SUPPLEMENTAL AIR QUALITY ANALYSIS

PREPARED FOR:
RAPP ROAD RESIDENTIAL DEVELOPMENT
WESTERN AVENUE MIXED USE REDEVELOPMENT

TOWN OF GUILDERLAND, NEW YORK

JULY 2020

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1.0 Summary of Findings

B. Laing Associates, Inc. is an environmental consultant firm providing air quality analyses services for the proposed Rapp Road Residential Development and Western Avenue Mixed Use Redevelopment (herein referred to as the Project) located in the Town of Guilderland, Albany County, New York. The Project consists of the three (3) sites which include: Site 1, west of the Crossgates Mall along Rapp Road, Site 2, located north of Western Avenue and east of the southwestern Crossgates Mall Road (aka, old Rapp Road) as it connects to Western Avenue and Site 3, east of Site 2 along Western Avenue.. See attached Figure 1 - Site Location Map. Section 2 provides a detailed description of each site and its proposed use..

Based on the Traffic Impact Study prepared by Maser Consulting, carbon monoxide (CO) concentrations associated with the Project were determined using EPA-approved, emission factor modeling and NY State Department of Transportation The Environmental Manual (TEM) CAL3QHC dispersion, line-source, air pollution modeling analyses for two intersections. In this case, the intersections of Washington Avenue Extension and Springsteen Street and Western Avenue and Johnston Road were modeled. These intersections were modeled because they exceeded Level of Service C and did not pass lesser air quality TEM screening levels. The results of the modeling analysis indicate that any projected increase in CO concentrations will not cause or contribute to the contravention of applicable air quality standards. Recommended roadway improvements associated with the project and timing modifications are sufficient to minimize air quality impacts[1] for the project.

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[1] Federally-mandated reductions in vehicular emissions in the past decades have also substantially reduced hot-spot air pollution State-wide.

2.0 Introduction

2.1 Proposed Action

Rapp Road Development, LLC proposes construction of 222 one and two bedroom apartments with ±3,900 SF of commercial space, on the ±19 acre site on Rapp Road (Site 1 on the attached plan). The northern portion of Site 1 (Site 1A) also includes a potential future development area. While no plans currently exist for this area, an additional 90 apartment units have been analyzed for purposes of this supplemental Air Quality Analysis. The site plan shows two five-story buildings and three two-story buildings with underground and surface parking. Currently, the site is vacant land.

The second re-development area (Site 2 on the attached plan) is located on the corner of Crossgates Mall Road and Western Avenue and is being analyzed for development of a ±160,000 square feet retail building and accessory fueling facility on ± 15 acres. The project area includes re-development of the largely vacant residential properties on Lawton Terrace, Tiernan Court and Rielton Court and Gabriel Terrace. The westernmost portion of Site 2 is an abandoned former Town road corridor (Old Rapp Road) and includes remnants of the pavement, guardrails and utility improvement from that prior use.

A third development area (Site 3 on the attached plan) is located on the remaining ±11.34 acres of Transit-Oriented Development (TOD) zoned property located between Site 2 and the existing hotel site. There are no specific development plans for this area and a zoning-compliant conceptual plan has been developed and analyzed for purposes of the DEIS. This potential future development scenario includes as 115,000 SF of retail space, 50,000 SF of office space, and 48 multi-family apartments. Currently, this proposed mixed use, redevelopment property is occupied by secondary, successional woodland and unoccupied residential structures.

The purpose of this Report is to evaluate potential impacts to air quality that may occur as a result of the increased vehicular traffic generated by the Project. Mitigation, in the form of intersection improvements and timing adjustments are included in the Maser Traffic analysis and are included in the analysis provided in this Report.

The air pollution modeling is based on the results of analysis of the peak PM traffic combined with the assumption of worst case meteorological conditions at the subject intersections.

2.2 General Air Quality Characteristics

Existing Conditions

Climate

The climate in Albany, New York is warm during the summer when average temperatures tend to be in the 80's and very cold during winter when average temperatures tend to be in the 30's. The National Oceanic and Atmospheric Administration (NOAA) record this local climate in Albany International Airport, New York. The warmest month of the year is July with high average temperature of 84 degrees Fahrenheit, while the coldest months of the year are January and February with a high average of temperature between 31 and 35 degrees Fahrenheit. Temperature variations between night and day tend to be fairly consistent during summer season with a difference that can reach 22 degrees Fahrenheit, and comparable in winter months with an average difference of approximately 15 to17 degrees Fahrenheit. The annual average precipitation in Albany is between around 39.35 inches. This locale receives about 60.3 inches of snow per year on average.

Ambient Air Quality

Existing air quality is good for the Project site. The median air quality index (AQI) in 2018 for Albany County, New York was 38.[2] An AQI between 0 and 50 is satisfactory and air pollution poses little or no risk. Existing air quality standards for New York State are found in the State Ambient Air Quality Standards (SAAQS) which largely mimic the National Ambient Air Quality Standards (NAAQS). Possible relevant pollutants for mobile sources are particulate matter (PM), ozone (O_3) and carbon monoxide (CO). Carbon monoxide is the dominant pollutant and so, it is modeled as provided in NYSDOT's The Environmental Manual (TEM).

Table 1 depicts the NAAQS.

NYSDEC monitors air quality throughout the State. There are currently 58 active air monitoring sites in New York State. Parameters observed vary from air monitoring sites. Historically, two (2) monitoring sites have been located within NYSDEC Region 4 in Albany County. These monitoring sites are identified as 0101-33 located in Loudonville at 300 Albany Shaker Road and 0101-13 at the Albany County Health Department at South Ferry and Green Streets, Albany, NY 12202. More recently, a third monitoring site (0101-34) was set up in South Albany located at 274 S. Pearl Street Albany, NY 12202. This monitoring site setup was a result of community concerns of air quality in the South Albany community[3]. Parameters are described below:

Carbon Monoxide (CO) is measured at station 0101-33 in Loudonville, New York. The highest one hour value in 2018 was 1.2 ppm versus a standard of 35 ppm. The highest running eight hour value was 0.80 ppm versus a standard of 9.0 ppm.

Lead (Pb) is not monitored in Region 4. The closest monitoring station was located in Region 3 at station 3566-09 at Wallkill Wakefern Food located at 260 Ballard Road, Middletown, New York. In 2018, the maximum 24-hour concentration of lead was recorded at 0.01 ug/m³ at

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[2] According to the United States Environmental Protection Agency (EPA) Outdoor Air Quality Data, Air Quality Index Report.

[3] The annual data is not provided in the New York State Ambient Air Quality Report for 2018.

station 3566-09. The three month, rolling average of lead in 2018 equaled 0.01 ug/m³. This three month rolling average was well below the 0.15 ug/m³ maximum allowed.

Nitrogen dioxide (NO_2) is not measured at station 3527-01.   Monitoring sites are located in NYSDEC Regions 2, 8 and 9. The closest monitoring station is at the Botanical Gardens (Pfizer Lab) in the Bronx, New York.[4] The annual value in 2018 was 14.44 ppb versus a standard of 53 ppb.

TABLE 1
National Ambient Air Quality Standards*

POLLUTANT		PRIMARY/ SECONDARY	AVERAGING TIME	LEVEL	FORM
CARBON MONOXIDE		primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
LEAD		primary and secondary	Rolling 3-month average	0.15 µg/m³ (1)	Not to be exceeded
NITROGEN DIOXIDE		primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	Annual	53 ppb (2)	Annual Mean
OZONE		primary and secondary	8-hour	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
PARTICLE POLLUTION	PM$_{2.5}$	primary	Annual	12 µg/m³	annual mean, averaged over 3 years
		secondary	Annual	15 µg/m³	annual mean, averaged over 3 years
		primary and secondary	24-hour	35 µg/m³	98th percentile, averaged over 3 years
	PM$_{10}$	primary and secondary	24-hour	150 µg/m³	Not to be exceeded more than once per year on average over 3 years
SULFUR DIOXIDE		primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

*http://www.dec.ny.gov/chemical/8542.html

Ozone is measured at station 0101-33 in Loudonville, New York. Ozone is formed from the long-term transport of hydrocarbon emissions in the mid-western United States and as such, is not a "local" enforcement issue on emissions. It is the only pollutant that occasionally exceeds the standard in most NYSDEC Regions state-wide. The average 3 year annual mean for this

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[4] Bronx, New York is approximately 151 miles south of Project site.

pollutant was 0.064 parts per million (ppm) for the years 2016 to 2018. The first highest maximum daily eight hour average was 0.074 ppm in 2018. Thus, the recorded value was slightly above the 0.070 ppm standard.

Particulate matter (PM 2.5) is measured in in both the Albany and Loudonville monitoring stations. The 0101-33 station in Loudonville had an annual mean standard for last three (3) years (2016-2018) of 5.7ug/m^3. This annual mean was well below the 12 ug/m^3 standard. This station had an average of 98th percentile for last 3 years 15.3 ug/m^3. This average was well below the 35 ug/m^3 standard. The 0101-13(C)[5] station in Albany had an annual mean standard for last three (3) years (2016-2018) of 7.2 ug/m^3. This annual mean was well below the 12 ug/m^3 standard. This station had an average of 98th percentile for last 3 years 17.9 ug/m^3. This average was, again, well below the 35 ug/m^3 standard.

Sulfur dioxide (SO$_2$) is monitored at the Loudonville station. In 2018, the annual average was recorded at 0.36 parts per billion (ppb) versus an annual standard not to exceed 30 ppb and the one hour average for the last three years (2016-2018) have peaked at 3.3 ppb versus a standard of 75 ppb.

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[5] Continuous, used for AQI calculations. Values based on 24 hour averages of 1-hour values

FIGURE 1 – Proposed Site Development/Redevelopment Locations

⭐ DEPICTS LOCATION

2.3 Intersection Selection

Mobile Screening:

The first level of "air quality screening" as provided in NYSDOT's The Environmental Manual (TEM) is a review of the traffic analysis consistent with the Highway Capacity Manual (HCM). This Traffic Impact Study was provided by Maser Consulting P.A. dated February 17, 2020 (as updated in July 1, 2020) and is attached as a separate appendix to the Draft Environmental Impact Statement (DEIS) and now this FEIS. The TEM provides guidance on determination for a required microscale analysis which is based on the consideration of several standards.

Sixteen (16) existing intersections and seven (7) new intersections, as listed in Table 2, were analyzed by the traffic engineer. The traffic data included seven (7) signalized intersections and sixteen (16) unsignalized intersections. LOS was analyzed in the existing (2019), no build (2022, 2025) and build condition (2022, 2025) of the Project in the AM, PM and Saturday phase. The build conditions considered development of Site 1 and redevelopment of Sites 2 and 3. Figure 2 depicts the analyzed intersections in aerial view.

Per TEM I-1 Level of Service (LOS) Screening, intersections potentially impacted by the Project must be screened for overall Level of Service (LOS). If the LOS is A, B, or C, no further analyses are required. If any signalized intersections have LOS predicted D, E, or F, significant vehicle queuing may occur and further analysis may be required for up to the three worst signalized intersections. In this case, traffic data was collected from historical NYSDOT data and through field data collection.

For this analysis, the signalized intersections of (1) Washington Ave Extension and Springsteen Road and (2) Western Ave and Johnston Road/Crossgates Mall Road were selected for one or more reasons:

1. Those most likely to experience an air quality impact[6],
2. They run at LOS of D, E or F under the 2022 and 2025 Build (PM) conditions,[7]
3. It is representative of "typical" conditions along the arterial/collector roadway[8].

If these intersections comply with the ambient air quality standards, it is assured (pursuant to the NYSDOT TEM) that other intersections would also comply with the standards. Thus, these intersections were modeled for air quality and the results are provided in Chapter 4.0.

The NYSDEC currently recommends the use of Level II threshold modeling of up to three signalized intersections in conformity with the NYSDOT TEM. In this case, B. Laing Associates, Inc. has modeled two intersections for the reasons described above. NYSDOT TEM has accepted MOVES2014b and CAL3QHC as its official emission factor model and first-level dispersion model, respectively. The MOVES2014b inputs have been modified by NYSDOT to provide emission factor data specific to each NYSDOT region and Albany County. These programs were used to determine potential air quality impacts on CO levels due to traffic generated by the proposed project at or near the subject intersections.

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[6] Western Avenue at Johnston Road and Crossgates Mall Road is closest to the project sites.
[7] In the build condition, with no improvements.
[8] Washington Avenue Extension, while more distant from the site, will experience considerably less project-generated traffic, is a regional, unrestricted urban arterial and collector roadway.

Particulate matter does not have to be analyzed of the uses/roadway types associated with the proposed project. Per US EPA's regulations, as provided in 40CFR 93.123(B) (1):

> **(b)** ***PM***10 and *PM2.5hot-spot analyses.*
> **(1)** The hot-spot demonstration required by § 93.116 must be based on quantitative analysis methods for the following types of projects:
> **(i)** New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;
> **(ii)** Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
> **(iii)** New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
> **(iv)** Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and
> **(v)** Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The project is not any of the uses described in the above regulations. Further, the project will not generate a significant number of "heavy" diesel vehicles. For example, the project sponsor estimates that the fueling station associated with the Costco will require approximately 15 deliveries per week (a little more than 2 per day).   This will occur via the Western Avenue/Johnson Road/Crossgates Mall Road intersection which carries approximately 4,000 vehicles per hour in the peak p.m. weekday condition. Thus, the fuel delivery, diesel vehicles represent only 0.05% of the intersection's peak hour traffic (and less of its daily traffic).

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	TABLE 2 ANALYZED INTERSECTIONS	
Intersection Number	Intersection Name	Signal Status
1	Western Ave. (US Rte 20) & Crossgates Mall Driveway	Signalized
2	Western Ave. (US Rte 20) & Gabriel Terrace/1700 Designer Residences	Unsignalized
3	Western Ave. (US Rte 20) & Johnston Road / Rapp Road	Signalized
4	Rapp Road & Crossgates Mall Road	Signalized
5	Rapp Road & Gipp Road	Unsignalized
6	Rapp Road & Pine Lane	Unsignalized
7	Rapp Rd & Springsteen Road	Unsignalized
8	Springsteen Road & S. Frontage Road	Unsignalized
9	Washington Ave. Extension & Springsteen Road/Crossgates Commons	Signalized
10	Crossgates Mall Road & I-87 On/Off Ramps	Signalized
11	Crossgates Mall Road & Mall Driveway #1	Unsignalized
12	Crossgates Mall Road & Hotel Connector Road / Mall Driveway #2	Signalized
13	Crossgates Mall Road & Crossgates Mall Main Driveway	Signalized
14	Crossgates Mall Road & Crossgates Mall Main Driveway	Signalized
15	S. Frontage Road & Rapp Road	Unsignalized
16	Western Avenue (US Rte 20) & Westmere Terrace	Unsignalized
17	Rapp Road & Site 1 Driveway	Unsignalized
18	Rapp Road & Site 1 Driveway	Unsignalized
	TABLE 2 ANALYZED INTERSECTIONS, CONTINUED	
19	Rapp Road & Site 2 Northerly Driveway	Unsignalized
20	Rapp Road & Site 2 Southerly Driveway	Unsignalized
21	Gabriel Terrace Connector Road & Site 2 Driveway	Unsignalized
22	Gabriel Terrace Connector Road & Site 3 Driveway	Unsignalized
23	Hotel Connector Road & Site 3 Driveway	Unsignalized

Level I **- Intersection Analysis**

<u>*AM Peak Scenario*</u>

Existing (2019):
Seven (7) signalized intersections were analyzed for the first level of screening in the weekday AM and PM and Saturday scenario in the Traffic Impact Report. In the AM scenario, the findings of the capacity analysis determined that the overall LOS for all seven (7) intersections in the existing condition (2019) achieves LOS of A, B or C. This is also true for the majority of unsignalized intersections in the existing condition. Six (6) intersections currently do not exist. The one, existing exception is the intersection of Western Avenue (U.S. Route 20) and Westmere Terrace. The LOS for southbound left or right turn onto Western Avenue is currently at LOS F in the existing condition. LOS at unsignalized intersections are defined by minor movements since the "through" movement on the main roadway is not affected by intersection traffic control. In addition, there is often much more unpredictability in the delay experienced by individual drivers in the minor movements at non-signalized intersections. The LOS of the location is a result of Western Avenue on Westmere Terrace by attempted left hand turners; a developed residential roadway.

Year 2022:
In the 2022 AM scenario, the findings of the capacity analysis determined that the overall LOS for six of the seven (7) intersections achieves LOS of A, B or C in both the 2022 Build and 2022 No Build scenario. The one exception is the intersection of Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road. This intersection has an LOS D in the 2022 Build and No Build scenario. This is similar to the existing condition. Thus, the LOS level will not decrease as a result of the Project and will not degrade as the Project is constructed as the Level of Service remains constant. However, a Level II quantitative analysis was undertaken and is addressed in Chapters 3 and 4.

In the 2022 AM scenario, the findings of the capacity analysis determined that the overall LOS for the majority of unsignalized intersections in this scenario achieves LOS of A, B, C. Six (6) intersections currently do not exist. As above, the intersection of Western Avenue (U.S. Route 20) and Westmere Terrace does not achieve LOS of A, B or C. The LOS for southbound left and southbound right turn is at LOS E or F in the 2022 Build and No Build scenario. This is similar to the existing condition; thus, the intersection does not see an additional impact from the Existing to Build/Build scenario. The LOS of the location is a result of Western Avenue by attempted left hand turners; a developed residential roadway. As per above, no overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report.

Six (6) new, non-signalized intersections will be created as a result of the Build scenario in 2022. These intersections achieve LOS of A, B or C in the 2022 Build scenario. Thus, no further air quality analysis would be required for those intersections with LOS A, B or C.

The intersection of Crossgates Mall Road and Mall Driveway #1 will be constructed as a connector road with Gabriel Terrace in the Build 2022 scenario. Gabriel Terrace will be moved to the east to form two "T" intersections. This intersection achieves a LOS A, B or C in 2022 AM scenario. Thus, no further air quality analysis would be required for those intersections as they achieve a LOS A, B or C.

Year 2025:

In the 2025 AM scenario, the findings of the capacity analysis determined that the overall LOS for six (6) intersections achieve LOS of A, B or C in both the 2025 Build and 2025 No Build scenario. The one exception is the intersection of Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road. This intersection shows a LOS D in both the 2025 Build and No Build scenario. Thus, the LOS level will not decrease as a result of the Project and will not degrade as the Project is advanced because the Level of Service remains constant.

The majority of unsignalized intersections also achieve LOS A, B or C in the 2025 Build and No Build Scenario. Six (6) intersections currently do not exist. As above, the intersection of Western Avenue (U.S. Route 20) and Westmere Terrace does not achieve LOS of A, B or C. The LOS for southbound left to right turn is at LOS F in the 2022 Build and No Build scenario. This is similar to the existing condition and 2022 condition; thus, Westmere Terrace itself does not see any additional vehicles from the Existing to Build/No Build scenario. The LOS of the location is a result of Westmere Terrace especially by attempted left hand turners; a developed residential roadway. No overall intersection LOS is provided for unsignalized intersections and Westmere Terrace in the Traffic Impact Report.

Six (6) new, non-signalized intersections will be created as a result of the Build scenario in 2025. These intersections achieve LOS of A, B or C in the 2022 Build scenario. Thus, no further air quality analysis would be required for these intersections as they achieve a LOS A, B or C.

The intersection of Crossgates Mall and Mall Driveway #1 will be constructed as a connector road with Gabriel Terrace in the Build 2022 scenario. Gabriel Terrace will be moved to the east to form two "T" intersections. This intersection achieves a LOS A, C or C in 2025 AM scenario. Thus, no further air quality analysis would be required for those intersections of LOS A, B or C.

PM Peak Scenario

Existing (2019):
Seven (7) signalized intersections were analyzed for the first level of screening in the weekday AM and PM and Saturday scenario in the Traffic Impact Report. In the PM scenario, the findings of the capacity analysis determined that the overall LOS for five (5) intersections, in the existing condition (2019), achieves LOS of A, B or C. The two exceptions are the intersection of Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road and Washington Avenue Extension and Springsteen Road/Crossgates Commons. These intersections achieve LOS D in the existing condition.

The majority of unsignalized intersections in the existing condition achieve LOS A, B or C in the 2019 PM scenario. Six (6) intersections currently do not exist. Two existing, unsignalized intersections achieve LOS D, E or F in the PM scenario. These include Western Avenue (U.S. Route 20) and Westmere Terrace and Western Avenue (U.S. Route 20) and Gabriel Terrace/1700 Designer Residences. Western Avenue (U.S. Route 20) and Westmere Terrace southbound left to right turn is currently at LOS F in the existing condition. The LOS of the location is a result of Westmere Terrace especially by attempted left hand turners; a developed residential roadway. Western Avenue (U.S. Route 20) and Gabriel Terrace/1700 Designer Residences LOS is also the result of stacking on Gabriel Terrace/1700 Designer Residences as the intersection is uncontrolled. No overall intersection LOS is provided for unsignalized intersection in the Traffic Impact Report. LOS at unsignalized intersections are defined by minor movements since the through movement on the main roadway is not affected by intersection traffic control. In addition, there is often much more unpredictability in the delay experienced by individual drivers at non-signalized intersections, especially by attempted left hand turners.

Year 2022:

In the 2022 PM scenario, the findings of the capacity analysis determined that the overall LOS for five (5) intersections achieves LOS of A, B or C. The two exceptions are the intersection of Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road and Washington Avenue Extension and Springsteen Road/Crossgates Commons. These intersections have an LOS D in the 2022 Build and No Build scenario. This is similar to the existing condition. Thus, the LOS level will not decrease as a result of the Project and will not degrade as the Project is constructed as the Level of Service remains constant. However, a Level II quantitative analysis was undertaken and is addressed in Chapters 3 and 4.

The majority of unsignalized intersections in the existing condition achieve LOS A, B or C in the 2022 PM scenario. Two existing, unsignalized intersections achieve LOS D, E or F in the PM scenario. These include Western Avenue (U.S. Route 20) and Westmere Terrace and Western Avenue (U.S. Route 20) and Gabriel Terrace/1700 Designer Residences. Western Avenue (U.S. Route 20) and Westmere Terrace operated at a LOS F in both the 2022 PM Build and No Build scenario. This LOS is similar to the existing condition; thus, Westmere Terrace does not see additional vehicles from the project in the Existing to Build/No Build scenario. Western Avenue (U.S. Route 20) and Gabriel Terrace/1700 Designer Residences achieves LOS F in the 2022 No Build scenario and LOS D in the 2022 Build scenario. Access to and from Gabriel Terrace at Western Avenue will be restricted to right turn in and right turn out movements only. Thus, with the provided mitigative measure, the LOS level will actually increase as a result of the Project and will not degrade as the Project is advanced.

Six (6) new, non-signalized intersections will be created as a result of the Build scenario in 2022. These intersections achieve LOS of A, B or C in the PM 2022 Build scenario. Thus, no further air quality analysis would be required for those intersections at LOS A, B or C.

The intersection of Crossgates Mall Road and Mall Driveway #1 will be constructed as a connector road with Gabriel Terrace in the Build 2022 scenario. Gabriel Terrace will be moved to the east to form two "T" intersections. This location of Mall Driveway #1 southwest bound will have a LOS A, B or C in 2022 PM Build scenario. Thus, no further air quality analysis would be required for those intersections of LOS A, B or C.

Year 2025:

In the 2025 PM scenario, the findings of the capacity analysis determined that the overall LOS for four (4) intersections achieves LOS of A, B or C. The three exceptions are the intersection of Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road, Washington Avenue Extension and Springsteen Road/Crossgates Commons and Crossgates Mall Road and I-87 on/off ramps. These intersections achieve LOS D, E or F in the 2025 Build and No Build scenario. Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road LOS is similar to the existing condition. Thus, the LOS level will not decrease as a result of the Project and will not degrade as the Project is constructed since the Level of Service remains constant. Washington Avenue Extension and Springsteen Road/Crossgates Commons LOS is similar to the existing condition and 2022 scenario. Thus, again, will be constructed as a connector road with Gabriel Terrace in the Build 2022 scenario. However, a Level II quantitative analysis was undertaken and is addressed in Chapters 3 and 4.

Crossgates Mall Road and the Fuller Road Alternate (I-87/I-90 on/off ramps) achieve LOS C in the 2025 No Build and LOS D in the 2025 Build condition. This intersection is already impacted by potential idling cars at the Crossgates Mall parking lot and vehicle volume on the interstate highways. No valid receptors which could be impacted are located within the

immediate vicinity of this intersection. However, as part of the project, the Applicant will work with the Town of Guilderland and other key stakeholders to implement the planned roundabout at Crossgates Mall and the ramps from and to Fuller Road Alternate (I-87/I-90) The roundabout will be constructed and operational prior to the opening of Costco to customers on Site 2. With this mitigative measure, the intersection of Crossgates Mall Road the highway on/off ramps will achieve LOS A, B or C in the 2025 Build condition. As a result , no further analysis is required.

The majority of unsignalized intersections in the existing condition achieve LOS A, B or C in the 2025 PM scenario. Three existing, unsignalized intersections achieve LOS D, E or F in both PM scenarios. These include Western Avenue (U.S. Route 20) and Westmere Terrace and Western Avenue (U.S. Route 20) and Gabriel Terrace/1700 Designer Residences and Crossgates Mall Road and Mall Driveway #1. Western Avenue (U.S. Route 20) and Westmere Terrace operate at LOS F in both the 2025 PM Build and No Build scenario. This LOS is similar to the existing condition and 2022 condition; thus, Westmere Terrace does not see additional vehicles from the Existing to Build/No Build scenario. Western Avenue (U.S. Route 20) and Gabriel Terrace/1700 Designer Residences achieves LOS D and F in the 2025 No Build scenario and LOS E and F in the 2025 Build scenario. This is a slight decrease in Level of Service; however, only Gabriel Terrace southbound is affected. Access to and from Gabriel Terrace at Western Avenue will be restricted to right turn in and right turn out movements only. As a result, no southbound left-hand turns will be permitted which would alleviate traffic conditions in that intersection. LOS along Western Avenue in this location is running at LOS A, B or C.

Crossgates Mall Road and Mall Driveway #1 will be constructed as a connector road with Gabriel Terrace in the Build 2022 scenario. Gabriel Terrace will be moved to the east to form two "T" intersections. This location of Mall Driveway #1 southwest bound achieves a LOS C in 2025 PM Build scenario. Crossgates Mall Road and Gabriel Terrace achieves a LOS D in the northbound left – right 2025 PM Build scenario. This is due to the stacking of cars on Gabriel Terrace. Crossgates Mall Road achieves LOS A, B or C in this scenario.

Six (6) new, non-signalized intersections will be created as a result of the Build scenario in 2022. These intersections achieve LOS of A, B or C in the PM 2025 Build scenario. Thus, no further air quality analysis would be required for those intersections of LOS A, B or C.

Saturday Scenario

Existing (2019):
Seven (7) signalized intersections were analyzed for the first level of screening in the weekday AM and PM and Saturday scenario in the Traffic Impact Report. In the Saturday scenario, the findings of the capacity analysis determined that the overall LOS for five (5) intersections, in the existing condition (2019), achieves LOS of A, B or C. The two exceptions are the intersection of Washington Avenue Extension and Springsteen Road/Crossgates Commons and Crossgates Mall Road and Fuller Road Alternate on/off ramps. These intersections operate at LOS D in the existing condition.

The majority of unsignalized intersections in the existing condition achieve LOS A, B or C in the 2019 Saturday scenario. Six (6) intersections currently do not exist. Three existing, unsignalized intersections operate at LOS D, E or F in the Saturday scenario. These include Western Avenue (U.S. Route 20) and Westmere Terrace and Western Avenue (U.S. Route 20) and Gabriel Terrace/1700 Designer Residences. Western Avenue (U.S. Route 20) and Westmere Terrace southbound left to right turn is currently at LOS E in the existing condition.

The LOS of the location is a result of Westmere Terrace especially by attempted left hand turners; a developed residential roadway. Western Avenue (U.S. Route 20) and Gabriel Terrace/1700 Designer Residences LOS is also the result of stacking on Gabriel Terrace/1700 Designer Residences, especially by attempted left hand turners as the intersection is uncontrolled. No overall intersection LOS is provided for unsignalized intersection in the Traffic Impact Report. LOS at unsignalized intersections are defined by minor movements since the through movement on the main roadway is not affected by intersection traffic control. In addition, there is often much more unpredictability in the delay experienced by individual drivers at the minor movements in non-signalized intersections.

Year 2022:
In the 2022 Saturday scenario, the findings of the capacity analysis determined that the overall LOS for five (5) signalized intersections achieves LOS of A, B or C. The two exceptions are the intersection of Washington Avenue Extension and Springsteen Road/Crossgates Commons and Crossgates Mall Road and I-87 on/off ramps. These intersections will operate at LOS D in the 2022 Build and No Build Saturday scenario. This is similar to the existing condition. Thus, the LOS level will not decrease as a result of the Project and will not degrade as the Project is constructed since the Level of Service remains constant. Two intersections and scenarios were chosen for quantitative analysis. These intersections included Washington Avenue Extension and Springsteen Road/Crossgates Commons and Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road because of their high level of service and the highest traffic volumes. As these intersections did not exhibit an exceedance of the CO standards, no further quantitative analysis was required for additional intersections (see Chapters 3 and 4 below).

The majority of unsignalized intersections achieve LOS A, B or C in the 2022 Saturday scenario. Two unsignalized intersections will operate at LOS D, E or F in the Saturday scenario. These include Western Avenue (U.S. Route 20) and Westmere Terrace and Crossgates Mall Road and Mall Driveway #1. Western Avenue (U.S. Route 20) and Westmere Terrace achieves LOS E and F in both the 2022 Saturday Build and No Build scenario. This LOS is similar to the existing condition; thus, Westmere Terrace does not see additional vehicles from the Existing to Build/No Build scenario. Crossgates Mall Road and Mall Driveway #1 achieves LOS F in the 2022 Build scenario. This is due to the stacking of cars within the parking lot roadway of the Crossgates Mall property, especially by attempted left hand turners. Crossgates Mall Road runs at LOS A, B, or C.

Six (6) new, non-signalized intersections will be created as a result of the Build scenario in 2022. These intersections achieve LOS of A, B or C in the Saturday 2022 Build scenario. Thus, no further air quality analysis would be required for those intersections of LOS A, B or C.

Year 2025:
In the 2025 Saturday scenario, the findings of the capacity analysis determined that the overall LOS for five (5) signalized intersections achieves LOS of A, B or C. The two exceptions are the intersection of Washington Avenue Extension and Springsteen Road/Crossgates Commons and Crossgates Mall Road and I-87 on/off ramps. These intersections will operate at LOS D in the 2025 Build and No Build Saturday scenario. This is similar to the existing condition and 2022 condition. Thus, the LOS level will not decline as a result of the Project and will not degrade as the Project is constructed since the Level of Service remains constant. Two intersections and scenarios were chosen for quantitative analysis. These intersections included Washington Avenue Extension and Springsteen Road/Crossgates Commons and Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road because of their high level of service and the highest traffic volumes. As these intersections did not exhibit an exceedance of the CO standards, no

further quantitative analysis was required for additional intersections (see Chapters 3 and 4 below).

The majority of unsignalized intersections in the existing condition achieve LOS A, B or C in the 2025 PM scenario. Two existing, unsignalized intersections will operate at LOS D, E or F in peak hour Saturday scenarios. These include Western Avenue (U.S. Route 20) and Westmere Terrace and Crossgates Mall and Mall Driveway #1. Western Avenue (U.S. Route 20) and Westmere Terrace will operate at LOS F in both the 2025 Saturday Build and No Build scenario. This LOS is similar to the existing condition and 2022 condition; thus, Westmere Terrace does not see additional vehicles from the Existing to Build/No Build scenarios. Crossgates Mall Road and Mall Driveway #1 will be constructed as a connector road with Gabriel Terrace in the Build 2022 scenario. Gabriel Terrace will be moved to the east to form two "T" intersections. These locations will achieve LOS D, E or F in 2025 Saturday Build scenario. This is due to the stacking of cars. Crossgates Mall Road achieves LOS A, B or C in this scenario.

Six (6) new, non-signalized intersections will be created as a result of the Build scenario in 2022. These intersections achieve LOS of A, B or C in the Saturday 2025 Build scenario. Thus, no further air quality analysis would be required for those intersections of LOS A, B or C.

As a result of the above traffic findings, no significant change in delays will occur as a result of the project build out. However, a Level II quantitative analysis was undertaken and is addressed in Chapters 3 and 4. In general, no significant change in the Level of Service will result from the proposed Project.

Stationary Emissions

The proposed Project developments will be heated and cooled using natural gas. As such, it will be registered with New York State Department of Environmental Conservation as a Minor facility pursuant to Title 6 NYCRR Part 201.4. It will be a Minor Facility as its emissions (natural gas combustion results only in CO_2, CO and water) will be less than half those mass pollutants per year listed in Title 6 NYCRR Part 201-9.1.

Climatic inversions are not a concern in this location. Climatic inversions are the result of a warm layer of air that rises and traps a layer of cooler air at ground level, usually for a period of a day or days. If this warm layer persists at the surface for a day or more, it prevents dispersion of pollutants, including vehicle emissions, dust and smoke. Such inversions are typical of areas with mountain valleys or areas clustered up against a mountain range. The local topographical and meteorological characteristics at this site are not conducive to the formations of climatic inversions.

2.4 Regional Analysis

If the project would significantly affect traffic conditions over a large area, it is also appropriate to consider regional air quality effects of the project by way of a mesoscale analysis. Such analyses are generally required for projects which include significant construction on or improvements to limited access highways. No construction will occur on limited access highways (See NYSDOT-TEM Chapter 1.1, page 31 for specific criteria). Thus, no mesoscale analysis is required for the project lane.

3.0 AIR QUALITY MODELING METHODOLOGY

3.1 Microscale Dispersion Modeling

The California Department of Transportation, CALINE3 model (as adopted by the Federal Highway Administration) was originally formulated for free flowing highways. It was adapted in the CAL3QHC format to accommodate intersection queuing (i.e., idling vehicles) situations. The CAL3QHC model is designed to estimate the impact of automobile traffic upon carbon monoxide (CO) concentrations at selected receptors located near roadway locations. It receives input from traffic models, on-site measurements and emission calculations. The dispersion model is the Gaussian-based formula with special modifications by the addition of special links to account for determination of signal cycle times, acceleration/deceleration, and queue lengths through application of traffic engineering principles. This model is still utilized (per the NYSDOT's TEM) for the first level of dispersion modeling.

Table 3, below identifies the specific inputs that were utilized in modeling the air quality at the identified intersection. These inputs are described in greater detail below.

TABLE 3 – MODELING INPUT VALUES		
Input	**Value Used**	**Source of Value**
Emission Rates	Variable – See modeling inputs	MOVES2014b
Mixing Height	1,000 meters	TEM Chapter 1.1, C (xii)
Wind Speed	1.0 Meters/second	TEM Chapter 1.1 C (xi)
Surface Roughness	175 cm	TEM Chapter 1.1C, Table 10, –office equivalent
Traffic Volumes	PM Peak Hour	Maser Consulting Traffic Analysis (updated June 2020)
Degree Interval	5 degree intervals	TEM Chapter 1.1 C (xiii)
Link Length and Queues	1,200 feet from intersection Free-flow links. Level 1 dispersion - CAL3QHC Queue Link Lengths	TEM Chapter 1.1 C (i)-1,000 feet required.
Ambient CO levels (1 hour – 8 hour)	1.2 1-hour 0.8 8-hour	Loudonville, NY station 0101-33 (approx. 6 miles east)
Stability	4 (D)	TEM Chapter 1.1 C (ix)
Receptor Height	6 feet	TEM Chapter 1.1, C (xii)

3.2 Emission Rates

At or near intersections, vehicles are operating in three possible modes; cruise, acceleration-deceleration or idle. Idling emissions, those which occur as cars queue at an intersection, are generally four to five times greater than cruise emissions (per unit length of roadway). Acceleration-deceleration emissions, those produced as cars stop or resume motion, are also greater than cruise emissions (per unit length of roadway). The roadway length over which the pollutants are emitted is variable, and is dependent upon a number of factors including traffic volume, roadway capacity, vehicle speeds, etc. Cruise and idle emissions are calculated by use of the USEPA's MOVES2014b model.

The vehicle mix is split into more than one dozen vehicle classes. The percent composition of each class was determined for New York. Engine operating conditions and speeds were also set at very conservative standard levels (for "urban," unrestricted collectors).   All addition standards for inspection/maintenance programs, meteorological data, winter fuel formulations, free-flow speeds, acceleration/deceleration and queue speeds, etc. are set as for Albany County, New York.

Emissions are calculated for vehicle population characteristics, they are then assigned to traffic links at 30 mph speeds on Western and Washington Avenues, and, on the local streets, at 20 mph for the 2022 and 2025 build scenarios. Acceleration/deceleration speeds are set at half those values. Parking and fueling station emissions were assigned to off-network links and portions of the queuing links associated with the Western Avenue and Johnson Avenue/Crossgates Mall Road modeling. These were assumed to be completely full at 1700 vehicles.

These emissions are inserted into the dispersion model defined by their own unique links. These links depend on average queue lengths and delay times which are determined from input signalization characteristics, lane volumes and lane capacities. Finally, all of these factors are assembled, along with receptor locations and meteorological data and are input to CAL3QHC to calculate hourly CO concentrations. CAL3QHC is accepted as the first level for dispersion modeling in NYSDOT's TEM.   Eight hour CO concentrations are determined by use of a persistence factor as described in Section 3.6.

3.3 Physical Model Structure

The dispersion model was used in this case to analyze two intersections, with two (2) phases. For most phases, at least two approach/departure links were required; one for free-flow (including acceleration/deceleration – included in the MOVES2014b emission factor calculations) and one or two for queuing. Each combination of phase, approach and/or queue uniquely defines an approaching the intersection.   In CAL3QHC, a free-flow link is non-directional; consequently, a cross intersection consists of four free flow links. Additional, four directional links were added to each intersection to simulate queue emissions. The basis of an intersection description in CAL3QHC is a localized coordinate system. The west to east and south to north coordinates (in feet or meters) are input to define the end points of the link center line. Other required inputs include; effective emission height for the link, width of the link, and traffic on the link.

After the data for free flow-links on each leg of the intersection were input, data for queuing links arriving at the intersections were input. This information is coded in a similar manner, (i.e., endpoints of the center line of the link are derived based on their location on the coordinate

axes). In setting up the coordinates for these two different types of links, the free-flow links terminated at the intersection center while the queue links originate at the approach stop line.

As a general rule, receptors close to a roadway with idling vehicles will experience greater CO concentrations. The existence of emissions from cross-streets plus variations in diffusion and wind flow further complicates the modeling scenario. Therefore, receptor locations were also identified on the coordinate axis system; i.e., so many feet or meters east or west and north or south from the origin of the coordinate axes. The vertical coordinate of the receptor location represents the height of the receptor. Receptors used in the model are found in Table 3 along with their descriptions. Receptors were the building lines of existing, physical structures.

3.4 Traffic Information

The peak PM in vehicles per hour and the cruise speed (mph), for each link were input into the model. Traffic velocities were set by NYSDOT-TEM values. On Western Avenue and Washington Avenue Extension these were lowered to account for heavier traffic loads. All other traffic data were determined from Maser Consulting P.A. traffic analyses as updated in June 2020. Traffic volumes in ETC 2022 and 2025 build scenarios applied in the modeling were taken from the engineers' data. These intersections included Washington Avenue Extension and Springsteen Road/Crossgates Commons and Western Avenue (U.S. Route 20) and Johnston Road/Crossgates Mall Road because of their high level of service and the highest traffic volumes. As these intersections did not exhibit an exceedance of the CO standards, no further quantitative analysis was required for additional intersections.

The traffic parameters were used in the CAL3QHC determination of vehicle emissions operating in two modes. Vehicle volumes and speeds were utilized in calculating free-flow emissions. Traffic signal characteristics and capacity service volumes were used in calculating the queue length and delay time, which determined the idle queue.

It should be noted that free flow speeds were set at 30 mph for on Western Avenue and Washington Avenue Extension to account for heavier traffic loads and 20 mph for local streets for the 2022 and 2025 build scenarios. This provided higher emissions for the mobile segments modeled. The resultant, modeled speeds are, however, actually much lower as the vehicles queuing (0 to 2.5 mph) in the intersection are effectively double counted. That is, the queue links physically overlap the free flow links, "double counting" queuing vehicles and so, is an environmentally conservative manner, reducing the effective speeds below the modeled speeds. This adds environmental conservativism to the analysis.

3.5 Receptors

Receptors used in the model are found in Table 4 along with their descriptions. Receptors were the building lines of existing, physical structures. As a general rule, receptors close to a roadway with idling vehicles will experience greater CO concentrations. The existence of emissions from cross-streets plus variations in diffusion and wind flow further complicates the modeling scenario. Therefore, receptor locations were also identified on the coordinate axis system; i.e., so many feet or meters east or west and north or south from the origin of the coordinate axes. The vertical coordinate of the receptor location represents the height of the receptor.

Graphs provided in the Appendix indicate the location of the receptors within the Study Area. The ambient air quality standards were set to protect the public health and welfare. Thus, in the end, all such receptors (e.g., including residences along Westmere Terrace) are subject to the same standards and so the health and welfare of those residents will be protected.

3.6 Dispersion Calculations

Emissions factors for each link were calculated from USEPA's MOVES2014b model as modified by New York data and described in Section 3.2 above. These factors are then input to the USEPA's CAL3QHC model in the first level of dispersion modeling to calculate hourly carbon monoxide concentrations at selected receptor locations. In CAL3QHC, the contribution of each small element of roadway to the concentration at a receptor location is calculated as a function of wind direction, wind speed and stability by use of the Gaussian plume formula. The contribution of the entire length of roadway is then obtained by line integration of that expression. In this instance, local, worst case, one-hour meteorological of 1.0 meter per second wind speed and stability class D was used. The worst stability generally occurs during early morning inversion conditions. After sunrise, the atmosphere gains energy and this condition will disappear, usually within one to two hours. Since weekday peak traffic from the Project will occur in the PM hour and this meteorological condition occurs before the AM peak hour, the assumption of their coincidence is extremely conservative. The ambient temperate was set at 17.7 degrees Fahrenheit which is less (and so, environmentally conservative) than the Albany AM average January temperature of 25 degrees Fahrenheit. The intersection was modeled for wind directions varying every 5 degrees for a 360 degree compass (i.e., 0 degrees, 5 degrees, 10 degrees, etc. to 355 degrees).

The CAL3QHC model calculated a one hour CO increment and an ambient CO was added to the result. It includes a 1.2 ppm ambient addition for the one hour value and a 0.8 ppm ambient addition for the eight hour value in 2022 and 2025. These values were taken from the Loudonville, NY station 0101-33 which is approximately 6 miles east of the site on Shaker Road in proximity to Residences, Corporate Woods commercial development and I90). Therefore, the true peak value is the sum of the CO contributions from each link plus the ambient. This result is the maximum predicted CO concentration for corresponding peak receptor.

Since the analysis must determine a differential between build and no-build scenarios for the eight-hour CO standard, a persistence factor of 0.72 (as provided by NYSDOT for Albany County) was applied to one-hour results above ambient to yield eight hour results en-lieu of the eight-hour modeling. The State and National Ambient Air Quality Standards (NAAQS) for CO are 35 ppm for one hour and 9 ppm for eight hours, respectively.

4.0 AIR QUALITY MODELING RESULTS

4.1 CAL3QHC Results

Two intersections were modeled for the proposed project. The CAL3QHC model was run at peak weekday PM conditions for 2022 and 2025 build conditions for the intersections of (1) Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road and (2) Washington Avenue Extension and Springsteen Road/Crossgates Commons. Peak PM traffic scenarios were analyzed at the subject intersection using worst case meteorology for each condition. Traffic volumes associated with the build scenarios anticipated the full build of the project. Traffic data were determined from Maser Consulting P.A. traffic analyses. Thus, the impact of increased general traffic and traffic directly relating to the proposed project were included in the traffic analysis. The air quality analysis does likewise.

Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road

Analysis results for the modeled receptors are presented in the Air Quality Appendix found in the Air Quality Analysis report prepared by B. Laing Associates, Inc.. The PM Peak CO result with the project constructed is predicted to be 1.4 ppm in the one hour scenario and 0.94 ppm in the eight hour scenario for 2022 PM Build along Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road. This result is located at Receptor 37 and is located approximately southwest of the intersection epicenter. Thus, the CO result with the project constructed in the one hour scenario and the eight hour scenario is predicted to be below their respective one hour standard of 35 ppm and eight hour standard of 9 ppm in the 2022 build condition. As such, it was determined that the project will not significantly impact air quality.

The PM Peak CO result with the project constructed is predicted to be 1.5 ppm in the one hour scenario and 1.02 ppm in the eight hour scenario for 2025 PM Build along Western Avenue (U.S. Route 20) and Johnston Road/Rapp Road. This result is located at Receptor 8 and is located approximately east of the intersection epicenter. Thus, the CO result with the project constructed in the one hour scenario and the eight hour scenario is predicted to be below their respective one hour standard of 35 ppm and eight hour standard of 9 ppm in the 2025 build condition. As such, it was determined that the project will not significantly impact air quality.

Washington Avenue Extension and Springsteen Road/Crossgates Commons

The PM Peak CO result with the project constructed is predicted to be 1.4 ppm in the one hour scenario and 0.94 ppm in the eight hour scenario for 2022 PM Build along Washington Avenue Extension and Springsteen Road/Crossgates Commons. This result is located at Receptor 4 and is located approximately north of the intersection epicenter. Thus, the CO result with the project constructed in the one hour scenario and the eight hour scenario is predicted to be below their respective one hour standard of 35 ppm and eight hour standard of 9 ppm in the 2022 build condition. As such, it was determined that the project will not significantly impact air quality.

The PM Peak CO result with the project constructed is predicted to be 1.3 ppm in the one hour scenario and 0.87 ppm in the eight hour scenario for 2025 PM Build along Washington Avenue Extension and Springsteen Road/Crossgates Commons. This result is located at Receptor 12 and is located approximately north of the intersection epicenter. Thus, the CO result with the project constructed in the one hour scenario and the eight hour scenario is predicted to be below their respective one hour standard of 35 ppm and eight hour standard of 9 ppm in the 2022 build condition. As such, it was determined that the project will not significantly impact air quality.

As all results described above are below the one hour, CO standard of 35 ppm and eight hour standard of 9 ppm in the 2022 and 2025 build conditions, it was determined that the project will not significantly impact air quality.

Data graph of receptors and associated list of modeled receptors can be found in Appendix A of this report.

5.0 CONCLUSION

In review of screening and microscale modeling guidelines of NYSDOT's The Environmental Manual (TEM), no further air quality analysis is required for the Project because it will not result in a significant increase in impacts to air quality and will not contravene state ambient air quality standards for CO. As all results described above are below the one hour, CO standard of 35 ppm and eight hour standard of 9 ppm in the 2022 and 2025 build conditions, it was determined that the Project will not significantly impact air quality.

TABLE 4
RECEPTORS (WITH CORRESPONDING DESCRIPTIONS)
Western Avenue (U.S. Route 20) and Johnston Road/Crossgates Mall Road

Receptor Numbers	Receptor Description
'RECP A	HOUSE 1685 WASHINGTON AVE
'RECP B	HOUSE 1683 WASHINGTON AVE
'RECP C	HOUSE 1681 WASHINGTON AVE A
'RECP D	HOUSE 1679 WASHINGTON AVE
'RECP E	DREW JEWELRY
'RECP F	AFF CAR INS'
'RECP G	SHOP PLAZA
'RECP H	HOUSE 1688 WASHINGTON AVE
'RECP I	HOUSE WASHINGTON AVE
'RECP J	EMPIRE SOL
'RECP K	HOUSE 1682 WASHINGTON AVE
'RECP L	HOUSE 1680 WASHINGTON AVE
'RECP M	HOUSE 1678 WASHINGTON AVE
'RECP N	MASSAGE SPE
'RECP O	COLE J MD
'RECP P	PRICECHOPPER
'RECP Q	TENDER CARE
'RECP R	HOUSE 6262 JOHNSTON ROAD
'RECP S	HOUSE 6254 JOHNSTON ROAD
'RECP T	HOUSE 6252 JOHNSTON ROAD
'RECP U	HOUSE 6250 JOHNSTON ROAD
'RECP V	HOUSE 6248 JOHNSTON ROAD
'RECP W	HOUSE 6246 JOHNSTON ROAD
'RECP X	HOUSE 6244 J JOHNSTON ROAD
'RECP Y	HOUSE 6242 JOHNSTON ROAD
'RECP Z	PURE ELEMENTS
'RECP 1	THR SALON
'RECP 2	PURE ELEMENTS
'RECP 3	BURNS MGMT'
'RECP 4	MEYERS LLP
'RECP 5	CAFE REST'
'RECP 6	STEVEN PHD
'RECP 7	WEST BEVER
'RECP 8	TAE KWAN DO
'RECP 9	LIZS CLOSEST'
'RECP 10	SALON
'RECP 11	BROKERAGE
'RECP 12	HEARING CTR
'RECP 13	MADELINE SALON
'RECP 14	STRUCTURE
'RECP 15	HOUSE 6269 JOHNSTON ROAD
'RECP 16	HOUSE 6267 JOHNSTON ROAD
'RECP 17	HOUSE 6261 JOHNSTON ROAD
'RECP 18	HOUSE 6253 JOHNSTON ROAD
'RECP 19	HOUSE 6247 JOHNSTON ROAD
'RECP 20	HOUSE 6243 JOHNSTON ROAD
'RECP 21	CAPITAL DINER
'RECP 22	SPRINT'
'RECP 23	ROMAN JEWELS
'RECP 24	BARBER
'RECP 25	WESTMERE FD
'RECP 26	AUTO TIRE
'RECP 27	CARWASH
'RECP 28	AUTOZONE
'RECP 29	MC HAIRSTYL
'RECP 30	HOUSE 5 WESTMERE TERRACE
'RECP 31	HOUSE 11 WESTMERE TERRACE
'RECP 32	HOUSE 21 WESTMERE TERRACE
'RECP 33	HOUSE 31 WESTMERE TERRACE
RECP 34	SIDEWALK RECEPTOR NE

TABLE 4 Cont…
RECEPTORS (WITH CORRESPONDING DESCRIPTIONS)

Washington Avenue Extension and Springsteen Road/Crossgates Commons

Receptor Numbers	Receptor Description
'RECP A	MCDONALDS
'RECP B	MALL
'RECP C	MCDONALDS
'RECP D	CROSSGATES PLAZA
'RECP E	MARILLAC
'RECP F	ALBANY PD
'RECP G	J FEDERATION
'RECP H	KIDNEY CARE
'RECP I	DIALYSIS CLIN
'RECP J	NURSING HOME
'RECP K	SENIOR CARE
'RECP L	HOUSE 8 RAPP ROAD
'RECP M	HOUSE 12 RAPP ROAD
'RECP N	HOUSE 5A RAPP ROAD
'RECP O	HOUSE 22 RAPP ROAD
'RECP P	HOUSE 28 RAPP ROAD
'RECP Q	HOUSE 27 RAPP ROAD
'RECP R	HOUSE RAPP ROAD
'RECP S	HOUSE 39 RAPP ROAD
'RECP T	HOUSING A
'RECP U	HOUSING B
'RECP V	HOUSING C
'RECP W	CHURCH
'RECP X	HOUSE 67 RAPP ROAD
'RECP Y	HOUSE 38 RAPP ROAD
'RECP Z	HOUSE RAPP ROAD
'RECP 1	HOUSE 54 RAPP ROAD
'RECP 2	HOUSE 68 RAPP ROAD
'RECP 3	ATRIA CROSSGATE
'RECP 4	ATRIA CROSSGATE
'RECP 5	130 WASHINGTON AVE EXT
'RECP 6	RESIDENCE INN
'RECP 7	CROSSGATES COMMONS
'RECP 8	CROSSGATES COMMONS'
'RECP 9	CROSSGATES COMMONS
'RECP 10	CROSSGATES COMMONS
'RECP 11	TRUCK DEALER

TABLE 5 <u>AIR QUALITY RESULTS</u>

CO TABLES

PYRCRG53.OUT

CONVERSION TABLE AIR QUALITY CO 1 AND 8 HR VALUES

JOB NO: PYRCRG10- Persistence Factor: 0.72 SCENARIO: 2022 PM Build WESTERN AVE/JOHNSTON/RAPP ROAD

Intersection: No. 3 - WESTERN AVE/JOHNSTON/RAPP ROAD

Receptor Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Raw Result/ 1 hr	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.10	0.10	0.10
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.30	1.40	1.30	1.30	1.30
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	2.20
8 Hour Result	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.87	0.94	0.87	0.87	2.27

Receptor Number:	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Raw Result/ 1 hr	0.2	0.10	0.20	0.20	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.20	0.10
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.40	1.30	1.40	1.40	1.30	1.30	1.30	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.40	1.40	1.40	1.30
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.94	0.87	0.94	0.94	0.87	0.87	0.87	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.94	0.94	0.94	0.87

Receptor Number:	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Raw Result/ 1 hr	0.1	0.10	0.10	0.10	0.20	0.20	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.30	1.30	3.40	3.30	4.10	3.80	3.80	3.70	3.80	4.10	3.70	3.80	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.30
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.87	0.87	0.87	0.87	0.94	0.94	0.87	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.87

* New York State carbon monoxide standard (CO) 35ppm - 1 Hour.
* New York State carbon monoxide standard (CO) 9ppm - 8 Hour.
** Modeling results are rounded to the nearest 0.1 ppm. Values lower are recorded as 0 ppm.

CONVERSION TABLE AIR QUALITY CO 1 AND 8 HR VALUES

JOB NO: PYRCRG10-   Persistence Factor: 0.72   SCENARIO: 2025 PM Build WESTERN AVE/JOHNSTON/RAPP ROAD

Intersection: No. 3 - WESTERN AVE/JOHNSTON/RAPP ROAD

Receptor Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Raw Result/ 1 hr	0.2	0.20	0.20	0.30	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.10	0.00	0.00	0.10
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.40	1.40	1.40	1.50	1.40	1.40	1.40	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.30	1.30	1.20	1.20	1.30
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.94	0.94	0.94	1.02	0.94	0.94	0.94	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	0.87	0.87	0.80	0.80	0.87

Receptor Number:	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Raw Result/ 1 hr	0.1	0.10	0.10	0.10	0.00	0.20	0.30	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0.20	0.10	0.10	0.10	0.20	0.10
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.30	1.30	1.30	1.30	1.20	1.40	1.50	1.40	1.40	1.40	1.40	1.40	1.30	1.30	1.40	1.30	1.30	1.30	1.40	1.30
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.87	0.87	0.87	0.87	0.80	0.94	1.02	0.94	0.94	0.94	0.94	0.94	0.87	0.87	0.94	0.87	0.87	0.87	0.94	0.87

Receptor Number:	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Raw Result/ 1 hr	0	0.00	0.00	0.00	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.00	0.20
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.20	1.20	3.40	3.30	4.10	3.80	3.80	3.70	3.80	4.10	3.70	3.80	1.30	1.30	1.30	1.30	1.30	1.20	1.20	1.40
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.80	0.80	0.80	0.80	0.87	0.87	0.94	0.94	0.94	0.94	0.94	0.87	0.87	0.87	0.87	0.87	0.87	0.80	0.80	0.94

* New York State carbon monoxide standard (CO) 35ppm - 1 Hour.
* New York State carbon monoxide standard (CO) 9ppm - 8 Hour.
** Modeling results are rounded to the nearest 0.1 ppm. Values lower are recorded as 0 ppm.

PYRCRG51.OUT

CONVERSION TABLE AIR QUALITY CO 1 AND 8 HR VALUES

JOB NO: pyrcrg10-15　　Persistence Factor: 0.72　　SCENARIO: 2022 PM Build - Washington/Springsteen

Intersection: No. 9 - Washington Ave/Springsteen/Rapp Rd

Receptor Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Raw Result/ 1 hr	0.1	0.00	0.10	0.20	0.10	0.00	0.00	0.00	0.10	0.00	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.00	0.00	0.00
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.30	1.20	1.30	1.40	1.30	1.20	1.20	1.20	1.30	1.20	1.30	1.30	1.30	1.30	1.30	1.30	1.20	1.20	1.20	1.20
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.87	0.80	0.87	0.94	0.87	0.80	0.80	0.80	0.87	0.80	0.87	0.87	0.87	0.87	0.87	0.87	0.80	0.80	0.80	0.80

Receptor Number:	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Raw Result/ 1 hr	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.30	1.30	1.30	1.30	1.20	1.20	1.20	1.20	1.20
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.87	0.87	0.87	0.87	0.80	0.80	0.80	0.80	0.80

* New York State carbon monoxide standard (CO) 35ppm - 1 Hour.
* New York State carbon monoxide standard (CO) 9ppm - 8 Hour.
** Modeling results are rounded to the nearest 0.1 ppm. Values lower are recorded as 0 ppm.

PYRCRG10-15_CO_TABLES 7-7-2020

CONVERSION TABLE AIR QUALITY CO 1 AND 8 HR VALUES

JOB NO: pyrcrg10-15   Persistence Factor: 0.72   SCENARIO: 2022 PM Build - Washington/Springsteen

Intersection: No. 9 - Washington Ave/Springsteen/Rapp Rd

Receptor Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Raw Result/ 1 hr	0.1	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.30	1.20	1.30	1.30	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.30	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.87	0.80	0.87	0.87	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.87	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80

Receptor Number:	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Raw Result/ 1 hr	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 Hour Ambient	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
1 Hour Result	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
8 Hour Ambient	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
8 Hour Result	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80

* New York State carbon monoxide standard (CO) 35ppm - 1 Hour.
* New York State carbon monoxide standard (CO) 9ppm - 8 Hour.
** Modeling results are rounded to the nearest 0.1 ppm. Values lower are recorded as 0 ppm.

AIR QUALITY APPENDIX A

RECEPTOR GRAPHS
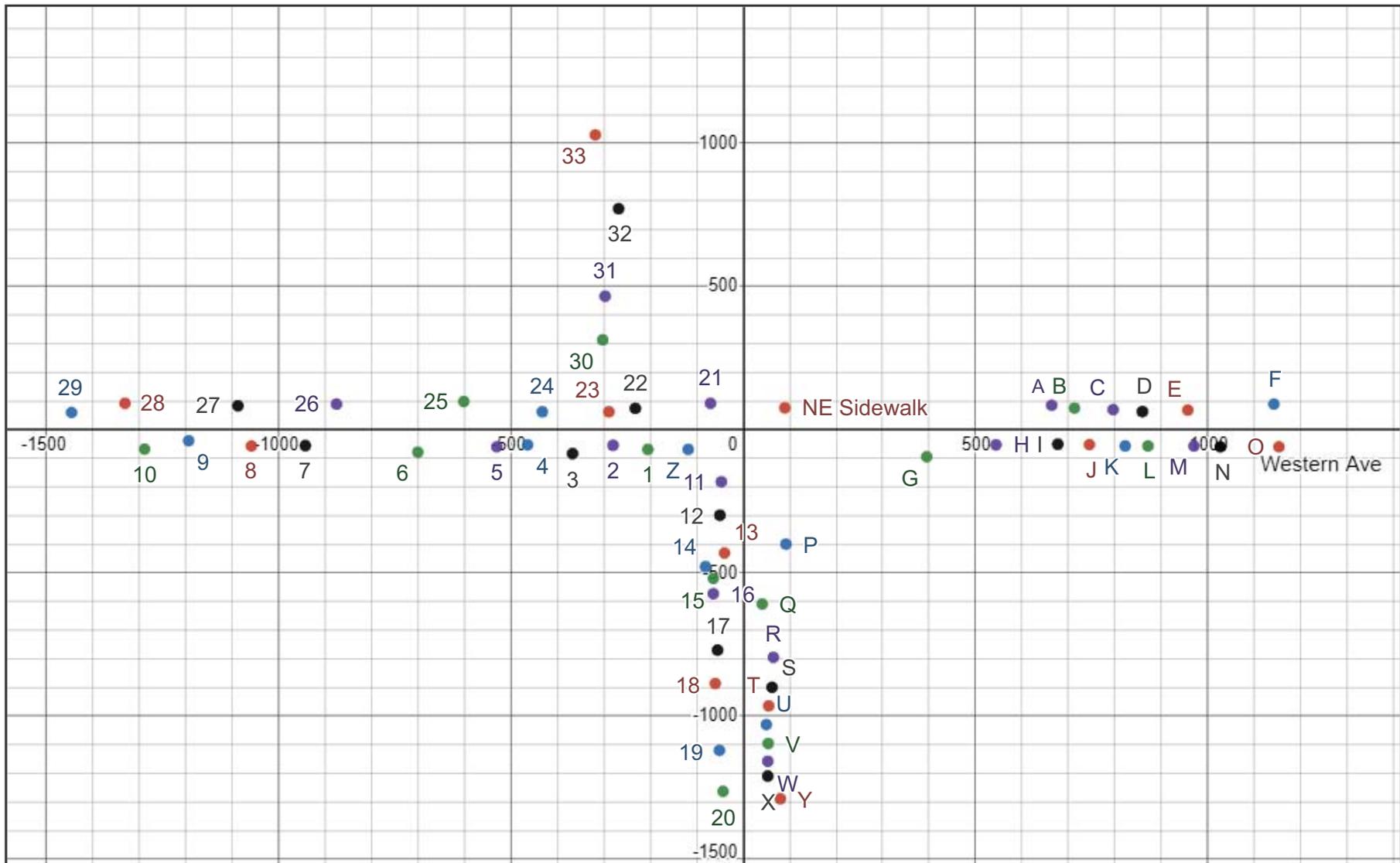
Title: Western Avenue Receptor Grid

Title: Washington Avenue Receptor Grid

AIR QUALITY APPENDIX B

CAL₃QHC MODELING OUPUTS

      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22   RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, SOU

      DATE : 7/ 7/20
      TIME : 9:10:39

      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 = 175. 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 (FT)   *   LENGTH
BRG TYPE   VPH   EF   H   W   V/C QUEUE
                           *   X1   Y1   X2   Y2   *   (FT)
(DEG)   (G/MI) (FT) (FT)   (VEH)

-----------------------*---*-----------------
----
      1. LINK1 CROSSGATES RD *   0.0   0.0   0.0   1200.0 *   1200.
360. AG   2700.   1.5   4.0 48.0
      2. LINK2 JOHNSTON RD   *   0.0   0.0   0.0   -1200.0 *   1200.
180. AG   2435.   2.1   4.0 48.0
      3. LINK3 WESTERN AVE E*   0.0   0.0   1200.0   0.0 *   1200.
90. AG   4516.   0.3   3.0 36.0
      4. LINK4 WESTERN AVE WF*   0.0   0.0   -1200.0   0.0 *   1200.
270. AG   4951.   0.0   2.0 24.0
      5. LINK5 WESTERN AVE E* -50.0   -6.0 -27482.5   -6.0 *   *****
270. AG   6. 100.0   0.0 12.0 8.76 *****
      6. LINK6 WESTERN AVE W*   60.0   24.0   2833.9   24.0 *   2774.
90. AG   2. 100.0   0.0 36.0 1.73 140.9
      7. LINK7 JOHNSTON RD   *   35.0   -50.0   35.0   -62.3 *   12.
180. AG   4. 100.0   0.0 48.0 0.07   0.6
      8. LINK8 CROSSGATES RD * -23.0   50.0   -23.0   75.6 *   26.
360. AG   6. 100.0   0.0 48.0 0.14   1.3
♠
                          PAGE 2
      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22   RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, SOU

      DATE : 7/ 7/20
      TIME : 9:10:39

```
     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)

-----------------------*--------------------------------------------------------
---------------------
      5. LINK5 WESTERN AVE  E*    120      90       3.0       2918       1600
 2.76     2        3
      6. LINK6 WESTERN AVE  W*    120      90       3.0       1727       1600
 0.25     2        3
      7. LINK7 JOHNSTON RD   *    120      30       3.0        302       1600
 1.55     2        3
      8. LINK8 CROSSGATES RD *    120      30       3.0        624       1600
 2.18     2        3

     RECEPTOR LOCATIONS
     ------------------
                              *             COORDINATES (FT)          *
        RECEPTOR              *      X           Y           Z         *
     -------------------------*------------------------------------------*
      1. RECP A HOUSE 1685 WA *     644.0        85.0        6.0        *
      2. RECP B HOUSE 1683 WA *     713.0        75.0        6.0        *
      3. RECP C HOUSE 1681 WA *     796.0        70.0        6.0        *
      4. RECP D HOUSE 1679 WA *     859.0        63.0        6.0        *
      5. RECP E DREW JEWELRY  *     957.0        68.0        6.0        *
      6. RECP F AFF CAR INS   *    1142.0        89.0        6.0        *
      7. RECP G SHOP PLAZA    *     395.0       -95.0        6.0        *
      8. RECP H HOUSE 1688 WA *     544.0       -53.0        6.0        *
      9. RECP I HOUSE WA      *     677.0       -51.0        6.0        *
     10. RECP J EMPIRE SOL    *     745.0       -52.0        6.0        *
     11. RECP K HOUSE 1682 WA *     822.0       -57.0        6.0        *
     12. RECP L HOUSE 1680 WA *     871.0       -57.0        6.0        *
     13. RECP M HOUSE 1678 WA *     970.0       -57.0        6.0        *
     14. RECP N MASSAGE SPE   *    1027.0       -60.0        6.0        *
     15. RECP O COLE J MD     *    1153.0       -60.0        6.0        *
     16. RECP P PRICECHOPPER  *      92.0      -400.0        6.0        *
     17. RECP Q TENDER CARE   *      41.0      -609.0        6.0        *
     18. RECP R HOUSE 6262 JR *      65.0      -795.0        6.0        *
     19. RECP S HOUSE 6254 JR *      62.0      -900.0        6.0        *
     20. RECP T HOUSE 6252 JR *      55.0      -965.0        6.0        *
     21. RECP U HOUSE 6250 JR *      50.0     -1030.0        6.0        *
     22. RECP V HOUSE 6248 JR *      54.0     -1096.0        6.0        *
     23. RECP W HOUSE 6246 JR *      53.0     -1158.0        6.0        *
     24. RECP X HOUSE 6244 JR *      53.0     -1210.0        6.0        *
     25. RECP Y HOUSE 6242 JR *      80.0     -1289.0        6.0        *
```

```
  26. RECP Z PURE ELEMENTS *      -118.0      -69.0       6.0    *
  27. RECP 1 THR SALON     *      -205.0      -53.0       6.0    *
  28. RECP 2 PURE ELEMENTS *      -280.0      -55.0       6.0    *
  29. RECP 3 BURNS MGMT     *      -367.0      -84.0       6.0    *
  30. RECP 4 MEYERS LLP     *      -464.0      -53.0       6.0    *
  31. RECP 5 CAFE REST      *      -530.0      -60.0       6.0    *
  32. RECP 6 STEVEN PHD     *      -700.0      -79.0       6.0    *
  33. RECP 7 WEST BEVER     *      -942.0      -56.0       6.0    *
  34. RECP 8 TAE KWAN DO    *     -1058.0      -57.0       6.0    *
  35. RECP 9 LIZS CLOSEST   *     -1193.0      -39.0       6.0    *
  36. RECP 10 SALON         *     -1288.0      -68.0       6.0    *
  37. RECP 11 BROKERAGE     *       -47.0     -182.0       6.0    *
  38. RECP 12 HEARING CTR   *       -50.0     -299.0       6.0    *
  39. RECP 13 MADELINE SAL  *       -40.0     -431.0       6.0    *
  40. RECP 14 STRUCTURE     *       -81.0     -479.0       6.0    *
  41. RECP 15 HOUSE 6269 J  *       -64.0     -520.0       6.0    *
↑
                         PAGE  3
     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22                    RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, SOU


     DATE :  7/ 7/20
     TIME :  9:10:39


     RECEPTOR LOCATIONS
     ------------------
                         *          COORDINATES (FT)         *
        RECEPTOR         *     X           Y           Z     *
 ------------------------*-------------------------------------*
  42. RECP 16 HOUSE 6267 J *       -64.0     -573.0       6.0    *
  43. RECP 17 HOUSE 6261 J *       -55.0     -770.0       6.0    *
  44. RECP 18 HOUSE 6253 J *       -60.0     -887.0       6.0    *
  45. RECP 19 HOUSE 6247 J *       -51.0    -1120.0       6.0    *
  46. RECP 20 HOUSE 6243 J *       -43.0    -1263.0       6.0    *
  47. RECP 21 CAPITAL DINE *       -70.0       92.0       6.0    *
  48. RECP 22 SPRINT       *      -232.0       74.0       6.0    *
  49. RECP 23 ROMAN JEWELS *      -289.0       62.0       6.0    *
  50. RECP 24 BARBER       *      -432.0       73.0       6.0    *
  51. RECP 25 WESTMERE FD  *      -601.0       98.0       6.0    *
  52. RECP 26 AUTO TIRE    *      -875.0       89.0       6.0    *
  53. RECP 27 CARWASH      *     -1087.0       83.0       6.0    *
  54. RECP 28 AUTOZONE     *     -1330.0       92.0       6.0    *
  55. RECP 29 MC HAIRSTYL  *     -1445.0       60.0       6.0    *
  56. RECP 30 HOUSE 5 WMT  *      -302.0      313.0       6.0    *
  57. RECP 31 HOUSE 11 WMT *      -297.0      466.0       6.0    *
  58. RECP 32 HOUSE 21 WMT *      -268.0      771.0       6.0    *
  59. RECP 33 HOUSE 31 WMT *      -318.0     1029.0       6.0    *
  60. RECP 12 SIDEWALK NE  *        90.0       76.0       6.0    *
↑
```

          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.-360.

  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   0.0   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
   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   0.1   0.0   0.0   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   0.0
 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
  20. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  25. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  35. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  55. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  65. *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0

```
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
  75.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
  85.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
  95.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 105.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 115.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 125.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 135.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 145.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 155.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 165.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 175.  *   0.0    0.0    0.0    0.0    0.0    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
 180.  *   0.0    0.0    0.0    0.0    0.0    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
 185.  *   0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    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    0.1    0.1    0.1
 195.  *   0.0    0.0    0.0    0.0    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    0.1    0.1    0.1
 200.  *   0.0    0.0    0.0    0.0    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    0.1    0.1    0.1
 205.  *   0.0    0.0    0.0    0.0    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    0.1    0.1    0.1
♠
```

     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22   RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, SOU

 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
 REC21 REC22 REC23 REC24 REC25 REC26 REC27 REC28 REC29 REC30 REC31 REC32 REC33 REC34
REC35 REC36 REC37 REC38 REC39 REC40
 REC41 REC42 REC43 REC44 REC45 REC46 REC47 REC48 REC49 REC50 REC51 REC52 REC53 REC54
REC55 REC56 REC57 REC58 REC59 REC60

```
------*-------------------------------------------------------------------------
---------------------------------------------
------*-------------------------------------------------------------------------
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------*-------------------------------------------------------------------------
---------------------------------------------
 210.  *   0.0    0.0    0.0    0.0    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    0.1    0.1    0.1
 215.  *   0.0    0.0    0.0    0.0    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    0.1    0.1    0.1
 220.  *   0.0    0.0    0.0    0.0    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    0.1    0.1    0.1
 225.  *   0.0    0.0    0.0    0.0    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
 230.  *   0.0    0.0    0.0    0.0    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
 235.  *   0.0    0.0    0.0    0.0    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
 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    0.1    0.1    0.1    0.1
 245.  *   0.0    0.0    0.0    0.0    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
 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    0.1    0.1    0.1    0.1    0.1
 255.  *   0.0    0.0    0.0    0.0    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
 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    0.1    0.1    0.1    0.1    0.1
 265.  *   0.0    0.0    0.0    0.0    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
 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   0.1   0.1   0.1   0.1   0.1
 275.  *   0.0   0.0   0.0   0.0   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
 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   0.1   0.1   0.1   0.1   0.1
 285.  *   0.0   0.0   0.0   0.0   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
 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   0.1   0.1   0.1   0.1   0.1
 295.  *   0.0   0.0   0.0   0.0   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
 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   0.1   0.1   0.1   0.1   0.1
 305.  *   0.0   0.0   0.0   0.0   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
 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   0.1   0.1   0.1   0.1   0.1
 315.  *   0.0   0.0   0.0   0.0   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
 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   0.1   0.2   0.1   0.1   0.1
 325.  *   0.0   0.0   0.0   0.0   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   0.1   0.1   0.1
 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   0.1   0.2   0.1   0.1   0.1
 335.  *   0.0   0.0   0.0   0.0   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   0.1   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   0.0
 0.0   0.0   0.0   0.1   0.2   0.1   0.1   0.1
 345.  *   0.0   0.0   0.0   0.0   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   0.1   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   0.0
 0.0   0.0   0.0   0.0   0.2   0.1   0.1   0.1
 355.  *   0.0   0.0   0.0   0.0   0.0   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
 360.  *   0.0   0.0   0.0   0.0   0.0   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

 ------*-------------------------------------------------------------------------
 ----------------------------------------------
 MAX   *   0.0   0.0   0.0   0.0   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   0.1   0.1   0.1
 DEGR. *    0     0     0     0     0     0     0     0     0     0     0     0
 0     0     0   185   190     0     0     0

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ROAD/COSTCO PM PEAK 2022 BUILD, SOU

         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.-360.

  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. *   0.1   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   0.0
    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   0.2   0.2   0.1   0.1
   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   0.2   0.1   0.2   0.1
   15. *   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   0.2   0.1   0.2   0.1
   20. *   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   0.2   0.1
   25. *   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   0.2   0.1
   30. *   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   0.2   0.1
   35. *   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   0.2   0.1
   40. *   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   0.2   0.1
   45. *   0.0   0.0   0.0   0.0   0.0   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
   50. *   0.0   0.0   0.0   0.0   0.0   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
   55. *   0.0   0.0   0.0   0.0   0.0   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
   60. *   0.0   0.0   0.0   0.0   0.0   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
   65. *   0.0   0.0   0.0   0.0   0.0   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
   70. *   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   0.1
   75. *   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    0.1
  80.  *    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    0.1
  85.  *    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    0.1
  90.  *    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    0.1
  95.  *    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    0.1
 100.  *    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    0.1
 105.  *    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    0.1
 110.  *    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    0.1
 115.  *    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    0.1
 120.  *    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    0.1
 125.  *    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    0.1
 130.  *    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    0.1
 135.  *    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    0.1
 140.  *    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    0.1    0.1    0.2    0.1
 145.  *    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    0.1    0.1    0.2    0.1
 150.  *    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    0.2    0.1    0.2    0.1
 155.  *    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    0.2    0.2    0.2    0.1
 160.  *    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    0.2    0.2    0.2    0.1
 165.  *    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    0.2    0.2    0.2    0.1
 170.  *    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    0.2    0.1    0.2    0.1
 175.  *    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    0.2    0.1
 180.  *    0.0    0.0    0.0    0.0    0.0    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    0.0
 185.  *    0.0    0.0    0.0    0.0    0.0    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    0.0
 190.  *    0.1    0.0    0.0    0.0    0.0    0.0    0.0    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
 195.  *    0.1    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
```

```
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 205.  *   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
♠
```
```
      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22                      RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, SOU

  WIND ANGLE RANGE:   0.-360.

  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


------*--------------------------------------------------------------------------
--------------------------------------------
 210.  *   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
 215.  *   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
 220.  *   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
 225.  *   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
 230.  *   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   0.0
 235.  *   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   0.0
 240.  *   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   0.0
 245.  *   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   0.0
 250.  *   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   0.0
 255.  *   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   0.0
 260.  *   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   0.0
 265.  *   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   0.0
 270.  *   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   0.0
 275.  *   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   0.0
 280.  *   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   0.0
 285.  *   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   0.0
 290.  *   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    0.0
 295.  *   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    0.0
 300.  *   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    0.0
 305.  *   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    0.0
 310.  *   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    0.0
 315.  *   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    0.0
 320.  *   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
 325.  *   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
 330.  *   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
 335.  *   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
 340.  *   0.2    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    0.0    0.0
 345.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
 350.  *   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
 355.  *   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    0.0
 360.  *   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    0.0


 ------*----------------------------------------------------------------------
 ----------------------------------------------
 MAX   *   0.2    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    0.0    0.0    0.2    0.2    0.2    0.1
 DEGR. *   335      0    345    340      0     10    140      0      0      0      0      0
   0      0      0      0      5      5     10      5
```

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```
                          PAGE  8
     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22                          RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, SOU


        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.-360.

  WIND  * CONCENTRATION
  ANGLE *       (PPM)
  (DEGR)* REC41 REC42 REC43 REC44 REC45 REC46 REC47 REC48 REC49 REC50 REC51 REC52
REC53 REC54 REC55 REC56 REC57 REC58 REC59 REC60

  ------*-------------------------------------------------------------------------
----------------------------------------------
   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   0.0   0.0   0.0   0.0   0.0
   5.  *   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   0.0   0.0   0.0   0.0   0.0
  10.  *   0.1   0.1   0.1   0.1   0.1   0.2   0.1   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  15.  *   0.1   0.1   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
  20.  *   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   0.0   0.0   0.0   0.0   0.0
  25.  *   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   0.0   0.0   0.0   0.0   0.0
  30.  *   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   0.0   0.0   0.0   0.0   0.0
  35.  *   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   0.0   0.0   0.0   0.0   0.0
  40.  *   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   0.0   0.0   0.0   0.0   0.0
  45.  *   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
  50.  *   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
  55.  *   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
  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
  65.  *   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   0.1   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
  75.  *   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
  80.  *   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
  85.  *   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
  90.  *   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
  95.  *   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
 100.  *   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
 105.  *   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
 110.  *   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
 115.  *   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
 120.  *   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
 125.  *   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
 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    0.0    0.0    0.0    0.0
 135.  *   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
 140.  *   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
 145.  *   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
 150.  *   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
 155.  *   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
 160.  *   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
 165.  *   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
 170.  *   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
 175.  *   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
 180.  *   0.1    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    0.1
 185.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1
 195.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1
 200.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1
 205.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1
```
⬆

     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22   RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, SOU

  WIND ANGLE RANGE: 0.-360.

```
 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC41 REC42 REC43 REC44 REC45 REC46 REC47 REC48 REC49 REC50 REC51 REC52
REC53 REC54 REC55 REC56 REC57 REC58 REC59 REC60

------*-------------------------------------------------------------------------
------------------------------------------------
 210.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 215.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 220.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 225.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 230.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 235.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 245.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 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   0.0   0.0   0.1
 255.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.1
 265.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 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   0.0   0.0   0.1
 275.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 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   0.0   0.0   0.1
 285.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 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   0.0   0.0   0.1
 295.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 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   0.0   0.0   0.1
 305.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 315.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1
 325.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1
 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    0.0    0.0    0.1
 335.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1
 345.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *    0.0    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    0.1
 355.  *    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    0.0    0.1
 360.  *    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    0.0    0.0    0.0    0.0    0.0

------*-------------------------------------------------------------------------
----------------------------------------------
 MAX   *    0.1    0.1    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    0.1
 DEGR. *    0      0      0      0     15     10      0      0      0      0      0      0
0      0      0      0      0      0      0    180

  THE HIGHEST CONCENTRATION OF    0.20 PPM OCCURRED AT RECEPTOR REC37.
```

     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25   RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, SOU

     DATE : 7/ 7/20
     TIME : 9:17: 8

     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 = 175. 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 (FT)   *   LENGTH
BRG TYPE   VPH   EF   H   W   V/C QUEUE
                           *   X1   Y1   X2   Y2   *   (FT)
(DEG)   (G/MI) (FT) (FT)   (VEH)

-----------------------*--*------------------
----
     1. LINK1 CROSSGATES RD *   0.0   0.0   0.0   1200.0 *   1200.
360. AG   4423.   0.4   4.0 44.0
     2. LINK2 JOHNSTON RD   *   0.0   0.0   0.0 -1200.0 *   1200.
180. AG   4147.   0.4   4.0 44.0
     3. LINK3 WESTERN AVE E*   0.0   0.0   1200.0   0.0 *   1200.
90. AG   6757.   1.5   4.0 50.0
     4. LINK4 WESTERN AVE WF*   0.0   0.0 -1200.0   0.0 *   1200.
270. AG   3357.   1.4   4.0 47.0
     5. LINK5 WESTERN AVE E*   -55.0   -20.0 -37129.6   -20.0 *   *****
270. AG   2. 100.0   0.0 26.0 5.60 *****
     6. LINK6 WESTERN AVE W*   55.0   24.0   7730.2   638.0 *   7700.
85. AG   3. 100.0   0.0 36.0 1.91 391.1
     7. LINK7 JOHNSTON RD   *   20.0   -50.0   20.0 -8165.8 *   8116.
180. AG   6. 100.0   0.0 30.0 4.03 412.3
     8. LINK8 CROSSGATES RD *   -23.0   54.0   -23.0   9363.0 *   9309.
360. AG   1. 100.0   0.0 30.0 4.48 472.9
♠
                              PAGE 2
     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25   RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, SOU

     DATE : 7/ 7/20
     TIME : 9:17: 8

```
      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)

 -----------------------*----------------------------------------------------------
 ---------------------
      5. LINK5 WESTERN AVE  E*    180      87      5.0        4275       1600
  1.56      2         3
      6. LINK6 WESTERN AVE  W*    180      87      5.0        4377       1600
  0.87      2         3
      7. LINK7 JOHNSTON RD   *    180      146     5.0        2899       1600
  0.93      2         3
      8. LINK8 CROSSGATES RD *    180      146     5.0        3229       1600
  0.22      2         3

      RECEPTOR LOCATIONS
      ------------------
                                *            COORDINATES (FT)        *
         RECEPTOR               *      X          Y          Z       *
 ------------------------*------------------------------------------*
   1. RECP A HOUSE 1685 WA *      644.0       85.0        6.0    *
   2. RECP B HOUSE 1683 WA *      713.0       75.0        6.0    *
   3. RECP C HOUSE 1681 WA *      796.0       70.0        6.0    *
   4. RECP D HOUSE 1679 WA *      859.0       63.0        6.0    *
   5. RECP E DREW JEWELRY  *      957.0       68.0        6.0    *
   6. RECP F AFF CAR INS   *     1142.0       89.0        6.0    *
   7. RECP G SHOP PLAZA     *      395.0      -95.0        6.0    *
   8. RECP H HOUSE 1688 WA *      544.0      -53.0        6.0    *
   9. RECP I HOUSE WA       *      677.0      -51.0        6.0    *
  10. RECP J EMPIRE SOL     *      745.0      -52.0        6.0    *
  11. RECP K HOUSE 1682 WA *      822.0      -57.0        6.0    *
  12. RECP L HOUSE 1680 WA *      871.0      -57.0        6.0    *
  13. RECP M HOUSE 1678 WA *      970.0      -57.0        6.0    *
  14. RECP N MASSAGE SPE    *     1027.0      -60.0        6.0    *
  15. RECP O COLE J MD      *     1153.0      -60.0        6.0    *
  16. RECP P PRICECHOPPER   *       92.0     -400.0        6.0    *
  17. RECP Q TENDER CARE    *       41.0     -609.0        6.0    *
  18. RECP R HOUSE 6262 JR *       65.0     -795.0        6.0    *
  19. RECP S HOUSE 6254 JR *       62.0     -900.0        6.0    *
  20. RECP T HOUSE 6252 JR *       55.0     -965.0        6.0    *
  21. RECP U HOUSE 6250 JR *       50.0    -1030.0        6.0    *
  22. RECP V HOUSE 6248 JR *       54.0    -1096.0        6.0    *
  23. RECP W HOUSE 6246 JR *       53.0    -1158.0        6.0    *
  24. RECP X HOUSE 6244 JR *       53.0    -1210.0        6.0    *
  25. RECP Y HOUSE 6242 JR *       80.0    -1289.0        6.0    *
```

```
26. RECP Z PURE ELEMENTS *      -118.0      -69.0         6.0    *
27. RECP 1 THR SALON      *      -205.0      -53.0         6.0    *
28. RECP 2 PURE ELEMENTS  *      -280.0      -55.0         6.0    *
29. RECP 3 BURNS MGMT      *      -367.0      -84.0         6.0    *
30. RECP 4 MEYERS LLP      *      -464.0      -53.0         6.0    *
31. RECP 5 CAFE REST       *      -530.0      -60.0         6.0    *
32. RECP 6 STEVEN PHD      *      -700.0      -79.0         6.0    *
33. RECP 7 WEST BEVER      *      -942.0      -56.0         6.0    *
34. RECP 8 TAE KWAN DO     *     -1058.0      -57.0         6.0    *
35. RECP 9 LIZS CLOSEST    *     -1193.0      -39.0         6.0    *
36. RECP 10 SALON          *     -1288.0      -68.0         6.0    *
37. RECP 11 BROKERAGE      *       -47.0     -182.0         6.0    *
38. RECP 12 HEARING CTR    *       -50.0     -299.0         6.0    *
39. RECP 13 MADELINE SAL   *       -40.0     -431.0         6.0    *
40. RECP 14 STRUCTURE      *       -81.0     -479.0         6.0    *
41. RECP 15 HOUSE 6269 J   *       -64.0     -520.0         6.0    *
```
♠
                         PAGE   3
   JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25   RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, SOU
```
```
    DATE : 7/ 7/20
    TIME : 9:17: 8

    RECEPTOR LOCATIONS
    ----
                         *   COORDINATES (FT)   *
       RECEPTOR   *   X   Y   Z   *
-------------------------*-------------------------------------*
42. RECP 16 HOUSE 6267 J *   -64.0   -573.0   6.0   *
43. RECP 17 HOUSE 6261 J *   -55.0   -770.0   6.0   *
44. RECP 18 HOUSE 6253 J *   -60.0   -887.0   6.0   *
45. RECP 19 HOUSE 6247 J *   -51.0   -1120.0   6.0   *
46. RECP 20 HOUSE 6243 J *   -43.0   -1263.0   6.0   *
47. RECP 21 CAPITAL DINE *   -70.0   92.0   6.0   *
48. RECP 22 SPRINT   *   -232.0   74.0   6.0   *
49. RECP 23 ROMAN JEWELS *   -289.0   62.0   6.0   *
50. RECP 24 BARBER   *   -432.0   73.0   6.0   *
51. RECP 25 WESTMERE FD *   -601.0   98.0   6.0   *
52. RECP 26 AUTO TIRE   *   -875.0   89.0   6.0   *
53. RECP 27 CARWASH   *   -1087.0   83.0   6.0   *
54. RECP 28 AUTOZONE   *   -1330.0   92.0   6.0   *
55. RECP 29 MC HAIRSTYL *   -1445.0   60.0   6.0   *
56. RECP 30 HOUSE 5 WMT *   -302.0   313.0   6.0   *
57. RECP 31 HOUSE 11 WMT *   -297.0   466.0   6.0   *
58. RECP 32 HOUSE 21 WMT *   -268.0   771.0   6.0   *
59. RECP 33 HOUSE 31 WMT *   -318.0   1029.0   6.0   *
60. RECP 12 SIDEWALK NE *   90.0   76.0   6.0   *
```
♠

        JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25                    RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, SOU

            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.-360.

   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   0.0   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
    5.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.2   0.2   0.2   0.2   0.2
  0.2   0.2   0.2   0.1   0.0   0.0   0.0   0.0
   10.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.2   0.2   0.2   0.2   0.2
  0.2   0.2   0.2   0.1   0.0   0.0   0.0   0.0
   15.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.2   0.2   0.2   0.2   0.2
  0.2   0.2   0.2   0.1   0.0   0.0   0.0   0.0
   20.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.2   0.2   0.2   0.2   0.2
  0.2   0.2   0.2   0.1   0.0   0.0   0.0   0.0
   25.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.2   0.2   0.2   0.2   0.2
  0.2   0.2   0.2   0.1   0.0   0.0   0.0   0.0
   30.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.2   0.2   0.2   0.2   0.2
  0.2   0.2   0.1   0.1   0.0   0.0   0.0   0.0
   35.  *   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   0.1   0.0   0.0   0.0   0.0
   40.  *   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   0.1   0.0   0.0   0.0   0.0
   45.  *   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   0.1   0.0   0.0   0.0   0.0
   50.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.2   0.2
  0.2   0.2   0.1   0.1   0.0   0.0   0.0   0.0
   55.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.2   0.2
  0.2   0.2   0.0   0.1   0.0   0.0   0.0   0.0
   60.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.2   0.2
  0.2   0.2   0.0   0.1   0.0   0.0   0.0   0.0
   65.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.2   0.2
  0.2   0.2   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   0.2   0.3   0.3   0.3   0.2   0.2

```
0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0
 75.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.2   0.2
0.2   0.1   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   0.3   0.2   0.2   0.2   0.2
0.1   0.1   0.0   0.0   0.0   0.0   0.0   0.0
 85.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.2   0.2   0.2   0.1   0.1
0.1   0.1   0.0   0.0   0.0   0.0   0.0   0.0
 90.  *   0.1   0.1   0.1   0.1   0.0   0.0   0.1   0.2   0.1   0.1   0.1   0.1
0.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 95.  *   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   0.0   0.0
100.  *   0.1   0.2   0.1   0.2   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
105.  *   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   0.0
110.  *   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
115.  *   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
120.  *   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
125.  *   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
130.  *   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
135.  *   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
140.  *   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
145.  *   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
150.  *   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
155.  *   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
160.  *   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
165.  *   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
170.  *   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
175.  *   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
180.  *   0.2   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
185.  *   0.2   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
190.  *   0.2   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0
0.0   0.0   0.0   0.0   0.1   0.0   0.0   0.0
195.  *   0.2   0.2   0.2   0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0
```

```
  0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.0
 200.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.0
 205.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.0
♠
```

PAGE 5
     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25   RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, SOU

```
 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
 REC21 REC22 REC23 REC24 REC25 REC26 REC27 REC28 REC29 REC30 REC31 REC32 REC33 REC34
REC35 REC36 REC37 REC38 REC39 REC40
 REC41 REC42 REC43 REC44 REC45 REC46 REC47 REC48 REC49 REC50 REC51 REC52 REC53 REC54
REC55 REC56 REC57 REC58 REC59 REC60


------*-----------------------------------------------------------------------------
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------*-----------------------------------------------------------------------------
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------*-----------------------------------------------------------------------------
--------------------------------------------
 210.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.0
 215.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.0
 220.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.0
 225.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.0
 230.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 235.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 240.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 245.  *   0.2    0.2    0.2    0.2    0.2    0.2    0.0    0.0    0.0    0.0    0.0    0.0
  0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 250.  *   0.2    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    0.0    0.0    0.0    0.0    0.0    0.0
 255.  *   0.2    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    0.0    0.0    0.0    0.0    0.0    0.0
 260.  *   0.1    0.2    0.2    0.2    0.2    0.2    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
 265.  *   0.1    0.1    0.2    0.2    0.2    0.1    0.0    0.1    0.1    0.1    0.1    0.1
```

```
 0.1   0.1   0.1   0.0   0.0   0.0   0.0   0.0
 270.  *   0.1   0.1   0.1   0.1   0.1   0.1   0.0   0.1   0.2   0.2   0.2   0.2
0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0
 275.  *   0.0   0.1   0.1   0.1   0.1   0.1   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
 280.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.2   0.3   0.3   0.2   0.3
0.3   0.2   0.3   0.0   0.0   0.0   0.0   0.0
 285.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.3   0.3   0.3   0.3   0.3
0.3   0.3   0.3   0.0   0.0   0.0   0.0   0.0
 290.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.3   0.3   0.3   0.3   0.3
0.3   0.3   0.3   0.0   0.0   0.0   0.0   0.0
 295.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.3   0.3
0.3   0.3   0.3   0.0   0.0   0.0   0.0   0.0
 300.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.3   0.3
0.3   0.2   0.2   0.0   0.0   0.0   0.0   0.0
 305.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.2   0.2
0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0
 310.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.3   0.3   0.2   0.2
0.2   0.2   0.2   0.0   0.0   0.0   0.0   0.0
 315.  *   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   0.2   0.0   0.1   0.0   0.0   0.0
 320.  *   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   0.2   0.0   0.1   0.0   0.0   0.0
 325.  *   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   0.2   0.0   0.1   0.0   0.0   0.0
 330.  *   0.0   0.0   0.0   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   0.1   0.0   0.0   0.0
 335.  *   0.0   0.0   0.0   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   0.1   0.0   0.0   0.0
 340.  *   0.0   0.0   0.0   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   0.1   0.0   0.0   0.0
 345.  *   0.0   0.0   0.0   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   0.1   0.0   0.0   0.1
 350.  *   0.0   0.0   0.0   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   0.1   0.0   0.0   0.0
 355.  *   0.0   0.0   0.0   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
 360.  *   0.0   0.0   0.0   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

-------*----------------------------------------------------------------------
---------------------------------------------
 MAX   *   0.2   0.2   0.2   0.3   0.2   0.2   0.2   0.3   0.3   0.3   0.3   0.3
0.3   0.3   0.3   0.1   0.1   0.0   0.0   0.1
 DEGR. *  105   100   105   250   110   180    35    50    50    50   285   280
280   285   280     5   190     0     0   345
```

🔺

ROAD/COSTCO PM PEAK 2025 BUILD, SOU

        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.-360.

 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   0.1   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
   5. *   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
  10. *   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   0.1   0.0
  15. *   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   0.1   0.0
  20. *   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   0.1   0.1   0.1   0.0
  25. *   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   0.1   0.1   0.2   0.0
  30. *   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   0.1   0.1   0.2   0.0
  35. *   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   0.1   0.1   0.2   0.0
  40. *   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   0.1   0.1   0.2   0.1
  45. *   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   0.1   0.1   0.2   0.1
  50. *   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   0.1   0.1   0.1   0.1
  55. *   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   0.2   0.1   0.1   0.1   0.1   0.1
  60. *   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   0.2   0.1   0.1   0.1   0.1   0.0
  65. *   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   0.2   0.1   0.1   0.1   0.0   0.0
  70. *   0.0   0.0   0.0   0.0   0.0   0.2   0.2   0.2   0.2   0.1   0.1   0.1
  0.1   0.1   0.2   0.1   0.1   0.1   0.0   0.0
  75. *   0.0   0.0   0.0   0.0   0.0   0.2   0.2   0.2   0.2   0.2   0.1   0.1

```
 0.1   0.1   0.2   0.1   0.1   0.1   0.0   0.0
  80.  *   0.0   0.0   0.0   0.0   0.0   0.2   0.3   0.2   0.1   0.2   0.2   0.1
 0.1   0.1   0.2   0.1   0.1   0.0   0.0   0.0
  85.  *   0.0   0.0   0.0   0.0   0.0   0.2   0.2   0.2   0.1   0.2   0.2   0.2
 0.1   0.1   0.2   0.1   0.1   0.0   0.0   0.0
  90.  *   0.0   0.0   0.0   0.0   0.0   0.1   0.1   0.1   0.1   0.2   0.2   0.1
 0.1   0.1   0.1   0.1   0.0   0.0   0.0   0.0
  95.  *   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   0.1   0.1   0.0   0.0   0.0   0.0   0.0
 100.  *   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   0.1   0.0   0.0   0.0   0.0   0.0
 105.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 115.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 125.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 135.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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
 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   0.0   0.0   0.1   0.0
 145.  *   0.0   0.0   0.0   0.0   0.0   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   0.1   0.0
 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   0.0
 155.  *   0.0   0.0   0.0   0.0   0.0   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   0.0
 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   0.1   0.1   0.1   0.0
 165.  *   0.0   0.0   0.0   0.0   0.0   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   0.0
 170.  *   0.0   0.0   0.0   0.0   0.0   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   0.0
 175.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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
 180.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 185.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 195.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
```

```
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 205.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
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```

```
 WIND ANGLE RANGE:    0.-360.

 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


------*------------------------------------------------------------------------
---------------------------------------------
 210.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 215.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 225.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 235.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 245.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 255.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0
 265.  *   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
 270.  *   0.0    0.0    0.0    0.0    0.0    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    0.0    0.0
 275.  *   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    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 280.  *   0.0    0.0    0.0    0.0    0.0    0.1    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
 285.  *   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    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 290.  *   0.0    0.0    0.0    0.0    0.0    0.1    0.1    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
 295. *   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     0.0     0.1     0.0     0.0     0.0
 300. *   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     0.0     0.1     0.0     0.0     0.0
 305. *   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     0.0     0.1     0.0     0.0     0.0
 310. *   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     0.0     0.1     0.0     0.0     0.0
 315. *   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     0.0     0.1     0.0     0.0     0.0
 320. *   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     0.0     0.0     0.0     0.0     0.0
 325. *   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     0.0     0.0     0.0     0.0     0.0
 330. *   0.1    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     0.0     0.0     0.0     0.0     0.0
 335. *   0.1    0.0     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
 340. *   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    0.0     0.0     0.0     0.0     0.0     0.0
 345. *   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    0.0     0.0     0.0     0.0     0.0     0.0
 350. *   0.1    0.0     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
 355. *   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
 360. *   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  *   0.1    0.1     0.1     0.1     0.0     0.2     0.3     0.2     0.2     0.2     0.2     0.2
0.1   0.1    0.2     0.1     0.1     0.1     0.2     0.1
 DEGR. *  330    340     335     335      0      50      80      70      70      75      80      85
0     0     55      55      20      20      25      40

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                         PAGE  8
     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25                        RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, SOU

       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.-360.

  WIND  * CONCENTRATION
  ANGLE *        (PPM)
  (DEGR)* REC41 REC42 REC43 REC44 REC45 REC46 REC47 REC48 REC49 REC50 REC51 REC52
REC53 REC54 REC55 REC56 REC57 REC58 REC59 REC60

 ------*------------------------------------------------------------------------
--------------------------------------------
    0.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.1   0.0   0.0   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   0.0   0.0   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   0.1   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
   20.  *   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
   25.  *   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
   30.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
   35.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
   55.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
   65.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
   75.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
   85.  *   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   0.1
   90.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.1   0.1   0.1   0.1   0.0
 0.1   0.1   0.1   0.0   0.0   0.0   0.0   0.1
   95.  *   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   0.0   0.0   0.0   0.0   0.2
  100.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.1   0.2   0.2   0.2   0.1
```

```
 0.1   0.1   0.1   0.0   0.0   0.0   0.0   0.2
 105.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.2   0.2   0.2   0.1   0.1
 0.1   0.1   0.1   0.1   0.0   0.0   0.0   0.2
 110.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.2   0.2   0.1   0.1   0.1
 0.1   0.1   0.0   0.1   0.0   0.0   0.0   0.2
 115.  *   0.0   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   0.0   0.1   0.0   0.0   0.0   0.2
 120.  *   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   0.0   0.1   0.1   0.0   0.0   0.2
 125.  *   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   0.1   0.1   0.0   0.0   0.2
 130.  *   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   0.0   0.0   0.1   0.1   0.0   0.0   0.2
 135.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 140.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 145.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 150.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 155.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 160.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 165.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 170.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 175.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 180.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 185.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 190.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 195.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 200.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 205.  *   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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
```
⬆

      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25   RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, SOU

  WIND ANGLE RANGE: 0.-360.

```
 WIND  * CONCENTRATION
 ANGLE *       (PPM)
 (DEGR)* REC41 REC42 REC43 REC44 REC45 REC46 REC47 REC48 REC49 REC50 REC51 REC52
REC53 REC54 REC55 REC56 REC57 REC58 REC59 REC60

------*-------------------------------------------------------------------------
----------------------------------------------
 210.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 215.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 220.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 225.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 230.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 235.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 240.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.2
 245.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 250.  *    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   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 255.  *    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   0.0   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   0.1   0.1   0.1   0.1   0.1   0.0
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 265.  *    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   0.1
 270.  *    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   0.1
 275.  *    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0
 285.  *    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0
 295.  *    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0
 305.  *    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0
 315.  *    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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    0.0    0.0    0.0
 325.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0
 335.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0
 345.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0
0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 355.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 360.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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   *   0.0    0.0    0.0    0.0    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    0.0    0.0    0.2
 DEGR. *   0      0      0      0     10      5    100    105    100     95    100     95
90     90     90    105    120      0      0     95

 THE HIGHEST CONCENTRATION OF    0.30 PPM OCCURRED AT RECEPTOR REC8 .
```

      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22   RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, NOR

      DATE : 7/ 7/20
      TIME : 8:59:46

      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 = 175. 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 (FT)   *   LENGTH
BRG TYPE   VPH   EF   H   W   V/C QUEUE
                             *   X1   Y1   X2   Y2   *   (FT)
(DEG)   (G/MI) (FT) (FT)   (VEH)

----------------------*--*------------------
----
     1. LINK1 WASH AVE EXT *   0.0   0.0   0.0   1200.0 *   1200.
360. AG 3260.   2.1   4.0 56.0
     2. LINK2 WASH AVE EXT *   0.0   0.0   0.0   -1200.0 *   1200.
180. AG 3760.   2.1   4.0 56.0
     3. LINK3 SPRINGSTN RD *   0.0   0.0   1200.0   0.0 *   1200.
90. AG 1185.   0.3   4.0 56.0
     4. LINK4 SPRINGSTN RD W*   0.0   0.0   -1200.0   0.0 *   1200.
270. AG   419.   0.0   4.0 40.0
     5. LINK5 SPRINGSTN RD *   -90.0   -20.0   -139.0   -20.0 *   49.
270. AG   3. 100.0   0.0 20.0 0.19   2.5
     6. LINK6 SPRINGSTN RD *   72.0   24.0   112.3   24.0 *   40.
90. AG   0. 100.0   0.0 36.0 0.16   2.0
     7. LINK7 WASH AVE EXT *   26.0   -52.0   26.0   -404.4 *   352.
180. AG   6. 100.0   0.0 36.0 0.81 17.9
     8. LINK8 WASH AVE EXT *   -30.0   60.0   -30.0   357.1 *   297.
360. AG   8. 100.0   0.0 36.0 0.69 15.1
♠
                           PAGE 2
      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22   RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, NOR

      DATE : 7/ 7/20
      TIME : 8:59:46

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      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)

-----------------------*------------------------------------------------------------
---------------------
      5. LINK5 SPRINGSTN RD  *    212      37       5.0        484        1600
 2.76      2        3
      6. LINK6 SPRINGSTN RD  *    212      37       5.0        599        1600
 0.25      2        3
      7. LINK7 WASH AVE EXT  *    212     101       5.0       1914        1600
 1.55      2        3
      8. LINK8 WASH AVE EXT  *    212     101       5.0       1615        1600
 2.18      2        3

      RECEPTOR LOCATIONS
      ------------------
                            *            COORDINATES (FT)          *
         RECEPTOR           *     X           Y           Z        *
      -----------------------*---------------------------------------*
      1. RECP A MCDONALDS    *    190.0       70.0        6.0      *
      2. RECP B MALL         *    666.0       37.0        6.0      *
      3. RECP C MCDONALDS    *    144.0      125.0        6.0      *
      4. RECP D CROSS G PLA  *    144.0      331.0        6.0      *
      5. RECP E MARILLAC     *    320.0     1500.0        6.0      *
      6. RECP F ALBANY PD    *    158.0     1882.0        6.0      *
      7. RECP G J FEDERATION *   -180.0     1900.0        6.0      *
      8. RECP H KIDNEY CARE  *   -270.0     1629.0        6.0      *
      9. RECP I DIALYSIS CLIN *  -266.0    -1318.0        6.0      *
     10. RECP J NURSING HOME *   -543.0     1113.0        6.0      *
     11. RECP K SENIOR CARE  *   -204.0      848.0        6.0      *
     12. RECP L HOUSE 8 RR   *   -187.0      553.0        6.0      *
     13. RECP M HOUSE 12 RR  *   -240.0      442.0        6.0      *
     14. RECP N HOUSE 5A RR  *   -267.0      375.0        6.0      *
     15. RECP O HOUSE 22 RR  *   -374.0      221.0        6.0      *
     16. RECP P HOUSE 28 RR  *   -421.0       48.0        6.0      *
     17. RECP Q HOUSE 27 RR  *   -622.0      139.0        6.0      *
     18. RECP R HOUSE RR     *   -680.0      159.0        6.0      *
     19. RECP S HOUSE 39 RR  *   -745.0       70.0        6.0      *
     20. RECP T HOUSING A    *   -936.0       79.0        6.0      *
     21. RECP U HOUSING B    *    986.0      180.0        6.0      *
     22. RECP V HOUSING C    *  -1038.0      180.0        6.0      *
     23. RECP W CHURCH       *  -1200.0      132.0        6.0      *
     24. RECP X HOUSE 67 RR  *  -1431.0      118.0        6.0      *
     25. RECP Y HOUSE 38 RR  *   -729.0      -46.0        6.0      *
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    26. RECP Z HOUSE RR        *      -984.0      -79.0       6.0    *
    27. RECP 1 HOUSE 54 RR     *     -1126.0     -117.0       6.0    *
    28. RECP 2 HOUSE 68 RR     *     -1442.0     -237.0       6.0    *
    29. RECP 3 ATRIA CG        *      -317.0     -198.0       6.0    *
    30. RECP 4 ATRIA CG        *      -317.0     -450.0       6.0    *
    31. RECP 5 130 WA EXT      *      -261.0     -832.0       6.0    *
    32. RECP 6 RESIDENCE INN   *      -314.0    -1152.0       6.0    *
    33. RECP 7 CG COMMONS      *       646.0      -49.0       6.0    *
    34. RECP 8 CG COMMONS      *       646.0     -254.0       6.0    *
    35. RECP 9 CG COMMONS      *       450.0     -598.0       6.0    *
    36. RECP 10 CG COMMONS     *       593.0     -998.0       6.0    *
    37. RECP 11 TRUCK DEALER   *       605.0     1407.0       6.0    *
♠
                            PAGE  3
      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22                    RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, NOR

           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.-360.

  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    0.0    0.0    0.0    0.0    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
   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
   15.  *    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
   20.  *    0.0    0.0    0.0    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    0.0
   25.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.1
 0.1    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    0.0    0.1    0.0    0.0    0.1
 0.1    0.1    0.0    0.0    0.0    0.0    0.0    0.0
   35.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1    0.0    0.0    0.1
 0.1    0.1    0.0    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    0.0    0.1    0.0    0.1    0.1
0.1   0.1    0.0    0.0    0.0    0.0    0.0    0.0
  45.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.1    0.0    0.1    0.1
0.1   0.1    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    0.0    0.0    0.1    0.0    0.1    0.1
0.1   0.1    0.0    0.0    0.0    0.0    0.0    0.0
  55.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
  60.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
  65.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
  70.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    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
  75.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
  80.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    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
  85.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
  90.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    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
  95.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
 100.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    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
 105.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
 110.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    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
 115.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
 120.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    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
 125.  *   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    0.0    0.0    0.0    0.0    0.0    0.0
 130.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    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
 135.  *   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    0.0    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    0.0    0.1    0.1
0.1   0.0    0.1    0.0    0.0    0.0    0.0    0.0
 145.  *   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    0.1    0.0    0.0    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    0.0    0.1    0.1
0.0   0.0    0.1    0.0    0.0    0.0    0.0    0.0
 155.  *   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   0.1    0.1    0.0    0.0    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    0.0    0.1    0.0
0.1   0.1    0.0    0.0    0.0    0.0    0.0    0.0
```

```
 165.  *   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    0.0    0.0    0.0    0.0    0.0
 170.  *   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
 175.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 185.  *   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
 190.  *   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
 195.  *   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
 200.  *   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
 205.  *   0.1    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
♠
                        PAGE  4
     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22                    RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, NOR

 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
 REC21 REC22 REC23 REC24 REC25 REC26 REC27 REC28 REC29 REC30 REC31 REC32 REC33 REC34
REC35 REC36 REC37

 ------*-------------------------------------------------------------------------
------------------------------------------------

 ------*-------------------------------------------------------------------------
-------------------------
 210.  *   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
 215.  *   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
 220.  *   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
 225.  *   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
 230.  *   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    0.0    0.0
 235.  *   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
 240.  *   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
 245.  *   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
 250.  *   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
 255.  *   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
 260.  *   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
 265.  *   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
 270.  *   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
 275.  *   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
 280.  *   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
 285.  *   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
 290.  *   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
 295.  *   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
 300.  *   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
 305.  *   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
 310.  *   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
 315.  *   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
 320.  *   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
 325.  *   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
 330.  *   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
 335.  *   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
 340.  *   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
 345.  *   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
 350.  *   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
 355.  *   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    0.0    0.0
 360.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0

 ------*-------------------------------------------------------------------
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```

```
 MAX    *   0.1    0.0    0.1    0.2    0.1    0.0    0.0    0.0    0.1    0.0    0.1    0.1
0.1    0.1    0.1    0.0    0.0    0.0    0.0    0.0
 DEGR. *   190     0    185    205    205     0      0      0     15     0     40     20
25     30    140     0      0      0      0      0
```

♠
      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22   RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, NOR

         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.-360.

 WIND * CONCENTRATION
 ANGLE *   (PPM)
 (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    0.0
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
  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
  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
  20.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0
  25.  *   0.0    0.0    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
  30.  *   0.0    0.0    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
  35.  *   0.0    0.0    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
  40.  *   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
  45.  *   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
  50.  *   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    0.0    0.0
  55.  *   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    0.0    0.0
  60.  *    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    0.0    0.0
  65.  *    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    0.0    0.0
  70.  *    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    0.0    0.0
  75.  *    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    0.0    0.0
  80.  *    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    0.0    0.0    0.0
  85.  *    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    0.0    0.0    0.0
  90.  *    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    0.0    0.0    0.0
  95.  *    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    0.0    0.0    0.0
 100.  *    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    0.0    0.0    0.0
 105.  *    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    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    0.1    0.0
 0.0    0.0    0.0    0.0    0.0
 115.  *    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    0.0    0.0    0.0
 120.  *    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    0.0    0.0    0.0
 125.  *    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    0.0    0.0    0.0
 130.  *    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    0.0    0.0    0.0
 135.  *    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    0.0    0.0    0.0
 140.  *    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
 145.  *    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
 150.  *    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
 155.  *    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
 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
 165.  *    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 175.  *    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
```

```
 0.0   0.0   0.0   0.0   0.0
 185.  *   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0
 195.  *   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0
 205.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0
```

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PAGE 6

      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.22   RUN: RAPP
ROAD/COSTCO PM PEAK 2022 BUILD, NOR

  WIND ANGLE RANGE: 0.-360.

  WIND * CONCENTRATION
  ANGLE *   (PPM)
  (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27 REC28 REC29 REC30 REC31 REC32
REC33 REC34 REC35 REC36 REC37

```
 ------*-----------------------------------------------------------------------------
 --------------------------
 210.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0
 215.  *   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0
 225.  *   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0
 235.  *   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0
 245.  *   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0
 255.  *   0.0   0.0   0.0   0.0   0.0   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
 265.  *   0.0   0.0   0.0   0.0   0.0   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
 275.  *   0.0    0.0    0.0    0.0    0.0    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
 285.  *   0.0    0.0    0.0    0.0    0.0    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
 295.  *   0.0    0.0    0.0    0.0    0.0    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
 305.  *   0.0    0.0    0.0    0.0    0.0    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
 315.  *   0.0    0.0    0.0    0.0    0.0    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
 325.  *   0.0    0.0    0.0    0.0    0.0    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
 335.  *   0.0    0.0    0.0    0.0    0.0    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
 345.  *   0.0    0.0    0.0    0.0    0.0    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    0.0
 0.0    0.0    0.0    0.0    0.0
 355.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 360.  *   0.0    0.0    0.0    0.0    0.0    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   *   0.0    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    0.0    0.0
 DEGR. *    0      0      0      0      0      0      0      0     25     50     25     25
   0      0      0      0      0

   THE HIGHEST CONCENTRATION OF    0.20 PPM OCCURRED AT RECEPTOR REC4 .
```

     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25   RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, NOR

     DATE : 7/ 7/20
     TIME : 9: 0:18

     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 = 175. 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 (FT)   *   LENGTH
BRG TYPE   VPH   EF   H   W   V/C QUEUE
                           *   X1   Y1   X2   Y2   *   (FT)
(DEG)   (G/MI) (FT) (FT)   (VEH)

----------------------*---*------------------
----
     1. LINK1 WASH AVE EXT *   0.0   0.0   0.0   1200.0 *   1200.
360. AG   3326.   1.4   4.0 56.0
     2. LINK2 WASH AVE EXT *   0.0   0.0   0.0   -1200.0 *   1200.
180. AG   3833.   1.4   4.0 56.0
     3. LINK3 SPRINGSTN RD *   0.0   0.0   1200.0   0.0 *   1200.
90. AG   1203.   0.4   4.0 56.0
     4. LINK4 SPRINGSTN RD W*   0.0   0.0   -1200.0   0.0 *   1200.
270. AG   424.   0.9   4.0 40.0
     5. LINK5 SPRINGSTN RD *   -90.0   -20.0   -173.7   -20.0 *   84.
270. AG   4. 100.0   0.0 20.0 0.29   4.3
     6. LINK6 SPRINGSTN RD *   72.0   24.0   141.9   24.0 *   70.
90. AG   1. 100.0   0.0 36.0 0.25   3.6
     7. LINK7 WASH AVE EXT *   26.0   -52.0   26.0   -4506.3 *   4454.
180. AG   6. 100.0   0.0 36.0 2.57 226.3
     8. LINK8 WASH AVE EXT *   -30.0   60.0   -30.0   3424.6 *   3365.
360. AG   9. 100.0   0.0 36.0 2.17 170.9
♠
                              PAGE   2
     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25   RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, NOR

     DATE : 7/ 7/20
     TIME : 9: 0:18

```
     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)

 -----------------------*--------------------------------------------------------
 --------------------
     5. LINK5 SPRINGSTN RD  *   145      63       5.0        486       1600
 1.70     2        3
     6. LINK6 SPRINGSTN RD  *   145      63       5.0        609       1600
 0.21     2        3
     7. LINK7 WASH AVE EXT  *   145      115      5.0        1952      1600
 0.96     2        3
     8. LINK8 WASH AVE EXT  *   145      115      5.0        1646      1600
 1.35     2        3

     RECEPTOR LOCATIONS
     ------------------
                           *            COORDINATES (FT)           *
        RECEPTOR           *     X           Y           Z         *
     --------------------------*------------------------------------*
      1. RECP A MCDONALDS   *      190.0        70.0       6.0    *
      2. RECP B MALL        *      666.0        37.0       6.0    *
      3. RECP C MCDONALDS   *      144.0       125.0       6.0    *
      4. RECP D CROSS G PLA *      144.0       331.0       6.0    *
      5. RECP E MARILLAC    *      320.0      1500.0       6.0    *
      6. RECP F ALBANY PD   *      158.0      1882.0       6.0    *
      7. RECP G J FEDERATION *    -180.0      1900.0       6.0    *
      8. RECP H KIDNEY CARE *     -270.0      1629.0       6.0    *
      9. RECP I DIALYSIS CLIN *  -266.0     -1318.0       6.0    *
     10. RECP J NURSING HOME *    -543.0      1113.0       6.0    *
     11. RECP K SENIOR CARE *     -204.0       848.0       6.0    *
     12. RECP L HOUSE 8 RR  *     -187.0       553.0       6.0    *
     13. RECP M HOUSE 12 RR *     -240.0       442.0       6.0    *
     14. RECP N HOUSE 5A RR *     -267.0       375.0       6.0    *
     15. RECP O HOUSE 22 RR *     -374.0       221.0       6.0    *
     16. RECP P HOUSE 28 RR *     -421.0        48.0       6.0    *
     17. RECP Q HOUSE 27 RR *     -622.0       139.0       6.0    *
     18. RECP R HOUSE RR    *     -680.0       159.0       6.0    *
     19. RECP S HOUSE 39 RR *     -745.0        70.0       6.0    *
     20. RECP T HOUSING A   *     -936.0        79.0       6.0    *
     21. RECP U HOUSING B   *      986.0       180.0       6.0    *
     22. RECP V HOUSING C   *    -1038.0       180.0       6.0    *
     23. RECP W CHURCH      *    -1200.0       132.0       6.0    *
     24. RECP X HOUSE 67 RR *    -1431.0       118.0       6.0    *
     25. RECP Y HOUSE 38 RR *     -729.0       -46.0       6.0    *
```

```
   26. RECP Z HOUSE RR        *        -984.0        -79.0         6.0   *
   27. RECP 1 HOUSE 54 RR      *       -1126.0       -117.0         6.0   *
   28. RECP 2 HOUSE 68 RR      *       -1442.0       -237.0         6.0   *
   29. RECP 3 ATRIA CG         *        -317.0       -198.0         6.0   *
   30. RECP 4 ATRIA CG         *        -317.0       -450.0         6.0   *
   31. RECP 5 130 WA EXT       *        -261.0       -832.0         6.0   *
   32. RECP 6 RESIDENCE INN *           -314.0      -1152.0         6.0   *
   33. RECP 7 CG COMMONS       *         646.0        -49.0         6.0   *
   34. RECP 8 CG COMMONS       *         646.0       -254.0         6.0   *
   35. RECP 9 CG COMMONS       *         450.0       -598.0         6.0   *
   36. RECP 10 CG COMMONS      *         593.0       -998.0         6.0   *
   37. RECP 11 TRUCK DEALER *            605.0       1407.0         6.0   *
♠
```

     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25   RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, NOR

         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.-360.

  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    0.0    0.0    0.0    0.0    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
  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
  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
  20.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
  25.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
  35.  *   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
```

```
  40.  *   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
  45.  *   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
  50.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  55.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  65.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  75.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  85.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  95.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 105.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 115.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 125.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 135.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   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
 145.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 155.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
```

```
 165.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 175.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0   0.0    0.0    0.0    0.0    0.0    0.0    0.0
 185.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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.  *   0.0    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
 195.  *   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
 200.  *   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
 205.  *   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
♠
                           PAGE  4
     JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25                    RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, NOR

 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
 REC21 REC22 REC23 REC24 REC25 REC26 REC27 REC28 REC29 REC30 REC31 REC32 REC33 REC34
REC35 REC36 REC37

 ------*----------------------------------------------------------------------------
----------------------------------------------

 ------*----------------------------------------------------------------------------
-------------------------
 210.  *   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
 215.  *   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
 220.  *   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
 225.  *   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    0.0    0.0
 230.  *   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    0.0    0.0
 235.  *   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    0.0
 240.  *   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    0.0
 245.  *   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    0.0
 250.   *    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
 255.   *    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
 260.   *    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
 265.   *    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
 270.   *    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
 275.   *    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
 280.   *    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
 285.   *    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
 290.   *    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
 295.   *    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
 300.   *    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
 305.   *    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
 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
 315.   *    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.   *    0.1    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
 325.   *    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
 330.   *    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
 335.   *    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
 340.   *    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
 345.   *    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
 350.   *    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    0.0    0.0
 355.   *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 360.   *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    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    0.0    0.1    0.1    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
 DEGR. *    195      0    190    190      0      0      0      0      0      0      0     35
0      0      0      0      0      0      0      0


♠
                                PAGE  5
      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25                        RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, NOR


          MODEL RESULTS
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          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.-360.


 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (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    0.0
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
  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
  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
  20.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0
  25.  *    0.0    0.0    0.0    0.0    0.0    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.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0
  35.  *    0.0    0.0    0.0    0.0    0.0    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.  *    0.0    0.0    0.0    0.0    0.0    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.  *    0.0    0.0    0.0    0.0    0.0    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.  *    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0
  55.  *    0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
  65.  *   0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
  75.  *   0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
  85.  *   0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
  95.  *   0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 105.  *   0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 115.  *   0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 125.  *   0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 135.  *   0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 145.  *   0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 155.  *   0.0    0.0    0.0    0.0    0.0    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.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 165.  *   0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 0.0    0.0    0.0    0.0    0.0
 175.  *   0.0    0.0    0.0    0.0    0.0    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    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
```

```
  0.0   0.0   0.0   0.0   0.0
 185.  *   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  0.0   0.0   0.0   0.0   0.0
 195.  *   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  0.0   0.0   0.0   0.0   0.0
 205.  *   0.0   0.0   0.0   0.0   0.0   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
      JOB: RAPP ROAD/COSTCO CAL3QHC ANAL.25                        RUN: RAPP
ROAD/COSTCO PM PEAK 2025 BUILD, NOR

  WIND ANGLE RANGE:   0.-360.

  WIND  * CONCENTRATION
  ANGLE *      (PPM)
 (DEGR)* REC21 REC22 REC23 REC24 REC25 REC26 REC27 REC28 REC29 REC30 REC31 REC32
REC33 REC34 REC35 REC36 REC37

 ------*-----------------------------------------------------------------------
--------------------------
 210.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  0.0   0.0   0.0   0.0   0.0
 215.  *   0.0   0.0   0.0   0.0   0.0   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.  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  0.0   0.0   0.0   0.0   0.0
 225.  *   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  0.0   0.0   0.0   0.0   0.0
 235.  *   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  0.0   0.0   0.0   0.0   0.0
 245.  *   0.0   0.0   0.0   0.0   0.0   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   0.0   0.0   0.0   0.0   0.0   0.0   0.0
  0.0   0.0   0.0   0.0   0.0
 255.  *   0.0   0.0   0.0   0.0   0.0   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
 265.  *   0.0   0.0   0.0   0.0   0.0   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
 275.  *   0.0    0.0    0.0    0.0    0.0    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
 285.  *   0.0    0.0    0.0    0.0    0.0    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
 295.  *   0.0    0.0    0.0    0.0    0.0    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
 305.  *   0.0    0.0    0.0    0.0    0.0    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
 315.  *   0.0    0.0    0.0    0.0    0.0    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
 325.  *   0.0    0.0    0.0    0.0    0.0    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
 335.  *   0.0    0.0    0.0    0.0    0.0    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
 345.  *   0.0    0.0    0.0    0.0    0.0    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    0.0
0.0    0.0    0.0    0.0    0.0
 355.  *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0
 360.  *   0.0    0.0    0.0    0.0    0.0    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   *   0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
0.0    0.0    0.0    0.0    0.0
 DEGR. *    0      0      0      0      0      0      0      0      0      0      0      0
0      0      0      0      0

  THE HIGHEST CONCENTRATION OF    0.10 PPM OCCURRED AT RECEPTOR REC12.
```

AIR QUALITY APPENDIX C

MOVES2014b MODELING OUPUTS

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-3 15:25:48
0	MOVES Output Database	PYRCRG253NFOUT
0	Emission Process	All
1	Run Date/Time	2020-07-03 15:23:09.0
1	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG253NFIN_07_03_2020.mrs
1	Run Spec File Date/Time	2020-07-03 15:23:07.0
1	Run Spec Description	PYRCRG WESTERN NORTH APPROACH FREE 2022 PM
1	Mass Units	g
1	Energy Units	MMBTU
1	Distance Units	mi
1	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	1109

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

PYRCRG10-15 WESTERN AVE N F 2022

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-3 15:17:39
0	MOVES Output Database	PYRCRG253NQOUT
0	Emission Process	All
1	Run Date/Time	2020-07-03 15:15:54.0
1	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG253NQIN_07_03_2020.mrs
1	Run Spec File Date/Time	2020-07-03 15:15:51.0
1	Run Spec Description	PYRCRG WESTERN NORTH APPROACH QUEUE 2022 PM
1	Mass Units	g
1	Energy Units	MMBTU
1	Distance Units	mi
1	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	1161

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

PYRCRG10-15 WESTERN AVE N Q 2022

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-3 16:9:16
0	MOVES Output Database	PYRCRG253SFOUT
0	Emission Process	All
3	Run Date/Time	2020-07-03 16:07:06.0
3	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG253SFIN_07_03_2020.mrs
3	Run Spec File Date/Time	2020-07-03 16:07:03.0
3	Run Spec Description	PYRCRG WESTERN SOUTH APPROACH FREE 2022 PM
3	Mass Units	g
3	Energy Units	MMBTU
3	Distance Units	mi
3	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	820

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

PYRCRG10-15 WESTERN AVE S F 2022

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-3 16:22:50
0	MOVES Output Database	pyrcrg253sqout
0	Emission Process	All
1	Run Date/Time	2020-07-03 16:17:20.0
1	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG253SQIN_07_03_2020.mrs
1	Run Spec File Date/Time	2020-07-03 16:17:18.0
1	Run Spec Description	PYRCRG WESTERN SOUTH APPROACH QUEUE 2022 PM
1	Mass Units	g
1	Energy Units	MMBTU
1	Distance Units	mi
1	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	571

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

PYRCRG10-15 WESTERN AVE S Q 2022

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-3 12:40:19
0	MOVES Output Database	PYRCRG253EFOUT
0	Emission Process	All
1	Run Date/Time	2020-07-03 12:37:27.0
1	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG253FQIN_07_03_2020.mrs
1	Run Spec File Date/Time	2020-07-03 12:37:25.0
1	Run Spec Description	PYRCRG WESTERN EAST APPROACH FREE 2022 PM
1	Mass Units	g
1	Energy Units	MMBTU
1	Distance Units	mi
1	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	6009

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

PYRCRG10-15 WESTERN AVE E FREE 2022

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-3 12:25:19
0	MOVES Output Database	PYRCRG253EQOUT
0	Emission Process	All
3	Run Date/Time	2020-07-03 12:23:52.0
3	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG253EQIN_07_03_2020.mrs
3	Run Spec File Date/Time	2020-07-03 12:23:50.0
3	Run Spec Description	PYRCRG WESTERN EAST APPROACH QUEUE 2022 PM
3	Mass Units	g
3	Energy Units	MMBTU
3	Distance Units	mi
3	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	3233

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run   Header Item   Header Item Value

0   Report Description   Summary Report

0   Report Date/Time   2020-7-3 13:51:17

0   MOVES Output Database   PYRCRG253WFOUT

0   Emission Process   All

1   Run Date/Time 2020-07-03 13:47:06.0

1   Run Specification   C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG253WFIN_07_03_2020.mrs

1   Run Spec File Date/Time   2020-07-03 13:47:04.0

1   Run Spec Description   PYRCRG WESTERN WEST APPROACH FREE 2022 PM

1   Mass Units   g

1   Energy Units   MMBTU

1   Distance Units mi

1   Time Units   hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	6374

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

PYRCRG10-15 WESTERN AVE W FREE 2022

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-3 13:2:17
0	MOVES Output Database	PYRCRG253WQOUT
0	Emission Process	All
1	Run Date/Time	2020-07-03 12:59:51.0
1	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG253WQIN_07_03_2020.mrs
1	Run Spec File Date/Time	2020-07-03 12:59:48.0
1	Run Spec Description	PYRCRG WESTERN WEST APPROACH QUEUE 2022 PM
1	Mass Units	g
1	Energy Units	MMBTU
1	Distance Units	mi
1	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	2359

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

PYRCRG10-15 WESTERN AVE W Q 2022

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 14:39:32
0	MOVES Output Database	PYRCRG53NOUT
0	Emission Process	All
5	Run Date/Time	2020-07-04 14:37:51.0
5	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG53NIN_07_04_2020.mrs
5	Run Spec File Date/Time	2020-07-04 14:37:49.0
5	Run Spec Description	PYRCRG WESTERN NORTH APPROACH FREE 2025 PM
5	Mass Units	g
5	Energy Units	MMBTU
5	Distance Units	mi
5	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	446

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 14:50:49
0	MOVES Output Database	PYRCRG53NQOUT
0	Emission Process	All
4	Run Date/Time	2020-07-04 14:48:18.0
4	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG53NQIN_07_04_2020.mrs
4	Run Spec File Date/Time	2020-07-04 14:48:15.0
4	Run Spec Description	PYRCRG WESTERN NORTH APPROACH QUEUE 2025 PM
4	Mass Units	g
4	Energy Units	MMBTU
4	Distance Units	mi
4	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	286

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 15:5:33
0	MOVES Output Database	PYRCRG53SOUT
0	Emission Process	All
3	Run Date/Time	2020-07-04 15:02:23.0
3	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG53SIN_07_04_2020.mrs
3	Run Spec File Date/Time	2020-07-04 15:02:21.0
3	Run Spec Description	PYRCRG WESTERN SOUTH APPROACH FREE 2025 PM
3	Mass Units	g
3	Energy Units	MMBTU
3	Distance Units	mi
3	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	347

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 15:13:55
0	MOVES Output Database	PYRCRG53SQOUT
0	Emission Process	All
4	Run Date/Time	2020-07-04 15:12:45.0
4	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG53SQIN_07_04_2020.mrs
4	Run Spec File Date/Time	2020-07-04 15:12:43.0
4	Run Spec Description	PYRCRG WESTERN SOUTH APPROACH QUEUE 2025 PM
4	Mass Units	g
4	Energy Units	MMBTU
4	Distance Units	mi
4	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	139

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 12:51:52
0	MOVES Output Database	PYRCRG53EOUT
0	Emission Process	All
3	Run Date/Time	2020-07-04 12:50:31.0
3	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG53INF_07_04_2020.mrs
3	Run Spec File Date/Time	2020-07-04 12:50:28.0
3	Run Spec Description	PYRCRG WESTERN EAST APPROACH FREE 2025 PM
3	Mass Units	g
3	Energy Units	MMBTU
3	Distance Units	mi
3	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	4313

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 13:3:51
0	MOVES Output Database	PYRCRG03QOUT
0	Emission Process	All
24	Run Date/Time	2020-07-04 13:02:20.0
24	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG53QIN_07_04_2020.mrs
24	Run Spec File Date/Time	2020-07-04 13:02:18.0
24	Run Spec Description	PYRCRG WESTERN EASTERN QUEUE 2025 PM
24	Mass Units	g
24	Energy Units	MMBTU
24	Distance Units	mi
24	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	2062

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 13:52:3
0	MOVES Output Database	PYRCRG53WOUT
0	Emission Process	All
3	Run Date/Time	2020-07-04 13:48:53.0
3	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG53WFIN_07_04_2020.mrs
3	Run Spec File Date/Time	2020-07-04 13:48:51.0
3	Run Spec Description	PYRCRG WESTERN WEST APPROACH FREE 2025 PM
3	Mass Units	g
3	Energy Units	MMBTU
3	Distance Units	mi
3	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	4846

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 14:2:59
0	MOVES Output Database	PYRCRG53QWOUT
0	Emission Process	All
5	Run Date/Time	2020-07-04 14:01:41.0
5	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG53WQIN_07_04_2020.mrs
5	Run Spec File Date/Time	2020-07-04 14:01:39.0
5	Run Spec Description	PYRCRG WESTERN WESTERN QUEUE 2025 PM
5	Mass Units	g
5	Energy Units	MMBTU
5	Distance Units	mi
5	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	1547

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 8:35:20
0	MOVES Output Database	pyrcrg262OUTNQ_2022
0	Emission Process	All
3	Run Date/Time	2020-07-04 08:33:41.0
3	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG211INN_07_04_20_2022.mrs
3	Run Spec File Date/Time	2020-07-04 08:33:39.0
3	Run Spec Description	WASHINGTON AVE- SPRINGSTEEN NORTH FREE 2022
3	Mass Units	g
3	Energy Units	MMBTU
3	Distance Units	mi
3	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	6809

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run   Header Item   Header Item Value

0   Report Description   Summary Report

0   Report Date/Time   2020-7-4 8:23:59

0   MOVES Output Database   pyrcrg262OUTNQ_2022

0   Emission Process   All

1   Run Date/Time 2020-07-04 08:22:41.0

1   Run Specification   C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG212INWQN_07_04_20_2022.mrs

1   Run Spec File Date/Time   2020-07-04 08:22:38.0

1   Run Spec Description   WASHINGTON AVE- SPRINGSTEEN NORTH QUEUE 2022

1   Mass Units   g

1   Energy Units   MMBTU

1   Distance Units mi

1   Time Units   hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	2976

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 8:1:39
0	MOVES Output Database	pyrcrg261SOUT_2022
0	Emission Process	All
1	Run Date/Time	2020-07-04 07:53:51.0
1	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG211INS_07_04_20_2022.mrs
1	Run Spec File Date/Time	2020-07-04 07:53:48.0
1	Run Spec Description	WASHINGTON AVE EXT SOUTH FREE 2022
1	Mass Units	g
1	Energy Units	MMBTU
1	Distance Units	mi
1	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	7851

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run　　Header Item　　Header Item Value

0　　Report Description　　Summary Report

0　　Report Date/Time　　2020-7-4 8:15:13

0　　MOVES Output Database　　pyrcrg262OUTSQ_2022

0　　Emission Process　　All

1　　Run Date/Time　2020-07-04 08:12:20.0

1　　Run Specification　　C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG212INWSQ_07_04_20_2022.mrs

1　　Run Spec File Date/Time　　2020-07-04 08:12:18.0

1　　Run Spec Description　　WASHINGTON AVE- SPRINGSTEEN SOUTH QUEUE 2022

1　　Mass Units　　g

1　　Energy Units　　MMBTU

1　　Distance Units　mi

1　　Time Units　　hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	3524

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 7:14:30
0	MOVES Output Database	pyrcrg261NOUT_2022
0	Emission Process	All
1	Run Date/Time 2020-07-04 07:03:02.0	
1	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG211INE_07_04_20_2022.mrs
1	Run Spec File Date/Time	2020-07-04 07:03:00.0
1	Run Spec Description	WASHINGTON AVE EXT EAST (CROSSGATES COMMONS) FREE 2022
1	Mass Units	g
1	Energy Units	MMBTU
1	Distance Units mi	
1	Time Units	hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	327

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run   Header Item   Header Item Value

0   Report Description   Summary Report

0   Report Date/Time   2020-7-4 6:41:30

0   MOVES Output Database   pyrcrg262OUTEQ_2022

0   Emission Process   All

1   Run Date/Time 2020-07-04 06:40:08.0

1   Run Specification   C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG212INEQ_07_04_20_2022.mrs

1   Run Spec File Date/Time   2020-07-04 06:40:05.0

1   Run Spec Description   WASHINGTON AVE- SPRINGSTEEN (CROSSGATES COMMONS) EAST QUEUE 2022

1   Mass Units   g

1   Energy Units   MMBTU

1   Distance Units mi

1   Time Units   hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	508

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	508

Run   Header Item   Header Item Value

0   Report Description   Summary Report

0   Report Date/Time   2020-7-4 7:43:47

0   MOVES Output Database   pyrcrg261WOUT_2022

0   Emission Process   All

1   Run Date/Time 2020-07-04 07:42:27.0

1   Run Specification   C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-
15\SENARIOS\PYRCRG211INW_07_04_20_2022.mrs

1   Run Spec File Date/Time   2020-07-04 07:42:25.0

1   Run Spec Description   WASHINGTON AVE EXT WEST (CROSSGATES COMMONS) FREE 2022

1   Mass Units   g

1   Energy Units   MMBTU

1   Distance Units mi

1   Time Units   hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	127

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run   Header Item   Header Item Value

0   Report Description   Summary Report

0   Report Date/Time   2020-7-4 7:32:29

0   MOVES Output Database   pyrcrg262OUTWQ_2022

0   Emission Process   All

1   Run Date/Time 2020-07-04 07:31:19.0

1   Run Specification   C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG212INWQ_07_04_20_2022.mrs

1   Run Spec File Date/Time   2020-07-04 07:31:16.0

1   Run Spec Description   WASHINGTON AVE- SPRINGSTEEN (CROSSGATES COMMONS) WEST QUEUE 2022

1   Mass Units   g

1   Energy Units   MMBTU

1   Distance Units mi

1   Time Units   hour

Year	Month	Hour	State	County	CO
2022	1	18	36	36001	152

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 10:37:6
0	MOVES Output Database	pyrcrg61nout_2025
0	Emission Process	All
4	Run Date/Time	2020-07-04 10:35:59.0
4	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG11INN_07_04_20_2025.mrs
4	Run Spec File Date/Time	2020-07-04 10:35:57.0
4	Run Spec Description	WASHINGTON AVE EXT NORTH FREE 2025
4	Mass Units	g
4	Energy Units	MMBTU
4	Distance Units	mi
4	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	4737

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run   Header Item   Header Item Value

0   Report Description   Summary Report

0   Report Date/Time   2020-7-4 10:49:15

0   MOVES Output Database   pyrcrg62outnq_2025

0   Emission Process   All

5   Run Date/Time 2020-07-04 10:45:28.0

5   Run Specification   C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG12INSQ_07_04_20_2025.mrs

5   Run Spec File Date/Time   2020-07-04 10:45:26.0

5   Run Spec Description   WASHINGTON AVE- NORTH QUEUE 2025

5   Mass Units   g

5   Energy Units   MMBTU

5   Distance Units mi

5   Time Units   hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	1880

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 10:19:48
0	MOVES Output Database	pyrcrg61SOUT_2025
0	Emission Process	All
3	Run Date/Time	2020-07-04 10:18:54.0
3	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG11INS_07_04_20_2025.mrs
3	Run Spec File Date/Time	2020-07-04 10:18:52.0
3	Run Spec Description	WASHINGTON AVE EXT SOUTH FREE 2025
3	Mass Units	g
3	Energy Units	MMBTU
3	Distance Units	mi
3	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	5464

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 10:28:17
0	MOVES Output Database	pyrcrg62outsq_2025
0	Emission Process	All
6	Run Date/Time 2020-07-04 10:26:49.0	
6	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG12INSQ_07_04_20_2025.mrs
6	Run Spec File Date/Time	2020-07-04 10:26:47.0
6	Run Spec Description	WASHINGTON AVE- SOUTH QUEUE 2025
6	Mass Units	g
6	Energy Units	MMBTU
6	Distance Units mi	
6	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	2219

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 11:15:41
0	MOVES Output Database	pyrcrg61eout_2025
0	Emission Process	All
1	Run Date/Time	2020-07-04 11:12:43.0
1	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG11INE_07_04_20_2025.mrs
1	Run Spec File Date/Time	2020-07-04 11:12:40.0
1	Run Spec Description	WASHINGTON AVE EXT EAST FREE 2025
1	Mass Units	g
1	Energy Units	MMBTU
1	Distance Units	mi
1	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	540

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-6-27 16:49:31
0	MOVES Output Database	pyrcrg62OUTEQ_2025
0	Emission Process	All
2	Run Date/Time	2020-06-27 16:48:09.0
2	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG12INEQ_06_27_20_2025.mrs
2	Run Spec File Date/Time	2020-06-27 09:18:17.0
2	Run Spec Description	WASHINGTON AVE- SPRINGSTEEN EAST QUEUE 2025
2	Mass Units	g
2	Energy Units	MMBTU
2	Distance Units	mi
2	Time Units	hour

Month	Year	Hour	State	County	CO
1	2025	18	36	36001	654

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

PYRCRG10-15 Washington Ave East Queue 2025

Run	Header Item	Header Item Value
0	Report Description	Summary Report
0	Report Date/Time	2020-7-4 11:24:56
0	MOVES Output Database	pyrcrg61wout_2025
0	Emission Process	All
3	Run Date/Time	2020-07-04 11:23:42.0
3	Run Specification	C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG11INE_07_04_20_2025.mrs
3	Run Spec File Date/Time	2020-07-04 11:23:39.0
3	Run Spec Description	WASHINGTON AVE EXT WEST FREE 2025
3	Mass Units	g
3	Energy Units	MMBTU
3	Distance Units	mi
3	Time Units	hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	381

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County

Run   Header Item   Header Item Value

0   Report Description   Summary Report

0   Report Date/Time   2020-7-4 11:34:39

0   MOVES Output Database   pyrcrg62outwq_2025

0   Emission Process   All

3   Run Date/Time 2020-07-04 11:33:05.0

3   Run Specification   C:\BLaing backup X-Netfiles\MOVES2014b\PYRCRG10-15\SENARIOS\PYRCRG12INWQ_07_04_20_2025.mrs

3   Run Spec File Date/Time   2020-07-04 11:33:02.0

3   Run Spec Description   WASHINGTON AVE- WEST QUEUE 2025

3   Mass Units   g

3   Energy Units   MMBTU

3   Distance Units mi

3   Time Units   hour

Year	Month	Hour	State	County	CO
2025	1	18	36	36001	128

Category Field	Value	Description
stateID	36	NEW YORK
countyID	36001	Albany County