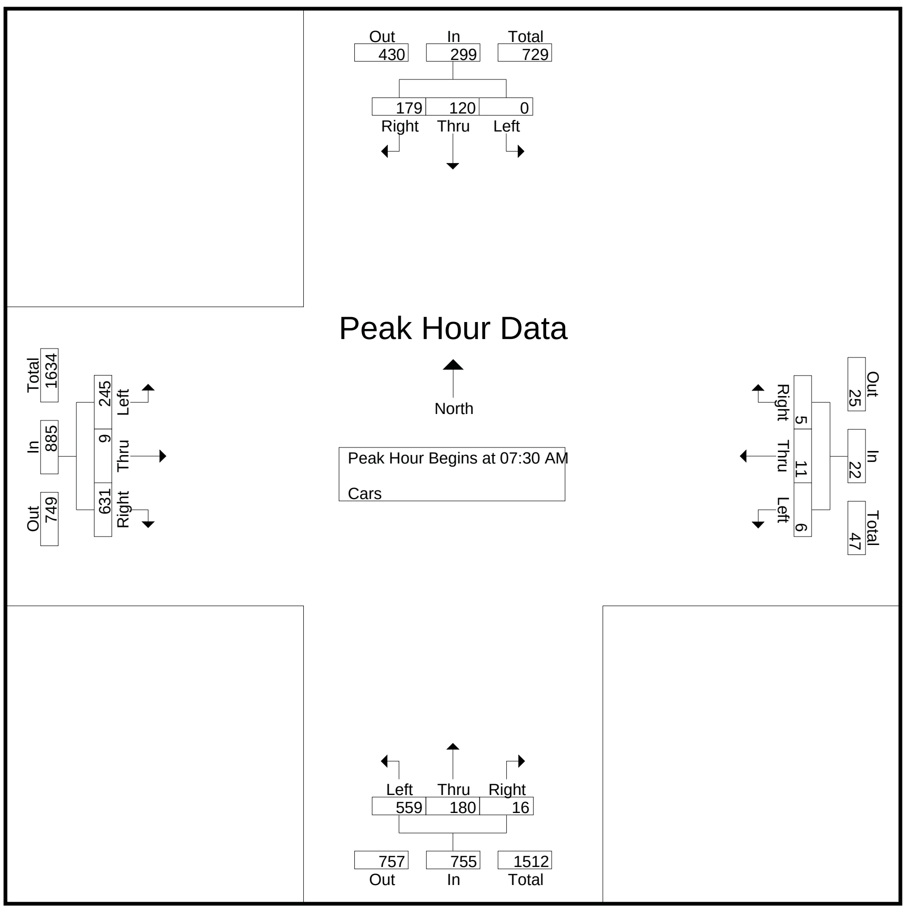


Accurate Counts

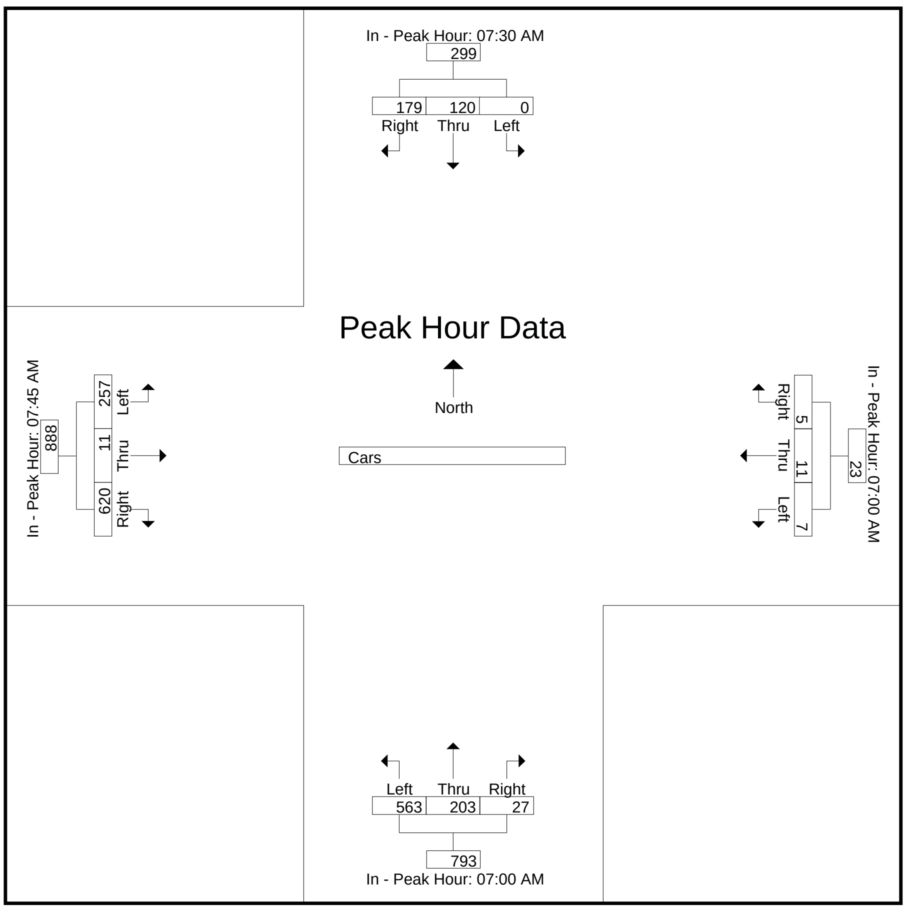
978-664-2565



Accurate Counts
978-664-2565

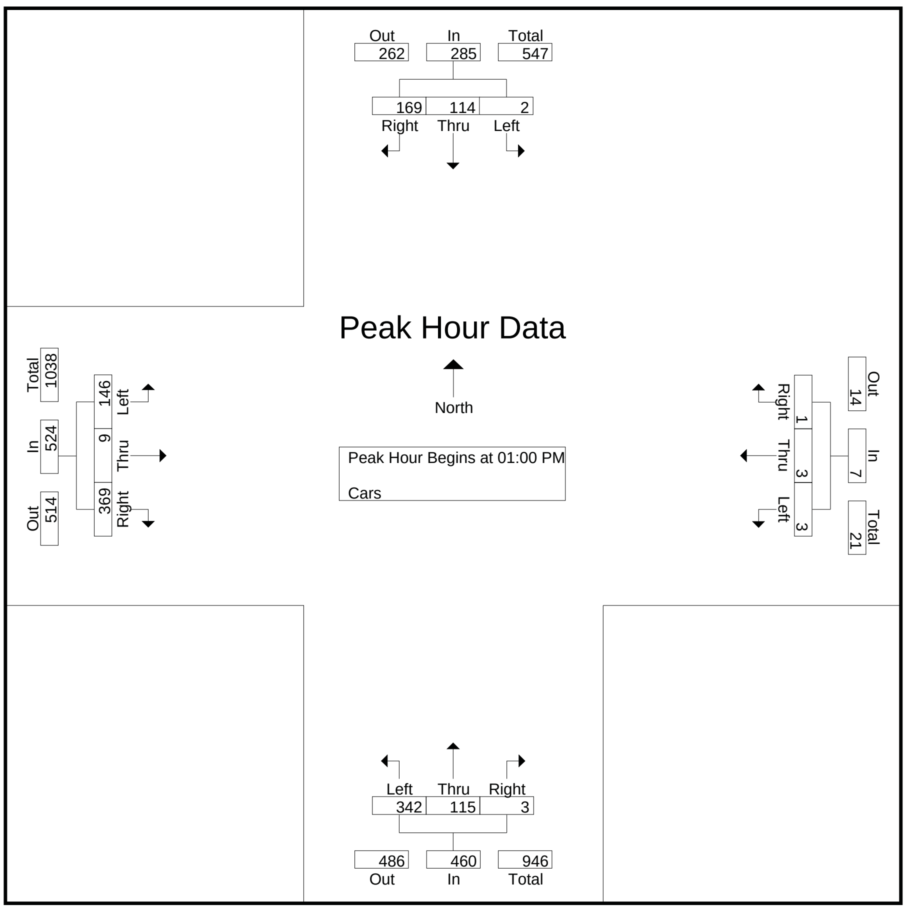


Accurate Counts
978-664-2565

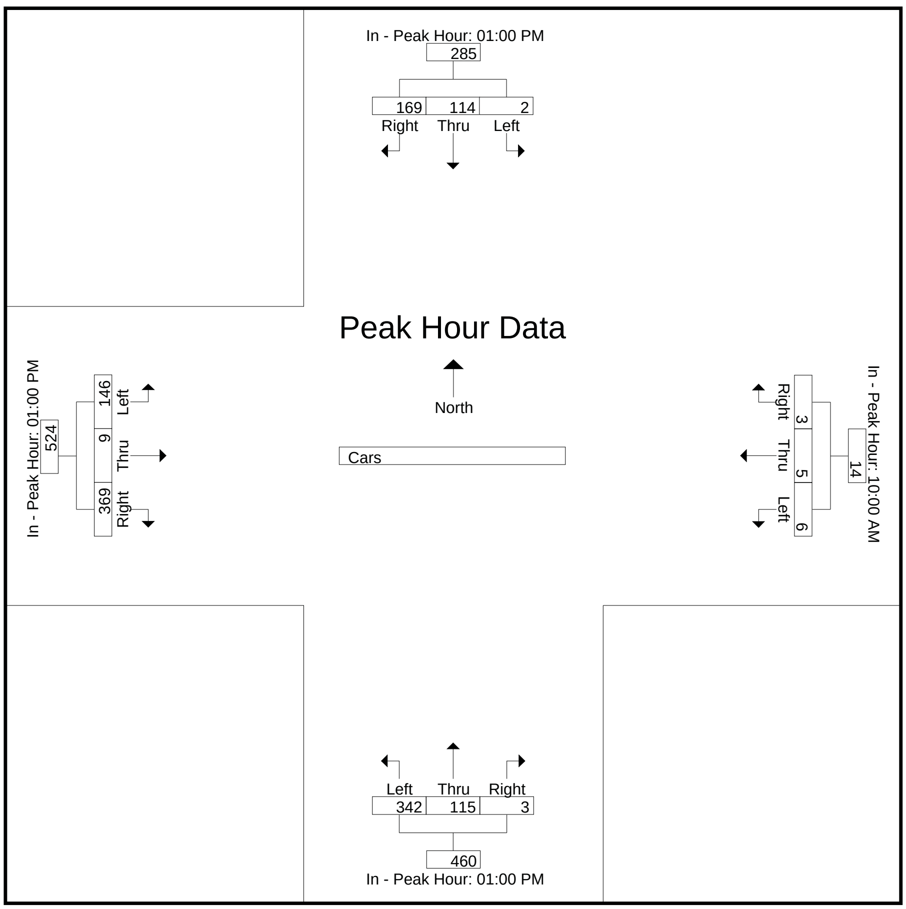


Accurate Counts

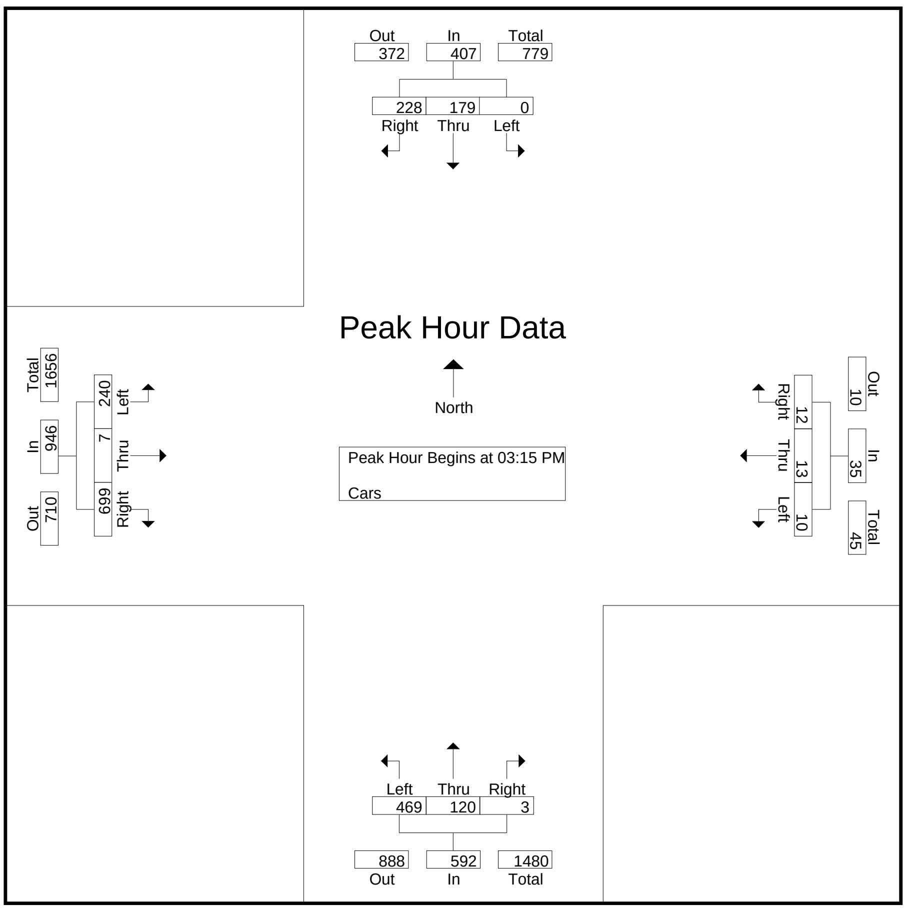
978-664-2565



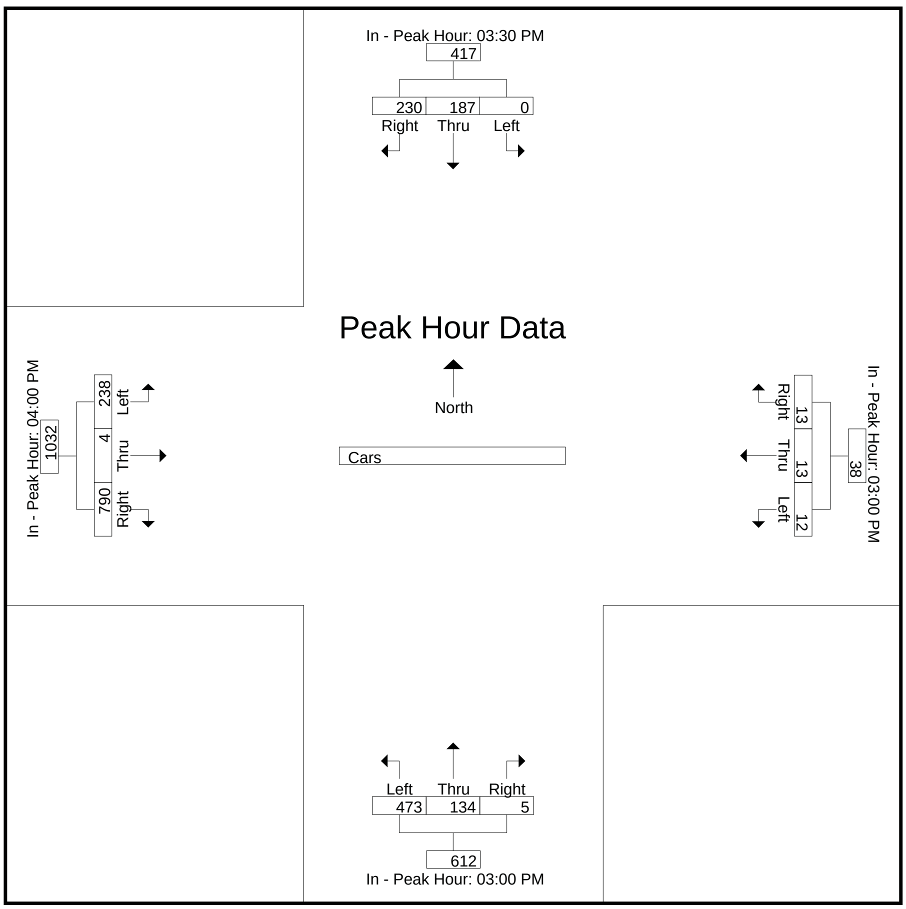
Accurate Counts
978-664-2565



Accurate Counts
978-664-2565

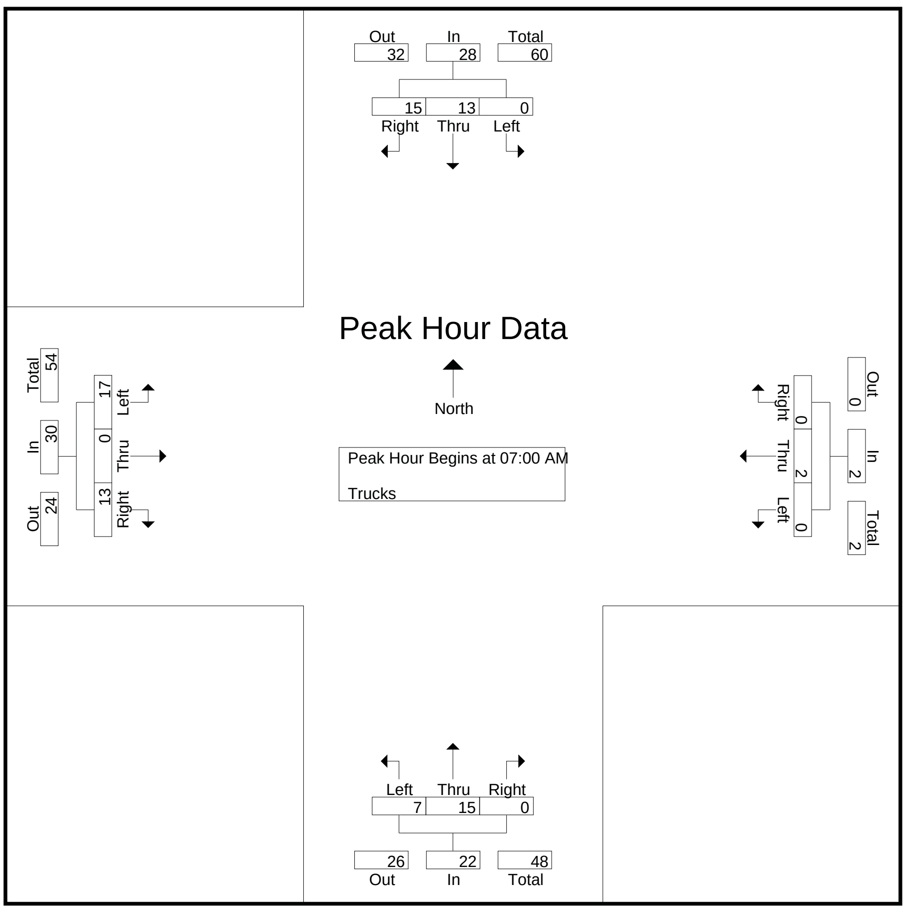


Accurate Counts
978-664-2565

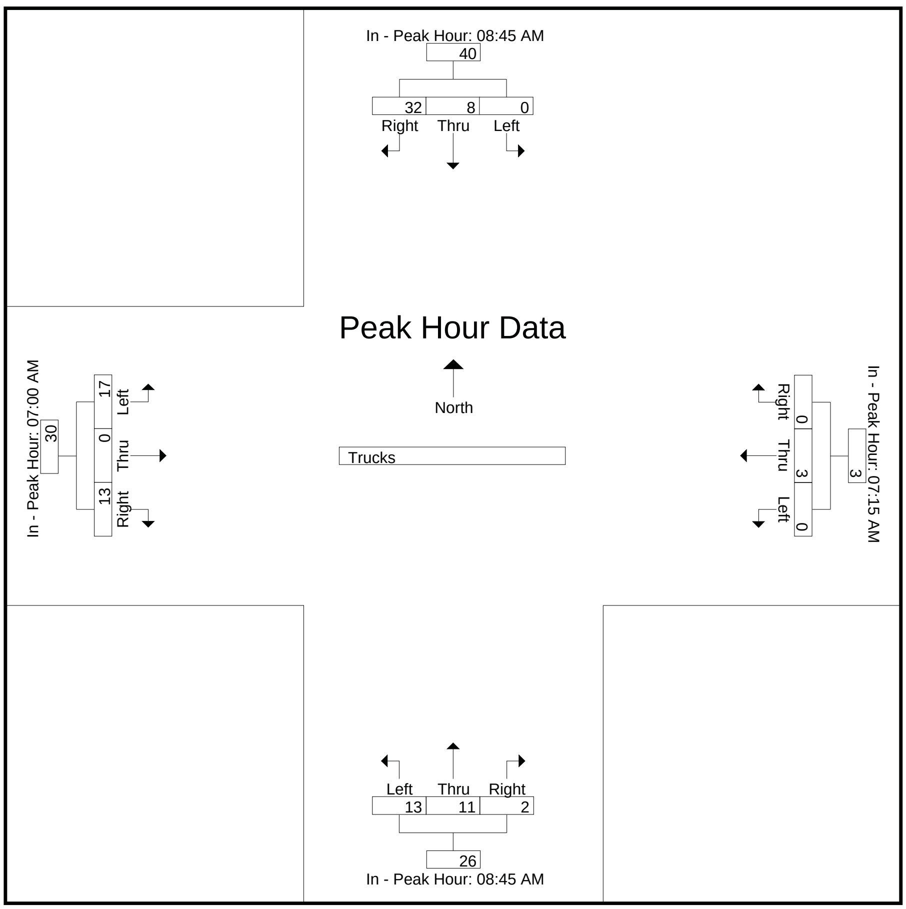


Accurate Counts

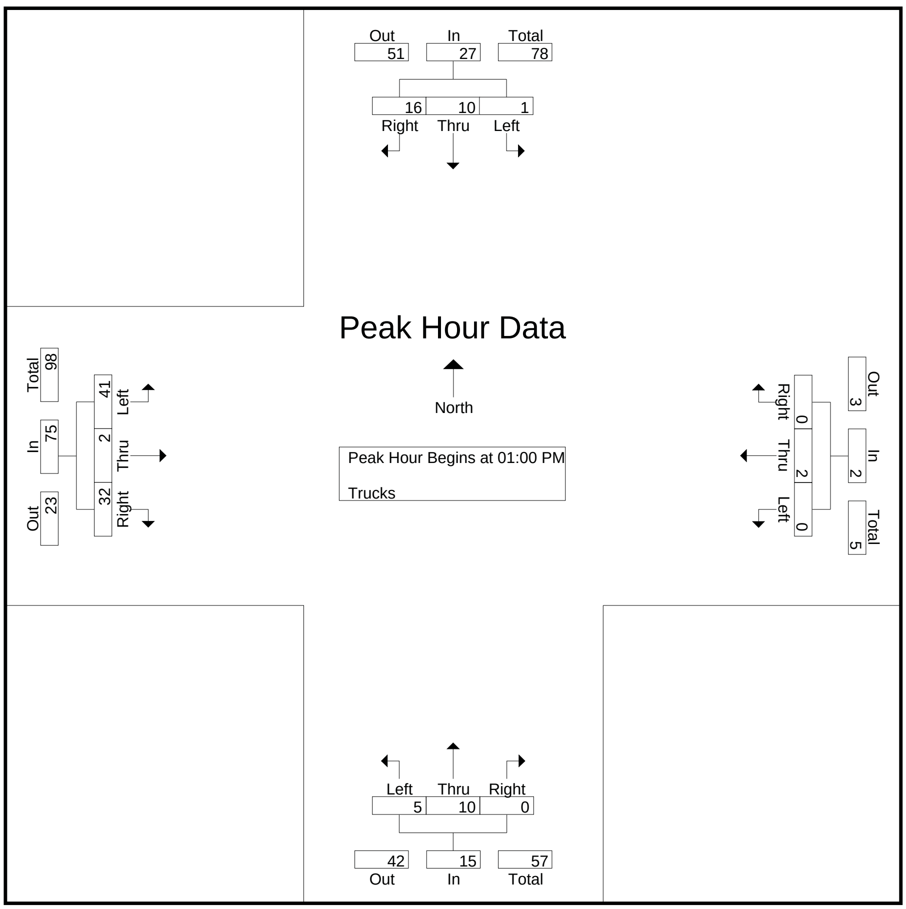
978-664-2565



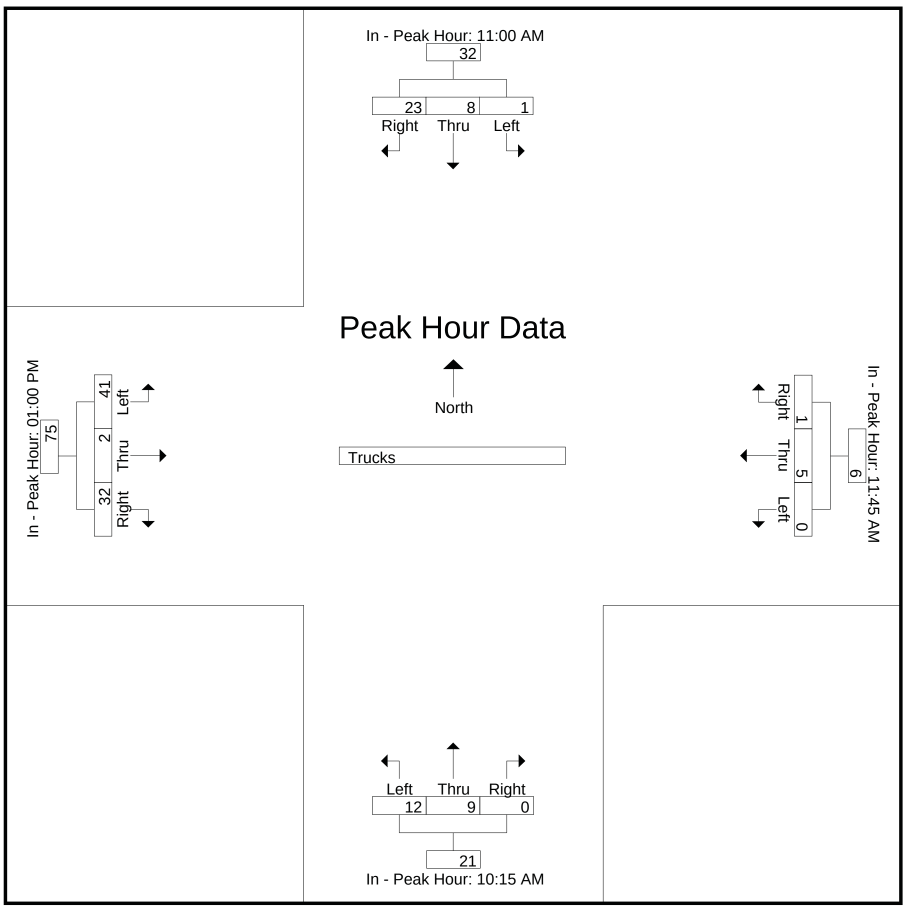
Accurate Counts
978-664-2565



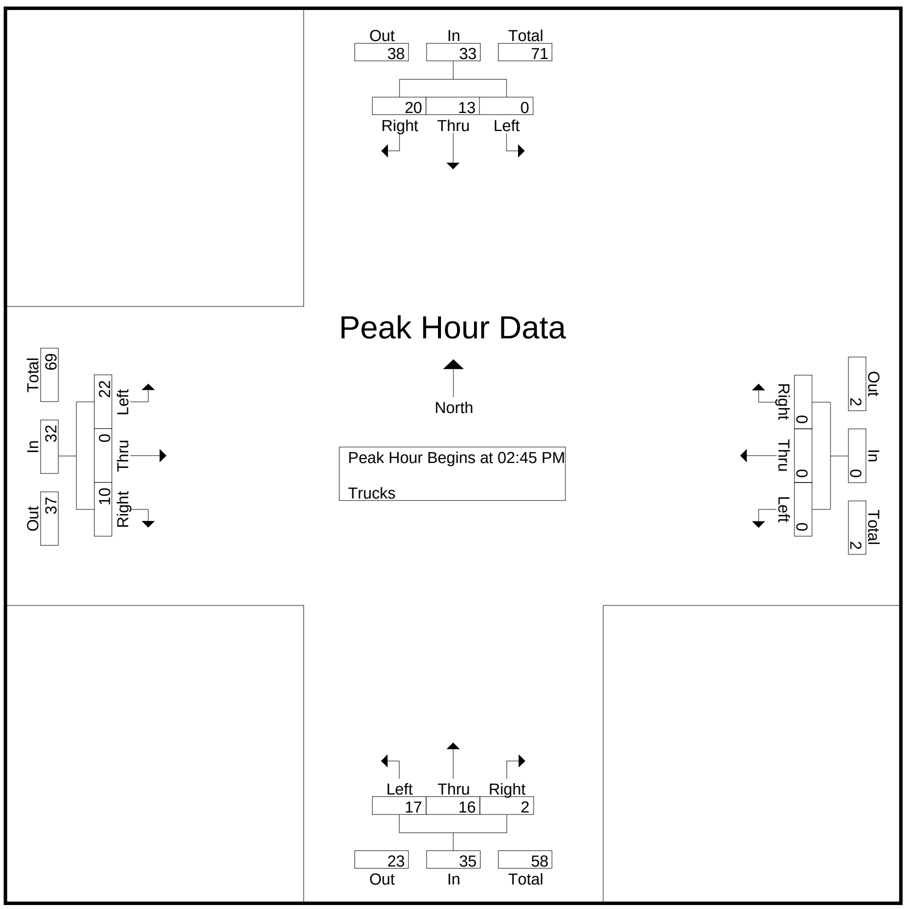
Accurate Counts
978-664-2565



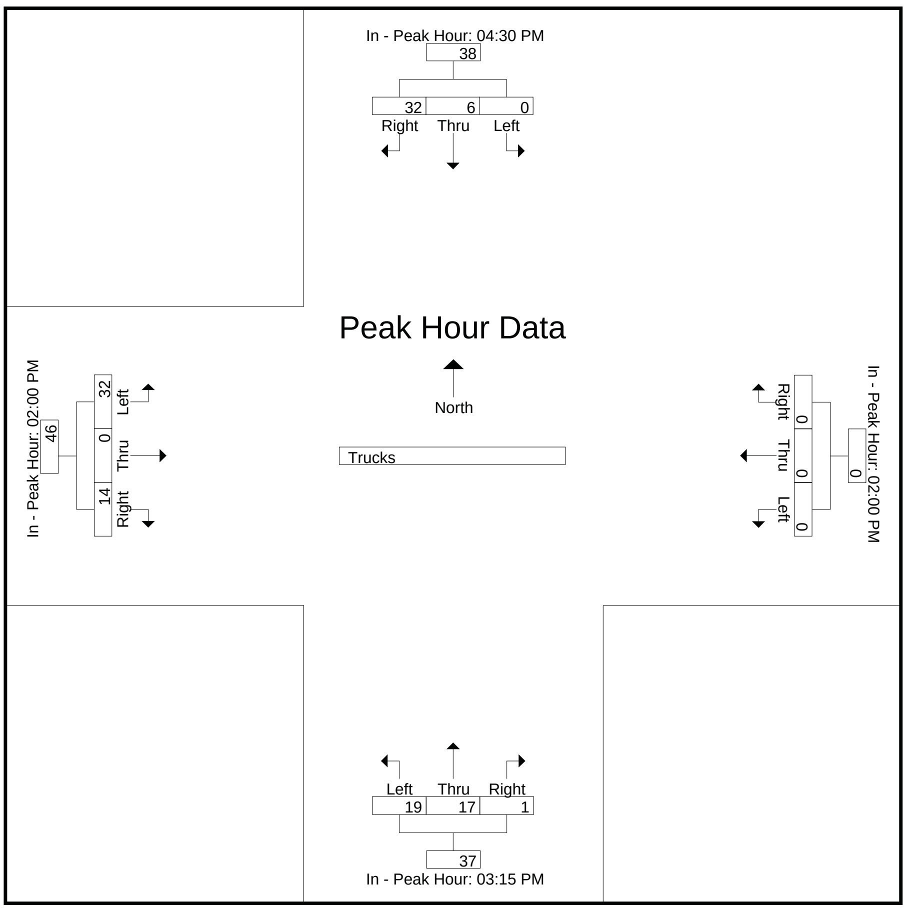
Accurate Counts
978-664-2565



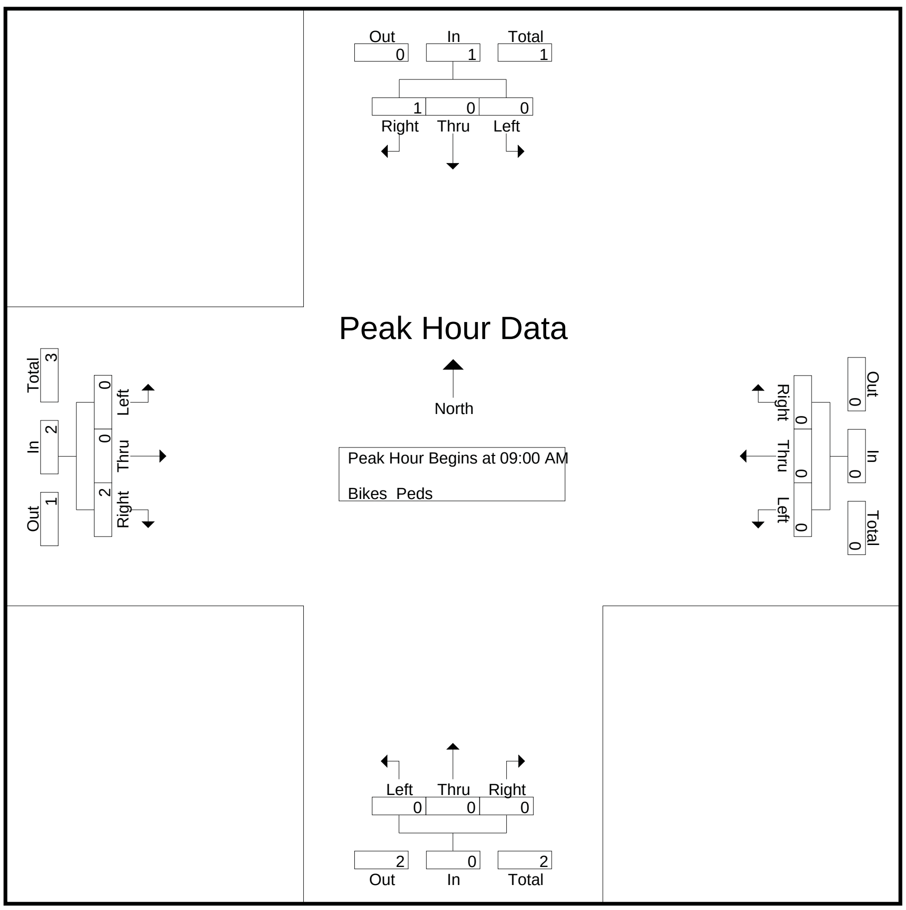
Accurate Counts
978-664-2565



Accurate Counts
978-664-2565

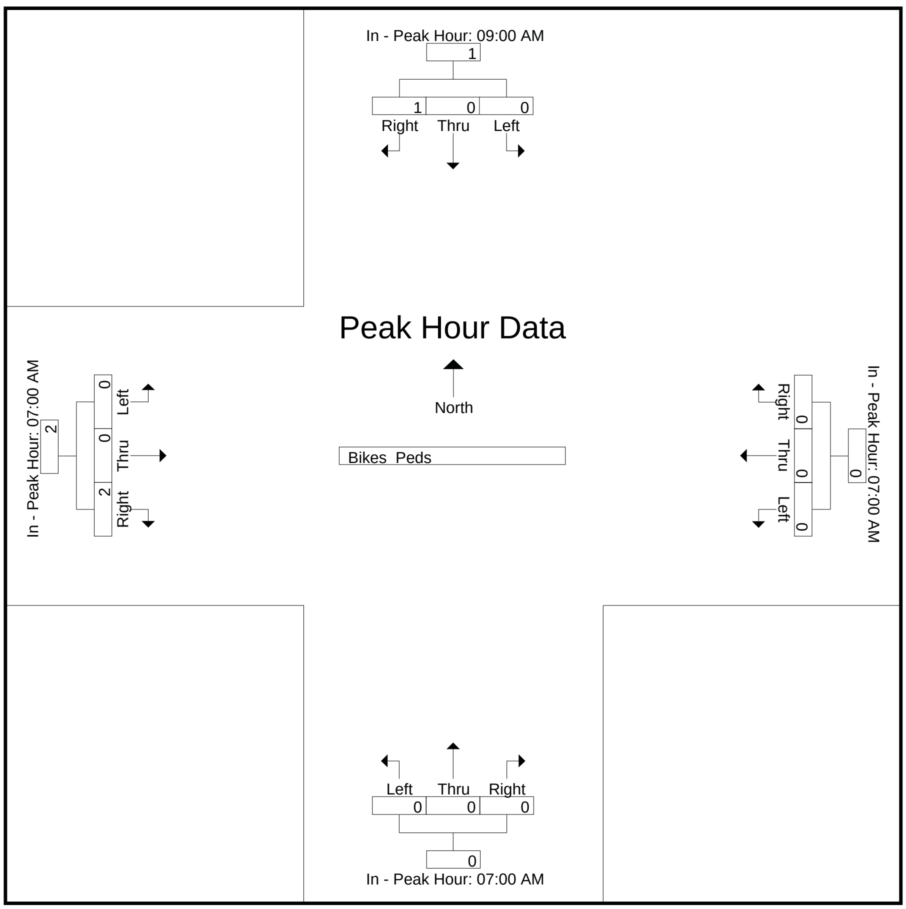


Accurate Counts
978-664-2565

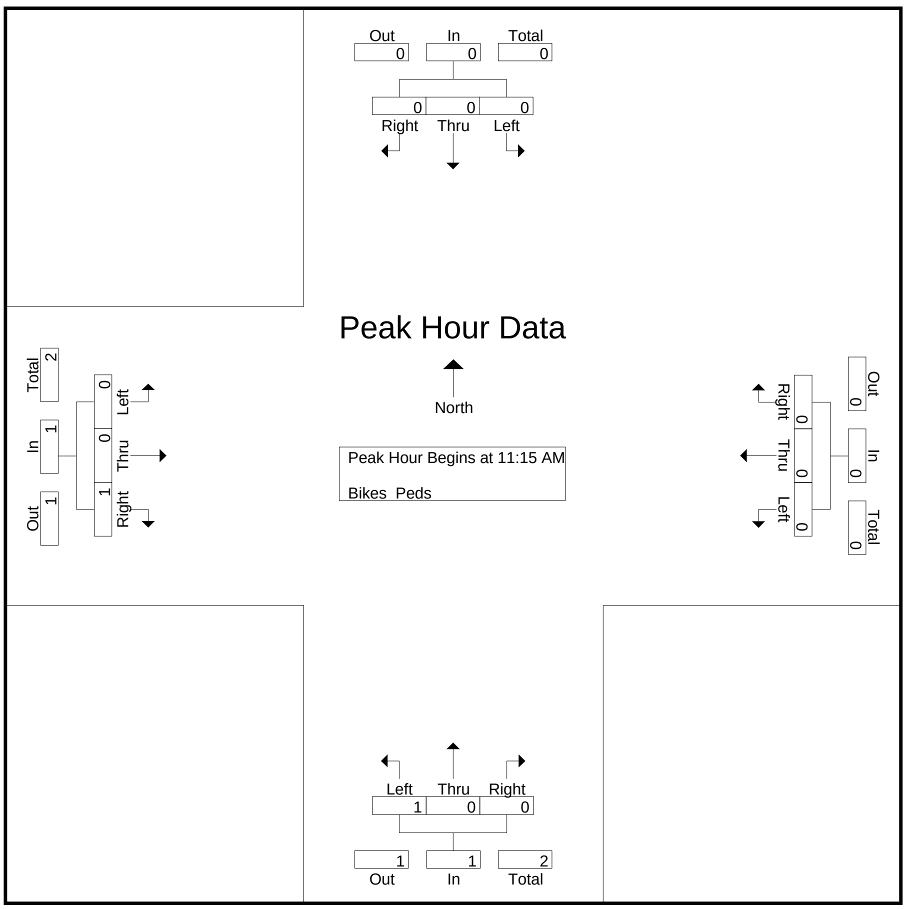


Accurate Counts

978-664-2565

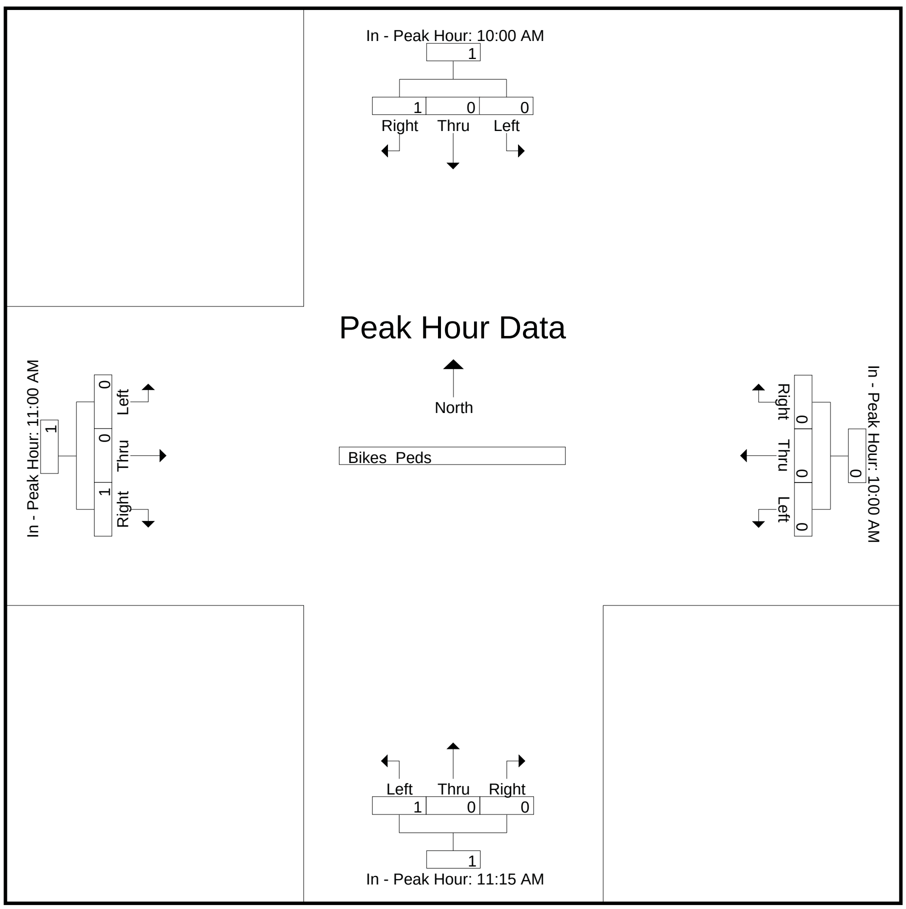


Accurate Counts
978-664-2565

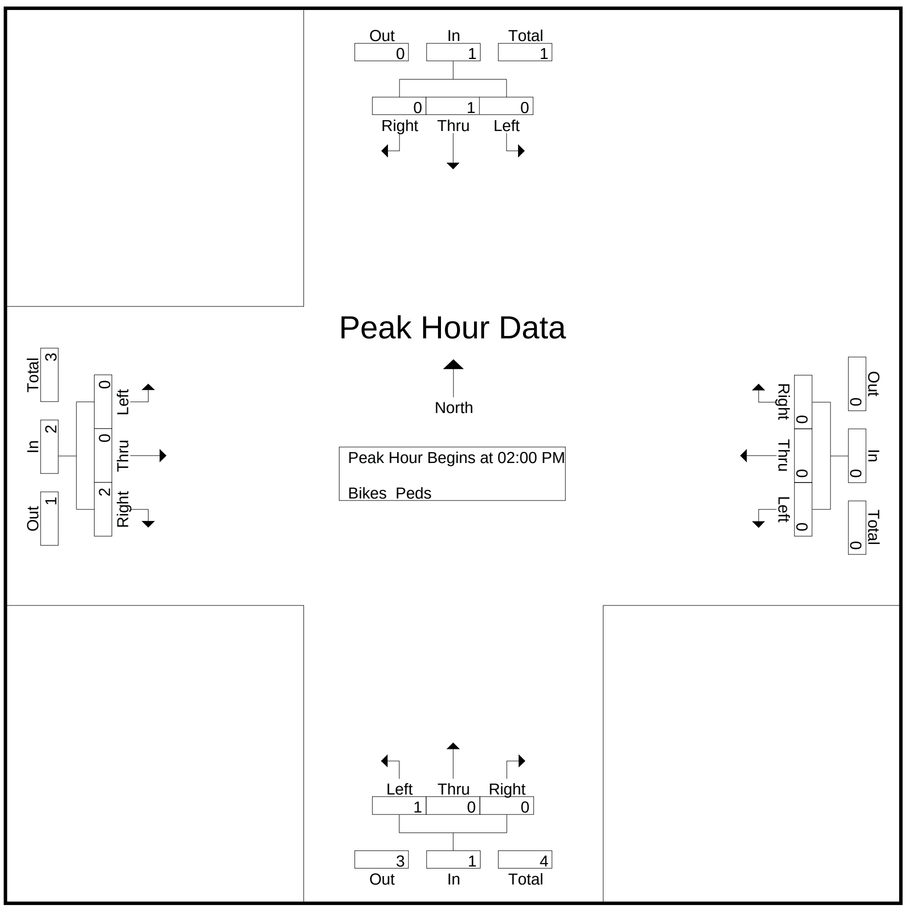


Accurate Counts

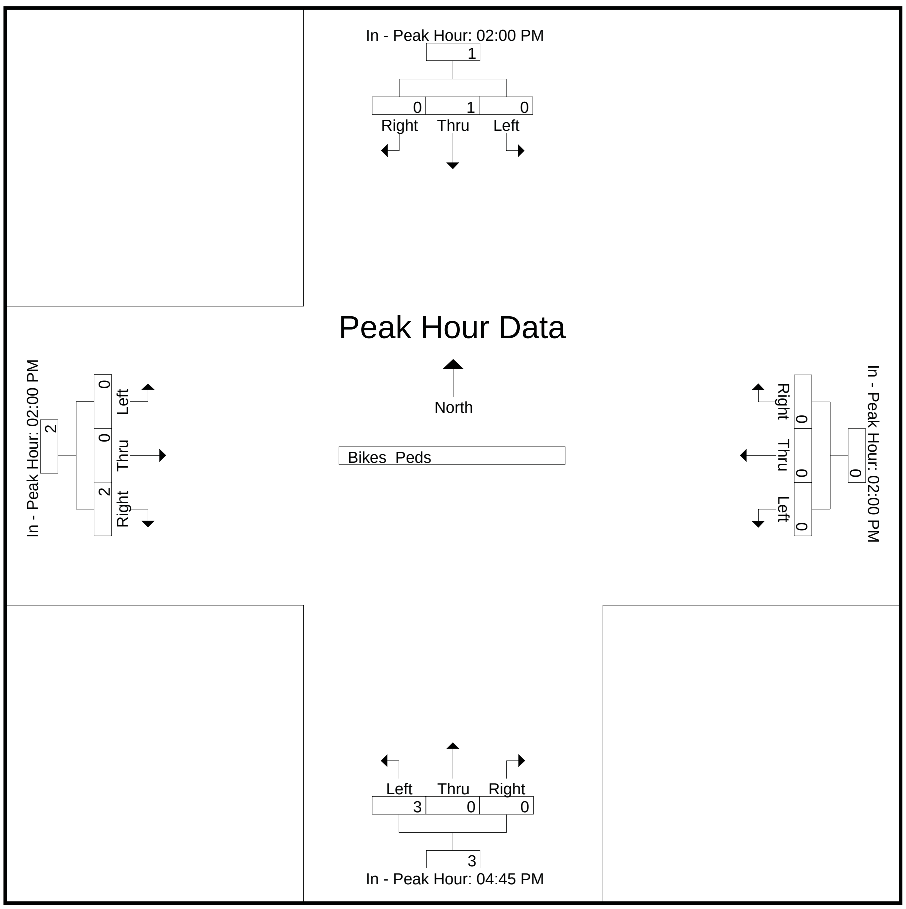
978-664-2565



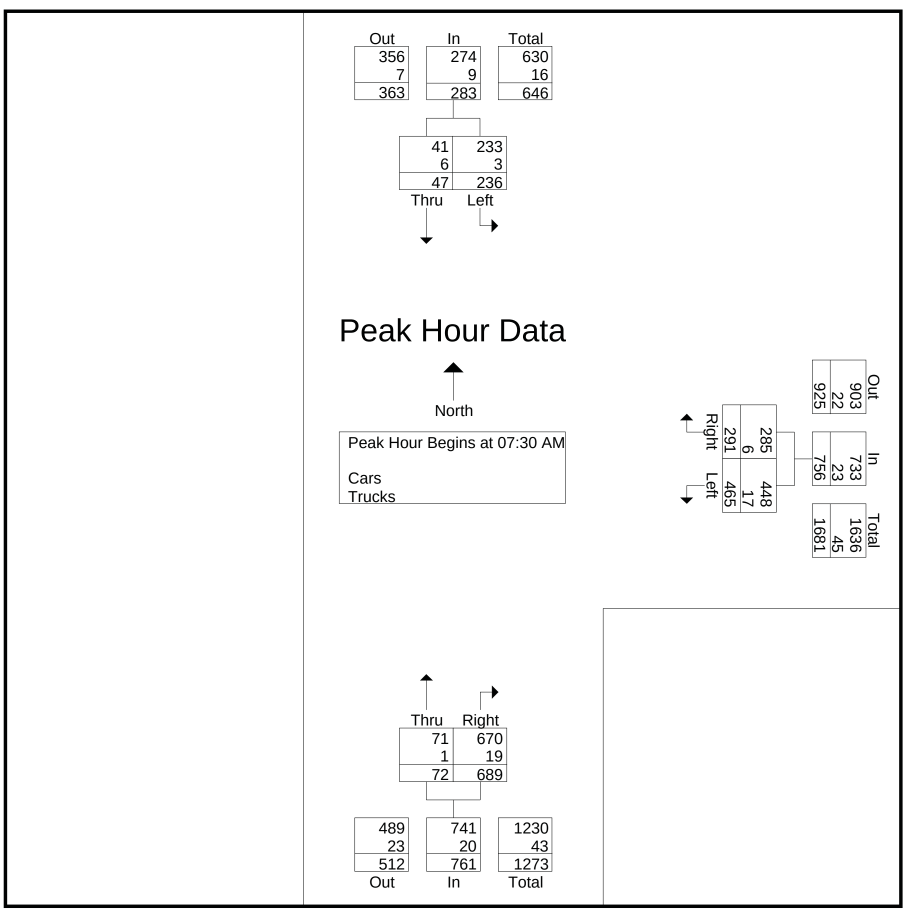
Accurate Counts
978-664-2565



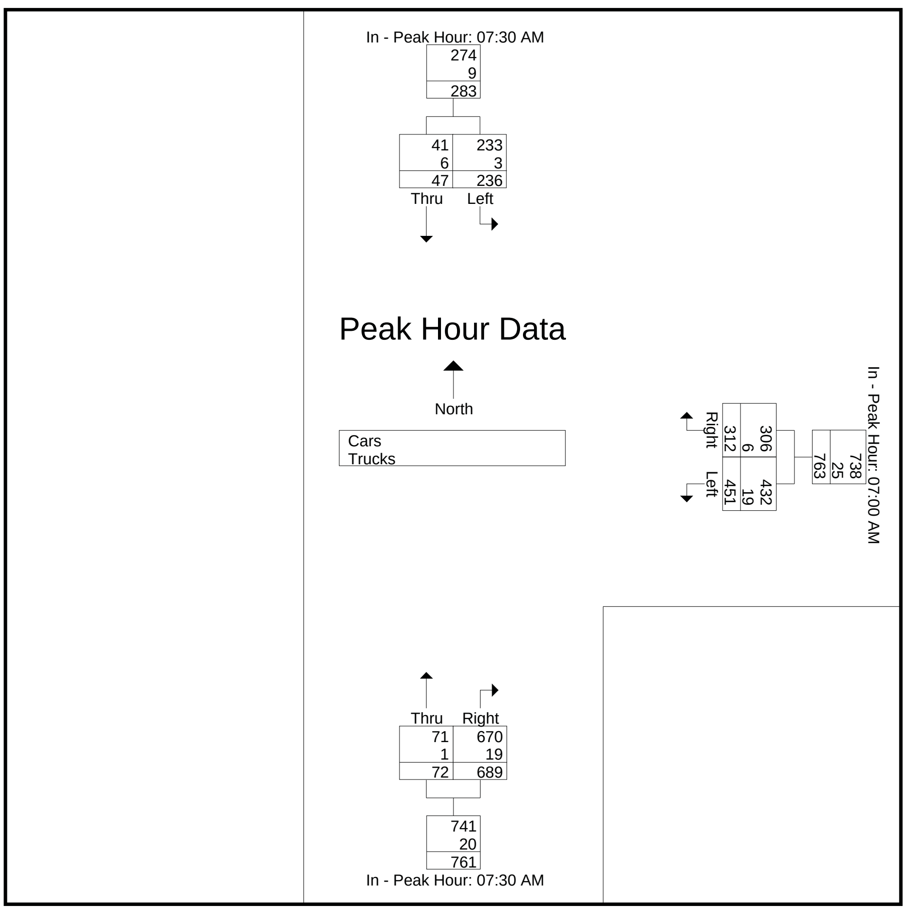
Accurate Counts
978-664-2565



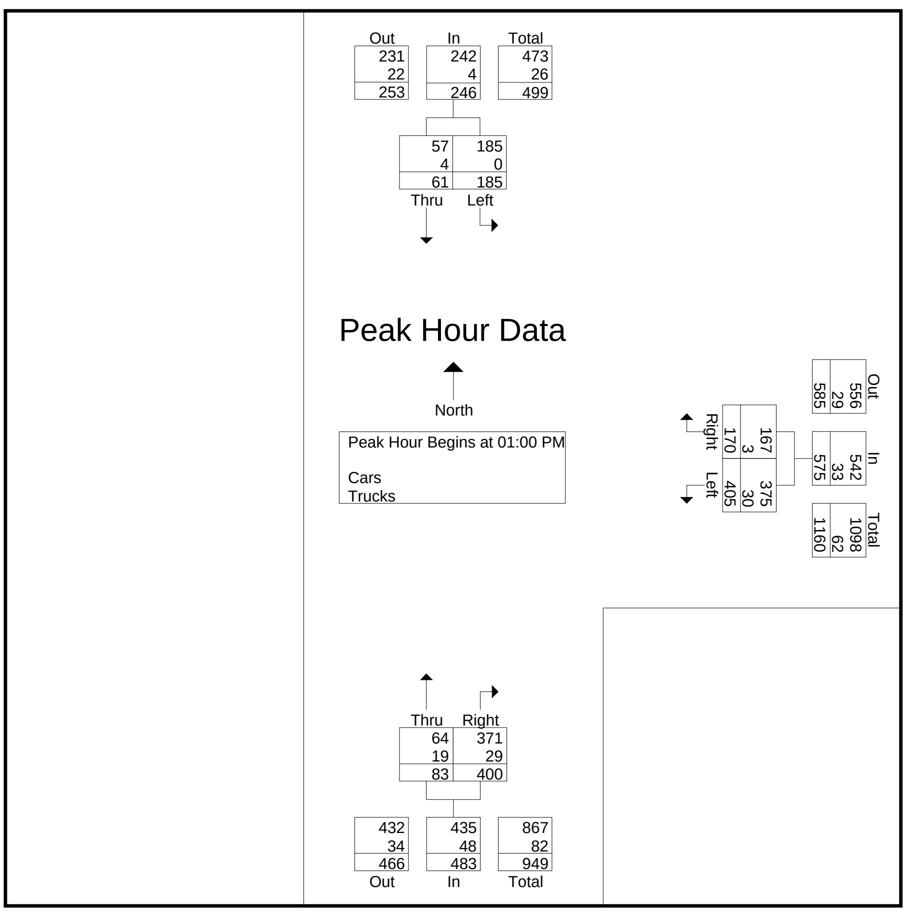
Accurate Counts
978-664-2565



Accurate Counts
978-664-2565

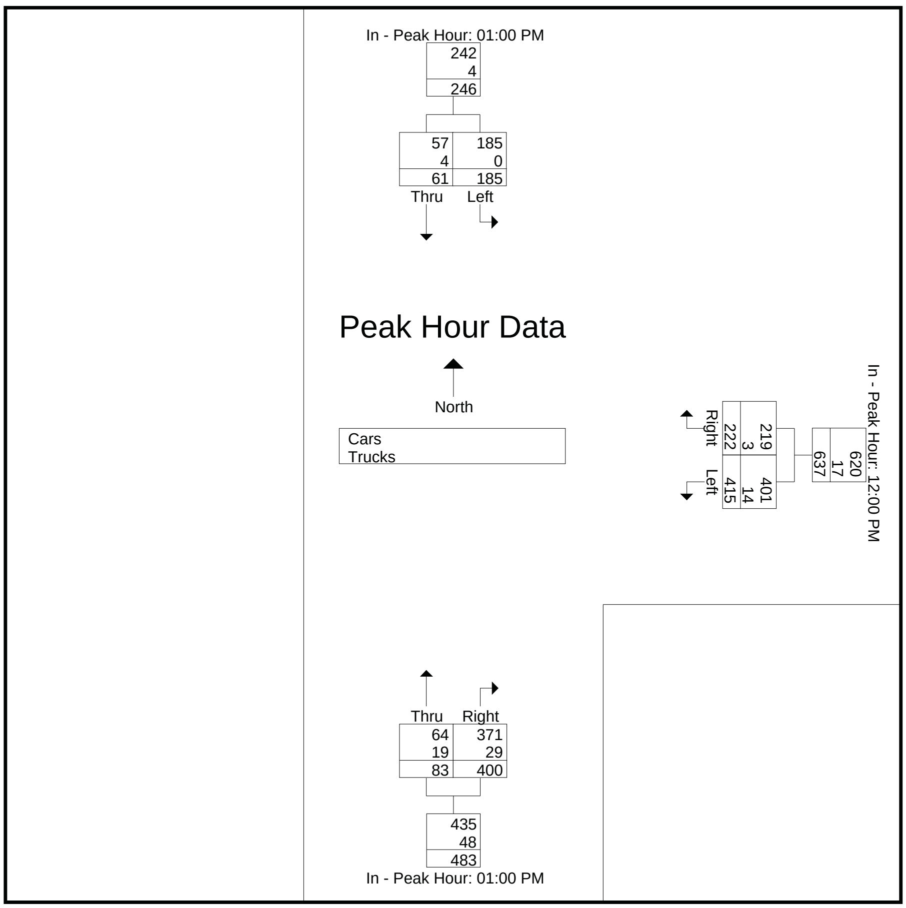


Accurate Counts
978-664-2565

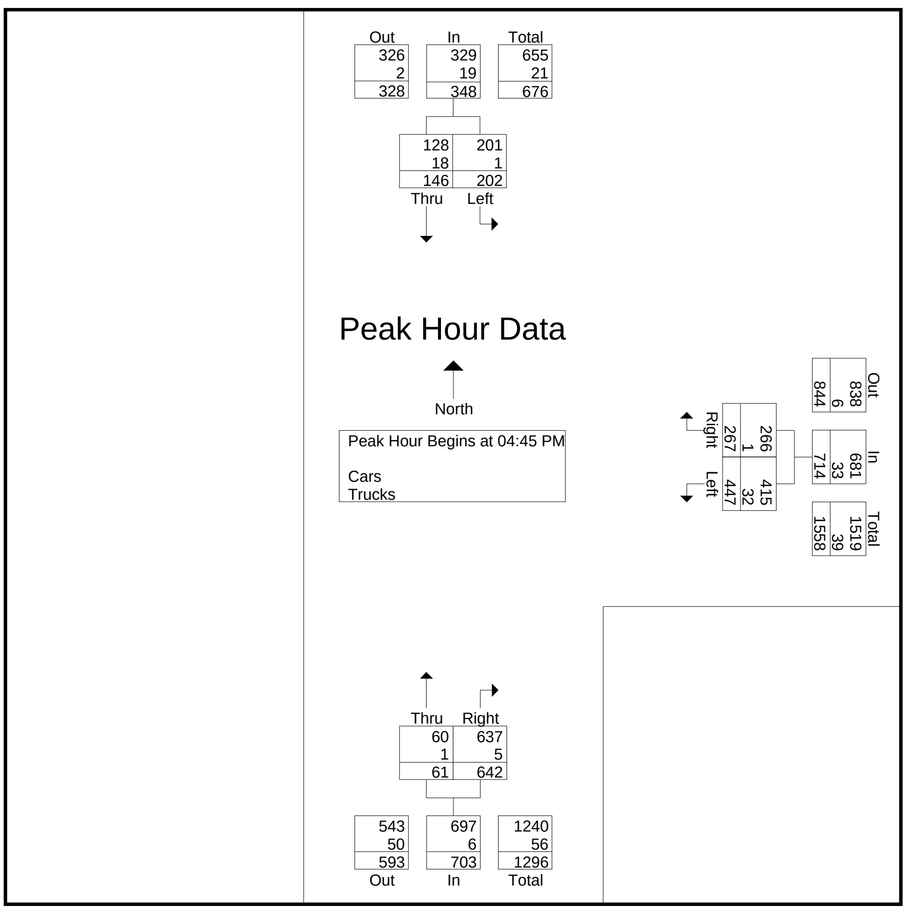


Accurate Counts

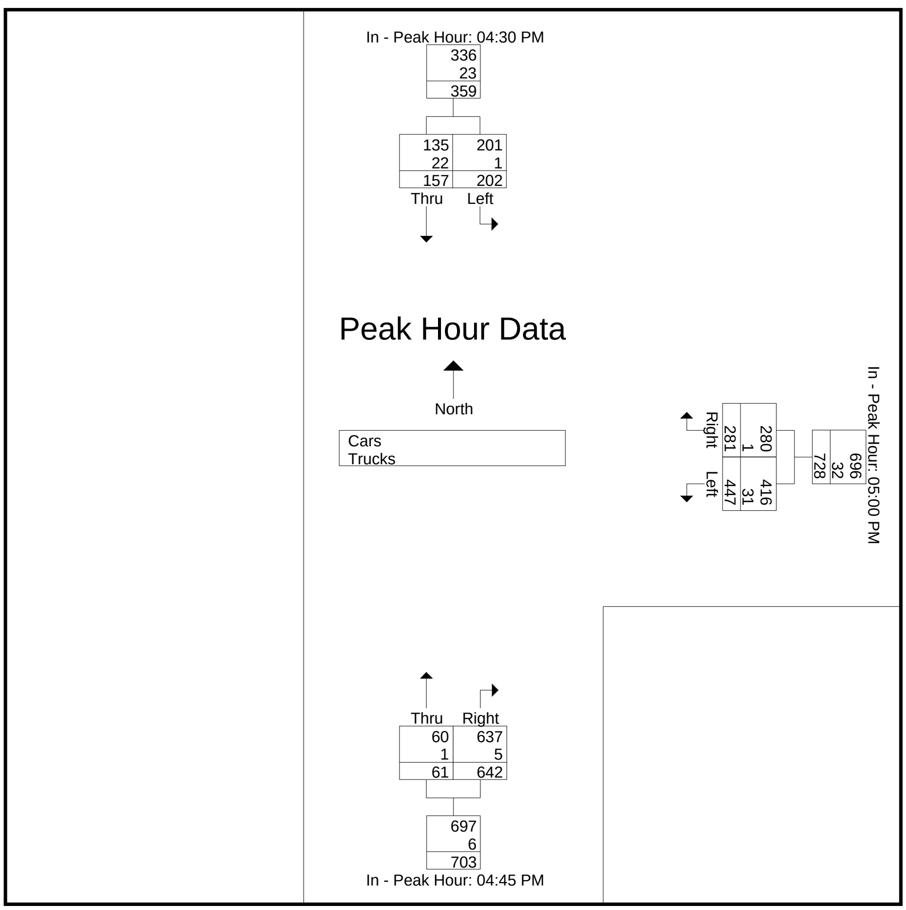
978-664-2565



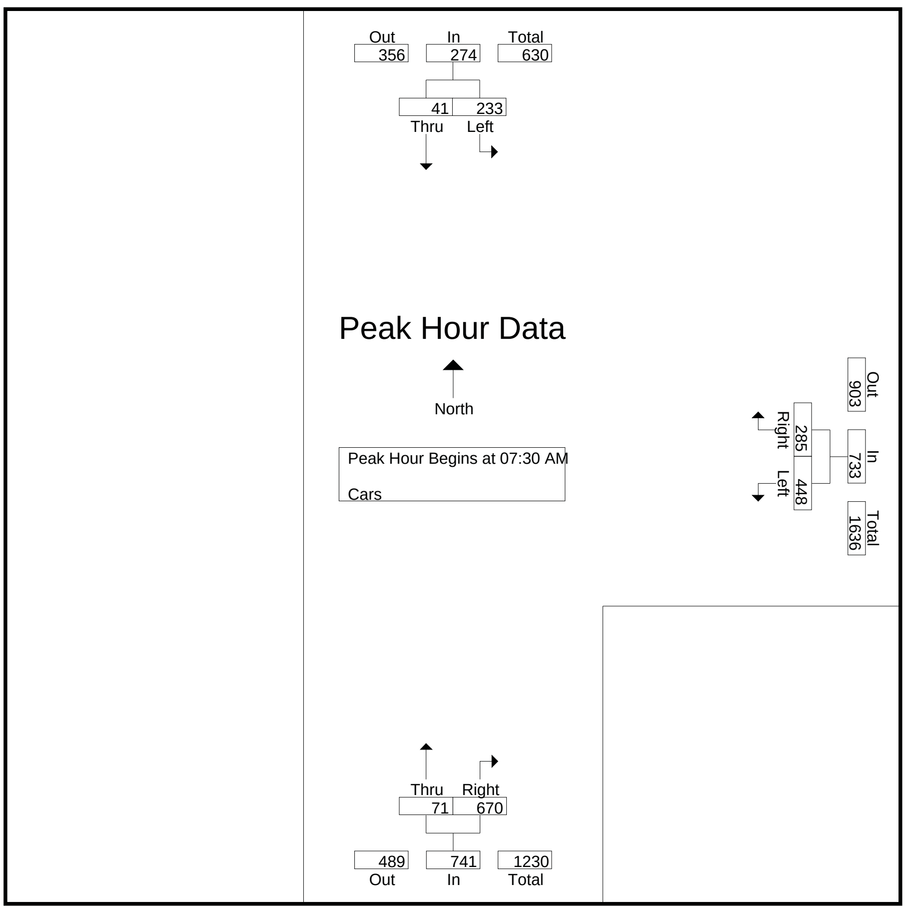
Accurate Counts
978-664-2565



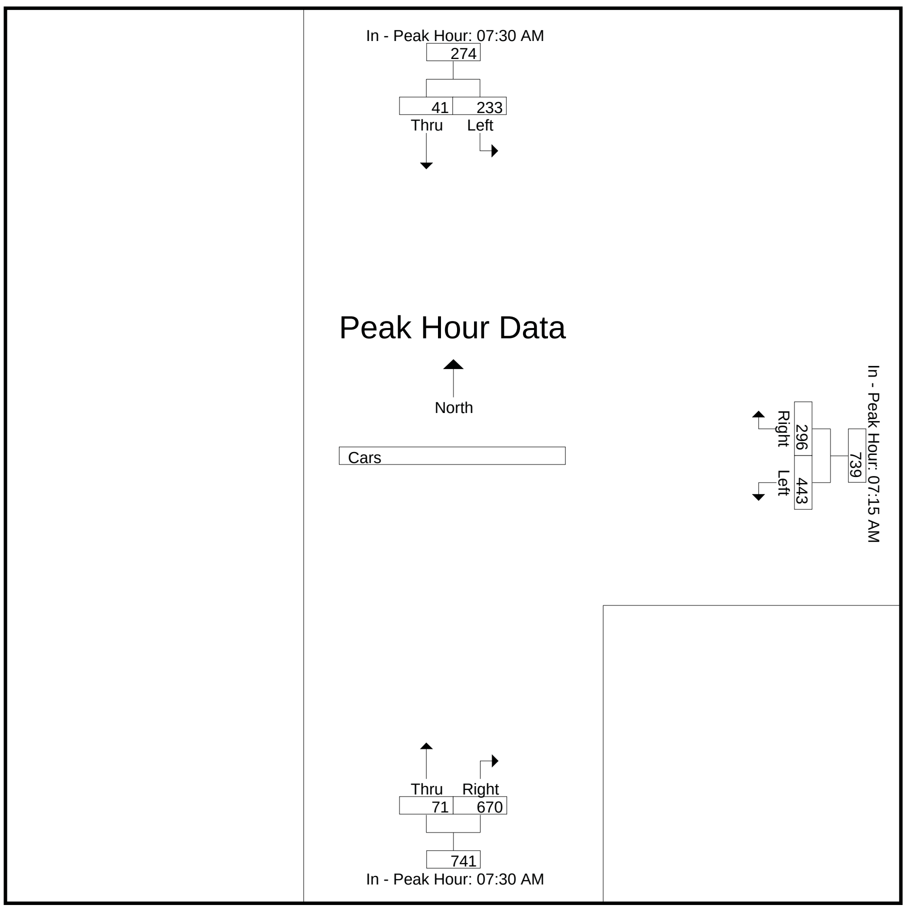
Accurate Counts
978-664-2565



Accurate Counts
978-664-2565

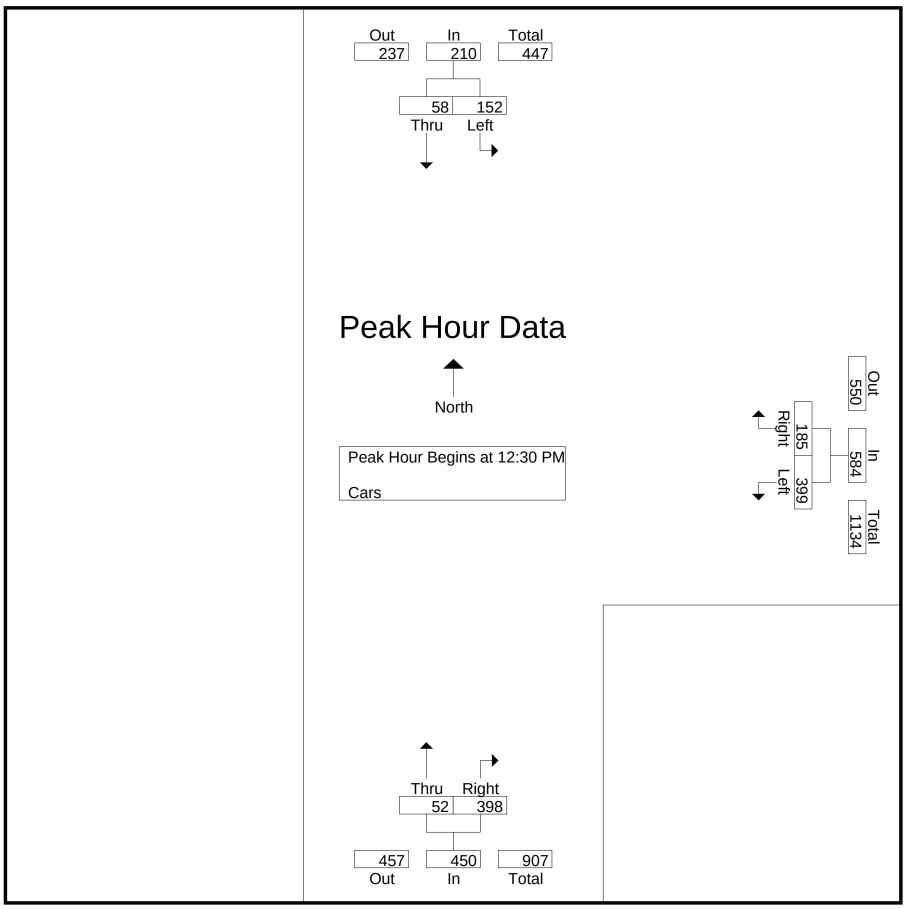


Accurate Counts
978-664-2565

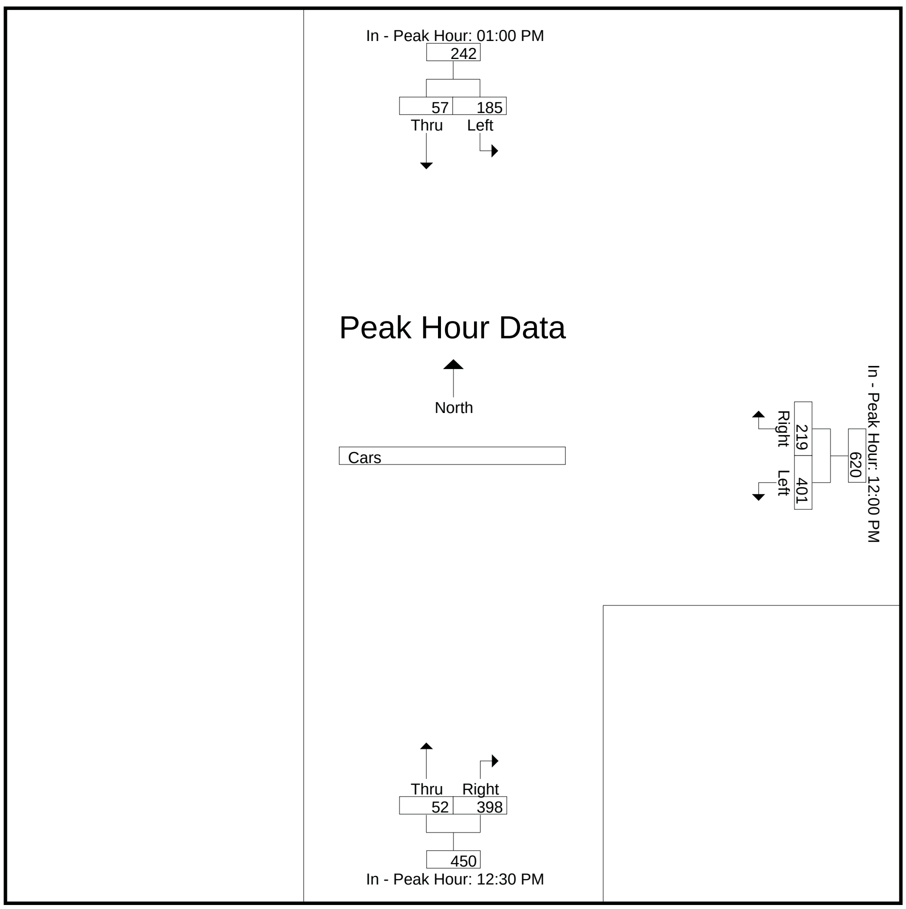


Accurate Counts

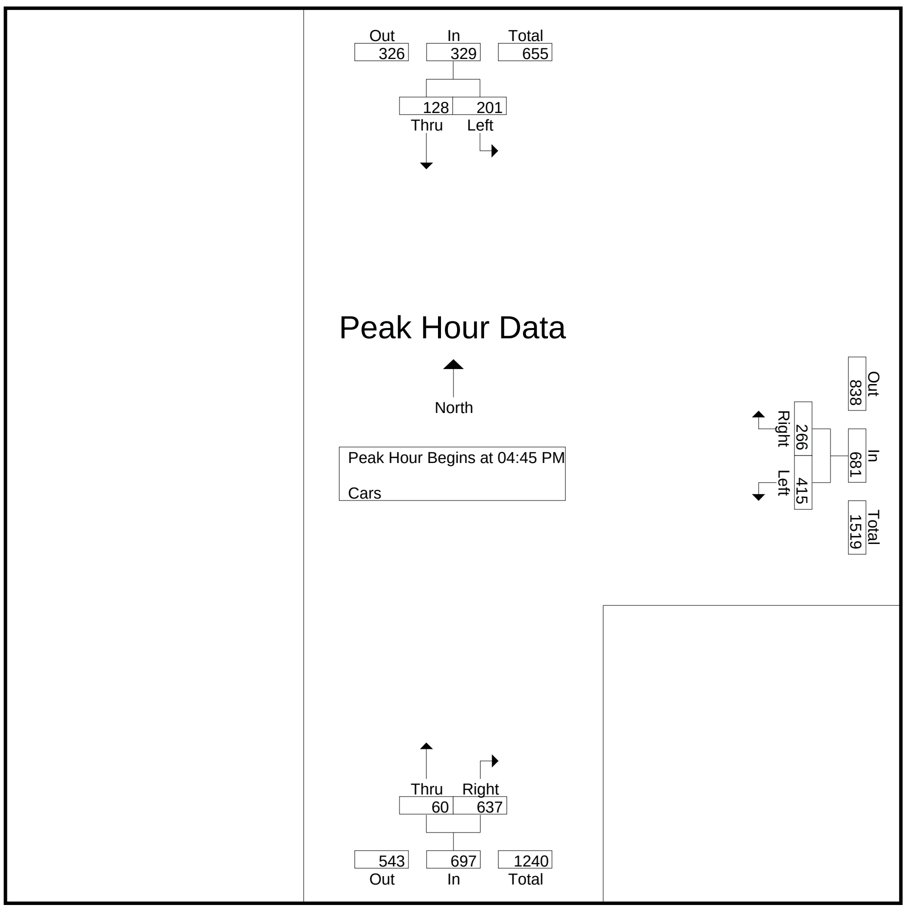
978-664-2565



Accurate Counts
978-664-2565

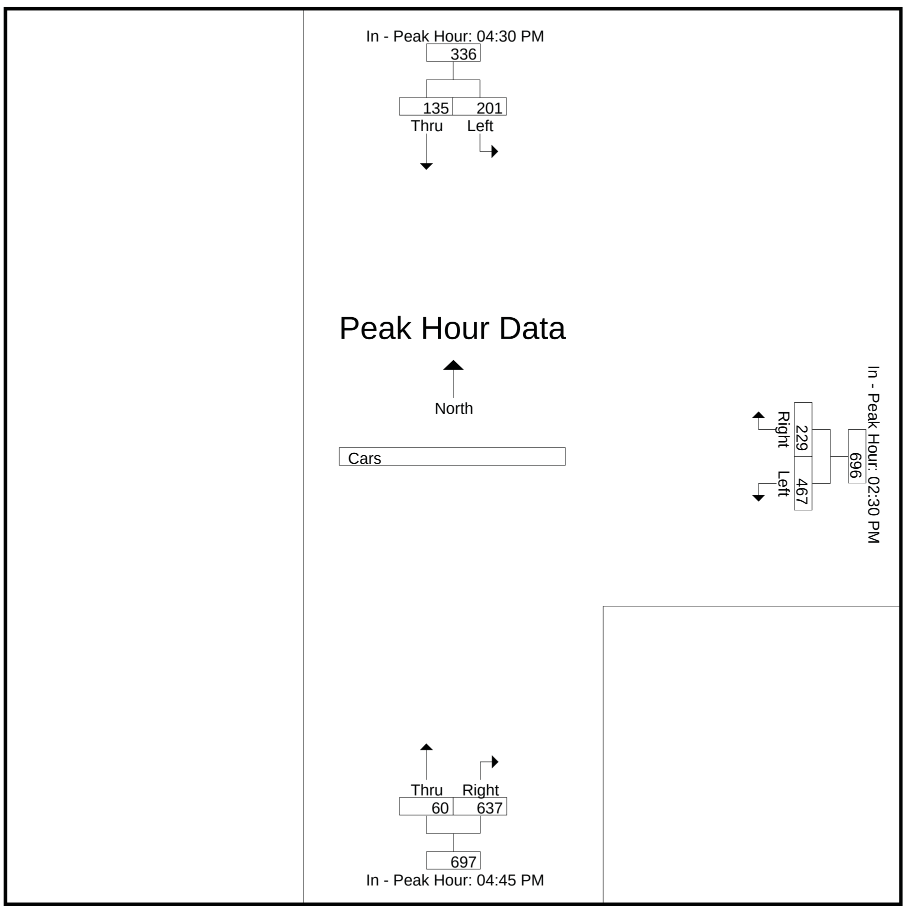


Accurate Counts
978-664-2565

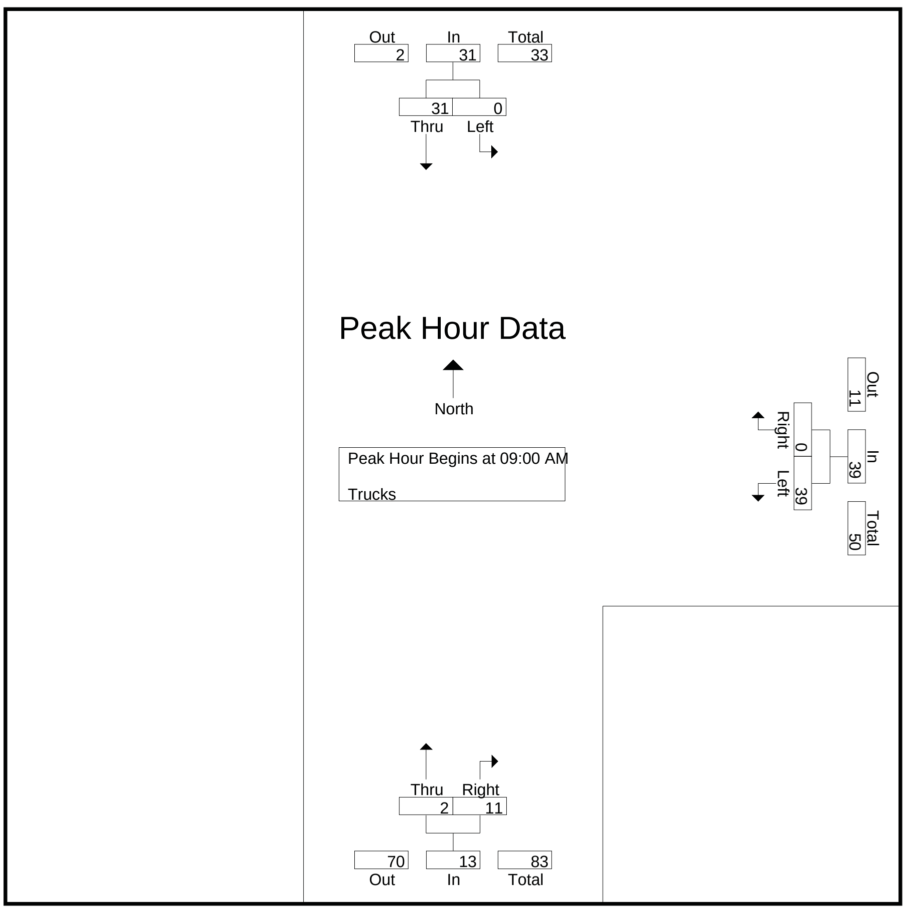


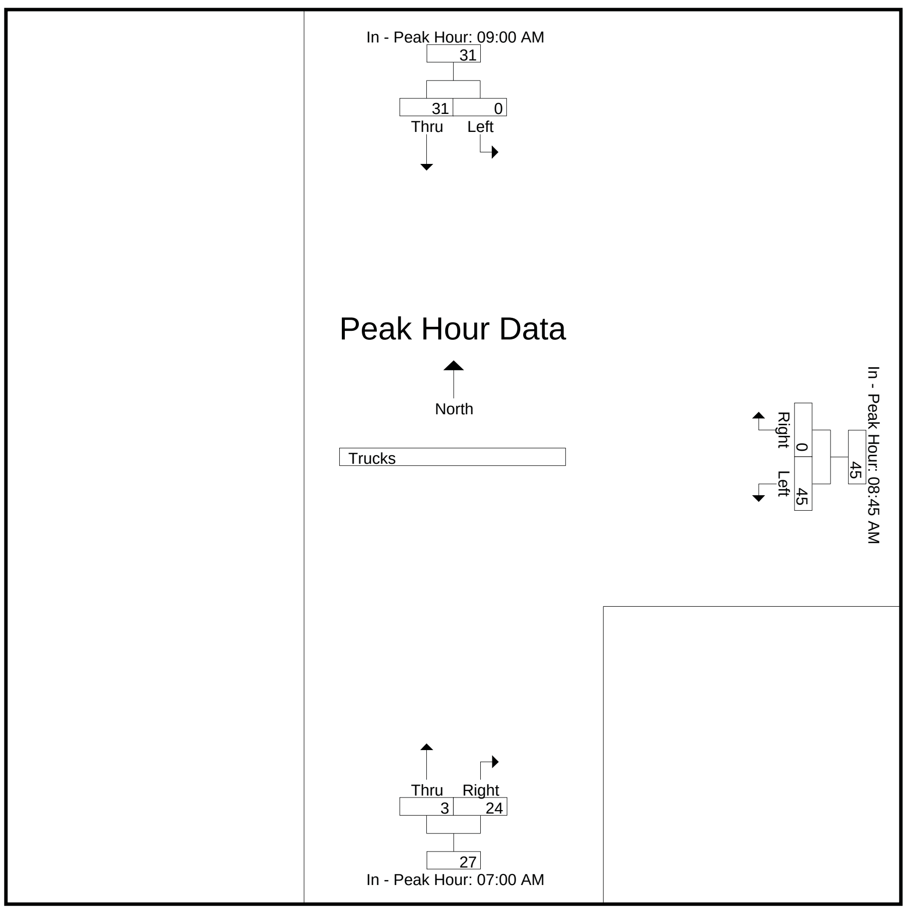
Accurate Counts

978-664-2565

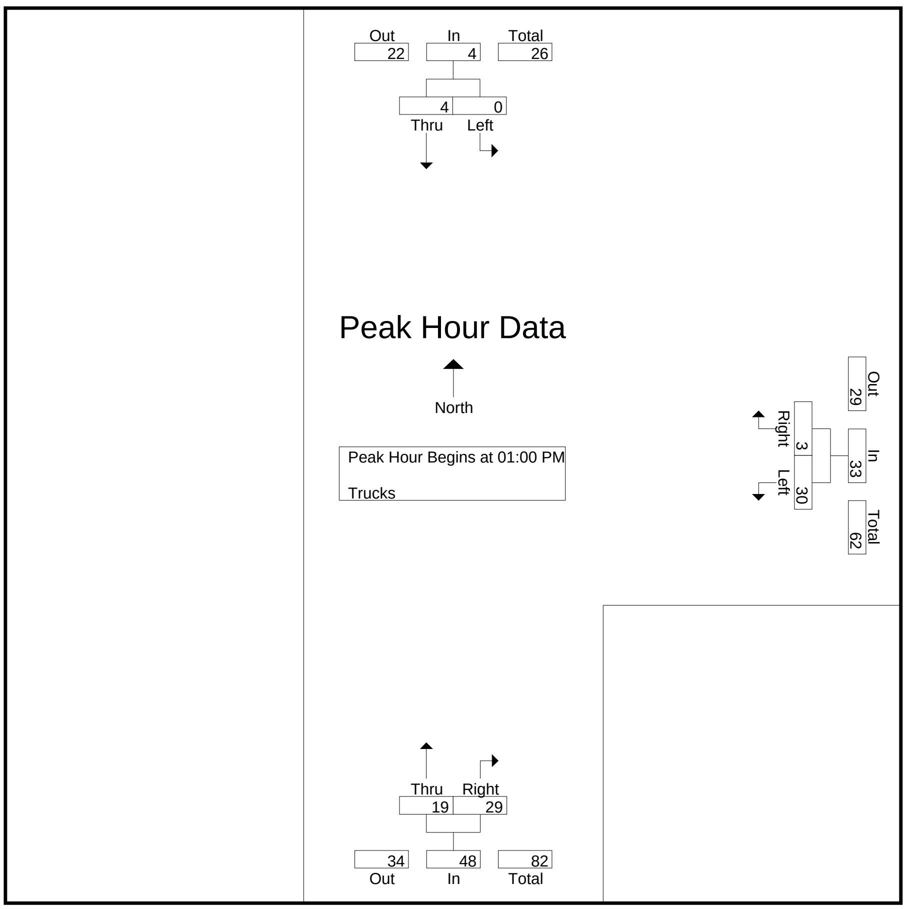


Accurate Counts
978-664-2565



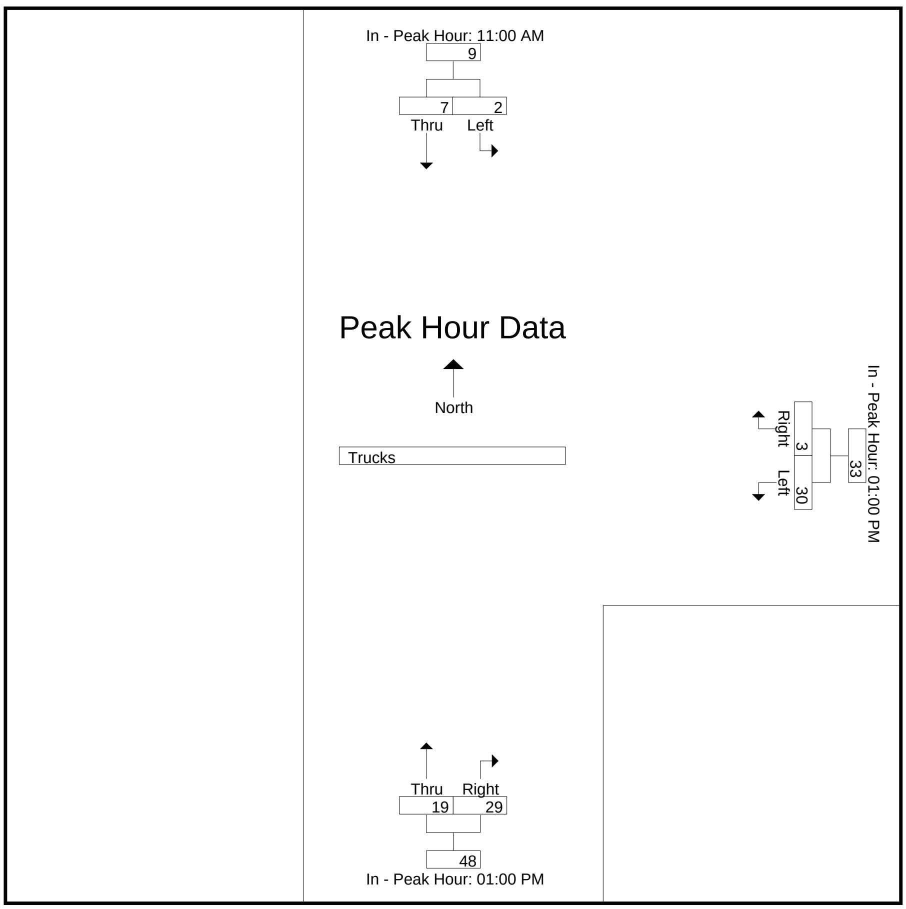

In - Peak Hour: 09:00 AM
31
31
0
Thru
Left
Peak Hour Data
North
Trucks
In - Peak Hour: 08:45 AM
45
Right
0
Left
45
Thru
Right
3
24
27
In - Peak Hour: 07:00 AM

Accurate Counts
978-664-2565

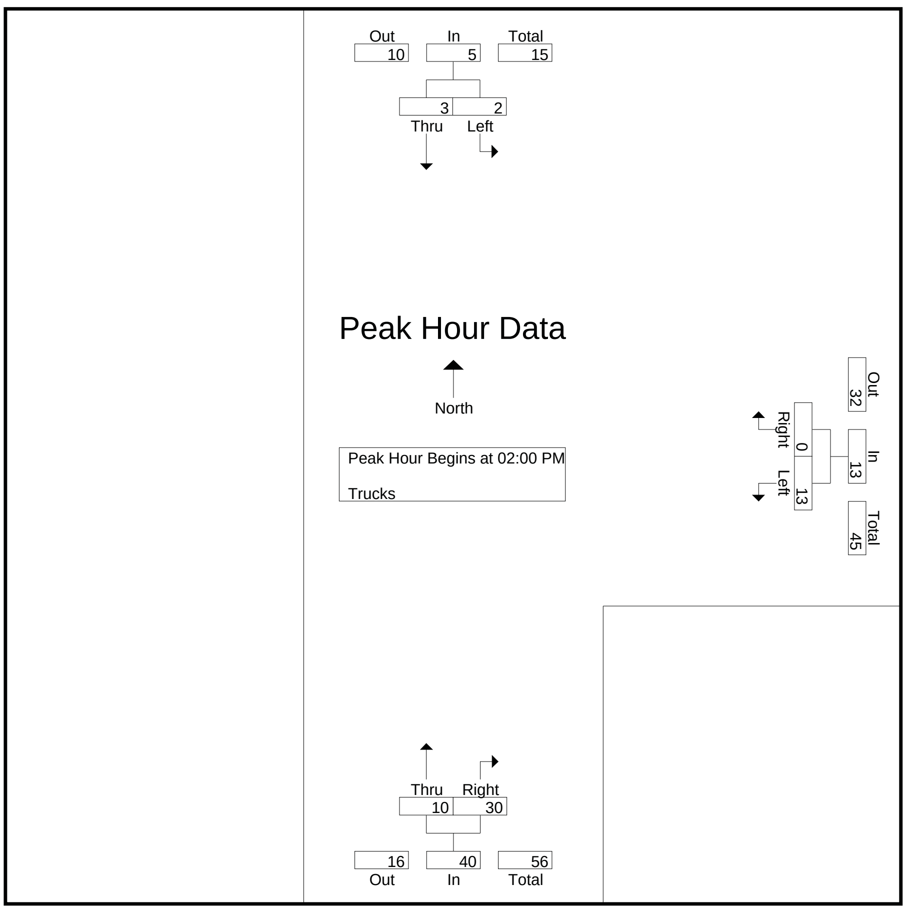


Accurate Counts

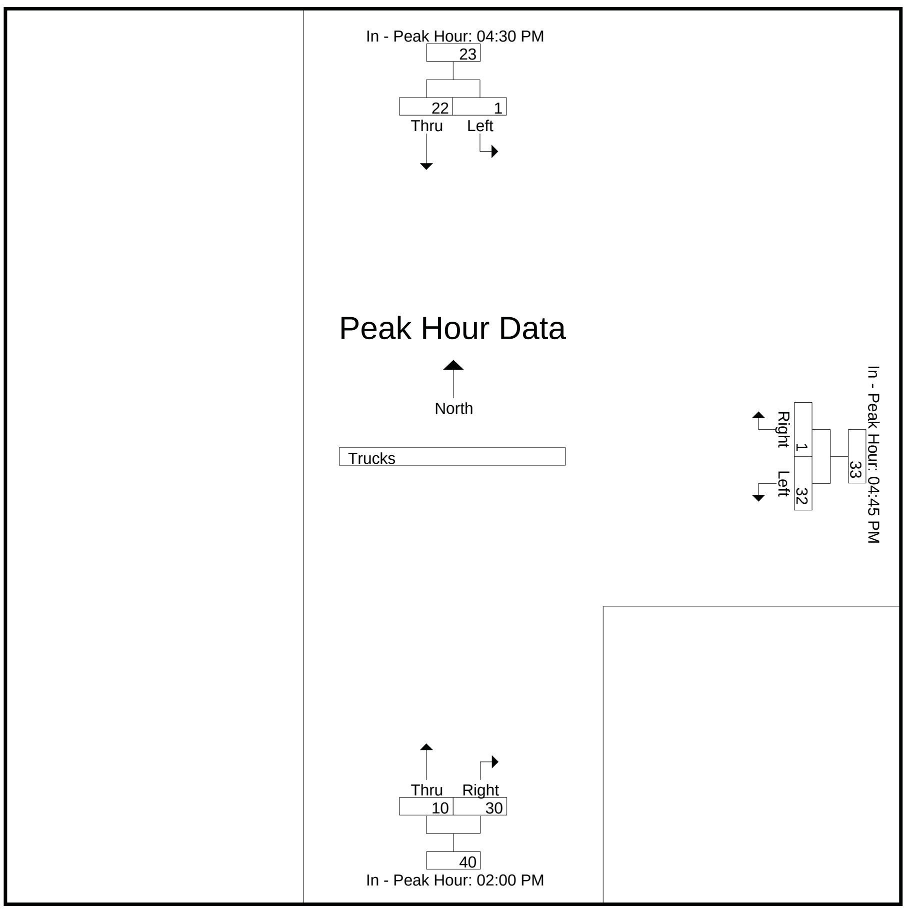
978-664-2565



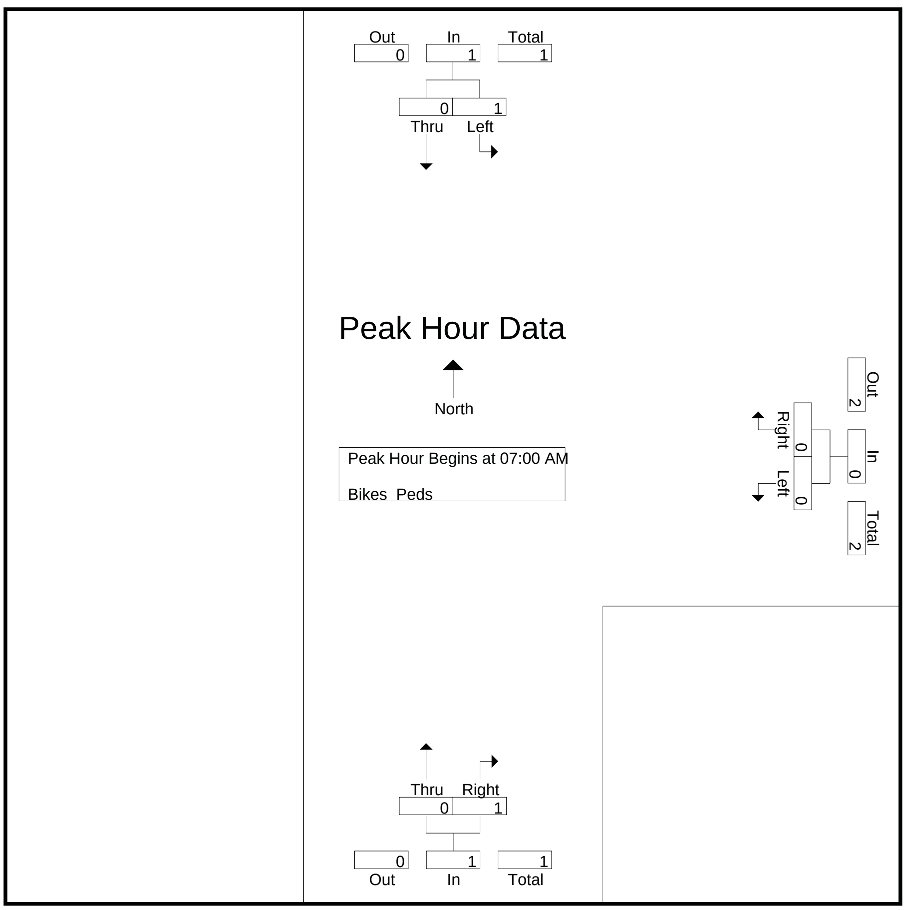
Accurate Counts
978-664-2565



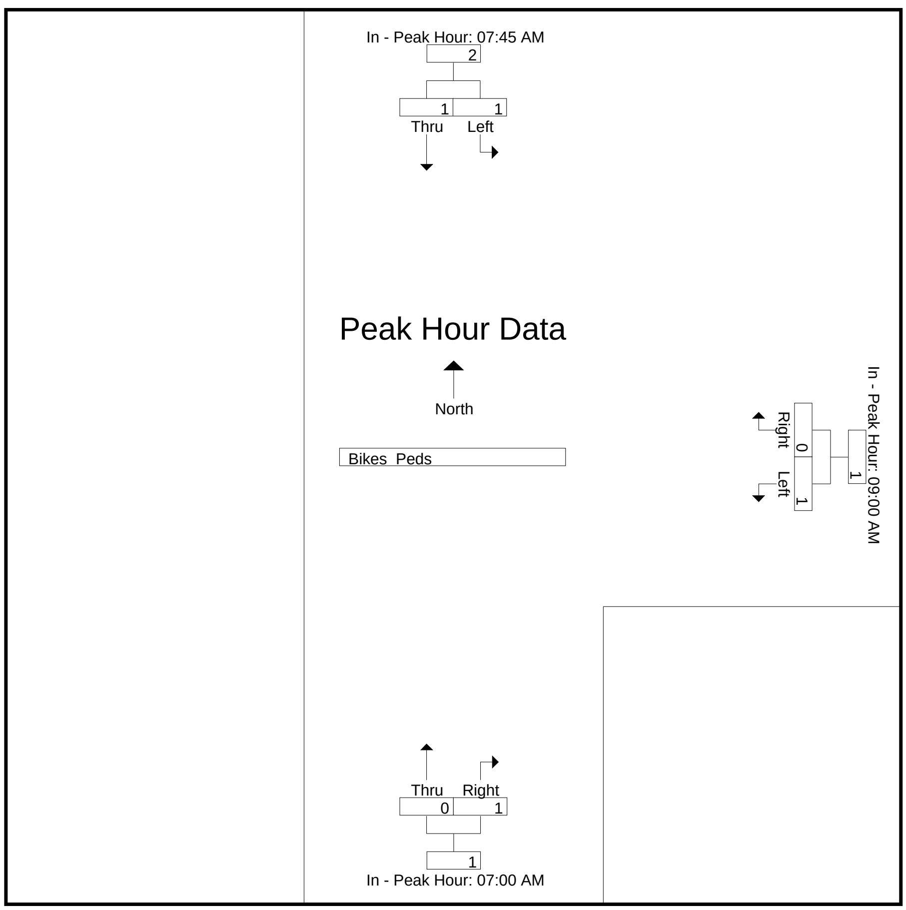
Accurate Counts
978-664-2565



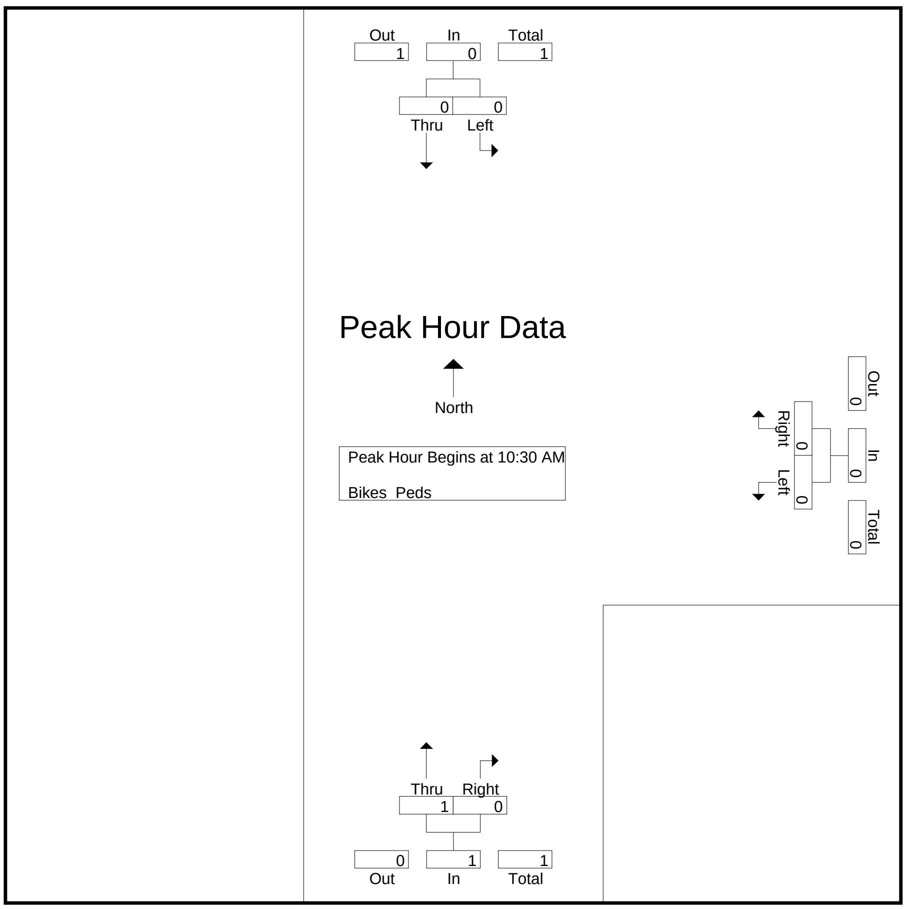
Accurate Counts
978-664-2565



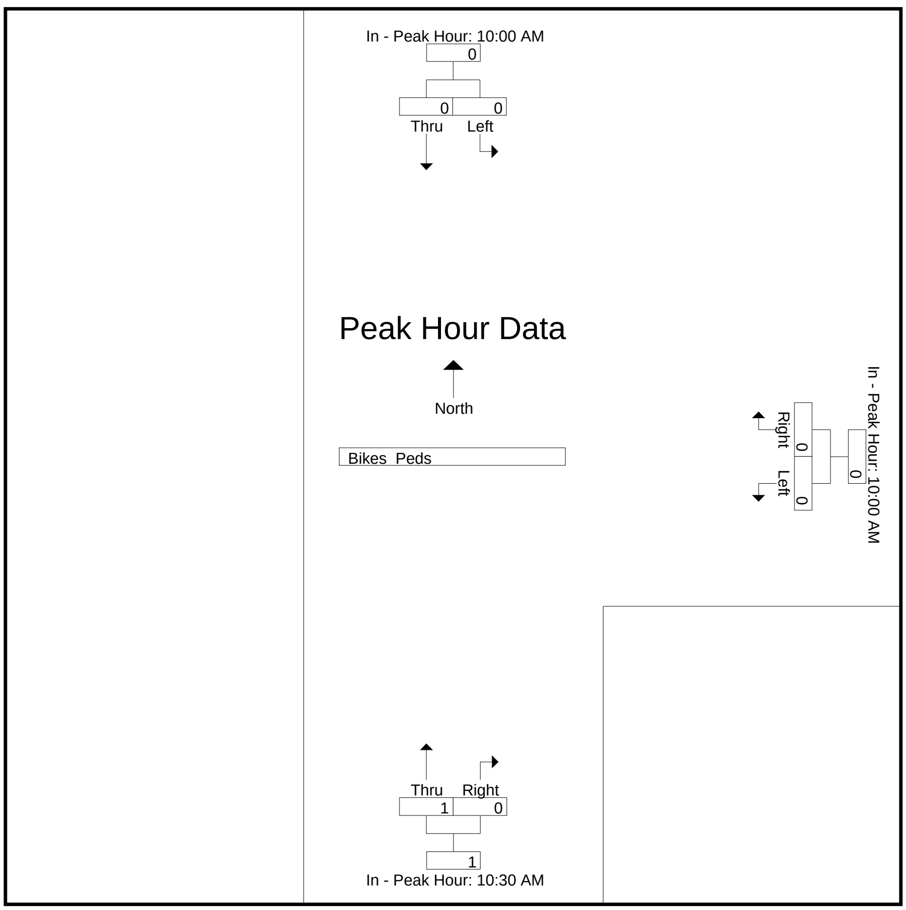
Accurate Counts
978-664-2565

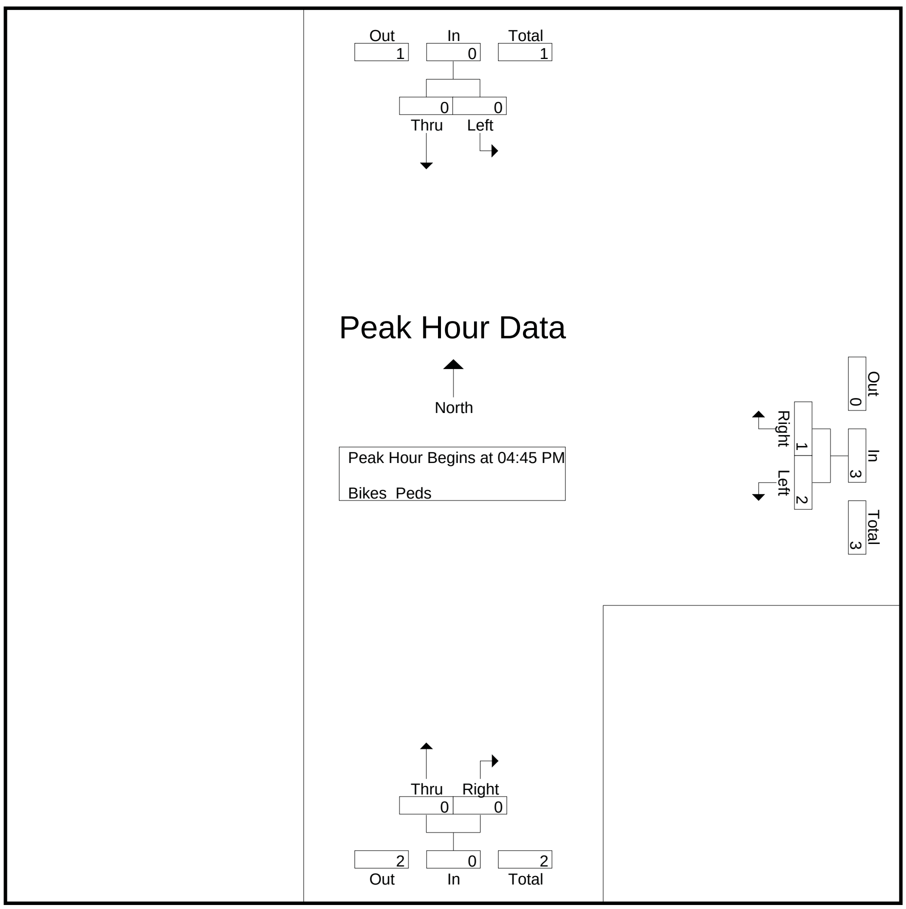


Accurate Counts
978-664-2565



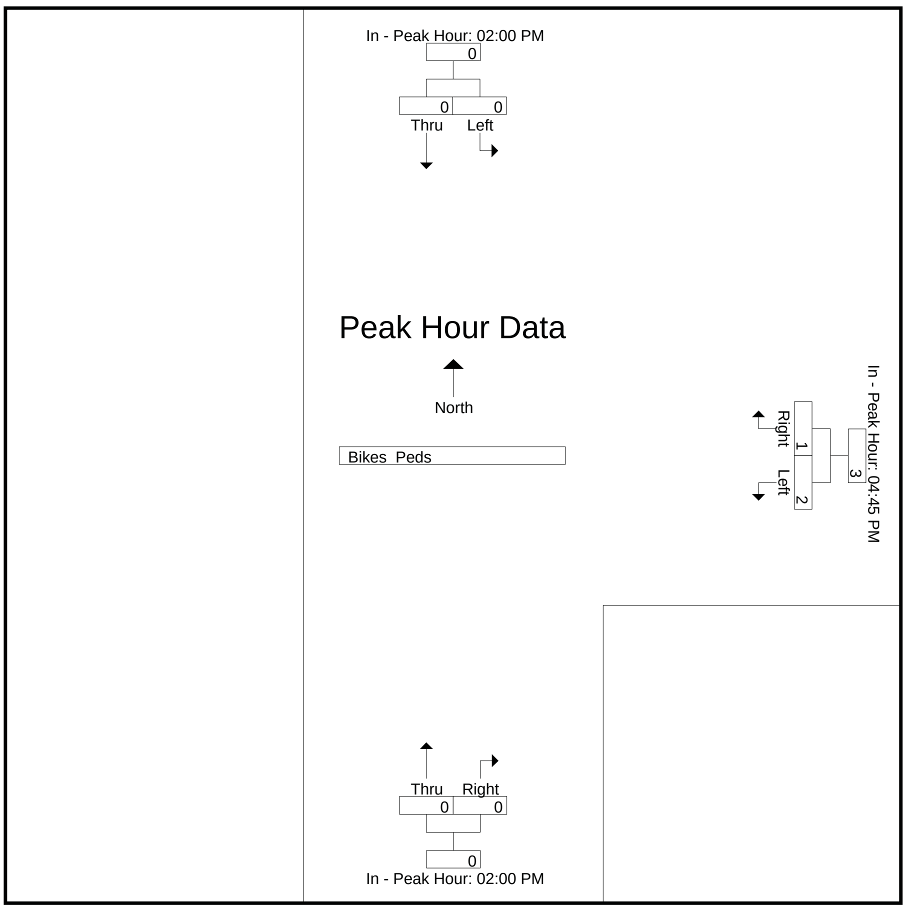
Accurate Counts
978-664-2565





Out
In
Total
1
0
1
0
0
Thru
Left
Peak Hour Data
North
Peak Hour Begins at 04:45 PM
Bikes Peds
Out
0
Right
1
In
3
Left
2
Total
3
Thru
Right
0
0
2
0
2
Out
In
Total

Accurate Counts
978-664-2565



BOSTON TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

U-Turn	Left	Thru	Right
0	13	124	0
0	14	128	0
0	13	131	0
0	11	128	0
0	9	130	0
0	7	126	0
0	9	127	0
0	8	123	0

U-Turn	Left	Thru	Right
0	20	0	10
0	18	0	9
0	15	0	7
0	10	0	5
0	5	0	3
0	7	0	4
0	6	0	5
0	5	0	4

9:00 AM

U-Turn	Left	Thru	Right
0	18	126	0
0	17	129	0
0	23	131	0
0	28	127	0
0	33	119	0
0	37	106	0
0	35	109	0
0	32	108	0

U-Turn	Left	Thru	Right
0	13	0	18
0	11	0	17
0	8	0	15
0	6	0	14
0	4	0	12
0	5	0	13
0	6	0	11
0	5	0	12

6:00 PM

U-Turn	Left	Thru	Right
0	**51**	**511**	**0**
0.98			
0.0%	**19.6%**	**2.7%**	**0.0%**

U-Turn	Left	Thru	Right
0	**63**	**0**	**31**
0.78			
0.0%	**15.9%**	**0.0%**	**9.7%**

U-Turn	Left	Thru	Right
0	**133**	**461**	**0**
0.96			
0.0%	**7.5%**	**1.3%**	**0.0%**

U-Turn	Left	Thru	Right
0	**21**	**0**	**50**
0.89			
0.0%	**9.5%**	**0.0%**	**2.0%**

BOSTON TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

U-Turn	Left	Thru	Right
0	3	5	0
0	3	4	0
0	2	2	0
0	2	3	0
0	3	2	0
0	2	4	0
0	2	5	0
0	3	4	0

U-Turn	Left	Thru	Right
0	4	0	2
0	1	0	0
0	2	0	0
0	3	0	1
0	2	0	0
0	4	0	1
0	1	0	0
0	3	0	0

9:00 AM

U-Turn	Left	Thru	Right
0	1	7	0
0	2	2	0
0	1	2	0
0	3	1	0
0	2	1	0
0	4	2	0
0	1	2	0
0	2	1	0

U-Turn	Left	Thru	Right
0	0	0	0
0	1	0	0
0	0	0	1
0	0	0	0
0	1	0	0
0	0	0	1
0	1	0	0
0	0	0	0

6:00 PM

U-Turn	Left	Thru	Right
0	**10**	**15**	**0**
0.89			

U-Turn	Left	Thru	Right
0	**10**	**0**	**1**
0.55			

U-Turn	Left	Thru	Right
0	**7**	**12**	**0**
0.59			

U-Turn	Left	Thru	Right
0	**1**	**0**	**1**
0.50			

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

Left	Thru	Right	PED
0	0	0	2
0	0	0	2
0	0	0	1
0	0	0	0
0	2	0	1
0	1	0	2
0	1	0	1
0	0	0	0

Left	Thru	Right	PED
0	1	0	0
0	0	0	1
0	1	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0

Left	Thru	Right	PED
0	0	0	5

Left	Thru	Right	PED
0	0	0	1

Left	Thru	Right	PED
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	3
0	0	0	2
0	0	0	3
0	0	0	0
0	0	0	1

Left	Thru	Right	PED
0	0	0	1
0	0	0	2
0	0	0	0
0	0	0	2
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	0

Left	Thru	Right	PED
0	0	0	4

Left	Thru	Right	PED
0	0	0	4

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

U-Turn	Left	Thru	Right
0	0	91	53
0	0	92	54
0	0	91	55
0	0	82	56
0	0	81	54
0	0	78	55
0	0	80	53
0	0	77	51

U-Turn	Left	Thru	Right
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

9:00 AM

U-Turn	Left	Thru	Right
0	0	95	44
0	0	94	46
0	0	92	47
0	0	85	48
0	0	74	49
0	0	63	48
0	0	69	46
0	0	66	47

U-Turn	Left	Thru	Right
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

6:00 PM

U-Turn	Left	Thru	Right
0	**0**	**356**	**218**
0.98			
0.0%	**0.0%**	**4.8%**	**3.2%**

U-Turn	Left	Thru	Right
0	**0**	**0**	**0**
0.00			
0.0%	**0.0%**	**0.0%**	**0.0%**

U-Turn	Left	Thru	Right
0	**0**	**345**	**190**
0.96			
0.0%	**0.0%**	**2.0%**	**0.5%**

U-Turn	Left	Thru	Right
0	**0**	**0**	**0**
0.00			
0.0%	**0.0%**	**0.0%**	**0.0%**

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

U-Turn	Left	Thru	Right
0	0	5	4
0	0	2	3
0	0	4	0
0	0	6	0
0	0	3	1
0	0	8	0
0	0	6	0
0	0	7	0

U-Turn	Left	Thru	Right
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

9:00 AM

U-Turn	Left	Thru	Right
0	0	7	0
0	0	3	0
0	0	1	1
0	0	1	0
0	0	2	0
0	0	2	0
0	0	2	1
0	0	1	0

U-Turn	Left	Thru	Right
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

6:00 PM

U-Turn	Left	Thru	Right
0	**0**	**23**	**1**
0.75			

U-Turn	Left	Thru	Right
0	**0**	**0**	**0**
0.00			

U-Turn	Left	Thru	Right
0	**0**	**12**	**1**
0.46			

U-Turn	Left	Thru	Right
0	**0**	**0**	**0**
0.00			

BOSTON TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

	Left	Thru	Right	PED	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	
	0	2	0	0	
	0	1	0	0	
	0	1	0	0	
	0	0	0	0	

	Left	Thru	Right	PED	
	0	1	0	0	
	0	0	0	0	
	0	0	1	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	

	Left	Thru	Right	PED	
	0	0	0	0	

	Left	Thru	Right	PED	
	0	0	1	0	

	Left	Thru	Right	PED	
	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	

	Left	Thru	Right	PED	
	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	

	Left	Thru	Right	PED	
	0	0	0	0	

	Left	Thru	Right	PED	
	0	0	0	0	

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

U-Turn	Left	Thru	Hard Right
0	0	73	28
0	0	76	30
0	0	77	28
0	0	75	24
1	0	76	20
0	0	73	16
0	0	72	17
0	0	70	15

U-Turn	Left	Thru	Right
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

9:00 AM

U-Turn	Left	Thru	Hard Right
0	0	81	17
1	0	84	16
1	0	83	17
0	0	79	18
0	0	78	20
0	0	73	21
1	0	74	20
0	0	71	19

U-Turn	Left	Thru	Right
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

6:00 PM

U-Turn	Left	Thru	Hard Right
0	**0**	**301**	**110**
0.97			
0.0%	**0.0%**	**0.7%**	**0.0%**

U-Turn	Left	Thru	Right
0	**0**	**0**	**0**
0.00			
0.0%	**0.0%**	**0.0%**	**0.0%**

U-Turn	Left	Thru	Hard Right
1	**0**	**304**	**79**
0.98			
0.0%	**0.0%**	**0.7%**	**0.0%**

U-Turn	Left	Thru	Right
0	**0**	**0**	**0**
0.00			
0.0%	**0.0%**	**0.0%**	**0.0%**

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

U-Turn	Left	Thru	Hard Right
0	0	0	0
0	0	1	0
0	0	1	0
0	0	0	0
0	0	2	0
0	0	5	0
0	0	6	0
0	0	2	0

U-Turn	Left	Thru	Right
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

9:00 AM

U-Turn	Left	Thru	Hard Right
0	0	2	0
0	0	0	0
0	0	1	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0

U-Turn	Left	Thru	Right
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

6:00 PM

U-Turn	Left	Thru	Hard Right
0	**0**	**15**	**0**
0.63			

U-Turn	Left	Thru	Right
0	**0**	**0**	**0**
0.00			

U-Turn	Left	Thru	Hard Right
0	**0**	**4**	**0**
0.50			

U-Turn	Left	Thru	Right
0	**0**	**0**	**0**
0.00			

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

	Left	Thru	Hard Right	PED	
	0	0	0	0	
	0	0	0	0	
	0	0	0	1	
	0	0	0	0	
	0	1	0	0	
	0	0	0	0	
	0	0	0	0	
	0	0	0	0	

	Left	Thru	Hard Right	PED	
	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	

	Left	Thru	Hard Right	PED	
	0	0	0	1	

	Left	Thru	Hard Right	PED	
	0	0	0	0	

	Left	Thru	Right	PED	
	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	

	Left	Thru	Right	PED	
	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	

	Left	Thru	Right	PED	
	0	0	0	0	

	Left	Thru	Right	PED	
	0	0	0	0	

MASSACHUSETTS HIGHWAY DEPARTMENT - STATEWIDE TRAFFIC DATA COLLECTION

2011 WEEKDAY SEASONAL FACTORS *

* Note: These are weekday factors. The average of the factors for the year will not equal 1, as weekend data are not considered.

FACTOR GROUP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
GROUP **1** - WEST INTERSTATE	0.98	0.93	0.90	0.89	0.90	0.88	0.91	0.90	0.89	0.89	0.93	0.95
Use group 2 for R5, R6, & R0 GROUP **2** - **RURAL MAJOR COLLECTOR (R-5)**	1.12	1.12	1.07	0.99	0.91	0.90	0.86	0.86	0.92	0.93	1.01	1.05
GROUP **3A** - RECREATIONAL **(1-4) See below	1.26	1.25	1.20	1.06	0.96	0.89	0.76	0.76	0.92	0.99	1.08	1.14
GROUP **3B** - RECREATIONAL ***(5) See below	1.22	1.26	1.22	1.06	0.96	0.90	0.72	0.74	0.97	1.02	1.14	1.15
GROUP **4** - I-495 INTERSTATE	1.02	1.00	1.00	0.96	0.92	0.89	0.85	0.83	0.93	0.96	1.01	1.03
GROUP **5** - EAST INTERSTATE	1.04	1.00	0.96	0.93	0.92	0.91	0.91	0.89	0.93	0.93	0.96	1.01
GROUP **6**: Use group 6 for U2, U3, U5, U6, U0, R2, & R3 **URBAN ARTERIALS, COLLECTORS & RURAL ARTERIALS (R-2, R-3)**	1.03	1.01	0.96	0.92	0.91	0.90	0.92	0.92	0.93	0.92	0.97	0.97
GROUP **7** - I-84 PROXIMITY (STA. 17, 3921)	1.24	1.24	1.15	1.04	0.99	1.00	0.93	0.89	1.05	1.05	1.05	1.12
GROUP **8** - I-295 PROXIMITY (STA. 6590)	1.00	0.99	0.95	0.92	0.94	0.91	0.93	0.92	0.95	0.94	0.97	0.95
GROUP **9** - I-195 PROXIMITY (STA. 7)	1.13	1.05	1.03	0.95	0.89	0.87	0.86	0.79	0.88	0.91	0.99	1.03

RECREATIONAL: (ALL YEARS)

**GROUP 3A:

1. CAPE COD (ALL TOWNS)

2.PLYMOUTH(SOUTH OF RTE.3A)

7014, 7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108,7178

3.MARTHA'S VINEYARD

4.NANTUCKET

***GROUP 3B:

5.PERMANENTS 2 & 189

1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,

1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,

1105,1106,1107,1108,1113,1114,1116,2196,2197,2198

2011 AXLE CORRECTION FACTORS

ROAD INVENTORY FUNCTIONAL CLASSIFICATION	AXLE CORRECTION FACTOR
RURAL	
1	0.95
2	0.97
3	0.98
0,5,6	0.98
URBAN	
1	0.96
2,3	0.98
5	0.98
0,6	0.99
I-84	0.90

ROUND OFF

0 - 999............10

> 1,000:.........100

Apply I-84 factor to stations:

3290, 3921, 3929

1717-1725 Hyde Park Avenue

Trip Generation Assessment

HOWARD STEIN HUDSON

Aug-18

HARD CODED TO BALANCE

Land Use	Size	Category	Directional Split	Average Trip Rate	Unadjusted Vehicle Trips	Assumed National Vehicle Occupancy Rate[1]	Unadjusted Person-Trips	Primary Person Trips	Transit Share[3]	Transit Person-Trips	Walk/Bike/ Other Share[3]	Walk/ Bike/ Other Trips	Auto Share[3]	Auto Person-Trips	Private Auto Person-Trips	Assumed Local Auto Occupancy Rate[5]	Total Adjusted Private Auto Trips
Daily Peak Hour																	
Multifamily Housing (Mid Rise)[8]	305	Total		5.440	1,660	1.13	**1,876**	**1,876**	22%	**412**	6%	**112**	72%	**1,352**	1,352	1.13	**1,196**
	units	In	50%	2.720	830	1.13	**938**	**938**	22%	**206**	6%	**56**	72%		676	1.13	**598**
		Out	50%	2.720	830	1.13	**938**	**938**	22%	**206**	6%	**56**	72%		676	1.13	**598**
Sit-Down Restaurant[16]	4.2	Total		112.180	472	2.20	**1,038**	**1,038**	4%	**42**	14%	**146**	82%	**850**	850	2.20	**386**
	KSF	In	50%	56.090	236	2.20	**519**	**519**	4%	**21**	14%	**73**	82%		425	2.20	**193**
		Out	50%	56.090	236	2.20	**519**	**519**	4%	**21**	14%	**73**	82%		425	2.20	**193**
Total		Total			**2,132**		**2,914**	**2,914**		**454**		**258**		**2,202**	**2,202**		**1,582**
		In			**1,066**		**1,457**	**1,457**		**227**		**129**		**1,101**	**1,101**		**791**
		Out			**1,066**		**1,457**	**1,457**		**227**		**129**		**1,101**	**1,101**		**791**
AM Peak Hour																	
Multifamily Housing (Mid Rise)[8]	305	Total		0.360	110	1.13	**125**	**125**		**33**		**7**		**85**	85	1.13	**75**
	units	In	26%	0.094	29	1.13	**33**	**33**	12%	**4**	7%	**2**	81%	**27**	27	1.13	**24**
		Out	74%	0.266	81	1.13	**92**	**92**	31%	**29**	5%	**5**	64%		58	1.13	**51**
Sit-Down Restaurant[16]	4.2	Total		9.94	42	2.20	**93**	**93**		**5**		**14**		**74**	74	2.20	**34**
	KSF	In	55%	5.467	23	2.20	**51**	**51**	3%	**2**	15%	**8**	82%		41	2.20	**19**
		Out	45%	4.473	19	2.20	**42**	**42**	8%	**3**	14%	**6**	78%	**33**	33	2.20	**15**
Total		Total			**152**		**218**	**218**		**38**		**21**		**159**	**159**		**109**
		In			**52**		**84**	**84**		**6**		**10**		**68**	**68**		**43**
		Out			**100**		**134**	**134**		**32**		**11**		**91**	**91**		**66**
PM Peak Hour																	
Multifamily Housing (Mid Rise)[8]	305	Total		0.440	134	1.13	**152**	**152**		**36**		**9**		**107**	107	1.13	**94**
	units	In	61%	0.268	82	1.13	**93**	**93**	31%	**29**	5%	**5**	64%		59	1.13	**52**
		Out	39%	0.172	52	1.13	**59**	**59**	12%	**7**	7%	**4**	81%	**48**	48	1.13	**42**
Sit-Down Restaurant[16]	4.2	Total		9.77	41	2.20	**90**	**90**		**5**		**13**		**72**	72	2.20	**33**
	KSF	In	62%	6.057	25	2.20	**55**	**55**	8%	**4**	14%	**8**	78%	**43**	43	2.20	**20**
		Out	38%	3.713	16	2.20	**35**	**35**	3%	**1**	15%	**5**	82%	**29**	29	2.20	**13**
Total		Total			**175**		**242**	**242**		**41**		**22**		**179**	**179**		**127**
		In			**107**		**148**	**148**		**33**		**13**		**102**	**102**		**72**
		Out			**68**		**94**	**94**		**8**		**9**		**77**	**77**		**55**

1. 2009 National vehicle occupancy rates - 1.13:home to work; 1.84: family/personal business; 1.78: shopping; 2.2 social/recreational
2. Based on ITE Trip Generation Handbook, 3rd Edition method
3. Mode shares based census data and on peak-hour BTD Data for Area 12 - Hyde Park, residential mode shares were adjusted by census data to reflect TOD site
5. Local vehicle occupancy rates based on 2009 National vehicle occupancy rates
8. ITE Trip Generation Manual, 10th Edition, LUC 221 (Multifamily Housing Mid-Rise (3-10 floors)), average rate
16. ITE Trip Generation Manual, 10th Edition, LUC 932 (High-Turnover (Sit-Down) Restaurant), average rate

Lane Group	EBL	EBT	EBR	WBL2	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2
Lane Configurations																			
Traffic Volume (vph)	88	643	13	3	580	97	1	52	20	11	59	4	1	32	3	3	14	4	
Future Volume (vph)	88	643	13	3	580	97	1	52	20	11	59	4	1	32	3	3	14	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	10	12	12	10	12	12	12	12	12	12	10	12	12	
Storage Length (ft)	100		0			0		0		0	0		100			0	0		
Storage Lanes	1		0			0		0		0	0		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	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00			1.00														
Frt		0.997			0.981				0.982			0.998		0.850		0.896			
Flt Protected	0.950								0.969			0.956				0.989			
Satd. Flow (prot)	1626	1854	0	0	1822	0	0	0	1647	0	0	1813	0	1262	0	1571	0	0	
Flt Permitted	0.262				0.997				0.760			0.678				0.989			
Satd. Flow (perm)	448	1854	0	0	1817	0	0	0	1292	0	0	1286	0	1262	0	1571	0	0	
Right Turn on Red						Yes				Yes				Yes				Yes	
Satd. Flow (RTOR)					9				7					193		136			
Link Speed (mph)		30			30				30			30				30			
Link Distance (ft)		509			1309				437			528				247			
Travel Time (s)		11.6			29.8				9.9			12.0				5.6			
Confl. Bikes (#/hr)			1			1													
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.66	0.66	0.66	0.66	0.80	0.80	0.80	0.80	0.67	0.67	0.67	0.67	
Heavy Vehicles (%)	11%	2%	8%	0%	2%	2%	0%	4%	0%	0%	0%	0%	0%	28%	0%	0%	0%	0%	
Adj. Flow (vph)	94	684	14	4	682	114	2	79	30	17	74	5	1	40	4	4	21	6	
Shared Lane Traffic (%)																			
Lane Group Flow (vph)	94	698	0	0	800	0	0	0	128	0	0	80	0	40	0	35	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		Perm	NA		Free	Prot	Prot			
Protected Phases		1			1				3			3			4	4			2
Permitted Phases	1			1			3	3			3			Free					
Detector Phase							3	3	3		3	3			4	4			
Switch Phase																			
Minimum Initial (s)	30.0	30.0		30.0	30.0		8.0	8.0	8.0		8.0	8.0			8.0	8.0			1.0
Minimum Split (s)	36.0	36.0		36.0	36.0		13.0	13.0	13.0		13.0	13.0			13.0	13.0			26.0
Total Split (s)	36.0	36.0		36.0	36.0		17.0	17.0	17.0		17.0	17.0			17.0	17.0			26.0
Total Split (%)	37.5%	37.5%		37.5%	37.5%		17.7%	17.7%	17.7%		17.7%	17.7%			17.7%	17.7%			27%
Maximum Green (s)	30.0	30.0		30.0	30.0		12.0	12.0	12.0		12.0	12.0			12.0	12.0			22.0
Yellow Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	4.0			4.0	4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0		1.0	1.0			1.0	1.0			2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0				-1.0			-1.0				-1.0			
Total Lost Time (s)	5.0	5.0			5.0				4.0			4.0				4.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead	Lead		Lead	Lead			Lag	Lag			Lag
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	1.0	1.0		1.0	1.0			1.0	1.0			2.0
Recall Mode	Max	Max		Max	Max		None	None	None		None	None			None	None			None
Walk Time (s)																			7.0
Flash Dont Walk (s)																			15.0
Pedestrian Calls (#/hr)																			23
Act Effct Green (s)	36.6	36.6			36.6				11.5			11.5		69.5		9.7			
Actuated g/C Ratio	0.53	0.53			0.53				0.17			0.17		1.00		0.14			
v/c Ratio	0.40	0.72			0.83				0.58			0.38		0.03		0.10			
Control Delay	27.8	26.0			31.2				41.7			36.3		0.0		0.6			
Queue Delay	0.0	0.0			0.0				0.0			0.0		0.0		0.0			
Total Delay	27.8	26.0			31.2				41.7			36.3		0.0		0.6			
LOS	C	C			C				D			D		A		A			
Approach Delay		26.2			31.2				41.7			24.2				0.6			
Approach LOS		C			C				D			C				A			
Queue Length 50th (ft)	12	110			138				32			20		0		0			
Queue Length 95th (ft)	#122	#686			#760				89			78		0		0			
Internal Link Dist (ft)		429			1229				357			448				167			
Turn Bay Length (ft)	100													100					
Base Capacity (vph)	235	974			959				265			259		1262		424			
Starvation Cap Reductn	0	0			0				0			0		0		0			
Spillback Cap Reductn	0	0			0				0			0		0		0			
Storage Cap Reductn	0	0			0				0			0		0		0			
Reduced v/c Ratio	0.40	0.72			0.83				0.48			0.31		0.03		0.08			

Intersection Summary

Area Type: Other
Cycle Length: 96
Actuated Cycle Length: 69.5
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 28.8 Intersection LOS: C
Intersection Capacity Utilization 97.4% ICU Level of Service F
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Wolcott Sq & Hyde Park Ave/Wolcott Ct & Hyde Park Avenue/Neponset Valley Pkwy

Ø1	Ø2	Ø3	Ø4
36 s	26 s	17 s	17 s

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	307	394	441	232	162	306	
Future Volume (vph)	307	394	441	232	162	306	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			25	0	125	
Storage Lanes	0			0	2	1	
Taper Length (ft)	25				25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.97	1.00	
Ped Bike Factor			1.00				
Frt			0.948			0.850	
Flt Protected		0.979			0.950		
Satd. Flow (prot)	0	3465	3351	0	3467	1599	
Flt Permitted		0.625			0.950		
Satd. Flow (perm)	0	2212	3351	0	3467	1599	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			79			322	
Link Speed (mph)		30	30		30		
Link Distance (ft)		692	547		1101		
Travel Time (s)		15.7	12.4		25.0		
Confl. Bikes (#/hr)				1			
Peak Hour Factor	0.98	0.98	0.96	0.96	0.95	0.95	
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	
Adj. Flow (vph)	313	402	459	242	171	322	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	715	701	0	171	322	
Turn Type	Prot	NA	NA		Prot	pt+ov	
Protected Phases	1	1 2	2		3	1 3	4
Permitted Phases							
Detector Phase	1	1 2	2		3	1 3	
Switch Phase							
Minimum Initial (s)	8.0		8.0		8.0		1.0
Minimum Split (s)	13.0		18.0		13.0		32.0
Total Split (s)	25.0		18.0		25.0		32.0
Total Split (%)	25.0%		18.0%		25.0%		32%
Maximum Green (s)	20.0		13.0		20.0		29.0
Yellow Time (s)	4.0		4.0		4.0		2.0
All-Red Time (s)	1.0		1.0		1.0		1.0
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			5.0		5.0		
Lead/Lag	Lead		Lag		Lead		Lag
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.0		1.0		1.0		3.0
Recall Mode	Min		None		None		None
Walk Time (s)			6.0				7.0
Flash Dont Walk (s)			7.0				22.0
Pedestrian Calls (#/hr)			1				4
Act Effct Green (s)		28.6	13.8		8.8	28.3	
Actuated g/C Ratio		0.50	0.24		0.15	0.49	
v/c Ratio		0.72	0.81		0.32	0.34	
Control Delay		21.5	30.5		27.1	2.3	
Queue Delay		0.0	0.0		0.0	0.0	
Total Delay		21.5	30.5		27.1	2.3	
LOS		C	C		C	A	
Approach Delay		21.5	30.5		10.9		
Approach LOS		C	C		B		
Queue Length 50th (ft)		74	87		23	0	
Queue Length 95th (ft)		#285	#364		79	32	
Internal Link Dist (ft)		612	467		1021		
Turn Bay Length (ft)						125	
Base Capacity (vph)		1367	866		1283	1121	
Starvation Cap Reductn		0	0		0	0	
Spillback Cap Reductn		0	0		0	0	
Storage Cap Reductn		0	0		0	0	
Reduced v/c Ratio		0.52	0.81		0.13	0.29	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 57.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 58.6% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Neponset Valley Parkway & Truman Parkway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	9	644	6	14	5	567	195	16	0	133	189
Future Volume (Veh/h)	258	9	644	6	14	5	567	195	16	0	133	189
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.63	0.63	0.63	0.93	0.93	0.93	0.90	0.90	0.90
Hourly flow rate (vph)	280	10	700	10	22	8	610	210	17	0	148	210
Pedestrians					1			10			4	
Lane Width (ft)					16.0			14.0			14.0	
Walking Speed (ft/s)					3.5			3.5			3.5	
Percent Blockage					0			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								843				
pX, platoon unblocked												
vC, conflicting volume	1601	1596	158	2302	1798	224	358			228		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1601	1596	158	2302	1798	224	358			228		
tC, single (s)	7.1	6.5	6.2	7.1	6.7	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.2	3.3	2.2			2.2		
p0 queue free %	0	81	20	0	38	99	49			100		
cM capacity (veh/h)	27	53	878	3	36	816	1206			1350		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	290	700	40	610	227	148	210
Volume Left	280	0	10	610	0	0	0
Volume Right	0	700	8	0	17	0	210
cSH	27	878	10	1206	1700	1350	1700
Volume to Capacity	10.66	0.80	4.12	0.51	0.13	0.00	0.12
Queue Length 95th (ft)	Err	214	Err	74	0	0	0
Control Delay (s)	Err	23.1	Err	11.0	0.0	0.0	0.0
Lane LOS	F	C	F	B			
Approach Delay (s)	2945.3		Err	8.0		0.0	
Approach LOS	F		F				

Intersection Summary				
Average Delay	1493.3			
Intersection Capacity Utilization	69.8%	ICU Level of Service		C
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	466	292	72	691	237	47
Future Volume (Veh/h)	466	292	72	691	237	47
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.96	0.96	0.86	0.86
Hourly flow rate (vph)	480	301	75	720	276	55
Pedestrians	13		1			
Lane Width (ft)	10.0		16.0			
Walking Speed (ft/s)	3.5		3.5			
Percent Blockage	1		0			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1056	448			808	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1056	448			808	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	50			66	
cM capacity (veh/h)	162	604			813	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1
Volume Total	480	301	795	331
Volume Left	480	0	0	276
Volume Right	0	301	720	0
cSH	162	604	1700	813
Volume to Capacity	2.97	0.50	0.47	0.34
Queue Length 95th (ft)	1098	69	0	38
Control Delay (s)	947.1	16.7	0.0	10.4
Lane LOS	F	C		B
Approach Delay (s)	588.5		0.0	10.4
Approach LOS	F			

Intersection Summary			
Average Delay	242.8		
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	63	31	671	65	51	511
Future Volume (Veh/h)	63	31	671	65	51	511
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.78	0.78	0.99	0.99	0.98	0.98
Hourly flow rate (vph)	81	40	678	66	52	521
Pedestrians	4		16			5
Lane Width (ft)	16.0		16.0			16.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	1		2			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1356	720			748	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1356	720			748	
tC, single (s)	6.6	6.3			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.4	
p0 queue free %	42	90			93	
cM capacity (veh/h)	140	410			781	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	121	744	573
Volume Left	81	0	52
Volume Right	40	66	0
cSH	179	1700	781
Volume to Capacity	0.68	0.44	0.07
Queue Length 95th (ft)	101	0	5
Control Delay (s)	59.4	0.0	1.8
Lane LOS	F		A
Approach Delay (s)	59.4	0.0	1.8
Approach LOS	F		

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	34.3
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	266	67	55	470	356	218
Future Vol, veh/h	266	67	55	470	356	218
Peak Hour Factor	0.96	0.96	0.97	0.97	0.98	0.98
Heavy Vehicles, %	2	6	16	2	5	3
Mvmt Flow	277	70	57	485	363	222
Number of Lanes	1	0	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	22.5	58.1	19.4
HCM LOS	C	F	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	10%	80%	0%	0%
Vol Thru, %	90%	0%	100%	0%
Vol Right, %	0%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	525	333	356	218
LT Vol	55	266	0	0
Through Vol	470	0	356	0
RT Vol	0	67	0	218
Lane Flow Rate	541	347	363	222
Geometry Grp	5	2	7	7
Degree of Util (X)	0.977	0.664	0.692	0.377
Departure Headway (Hd)	6.5	6.896	6.86	6.108
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	557	524	527	589
Service Time	4.523	4.919	4.603	3.851
HCM Lane V/C Ratio	0.971	0.662	0.689	0.377
HCM Control Delay	58.1	22.5	23.7	12.5
HCM Lane LOS	F	C	C	B
HCM 95th-tile Q	13.4	4.9	5.3	1.7

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	71	361	301	110	10	63
Future Volume (Veh/h)	71	361	301	110	10	63
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.97	0.97	0.91	0.91
Hourly flow rate (vph)	88	446	310	113	11	69
Pedestrians			1		3	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	313				992	370
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	313				992	370
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				96	90
cM capacity (veh/h)	1249				254	672

Direction, Lane #	NB 1	SB 1	SE 1
Volume Total	534	423	80
Volume Left	88	0	11
Volume Right	0	113	69
cSH	1249	1700	548
Volume to Capacity	0.07	0.25	0.15
Queue Length 95th (ft)	6	0	13
Control Delay (s)	2.0	0.0	12.7
Lane LOS	A		B
Approach Delay (s)	2.0	0.0	12.7
Approach LOS			B

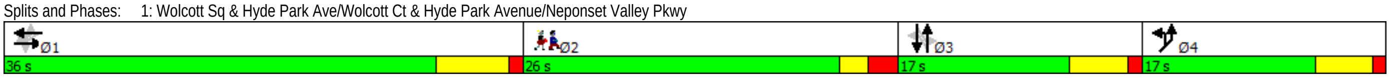
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2	NEL2	NEL	NER	NER2	Ø2
Lane Configurations																	
Traffic Volume (vph)	27	636	11	3	514	23	44	1	12	35	1	24	14	2	36	7	
Future Volume (vph)	27	636	11	3	514	23	44	1	12	35	1	24	14	2	36	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	10	12	10	12	12	12	12	12	10	12	12	
Storage Length (ft)	100		0			0	0		0	0				0	0		
Storage Lanes	1		0			0	0		0	0				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	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00			1.00			1.00									
Frt		0.997			0.994			0.972				0.850		0.901			
Flt Protected	0.950							0.963			0.954			0.987			
Satd. Flow (prot)	1480	1875	0	0	1848	0	0	1627	0	0	1761	1292	0	1577	0	0	
Flt Permitted	0.344				0.997			0.731			0.791			0.987			
Satd. Flow (perm)	536	1875	0	0	1843	0	0	1235	0	0	1460	1292	0	1577	0	0	
Right Turn on Red						Yes			Yes			Yes				Yes	
Satd. Flow (RTOR)					2			11				193		136			
Link Speed (mph)		30			30			30			30			30			
Link Distance (ft)		509			1309			437			528			247			
Travel Time (s)		11.6			29.8			9.9			12.0			5.6			
Confl. Bikes (#/hr)			1			2			1								
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.84	0.84	0.84	0.56	0.56	0.56	0.87	0.87	0.87	0.87	
Heavy Vehicles (%)	22%	1%	0%	0%	2%	4%	2%	0%	0%	3%	0%	25%	0%	0%	0%	0%	
Adj. Flow (vph)	28	669	12	3	559	25	52	1	14	63	2	43	16	2	41	8	
Shared Lane Traffic (%)																	
Lane Group Flow (vph)	28	681	0	0	587	0	0	67	0	0	65	43	0	67	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Free	Prot	Prot			
Protected Phases		1			1			3			3		4	4			2
Permitted Phases	1			1			3			3		Free					
Detector Phase	1	1		1	1		3	3		3	3		4	4			
Switch Phase																	
Minimum Initial (s)	30.0	30.0		30.0	30.0		8.0	8.0		8.0	8.0		8.0	8.0			1.0
Minimum Split (s)	36.0	36.0		36.0	36.0		13.0	13.0		13.0	13.0		13.0	13.0			26.0
Total Split (s)	36.0	36.0		36.0	36.0		17.0	17.0		17.0	17.0		17.0	17.0			26.0
Total Split (%)	37.5%	37.5%		37.5%	37.5%		17.7%	17.7%		17.7%	17.7%		17.7%	17.7%			27%
Maximum Green (s)	30.0	30.0		30.0	30.0		12.0	12.0		12.0	12.0		12.0	12.0			22.0
Yellow Time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0		4.0	4.0			2.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0			2.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0			0.0			
Total Lost Time (s)	6.0	6.0			6.0			5.0			5.0			5.0			
Lead/Lag	Lead	Lead		Lead	Lead		Lead	Lead		Lead	Lead		Lag	Lag			Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes		Yes	Yes			Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.0	1.0		1.0	1.0		1.0	1.0			2.0
Recall Mode	Max	Max		Max	Max		None	None		None	None		None	None			None
Walk Time (s)																	7.0
Flash Dont Walk (s)																	15.0
Pedestrian Calls (#/hr)																	53
Act Effct Green (s)	38.0	38.0			38.0			9.4			9.4	76.5		8.5			
Actuated g/C Ratio	0.50	0.50			0.50			0.12			0.12	1.00		0.11			
v/c Ratio	0.11	0.73			0.64			0.42			0.37	0.03		0.23			
Control Delay	22.6	32.3			28.8			40.1			42.4	0.0		1.8			
Queue Delay	0.0	0.0			0.0			0.0			0.0	0.0		0.0			
Total Delay	22.6	32.3			28.8			40.1			42.4	0.0		1.8			
LOS	C	C			C			D			D	A		A			
Approach Delay		32.0			28.8			40.1			25.5			1.8			
Approach LOS		C			C			D			C			A			
Queue Length 50th (ft)	11	~422			310			30			35	0		0			
Queue Length 95th (ft)	33	#672			#555			66			45	0		0			
Internal Link Dist (ft)		429			1229			357			448			167			
Turn Bay Length (ft)	100											100					
Base Capacity (vph)	266	932			917			214			242	1292		375			
Starvation Cap Reductn	0	0			0			0			0	0		0			
Spillback Cap Reductn	0	0			0			0			0	0		0			
Storage Cap Reductn	0	0			0			0			0	0		0			
Reduced v/c Ratio	0.11	0.73			0.64			0.31			0.27	0.03		0.18			

Intersection Summary

Area Type: Other
Cycle Length: 96
Actuated Cycle Length: 76.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 29.3 Intersection LOS: C
Intersection Capacity Utilization 64.0% 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: 1: Wolcott Sq & Hyde Park Ave/Wolcott Ct & Hyde Park Avenue/Neponset Valley Pkwy



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	282	598	323	154	206	299	
Future Volume (vph)	282	598	323	154	206	299	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			25	0	125	
Storage Lanes	0			0	2	1	
Taper Length (ft)	25				25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.97	1.00	
Ped Bike Factor			1.00				
Frt			0.951			0.850	
Flt Protected		0.984			0.950		
Satd. Flow (prot)	0	3528	3362	0	3467	1599	
Flt Permitted		0.656			0.950		
Satd. Flow (perm)	0	2352	3362	0	3467	1599	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			66			305	
Link Speed (mph)		30	30		30		
Link Distance (ft)		692	547		1101		
Travel Time (s)		15.7	12.4		25.0		
Confl. Bikes (#/hr)				1			
Peak Hour Factor	0.99	0.99	0.99	0.99	0.98	0.98	
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%	
Adj. Flow (vph)	285	604	326	156	210	305	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	889	482	0	210	305	
Turn Type	D.P+P	NA	NA		Prot	pt+ov	
Protected Phases	1	1 2	2		3	1 3	4
Permitted Phases	2						
Detector Phase	1	1 2	2		3	1 3	
Switch Phase							
Minimum Initial (s)	8.0		8.0		8.0		1.0
Minimum Split (s)	13.0		18.0		13.0		32.0
Total Split (s)	25.0		18.0		25.0		32.0
Total Split (%)	25.0%		18.0%		25.0%		32%
Maximum Green (s)	20.0		13.0		20.0		29.0
Yellow Time (s)	4.0		4.0		4.0		2.0
All-Red Time (s)	1.0		1.0		1.0		1.0
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			5.0		5.0		
Lead/Lag	Lead		Lag		Lead		Lag
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.0		1.0		1.0		3.0
Recall Mode	Min		None		None		None
Walk Time (s)			6.0				7.0
Flash Dont Walk (s)			7.0				22.0
Pedestrian Calls (#/hr)			0				1
Act Effct Green (s)		27.9	13.7		9.1	28.0	
Actuated g/C Ratio		0.49	0.24		0.16	0.49	
v/c Ratio		0.62	0.56		0.38	0.32	
Control Delay		12.1	23.0		27.0	2.3	
Queue Delay		0.0	0.0		0.0	0.0	
Total Delay		12.1	23.0		27.0	2.3	
LOS		B	C		C	A	
Approach Delay		12.1	23.0		12.4		
Approach LOS		B	C		B		
Queue Length 50th (ft)		52	52		28	0	
Queue Length 95th (ft)		271	#221		94	31	
Internal Link Dist (ft)		612	467		1021		
Turn Bay Length (ft)						125	
Base Capacity (vph)		1794	871		1303	1127	
Starvation Cap Reductn		0	0		0	0	
Spillback Cap Reductn		0	0		0	0	
Storage Cap Reductn		0	0		0	0	
Reduced v/c Ratio		0.50	0.55		0.16	0.27	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 57
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 15.0 Intersection LOS: B
Intersection Capacity Utilization 57.7% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Neponset Valley Parkway & Truman Parkway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	2	758	1	4	3	494	119	2	1	169	207
Future Volume (Veh/h)	233	2	758	1	4	3	494	119	2	1	169	207
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.40	0.40	0.40	0.85	0.85	0.85	0.90	0.90	0.90
Hourly flow rate (vph)	271	2	881	3	10	8	581	140	2	1	188	230
Pedestrians		8			6			3			1	
Lane Width (ft)		12.0			16.0			14.0			14.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			1			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								843				
pX, platoon unblocked												
vC, conflicting volume	1514	1508	199	2384	1737	148	426			148		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1514	1508	199	2384	1737	148	426			148		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	97	0	0	76	99	48			100		
cM capacity (veh/h)	47	58	835	0	42	896	1119			1435		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	273	881	21	581	142	189	230
Volume Left	271	0	3	581	0	1	0
Volume Right	0	881	8	0	2	0	230
cSH	47	835	0	1119	1700	1435	1700
Volume to Capacity	5.81	1.05	Err	0.52	0.08	0.00	0.14
Queue Length 95th (ft)	Err	531	Err	77	0	0	0
Control Delay (s)	Err	68.5	Err	11.6	0.0	0.0	0.0
Lane LOS	F	F	F	B		A	
Approach Delay (s)	2417.7		Err	9.3		0.0	
Approach LOS	F		F				

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	448	268	61	644	203	146
Future Volume (Veh/h)	448	268	61	644	203	146
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.90	0.90	0.87	0.87
Hourly flow rate (vph)	492	295	68	716	233	168
Pedestrians	8		2			
Lane Width (ft)	10.0		16.0			
Walking Speed (ft/s)	3.5		3.5			
Percent Blockage	1		0			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1070	434			792	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1070	434			792	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.2	
p0 queue free %	0	53			72	
cM capacity (veh/h)	171	622			832	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1
Volume Total	492	295	784	401
Volume Left	492	0	0	233
Volume Right	0	295	716	0
cSH	171	622	1700	832
Volume to Capacity	2.88	0.47	0.46	0.28
Queue Length 95th (ft)	1108	64	0	29
Control Delay (s)	902.9	15.9	0.0	7.8
Lane LOS	F	C		A
Approach Delay (s)	570.4		0.0	7.8
Approach LOS	F			

Intersection Summary			
Average Delay	229.2		
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	50	653	7	133	461
Future Volume (Veh/h)	21	50	653	7	133	461
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.98	0.98	0.96	0.96
Hourly flow rate (vph)	24	56	666	7	139	480
Pedestrians	4		13			1
Lane Width (ft)	16.0		16.0			16.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	1		2			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1444	674			677	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1444	674			677	
tC, single (s)	6.5	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.3	
p0 queue free %	79	88			84	
cM capacity (veh/h)	115	451			883	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	80	673	619
Volume Left	24	0	139
Volume Right	56	7	0
cSH	240	1700	883
Volume to Capacity	0.33	0.40	0.16
Queue Length 95th (ft)	35	0	14
Control Delay (s)	27.3	0.0	3.9
Lane LOS	D		A
Approach Delay (s)	27.3	0.0	3.9
Approach LOS	D		

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	81.0%	ICU Level of Service		D
Analysis Period (min)	15			

Intersection	
Intersection Delay, s/veh	20.6
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	312	74	44	303	345	190
Future Vol, veh/h	312	74	44	303	345	190
Peak Hour Factor	0.95	0.95	0.92	0.92	0.96	0.96
Heavy Vehicles, %	1	1	9	2	2	1
Mvmt Flow	328	78	48	329	359	198
Number of Lanes	1	0	0	1	1	1
Approach	EB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		2		1	
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	2		1		0	
Conflicting Approach Right	NB				EB	
Conflicting Lanes Right	1		0		1	
HCM Control Delay	23.8		21.6		17.7	
HCM LOS	C		C		C	

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	13%	81%	0%	0%
Vol Thru, %	87%	0%	100%	0%
Vol Right, %	0%	19%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	347	386	345	190
LT Vol	44	312	0	0
Through Vol	303	0	345	0
RT Vol	0	74	0	190
Lane Flow Rate	377	406	359	198
Geometry Grp	5	2	7	7
Degree of Util (X)	0.669	0.714	0.655	0.321
Departure Headway (Hd)	6.386	6.329	6.566	5.834
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	562	569	546	610
Service Time	4.475	4.408	4.359	3.626
HCM Lane V/C Ratio	0.671	0.714	0.658	0.325
HCM Control Delay	21.6	23.8	21.1	11.4
HCM Lane LOS	C	C	C	B
HCM 95th-tile Q	5	5.8	4.7	1.4

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	56	329	304	79	31	98
Future Volume (Veh/h)	56	329	304	79	31	98
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.98	0.98	0.95	0.95
Hourly flow rate (vph)	58	339	310	81	33	103
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	310				806	350
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	310				806	350
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				90	85
cM capacity (veh/h)	1262				338	695

Direction, Lane #	NB 1	SB 1	SE 1
Volume Total	397	391	136
Volume Left	58	0	33
Volume Right	0	81	103
cSH	1262	1700	553
Volume to Capacity	0.05	0.23	0.25
Queue Length 95th (ft)	4	0	24
Control Delay (s)	1.6	0.0	13.6
Lane LOS	A		B
Approach Delay (s)	1.6	0.0	13.6
Approach LOS			B

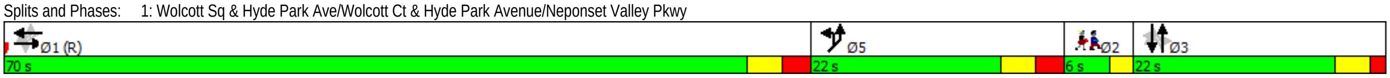
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL2	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2
Lane Configurations																			
Traffic Volume (vph)	91	681	13	3	682	100	1	54	21	11	61	4	1	33	3	3	14	4	
Future Volume (vph)	91	681	13	3	682	100	1	54	21	11	61	4	1	33	3	3	14	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	10	12	12	10	12	12	12	12	12	12	10	12	12	
Storage Length (ft)	100		0			0		0		0	0		100			0	0		
Storage Lanes	1		0			0		0		0	0		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	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00			1.00				1.00										
Frt		0.997			0.983				0.983			0.998		0.850		0.896			
Flt Protected	0.950								0.969			0.956				0.989			
Satd. Flow (prot)	1626	1854	0	0	1826	0	0	0	1644	0	0	1813	0	1262	0	1571	0	0	
Flt Permitted	0.269				0.998				0.704			0.657				0.989			
Satd. Flow (perm)	460	1854	0	0	1823	0	0	0	1194	0	0	1246	0	1262	0	1571	0	0	
Right Turn on Red						Yes				Yes				Yes				Yes	
Satd. Flow (RTOR)					10				5					132		82			
Link Speed (mph)		30			30				30			30				30			
Link Distance (ft)		509			1309				437			528				247			
Travel Time (s)		11.6			29.8				9.9			12.0				5.6			
Confl. Bikes (#/hr)			1			2				1									
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.66	0.66	0.66	0.66	0.80	0.80	0.80	0.80	0.67	0.67	0.67	0.67	
Heavy Vehicles (%)	11%	2%	8%	0%	2%	2%	0%	4%	0%	0%	0%	0%	0%	28%	0%	0%	0%	0%	
Adj. Flow (vph)	97	724	14	4	802	118	2	82	32	17	76	5	1	41	4	4	21	6	
Shared Lane Traffic (%)																			
Lane Group Flow (vph)	97	738	0	0	924	0	0	0	133	0	0	82	0	41	0	35	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		Perm	NA		Free	Prot	Prot			
Protected Phases		1			1				3			3			5	5			2
Permitted Phases	1			1			3	3			3			Free					
Detector Phase	1	1		1	1		3	3	3		3	3			5	5			
Switch Phase																			
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0		8.0	8.0			8.0	8.0			1.0
Minimum Split (s)	70.0	70.0		70.0	70.0		22.0	22.0	22.0		22.0	22.0			21.5	21.5			6.0
Total Split (s)	70.0	70.0		70.0	70.0		22.0	22.0	22.0		22.0	22.0			22.0	22.0			6.0
Total Split (%)	58.3%	58.3%		58.3%	58.3%		18.3%	18.3%	18.3%		18.3%	18.3%			18.3%	18.3%			5%
Maximum Green (s)	64.5	64.5		64.5	64.5		17.5	17.5	17.5		17.5	17.5			16.5	16.5			4.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0			2.0
All-Red Time (s)	2.5	2.5		2.5	2.5		1.5	1.5	1.5		1.5	1.5			2.5	2.5			0.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0				-1.0			-1.0				-1.0			
Total Lost Time (s)	4.5	4.5			4.5				3.5			3.5				4.5			
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lag	Lag		Lag	Lag			Lag	Lag			Lead
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0		2.0	2.0			2.0	2.0			3.0
Recall Mode	C-Max	C-Max		C-Max	C-Max		Max	Max	Max		Max	Max			None	None			Max
Walk Time (s)	55.5	55.5		55.5	55.5		7.0	7.0	7.0		7.0	7.0			7.0	7.0			4.0
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		10.5	10.5	10.5		10.5	10.5			9.0	9.0			0.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	0			10	10			0
Act Effct Green (s)	77.8	77.8			77.8				18.5			18.5		120.0		10.6			
Actuated g/C Ratio	0.65	0.65			0.65				0.15			0.15		1.00		0.09			
v/c Ratio	0.33	0.61			0.78				0.71			0.43		0.03		0.16			
Control Delay	18.2	20.4			22.9				67.5			53.7		0.1		1.7			
Queue Delay	0.0	0.2			0.0				0.0			0.0		0.0		0.0			
Total Delay	18.2	20.6			22.9				67.5			53.7		0.1		1.7			
LOS	B	C			C				E			D		A		A			
Approach Delay		20.3			22.9				67.5			35.8				1.7			
Approach LOS		C			C				E			D				A			
Queue Length 50th (ft)	41	462			514				95			58		0		0			
Queue Length 95th (ft)	m97	661			#781				115			97		0		0			
Internal Link Dist (ft)		429			1229				357			448				167			
Turn Bay Length (ft)	100													100					
Base Capacity (vph)	298	1201			1185				188			192		1262		299			
Starvation Cap Reductn	0	70			0				0			0		0		0			
Spillback Cap Reductn	0	0			0				0			0		0		0			
Storage Cap Reductn	0	0			0				0			0		0		0			
Reduced v/c Ratio	0.33	0.65			0.78				0.71			0.43		0.03		0.12			

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 25.2 Intersection LOS: C
Intersection Capacity Utilization 100.5% ICU Level of Service G
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Wolcott Sq & Hyde Park Ave/Wolcott Ct & Hyde Park Avenue/Neponset Valley Pkwy



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	321	420	522	240	168	333	
Future Volume (vph)	321	420	522	240	168	333	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			25	0	125	
Storage Lanes	0			0	2	1	
Taper Length (ft)	25				25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.97	1.00	
Ped Bike Factor			1.00				
Frt			0.953			0.850	
Flt Protected		0.979			0.950		
Satd. Flow (prot)	0	3465	3369	0	3467	1599	
Flt Permitted		0.638			0.950		
Satd. Flow (perm)	0	2258	3369	0	3467	1599	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			62			351	
Link Speed (mph)		30	30		30		
Link Distance (ft)		692	547		1101		
Travel Time (s)		15.7	12.4		25.0		
Confl. Bikes (#/hr)				1			
Peak Hour Factor	0.98	0.98	0.96	0.96	0.95	0.95	
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	
Adj. Flow (vph)	328	429	544	250	177	351	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	757	794	0	177	351	
Turn Type	Prot	NA	NA		Prot	pt+ov	
Protected Phases	1	1 2	2		3	1 3	4
Permitted Phases							
Detector Phase	1	1 2	2		3	1 3	
Switch Phase							
Minimum Initial (s)	8.0		8.0		8.0		1.0
Minimum Split (s)	13.0		18.0		13.0		32.0
Total Split (s)	25.0		18.0		25.0		32.0
Total Split (%)	25.0%		18.0%		25.0%		32%
Maximum Green (s)	20.0		13.0		20.0		29.0
Yellow Time (s)	4.0		4.0		4.0		2.0
All-Red Time (s)	1.0		1.0		1.0		1.0
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			5.0		5.0		
Lead/Lag	Lead		Lag		Lead		Lag
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0		1.0		3.0
Recall Mode	Min		None		None		None
Walk Time (s)			6.0				7.0
Flash Dont Walk (s)			7.0				22.0
Pedestrian Calls (#/hr)			1				4
Act Effct Green (s)		31.1	13.7		8.8	30.8	
Actuated g/C Ratio		0.52	0.23		0.15	0.51	
v/c Ratio		0.68	0.97		0.35	0.35	
Control Delay		19.9	50.9		28.1	2.3	
Queue Delay		0.0	0.0		0.0	0.0	
Total Delay		19.9	50.9		28.1	2.3	
LOS		B	D		C	A	
Approach Delay		19.9	50.9		10.9		
Approach LOS		B	D		B		
Queue Length 50th (ft)		78	117		26	0	
Queue Length 95th (ft)		#311	#438		81	33	
Internal Link Dist (ft)		612	467		1021		
Turn Bay Length (ft)						125	
Base Capacity (vph)		1319	816		1217	1093	
Starvation Cap Reductn		0	0		0	0	
Spillback Cap Reductn		0	0		0	0	
Storage Cap Reductn		0	0		0	0	
Reduced v/c Ratio		0.57	0.97		0.15	0.32	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 59.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 29.5 Intersection LOS: C
Intersection Capacity Utilization 62.2% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Neponset Valley Parkway & Truman Parkway

Ø1	Ø2	Ø3	Ø4
25 s	18 s	25 s	32 s

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	275	9	682	6	14	5	668	202	16	0	138	242	
Future Volume (vph)	275	9	682	6	14	5	668	202	16	0	138	242	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12	
Storage Length (ft)	0		0	0		0	165		0	0		125	
Storage Lanes	0		1	0		0	1		0	0		1	
Taper Length (ft)	25			25			65			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	
Frt			0.850		0.973			0.989				0.850	
Flt Protected		0.954			0.988		0.950						
Satd. Flow (prot)	0	1729	1583	0	1856	0	1787	1749	0	0	1727	1538	
Flt Permitted		0.704			0.907		0.580						
Satd. Flow (perm)	0	1276	1583	0	1704	0	1091	1749	0	0	1727	1538	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			690		8			4				269	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		468			141			334			343		
Travel Time (s)		10.6			3.2			7.6			7.8		
Peak Hour Factor	0.92	0.92	0.92	0.63	0.63	0.63	0.93	0.93	0.93	0.90	0.90	0.90	
Heavy Vehicles (%)	5%	0%	2%	0%	21%	0%	1%	8%	0%	0%	10%	5%	
Adj. Flow (vph)	299	10	741	10	22	8	718	217	17	0	153	269	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	309	741	0	40	0	718	234	0	0	153	269	
Turn Type	Perm	NA	pt+ov	Perm	NA		D.P+P	NA			NA	Prot	
Protected Phases		5	5 6		5		6	1 6			1	1	2
Permitted Phases	5			5			1			1			
Detector Phase	5	5	5 6	5	5		6	1 6		1	1	1	
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0			8.0	8.0	8.0	1.0
Minimum Split (s)	13.0	13.0		13.0	13.0		13.5			13.0	13.0	13.0	24.0
Total Split (s)	37.0	37.0		37.0	37.0		36.0			23.0	23.0	23.0	24.0
Total Split (%)	30.8%	30.8%		30.8%	30.8%		30.0%			19.2%	19.2%	19.2%	20%
Maximum Green (s)	32.0	32.0		32.0	32.0		30.5			18.0	18.0	18.0	18.0
Yellow Time (s)	3.0	3.0		3.0	3.0		2.5			3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0			2.0	2.0	2.0	4.0
Lost Time Adjust (s)		0.0			0.0		0.0				0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.5				5.0	5.0	
Lead/Lag	Lead	Lead		Lead	Lead		Lag			Lead	Lead	Lead	Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	3.0	3.0
Recall Mode	Max	Max		Max	Max		Max			C-Max	C-Max	C-Max	None
Walk Time (s)													7.0
Flash Dont Walk (s)													11.0
Pedestrian Calls (#/hr)													18
Act Effct Green (s)		32.0	68.0		32.0		62.4	68.4			32.4	32.4	
Actuated g/C Ratio		0.27	0.57		0.27		0.52	0.57			0.27	0.27	
v/c Ratio		0.91	0.62		0.09		0.97	0.23			0.33	0.44	
Control Delay		75.3	2.8		28.5		53.8	24.8			41.7	7.9	
Queue Delay		0.0	0.2		0.0		41.4	0.0			0.0	0.9	
Total Delay		75.3	3.0		28.5		95.2	24.8			41.7	8.8	
LOS		E	A		C		F	C			D	A	
Approach Delay		24.3			28.5			77.9			20.7		
Approach LOS		C			C			E			C		
Queue Length 50th (ft)		241	6		19		481	120			84	0	
Queue Length 95th (ft)		#409	84		31		#793	m225			184	79	
Internal Link Dist (ft)		388			61			254			263		
Turn Bay Length (ft)							165					125	
Base Capacity (vph)		340	1196		460		744	998			466	611	
Starvation Cap Reductn		0	60		0		0	0			0	0	
Spillback Cap Reductn		0	0		0		106	0			0	145	
Storage Cap Reductn		0	0		0		0	0			0	0	
Reduced v/c Ratio		0.91	0.65		0.09		1.13	0.23			0.33	0.58	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green, Master Intersection
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 44.4 Intersection LOS: D
Intersection Capacity Utilization 79.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Hyde Park Ave & Father Hart Bridge/Commuter Rail Parking lot

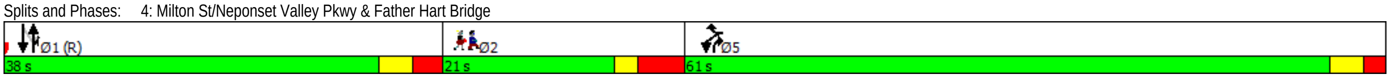
Ø1 (R)	Ø2	Ø5	Ø6
23 s	24 s	37 s	36 s

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø2
Lane Configurations							
Traffic Volume (vph)	610	302	75	739	245	49	
Future Volume (vph)	610	302	75	739	245	49	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	12	12	12	12	
Storage Length (ft)	0	0		0	50		
Storage Lanes	1	1		1	0		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850		0.850			
Flt Protected	0.950					0.960	
Satd. Flow (prot)	1620	1478	1881	1568	0	1771	
Flt Permitted	0.950					0.708	
Satd. Flow (perm)	1620	1478	1881	1568	0	1306	
Right Turn on Red		No		No			
Satd. Flow (RTOR)							
Link Speed (mph)	30		30			30	
Link Distance (ft)	468		361			557	
Travel Time (s)	10.6		8.2			12.7	
Peak Hour Factor	0.97	0.97	0.96	0.96	0.86	0.86	
Heavy Vehicles (%)	4%	2%	1%	3%	1%	13%	
Adj. Flow (vph)	629	311	78	770	285	57	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	629	311	78	770	0	342	
Turn Type	Prot	Prot	NA	pt+ov	Perm	NA	
Protected Phases	5	5	1	1 5		1	2
Permitted Phases					1		
Detector Phase	5	5	1	1 5	1	1	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0	1.0
Minimum Split (s)	13.0	13.0	13.5		13.5	13.5	21.0
Total Split (s)	61.0	61.0	38.0		38.0	38.0	21.0
Total Split (%)	50.8%	50.8%	31.7%		31.7%	31.7%	18%
Maximum Green (s)	56.0	56.0	32.5		32.5	32.5	15.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.5		2.5	2.5	4.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0	5.5			5.5	
Lead/Lag			Lead		Lead	Lead	Lag
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							8.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	52.4	52.4	52.9	114.7		52.9	
Actuated g/C Ratio	0.44	0.44	0.44	0.96		0.44	
v/c Ratio	0.89	0.48	0.09	0.51		0.59	
Control Delay	37.5	21.0	24.2	3.2		33.9	
Queue Delay	50.7	1.3	0.0	0.0		0.0	
Total Delay	88.2	22.3	24.2	3.2		33.9	
LOS	F	C	C	A		C	
Approach Delay	66.4		5.1			33.9	
Approach LOS	E		A			C	
Queue Length 50th (ft)	468	194	34	0		193	
Queue Length 95th (ft)	m551	m272	87	316		#421	
Internal Link Dist (ft)	388		281			477	
Turn Bay Length (ft)							
Base Capacity (vph)	756	689	829	1484		575	
Starvation Cap Reductn	212	204	0	0		0	
Spillback Cap Reductn	0	0	0	0		0	
Storage Cap Reductn	0	0	0	0		0	
Reduced v/c Ratio	1.16	0.64	0.09	0.52		0.59	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 69 (58%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 36.8 Intersection LOS: D
Intersection Capacity Utilization 71.1% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Milton St/Neponset Valley Pkwy & Father Hart Bridge



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	81	54	695	169	178	529
Future Volume (Veh/h)	81	54	695	169	178	529
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.78	0.78	0.99	0.99	0.98	0.98
Hourly flow rate (vph)	104	69	702	171	182	540
Pedestrians	4		13			1
Lane Width (ft)	16.0		16.0			16.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	1		2			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						361
pX, platoon unblocked						
vC, conflicting volume	1708	792			877	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1708	792			877	
tC, single (s)	6.6	6.3			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.4	
p0 queue free %	0	82			74	
cM capacity (veh/h)	67	374			696	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	173	873	722
Volume Left	104	0	182
Volume Right	69	171	0
cSH	99	1700	696
Volume to Capacity	1.74	0.51	0.26
Queue Length 95th (ft)	347	0	26
Control Delay (s)	446.1	0.0	6.5
Lane LOS	F		A
Approach Delay (s)	446.1	0.0	6.5
Approach LOS	F		

Intersection Summary			
Average Delay	46.3		
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	58.9
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	344	69	57	522	375	238
Future Vol, veh/h	344	69	57	522	375	238
Peak Hour Factor	0.96	0.96	0.97	0.97	0.98	0.98
Heavy Vehicles, %	2	6	16	2	5	3
Mvmt Flow	358	72	59	538	383	243
Number of Lanes	1	0	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	36.2	111.2	24.5
HCM LOS	E	F	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	10%	83%	0%	0%
Vol Thru, %	90%	0%	100%	0%
Vol Right, %	0%	17%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	579	413	375	238
LT Vol	57	344	0	0
Through Vol	522	0	375	0
RT Vol	0	69	0	238
Lane Flow Rate	597	430	383	243
Geometry Grp	5	2	7	7
Degree of Util (X)	1.146	0.826	0.765	0.436
Departure Headway (Hd)	6.911	7.258	7.533	6.776
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	525	503	482	534
Service Time	4.975	5.258	5.233	4.476
HCM Lane V/C Ratio	1.137	0.855	0.795	0.455
HCM Control Delay	111.2	36.2	30.8	14.6
HCM Lane LOS	F	E	D	B
HCM 95th-tile Q	20.3	8.1	6.6	2.2

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	74	382	358	114	10	65
Future Volume (Veh/h)	74	382	358	114	10	65
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.97	0.97	0.91	0.91
Hourly flow rate (vph)	91	472	369	118	11	71
Pedestrians			1		3	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	372				1086	431
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	372				1086	431
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				95	89
cM capacity (veh/h)	1189				222	620

Direction, Lane #	NB 1	SB 1	SE 1
Volume Total	563	487	82
Volume Left	91	0	11
Volume Right	0	118	71
cSH	1189	1700	500
Volume to Capacity	0.08	0.29	0.16
Queue Length 95th (ft)	6	0	15
Control Delay (s)	2.1	0.0	13.6
Lane LOS	A		B
Approach Delay (s)	2.1	0.0	13.6
Approach LOS			B

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

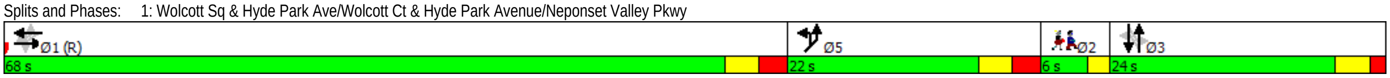
Lane Group	EBL	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2	NEL2	NEL	NER	NER2	Ø2
Lane Configurations																	
Traffic Volume (vph)	28	739	11	3	550	24	46	1	12	36	1	25	14	2	37	7	
Future Volume (vph)	28	739	11	3	550	24	46	1	12	36	1	25	14	2	37	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	10	12	10	12	12	12	12	12	10	12	12	
Storage Length (ft)	100		0			0	0		0	0				0	0		
Storage Lanes	1		0			0	0		0	0				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	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00			1.00												
Frt		0.998			0.994			0.973				0.850		0.900			
Flt Protected	0.950							0.962			0.954			0.987			
Satd. Flow (prot)	1480	1877	0	0	1849	0	0	1634	0	0	1761	1292	0	1575	0	0	
Flt Permitted	0.371				0.998			0.755			0.732			0.987			
Satd. Flow (perm)	578	1877	0	0	1845	0	0	1283	0	0	1351	1292	0	1575	0	0	
Right Turn on Red						Yes			Yes			Yes				Yes	
Satd. Flow (RTOR)					3			9				132		82			
Link Speed (mph)		30			30			30			30			30			
Link Distance (ft)		509			1309			437			528			247			
Travel Time (s)		11.6			29.8			9.9			12.0			5.6			
Confl. Bikes (#/hr)			1			2											
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.84	0.84	0.84	0.56	0.56	0.56	0.87	0.87	0.87	0.87	
Heavy Vehicles (%)	22%	1%	0%	0%	2%	4%	2%	0%	0%	3%	0%	25%	0%	0%	0%	0%	
Adj. Flow (vph)	29	778	12	3	598	26	55	1	14	64	2	45	16	2	43	8	
Shared Lane Traffic (%)																	
Lane Group Flow (vph)	29	790	0	0	627	0	0	70	0	0	66	45	0	69	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Free	Prot	Prot			
Protected Phases		1			1			3			3		5	5			2
Permitted Phases	1			1			3			3		Free					
Detector Phase	1	1		1	1		3	3		3	3		5	5			
Switch Phase																	
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0			1.0
Minimum Split (s)	68.0	68.0		68.0	68.0		24.0	24.0		24.0	24.0		18.5	18.5			6.0
Total Split (s)	68.0	68.0		68.0	68.0		24.0	24.0		24.0	24.0		22.0	22.0			6.0
Total Split (%)	56.7%	56.7%		56.7%	56.7%		20.0%	20.0%		20.0%	20.0%		18.3%	18.3%			5%
Maximum Green (s)	62.5	62.5		62.5	62.5		19.5	19.5		19.5	19.5		16.5	16.5			4.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0			2.0
All-Red Time (s)	2.5	2.5		2.5	2.5		1.5	1.5		1.5	1.5		2.5	2.5			0.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0			-1.0			-1.0			
Total Lost Time (s)	4.5	4.5			4.5			3.5			3.5			4.5			
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lag		Lag	Lag		Lag	Lag			Lead
Lead-Lag Optimize?																	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0			3.0
Recall Mode	C-Max	C-Max		C-Max	C-Max		Max	Max		Max	Max		None	None			Max
Walk Time (s)	53.5	53.5		53.5	53.5		7.0	7.0		7.0	7.0		7.0	7.0			4.0
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		12.5	12.5		12.5	12.5		6.0	6.0			0.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		10	10			0
Act Effct Green (s)	73.7	73.7			73.7			20.5			20.5	120.0		10.0			
Actuated g/C Ratio	0.61	0.61			0.61			0.17			0.17	1.00		0.08			
v/c Ratio	0.08	0.69			0.55			0.31			0.29	0.03		0.33			
Control Delay	10.5	16.8			16.9			42.2			47.3	0.0		12.3			
Queue Delay	0.0	0.4			0.0			0.0			0.0	0.0		0.0			
Total Delay	10.5	17.2			16.9			42.2			47.3	0.0		12.3			
LOS	B	B			B			D			D	A		B			
Approach Delay		16.9			16.9			42.2			28.1			12.3			
Approach LOS		B			B			D			C			B			
Queue Length 50th (ft)	9	376			275			42			45	0		0			
Queue Length 95th (ft)	m10	m515			428			81			54	0		31			
Internal Link Dist (ft)		429			1229			357			448			167			
Turn Bay Length (ft)	100											100					
Base Capacity (vph)	354	1152			1134			226			230	1292		299			
Starvation Cap Reductn	0	86			0			0			0	0		0			
Spillback Cap Reductn	0	0			0			0			0	0		0			
Storage Cap Reductn	0	0			0			0			0	0		0			
Reduced v/c Ratio	0.08	0.74			0.55			0.31			0.29	0.03		0.23			

Intersection Summary

Area Type:	Other	
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 82 (68%), Referenced to phase 1:EBWB, Start of Green		
Natural Cycle: 120		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.69		
Intersection Signal Delay: 18.5		Intersection LOS: B
Intersection Capacity Utilization 67.1%		ICU Level of Service C
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Wolcott Sq & Hyde Park Ave/Wolcott Ct & Hyde Park Avenue/Neponset Valley Pkwy



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	307	684	349	159	213	313	
Future Volume (vph)	307	684	349	159	213	313	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			25	0	125	
Storage Lanes	0			0	2	1	
Taper Length (ft)	25				25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.97	1.00	
Ped Bike Factor			1.00				
Frt			0.953			0.850	
Flt Protected		0.985			0.950		
Satd. Flow (prot)	0	3531	3367	0	3467	1599	
Flt Permitted		0.616			0.950		
Satd. Flow (perm)	0	2209	3367	0	3467	1599	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			61			319	
Link Speed (mph)		30	30		30		
Link Distance (ft)		692	547		1101		
Travel Time (s)		15.7	12.4		25.0		
Confl. Bikes (#/hr)				2			
Peak Hour Factor	0.99	0.99	0.99	0.99	0.98	0.98	
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%	
Adj. Flow (vph)	310	691	353	161	217	319	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	1001	514	0	217	319	
Turn Type	Prot	NA	NA		Prot	pt+ov	
Protected Phases	1	1 2	2		3	1 3	4
Permitted Phases							
Detector Phase	1	1 2	2		3	1 3	
Switch Phase							
Minimum Initial (s)	8.0		8.0		8.0		1.0
Minimum Split (s)	13.0		18.0		13.0		32.0
Total Split (s)	25.0		18.0		25.0		32.0
Total Split (%)	25.0%		18.0%		25.0%		32%
Maximum Green (s)	20.0		13.0		20.0		29.0
Yellow Time (s)	4.0		4.0		4.0		2.0
All-Red Time (s)	1.0		1.0		1.0		1.0
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			5.0		5.0		
Lead/Lag	Lead		Lag		Lead		Lag
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0		1.0		3.0
Recall Mode	Min		None		None		None
Walk Time (s)			7.0				7.0
Flash Dont Walk (s)			6.0				22.0
Pedestrian Calls (#/hr)			0				1
Act Effct Green (s)		34.3	13.5		8.9	34.2	
Actuated g/C Ratio		0.54	0.21		0.14	0.54	
v/c Ratio		0.80	0.67		0.45	0.32	
Control Delay		24.9	27.9		30.1	2.1	
Queue Delay		0.0	0.0		0.0	0.0	
Total Delay		24.9	27.9		30.1	2.1	
LOS		C	C		C	A	
Approach Delay		24.9	27.9		13.5		
Approach LOS		C	C		B		
Queue Length 50th (ft)		126	71		35	0	
Queue Length 95th (ft)		#488	#247		97	32	
Internal Link Dist (ft)		612	467		1021		
Turn Bay Length (ft)						125	
Base Capacity (vph)		1250	768		1141	1033	
Starvation Cap Reductn		0	0		0	0	
Spillback Cap Reductn		0	0		0	0	
Storage Cap Reductn		0	0		0	0	
Reduced v/c Ratio		0.80	0.67		0.19	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 63.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 22.7 Intersection LOS: C
Intersection Capacity Utilization 61.7% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Neponset Valley Parkway & Truman Parkway

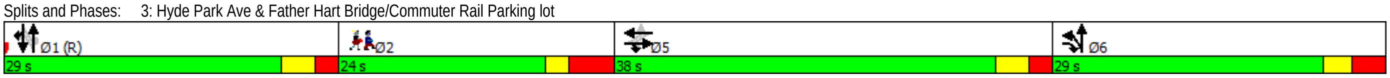
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	286	4	865	1	4	3	530	123	2	1	175	224	
Future Volume (vph)	286	4	865	1	4	3	530	123	2	1	175	224	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12	
Storage Length (ft)	0		0	0		0	165		0	0		125	
Storage Lanes	0		1	0		0	1		0	0		1	
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	
Frt			0.850		0.949			0.998				0.850	
Flt Protected		0.953			0.993		0.950						
Satd. Flow (prot)	0	1776	1599	0	2029	0	1752	1774	0	0	1827	1404	
Flt Permitted		0.714			0.960		0.537				0.999		
Satd. Flow (perm)	0	1330	1599	0	1962	0	991	1774	0	0	1825	1404	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			645		8			1				249	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		468			141			334			343		
Travel Time (s)		10.6			3.2			7.6			7.8		
Peak Hour Factor	0.86	0.86	0.86	0.40	0.40	0.40	0.85	0.85	0.85	0.90	0.90	0.90	
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	3%	7%	0%	0%	4%	15%	
Adj. Flow (vph)	333	5	1006	3	10	8	624	145	2	1	194	249	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	338	1006	0	21	0	624	147	0	0	195	249	
Turn Type	Perm	NA	pt+ov	Perm	NA		D.P+P	NA		Perm	NA	Prot	
Protected Phases		5	5 6		5		6	1 6			1	1	2
Permitted Phases	5			5			1			1			
Detector Phase	5	5	5 6	5	5		6	1 6		1	1	1	
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0			8.0	8.0	8.0	1.0
Minimum Split (s)	13.0	13.0		13.0	13.0		13.5			13.0	13.0	13.0	24.0
Total Split (s)	38.0	38.0		38.0	38.0		29.0			29.0	29.0	29.0	24.0
Total Split (%)	31.7%	31.7%		31.7%	31.7%		24.2%			24.2%	24.2%	24.2%	20%
Maximum Green (s)	33.0	33.0		33.0	33.0		23.5			24.0	24.0	24.0	18.0
Yellow Time (s)	3.0	3.0		3.0	3.0		2.5			3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0			2.0	2.0	2.0	4.0
Lost Time Adjust (s)		0.0			0.0		0.0				0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.5				5.0	5.0	
Lead/Lag	Lead	Lead		Lead	Lead		Lag			Lead	Lead	Lead	Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	3.0	3.0
Recall Mode	Max	Max		Max	Max		Max			C-Max	C-Max	C-Max	None
Walk Time (s)													7.0
Flash Dont Walk (s)													11.0
Pedestrian Calls (#/hr)													18
Act Effct Green (s)		33.0	62.0		33.0		61.4	67.4			38.4	38.4	
Actuated g/C Ratio		0.28	0.52		0.28		0.51	0.56			0.32	0.32	
v/c Ratio		0.93	0.88		0.04		0.95	0.15			0.33	0.40	
Control Delay		74.7	15.2		23.4		45.6	9.7			36.7	7.2	
Queue Delay		0.0	1.2		0.0		16.3	0.0			0.0	0.2	
Total Delay		74.7	16.4		23.4		61.9	9.7			36.7	7.4	
LOS		E	B		C		E	A			D	A	
Approach Delay		31.1			23.4			51.9			20.3		
Approach LOS		C			C			D			C		
Queue Length 50th (ft)		261	160		7		179	23			100	0	
Queue Length 95th (ft)		#406	237		10		#555	52			215	72	
Internal Link Dist (ft)		388			61			254			263		
Turn Bay Length (ft)							165					125	
Base Capacity (vph)		365	1137		545		656	996			584	619	
Starvation Cap Reductn		0	35		0		0	0			0	0	
Spillback Cap Reductn		0	0		0		48	0			0	75	
Storage Cap Reductn		0	0		0		0	0			0	0	
Reduced v/c Ratio		0.93	0.91		0.04		1.03	0.15			0.33	0.46	

Intersection Summary

Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 35.4	Intersection LOS: D
Intersection Capacity Utilization 82.0%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 3: Hyde Park Ave & Father Hart Bridge/Commuter Rail Parking lot

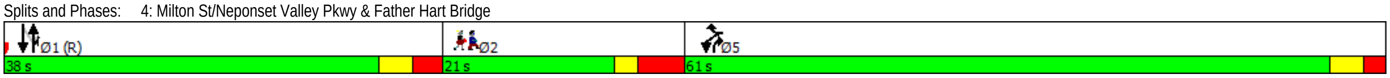


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø2
Lane Configurations							
Traffic Volume (vph)	492	278	63	792	210	151	
Future Volume (vph)	492	278	63	792	210	151	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	12	12	12	12	
Storage Length (ft)	0	0		0	50		
Storage Lanes	1	1		1	0		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850		0.850			
Flt Protected	0.950					0.972	
Satd. Flow (prot)	1574	1507	1863	1599	0	1758	
Flt Permitted	0.950					0.781	
Satd. Flow (perm)	1574	1507	1863	1599	0	1413	
Right Turn on Red		No		No			
Satd. Flow (RTOR)							
Link Speed (mph)	30		30			30	
Link Distance (ft)	468		361			557	
Travel Time (s)	10.6		8.2			12.7	
Peak Hour Factor	0.91	0.91	0.90	0.90	0.87	0.87	
Heavy Vehicles (%)	7%	0%	2%	1%	0%	12%	
Adj. Flow (vph)	541	305	70	880	241	174	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	541	305	70	880	0	415	
Turn Type	Prot	Prot	NA	pt+ov	Perm	NA	
Protected Phases	5	5	1	1 5		1	2
Permitted Phases					1		
Detector Phase	5	5	1	1 5	1	1	
Switch Phase							
Minimum Initial (s)	3.0	3.0	8.0		8.0	8.0	1.0
Minimum Split (s)	8.0	8.0	13.5		13.5	13.5	21.0
Total Split (s)	61.0	61.0	38.0		38.0	38.0	21.0
Total Split (%)	50.8%	50.8%	31.7%		31.7%	31.7%	18%
Maximum Green (s)	56.0	56.0	32.5		32.5	32.5	15.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.5		2.5	2.5	4.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0	5.5			5.5	
Lead/Lag			Lead		Lead	Lead	Lag
Lead-Lag Optimize?			Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							8.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	49.3	49.3	56.0	114.7		56.0	
Actuated g/C Ratio	0.41	0.41	0.47	0.96		0.47	
v/c Ratio	0.84	0.49	0.08	0.58		0.63	
Control Delay	34.9	21.9	23.3	3.8		33.0	
Queue Delay	24.8	1.0	0.0	0.0		0.0	
Total Delay	59.7	23.0	23.3	3.9		33.0	
LOS	E	C	C	A		C	
Approach Delay	46.4		5.3			33.0	
Approach LOS	D		A			C	
Queue Length 50th (ft)	399	162	28	0		228	
Queue Length 95th (ft)	m483	m272	80	415		#531	
Internal Link Dist (ft)	388		281			477	
Turn Bay Length (ft)							
Base Capacity (vph)	734	703	869	1513		659	
Starvation Cap Reductn	204	198	0	0		0	
Spillback Cap Reductn	0	0	0	17		0	
Storage Cap Reductn	0	0	0	0		0	
Reduced v/c Ratio	1.02	0.60	0.08	0.59		0.63	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 26.2 Intersection LOS: C
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Milton St/Neponset Valley Pkwy & Father Hart Bridge



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	124	175	676	30	161	477
Future Volume (Veh/h)	124	175	676	30	161	477
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.98	0.98	0.96	0.96
Hourly flow rate (vph)	139	197	690	31	168	497
Pedestrians	4		13			1
Lane Width (ft)	16.0		16.0			16.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	1		2			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						361
pX, platoon unblocked						
vC, conflicting volume	1556	710			725	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1556	710			725	
tC, single (s)	6.5	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.3	
p0 queue free %	0	54			80	
cM capacity (veh/h)	93	431			847	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	336	721	665
Volume Left	139	0	168
Volume Right	197	31	0
cSH	173	1700	847
Volume to Capacity	1.95	0.42	0.20
Queue Length 95th (ft)	635	0	18
Control Delay (s)	491.1	0.0	4.8
Lane LOS	F		A
Approach Delay (s)	491.1	0.0	4.8
Approach LOS	F		

Intersection Summary			
Average Delay	97.7		
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	27.8
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	338	77	46	322	391	266
Future Vol, veh/h	338	77	46	322	391	266
Peak Hour Factor	0.95	0.95	0.92	0.92	0.96	0.96
Heavy Vehicles, %	1	1	9	2	2	1
Mvmt Flow	356	81	50	350	407	277
Number of Lanes	1	0	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	32.9	28.2	24.3
HCM LOS	D	D	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	12%	81%	0%	0%
Vol Thru, %	88%	0%	100%	0%
Vol Right, %	0%	19%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	368	415	391	266
LT Vol	46	338	0	0
Through Vol	322	0	391	0
RT Vol	0	77	0	266
Lane Flow Rate	400	437	407	277
Geometry Grp	5	2	7	7
Degree of Util (X)	0.757	0.815	0.787	0.479
Departure Headway (Hd)	6.814	6.719	6.96	6.225
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	532	542	521	579
Service Time	4.858	4.719	4.709	3.973
HCM Lane V/C Ratio	0.752	0.806	0.781	0.478
HCM Control Delay	28.2	32.9	30.9	14.6
HCM Lane LOS	D	D	D	B
HCM 95th-tile Q	6.6	8	7.2	2.6

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	58	386	325	82	32	101
Future Volume (Veh/h)	58	386	325	82	32	101
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.98	0.98	0.95	0.95
Hourly flow rate (vph)	60	398	332	84	34	106
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	332				892	374
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332				892	374
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				89	84
cM capacity (veh/h)	1239				300	674

Direction, Lane #	NB 1	SB 1	SE 1
Volume Total	458	416	140
Volume Left	60	0	34
Volume Right	0	84	106
cSH	1239	1700	517
Volume to Capacity	0.05	0.24	0.27
Queue Length 95th (ft)	4	0	27
Control Delay (s)	1.5	0.0	14.5
Lane LOS	A		B
Approach Delay (s)	1.5	0.0	14.5
Approach LOS			B

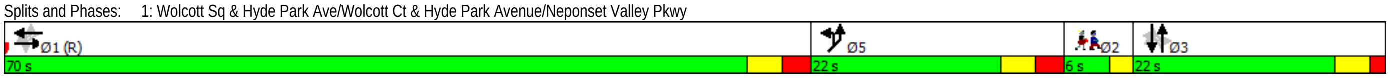
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL2	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	NEL2	NEL	NER	NER2	Ø2
Lane Configurations																			
Traffic Volume (vph)	91	699	13	3	693	100	1	54	21	11	61	4	1	33	3	3	14	4	
Future Volume (vph)	91	699	13	3	693	100	1	54	21	11	61	4	1	33	3	3	14	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	10	12	12	10	12	12	12	12	12	12	10	12	12	
Storage Length (ft)	100		0			0		0		0	0		100			0	0		
Storage Lanes	1		0			0		0		0	0		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	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00			1.00				1.00										
Frt		0.997			0.983				0.983			0.998		0.850		0.896			
Flt Protected	0.950								0.969			0.956				0.989			
Satd. Flow (prot)	1626	1854	0	0	1826	0	0	0	1644	0	0	1813	0	1262	0	1571	0	0	
Flt Permitted	0.265				0.998				0.704			0.657				0.989			
Satd. Flow (perm)	454	1854	0	0	1823	0	0	0	1194	0	0	1246	0	1262	0	1571	0	0	
Right Turn on Red						Yes				Yes				Yes				Yes	
Satd. Flow (RTOR)					10				5					132		82			
Link Speed (mph)		30			30				30			30				30			
Link Distance (ft)		509			1309				437			528				247			
Travel Time (s)		11.6			29.8				9.9			12.0				5.6			
Confl. Bikes (#/hr)			1			2				1									
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.66	0.66	0.66	0.66	0.80	0.80	0.80	0.80	0.67	0.67	0.67	0.67	
Heavy Vehicles (%)	11%	2%	8%	0%	2%	2%	0%	4%	0%	0%	0%	0%	0%	28%	0%	0%	0%	0%	
Adj. Flow (vph)	97	744	14	4	815	118	2	82	32	17	76	5	1	41	4	4	21	6	
Shared Lane Traffic (%)																			
Lane Group Flow (vph)	97	758	0	0	937	0	0	0	133	0	0	82	0	41	0	35	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		Perm	NA		Free	Prot	Prot			
Protected Phases		1			1				3			3			5	5			2
Permitted Phases	1			1			3	3			3			Free					
Detector Phase	1	1		1	1		3	3	3		3	3			5	5			
Switch Phase																			
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0	8.0		8.0	8.0			8.0	8.0			1.0
Minimum Split (s)	70.0	70.0		70.0	70.0		22.0	22.0	22.0		22.0	22.0			21.5	21.5			6.0
Total Split (s)	70.0	70.0		70.0	70.0		22.0	22.0	22.0		22.0	22.0			22.0	22.0			6.0
Total Split (%)	58.3%	58.3%		58.3%	58.3%		18.3%	18.3%	18.3%		18.3%	18.3%			18.3%	18.3%			5%
Maximum Green (s)	64.5	64.5		64.5	64.5		17.5	17.5	17.5		17.5	17.5			16.5	16.5			4.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0			2.0
All-Red Time (s)	2.5	2.5		2.5	2.5		1.5	1.5	1.5		1.5	1.5			2.5	2.5			0.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0				-1.0			-1.0				-1.0			
Total Lost Time (s)	4.5	4.5			4.5				3.5			3.5				4.5			
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lag	Lag		Lag	Lag			Lag	Lag			Lead
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0		2.0	2.0			2.0	2.0			3.0
Recall Mode	C-Max	C-Max		C-Max	C-Max		Max	Max	Max		Max	Max			None	None			Max
Walk Time (s)	55.5	55.5		55.5	55.5		7.0	7.0	7.0		7.0	7.0			7.0	7.0			4.0
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		10.5	10.5	10.5		10.5	10.5			9.0	9.0			0.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0		0	0			10	10			0
Act Effct Green (s)	77.8	77.8			77.8				18.5			18.5		120.0		10.6			
Actuated g/C Ratio	0.65	0.65			0.65				0.15			0.15		1.00		0.09			
v/c Ratio	0.33	0.63			0.79				0.71			0.43		0.03		0.16			
Control Delay	18.0	20.4			23.5				67.5			53.7		0.1		1.7			
Queue Delay	0.0	0.2			0.0				0.0			0.0		0.0		0.0			
Total Delay	18.0	20.7			23.5				67.5			53.7		0.1		1.7			
LOS	B	C			C				E			D		A		A			
Approach Delay		20.4			23.5				67.5			35.8				1.7			
Approach LOS		C			C				E			D				A			
Queue Length 50th (ft)	40	481			529				95			58		0		0			
Queue Length 95th (ft)	m95	688			#847				115			97		0		0			
Internal Link Dist (ft)		429			1229				357			448				167			
Turn Bay Length (ft)	100													100					
Base Capacity (vph)	294	1201			1185				188			192		1262		299			
Starvation Cap Reductn	0	71			0				0			0		0		0			
Spillback Cap Reductn	0	0			0				0			0		0		0			
Storage Cap Reductn	0	0			0				0			0		0		0			
Reduced v/c Ratio	0.33	0.67			0.79				0.71			0.43		0.03		0.12			

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 100.6% ICU Level of Service G
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Wolcott Sq & Hyde Park Ave/Wolcott Ct & Hyde Park Avenue/Neponset Valley Pkwy



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	321	438	533	240	168	333	
Future Volume (vph)	321	438	533	240	168	333	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			25	0	125	
Storage Lanes	0			0	2	1	
Taper Length (ft)	25				25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.97	1.00	
Ped Bike Factor			1.00				
Frt			0.953			0.850	
Flt Protected		0.979			0.950		
Satd. Flow (prot)	0	3465	3369	0	3467	1599	
Flt Permitted		0.640			0.950		
Satd. Flow (perm)	0	2265	3369	0	3467	1599	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			59			351	
Link Speed (mph)		30	30		30		
Link Distance (ft)		692	547		1101		
Travel Time (s)		15.7	12.4		25.0		
Confl. Bikes (#/hr)				1			
Peak Hour Factor	0.98	0.98	0.96	0.96	0.95	0.95	
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	
Adj. Flow (vph)	328	447	555	250	177	351	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	775	805	0	177	351	
Turn Type	Prot	NA	NA		Prot	pt+ov	
Protected Phases	1	1 2	2		3	1 3	4
Permitted Phases							
Detector Phase	1	1 2	2		3	1 3	
Switch Phase							
Minimum Initial (s)	8.0		8.0		8.0		1.0
Minimum Split (s)	13.0		18.0		13.0		32.0
Total Split (s)	25.0		18.0		25.0		32.0
Total Split (%)	25.0%		18.0%		25.0%		32%
Maximum Green (s)	20.0		13.0		20.0		29.0
Yellow Time (s)	4.0		4.0		4.0		2.0
All-Red Time (s)	1.0		1.0		1.0		1.0
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			5.0		5.0		
Lead/Lag	Lead		Lag		Lead		Lag
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0		1.0		3.0
Recall Mode	Min		None		None		None
Walk Time (s)			6.0				7.0
Flash Dont Walk (s)			7.0				22.0
Pedestrian Calls (#/hr)			1				4
Act Effct Green (s)		32.6	13.6		8.7	32.3	
Actuated g/C Ratio		0.53	0.22		0.14	0.53	
v/c Ratio		0.66	1.02		0.36	0.35	
Control Delay		19.5	62.0		28.5	2.2	
Queue Delay		0.0	0.0		0.0	0.0	
Total Delay		19.5	62.0		28.5	2.2	
LOS		B	E		C	A	
Approach Delay		19.5	62.0		11.1		
Approach LOS		B	E		B		
Queue Length 50th (ft)		81	123		26	0	
Queue Length 95th (ft)		#323	#447		81	33	
Internal Link Dist (ft)		612	467		1021		
Turn Bay Length (ft)						125	
Base Capacity (vph)		1284	792		1182	1072	
Starvation Cap Reductn		0	0		0	0	
Spillback Cap Reductn		0	0		0	0	
Storage Cap Reductn		0	0		0	0	
Reduced v/c Ratio		0.60	1.02		0.15	0.33	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 61.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 33.6 Intersection LOS: C
Intersection Capacity Utilization 63.0% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Neponset Valley Parkway & Truman Parkway

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	290	9	682	6	14	5	668	213	16	0	156	267	
Future Volume (vph)	290	9	682	6	14	5	668	213	16	0	156	267	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12	
Storage Length (ft)	0		0	0		0	165		0	0		125	
Storage Lanes	0		1	0		0	1		0	0		1	
Taper Length (ft)	25			25			65			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	
Frt			0.850		0.973			0.990				0.850	
Flt Protected		0.954			0.988		0.950						
Satd. Flow (prot)	0	1729	1583	0	1856	0	1787	1751	0	0	1727	1538	
Flt Permitted		0.703			0.904		0.542						
Satd. Flow (perm)	0	1274	1583	0	1698	0	1020	1751	0	0	1727	1538	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			667		8			4				297	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		468			141			334			343		
Travel Time (s)		10.6			3.2			7.6			7.8		
Peak Hour Factor	0.92	0.92	0.92	0.63	0.63	0.63	0.93	0.93	0.93	0.90	0.90	0.90	
Heavy Vehicles (%)	5%	0%	2%	0%	21%	0%	1%	8%	0%	0%	10%	5%	
Adj. Flow (vph)	315	10	741	10	22	8	718	229	17	0	173	297	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	325	741	0	40	0	718	246	0	0	173	297	
Turn Type	Perm	NA	pt+ov	Perm	NA		D.P+P	NA			NA	Prot	
Protected Phases		5	5 6		5		6	1 6			1	1	2
Permitted Phases	5			5			1			1			
Detector Phase	5	5	5 6	5	5		6	1 6		1	1	1	
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0			8.0	8.0	8.0	1.0
Minimum Split (s)	13.0	13.0		13.0	13.0		13.5			13.0	13.0	13.0	24.0
Total Split (s)	37.0	37.0		37.0	37.0		36.0			23.0	23.0	23.0	24.0
Total Split (%)	30.8%	30.8%		30.8%	30.8%		30.0%			19.2%	19.2%	19.2%	20%
Maximum Green (s)	32.0	32.0		32.0	32.0		30.5			18.0	18.0	18.0	18.0
Yellow Time (s)	3.0	3.0		3.0	3.0		2.5			3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0			2.0	2.0	2.0	4.0
Lost Time Adjust (s)		0.0			0.0		0.0				0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.5				5.0	5.0	
Lead/Lag	Lead	Lead		Lead	Lead		Lag			Lead	Lead	Lead	Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	3.0	3.0
Recall Mode	Max	Max		Max	Max		Max			C-Max	C-Max	C-Max	None
Walk Time (s)													7.0
Flash Dont Walk (s)													11.0
Pedestrian Calls (#/hr)													18
Act Effct Green (s)		32.0	68.0		32.0		62.4	68.4			32.4	32.4	
Actuated g/C Ratio		0.27	0.57		0.27		0.52	0.57			0.27	0.27	
v/c Ratio		0.96	0.62		0.09		0.99	0.25			0.37	0.47	
Control Delay		84.9	2.9		28.5		59.6	24.9			42.4	7.9	
Queue Delay		0.0	0.2		0.0		36.7	0.0			0.0	1.1	
Total Delay		84.9	3.1		28.5		96.3	24.9			42.4	9.0	
LOS		F	A		C		F	C			D	A	
Approach Delay		28.0			28.5			78.1			21.3		
Approach LOS		C			C			E			C		
Queue Length 50th (ft)		256	8		19		486	128			96	0	
Queue Length 95th (ft)		#439	90		31		#811	m234			#211	83	
Internal Link Dist (ft)		388			61			254			263		
Turn Bay Length (ft)							165					125	
Base Capacity (vph)		339	1186		458		724	999			466	632	
Starvation Cap Reductn		0	60		0		0	0			0	0	
Spillback Cap Reductn		0	6		0		106	0			0	153	
Storage Cap Reductn		0	0		0		0	0			0	0	
Reduced v/c Ratio		0.96	0.66		0.09		1.16	0.25			0.37	0.62	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green, Master Intersection
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 45.8 Intersection LOS: D
Intersection Capacity Utilization 80.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

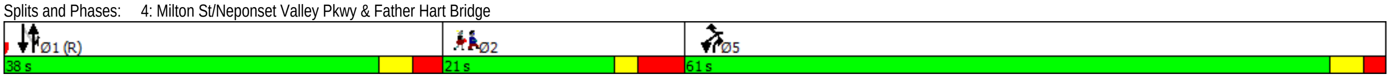
Splits and Phases: 3: Hyde Park Ave & Father Hart Bridge/Commuter Rail Parking lot

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø2
Lane Configurations							
Traffic Volume (vph)	632	305	75	752	247	49	
Future Volume (vph)	632	305	75	752	247	49	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	12	12	12	12	
Storage Length (ft)	0	0		0	50		
Storage Lanes	1	1		1	0		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850		0.850			
Flt Protected	0.950					0.960	
Satd. Flow (prot)	1620	1478	1881	1568	0	1771	
Flt Permitted	0.950					0.708	
Satd. Flow (perm)	1620	1478	1881	1568	0	1306	
Right Turn on Red		No		No			
Satd. Flow (RTOR)							
Link Speed (mph)	30		30			30	
Link Distance (ft)	468		361			557	
Travel Time (s)	10.6		8.2			12.7	
Peak Hour Factor	0.97	0.97	0.96	0.96	0.86	0.86	
Heavy Vehicles (%)	4%	2%	1%	3%	1%	13%	
Adj. Flow (vph)	652	314	78	783	287	57	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	652	314	78	783	0	344	
Turn Type	Prot	Prot	NA	pt+ov	Perm	NA	
Protected Phases	5	5	1	1 5		1	2
Permitted Phases					1		
Detector Phase	5	5	1	1 5	1	1	
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0	1.0
Minimum Split (s)	13.0	13.0	13.5		13.5	13.5	21.0
Total Split (s)	61.0	61.0	38.0		38.0	38.0	21.0
Total Split (%)	50.8%	50.8%	31.7%		31.7%	31.7%	18%
Maximum Green (s)	56.0	56.0	32.5		32.5	32.5	15.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.5		2.5	2.5	4.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0	5.5			5.5	
Lead/Lag			Lead		Lead	Lead	Lag
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							8.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	53.2	53.2	52.1	114.7		52.1	
Actuated g/C Ratio	0.44	0.44	0.43	0.96		0.43	
v/c Ratio	0.91	0.48	0.10	0.52		0.61	
Control Delay	39.3	21.1	24.4	3.3		34.6	
Queue Delay	49.9	1.4	0.0	0.0		0.0	
Total Delay	89.2	22.5	24.4	3.3		34.6	
LOS	F	C	C	A		C	
Approach Delay	67.5		5.2			34.6	
Approach LOS	E		A			C	
Queue Length 50th (ft)	503	192	34	0		196	
Queue Length 95th (ft)	m563	m271	87	328		#423	
Internal Link Dist (ft)	388		281			477	
Turn Bay Length (ft)							
Base Capacity (vph)	756	689	816	1493		567	
Starvation Cap Reductn	213	208	0	0		0	
Spillback Cap Reductn	0	0	0	0		0	
Storage Cap Reductn	0	0	0	0		0	
Reduced v/c Ratio	1.20	0.65	0.10	0.52		0.61	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 69 (58%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 37.6 Intersection LOS: D
Intersection Capacity Utilization 72.0% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Milton St/Neponset Valley Pkwy & Father Hart Bridge



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	81	54	708	169	178	551
Future Volume (Veh/h)	81	54	708	169	178	551
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.78	0.78	0.99	0.99	0.98	0.98
Hourly flow rate (vph)	104	69	715	171	182	562
Pedestrians	4		13			1
Lane Width (ft)	16.0		16.0			16.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	1		2			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						361
pX, platoon unblocked						
vC, conflicting volume	1744	806			890	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1744	806			890	
tC, single (s)	6.6	6.3			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.4	
p0 queue free %	0	81			74	
cM capacity (veh/h)	63	368			688	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	173	886	744
Volume Left	104	0	182
Volume Right	69	171	0
cSH	94	1700	688
Volume to Capacity	1.84	0.52	0.26
Queue Length 95th (ft)	359	0	27
Control Delay (s)	489.6	0.0	6.6
Lane LOS	F		A
Approach Delay (s)	489.6	0.0	6.6
Approach LOS	F		

Intersection Summary			
Average Delay	49.7		
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	63.9
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	348	69	57	531	391	244
Future Vol, veh/h	348	69	57	531	391	244
Peak Hour Factor	0.96	0.96	0.97	0.97	0.98	0.98
Heavy Vehicles, %	2	6	16	2	5	3
Mvmt Flow	363	72	59	547	399	249
Number of Lanes	1	0	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	37.7	122	27
HCM LOS	E	F	D

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	10%	83%	0%	0%
Vol Thru, %	90%	0%	100%	0%
Vol Right, %	0%	17%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	588	417	391	244
LT Vol	57	348	0	0
Through Vol	531	0	391	0
RT Vol	0	69	0	244
Lane Flow Rate	606	434	399	249
Geometry Grp	5	2	7	7
Degree of Util (X)	1.175	0.837	0.802	0.45
Departure Headway (Hd)	6.976	7.328	7.597	6.84
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	521	500	479	530
Service Time	5.03	5.328	5.297	4.54
HCM Lane V/C Ratio	1.163	0.868	0.833	0.47
HCM Control Delay	122	37.7	34.5	15
HCM Lane LOS	F	E	D	B
HCM 95th-tile Q	21.6	8.4	7.4	2.3

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	80	394	365	114	10	69
Future Volume (Veh/h)	80	394	365	114	10	69
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.97	0.97	0.91	0.91
Hourly flow rate (vph)	99	486	376	118	11	76
Pedestrians			1		3	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	379				1123	438
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	379				1123	438
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				95	88
cM capacity (veh/h)	1182				210	615

Direction, Lane #	NB 1	SB 1	SE 1
Volume Total	585	494	87
Volume Left	99	0	11
Volume Right	0	118	76
cSH	1182	1700	494
Volume to Capacity	0.08	0.29	0.18
Queue Length 95th (ft)	7	0	16
Control Delay (s)	2.2	0.0	13.8
Lane LOS	A		B
Approach Delay (s)	2.2	0.0	13.8
Approach LOS			B

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	43	26	486	380	11
Future Volume (Veh/h)	18	43	26	486	380	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	47	28	528	413	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				493		
pX, platoon unblocked	0.93					
vC, conflicting volume	1003	419	425			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	966	419	425			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	93	98			
cM capacity (veh/h)	256	634	1134			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	67	556	425
Volume Left	20	28	0
Volume Right	47	0	12
cSH	440	1134	1700
Volume to Capacity	0.15	0.02	0.25
Queue Length 95th (ft)	13	2	0
Control Delay (s)	14.6	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	14.6	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2	NEL2	NEL	NER	NER2	Ø2
Lane Configurations																	
Traffic Volume (vph)	28	754	11	3	570	24	46	1	12	36	1	25	14	2	37	7	
Future Volume (vph)	28	754	11	3	570	24	46	1	12	36	1	25	14	2	37	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	10	12	10	12	12	12	12	12	10	12	12	
Storage Length (ft)	100		0			0	0		0	0				0	0		
Storage Lanes	1		0			0	0		0	0				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	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00			1.00												
Frt		0.998			0.995			0.973				0.850		0.900			
Flt Protected	0.950							0.962			0.954			0.987			
Satd. Flow (prot)	1480	1877	0	0	1851	0	0	1634	0	0	1761	1292	0	1575	0	0	
Flt Permitted	0.362				0.998			0.755			0.732			0.987			
Satd. Flow (perm)	564	1877	0	0	1847	0	0	1283	0	0	1351	1292	0	1575	0	0	
Right Turn on Red						Yes			Yes			Yes				Yes	
Satd. Flow (RTOR)					3			9				132		82			
Link Speed (mph)		30			30			30			30			30			
Link Distance (ft)		509			1309			437			528			247			
Travel Time (s)		11.6			29.8			9.9			12.0			5.6			
Confl. Bikes (#/hr)			1			2											
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.84	0.84	0.84	0.56	0.56	0.56	0.87	0.87	0.87	0.87	
Heavy Vehicles (%)	22%	1%	0%	0%	2%	4%	2%	0%	0%	3%	0%	25%	0%	0%	0%	0%	
Adj. Flow (vph)	29	794	12	3	620	26	55	1	14	64	2	45	16	2	43	8	
Shared Lane Traffic (%)																	
Lane Group Flow (vph)	29	806	0	0	649	0	0	70	0	0	66	45	0	69	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Free	Prot	Prot			
Protected Phases		1			1			3			3		5	5			2
Permitted Phases	1			1			3			3		Free					
Detector Phase	1	1		1	1		3	3		3	3		5	5			
Switch Phase																	
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0			1.0
Minimum Split (s)	68.0	68.0		68.0	68.0		24.0	24.0		24.0	24.0		18.5	18.5			6.0
Total Split (s)	68.0	68.0		68.0	68.0		24.0	24.0		24.0	24.0		22.0	22.0			6.0
Total Split (%)	56.7%	56.7%		56.7%	56.7%		20.0%	20.0%		20.0%	20.0%		18.3%	18.3%			5%
Maximum Green (s)	62.5	62.5		62.5	62.5		19.5	19.5		19.5	19.5		16.5	16.5			4.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0			2.0
All-Red Time (s)	2.5	2.5		2.5	2.5		1.5	1.5		1.5	1.5		2.5	2.5			0.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0			-1.0			-1.0			
Total Lost Time (s)	4.5	4.5			4.5			3.5			3.5			4.5			
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lag		Lag	Lag		Lag	Lag			Lead
Lead-Lag Optimize?																	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0		2.0	2.0			3.0
Recall Mode	C-Max	C-Max		C-Max	C-Max		Max	Max		Max	Max		None	None			Max
Walk Time (s)	53.5	53.5		53.5	53.5		7.0	7.0		7.0	7.0		7.0	7.0			4.0
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		12.5	12.5		12.5	12.5		6.0	6.0			0.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		10	10			0
Act Effct Green (s)	73.7	73.7			73.7			20.5			20.5	120.0		10.0			
Actuated g/C Ratio	0.61	0.61			0.61			0.17			0.17	1.00		0.08			
v/c Ratio	0.08	0.70			0.57			0.31			0.29	0.03		0.33			
Control Delay	10.9	17.2			17.3			42.2			47.3	0.0		12.3			
Queue Delay	0.0	0.4			0.0			0.0			0.0	0.0		0.0			
Total Delay	10.9	17.7			17.3			42.2			47.3	0.0		12.3			
LOS	B	B			B			D			D	A		B			
Approach Delay		17.4			17.3			42.2			28.1			12.3			
Approach LOS		B			B			D			C			B			
Queue Length 50th (ft)	9	384			290			42			45	0		0			
Queue Length 95th (ft)	m11	m537			450			81			54	0		31			
Internal Link Dist (ft)		429			1229			357			448			167			
Turn Bay Length (ft)	100											100					
Base Capacity (vph)	346	1152			1135			226			230	1292		299			
Starvation Cap Reductn	0	82			0			0			0	0		0			
Spillback Cap Reductn	0	0			0			0			0	0		0			
Storage Cap Reductn	0	0			0			0			0	0		0			
Reduced v/c Ratio	0.08	0.75			0.57			0.31			0.29	0.03		0.23			

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 82 (68%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 18.9 Intersection LOS: B
Intersection Capacity Utilization 67.8% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Wolcott Sq & Hyde Park Ave/Wolcott Ct & Hyde Park Avenue/Neponset Valley Pkwy

Ø1 (R)	Ø5	Ø2	Ø3
68 s	22 s	6 s	24 s

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	307	699	369	159	213	313	
Future Volume (vph)	307	699	369	159	213	313	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			25	0	125	
Storage Lanes	0			0	2	1	
Taper Length (ft)	25				25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.97	1.00	
Ped Bike Factor			1.00				
Frt			0.955			0.850	
Flt Protected		0.985			0.950		
Satd. Flow (prot)	0	3531	3374	0	3467	1599	
Flt Permitted		0.606			0.950		
Satd. Flow (perm)	0	2173	3374	0	3467	1599	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			56			319	
Link Speed (mph)		30	30		30		
Link Distance (ft)		692	547		1101		
Travel Time (s)		15.7	12.4		25.0		
Confl. Bikes (#/hr)				2			
Peak Hour Factor	0.99	0.99	0.99	0.99	0.98	0.98	
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%	
Adj. Flow (vph)	310	706	373	161	217	319	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	1016	534	0	217	319	
Turn Type	Prot	NA	NA		Prot	pt+ov	
Protected Phases	1	1 2	2		3	1 3	4
Permitted Phases							
Detector Phase	1	1 2	2		3	1 3	
Switch Phase							
Minimum Initial (s)	8.0		8.0		8.0		1.0
Minimum Split (s)	13.0		18.0		13.0		32.0
Total Split (s)	25.0		18.0		25.0		32.0
Total Split (%)	25.0%		18.0%		25.0%		32%
Maximum Green (s)	20.0		13.0		20.0		29.0
Yellow Time (s)	4.0		4.0		4.0		2.0
All-Red Time (s)	1.0		1.0		1.0		1.0
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			5.0		5.0		
Lead/Lag	Lead		Lag		Lead		Lag
Lead-Lag Optimize?							
Vehicle Extension (s)	1.0		1.0		1.0		3.0
Recall Mode	Min		None		None		None
Walk Time (s)			7.0				7.0
Flash Dont Walk (s)			6.0				22.0
Pedestrian Calls (#/hr)			0				1
Act Effct Green (s)		34.3	13.5		8.9	34.2	
Actuated g/C Ratio		0.54	0.21		0.14	0.54	
v/c Ratio		0.82	0.70		0.45	0.32	
Control Delay		26.0	29.0		30.1	2.1	
Queue Delay		0.0	0.0		0.0	0.0	
Total Delay		26.0	29.0		30.1	2.1	
LOS		C	C		C	A	
Approach Delay		26.0	29.0		13.5		
Approach LOS		C	C		B		
Queue Length 50th (ft)		131	75		35	0	
Queue Length 95th (ft)		#503	#265		97	32	
Internal Link Dist (ft)		612	467		1021		
Turn Bay Length (ft)						125	
Base Capacity (vph)		1241	766		1141	1033	
Starvation Cap Reductn		0	0		0	0	
Spillback Cap Reductn		0	0		0	0	
Storage Cap Reductn		0	0		0	0	
Reduced v/c Ratio		0.82	0.70		0.19	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 63.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 23.6 — Intersection LOS: C
Intersection Capacity Utilization 62.7% — ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

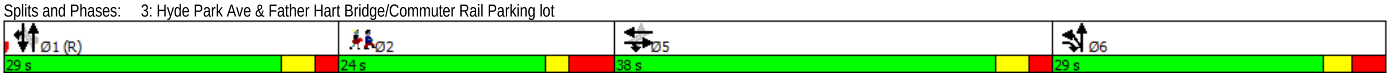
Splits and Phases: 2: Neponset Valley Parkway & Truman Parkway

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2
Lane Configurations													
Traffic Volume (vph)	312	4	865	1	4	3	530	143	2	1	190	245	
Future Volume (vph)	312	4	865	1	4	3	530	143	2	1	190	245	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12	
Storage Length (ft)	0		0	0		0	165		0	0		125	
Storage Lanes	0		1	0		0	1		0	0		1	
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	
Frt			0.850		0.949			0.998				0.850	
Flt Protected		0.953			0.993		0.950						
Satd. Flow (prot)	0	1776	1599	0	2029	0	1752	1774	0	0	1827	1404	
Flt Permitted		0.714			0.958		0.511				0.999		
Satd. Flow (perm)	0	1330	1599	0	1958	0	943	1774	0	0	1825	1404	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			626		8			1				272	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		468			141			334			343		
Travel Time (s)		10.6			3.2			7.6			7.8		
Peak Hour Factor	0.86	0.86	0.86	0.40	0.40	0.40	0.85	0.85	0.85	0.90	0.90	0.90	
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	3%	7%	0%	0%	4%	15%	
Adj. Flow (vph)	363	5	1006	3	10	8	624	168	2	1	211	272	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	368	1006	0	21	0	624	170	0	0	212	272	
Turn Type	Perm	NA	pt+ov	Perm	NA		D.P+P	NA		Perm	NA	Prot	
Protected Phases		5	5 6		5		6	1 6			1	1	2
Permitted Phases	5			5			1			1			
Detector Phase	5	5	5 6	5	5		6	1 6		1	1	1	
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0			8.0	8.0	8.0	1.0
Minimum Split (s)	13.0	13.0		13.0	13.0		13.5			13.0	13.0	13.0	24.0
Total Split (s)	38.0	38.0		38.0	38.0		29.0			29.0	29.0	29.0	24.0
Total Split (%)	31.7%	31.7%		31.7%	31.7%		24.2%			24.2%	24.2%	24.2%	20%
Maximum Green (s)	33.0	33.0		33.0	33.0		23.5			24.0	24.0	24.0	18.0
Yellow Time (s)	3.0	3.0		3.0	3.0		2.5			3.0	3.0	3.0	2.0
All-Red Time (s)	2.0	2.0		2.0	2.0		3.0			2.0	2.0	2.0	4.0
Lost Time Adjust (s)		0.0			0.0		0.0				0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.5				5.0	5.0	
Lead/Lag	Lead	Lead		Lead	Lead		Lag			Lead	Lead	Lead	Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	3.0	3.0
Recall Mode	Max	Max		Max	Max		Max			C-Max	C-Max	C-Max	None
Walk Time (s)													7.0
Flash Dont Walk (s)													11.0
Pedestrian Calls (#/hr)													18
Act Effct Green (s)		33.0	62.0		33.0		61.4	67.4			38.4	38.4	
Actuated g/C Ratio		0.28	0.52		0.28		0.51	0.56			0.32	0.32	
v/c Ratio		1.01	0.89		0.04		0.97	0.17			0.36	0.43	
Control Delay		92.8	16.1		23.4		51.5	9.7			37.3	7.2	
Queue Delay		0.0	1.4		0.0		25.8	0.0			0.0	0.3	
Total Delay		92.8	17.5		23.4		77.3	9.7			37.3	7.5	
LOS		F	B		C		E	A			D	A	
Approach Delay		37.7			23.4			62.8			20.5		
Approach LOS		D			C			E			C		
Queue Length 50th (ft)		~295	179		7		198	26			110	0	
Queue Length 95th (ft)		#456	223		10		#577	58			233	76	
Internal Link Dist (ft)		388			61			254			263		
Turn Bay Length (ft)							165					125	
Base Capacity (vph)		365	1128		544		640	996			584	634	
Starvation Cap Reductn		0	36		0		0	0			0	0	
Spillback Cap Reductn		0	7		0		54	0			0	88	
Storage Cap Reductn		0	0		0		0	0			0	0	
Reduced v/c Ratio		1.01	0.92		0.04		1.06	0.17			0.36	0.50	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green, Master Intersection
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 41.9 Intersection LOS: D
Intersection Capacity Utilization 82.8% ICU Level of Service E
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: Hyde Park Ave & Father Hart Bridge/Commuter Rail Parking lot

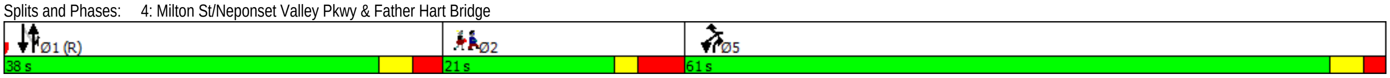


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø2
Lane Configurations							
Traffic Volume (vph)	510	281	63	815	213	151	
Future Volume (vph)	510	281	63	815	213	151	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	12	12	12	12	
Storage Length (ft)	0	0		0	50		
Storage Lanes	1	1		1	0		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850		0.850			
Flt Protected	0.950					0.972	
Satd. Flow (prot)	1574	1507	1863	1599	0	1759	
Flt Permitted	0.950					0.780	
Satd. Flow (perm)	1574	1507	1863	1599	0	1412	
Right Turn on Red		No		No			
Satd. Flow (RTOR)							
Link Speed (mph)	30		30			30	
Link Distance (ft)	468		361			557	
Travel Time (s)	10.6		8.2			12.7	
Peak Hour Factor	0.91	0.91	0.90	0.90	0.87	0.87	
Heavy Vehicles (%)	7%	0%	2%	1%	0%	12%	
Adj. Flow (vph)	560	309	70	906	245	174	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	560	309	70	906	0	419	
Turn Type	Prot	Prot	NA	pt+ov	Perm	NA	
Protected Phases	5	5	1	1 5		1	2
Permitted Phases					1		
Detector Phase	5	5	1	1 5	1	1	
Switch Phase							
Minimum Initial (s)	3.0	3.0	8.0		8.0	8.0	1.0
Minimum Split (s)	8.0	8.0	13.5		13.5	13.5	21.0
Total Split (s)	61.0	61.0	38.0		38.0	38.0	21.0
Total Split (%)	50.8%	50.8%	31.7%		31.7%	31.7%	18%
Maximum Green (s)	56.0	56.0	32.5		32.5	32.5	15.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	2.0
All-Red Time (s)	2.0	2.0	2.5		2.5	2.5	4.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0	5.5			5.5	
Lead/Lag			Lead		Lead	Lead	Lag
Lead-Lag Optimize?			Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							8.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	50.1	50.1	55.2	114.7		55.2	
Actuated g/C Ratio	0.42	0.42	0.46	0.96		0.46	
v/c Ratio	0.85	0.49	0.08	0.59		0.65	
Control Delay	36.2	22.3	23.7	4.1		34.0	
Queue Delay	40.2	1.2	0.0	0.0		0.0	
Total Delay	76.5	23.4	23.7	4.1		34.0	
LOS	E	C	C	A		C	
Approach Delay	57.6		5.5			34.0	
Approach LOS	E		A			C	
Queue Length 50th (ft)	425	169	29	0		236	
Queue Length 95th (ft)	m492	m271	80	448		#538	
Internal Link Dist (ft)	388		281			477	
Turn Bay Length (ft)							
Base Capacity (vph)	734	703	856	1523		649	
Starvation Cap Reductn	210	205	0	0		0	
Spillback Cap Reductn	0	0	0	16		0	
Storage Cap Reductn	0	0	0	0		0	
Reduced v/c Ratio	1.07	0.62	0.08	0.60		0.65	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 30.8 Intersection LOS: C
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Milton St/Neponset Valley Pkwy & Father Hart Bridge



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	124	175	699	30	161	495
Future Volume (Veh/h)	124	175	699	30	161	495
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.98	0.98	0.96	0.96
Hourly flow rate (vph)	139	197	713	31	168	516
Pedestrians	4		13			1
Lane Width (ft)	16.0		16.0			16.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	1		2			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						361
pX, platoon unblocked						
vC, conflicting volume	1598	734			748	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1598	734			748	
tC, single (s)	6.5	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.3	
p0 queue free %	0	53			80	
cM capacity (veh/h)	87	418			830	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	336	744	684
Volume Left	139	0	168
Volume Right	197	31	0
cSH	163	1700	830
Volume to Capacity	2.06	0.44	0.20
Queue Length 95th (ft)	660	0	19
Control Delay (s)	544.2	0.0	4.9
Lane LOS	F		A
Approach Delay (s)	544.2	0.0	4.9
Approach LOS	F		

Intersection Summary			
Average Delay	105.5		
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	31.1
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	345	77	46	338	404	271
Future Vol, veh/h	345	77	46	338	404	271
Peak Hour Factor	0.95	0.95	0.92	0.92	0.96	0.96
Heavy Vehicles, %	1	1	9	2	2	1
Mvmt Flow	363	81	50	367	421	282
Number of Lanes	1	0	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	36.2	32.2	27.2
HCM LOS	E	D	D

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	12%	82%	0%	0%
Vol Thru, %	88%	0%	100%	0%
Vol Right, %	0%	18%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	384	422	404	271
LT Vol	46	345	0	0
Through Vol	338	0	404	0
RT Vol	0	77	0	271
Lane Flow Rate	417	444	421	282
Geometry Grp	5	2	7	7
Degree of Util (X)	0.8	0.841	0.826	0.496
Departure Headway (Hd)	6.897	6.814	7.067	6.331
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	526	533	513	567
Service Time	4.947	4.814	4.824	4.088
HCM Lane V/C Ratio	0.793	0.833	0.821	0.497
HCM Control Delay	32.2	36.2	35.3	15.2
HCM Lane LOS	D	E	E	C
HCM 95th-tile Q	7.6	8.7	8.2	2.7

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	63	396	338	82	32	108
Future Volume (Veh/h)	63	396	338	82	32	108
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.98	0.98	0.95	0.95
Hourly flow rate (vph)	65	408	345	84	34	114
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	345				925	387
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	345				925	387
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				88	83
cM capacity (veh/h)	1225				285	663

Direction, Lane #	NB 1	SB 1	SE 1
Volume Total	473	429	148
Volume Left	65	0	34
Volume Right	0	84	114
cSH	1225	1700	508
Volume to Capacity	0.05	0.25	0.29
Queue Length 95th (ft)	4	0	30
Control Delay (s)	1.6	0.0	15.0
Lane LOS	A		B
Approach Delay (s)	1.6	0.0	15.0
Approach LOS			B

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	36	46	413	400	20
Future Volume (Veh/h)	15	36	46	413	400	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	39	50	449	435	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				524		
pX, platoon unblocked	0.97					
vC, conflicting volume	995	446	457			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	977	446	457			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	94	95			
cM capacity (veh/h)	256	612	1104			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	55	499	457
Volume Left	16	50	0
Volume Right	39	0	22
cSH	436	1104	1700
Volume to Capacity	0.13	0.05	0.27
Queue Length 95th (ft)	11	4	0
Control Delay (s)	14.4	1.3	0.0
Lane LOS	B	A	
Approach Delay (s)	14.4	1.3	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		1.4		
Intersection Capacity Utilization		59.9%	ICU Level of Service	B
Analysis Period (min)		15		

APPENDIX E – RESPONSE TO CLIMATE CHANGE QUESTIONNAIRE

Appendix E. Response to Climate Change Questionnaire-1717-1725 Hyde Park Avenue

boston planning & development agency

Climate Resiliency Checklist

NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

A.1 - Project Information

Project Name:	1725 Hyde Park Ave			
Project Address:	1725 Hyde Park Ave			
Project Address Additional:				
Filing Type (*select*)	*Initial (**PNF**, EPNF, NPC or other substantial filing)* *Design / Building Permit (prior to final design approval), or* *Construction / Certificate of Occupancy (post construction completion)*			
Filing Contact	*Mitch Fischman*	*MLF Consulting LLC*	*mitchfischman@gmail.com*	*781-760-1726*
Is MEPA approval required	*Yes/**no***		*Date*	

A.3 - Project Team

Owner / Developer:	AD Meliora LLC
Architect:	The Architectural Team
Engineer:	RW Sullivan
Sustainability / LEED:	Soden Sustainability Consulting
Permitting:	MLF Consulting
Construction Management:	Ad Meliora

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Residential Units -305 Proposed
List the First Floor Uses:	Main Residential Lobbies; Residential Units; Proposed Restaurant
List any Critical Site Infrastructure and or Building Uses:	Residential Units, Residential Amenities, Garage Parking; Landscaped Areas

Site and Building:

Site Area:	*119,626 SF*	Building Area:	*348,395 SF Building, 78,610 Garage SF*
Building Height:	*60.4 Ft*	Building Height:	*6 Stories above a parking level*
Existing Site Elevation – Low:	*62 Ft BCB*	Existing Site Elevation – High:	*88 Ft BCB*
Proposed Site Elevation – Low:	*62 Ft BCB*	Proposed Site Elevation – High:	*88 Ft BCB*
Proposed First Floor Elevation:	*77 Ft BCB*	Below grade levels:	1 Story (parking)

Article 37 Green Building:

LEED Version - Rating System:	BDC v4	LEED Certification:	***No***
Proposed LEED rating:	*Certified/**Silver**/ Gold/Platinum*	Proposed LEED point score:	*53 Pts.*

Building Envelope

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	*40 ci (R)*	Exposed Floor:	*20 ci (R)*
Foundation Wall:	*10 (R)*	Slab Edge (at or below grade):	*10 (R)*

Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):

Area of Opaque Curtain Wall & Spandrel Assembly:	*n/a (%)*	Wall & Spandrel Assembly Value:	*Spandrel: U-0.24*
Area of Framed & Insulated / Standard Wall:	*50(%)*	Wall Value	*Opaque: R-23 + R-6.3 c.i.*
Area of Vision Window:	*45%*	Window Glazing Assembly Value:	*. 34 (U)*
		Window Glazing SHGC:	*SHGC-0.30*
Area of Doors:	*1%*	Door Assembly Value:	*.7 (U)*

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined	*Whole building energy simulation using Trane Trace 700*		
Annual Electric:	*2,086,176 (kWh)*	Peak Electric:	*267 (kW)*
Annual Heating:	*5,536 (MMbtu/hr)*	Peak Heating:	*13.7 (MMbtu)*
Annual Cooling:	*52,822 (Tons/hr)*	Peak Cooling:	*142 (Tons)*
Energy Use - Below ASHRAE 90.1 - 2013:	*13%*	Have the local utilities reviewed the building energy performance?:	*Yes (initial Outreach)*
Energy Use - Below Mass. Code:	*13%*	Energy Use Intensity:	*41 (kBtu/SF)*

Back-up / Emergency Power System

Electrical Generation Output:	*(kW)*	Number of Power Units:	
System Type:	*(kW)*	Fuel Source:	

Emergency and Critical System Loads (in the event of a service interruption)

Electric:	*(kW)*	Heating:	*(MMbtu/hr)*
		Cooling:	*(Tons/hr)*

B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing GHG emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon neutrality by 2050 new buildings performance will need to progressively improve to net carbon zero and positive.

B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions: *1,155 (Tons)*

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

Early energy modeling before HVAC system design, internal goals set for energy and water use reduction.

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

This building aims to maximize daylighting to reduce the need for artificial lighting.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

Dedicated outdoor air system with total energy recovery wheel, All-LED Lighting design, air-to-air heat recovery in dwelling units

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

On-site renewable is being evaluated for this project.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

None at this time

Describe any energy efficiency assistance or support provided or to be provided to the project:

We will be working with ICF to determine an incentive path.

B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

Commissioning and systems maintenance to ensure proper and efficient operation of equipment

C - Extreme Heat Events

Annual average temperature in Boston increased by about 2˚F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

C.1 – Extreme Heat - Design Conditions

Temperature Range - Low:	*5 Deg.*	Temperature Range - High:	*97 Deg.*
Annual Heating Degree Days:	5,573	Annual Cooling Degree Days	1,177

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90°:	12	Days – Above 100°:	4
Number of Heatwaves / Year:	*3*	Average Duration of Heatwave (Days):	*3*

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

The project is specifying high SRI roofing and paving materials.

C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

Continuous insulation to avoid conductive heat gain.

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

Continuous insulation to avoid conductive heat gain in summer and to avoid heat loss in winter.

D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

D.1 – Extreme Precipitation - Design Conditions

10 Year, 24 Hour Design Storm:	*6.In.*

Describe all building and site measures for reducing storm water run-off:

The project will incorporate a subsurface stormwater infiltration/ detention system into the storm drain system design.

D.2 - Extreme Precipitation - Adaptation Strategies

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

The project will incorporate a subsurface stormwater infiltration/ detention system into the storm drain system design.

E – Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, sea levels in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA SFHA?	*No*	What Zone:	Zone X
		Current FEMA SFHA Zone Base Flood Elevation:	*N/A*

Is any portion of the site in a BPDA Sea Level Rise - Flood Hazard Area? Use the online BPDA SLR-FHA Mapping Tool to assess the susceptibility of the project site.: *No*

If you answered YES to either of the above questions, please complete the following questions.
Otherwise you have completed the questionnaire; thank you!

E.1 – Sea Level Rise and Storms – Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented on the BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map, which depicts a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). Use the online BPDA SLR-FHA Mapping Tool to identify the highest Sea Level Rise - Base Flood Elevation for the site. The Sea Level Rise - Design Flood Elevation is determined by adding either 24” of freeboard for critical facilities and infrastructure and any ground floor residential units OR 12” of freeboard for other buildings and uses.

Sea Level Rise - Base Flood Elevation:	*Ft BCB*		
Sea Level Rise - Design Flood Elevation:	*Ft BCB*	First Floor Elevation:	*Ft BCB*
Site Elevations at Building:	*Ft BCB*	Accessible Route Elevation:	*Ft BCB*

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

Describe any strategies that would support rapid recovery after a weather event:

E.2 – Sea Level Rise and Storms – Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

A pdf and word version of the Climate Resiliency Checklist is provided for informational use and off-line preparation of a project submission. NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

For questions or comments about this checklist or Climate Change best practices, please contact:
John.Dalzell@boston.gov

APPENDIX F – RESPONSE TO COB ACCESS GUIDELINES

Article 80 – Accessibility Checklist

A requirement of the Boston Planning & Development Agency (BPDA) Article 80 Development Review Process

The Mayor's Commission for Persons with Disabilities strives to reduce architectural, procedural, attitudinal, and communication barriers that affect persons with disabilities in the City of Boston. In 2009, a Disability Advisory Board was appointed by the Mayor to work alongside the Commission in creating universal access throughout the city's built environment. The Disability Advisory Board is made up of 13 volunteer Boston residents with disabilities who have been tasked with representing the accessibility needs of their neighborhoods and increasing inclusion of people with disabilities.

In conformance with this directive, the BDPA has instituted this Accessibility Checklist as a tool to encourage developers to begin thinking about access and inclusion at the beginning of development projects, and strive to go beyond meeting only minimum MAAB / ADAAG compliance requirements. Instead, our goal is for developers to create ideal design for accessibility which will ensure that the built environment provides equitable experiences for all people, regardless of their abilities. As such, any project subject to Boston Zoning Article 80 Small or Large Project Review, including Institutional Master Plan modifications and updates, must complete this Accessibility Checklist thoroughly to provide specific detail about accessibility and inclusion, including descriptions, diagrams, and data.

For more information on compliance requirements, advancing best practices, and learning about progressive approaches to expand accessibility throughout Boston's built environment. Proponents are highly encouraged to meet with Commission staff, prior to filing.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
   http://www.ada.gov/2010ADAstandards_index.htm

2. Massachusetts Architectural Access Board 521 CMR
   http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html

3. Massachusetts State Building Code 780 CMR
   http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/csl/building-codebbrs.html

4. Massachusetts Office of Disability – Disabled Parking Regulations

   http://www.mass.gov/anf/docs/mod/hp-parking-regulations-summary-mod.pdf

5. MBTA Fixed Route Accessible Transit Stations
   http://www.mbta.com/riding_the_t/accessible_services/

6. City of Boston – Complete Street Guidelines
   http://bostoncompletestreets.org/

7. City of Boston – Mayor's Commission for Persons with Disabilities Advisory Board
   www.boston.gov/disability
8. City of Boston – Public Works Sidewalk Reconstruction Policy
   http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf

9. City of Boston – Public Improvement Commission Sidewalk Café Policy
   http://www.cityofboston.gov/images_documents/Sidewalk_cafes_tcm3-1845.pdf

Glossary of Terms:

1. ***Accessible Route*** – A continuous and unobstructed path of travel that meets or exceeds the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 20
2. ***Accessible Group 2 Units*** – Residential units with additional floor space that meet or exceed the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 9.4

3. ***Accessible Guestrooms*** – Guestrooms with additional floor space, that meet or exceed the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 8.4
4. ***Inclusionary Development Policy (IDP)*** – Program run by the BPDA that preserves access to affordable housing opportunities, in the City. For more information visit: http://www.bostonplans.org/housing/overview
5. ***Public Improvement Commission (PIC)*** – The regulatory body in charge of managing the public right of way. For more information visit: https://www.boston.gov/pic
6. ***Visitability*** – A place's ability to be accessed and visited by persons with disabilities that cause functional limitations; where architectural barriers do not inhibit access to entrances/doors and bathrooms.

1. Project Information: *If this is a multi-phased or multi-building project, fill out a separate Checklist for each phase/building.*	
Project Name:	**The Residences at Readville Station**
Primary Project Address:	**1717-1725 Hyde Park Avenue**
Total Number of Phases/Buildings:	**One Phase, Two Buildings**
Primary Contact (Name / Title / Company / Email / Phone):	**AD Meliora LLC** Two Oliver Street Boston, MA 02109 Tel: 617-202-3266 Paul Soughley paul.soughley@admelioral lc.com
Owner / Developer:	**Same**
Architect:	**The Architectural Team, Inc.** 50 Commandant's Way Chelsea, MA 02150 Tel: 617-889-4402 Mike Doherty mdoherty@architecturalteam.com
Civil Engineer:	**HW Moore Associates, Inc.** 212 East Berkeley Street #4 Boston, MA 02118 Tel: 617-357-8145 Robert Carter RCarter@hwmoore.com
Landscape Architect:	**Copley Wolff Design Group** 10 Post Office Square Boston, MA 02109 Tel: 617-654-9000 Marcus Cantu mcantu@copley-wolff.com

Permitting:	**Mitchell L. Fischman Consulting (“MLF Consulting”) LLC** 41 Brush Hill Road Newton, MA 02461 Tel : 781-760-1726 Mitchell L. Fischman mitchfischman@gmail.com
Construction Management:	**Ad Meliora**

At what stage is the project at time of this questionnaire? Select below:

	PNF / Expanded PNF Submitted	Draft / Final Project Impact Report Submitted	BPDA Board Approved
	BPDA Design Approved	Under Construction	Construction Completed:

Do you anticipate filing for any variances with the Massachusetts Architectural Access Board (MAAB)? ***If yes,*** identify and explain.	No

2. Building Classification and Description:

This section identifies preliminary construction information about the project including size and uses.

What are the dimensions of the project?

Site Area:	2.7 acres (119,626 *SF)*	Building Area:	Approx. 348,395 *GSF*
Building Height:	*Approx. 60 feet*	Number of Stories:	*6 stories*
First Floor Elevation:	88’	Is there below grade space:	***Yes*** */ No*

What is the Construction Type? (Select most appropriate type)

	Wood Frame	Masonry	Steel Frame	Concrete

What are the principal building uses? (IBC definitions are below – select all appropriate that apply)

	Residential – One - Three Unit	**Residential - Multi-unit, Four +**	Institutional	Educational
	Business	Mercantile	Factory	Hospitality
	Laboratory / Medical	Storage, Utility and Other		

List street-level uses of the building:	Main Lobbies and on-site management office, mail/package room, and a restaurant/retail space with outdoor patio

3. Assessment of Existing Infrastructure for Accessibility: *This section explores the proximity to accessible transit lines and institutions, such as (but not limited to) hospitals, elderly & disabled housing, and general neighborhood resources. Identify how the area surrounding the development is accessible for people with mobility impairments and analyze the existing condition of the accessible routes through sidewalk and pedestrian ramp reports.*	
Provide a description of the neighborhood where this development is located and its identifying topographical characteristics:	The Proposed Site is a 2.5 acre (119,626 sf) partially occupied industrial property, bounded by Hyde Park Avenue, Milton Street, and the AMTRAK Mainline and MBTA Commuter Rail Tracks. The site drops down from Hyde Park Ave to the tracks and is on a gradual incline along Hyde Park Avenue with the lower road section closest to the Cleary Sq. side.
on the otherside of the Milton St BridgeList the surrounding accessible MBTA transit lines and their proximity to development site: commuter rail / subway stations, bus stops:	MBTA Readville Station on opposite side of Hyde Park Avenue, and the Readville mainline station. A bus stop connecting to Forest Hills and Walcott Sq is in front of the site along Hyde Park Avenue and on the otherside of Hyde Park Ave opposite the Milton St. Bridge.
List the surrounding institutions: hospitals, public housing, elderly and disabled housing developments, educational facilities, others:	There is a private school on the otherside of the Milton St Bridge
List the surrounding government buildings: libraries, community centers, recreational facilities, and other related facilities:	Walcott Square is located within ¼ mile of the site
4. Surrounding Site Conditions – Existing: *This section identifies current condition of the sidewalks and pedestrian ramps at the development site.*	
Is the development site within a historic district? ***If yes,*** identify which district:	No
Are there sidewalks and pedestrian ramps existing at the development site? ***If yes***, list the existing sidewalk and pedestrian ramp dimensions, slopes, materials, and physical condition at the development site:	Existing sidewalks along Hyde Park Avenue and Milton Street will be replaced with new sidewalks.

Are the sidewalks and pedestrian ramps existing-to-remain? ***If yes,*** have they been verified as ADA / MAAB compliant (with yellow composite detectable warning surfaces, cast in concrete)? ***If yes,*** provide description and photos:	No.

5. Surrounding Site Conditions – Proposed

This section identifies the proposed condition of the walkways and pedestrian ramps around the development site. Sidewalk width contributes to the degree of comfort walking along a street. Narrow sidewalks do not support lively pedestrian activity, and may create dangerous conditions that force people to walk in the street. Wider sidewalks allow people to walk side by side and pass each other comfortably walking alone, walking in pairs, or using a wheelchair.

Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? ***If yes***, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, or Boulevard.	Yes (pending confirmation of existing cross slopes and clearances)
What are the total dimensions and slopes of the proposed sidewalks? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone:	8-foot wide continuous sidewalks along Milton Street and Hyde Park Ave. Sidewalks along Hyde Park Avenue also widen to 12 feet between trees and planting. Slopes conform to existing street slopes and grades.
List the proposed materials for each Zone. Will the proposed materials be on private property or will the proposed materials be on the City of Boston pedestrian right-of-way?	The paving material for the sidewalks will be mostly poured in place concrete with pavers between trees and planting.
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way? ***If yes,*** what are the proposed dimensions of the sidewalk café or furnishings and what will the remaining right-of-way clearance be?	No

If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the Public Improvement Commission (PIC)?	No
Will any portion of the Project be going through the PIC? ***If yes,*** identify PIC actions and provide details.	PIC actions/approvals not identified at the present time
6. Accessible Parking: *See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding accessible parking requirement counts and the Massachusetts Office of Disability – Disabled Parking Regulations*.	
What is the total number of parking spaces provided at the development site? Will these be in a parking lot or garage?	221 spaces in below level garage, 6 spaces at grade level entry auto court.
What is the total number of accessible spaces provided at the development site? How many of these are "Van Accessible" spaces with an 8 foot access aisle?	7 accessible spaces including 1 van accessible space in below level garage. 1 space at entry auto court
Will any on-street accessible parking spaces be required? ***If yes,*** has the proponent contacted the Commission for Persons with Disabilities regarding this need?	No.
Where is the accessible visitor parking located?	At grade at entry auto court.
Has a drop-off area been identified? ***If yes,*** will it be accessible?	Yes, it will be accessible.

7. Circulation and Accessible Routes: *The primary objective in designing smooth and continuous paths of travel is to create universal access to entryways and common spaces, which accommodates persons of all abilities and allows for visitability with neighbors.*	
Describe accessibility at each entryway: Example: Flush Condition, Stairs, Ramp, Lift or Elevator:	Flush Condition at most if not at all entryway locations. Ramps to be added where/if needed. This will enable access and promote "Visit-ability". The apartment buildings are serviced by elevators and flush conditions at the entryways. All common areas and residential units are accessible and on an accessible route.
Are the accessible entrances and standard entrance integrated? ***If yes,*** *describe.* ***If no***, what is the reason?	Yes, all entries are accessible.
If project is subject to Large Project Review/Institutional Master Plan, describe the accessible routes way-finding / signage package.	See figures attached
8. Accessible Units (Group 2) and Guestrooms: (If applicable) *In order to facilitate access to housing and hospitality, this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing and hotel rooms.*	
What is the total number of proposed housing units or hotel rooms for the development?	305 Residential Apartments
If a residential development, how many units are for sale? How many are for rent? What is the breakdown of market value units vs. IDP (Inclusionary Development Policy) units?	The units are a mix of condominiums and rentals, with the exact mix to be determined.
If a residential development, how many accessible Group 2 units are being proposed?	16
If a residential development, how many accessible Group 2 units will also be IDP units? ***If none***, describe reason.	TBD

If a hospitality development, how many accessible units will feature a wheel-in shower? Will accessible equipment be provided as well? *If yes,* provide amount and location of equipment.	N/A
Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs / thresholds at entry, step to balcony, others. *If yes*, provide reason.	No
Are there interior elevators, ramps or lifts located in the development for access around architectural barriers and/or to separate floors? *If yes*, describe:	Elevators are provided to access upper floors and parking level blow.

9. Community Impact:

Accessibility and inclusion extend past required compliance with building codes. Providing an overall scheme that allows full and equal participation of persons with disabilities makes the development an asset to the surrounding community.

Is this project providing any funding or improvements to the surrounding neighborhood? Examples: adding extra street trees, building or refurbishing a local park, or supporting other community-based initiatives?	At a minimum, new sidewalks and street trees will be provided along Hyde Park Avenue in addition to the Project's support to the traffic improvement plan for Walcott Square.
What inclusion elements does this development provide for persons with disabilities in common social and open spaces? Example: Indoor seating and TVs in common rooms; outdoor seating and barbeque grills in yard. Will all of these spaces and features provide accessibility?	To Be Developed; Early in Process. However, the intent and expectation is for all common use areas, interior and exterior, to be fully accessible.

Are any restrooms planned in common public spaces? ***If yes,*** will any be single-stall, ADA compliant and designated as "Family"/ "Companion" restrooms? ***If no***, explain why not.	Common restrooms will be located within proximity to the First Floor amenity spaces and all will be ADA compliant.
Has the proponent reviewed the proposed plan with the City of Boston Disability Commissioner or with their Architectural Access staff? ***If yes,*** did they approve? ***If no,*** what were their comments?	Review is expected to be completed as a part of the Article 80 LPR of the PNF.
Has the proponent presented the proposed plan to the Disability Advisory Board at one of their monthly meetings? Did the Advisory Board vote to support this project? ***If no,*** what recommendations did the Advisory Board give to make this project more accessible?	No, it has not been presented.

10. Attachments

Include a list of all documents you are submitting with this Checklist. This may include drawings, diagrams, photos, or any other material that describes the accessible and inclusive elements of this project.

Provide a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations, including route distances. The accessible route is along Hyde Park Avenue, Milton Street and sidewalks. All entryways to the building will be accessible. **See accessibility figures attached.**
Provide a diagram of the accessible route connections through the site, including distances. ***SEE ABOVE***
Provide a diagram the accessible route to any roof decks or outdoor courtyard space? (if applicable) ***SEE ABOVE***
Provide a plan and diagram of the accessible Group 2 units, including locations and route from accessible entry. ***SEE ABOVE***
Provide any additional drawings, diagrams, photos, or any other material that describes the inclusive and accessible elements of this project. ***SEE ABOVE***

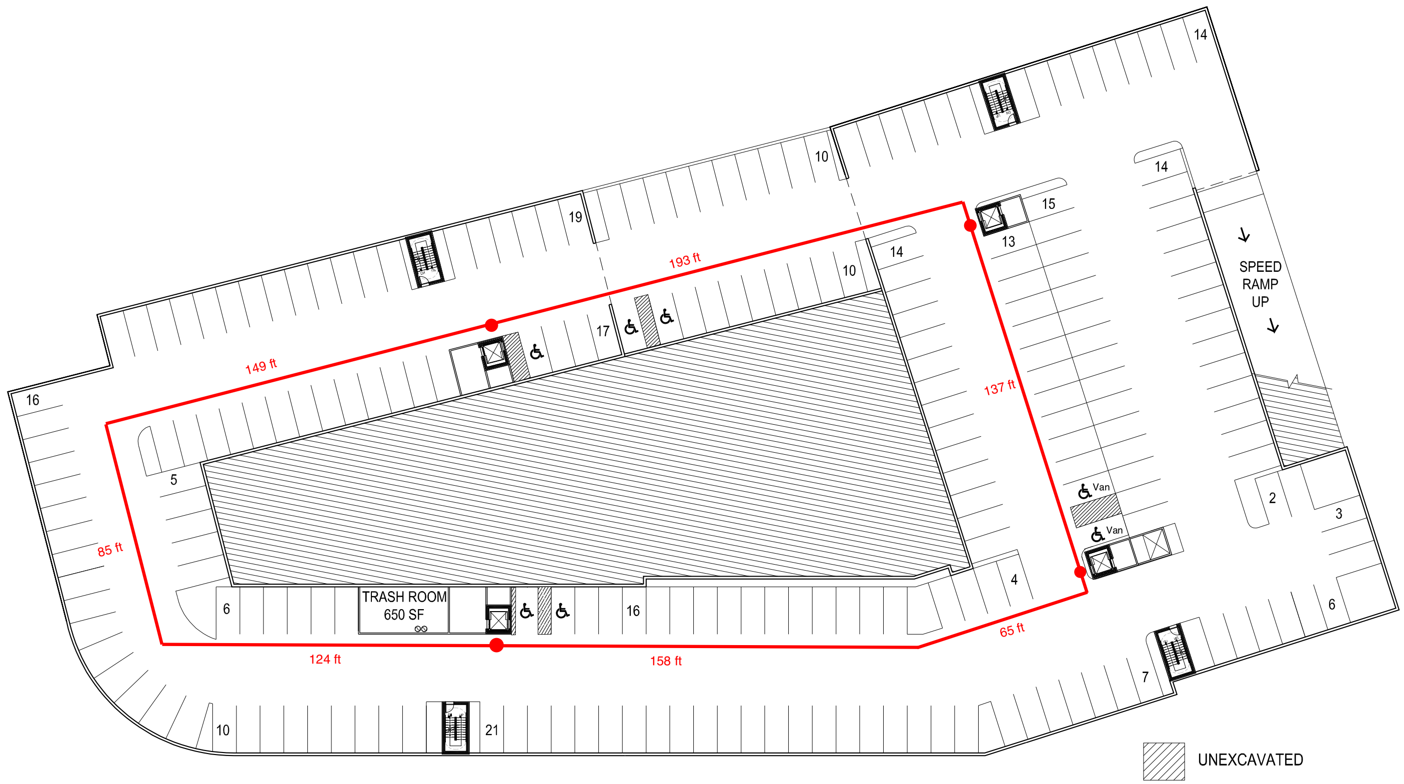
This completes the Article 80 Accessibility Checklist required for your project. Prior to and during the review process, Commission staff are able to provide technical assistance and design review, in order to help achieve ideal accessibility and to ensure that all buildings, sidewalks, parks, and open spaces are usable and welcoming to Boston's diverse residents and visitors, including those with physical, sensory, and other disabilities.

For questions or comments about this checklist, or for more information on best practices for improving accessibility and inclusion, visit www.boston.gov/disability, or our office:

The Mayor's Commission for Persons with Disabilities
1 City Hall Square, Room 967,
Boston MA 02201.

Architectural Access staff can be reached at:

accessibility@boston.gov | patricia.mendez@boston.gov | sarah.leung@boston.gov | 617-635-3682



10 HYDE PARK AVENUE - PARKING LEVEL (EL.62 +/-)

SCALE: NOT TO SCALE

0' 10' 20' 50'

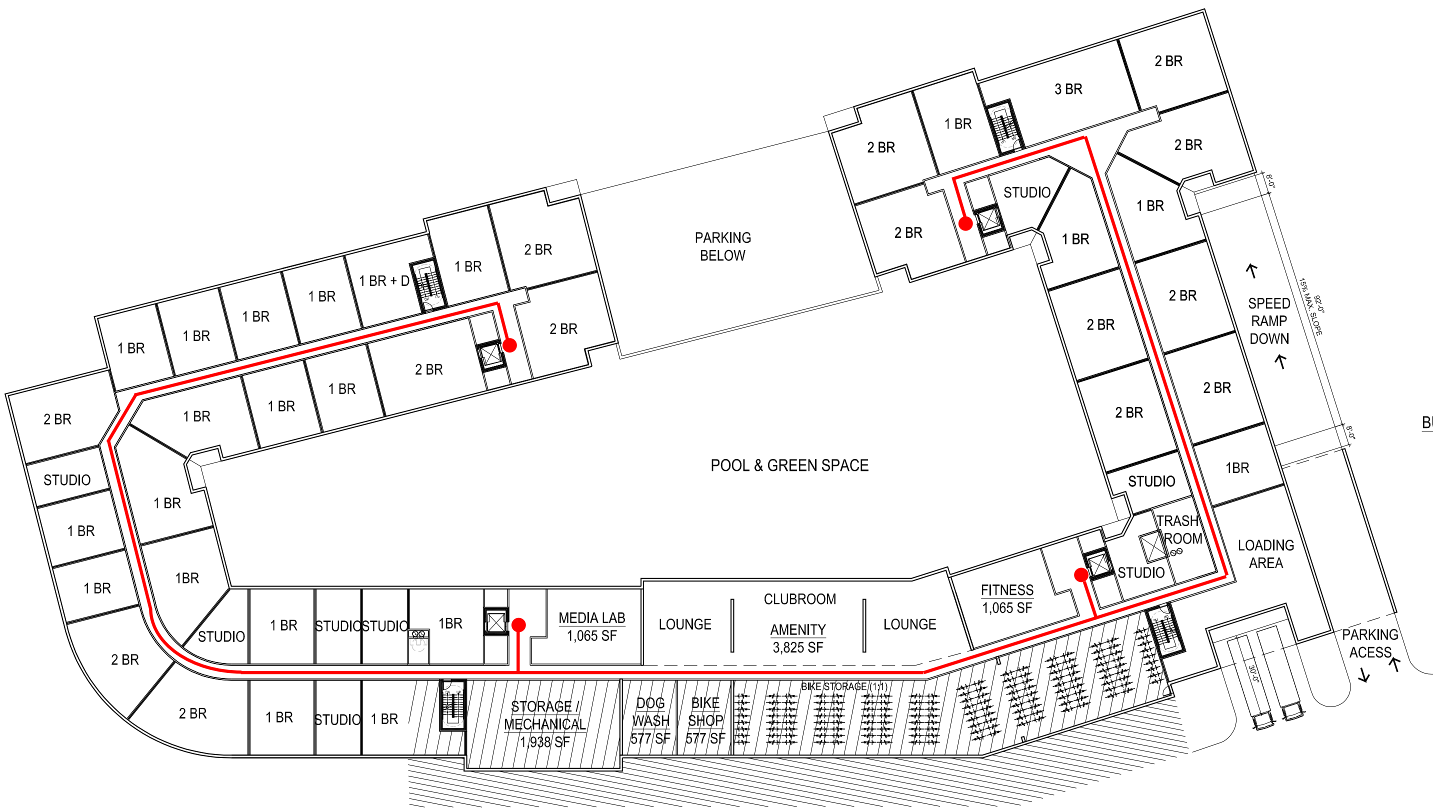
Legend:
Accessible Route

1717 - 1725 Hyde Park Avenue

Boston, MA | August 8, 2018 | 17105 | © The Architectural Team, Inc.

Floor Plan
PARKING
X-1

AD MELIORA tat



10 HYDE PARK AVENUE - 1ST FLOOR (EL.77)

SCALE: NOT TO SCALE

0' 10' 20' 50'

UNEXCAVATED

BELOW GRADE

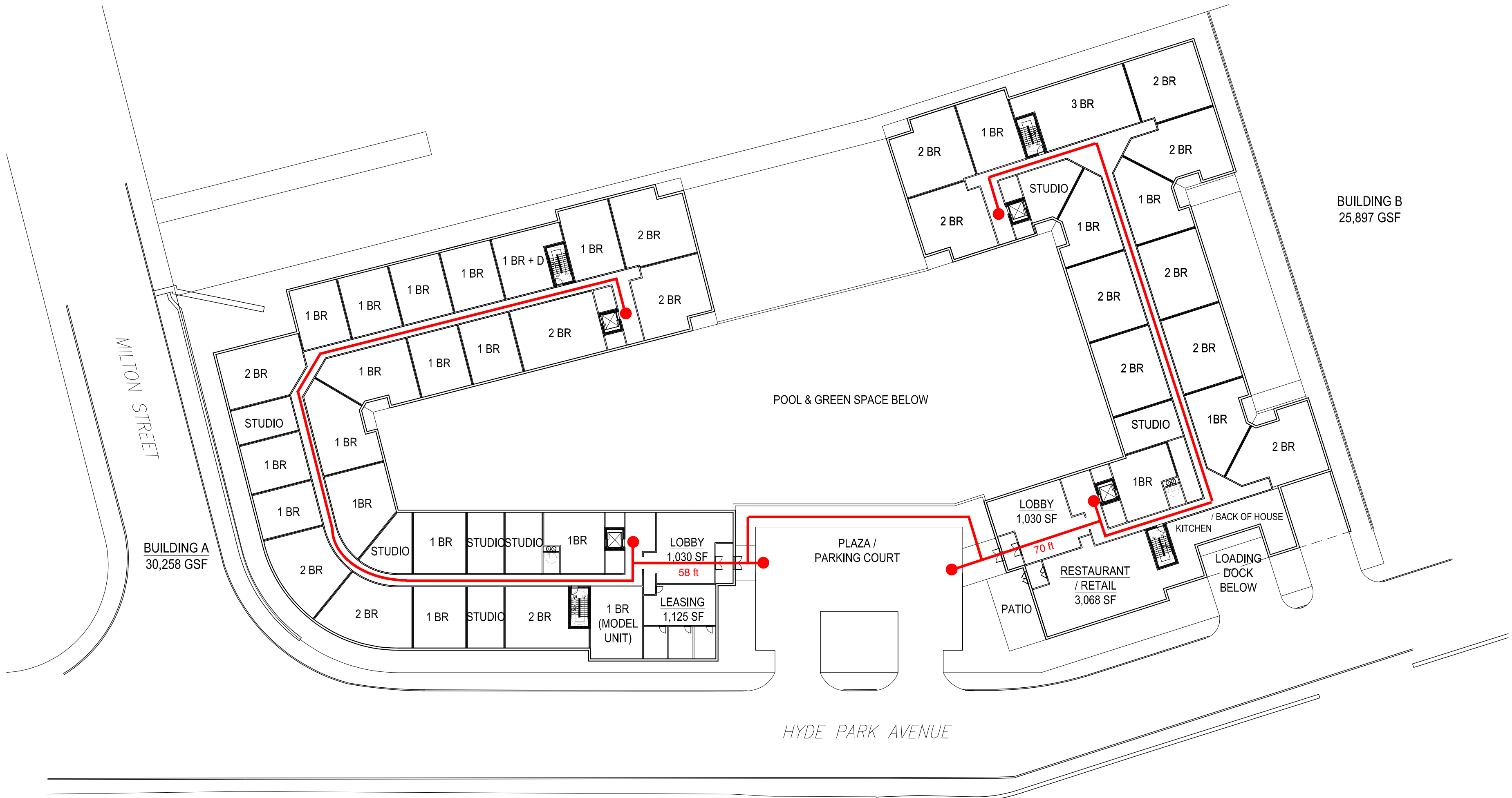
Legend:
Accessible Route

1717 - 1725 Hyde Park Avenue

Boston, MA | August 8, 2018 | 17105 | © The Architectural Team, Inc.

Floor Plan
FIRST FLOOR
X-2

AD MELIORA tat



Legend:
Accessible Route

10 HYDE PARK AVENUE - 2ND FLOOR (EL.88)

SCALE: NOT TO SCALE

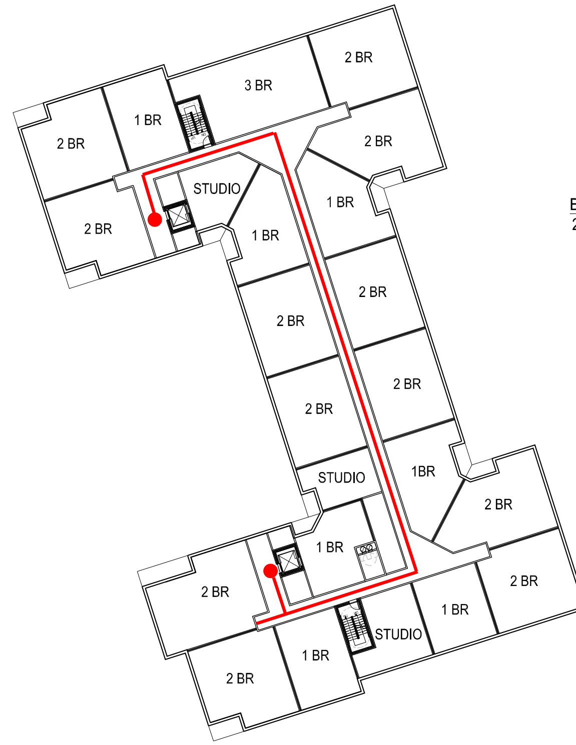
1717 - 1725 Hyde Park Avenue

Boston, MA | August 8, 2018 | 17105 | © The Architectural Team, Inc.

Floor Plan
SECOND FLOOR
X-3

AD MELIORA tat

BUILDING A
30,065 GSF



BUILDING B
26,890 GSF

10 HYDE PARK AVENUE - TYPICAL LEVEL - 3RD, 4TH, 5TH FLOOR (EL.VARIES)

SCALE: NOT TO SCALE

0' 10' 20' 50'

Legend:
Accessible Route

1717 - 1725 Hyde Park Avenue

Boston, MA | August 8, 2018 | 17105 | © The Architectural Team, Inc.

Floor Plan
TYPICAL FLOOR
X-4

AD MELIORA tat

10 HYDE PARK AVENUE - 6TH FLOOR (EL.132)

SCALE: NOT TO SCALE

0' 10' 20' 50'

Legend:
Accessible Route

1717 - 1725 Hyde Park Avenue
Boston, MA | July 16, 2018 | 17105 | © The Architectural Team, Inc.

Floor Plan
SIXTH FLOOR
X-5

AD MELIORA tat

APPENDIX G – BROADBAND QUESTIONNAIRE RESPONSE

Appendix G

Broadband Ready Buildings Questionnaire

1717-1725 Hyde Park Avenue

The City of Boston is working to cultivate a broadband ecosystem that serves the current and future connectivity needs of residents, businesses, and institutions. The real estate development process offers a unique opportunity to create a building stock in Boston that enables this vision. In partnership with the development community, the Boston Planning and Development Authority and the City of Boston will begin to leverage this opportunity by adding a broadband readiness component to the Article 80 Design Review. This component will take the form of a set of questions to be completed as part of the Project Notification Form. Thoughtful integration of future-looking broadband practices into this process will contribute to progress towards the following goals:

1. Enable an environment of competition and choice that results in all residents and businesses having a choice of 2 or more wireline or fixed wireless high-speed Internet providers
2. Create a built environment that is responsive to new and emerging connectivity technologies
3. Minimize disruption to the public right of way during and after construction of the building

The information that is shared through the Project Notification Form will help BPDA and the City understand how developers currently integrate telecommunications planning in their work and how this integration can be most responsive to a changing technological landscape.

Upon submission of this online form, a PDF of the responses provided will be sent to the email address of the individual entered as Project Contact. Please include this PDF in the Project Notification Form packet submitted to BPDA.

Section 1: General Questions

For consistency, general intake questions below are modeled after Boston Planning and Development Agency Climate Change Resiliency and Preparedness Checklist.

Project Information

- Project Name: **The Residences at Readville Station**
- Project Address Primary: **1717 -1725 Hyde Park Avenue, Hyde Park**
- Project Address Additional:

- Project Contact: **Paul Soughley, SVP** **paul.soughley@admeliorallc.com, 617-202-3266 ext 102**
- Expected completion date: **2021**

Team Description

- Owner / Developer: **1717-1725 Hyde Park Ave LLC**
- Architect: **The Architectural Team**
- Engineer (building systems): **R.W. Sullivan**
- Permitting: **Mitchell L. Fischman ("MLF") Consulting LLC**
- Construction Management: **Ad Meliora LLC**

Section 2: Right of Way to Building

Point of Entry Planning

Point of entry planning has important implications for the ease with which your building's telecommunications services can be installed, maintained, and expanded over time.

#1: Please provide the following information for your building's point of entry planning (conduits from building to street for telecommunications). Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

- Number of Points of Entry: **Unknown**
- Locations of Points of Entry: **Unknown**
- Quantity and size of conduits: **Unknown**
- Location where conduits connect (e.g. building-owned manhole, carrier-specific manhole or stubbed at property line): **Unknown**
- Other information/comments: **Unknown**

#2: Do you plan to conduct a utility site assessment to identify where cabling is located within the street? This information can be helpful in determining the locations of POEs and telco rooms. Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

- **Yes**
- No
- Unknown

Section 3: Inside of the Building

Riser Planning

Riser capacity can enable multiple telecom providers to serve tenants in your building.

#3: Please provide the following information about the riser plans throughout the building. Please enter ‘unknown’ if these decisions have not yet been made or you are presently unsure.

- Number of risers: **Unknown**
- Distance between risers (if more than one): **Unknown**
- Dimensions of riser closets: **Unknown**
- Riser or conduit will reach to top floor: **Unknown**
- Number and size of conduits or sleeves within each riser: **Unknown**
- Proximity to other utilities (e.g. electrical, heating): **Unknown**
- Other information/comments: **Unknown**

Telecom Room

A well designed telecom room with appropriate security and resiliency measures can be an enabler of tenant choice and reduce the risk of service disruption and costly damage to telecom equipment.

#4: Please provide the following information about the telecom room plans. Please enter ‘unknown’ if these decisions have not yet been made or you are presently unsure.

- What is the size of the telecom room? **Unknown**

- Describe the electrical capacity of the telecom room (i.e. # and size of electrical circuits) **Unknown**

- Will the telecom room be located in an area of the building containing one or more load bearing walls? **Unknown**

- Will the telecom room be climate controlled?

○ **Yes**
○ No
○ Unknown

- If the building is within a flood-prone geographic area, will the telecom equipment will be located above the floodplain?

○ **Yes**
○ No
○ Unknown

- Will the telecom room be located on a floor where water or other liquid storage is present?

○ Yes
○ **No**

- Unknown
  - Will the telecom room contain a flood drain?
- Yes
- No
- **Unknown**

  - Will the telecom room be single use (telecom only) or shared with other utilities?
- Telecom only
- Shared with other utilities
- U**nknown**

  - Other information/comments

Delivery of Service Within Building (Residential Only)
Please enter 'unknown' if these decisions have not yet been made or you are presently unsure. Questions 5 through 8 are for residential development only.

#5: Will building/developer supply common inside wiring to all floors of the building?
- Yes
- No
- **Unknown**

#6: If so, what transmission medium (e.g. coax, fiber)? Please enter 'unknown' if these decisions have not yet been made or you are presently unsure. **Unknown**

#7: Is the building/developer providing wiring within each unit?
- **Yes**
- No
- Unknown

#8: If so, what transmission medium (e.g. coax, fiber)? Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

<u>Section 4: Accommodation of New and Emerging Technologies</u>

Cellular Reception

The quality of cellular reception in your building can have major impacts on quality of life and business operations.

Please provide the following information on your plans to facilitate high quality cellular coverage in your building. Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

#9: Will the building conduct any RF benchmark testing to assess cellular coverage?

- **Yes**
- No
- Unknown

#10: Will the building allocate any floor space for future in-building wireless solutions (DAS/small **cell/booster equipment)?**

- **Yes**
- No
- Unknown

#11: Will the building be providing an in-building solution (DAS/ Small cell/ booster)?

- **Yes**
- No
- Unknown

#12: If so, are you partnering with a carrier, neutral host provider, or self-installing?

- Carrier
- Neutral host provider
- **Self-installing**

Rooftop Access

Building rooftops are frequently used by telecommunications providers to install equipment critical to the provision of service to tenants.

Please provide the following information regarding your plans for roof access and usage. Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.

#13: Will you allow cellular providers to place equipment on the roof?

- Yes
- No
- **Unknown**

#14: Will you allow broadband providers (fixed wireless) to install equipment on the roof?
- Yes
- No
- **Unknown**

Section 5: Telecom Provider Outreach

Supporting Competition and Choice

Having a choice of broadband providers is a value add for property owners looking to attract tenants and for tenants in Boston seeking fast, affordable, and reliable broadband service. In addition to enabling tenant choice in your building, early outreach to telecom providers can also reduce cost and disruption to the public right of way. The following questions focus on steps that property owners can take to ensure that multiple wireline or fixed wireless broadband providers can access your building and provide service to your tenants.

#15: (Residential Only) Please provide the date upon which each of the below providers were successfully contacted, whether or not they will serve the building, what transmission medium they will use (e.g. coax, fiber) and the reason they provided if the answer was 'no'.
TO BE COMPLETED DURING DESIGN DEVELOPMENT

- Comcast - enter contact info
- RCN - enter contact info
- Verizon - enter contact info
- Wicked Broadband - enter contact info
- WebPass
- Starry
- Level 3
- Cogent
- Lightower
- XO Communications
- AT&T
- Zayo
- Other(s) - please specify - enter contact info

#16: Do you plan to abstain from exclusivity agreements with broadband and cable providers?
- **Yes**
- No
- Unknown

#17: Do you plan to make public to tenants and prospective tenants the list of broadband/cable providers who serve the building?

- Yes
- No
- **Unknown**

Section 6: Feedback for Boston Planning and Development Agency

The Boston Planning and Development Agency looks forward to supporting the developer community in enabling broadband choice for resident and businesses. Please provide feedback on your experience completing these questions.

The Residences at Readville Station
Mixed-Use Residential / Commercial Development

MLF CONSULTING LLC