INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

THELAB PROJECT

BERKELEY, CALIFORNIA

LSA

March 2022

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Planning and Development Department
Land Use Planning Division

**NOTICE OF INTENT TO ADOPT AN
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR THELAB PROJECT**

Date: March 9, 2022
To: Public Agencies, Organizations and Interested Parties
From: City of Berkeley, Land Use Planning Division
Subject: **Notice of Intent to Adopt an Initial Study/Mitigated Negative Declaration**

Pursuant to the *State of California Public Resources Code and the Guidelines for Implementation of the California Environmental Quality Act*, as most recently amended, this is to advise that the City of Berkeley has prepared an Initial Study to evaluate the environmental effects of the project identified below:

Project Title: TheLAB Project

Applicant: W-SW WBLS West Owner IX, L.P. and W-SW WBLS East Owner IX, L.P., c/o Steelwave CDS, LLC, 999 Baker Way, Suite 200, San Mateo, CA 94404

Project Location: The approximately 3.02-acre Project site is made up of portions of two contiguous blocks (the East Block and the West Block) in the City of Berkeley, Alameda County. The Project site is bisected by Fourth Street and generally bordered by Allston Way to the north, Fifth Street to the east, Bancroft Way to the south, and the Union Pacific Railroad (UPRR) and Amtrak heavy rail corridor to the west.

The East Block consists of four existing one- to two-story buildings with addresses at 2212 and 2216 Fifth Street and 2213 and 2221 Fourth Street (Assessor's Parcel Numbers [APNs] 056-1958-00604, 056-1958-01401, and 056-1958-00400). The West Block consists of four separate parcels currently occupied by a surface parking lot and six single-story buildings with addresses at 701, 703, 705, 705A, and 747 Bancroft Way and 2220 Fourth Street (APNs 056-1957-00701, 056-1957-00301, 056-1957-00204, and 056-1957-00800).

Project Description: The Project sponsor is proposing to redevelop the East and West blocks to create a "life sciences" campus oriented toward Fourth Street, through a combination of new construction, increased open space, and enhancements to the public realm. The proposed Project would result in the demolition of all existing buildings on the site and construction of a new research and development (R&D) building and surface parking lot on the West Block (also referred to as 787 Bancroft Way) and an above-ground parking garage on the East Block (also referred to as 2213 Fourth Street), totaling approximately 283,810 gross square feet of building area and a total of 491 parking spaces.

Based upon the conclusions set forth in the Initial Study, the City of Berkeley proposes to adopt a Mitigated Negative Declaration. The project site is on a list of sites as described by Government Code 65962.5 (LUST Site, State Water Resources Control Board).

Public Review Period: A 30-day public review period will begin on March 9, 2022. Written comments must be mailed, submitted in person or via email to the contact person below no later than 5:00 p.m. April 7, 2022.

CEQA Project Status: An Initial Study-Mitigated Negative Declaration (IS-MND) has been prepared for this project pursuant to the provisions of CEQA. The IS-MND determined that the proposed project would have no impact and therefore a Mitigated Negative Declaration is proposed. The Draft IS/MND and all related analysis are available on the City's website at: https://www.cityofberkeley.info/Planning_and_Development/Zoning_Adjustment_Board/theLAB_Phase_II_and_Phase_III_-_2213_Fourth_and_787_Bancroft.aspx.

Contact Person: Ashley James, Senior Planner
Address: Land Use Planning Division, 1947 Center Street, 2nd Floor, Berkeley, CA 94704
Telephone: (510) 981-7458
E-mail: AJames@cityofberkeley.info

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

THELAB PROJECT

BERKELEY, CALIFORNIA

Submitted to:

City of Berkeley
Planning and Development Department
Land Use Planning Division
1947 Center Street, 2nd Floor
Berkeley, California 94704

Prepared by:

LSA
157 Park Place
Pt. Richmond, California 94801
510.236.6810

Project No. CBE1906.03

LSA

March 2022

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LIST OF ABBREVIATIONS AND ACRONYMS

AC Transit	Alameda-Contra Costa County Transit
ACCWP	Alameda County Clean Water Program
ACMs	asbestos-containing materials
ACTC	Alameda County Transit Authority
ACWMA	Alameda County Waste Management Authority
APN	Assessor's Parcel Number
ARMCO	Armco Drainage & Metal Products
ASCE	American Society of Civil Engineers
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
Bay Trail	San Francisco Bay Trail
Basin Plan	San Francisco Bay Basin Water Quality Control Plan
BMC	Berkeley Municipal Code
BMPs	best management practices
BORP	Bay Area Outreach and Recreation Program
BUSD	Berkeley Unified School District
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	City of Berkeley Climate Action Plan
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CGP	Construction General Permit
CGS	California Geological Survey
CH4	methane
City	City of Berkeley
Clean Air Plan	Bay Area Air Quality Management District 2017 Clean Air Plan
CNDDB	California Natural Diversity Data Base

CNEL	community noise equivalent level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO2 equivalents
COA	Conditions of Approval
CPUC	California Public Utilities Commission
CWA	Federal Clean Water Act
dB	decibels
dBA	A-weighted sound level
dbh	diameter at breast height
DIR	Department of Industrial Relations
DOSH	Division of Occupational Safety and Health
DRC	Design Review Committee
DTSC	Department of Toxic Substances Control
EBMUD	East Bay Municipal Utility District
EMA	Environmental Management Area
Emissions Plan	Construction Emissions Minimization Plan
ESA	Environmental Site Assessment
ESLs	Environmental Screening Levels
EV	electric vehicle
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GHG	greenhouse gas
GSA	groundwater sustainability agency
GSP	Groundwater Sustainability Plan
GWh	gigawatt-hours
GWP	global warming potential
HASP	Health and Safety Plan
HFCs	hydrofluorocarbons

HMBP	Hazardous Materials Business Plan
HP	horsepower
HRE	Historic Resource Evaluation
I-580	Interstate 580
I-80	Interstate 80
I/I	infiltration and inflow
ITE	Institute of Transportation Engineers
kWh	kilowatt-hours
L_{dn}	day-night average level
L_{eq}	equivalent continuous sound level
L_{max}	maximum noise level
LBP	lead-based paint
LEED	Leadership in Energy and Environmental Design
Lisjan Tribe	Confederated Villages of Lisjan
LOS	level of service
LUC	Land Use Covenant
LUST	leaking underground storage tank
MEI	maximally exposed individual
mgd	million gallons per day
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MRP	Municipal Regional Permit
MU-LI	Mixed Use-Light Industrial
MU-R	Mixed Use-Residential
MWWTP	Main Wastewater Treatment Plant
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NO_2	nitrogen dioxide
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NWIC	Northwest Information Center

OEHHA	Office of Environmental Health Hazard Assessment
OPR	State Office of Planning and Research
Orinda WTP	Orinda Water Treatment Plant
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyl
PCP	pentachlorophenol
PFCs	perfluorocarbons
PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
POTW	publicly owned treatment works
PV	photovoltaic
R&D	research and development
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
Regional Water Board	Regional Water Quality Control Board
RMP	Risk Management Plan
rms	root mean square
ROG	reactive organic gases
RRFB	rectangular rapid flashing beacon
SB	Senate Bill
SDS	Safety Data Sheets
SF_6	sulfur hexafluoride
SGMP	Soil and Groundwater Management Plan
SMARTS	Stormwater Multiple Application and Report Tracking System
SO_2	sulfur dioxide
SRA	State Responsibility Area
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant

TDM	transportation demand management
TIA	Transportation Impact Analysis
TMD	Toxics Management Division
TMDLs	Total Maximum Daily Loads
TPA	Transit Priority Area
µg/m^3	micrograms per cubic meter
UC Berkeley	University of California, Berkeley
UPRR	Union Pacific Railroad
USDOT	United States Department of Transportation
UST	underground storage tank
VDECS	Verified Diesel Emission Control Strategies
VMT	vehicle miles traveled
VMT Guidelines	City of Berkeley VMT Criteria and Thresholds Report
VOCs	volatile organic compounds
WDID	Waste Discharger Identification
WDRs	waste discharge requirements
WETA	Water Emergency Transportation Authority
WSMP	Water Supply Management Program
ZAB	Zoning Adjustments Board
Zoning Ordinance	City of Berkeley Zoning Ordinance

CITY OF BERKELEY

LAND USE PLANNING

INITIAL STUDY

1.0 PROJECT INFORMATION

The following is a Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the proposed project located at 2213 and 2221 Fourth Street, 2212 and 2216 Fifth Street, and 701-705A and 747 Bancroft Way (herein referred to as "TheLAB Project" or "proposed Project"). An overview of the Project site location and existing characteristics is followed by a description of the proposed development and a summary of requested approvals and entitlements. Copies of all materials referenced in this report are available for review in the Project file during regular business hours at the City of Berkeley (City) Planning and Development Department, Land Use Planning Division, as well as on the City's website at: https://www.cityofberkeley.info/Planning_and_Development/Zoning_Adjustment_Board/theLAB_Phase_II_and_Phase_III_-_2213_Fourth_and_787_Bancroft.aspx.

1. **Project Title:**

   TheLAB Project

2. **Lead Agency Name and Address:**

   City of Berkeley (City)
   1947 Center Street, 2nd Floor
   Berkeley, California 94704

3. **Contact Person and Phone Number:**

   Ashley James, Senior Land Use Planner
   Planning and Development Department
   Land Use Planning Division
   Phone: (510) 981-7458
   Email: AJames@cityofberkeley.info

4. **Project Sponsor's Name and Address:**

   W-SW WBLS West Owner IX, L.P. and W-SW WBLS East Owner IX, L.P., c/o Steelwave CDS, LLC (project sponsor)
   999 Baker Way, Suite 200
   San Mateo, California 94404

5. **General Plan Designation:**

   City of Berkeley General Plan: Manufacturing/Manufacturing Mixed Use
   West Berkeley Plan: Mixed Use-Light Industrial (MU-LI)/Mixed Use Residential (MU-R)

6. Zoning:

Mixed Use-Light Industrial (MU-LI)/Mixed Use Residential (MU-R)

7. Project Location:

The approximately 3.02-acre Project site is made up of portions of two contiguous blocks in the City of Berkeley, Alameda County. The Project site is bisected by Fourth Street and generally bordered by Allston Way to the north, Fifth Street to the east, Bancroft Way to the south, and the Union Pacific Railroad (UPRR) and Amtrak heavy rail corridor to the west.

Regional vehicular access to the Project site is provided by Interstate 80 (I-80) and Interstate 580 (I-580), access to which is provided approximately two blocks north via the University Avenue overpass. Local access is primarily via University Avenue, which is an arterial roadway with direct access from I-80, and Allston Way and Bancroft Way, which are both local streets. Transit in the Project vicinity includes the Berkeley Amtrak Station and extensive bus transit service provided by Alameda-Contra Costa County Transit (AC Transit); the Amtrak station and closest bus stops are each located approximately two blocks north of the site on University Avenue. The Channing Way Bicycle Boulevard, which runs from Fourth Street to Piedmont Avenue, is located approximately two blocks south of the Project site. Figure 1-1 depicts the site's regional and local context and Figure 1-2 depicts an aerial view of the Project site.

8. Description of Project:

The existing site conditions and the proposed Project are described below.

Site Characteristics and Current Site Conditions. The generally level Project site is comprised of six parcels of land across two contiguous blocks, referred to herein as the "East Block" and the "West Block." The East Block consists of four existing one- to two-story buildings with addresses at 2212 and 2216 Fifth Street and 2213 and 2221 Fourth Street (Assessor's Parcel Numbers [APNs] 056-1958-00604, 056-1958-01401, and 056-1958-00400). The West Block consists of four separate parcels currently occupied by a surface parking lot and six single-story buildings with addresses at 701, 703, 705, 705A, and 747 Bancroft Way and 2220 Fourth Street (APNs 056-1957-00701, 056-1957-00301, 056-1957-00204, and 056-1957-00800). As of September 2021, all buildings on the Project site are vacant. Previously, a total of 60 employees worked on site.

Vehicular access to both the East and West blocks is provided by multiple driveways located on Fourth Street. An additional driveway providing access to the West Block is located on Bancroft Avenue at the southwest corner of the Project site. The parcel at 2213 Fourth Street contains a vacant storage shed and surface parking lot with the capacity for approximately 38 vehicles used by area residents and employees; it does not provide required parking for a surrounding use. The parcel at 701 Bancroft Way contains a surface parking lot with the capacity for 26 vehicles, providing required parking for the buildings on-site.[1] The remaining portions of the East Block and West Block do not contain any striped parking spaces.

[1] These surface parking lots do not have any striped parking spaces.

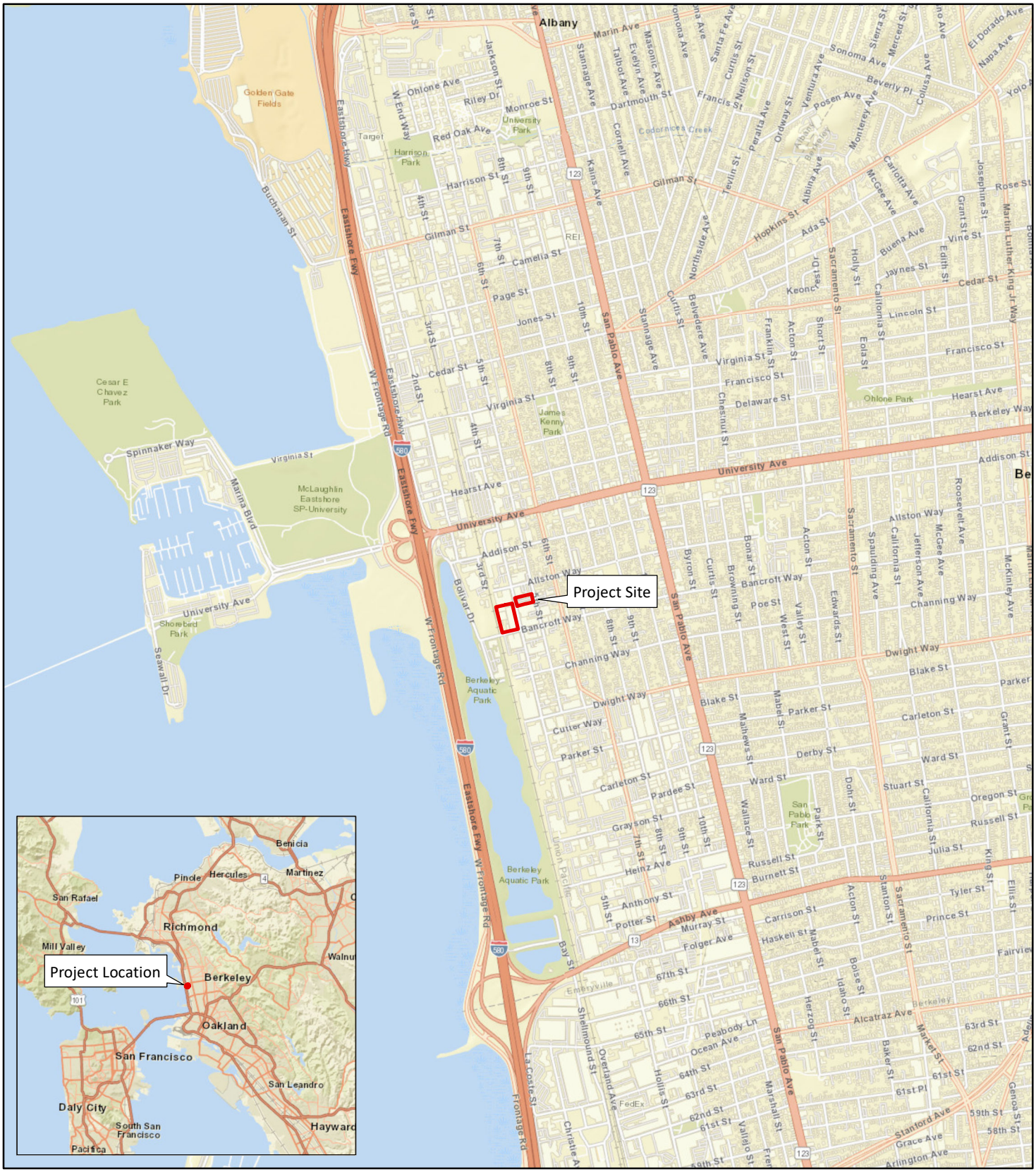

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FIGURE 1-1

theLAB Project IS/MND

Project Location and Regional Vicinity

SOURCE: ESRI StreetMap North America, National Geographic.

I:\CBE1906.02\GIS\Maps\Figure 1-1_ Project Location and Regional Vicinity Map.mxd (8/31/2021)

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FIGURE 1-2

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4 Photo Viewpoint Locations

Project Site Boundaries

theLAB Project IS/MND
Aerial Photograph of the Project Site - Surrounding Land Uses and Photo Viewpoint Locations

SOURCES: Google Earth, 8/6/2020; LSA, 2021

P:\CBE1906.03 theLAB\PRODUCTS\Graphics\Figure 1-2.ai (11/17/2021)

Vegetation within the boundaries of the Project site consists of ornamental landscaping, ruderal grasses and shrubs, and approximately 4 trees, including 3 on the East Block and 1 on the West Block. Table 1.A shows a summary of the existing conditions on the project site.

Table 1.A: Existing Conditions Summary

APN	Address	Building Height (feet)	Building Size (square feet)	Recent Uses[1]	Surface Parking
East Block					
056-1958-01401	2213 Fourth Street	12	650	Storage shed	38 spaces
056-1958-00604	2221 Fourth Street	19	4,000	Manufacturing	N/A
056-1958-00400	2212 Fifth Street	36	2,033	Residential duplex	N/A
056-1958-00604	2216 Fifth Street	19	4,000	Building contractor business	N/A
West Block					
056-1957-00701	701 Bancroft	16	2,438	Light Manufacturing	26 spaces
056-1957-00701	703 Bancroft	35	13,320	Warehouse and light manufacturing	N/A
056-1957-00701	705 Bancroft	27	4,103	Warehouse	N/A
056-1957-00701	705A Bancroft	17	1,524	Warehouse	N/A
056-1957-00301	747 Bancroft	35	43,713	Warehouse-based non-store retail	N/A
056-1957-00204	2220 Fourth	35	15,136	Warehouse-based non-store retail	N/A

Source: Steelwave CDS, LLC (2021).
[1] All buildings are currently vacant.

Figures 1-3 and 1-4 depict existing site conditions. Existing uses on the site are described in greater detail below by property address and photos of existing site conditions are depicted in Figures 1-5 and 1-6; viewpoint locations are shown in Figure 1-2.

East Block. As shown in Table 1.A, the East Block consists of four existing buildings. The structure located at 2213 4th Street is an approximately 650-square-foot shed approximately 12 feet in height that was associated with a previous occupant of the site and used for storage. The building at 2221 Fourth Street is approximately 4,000 square feet in size and 19 feet in height and is currently vacant but was previously used as a machine shop and electrical insulating business. The building at 2216 Fifth Street is approximately 4,000 square feet in size and 19 feet in height and is currently vacant but was previously used by a building contractor and as an electrical insulating business. The building at 2212 Fifth Street is an approximately 2,033-square-foot, two-story residential duplex that is currently vacant.

West Block. As shown in Table 1.A, the West Block contains six single-story buildings. In total, these six buildings combined are approximately 80,234 square feet in size, and have an average height of 32 feet, with a maximum height of 35 feet. The majority of the buildings are vacant, previously used for light manufacturing and warehousing. The building at 747 Bancroft (see right side of Photo 3) was previously occupied by wine.com, a warehouse-based non-store retailer. Past uses on the site have included vending machine sales and service, a pesticide company, and an electrical company.

Proposed Project. This section provides a description of the proposed Project as identified in the Project application materials submitted to the City of Berkeley, dated September 14, 2021 and February 7, 2022. The Project sponsor is proposing to redevelop the East and West blocks to create a "life sciences" campus oriented toward Fourth Street, through a combination of new construction, increased open space, and enhancements to the public realm. The proposed Project would result in the demolition of all existing buildings on the site and construction of a new research and development (R&D) building and surface parking lot on the West Block (also referred to as 787 Bancroft Way) and an above-ground parking garage on the East Block (also referred to as 2213 Fourth Street), totaling approximately 283,810 gross square feet of building area and a total of 491 parking spaces. Individual Project components are described in detail below.

Figure 1-7 depicts the conceptual site plan for the proposed Project. Figures 1-8 through 1-10 depict the ground, second, third, and roof levels of the proposed 747 Bancroft building, and Figures 1-11 through 1-14 depict the ground through roof levels of the 2213 Fourth Street parking garage. Figures 1-15 through 1-17 depict conceptual elevations and sections for the proposed building and Figures 1-18 and 1-19 depict elevations and sections for the parking garage.

West Block Building Program – 787 Bancroft Way. As described above, the West Block would be redeveloped with a new R&D building and surface parking lot, with a proposed new address of 787 Bancroft Way. The 787 Bancroft Way building would front both Fourth Street and Bancroft Way and would consist of a three-story building with a maximum height of approximately 45 feet and contain approximately 159,143 square feet of light manufacturing and R&D space. The proposed 787 Bancroft Way building would have a floor area ratio (FAR) of approximately 1.64 and approximately 6,700 square feet of common outdoor and landscaped area and would occupy the majority of the West Block.

The proposed building would be built up to the lot line along the eastern and southern edges of the Project site, and would be set back approximately 21 feet, 10 inches feet from the existing buildings along the northern edge of the Project site at 2200 Fourth Street (also known as 716 Allston Way) and approximately 33 feet, 8 inches from the western border adjacent to the UPRR tracks. It is estimated that proposed projections (e.g., mechanical penthouse) would extend approximately 20 feet beyond the roofline.

Approximately 82 percent (approximately 133,028 square feet) of the space would be R&D use (consisting of lab and office space); the remaining 18 percent (approximately 29,347 square feet) would be light manufacturing use. It is estimated that the proposed uses would generate an estimated maximum of 354 full time employees on the site, for an increase of approximately 294 employees compared to existing conditions.[2]

In addition, the northwest corner of the West Block would include a surface parking lot that would contain 76 parking spaces.

[2] As stated previously, all of the existing buildings on the project site are vacant as of September 2021. However, for the purposes of this analysis, the buildings at 747 Bancroft Way and 2220 Fourth Street (i.e., the buildings occupied by wine.com) are assumed to include 60 employees.

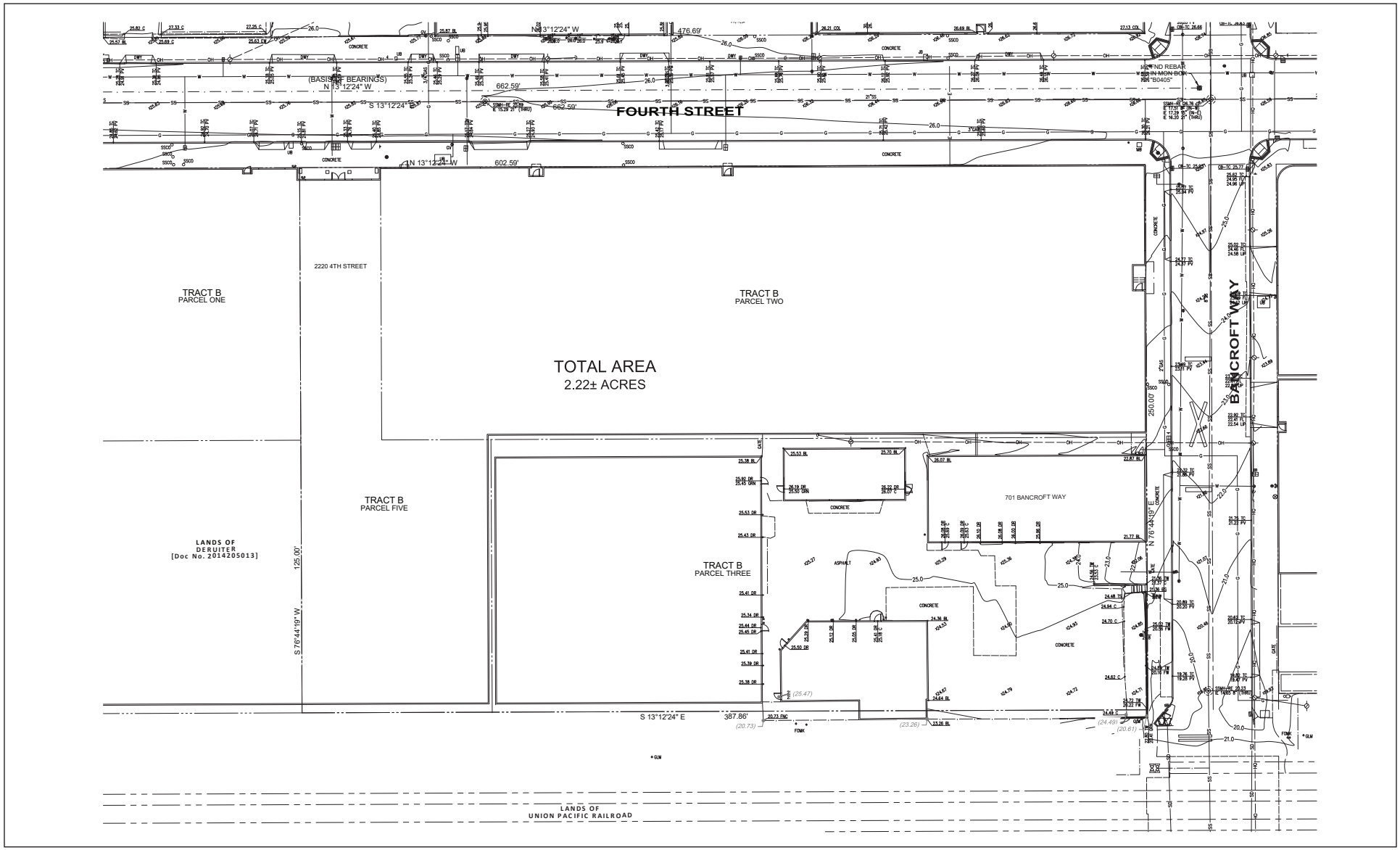

FIGURE 1-3

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Existing Site Conditions - 787 Bancroft Way

SOURCE: Skidmore, Ownings & Merrill, LLP, May 2021

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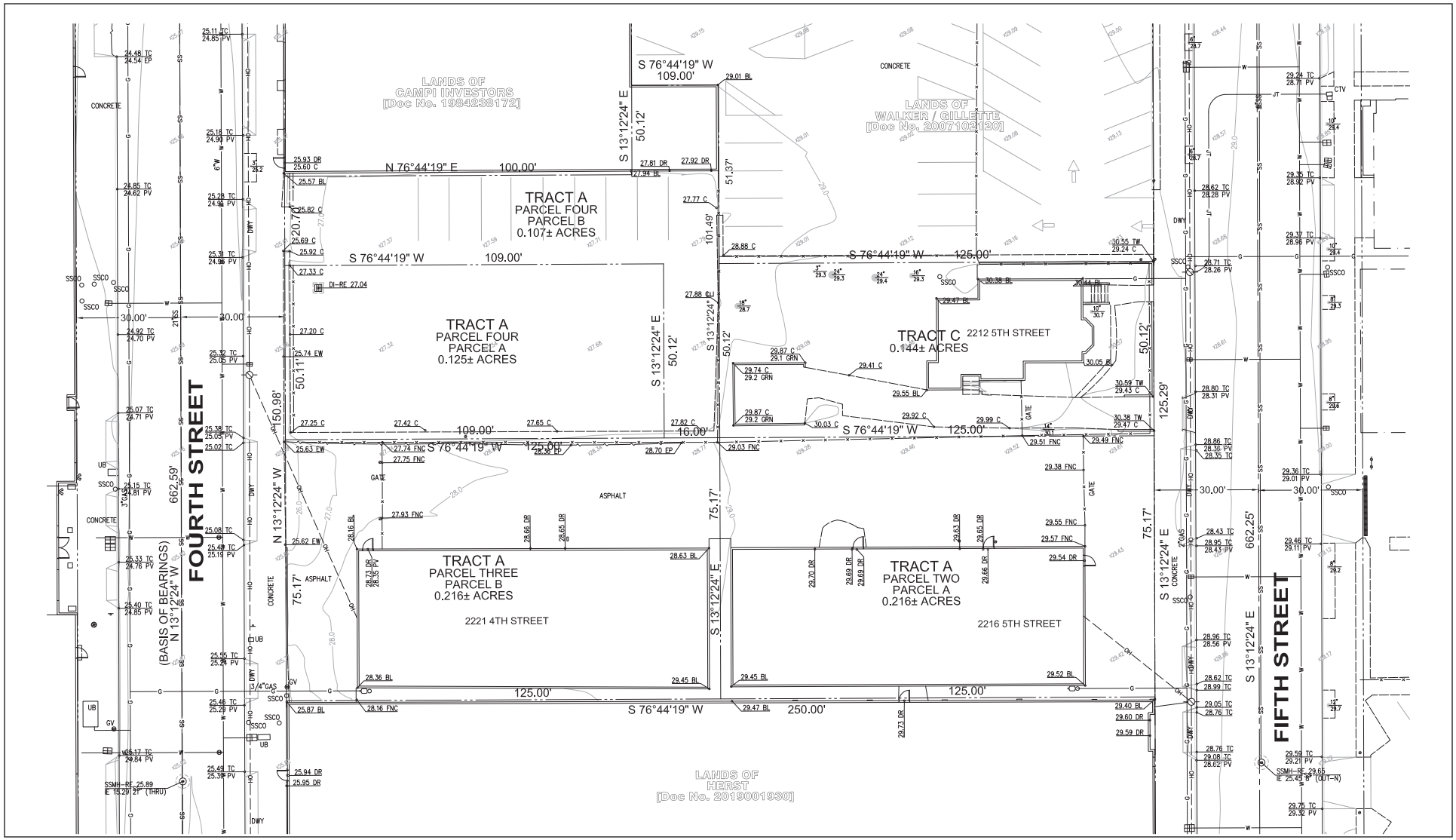

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FIGURE 1-4

LEGEND

PROPERTY LINE	TRANSFORMER	UTILITY BOX (SIZE VARIES)	EDGE OF PAVEMENT
ADJACENT PROPERTY LINE	FIRE HYDRANT	MONITORING WELL	SANITARY SEWER
CENTERLINE	STORM DRAIN MANHOLE	SIGN	STORM DRAIN
MONUMENT LINE	SANITARY SEWER MANHOLE	TREE W/ SIZE AND ELEVATION	WATER
BUILDING LINE W/ DOOR	CLEAN OUT	SPOT ELEVATION	GAS
BUILDING OVERHANG	GAS METER	CONTOUR	UNDERGROUND ELECTRIC
FOUND MONUMENT AS NOTED	UTILITY POLE W/ GUY WIRE	INDEX CONTOUR	OVERHEAD
BOLLARD LIGHT	VALVE	CURB	JOINT TRENCH
LIGHT	CATCH BASIN / DROP INLET	CURB & GUTTER	
STREET LIGHT	WATER METER	CONCRETE	
	FIRE DEPARTMENT CONNECTION	FENCE	
	BACK FLOW PREVENTER	RETAINING WALL	

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SOURCES: WARE MALCOMB; BARBER SURVEYING, INC., 1/2021

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Existing Site Conditions - 2213 Fourth Street

Photo 1: Existing residential duplex building at 2212 Fifth Street, as seen from Fifth Street

Photo 2: Existing buildings at 2212 Fifth Street and 2213-2221 Fourth Street, as seen from Fourth Street

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FIGURE 1-5

theLAB Project IS/MND
Photos of Existing Site

SOURCE: LSA, 2021

P:\CBE1906.03 theLAB\PRODUCTS\Graphics\Figure 1-5.ai (11/17/2021)

Photo 3: Existing warehouse building at 747 Bancroft Way, as seen from Fourth Street

Photo 4: Existing warehouse buildings at 703, 705, and 705A Bancroft Way, as seen from Bancroft Way

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FIGURE 1-6

theLAB Project IS/MND
Photos of Existing Site

SOURCE: LSA, 2021

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Project Site Boundary

FIGURE 1-7

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SOURCES: Steel Wave; Skidmore, Owings & Merrill, LLP, February 2022

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TheLAB Project IS/MND

Conceptual Site Plan

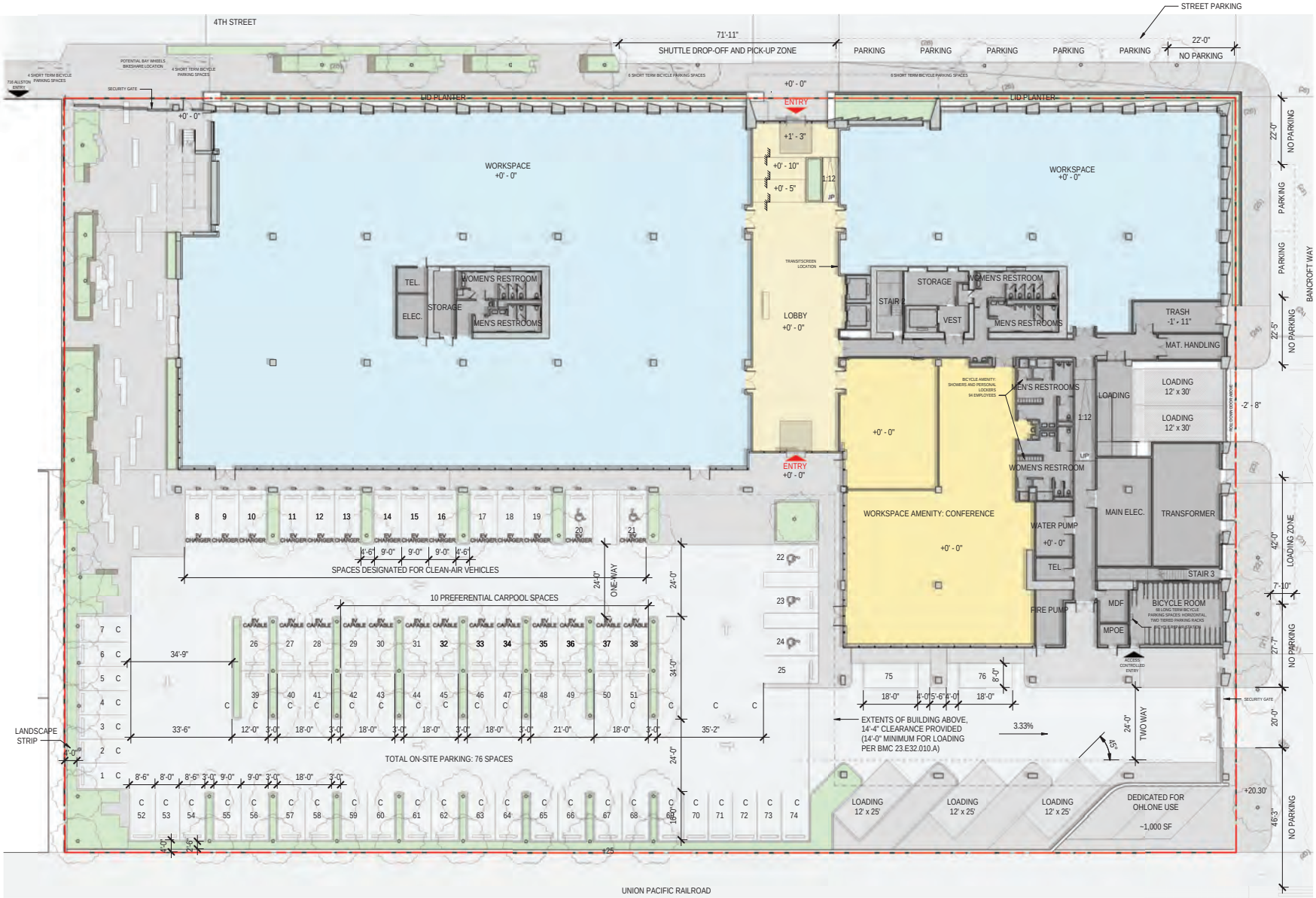

FIGURE 1-8

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SOURCES: Steel Wave; Skidmore, Ownings & Merrill, LLP, February 2022

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TheLAB Project IS/MND

Conceptual Ground Level Plan - 787 Bancroft Way

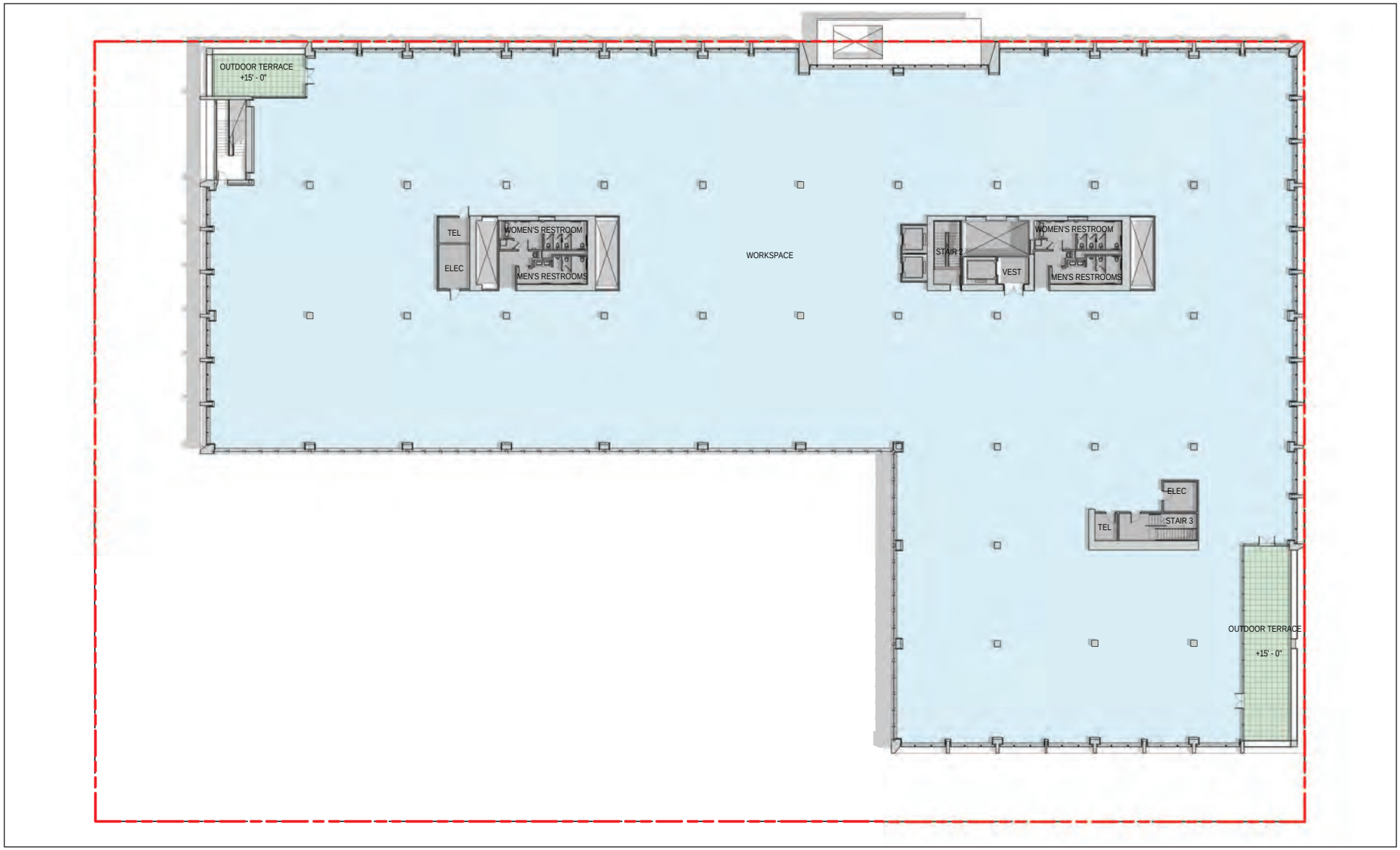

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FIGURE 1-9

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TheLAB Project IS/MND

Conceptual Second and Third Level Plan - 787 Bancroft Way

SOURCES: Steel Wave; Skidmore, Ownings & Merrill, LLP, February 2022

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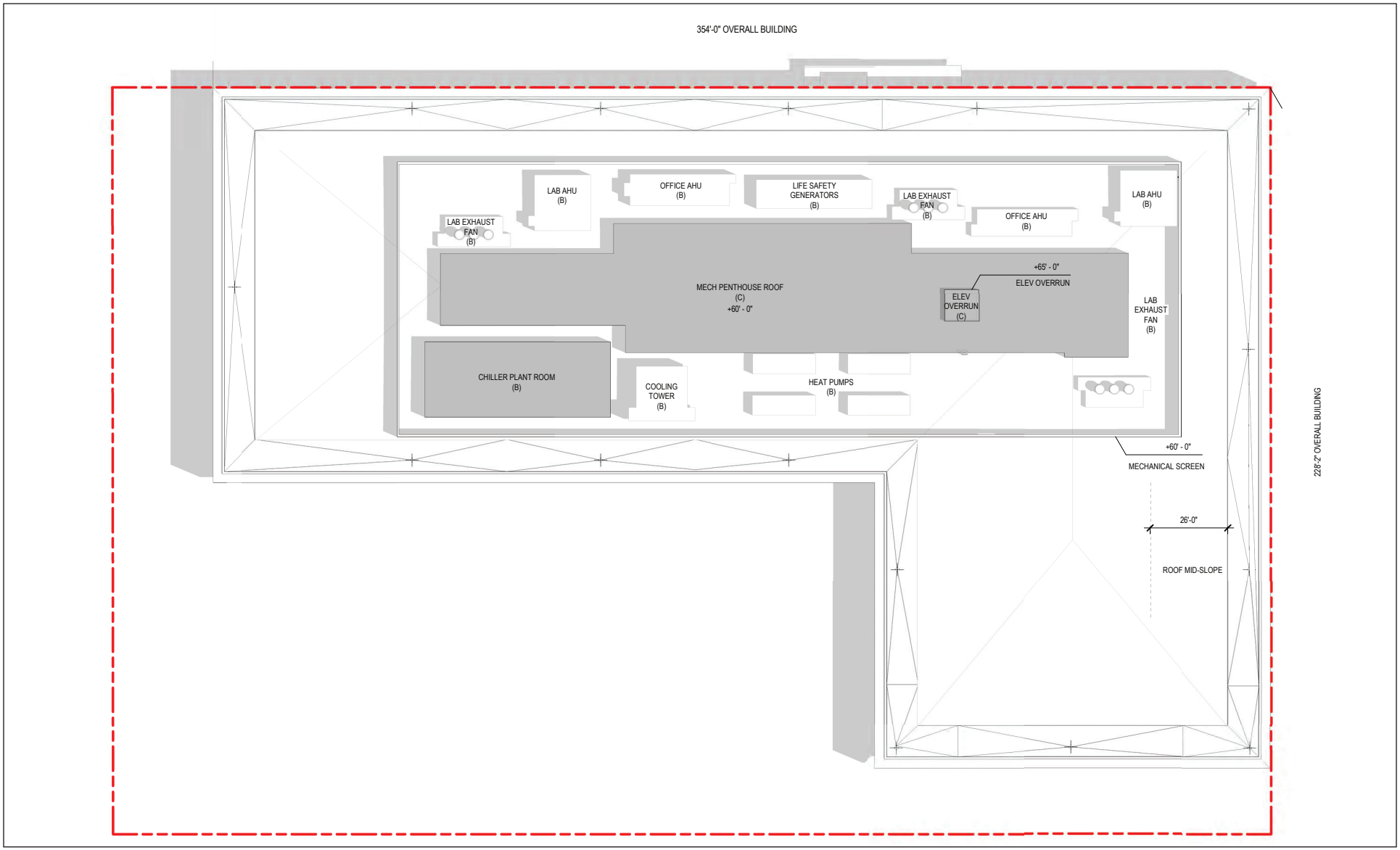

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FIGURE 1-10

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SOURCES: Steel Wave; Skidmore, Owings & Merrill, LLP, February 2022

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TheLAB Project IS/MND

Conceptual Roof Plan - 787 Bancroft Way

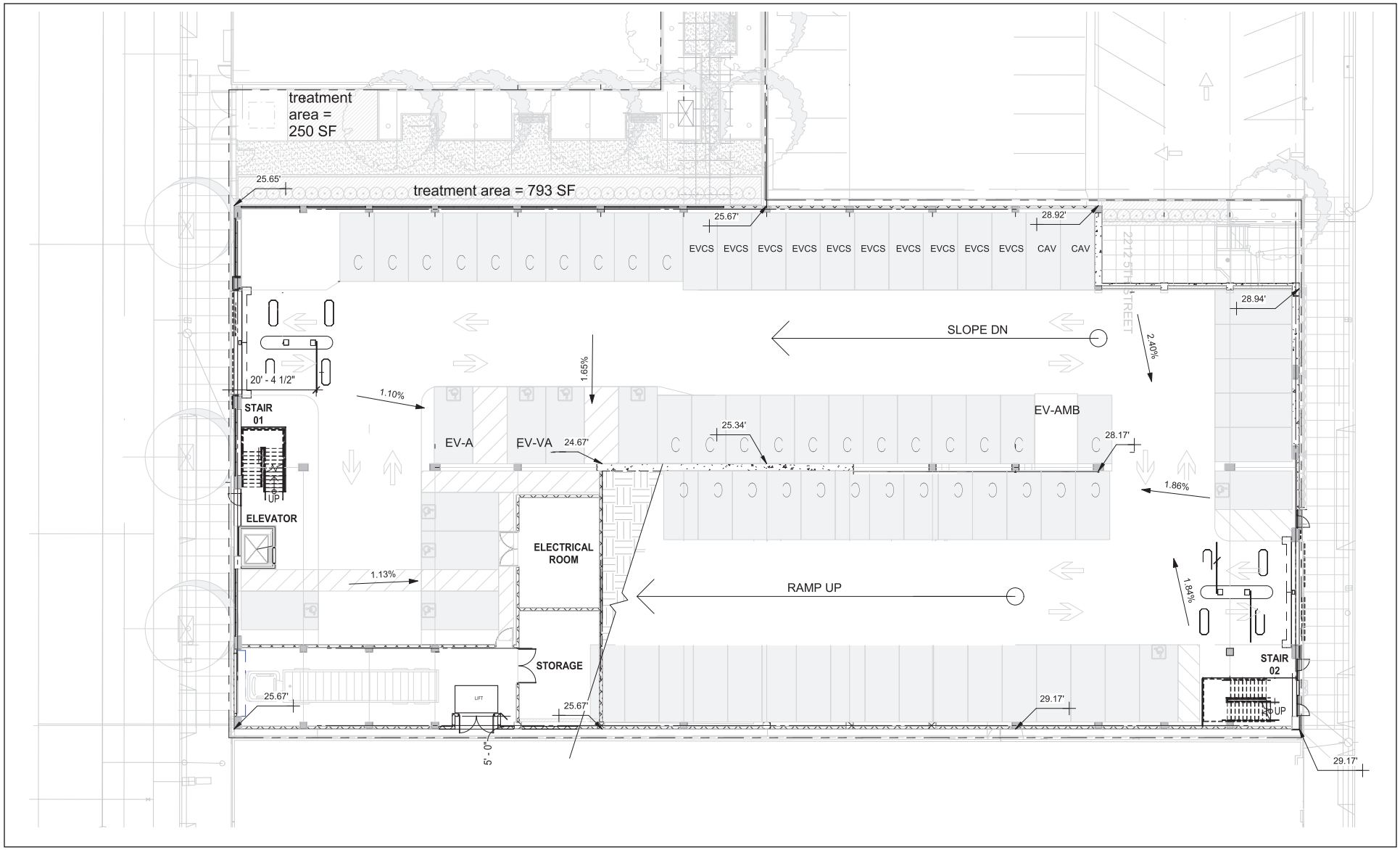

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FIGURE 1-11

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SOURCES: Steel Wave; OVERAA; International Parking Design, Inc., February 2022

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theLAB Project IS/MND

Conceptual Ground Level Plan - 2213 Fourth Street

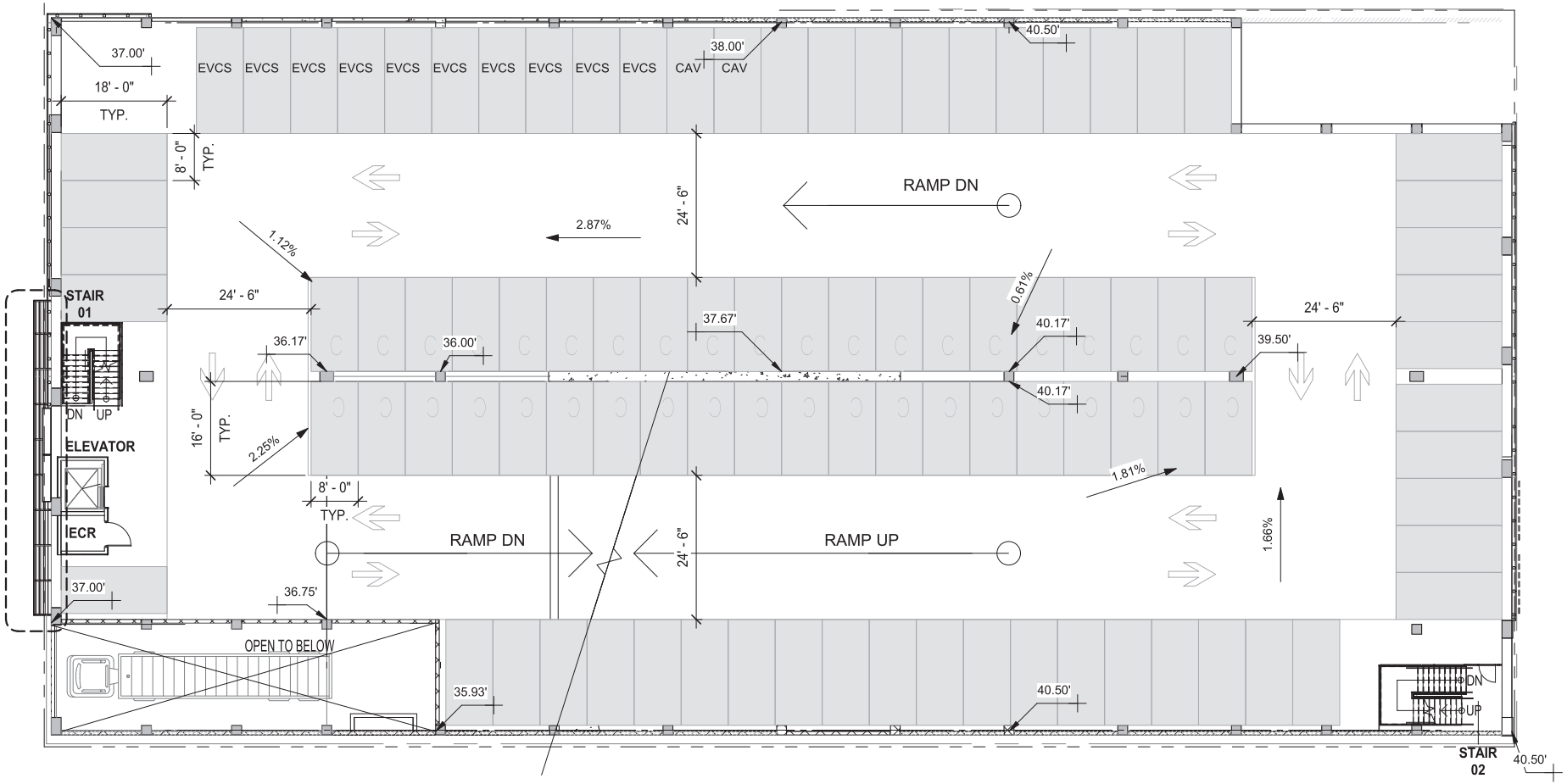

FIGURE 1-12

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SOURCES: Steel Wave; OVERAA; International Parking Design, Inc., February 2022

P:\CBE1906.03\G\Figure 1-12.Conceptual 2nd Level Plan 2213 Fourth St.ai (3/8/2022)

TheLAB Project IS/MND
Conceptual Second Level Plan - 2213 Fourth Street

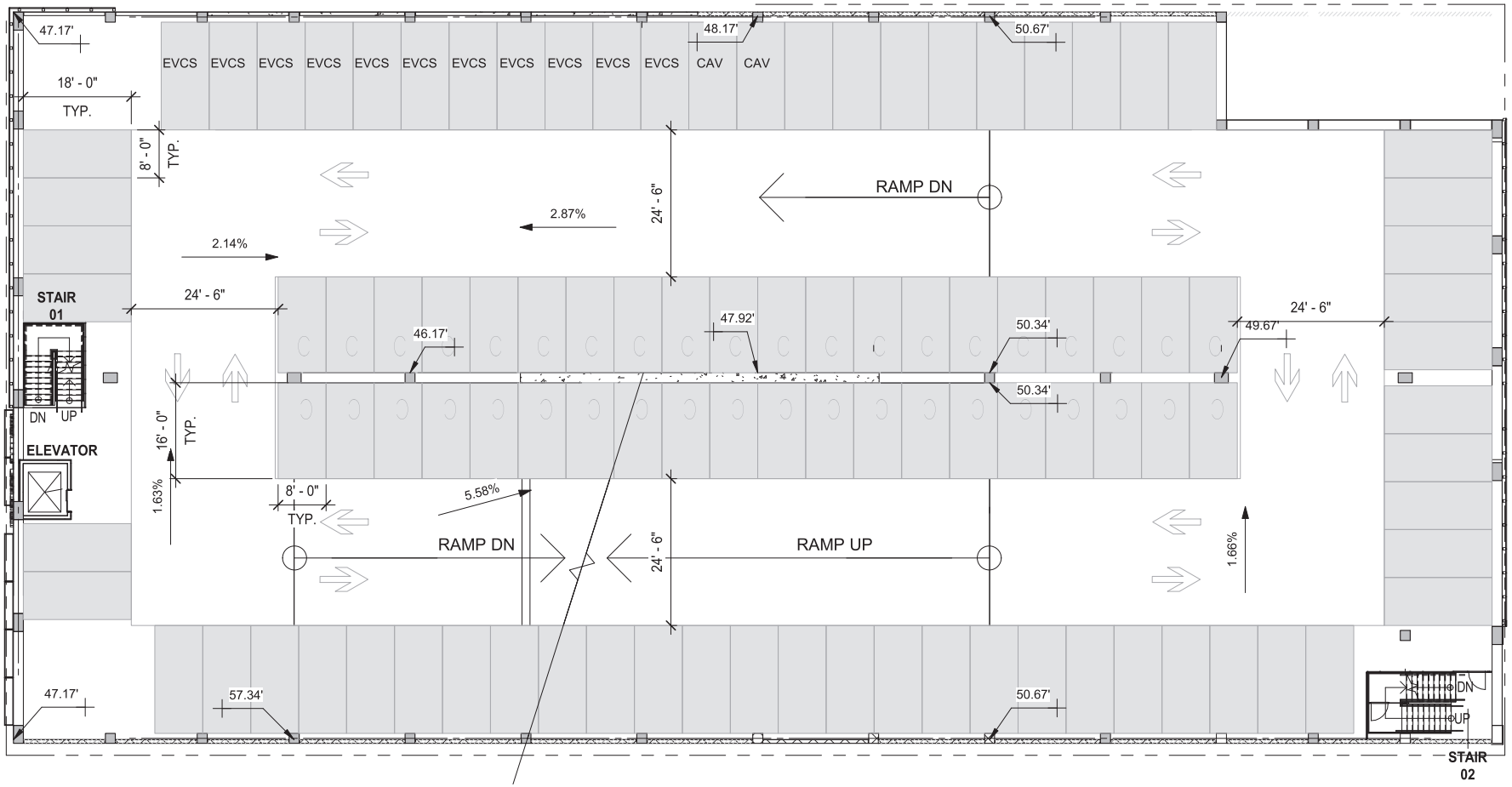

FIGURE 1-13

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SOURCES: Steel Wave; OVERAA; International Parking Design, Inc., February 2022

I:\CBE1906.03\G\Figure 1-13_Conceptual Third&Fourth Level Plan-2213 Fourth St.ai (3/8/2022)

TheLAB Project IS/MND

Conceptual Third and Fourth Level Plan - 2213 Fourth Street

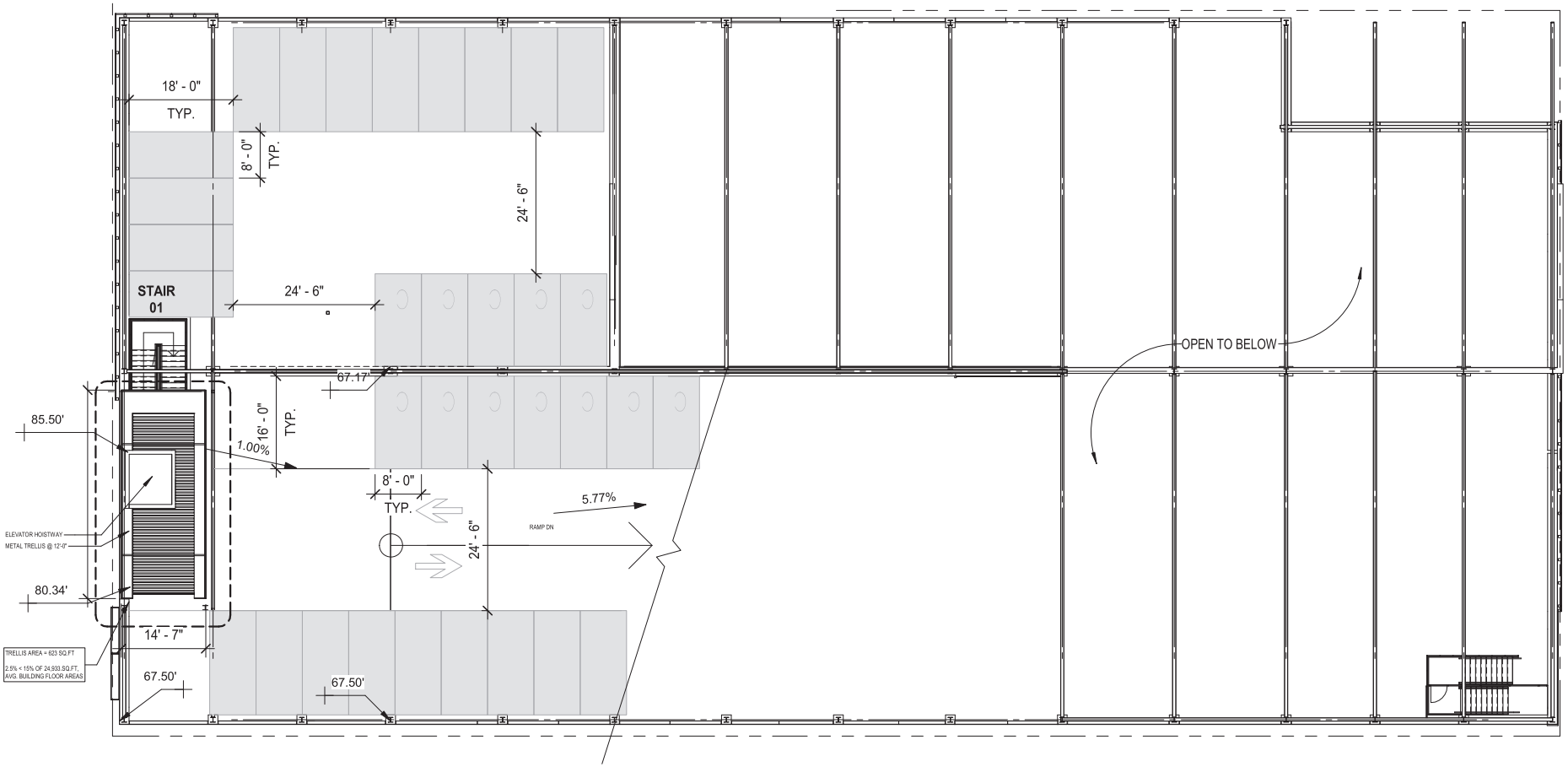

FIGURE 1-14

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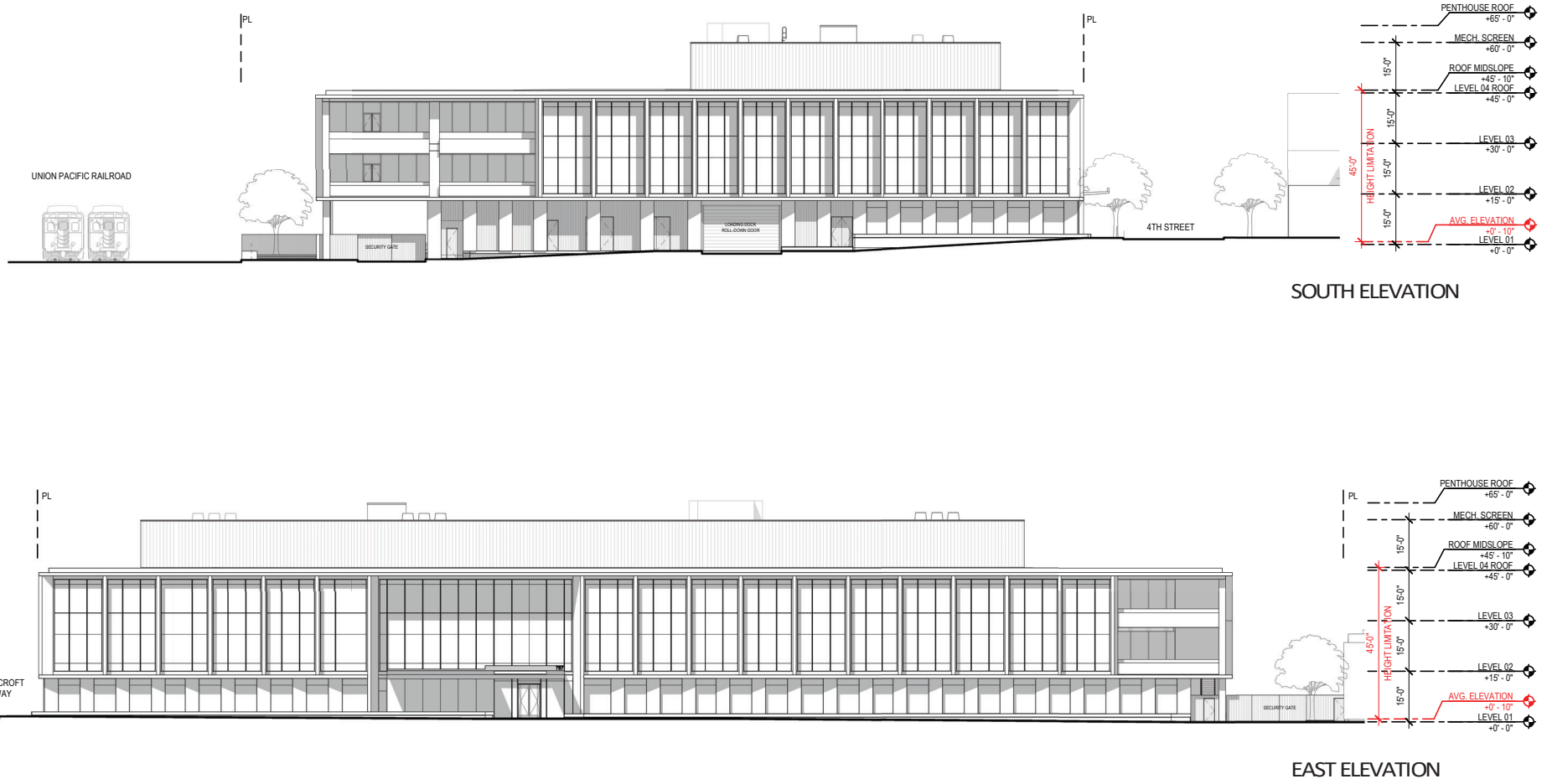
SOURCES: Steel Wave; OVERAA; International Parking Design, Inc., February 2022

I:\CBE1906.03\G\Figure 1-14_Conceptual Roof Plan-2213 Fourth St.ai (3/8/2022)

TheLAB Project IS/MND

Conceptual Roof Plan - 2213 Fourth Street



LSA

FIGURE 1-15

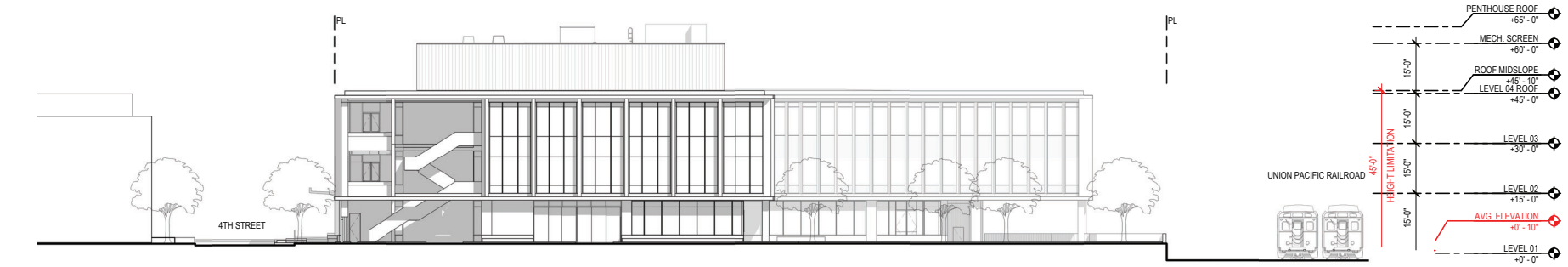
NOT TO SCALE

TheLAB Project IS/MND

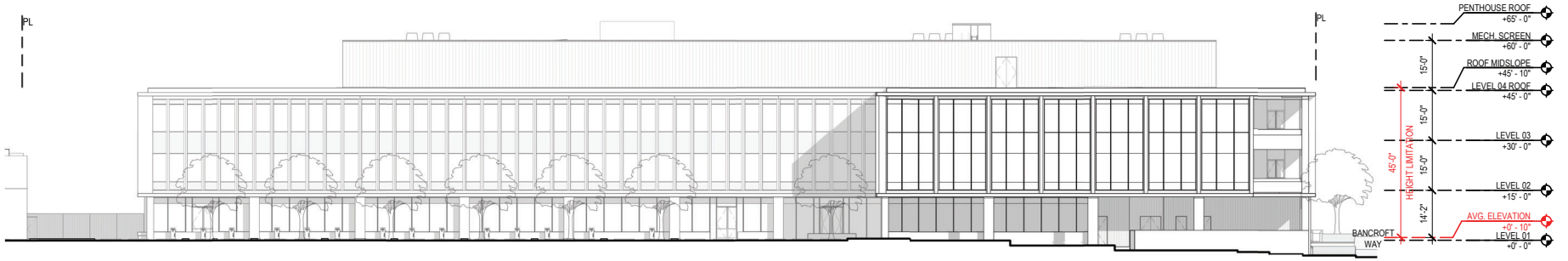
Conceptual East and South Building Elevations - 787 Bancroft Way

SOURCES: Steel Wave; Skidmore, Ownings & Merrill, LLP, February 2022

P:\CBE1906.03\G\Figure 1-15_Conceptual East&South Bldg Sections-787 Bancroft.ai (3/8/2022)



NORTH ELEVATION



WEST ELEVATION

LSA

FIGURE 1-16

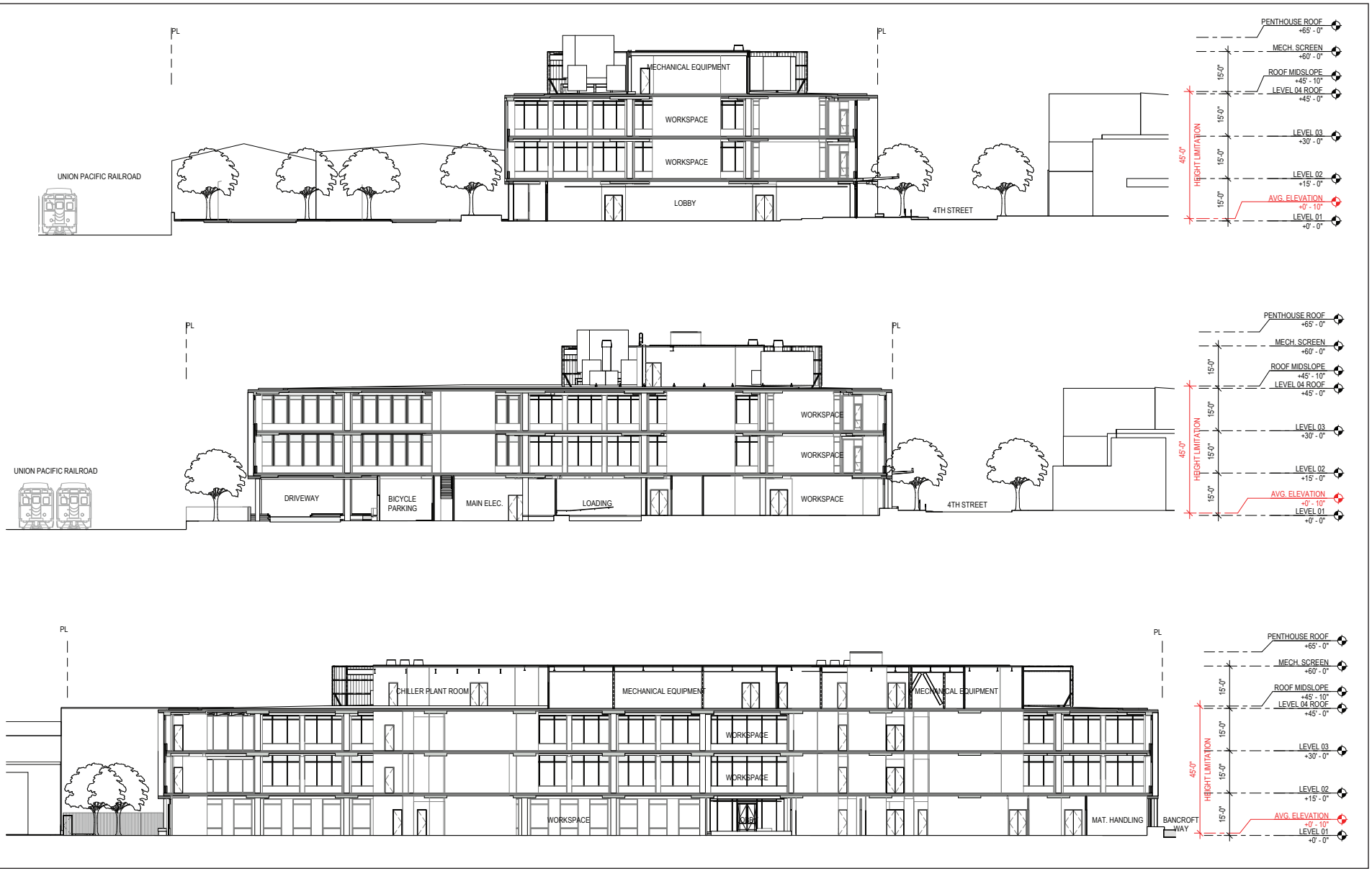
NOT TO SCALE

TheLAB Project IS/MND

Conceptual North and West Building Elevations - 787 Bancroft Way

SOURCES: Steel Wave; Skidmore, Ownings & Merrill, LLP, December 17, 2021

I:\CBE1906.03\G\Figure 1-16_Conceptual North&West Bldg Sections-787Bancroft.ai (3/8/2022)



LSA

FIGURE 1-17

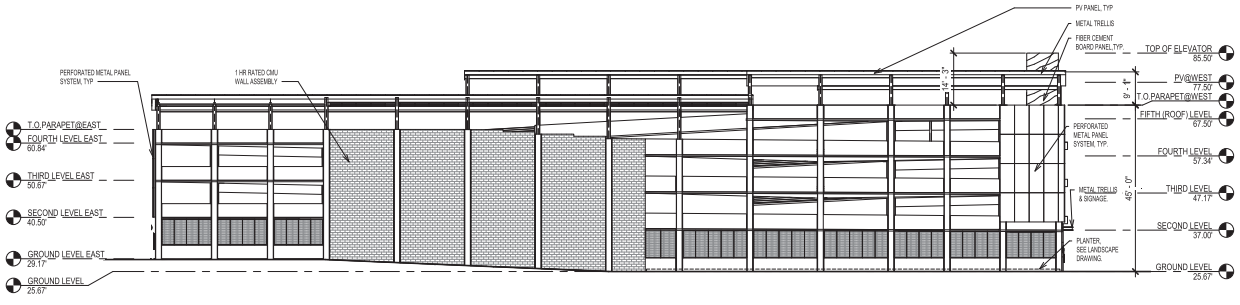
NOT TO SCALE

SOURCES: Steel Wave; Skidmore, Ownings & Merrill, LLP, February 2022

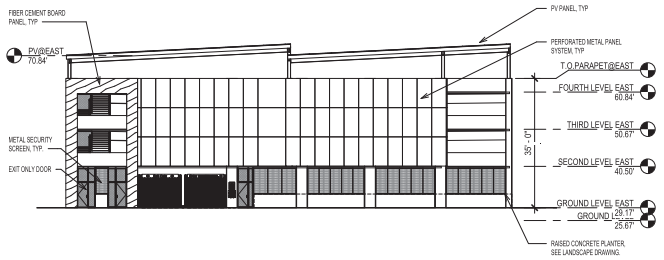
P:\CBE1906.03\G\Figure 1-17_Conceptual Bldg Sections-787 Bancroft.ai (3/8/2022)

TheLAB Project IS/MND

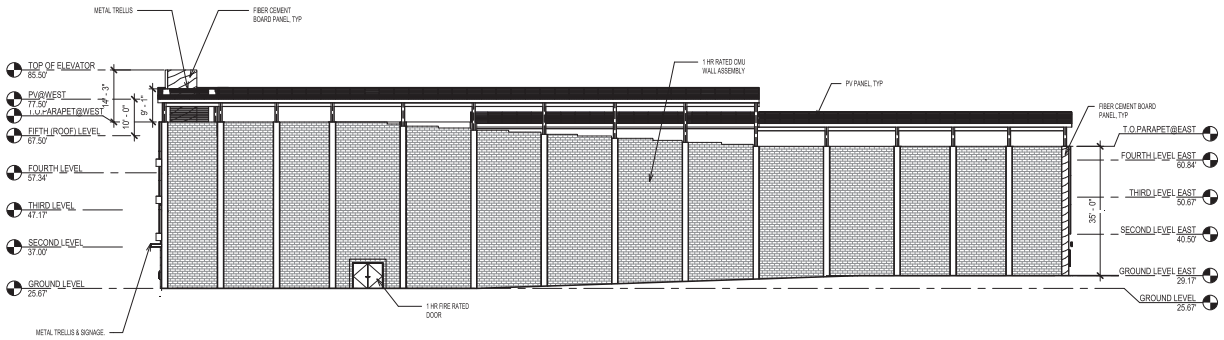
Conceptual Building Elevations - 787 Bancroft Way



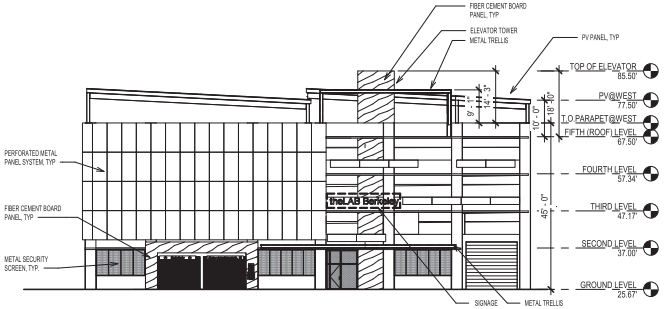
NORTH ELEVATION -



EAST ELEVATION-



SOUTH ELEVATION-



WEST ELEVATION -

LSA

FIGURE 1-18

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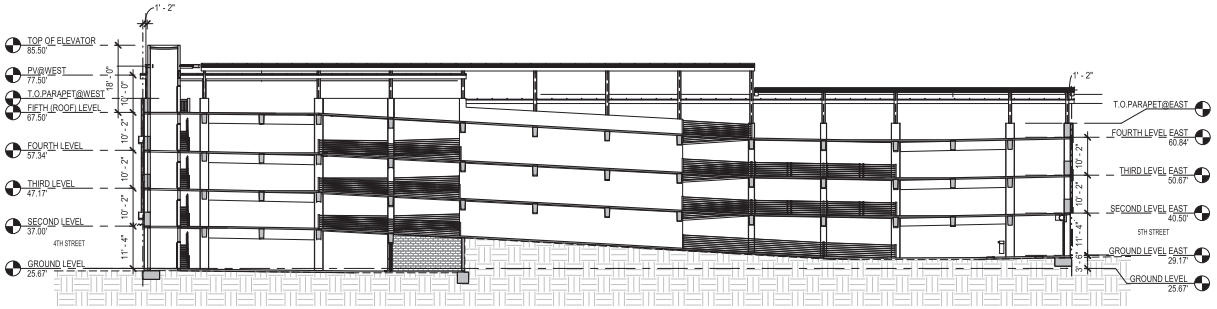
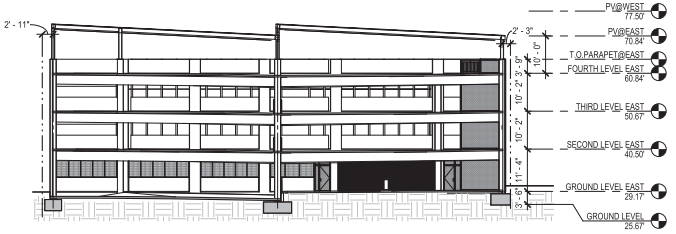
TheLAB Project IS/MND
Conceptual Building Elevations - 2213 Fourth Street

SOURCES: Steel Wave; OVERAA; International Parking Design, Inc., February 2022

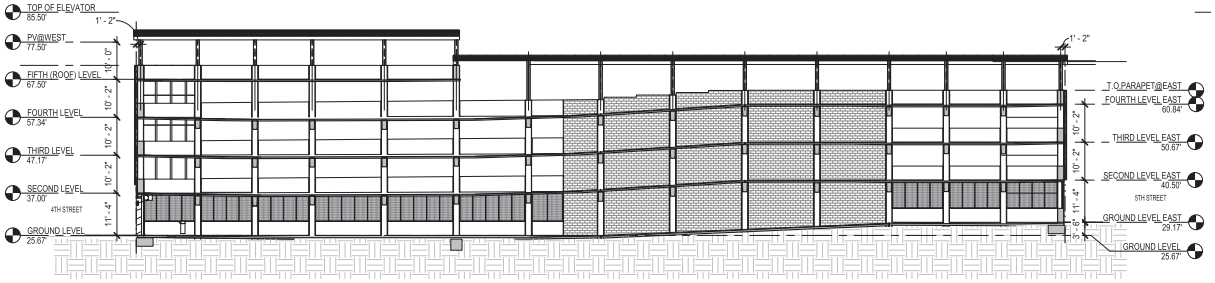
P:\CBE1906.03\G\Figure 1-18_Conceptual Bldg Elevations-2213 Fourth St.ai (3/9/2022)



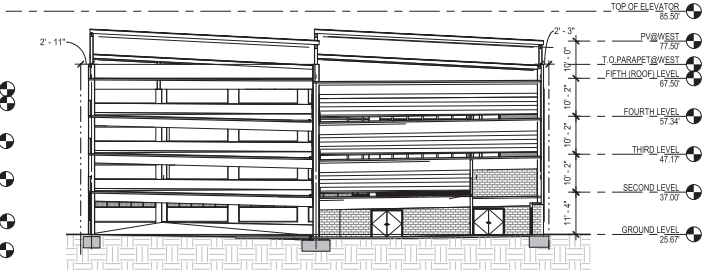
BUILDING SECTION 1



BUILDING SECTION 3



BUILDING SECTION 2



BUILDING SECTION 4

LSA

FIGURE 1-19

0 16 32
FEET

TheLAB Project IS/MND
Conceptual Building Sections - 2213 Fourth Street

SOURCES: Steel Wave; OVERAA; International Parking Design, Inc., February 2022

P:\CBE1906.03\G\Figure 1-19_Conceptual Bldg Sections-2213 Fourth St.ai (3/9/2022)

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East Block Building Program – 2213 Fourth Street. The proposed 2213 Fourth Street parking garage on the East Block would front both Fourth and Fifth streets and would consist of a five-story structure with an average height of approximately 35 feet on the Fifth Street frontage and approximately 45 feet on the Fourth Street frontage; an elevator and trellis would project 14 feet, 3 inches above the roof level on the Fifth Street frontage. The garage would total approximately 124,667 gross square feet.[3] In total, the parking structure would contain 415 parking spaces across 5 stories, including 82 spaces on the ground level, 100 spaces on the second level, 107 spaces on the third and fourth levels, and 19 spaces on the fifth level. The building would be set back approximately 1 foot, 6 inches from the northern and southern edges of the Project site and built to the lot line along the eastern and western edges. It is estimated that proposed projections (e.g., elevator overrun) would extend approximately 18 feet beyond the roofline.

Access, Circulation and Parking. Primary vehicular access to the 2213 Fourth Street parking garage would be via a new driveway located along Fourth Street. Primary vehicular access to the surface parking lot on the West Block would be via the existing driveway along Bancroft Way. As noted above, a total of 491 parking spaces would be provided across the project site, consisting of 415 within the parking garage and 76 surface spaces within the West Block. A total of 55 electric vehicle (EV) parking spaces would be provided, including 42 within the parking garage and 14 within the West Block surface parking lot. In addition, a passenger drop-off space would be provided along Fourth Street, and five loading spaces would be provided near the existing driveway. A total of 80 bicycle parking spaces would be provided on the West Block, including 68 long-term spaces within a bicycle room on the ground floor of the 787 Bancroft Way building and 12 short-term bicycle racks along Fourth Street.

As noted above, the proposed Project would also include streetscape improvements along Fourth Street. These improvements would consist of rebuilt curbs, sidewalks, and gutters, and the addition of landscaping (as further discussed below).

Common Outdoor Space and Landscaping. A total of approximately 6,363 square feet of outdoor and landscaped area would be provided on the ground level of the project site. All landscaping would be planted and irrigated compliant with the State's Water Efficiency Landscape Ordinance and Bay-friendly landscape requirements.

Common outdoor and landscape areas would be provided at the ground level, including a pedestrian plaza in the northeast corner of the West Block, landscaped strips along the perimeter of the West Block, planter boxes along both sides of Fourth Street, and a landscaped area along the northern boundary of the East Block. Outdoor terraces would also be provided on the second and third levels of the proposed building, providing an additional 2,592 square feet of open space. All 4 of the existing trees, none of which are classified as protected trees, on the Project site would be removed. Approximately 88 new trees would be planted on the Project site, including 77 on the West Block along Fourth Street, the northern boundary, and within the

[3] Per BMC Section 23.502 (Glossary), covered or uncovered areas used for off-street parking spaces or loading spaces and driveways, ramps between floors or a multi-level parking garage and maneuvering isles relating thereto are excluded from the calculation of gross floor area.

surface parking lot, and 11 on the East Block, including within the landscaped area and along both Fourth and Fifth Street. All landscaping would be planted and irrigated compliant with Bay-friendly landscape requirements. Figure 1-20 depicts the conceptual landscape plan.

Utilities and Infrastructure. The proposed Project is located in an urban area with existing utilities and infrastructure. The proposed Project would be required to install the following utility connections to the satisfaction of the applicable utility providers: water; wastewater; stormwater drainage; power; and telecommunications services. Connections to existing infrastructure would occur within the adjacent public rights-of-way. All existing and new electrical lines on and serving the proposed 787 Bancroft Way building would be undergrounded as part of the proposed Project.

Most of the existing approximately 3.02-acre project site is covered by impervious surfaces, including existing buildings and other paved surfaces. Development of the Project would result in a reduction in impervious surfaces on the project site from approximately 131,445 square feet to approximately 124,845 square feet. Runoff would be treated in accordance with the terms of the applicable Municipal Regional Permit (MRP) and C.3 requirements, before flowing to the City's storm drain.

The proposed Project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver equivalence. The proposed Project would include photovoltaic (PV) solar panels on the rooftops of the proposed buildings and secure bicycle parking, and various other sustainable features. Additionally, the proposed buildings would be designed to be all-electric, and would not include the use of any natural gas systems. A backup 500-kilowatt (670 horsepower [HP]) diesel powered generator would be located on the roof of the proposed 787 Bancroft Way building within a weatherproof and sound attenuated enclosure. The generator would run two to three hours per month.

Demolition, Grading and Construction.The proposed Project would result in demolition of the existing buildings and surface pavements and parking lots on the site. Approximately 1,550 tons of construction debris, such as old foundations, pavements, and structures, would be collected and off-hauled. The existing topography of the site would generally be maintained. Up to 10,000 cubic yards of soils would be excavated from the site and off-hauled. It is anticipated that building loads would be adequately supported by shallow spread foundations; no pile driving would be required. The proposed 787 Bancroft Way building would require a maximum depth of excavation of approximately 4 feet, while the 2213 Fourth Street parking garage would require a maximum excavation depth of 6 feet.

Demolition and construction activities are anticipated to begin once entitlements are obtained, currently anticipated by late 2022. Buildout of the proposed 787 Bancroft Way building would occur over an approximately 12- to 15-month period, from site preparation to full site occupancy, while the buildout for the proposed 2213 Fourth Street parking garage would occur over a 10- to 12-month period.

LSA

FIGURE 1-20

Project Site Boundary

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FEET

SOURCES: Steel Wave; Skidmore, Owings & Merrill, LLP, February 2022

P:\CBE1906.03\G\Figure 1-20_Conceptual Landscape Plan.ai (3/9/2022)

TheLAB Project IS/MND
Conceptual Landscape Plan

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Discretionary Actions. The proposed Project is subject to action by the City of Berkeley's Zoning Adjustments Board (ZAB). The Project would require the following discretionary entitlements from the City of Berkeley, per the City of Berkeley Municipal Code (BMC):

- **Phase II (East Block)**[4]
  - Use Permit, per BMC Section 23.326.070, to allow demolition of existing non-residential buildings;
  - Use Permit, per BMC Section 23.326.030, to demolish a duplex;
  - Use Permit, per BMC Section 23.206.050, to remove protected floor area used for manufacturing, wholesale trade, warehousing or Material Recovery Enterprise;
  - Administrative Use Permit, per BMC Section 23.302.070.G, to construct a parking structure on a split-zoned parcel in the MU-LI and MU-R districts; and
  - Administrative Use Permit, per BMC Section 23.304.050, to allow rooftop equipment projections to exceed the height limit in a non-residential district.

- **Phase III (West Block)**
  - Use Permit, per BMC Section 23.326.070, to allow demolition of existing non-residential buildings;
  - Use Permit, per BMC Section 23.206.050, to change more than 25 percent of manufacturing and warehouse uses to R&D use;
  - Use Permit, per BMC Section 23.206.030.A, to construct between 20,000 and 30,000 square feet of new floor area as Manufacturing and Wholesale Trade, as per BMC Table 23.206-2;
  - Administrative Use Permit, per BMC Section 23.322.100.C.5, to reduce the number of on-site loading spaces from seven to five;
  - Administrative Use Permit, per BMC Section 23.304.050, to allow rooftop equipment projections to exceed the height limit in a non-residential district;
  - Administrative Use Permit, per BMC Section 23.206.020, to establish more than 30,000 square feet of R&D use; and
  - Variance, per BMC Section 23.406.050.B.1, from the protected use requirement, to allow replacement of protected floor area to be made available after the demolition or change of use of the space.

[4] The proposed Project consists of the second and third phases of an overall development plan to be implemented by the project sponsor. Phase I consists of tenant improvements within three vacant industrial buildings at 2229 and 2231 Fourth Street and 2222 and 2246 Fifth Street totaling approximately 87,159 square feet and is not subject to discretionary approvals because use permits are not required. Phase IV consists of tenant improvements within a vacant 25,639-square-foot industrial building at 2200 Fourth Street, including a 4,287-square-foot addition to the existing mezzanine. Phase I is already underway and both Phases I and IV are anticipated to be completed by November 2022.

In addition, the City's Design Review Committee (DRC) will be responsible for reviewing the proposed Project and providing a recommendation to the ZAB for Preliminary Design Review and will be responsible for conducting Final Design Review at the time of building permit submittal. Development of the proposed Project, if approved, would be subject to the City of Berkeley's standard Conditions of Approval (COA), pursuant to BMC Section 23.406.040.E and consistent with the findings made by ZAB for approval of the Project and issuance of the requested Use Permits. Applicable COAs are identified in Chapter 3.0 of this Initial Study. Each COA is titled pursuant to the subject area it addresses.

9. Surrounding Land Uses and Setting:

The Project site is located in West Berkeley, which is characterized by a mix of uses, including manufacturing, light industrial, office, residential, and commercial/restaurant uses. Figure 1-2 depicts an aerial view of the site and surrounding land uses, which are further described below. Figures 1-21 and 1-22 include photos of select land uses that surround the site; Figure 1-2 shows the viewpoint locations for each photo.

North of the Project Site. The Project site is bordered immediately to the north by commercial uses and Allston Way, a two-lane roadway that runs east-west through the City, terminating at the UPRR and Amtrak railroad tracks to the west and the University of California, Berkeley (UC Berkeley) campus to the east. Across Allston Way, land uses consist of one- and two-story commercial buildings that primarily consist of office and light manufacturing uses, as well as the Takara Sake Brewery (refer to Photo 5 on Figure 1-21). Further north of the site, land uses consist of mixed use residential, commercial, light industrial, and manufacturing. The Fourth Street shopping area and Berkeley Amtrak Station are located approximately two blocks north of the site, across University Avenue. The Berkeley Amtrak Station, which services the Capitol Corridor passenger route with access between Auburn and San Jose, is located northwest of the Fourth Street and Addison Street intersection.

East of the Project Site. The Project site is bordered immediately to the east by Fifth Street, a two-lane roadway that runs north-south through the City (refer to Photo 6 on Figure 1-21, which depicts existing conditions along this roadway). East of Fifth Street land uses transition to primarily low- and medium-density residential uses, with offices fronting the east side of Fifth Street. San Pablo Avenue, a major transportation and commercial corridor, is located approximately 0.4 miles further east.

South of the Project Site. The Project site is bordered immediately to the south by Bancroft Way, a two-lane roadway that runs east-west through the City (refer to Photo 7 on Figure 1-22, which depicts existing conditions along this roadway). An at-grade railroad crossing bisects Bancroft Way, immediately southwest of the Project site. The crossing includes warning gates, lights, and signs similar to the Addison Street crossing described above.

One- and two-story manufacturing uses occupy the block immediately south of Bancroft Way and east of the UPRR corridor. Further south of the site, land uses consist of light industrial, wholesale, commercial, and research and development uses with ancillary retail. The Bayer Corporation campus is located three blocks south of the site.

Photo 5: Takara Sake Brewery north of the Project site, as seen from the intersection of Fourth Street and Allston Way

Photo 6: View of Fifth Street looking north, east of the Project site

LSA

FIGURE 1-21

theLAB Project IS/MND

Photos of Surrounding Land Uses

SOURCE: LSA, 2021

P:\CBE1906.03 theLAB\PRODUCTS\Graphics\Figure 1-21.ai (11/17/2021)

Photo 7: View of Bancroft Way looking east, south of the Project site

Photo 8: View of the UPPR corridor looking north, west of the Project site

LSA

FIGURE 1-22

theLAB Project IS/MND

Photos of Surrounding Land Uses

SOURCE: LSA, 2021

P:\CBE1906.03 theLAB\PRODUCTS\Graphics\Figure 1-22.ai (11/17/2021)

West of the Project Site. The project site is bordered immediately to the west by the UPRR rail corridor (refer to Photo 8 on Figure 1-22) which serves intercity freight movements as well as Amtrak and other long haul and intra-state passenger rail service. A subsurface hazardous liquid pipeline is located within the rail right-of-way, west of the Project site. West of the UPRR rail corridor is the site of the recently approved 600 Addison Street Project (known as Berkeley Commons).[5] Further west is Aquatic Park, which is owned by the City of Berkeley and consists of approximately 33 acres of land and approximately 68 acres of open water in three separate lagoons including the approximately 1-mile-long Main Lagoon and the smaller Model Yacht Club Basin and Radio Tower Pond, as well as a limited number of leasable spaces occupied by tenants providing recreation-focused services. Bolivar Drive, an access driveway through the park, begins at Addison Street, runs north-south, and terminates at the intersection with Channing way, one block south and west of the site. On the west side of Bolivar Drive land uses consist of one-story commercial buildings occupied by Waterside Workshops, Street Level Cycles, and the Bay Area Outreach and Recreation Program (BORP) Adaptive Cycling Center. On the east side of Bolivar Drive land uses consist of R&D and laboratory.

The park also includes boating and wetland areas within the Main Lagoon directly across from the Project site as well as public pathways; Dreamland Playground, which includes a play area and play structures for children; Frisbee golf course; picnic areas; and a boating clubhouse and storage facility. West of Aquatic Park is the I-580/I-80 corridor, which runs north-south in this segment. The McLaughlin Eastshore State Park, San Francisco Bay Trail (Bay Trail), and San Francisco Bay are located approximately 0.5 miles to the west. The Berkeley Marina is located approximately 1-mile further west. Access to these open space and recreation areas is provided by a pedestrian/bicycle bridge over the freeway corridor, which is accessed by a pathway located one block northwest of the Project site, at the intersection of Bolivar Drive and Addison Street.

10. Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreements):

East Bay Municipal Utility District (EBMUD), San Francisco Bay Regional Water Quality Control Board (Regional Water Board), Alameda County Public Works Agency, Union Pacific Railroad.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resource Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

A request form describing the Project and map depicting the Project site was sent to the Native American Heritage Commission (NAHC) in West Sacramento requesting a list of tribes eligible to consult with the City, pursuant to Public Resources Code section 21080.3.1. On October 10, 2021, the NAHC responded in a letter with a list of tribal contacts. The City sent letters to these individuals on October 15, 2021, notifying them of their opportunity to consult for this Project.

[5] The 600 Addison Street Project, which was approved by the City's Zoning Adjustments Board on May 27, 2021, consists of the redevelopment of the site with two separate R&D/Office buildings totaling approximately 461,822 gross square feet, each with their own separate, four-story parking structure.

On November 10, 2021, Ms. Gould, representative of the Confederated Villages of Lisjan (Lisjan Tribe) responded to the City's email and requested more information and consultation. The City, archeological consultants, and representatives of the Lisjan Tribe met for an initial consultation meeting on December 1, 2021 and the final consultation meeting was held on February 2, 2022. Representatives of the Lisjan Tribe have reviewed, provided comments on, and agreed to the City's standard COAs and additional Project-specific conditions of approval identified for the protection of tribal cultural resources as outlined in Sections 3.5, Cultural Resources and 3.18, Tribal Cultural Resources.

2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist in Chapter 3.0.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Wildfire	☐ Utilities/Service Systems	☐ Mandatory Findings of Significance

2.1 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a "Potentially Significant Impact" or "Potentially Significant Unless Mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Ashley James, Senior Planner

March 9, 2022
Date

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3.0 ENVIRONMENTAL CHECKLIST

3.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the Project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Public Resources Code Section 21099(d) provides that, among other items, "aesthetics… impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." Accordingly, aesthetics is no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all of the following three criteria:

1. The project site is residential, mixed-use residential, or an employment center;
2. The project is on an infill site;[6] and
3. The project is in a transit priority area.[7]

The proposed Project would result in the development of an employment center use on an infill site. An employment center use is defined as a project located on a property zone for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area. The proposed Project would have an FAR of 0.9 and is within the MU-LI and MU-R zoning districts, which allow commercial uses. The project site is within a transit priority area because it is within 0.5 mile of several major transit stops/intersecting major bus routes. The Berkeley Amtrak Station, two

[6] Public Resources Code Section 21099(a) defines an "infill site" as a lot located within an urban area that has been previously developed, or a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

[7] Public Resources Code Section 21099(a) defines a "transit priority area" as an area within 0.5 miles of an existing or planned major transit stop. A "major transit stop" is defined in Section 21064.3 of the California Public Resources Code as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency or service interval of 15 minutes or less during the morning and afternoon peak commute periods.

blocks north of the site, is an existing rail transit station providing service to a regional route from Auburn to San Jose. AC Transit also defines the Amtrak Station as a Transit Center. In addition, stops for three routes (51B, G, and West Berkeley Shuttle) are located within four blocks. The 51B route provides bus service from the Amtrak Station to Downtown Berkeley Bay Area Rapid Transit (BART) with a frequency of less than 15 minutes. The West Berkeley Shuttle provides bus service from Dwight Way at Sixth Street to the Ashby BART station with a frequency of 15 minutes during the morning and afternoon peak commute periods.

The proposed Project meets each of the above three criteria and thus, this checklist does not consider aesthetics in determining the significance of Project impacts under CEQA. Project elements that relate to changes to aesthetic conditions at the site and vicinity, such as proposed building heights, architecture, effects of new light and glare, etc., will however be considered as part of the planning approval process, including through design review.

3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a. Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? ***(No Impact)***

The Project site and vicinity are located within an urban area of the City of Berkeley. There are no agricultural uses located on or near the Project site and the site is designated as Urban and Built-Up land by the Department of Conservation's Important Farmland Finder Map.[8] Therefore, development of the proposed Project would not convert agricultural lands to non-agricultural uses. The proposed Project would have no impact on farmlands designated by the State of California as Unique or Prime Farmland, or Farmland of Statewide Importance.

[8] California Department of Conservation. 2016. California Important Farmland Finder (map). Website: maps.conservation.ca.gov/dlrp/ciff (October 27, 2021).

b. Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract? ***(No Impact)***

The Project site is zoned Mixed-Use Light Industrial (MU-LI) and Mixed-Use Residential (MU-R) on the City's Zoning Map and is therefore not eligible to enter into a Williamson Act contract.[9] Therefore, the proposed Project would not conflict with existing zoning for an agricultural use, or a Williamson Act contract.

c. Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? ***(No Impact)***

The Project site is zoned MU-LI and MU-R on the City's Zoning Map and is located in an urban, developed area. Therefore, the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest uses.

d. Would the Project result in the loss of forest land or conversion of forestland to non-forest use? ***(No Impact)***

The Project site and vicinity are not located in an area that is designated as forest land. Therefore, the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest uses.

e. Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? ***(No Impact)***

The proposed Project would result in the redevelopment of the Project site, which is surrounded by a variety of urban and recreational uses. The Environmental Management Element of the City's General Plan states that "Agriculture in Berkeley is limited to personal and community gardens." No existing or proposed community gardens are located within the vicinity of the site. Therefore, the proposed Project would not result in the extension of infrastructure into an undeveloped area, the development of urban uses on a greenfield site, or other physical changes that would result in the conversion of farmland to non-agricultural uses.

[9] California Department of Conservation. 2019. Williamson Act Program. Website: https://www.conservation.ca.gov/dlrp/lca (accessed October 27, 2021).

3.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

The Project site is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In Berkeley, and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}, $PM_{2.5}$), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter (both PM_{10} and $PM_{2.5}$) standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal $PM_{2.5}$ 24-hour standard.

a. Would the Project conflict with or obstruct implementation of the applicable air quality plan? ***(Less-Than-Significant Impact)***

The applicable air quality plan is the BAAQMD 2017 Clean Air Plan (Clean Air Plan),[10] which was adopted on April 19, 2017. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest heath risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the Project: (1) supports the goals of the

[10] Bay Area Air Quality Management District. 2017. *Clean Air Plan*. April 19.

Clean Air Plan; (2) includes applicable control measures from the Clean Air Plan; and (3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan. As discussed below, the proposed Project would not conflict with or obstruct implementation of the Clean Air Plan and this impact would be less than significant.

Clean Air Plan Goals. The primary goals of the Bay Area Clean Air Plan are to: attain air quality standards; reduce population exposure and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect climate.

The BAAQMD has established significance thresholds for project construction and operational impacts at a level at which the cumulative impact of exceeding these thresholds would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health. As discussed below in Section 3.3.b, implementation of the proposed Project would result in less-than-significant operation-period emissions and, with implementation of standard conditions that would implement BAAQMD-required diesel and particulate reduction measures during construction (COA: Public Works - Implement BAAQMD-Required Measures During Construction) and require equipment controls to reduce diesel particulate matter for off-road construction equipment (COA: Air Quality - Diesel Particulate Matter Controls During Construction), the Project would result in less-than-significant construction-period emissions. Therefore, the Project would not conflict with the Clean Air Plan goals.

Clean Air Plan Control Measures. The control strategies of the Clean Air Plan include measures in the following categories: Stationary Source Measures, Transportation Measures, Energy Measures, Building Measures, Agriculture Measures, Natural and Working Lands Measures, Waste Management Measures, Water Measures, and Super-Greenhouse Gas (GHG) Pollutants Measures. The Project's compliance with each of these control measures is discussed below. As discussed, the Project would not conflict with the Clean Air Plan control measures.

Stationary Source Control Measures. The Stationary Source Control Measures, which are designed to reduce emissions from stationary sources such as metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the BAAQMD and then enforced by the BAAQMD Permit and Inspection programs. Since the Project would not include any of these stationary sources, the Stationary Source Control Measures of the Clean Air Plan are not applicable to the Project.

Transportation Control Measures. The BAAQMD identifies Transportation Control Measures as part of the Clean Air Plan to decrease emissions of criteria pollutants, toxic air contaminants (TACs), and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The proposed Project would result in the redevelopment of the site with an R&D campus, which would serve as an employment center on an infill site that would locate employees near existing residential, commercial, warehouse/manufacturing, and recreational uses. In addition, transit in the Project vicinity includes the Berkeley Amtrak Station and extensive bus transit service provided by Alameda-Contra Costa County Transit (AC Transit); the Amtrak station and closest bus stops are each located approximately two blocks north of the

site on University Avenue. The Channing Way Bicycle Boulevard, which runs from Fourth Street to Piedmont Avenue, is located approximately two blocks south of the Project site. As such, the proposed Project would locate employees near public transportation facilities, including rail, bus, and bicycle facilities, and is within walking distance to goods and services. Therefore, the proposed Project would facilitate use of alternative modes of transportation, which would promote a reduction of vehicle trips and vehicle miles traveled (VMT). In addition, the Project would implement a transportation demand management (TDM) plan that would reduce VMT, vehicular trips, and parking demand generated by the Project by up to 15 percent (refer to Section 3.17, Transportation, for the proposed TDM Plan measures). The proposed Project would also meet the City of Berkeley's requirements for minimum automobile parking, including requirements for accessible parking spaces. The proposed Project would provide 51 electric vehicle (EV) charging spaces, consisting of 42 within the proposed parking garage and 9 within the West Block surface parking lot, and infrastructure consistent with BMC Section 19.37, which requires provision of Level 2 charging stations for at least 10 percent of the parking supply and provision of appropriate wiring for a total of 40 percent of the parking spaces for future EV charging, which would support the ability of Project employees to use cleaner modes of transportation. As such, the proposed Project would not conflict with Transportation Control Measures.

Energy Control Measures. The Clean Air Plan also includes Energy Control Measures, which are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the energy control measures of the Clean Air Plan are not applicable to the Project.

Building Control Measures. The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters but has limited authority to regulate buildings themselves. Therefore, the strategies in the control measures for this sector focus on working with local governments that do have authority over local building codes, to facilitate adoption of best GHG control practices and policies. In addition, the proposed Project would be designed to achieve LEED Silver equivalence and would include PV solar panels on the rooftops of the proposed buildings, as well as various other sustainable features. Additionally, the proposed buildings would be designed to be all-electric, and would not include the use of any traditional natural gas systems. Therefore, the proposed Project would not conflict with any of the Building Control Measures.

Agriculture Control Measures. The Agriculture Control Measures are designed to primarily reduce emissions of methane. Since the Project does not include any agricultural activities, the Agriculture Control Measures of the Clean Air Plan are not applicable to the Project.

Natural and Working Lands Control Measures. The Natural and Working Lands Control Measures focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to adopt ordinances that promote urban-tree plantings. Since

the Project does not include the disturbance of any rangelands or wetlands, the Natural and Working Lands Control Measures of the Clean Air Plan are not applicable to the Project.

Waste Management Control Measures. The Waste Management Control Measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The Project would comply with local requirements for waste management (e.g., recycling and composting services). Therefore, the Project would be consistent with the Waste Management Control Measures of the Clean Air Plan.

Water Control Measures. The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. Since these measures apply to POTWs and local government agencies (and not individual projects), the Water Control Measures are not applicable to the Project.

Super GHG Control Measures. The Super-GHG Control Measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual projects, the Super-GHG Control Measures are not applicable to the Project.

Clean Air Plan Implementation. As discussed above, the proposed Project would generally implement the applicable measures outlined in the Clean Air Plan, including Transportation Control Measures. Therefore, the Project would not disrupt or hinder implementation of a control measure from the Clean Air Plan and this impact would be less than significant.

b. Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation? ***(Less-Than-Significant Impact)***

The BAAQMD is currently designated as a nonattainment area for State and national ozone standards and national particulate matter ambient air quality standards. The BAAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The following analysis assesses the potential Project-level construction- and operation-related air quality impacts and CO impacts.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by demolition, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, nitrogen oxide (NO_x), reactive organic gases (ROG), directly emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Site preparation and Project construction would involve demolition, grading, paving, and other activities. Construction-related effects on air quality from the proposed Project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Vehicles leaving the site could deposit dirt and mud on local streets, which would be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, ROGs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the Project using the California Emissions Estimator Model (CalEEMod) version 2020.4.0, consistent with BAAQMD recommendations. The Project would include approximately 1,400 tons of construction debris and up to 10,000 cubic yards of soils would be excavated from the site and off-hauled, which were included as inputs to the CalEEMod analysis. In addition, the construction equipment list provided by the Project sponsor was input into CalEEMod. For purposes of this CalEEMod analysis, the construction schedule for all improvements was assumed to start in May 2023 and end in December 2024, with the proposed R&D building and parking garage assumed to occur concurrently (i.e., construction would not be phased). This analysis also assumes that all off-road equipment over 50 horsepower rating would utilize the USEPA Tier 4 engines (refer to COA, Air Quality - Diesel Particulate Matter Controls During Construction, below). Construction-related emissions are presented in Table 3.A. CalEEMod output sheets are included in Appendix A.

Table 3.A: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	Exhaust PM_{10}	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$
Average Daily Emissions	4.9	16.9	0.1	1.7	0.1	0.7
BAAQMD Thresholds	54.0	54.0	82.0	BMP	54.0	BMP
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA (October 2021).
BMP = Best Management Practices

As shown in Table 3.A, construction emissions associated with the Project would be less than significant for ROG, NO_x, $PM_{2.5}$, and PM_{10} exhaust emissions. The BAAQMD and the City of Berkeley require the implementation of the BAAQMD's Basic Construction Mitigation Measures, which are required by COA, Public Works - Implementation of BAAQMD-Recommended Measures During Construction, to reduce construction fugitive dust impacts to a less-than-significant level. Development projects that require a Use Permit are required to comply with the following COAs that addresses these potential impacts. With implementation of these COAs, construction impacts would be less than significant.

COA Public Works – Implement BAAQMD-Recommended Measures During Construction. For all proposed projects, BAAQMD recommends implementing all the Basic Construction Mitigation Measures, listed below to meet the best management practices threshold for fugitive dust:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- Post a publicly visible sign with the telephone number and person to contact at the City of Berkeley regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

COA Air Quality – Diesel Particulate Matter Controls During Construction. All off-road construction equipment used for projects with construction lasting more than 2 months shall comply with one of the following measures:

a. The Project applicant shall prepare a health risk assessment that demonstrates the Project's onsite emissions of diesel particulate matter during construction will not exceed health risk screening criteria after a screening-level health risk assessment is conducted in accordance with current guidance from BAAQMD and Office of Environmental Health Hazard Assessment (OEHHA). The health risk assessment shall be submitted to the Land Use Planning Division for review and approval prior to the issuance of building permits; or

b. All construction equipment shall be equipped with Tier 2 or higher engines and the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by the California Air Resources Board (CARB). The equipment shall be properly maintained and tuned in accordance with manufacturer specifications.

In addition, a Construction Emissions Minimization Plan (Emissions Plan) shall be prepared that includes the following:

- An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.

- A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract. The Emissions Plan shall be submitted to the Public Works Department for review and approval prior to the issuance of building permits.

The proposed Project would be required to comply with the above City-required COAs. Therefore, the BAAQMD's basic source control measures would be implemented during the construction period and construction vehicles would be equipped with Tier 4 (or Tier 2 or higher engines with the most effective VDECS available) engines. Also refer to Section 3.3.c, below which discusses potential impacts to sensitive receptors. In compliance with COA: Air Quality – Diesel Particulate Matter Controls During Construction, a health risk assessment was conducted for the proposed Project and the analysis determined that construction emissions would not exceed health risk screening criteria; therefore, impacts to sensitive receptors would also be less than significant. As such, construction of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standards and impacts would be less than significant.

Operational Emissions. Long-term air pollutant emission impacts that would result from the proposed Project are those that are associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity), area sources (e.g., architectural coatings and the use of landscape maintenance equipment), and stationary sources (e.g., emergency generators).

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement, and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. A majority of the Project's PM_{10} emissions would result from entrainment of roadway dust from vehicle travel associated with the Project traffic fleet.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. In addition, the proposed Project would be designed to achieve LEED Silver equivalence and would include PV solar panels on the rooftops of the proposed buildings, as well as various other sustainable features. Additionally, the proposed buildings would be designed to be all-electric, and would not include the use of any traditional natural gas systems.

Typically, area source emissions consist of direct sources of air emissions located at the Project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the Project would include emissions from the use of landscaping equipment and the use of consumer products.

Emission estimates for operation of the Project were calculated using CalEEMod. Model results are shown in Table 3.B and output sheets are included in Appendix A. Trip generation rates for the Project were based on the Project's Transportation Impact Analysis,[11] which estimates that the proposed Project would generate approximately 610 net new trips per day. In addition, the proposed project would include a 500-kilowatt (670 horsepower [HP]) backup diesel powered generator that would run two to three hours per month, which was included in CalEEMod.[12]

Table 3.B: Project Operational Emissions

Operational Emission Source	ROG	NO_x	PM_{10}	$PM_{2.5}$
Pounds Per Day				
Area Source Emissions	3.9	<0.1	<0.1	<0.1
Energy Source Emissions	0.1	1.0	0.1	0.1
Mobile Source Emissions	2.9	3.2	6.0	1.6
Stationary Source Emissions	0.1	0.3	<0.1	<0.1
Total Emissions	**7.1**	**4.5**	**6.1**	**1.7**
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	**No**	**No**	**No**	**No**
Tons Per Year				
Area Source Emissions	0.7	<0.1	<0.1	<0.1
Energy Source Emissions	<0.1	0.2	<0.1	<0.1
Mobile Source Emissions	0.4	0.4	0.8	0.2
Stationary Source Emissions	<0.1	0.1	<0.1	<0.1
Total Emissions	**1.1**	**0.7**	**0.9**	**0.2**
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	**No**	**No**	**No**	**No**

Source: LSA (October 2021).
BAAQMD = Bay Area Air Quality Management District
NO_x = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases

The primary emissions associated with the Project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the Project, emissions are released in other areas of the air basin. The daily and annual emissions associated with Project operational trip generation, energy, area, and stationary sources are identified in Table 3.B for ROG, NO_x, PM_{10}, and $PM_{2.5}$. The results shown in Table 3.B indicate the Project would not exceed the significance criteria for daily ROG, NO_2, PM_{10} or $PM_{2.5}$ emissions. As such, operation of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standards and impacts would be less than significant.

11 Fehr & Peers. 2021. TheLAB Transportation Impact Analysis. September.

12 The emissions shown in Table 3.G were calculated using a trip generation of 1,090 new trips. As described in Section 3.17, Transportation, the net new project trips would be 610. Therefore, this analysis is conservative and likely overestimates operational project emissions.

Localized CO Impacts. Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the State or federal CO standards have been recorded at Bay Area monitoring stations since 1991. The BAAQMD 2017 CEQA Guidelines include recommended methodologies for quantifying concentrations of localized CO levels for proposed development projects. A screening level analysis using guidance from the BAAQMD CEQA Guidelines was performed to determine the impacts of the Project. The screening methodology provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD 2017 CEQA Guidelines, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans.

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

The Project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

The proposed Project would not conflict with standards established by the Alameda County Transportation Commission (ACTC) for designated roads and highways, a regional transportation plan, or other agency plans. The Project site is not located in an area where vertical or horizontal mixing of air is substantially limited. Some study area intersections would result in increased level of service due to intersection delay. However, the Project's trip generation would be 109 AM peak hour trips and 117 PM peak hour trips (refer to Section 3.17, Transportation, for additional discussion); therefore, the Project's contribution to peak hour traffic volumes at intersections in the vicinity of the Project site would be well below 44,000 vehicles per hour. As such, the proposed Project would not result in localized CO concentrations that exceed State or federal standards, and this impact would be less than significant.

c. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? ***(Less-Than-Significant Impact)***

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

According to the BAAQMD, a project would result in a significant impact if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one

million, an increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient $PM_{2.5}$ increase greater than 0.3 micrograms per cubic meter ($\mu g/m^3$). A significant cumulative impact would occur if the Project, in combination with other projects located within a 1,000-foot radius of the Project site, would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100.0 in one million, an increased non-cancer risk of greater than 10.0 on the hazard index (chronic), or an ambient $PM_{2.5}$ increase greater than 0.8 $\mu g/m^3$ on an annual average basis. Impacts from substantial pollutant concentrations are discussed below.

The Project site is in an urban area in close proximity to existing residential uses, the closest of which are located approximately 65 feet northeast of the Project site across Fifth Street. These uses could be exposed to diesel emission exhaust during the construction period. The City requires the implementation of diesel particulate matter controls, which are required by COA: Air Quality – Diesel Particulate Matter Controls During Construction, to reduce potential health risks to sensitive receptors during Project construction.

In compliance with COA: Air Quality – Diesel Particulate Matter Controls During Construction, to estimate the potential cancer risk from Project construction equipment exhaust (including diesel particulate matter), a dispersion model was used to translate an emission rate from the source location to a concentration at the receptor location (i.e., a nearby residential land use). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using CARB's exposure methodology, with the air dispersion modeling performed using the USEPA dispersion model AERMOD. The model provides a detailed estimate of exhaust concentrations based on site and source geometry, source emissions strength, distance from the source to the receptor, and site-specific meteorological data.

Table 3.C below identifies the results of the analysis utilizing the CalEEMod outputs, assuming the use of Tier 4 construction equipment. Model snap shots of the sources are provided in Appendix B.

Table 3.C: Inhalation Health Risks from Project Construction to Off-Site Receptors

Project Construction	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Maximally Exposed Individual	1.64	0.001	0.01
Threshold	**10.0**	**1.0**	**0.30**

Source: LSA (November 2021).
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
$\mu g/m^3$ = micrograms per cubic meter

As shown in Table 3.C, the risk associated with Project construction at the maximally exposed individual (MEI) would be 1.64 in one million, which would not exceed the BAAQMD cancer risk of 10 in one million. The total chronic hazard index would be 0.001, which would be well below the threshold of 1.0. The results of the analysis indicate that the total $PM_{2.5}$ concentration would be 0.01 $\mu g/m^3$, which would also not exceed the BAAQMD significance threshold of 0.30 $\mu g/m^3$. Therefore, with implementation of COA: Air Quality - Diesel Particulate Matter Controls During Construction,

construction of the proposed Project would not exceed BAAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations.

Once the Project is constructed, the Project would not be a source of substantial emissions. Therefore, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during Project construction or operation, and potential impacts would be less than significant.

d. Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? ***(Less-Than-Significant Impact)***

During construction, the various diesel-powered vehicles and equipment in use on site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the Project site. The potential for diesel odor impacts is therefore considered less than significant. Additionally, the proposed uses that would be developed within the Project site are not expected to produce any offensive odors that would result in frequent odor complaints. The proposed Project would not include sensitive receptors; therefore, odor impacts on the Project do not require further evaluation. This impact would be less than significant.

3.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The approximately 3.02-acre site is located in the highly urbanized West Berkeley area situated immediately east of the active UPRR railroad line and approximately one block east of Aquatic Park. Biological resources on the site mainly consist of those species of plants and animals that are tolerant of human disturbance and can survive in the urban environment. Existing buildings on the site may provide habitat for bats, some species of which find suitable roost sites and foraging sites even in the urban environment, especially with the large open space of Aquatic Park just west of the site. Due to the developed nature of the site, wildlife use is expected to be limited and native vegetation is absent. The following provides an overview of existing conditions related to biological resources at and within the vicinity of the site. Existing conditions were determined through a review of literature and previous field visits within the site vicinity, as further described below.

Literature Review. In 2016, LSA reviewed the CDFW California Natural Diversity Data Base (CNDDB);[13] the California Native Plant Society's Inventory of Rare, Threatened, and Endangered

[13] California Department of Fish and Wildlife. 2016. California Natural Diversity Database, commercial version dated July 31, 2016. Biogeographic Data Branch, Sacramento.

Plants of California;[14] and U.S. Fish and Wildlife Service's online database[15] for lists of special-status species that have occurred or could occur on or near the site 600 Addison Street Project site, which is located immediately adjacent to the Project site. In 2020, LSA again queried the CNDDB[16] for occurrences of special-status species within 5 miles of the 600 Addison Street Project site to account for new observations and changes in the regulatory status of species.

LSA biologists also reviewed a Citizens for East Shore Parks webpage entitled *Birds at the Albany Shoreline, Albany Neck and Bulb Bird Survey,* for records of migratory birds observed approximately 2 miles northwest of the Project site,[17] and the Alameda County Breeding Bird Atlas.[18]

Field Reconnaissance Surveys. LSA conducted a reconnaissance-level site survey of the nearby 600 Addison Street Project site and the surrounding area on July 29, 2016, to document the habitats and conditions in the area. LSA assessed habitats for special-status species based on the presence of suitable habitat and mapped the general location of potential jurisdictional areas. Potential roost sites for bats were searched for evidence of bat use or occupation. An LSA biologist conducted a brief follow-up visit to the 600 Addison site on April 30, 2020, to confirm that conditions on and around the site had not substantially changed.

Tree Surveys. The Project site was visited by a certified arborist in January and February 2021. For each tree survey, the arborist recorded the species name, trunk circumference at 4 feet from the ground, number of stems, and location. The results are presented in a Tree Assessment and Inventory Report[19] and an Arborist Report.[20]

Vegetation. Vegetation on the site consists of landscaped trees and ruderal vegetation primarily located along the western boundary of the West Block, adjacent to the UPPR line, and within the front and rear yards of the residential duplex (2212 Fifth Street) on the East Block. As detailed in the tree surveys, a total of four trees with diameters at breast height (dbh) of 6 inches or more were surveyed for the Project site. These trees represent three different species, including one coast redwood (*Sequoia sempervirens*), one lemon (*Citrus limon*) and two avocado (*Persea americana*).

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14 California Native Plant Society. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento. Website: www.cnps.org/inventory (accessed July 27, 2016).

15 U.S. Fish and Wildlife Service. 2016. *IPaC Trust Resources Report for 600 Addison Street, Berkeley, California*. Online species list, Sacramento Fish and Wildlife Office, Sacramento, California.

16 California Department of Fish and Wildlife. 2020. California Natural Diversity Database, commercial version dated April 30, 2020. Biogeographic Data Branch, Sacramento.

17 Citizens for East Shore Parks. 2020. Birds at the Albany Shoreline, Albany Neck and Bulb Bird Survey, Available online at: eastshorepark.org/wp-content/uploads/2016/12/Bird_Survey_Brochure_WEB.pdf (accessed January 11, 2021).

18 Richmond, B., H. Green, and D. Rice. 2011. *Alameda County Breeding Bird Atlas*. Golden Gate Audubon Society and Ohlone Audubon Society.

19 HortScience | Bartlett Consulting. 2021a. *Tree Assessment and Inventory Report. 701, 703, 705, 705A and 747 Bancroft, 716 Allston, 2200 and 2220 4th Street ("West Block"), Berkeley, CA.*

20 HortScience | Bartlett Consulting. 2021b. *Arborist Report. 2213 & 2221 4th St., 2212 and 2216 5th St. (Phase III), Berkeley CA.* February 17. January 22.

Wildlife. Wildlife observed at the nearby Aquatic Park includes American crow (*Corvus brachyrhynchos*), California gull (*Larus californicus*), rock pigeon (*Columba livia*), house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), Anna's hummingbird (*Calypte anna*), and California towhee (*Melozone crissalis*). One dead black rat (*Rattus rattus*) was observed in Bolivar Road.

The five most commonly observed species at the Albany neck and bulb approximately 2 miles northwest of the site were house finch (*Haemorhous mexicanus*), California towhee, white-crowned sparrow (*Zonotrichia leucophrys*), Anna's hummingbird, and golden-crowned sparrow (*Zonotrichia atricapilla)*. Other species that are common in the region and may occur on the site include American robin (*Turdus migratorius*), chestnut-backed chickadee (*Poecile rufescens*), ruby-crowned kinglet (*Regulus calendula*), Botta's pocket gopher (*Thomomys bottae*), fox squirrel (*Sciurus niger*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and Virginia opossum (*Didelphis virginiana*). The aforementioned species, in addition to several species of waterfowl and shorebirds, are known to occur west of the site in Aquatic Park. Birds often observed at the ponds within Aquatic Park include western grebe (*Aechmophorus occidentalis*), pied-billed grebe (*Podilymbus podiceps*), snowy egret (*Egretta thula*), great blue heron (*Ardea herodias*), American coot (*Fulica americana*), Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), scaup (*Aythya* spp.), ruddy duck (*Oxyura jamaicensis*), bufflehead (*Bucephala albeola*), and gulls (*Larus* spp.).

Special-Status Species. For the purposes of the analysis contained in this document, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act or California Endangered Species Act.
- Plant species assigned to California Rare Plant Ranks 1A, 1B, or 2.
- Animal species designated as Species of Special Concern or Fully Protected Species by the CDFW.
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA Guidelines.
- Species considered as a taxon of special concern by local agencies.

Special-status plant and wildlife species on and within the vicinity of the Project site are discussed below.

Special-Status Plants. A total of 22 special-status plant species has CNDDB occurrences within 5 miles of the Project site (Table 3.D). None of these plants are likely to occur at the Project site primarily because the site is nearly entirely comprised of surface pavements and structures, with limited ruderal vegetation. The limited undeveloped areas of the site also lack suitable vegetation communities or soil substrates (e.g., salt marsh, woodland, chaparral, alkaline substrates).

Table 3.D: Special-Status Plant Species Potentially Occurring in the Vicinity of the Project Site

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Amsinckia lunaris Bent-flowered fiddleneck	1B	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Elevation: 3-500 m. Blooms: March-June	No suitable habitat present onsite due to past disturbance and development.
Arctostaphylos pallida Pallid manzanita	FT, CE, 1B	Siliceous shale, sandy or gravelly soils in broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub. Elevation: 185 - 465 m. Blooms: December-March	No manzanitas were seen during surveys. Site is outside the known elevation range of the species. No suitable habitat present onsite due to past disturbance and development.
Astragalus tener var. *tener* Alkali milk-vetch	1B	Mesic alkaline and adobe clay soils in valley and foothill grassland, adjacent to vernal pools. Elevation: 1-60 m. Blooms: March-June	No suitable habitat present onsite due to past disturbance and development.
California macrophylla Round-leaved filaree	1B	Grassy openings in cismontane woodland, valley and foothill grassland with clay soils. Elevation: 15-1,200 m. Blooms: March-May	No suitable habitat present onsite due to past disturbance and development.
Calystegia purpurata ssp. *saxicola* Coastal bluff morning-glory	1B	Coastal bluff scrub, coastal dunes, coastal scrub, North Coast coniferous forest Elevation: 0 - 105 m. Blooms: April-September	No suitable habitat present onsite due to past disturbance and development.
Chloropyron maritimum subsp. *palustre* [=*Cordylanthus maritimus* subsp. *palustris*] Point Reyes salty bird's-beak	1B	Marshes and swamps (coastal salt). Elevation: 0-10 m. Blooms: June-October	No suitable habitat present onsite due to past disturbance and development.
Chorizanthe cuspidata var. *cuspidata* San Francisco Bay spineflower	1B	Coastal strand/dunes, coastal bluff scrub, coastal prairie, northern coastal scrub. Elevation: 3-215 m. Blooms: April-August	No suitable habitat present onsite due to past disturbance and development.
Cirsium andrewsii Franciscan thistle	1B	Mesic, sometimes serpentinite in broadleafed upland forest, coastal bluff scrub, coastal prairie, coastal scrub Elevation: 0-150 m. Blooms: March-July	No suitable habitat present onsite due to past disturbance and development.

Table 3.D: Special-Status Plant Species Potentially Occurring in the Vicinity of the Project Site

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Dirca occidentalis Western leatherwood	1B	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland Elevation: 25 - 425 m Blooms: January-April	No suitable habitat present onsite due to past disturbance and development. Site is outside the known elevation range of the species.
Extriplex joaquinana [=*Atriplex joaquiniana*] San Joaquin spearscale	1B	Seasonal alkali wetland, alkali sink/chenopod scrub, meadows and seeps, playas, valley and foothill grassland/alkaline. Elevation: 1-835 m. Blooms: April-October	No suitable habitat present onsite due to past disturbance and development.
Fritillaria liliacea Fragrant fritillary	1B	Often serpentinite, in cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Elevation: 3 - 410 m Blooms: February-April	No suitable habitat present onsite due to past disturbance and development.
Gilia millefoliata Dark-eyed gilia	1B	Coastal dunes. Elevation: 2-30 m. Blooms: April-July	This occurrence is based on a collection made in 1863 and is considered extirpated. No suitable habitat present onsite due to past disturbance and development.
Helianthella castanea *Diablo helianthella*	1B	Usually rocky, axonal soils. Often in partial shade in broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Elevation: 60-1,300 m. Blooms: March-June	No suitable habitat present onsite due to past disturbance and development
Holocarpa macradenia Santa Cruz tarplant	FT/CE/1B	Sandy-clay soil in coastal prairie, coastal scrub, and in valley and foothill grassland. Elevation: 10-220 m. Blooms: June-October	No suitable habitat present onsite due to past disturbance and development.
Horkelia cuneata subsp. *sericea* Kellogg's horkelia	1B	Closed-cone coniferous forest, maritime chaparral, coastal scrub, dunes and coastal sandhills; sandy or gravelly openings. Primarily found on old dunes and coastal sand hills. Elevation: 10-200 m. Blooms: April-September	No suitable habitat present onsite due to past disturbance and development.
Meconella oregano Oregon meconella	1B	Coastal prairie and coastal scrub. Elevation: 250-620 m. Blooms: March-April	No suitable habitat present onsite due to past disturbance and development. Site is outside the known elevation range of the species.

Table 3.D: Special-Status Plant Species Potentially Occurring in the Vicinity of the Project Site

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	1B	Grassy and moist areas (ephemeral drainages) in chaparral, coastal prairie and coastal scrub. Elevation: 15-160 m. Blooms: March-June	No suitable habitat present onsite due to past disturbance and development.
Sanicula maritima Adobe sanicle	1B	Moist clay or ultramafic soils in meadows and seeps, valley and foothill grassland, chaparral, and coastal prairie. Elevation: 18-190 m. Blooms: February-May	No suitable habitat present onsite due to past disturbance and development.
Streptanthus albidus ssp. *peramoenus* Most beautiful jewelflower	1B	Serpentinite in chaparral, cismontane woodland, valley and foothill grassland. Elevation: 95-1,000 m. Blooms: April-September	No suitable habitat present onsite due to past disturbance and development. Site is outside the known elevation range of the species.
Suaeda californica California seablite	FE/1B	Narrow high tide zone along sandy salt marsh edges or estuarine beaches. Elevation: 0-15 m. Blooms: July-October	No suitable habitat present onsite due to past disturbance and development.
Trifolium hydrophylum *[=Trifolium depauperatum* var. *hydrophylum]* Saline clover	1B	Marshes and swamps, valley and foothill grassland, vernal pools. Elevation: 0-300 m. Blooms: April-June	No suitable habitat present onsite due to past disturbance and development.
Viburnum ellipticum Oval-leaved virburnum	2B	Chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 100-1,160 m. Blooms: May-June	No suitable habitat present onsite due to past disturbance and development.

Source: California Natural Diversity Database (California Department of Fish and Wildlife, May 2020).

[a] Status:

Federal/State

FE = Federally Endangered

FT = Federally Threatened

CE = State-Listed as Endangered

CR = State Rare

CT = State-Listed as Threatened

Rare Plant Rank

1B = California Rare Plant Rank 1B: species considered rare or endangered in California and elsewhere.

2 = California Rare Plant Rank 2 – rare, threatened or endangered in California, but more common elsewhere.

Special-Status Wildlife. A total of 31 special-status wildlife species has CNDDB occurrences within 5 miles of the Project site (Table 3.E). The Project site provides habitat for only one special-status wildlife species: the pallid bat (*Antrozous pallidus*). This species is discussed in further detail below.

Bats. Pallid bats and other bat species could roost in the onsite buildings. Due to the presence of openings in the existing buildings on the Project site, and because they are currently vacant, bats could currently roost in them or may roost in them in the future.

Several other special-status wildlife species may occur in the salt marshes associated with San Francisco Bay, and/or the Berkeley Marina. However, these locations are separated from the Project site by I-80, UPRR tracks, other roads and barriers, and significant distance.

Riparian Habitat or Other Sensitive Natural Communities. The CNDDB contains occurrences for two sensitive natural communities, northern coastal salt marsh and valley needlegrass grassland, within 5 miles of the site. There is no salt marsh or valley needlegrass grassland on or adjacent to the site. There is no riparian habitat or other sensitive natural communities on the Project site.

State or Federally Protected Wetlands. Aside from a small yard at 2212 Fifth Street, the entire Project site is developed and covered with impervious surfaces and does not contain any State or federally protected wetlands.

a. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ***(Less-Than-Significant with Mitigation Incorporated)***

The proposed Project would result in the redevelopment of the Project site with new buildings ranging from three to five stories in height. However, the proposed Project would not directly or indirectly impact the lagoons or marsh habitat at Aquatic Park, due to distance and intervening development, including the active UPPR line. Waterfowl, shorebirds, and other birds that forage and/or nest in the park are habituated to disturbance caused by recreational activities and adjacent commercial activities and are likely to tolerate construction-related disturbance at the Project site. Once developed, the Project site would include new landscaped and common areas, providing more trees and vegetation on the site compared to existing conditions.

Table 3.E: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of the Project Site

Species	Status[a]	Habitat	Potential for Occurrence
Invertebrates			
Danaus plexippus Monarch butterfly –Winter colony sites	[b]	Winter colony sites occur along the California coast in wind protected tree groves (eucalyptus, Monterey pine, and cypress) where nectar and water resources are nearby.	Not expected to occur. Wintered approximately 2,500 feet south of the site at the west end of Carleton Street in adjacent Aquatic Park during the winter of 2015/2016. Clusters of hundreds of butterflies observed just east of the 14th hole of disc golf course. Overwintering has not been observed in Aquatic Park since.
Western bumble bee *Bombus occidentalis*	-/SCE [c]	Feeds upon nectar and pollen from a variety of plants species but is most adapted to native plant species. Nests in abandoned rodent burrows and bird nests. The flight period in California is from early February to late November, peaking in late June and late September. The flight period for workers and males is from early April to early November. Little is known about sites where queens overwinter. The species is currently restricted to high elevation sites in the Sierra Nevada and scattered coastal areas.	Not expected to occur. There are four presumed CNDDB extant occurrences within 5 miles of the Project site, but the most recent collections were in 1992. The site is landscaped and has few native nectar and pollen plants upon which the species relies.
Fish			
Archoplites interruptus Sacramento perch	-/CSC	Sloughs, slow moving rivers, and large lakes, including floodplain lakes, of the Central Valley	There are two CNDDB occurrences within 5 miles of the site, in Anza Lake and Jewel Lake. Although the species was not detected during surveys conducted in 2009,[d] it may be present in the ponds in Aquatic Park.
Acipenser medirostris Green sturgeon, Southern DPS	FT/CSC	Near shore marine waters, bays and estuaries, spawns in rivers in deep fast water over large cobbles, but also clean sand to bedrock. Southern most spawning population in the Sacramento River.	No suitable habitat is present on the site or in the adjacent Aquatic Park.
Eucyclogobius newberryi Tidewater goby	FE/CSC	Fresh to brackish shallow lagoons and lower stream reaches with still, but not stagnant, water.	No suitable habitat present. Considered extirpated from the adjacent Aquatic Park and San Francisco Bay,[e] but some small populations may persist.[f] Last collected in Aquatic Park in 1950.

Table 3.E: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of the Project Site

Species	Status[a]	Habitat	Potential for Occurrence
Oncorhynchus tshawytscha Chinook salmon (Sacramento River winter-run ESU[g])	FE/SE	Anadromous: spawns in Sacramento River system; occurs in small numbers in San Francisco Bay.	No suitable habitat is present on the site or in the adjacent Aquatic Park.
Oncorhynchus tshawytscha Chinook salmon (Central Valley spring-run ESU)	FT/-	Anadromous: spawns in Sacramento River system; occurs in small numbers in central San Francisco Bay.	No suitable habitat is present on the site or in the adjacent Aquatic Park.
Oncorhynchus mykiss Steelhead (central California coast ESU)	FT/-	Anadromous: spawns in small coastal streams and rivers. For spawning and egg development; requires cool, well-oxygenated water with moderate flow/velocity, small to medium gravel bottom material, and moderately deep, cool pools for refuge. Rearing sites are in tributaries.	No suitable habitat is present on the site or in the adjacent Aquatic Park.
Spirinchus thaleichthys Longfin smelt	FC[h]/ST	Spends its adult life in bays, estuaries, and nearshore coastal areas, and migrates into freshwater rivers and tidally influenced freshwater streams to spawn.	No suitable habitat is present on the site or in the adjacent Aquatic Park.
Amphibians			
Rana boylii Foothill yellow-legged frog	CE/CSC	Rarely leaves riparian corridors. Breed and deposit eggs shortly after streams reach peak flow in the spring after the winter rains end. Egg masses are typically attached to the downstream side or boulders or cobble, in a sunny, shallow section of low-gradient stream. Breeding rarely occurs in well-shaded (>90 percent closed canopy) sites.	No suitable habitat is present on the site or in the adjacent Aquatic Park.
Reptiles			
Emys marmorata Western pond turtle	-/CSC	Ponds, marshes, streams, and irrigation ditches with aquatic vegetation, deep water, basking sites, and adjacent uplands that are suitable for egg-laying (sandy banks or grassland).	No suitable habitat present. Not known to occur in the adjacent Aquatic Park.

Table 3.E: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of the Project Site

Species	Status[a]	Habitat	Potential for Occurrence
Masticophis lateralis euryxanthus Alameda whipsnake	FT/ST	Slopes and ravines where chaparral shrubs and oak trees form a vegetative mosaic with grasslands. Rock outcrops and an abundance of prey species such as western fence lizard.	No suitable habitat present.
Birds			
Aythya americana Redhead	-/CSC	Large, deep bodies of water; nests in freshwater emergent wetlands.	No suitable habitat present. May winter in small numbers along San Francisco Bay, such as the Emeryville Crescent; may briefly winter in Aquatic Park but does not breed in San Francisco Bay.
Pelecanus erythrorhynchos American white pelican	-/CSC	Forages over shallow inland waters and coastal marine habitats, nests on isolated islands or peninsulas.	No suitable habitat present. May forage and roost in Aquatic Park but does not breed in San Francisco Bay.
Pelecanus occidentalis californicus California brown pelican	FD/SD/CFP	Coastal areas; nests on islands.	No suitable habitat present. May forage and roost in the adjacent Aquatic Park but does not breed in San Francisco Bay.
Elanus leucurus White-tailed kite	-/CFP	Open grasslands, meadows, or marshes; require dense-topped trees or shrubs for nesting and perching.	No suitable habitat present. Nesting has been documented near the Berkeley Yacht Harbor approximately 0.8 miles northwest of the site. Also known to nest in residential neighborhoods in Berkeley.
Circus cyaneus Northern harrier	-/-/CSC	Nests in wet meadows and marshes, forages over open grasslands and agricultural fields.	No suitable habitat present. Limited foraging habitat present in Aquatic Park. Known to nest less than 1 mile north of site in northwestern corner of the Berkeley Meadow, but not in since 2002.
Falco peregrinus American peregrine falcon	FD/SD/CFP	A variety of open habitats including coastlines, mountains, marshes, bay shorelines, and urban areas. Nest on cliffs, bridges, and tall buildings. Feeds almost exclusively on birds.	Known to nest on the University of California campus, approximately 2.4 miles east of the Project site. May occasionally forage over the site, but no suitable nesting habitat is present on the site.
Laterallus jamaicensis coturniculus California black rail	ST/CFP	Salt marshes bordering larger bays, also found in brackish and freshwater marshes.	No suitable habitat is present on the site or in the adjacent Aquatic Park.

Table 3.E: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of the Project Site

Species	Status[a]	Habitat	Potential for Occurrence
Rallus longirostris obsoletus California Ridgway's rail	FE/SE/CFP	Tidal salt marshes with sloughs and substantial cordgrass (*Spartina* sp.) cover.	No suitable habitat is present on the site or in the adjacent Aquatic Park.
Sternula antillarum browni California least tern	FE/SE/CFP	Sandy beaches, alkali flats, hard-pan surfaces (salt ponds).	No suitable habitat nesting habitat present on the site or in the adjacent Aquatic Park. Forages west of site within the Emeryville Crescent portion of the San Francisco Bay.
Athene cunicularia Burrowing owl	-/-/CSC	Open, dry grasslands that contain abundant ground squirrel burrows.	No suitable habitat is present on the site. Not known to occur in the adjacent Aquatic Park, but wintering individuals have been observed at Cesar Chavez Park, North Basin Strip of the Berkeley Marina, the Berkeley Meadow,[i] and the Albany Plateau,[j] but no nesting confirmed to date.
Lanius ludovicianus Loggerhead shrike	-/CSC	Open grasslands and woodlands with scattered shrubs, fence posts, utility lines, or other perches; nests in dense shrubs and lower branches of trees.	No suitable habitat is present on the site. Limited suitable nesting and foraging habitat present in the adjacent Aquatic Park.
Geothlypis trichas sinuosa San Francisco common yellowthroat	-/CSC	Salt, brackish, and freshwater marshes; and riparian woodlands; nests on or near ground in low vegetation.	No suitable habitat is present on the site. Suitable nesting and foraging habitat present in the adjacent Aquatic Park.
Passerculus sandwichensis alaudinus Bryant's savannah sparrow	-/CSC	Nests and forages in salt marsh and adjacent ruderal habitat, and moist grasslands in the fog belt, but has also been found in dry grasslands back from the coast	No suitable habitat is present on the site. Limited suitable nesting and foraging habitat present in the adjacent Aquatic Park.
Melospiza melodia pusillula Alameda song sparrow	-/CSC	Tidal salt marshes dominated by pickleweed; nests primarily in pickleweed and marsh gumplant.	No suitable habitat is present on the site. Limited suitable nesting and foraging habitat present in the adjacent Aquatic Park.
Mammals			
Sorex vagrans halicoetes Salt marsh wandering shrew	-/CSC	Tidal marshes with abundant driftwood and other debris (for shelter and foraging).	No suitable habitat is present on the site or in the adjacent Aquatic Park.
Reithrodontomys raviventris Salt-marsh harvest mouse	FE/SE/CFP	Tidal salt marshes of San Francisco Bay and its tributaries. Requires tall, dense pickleweed for cover.	No suitable habitat is present on the site or in the adjacent Aquatic Park. Known to occur west of site on the far side of I-80 in the Emeryville Crescent marsh.

Table 3.E: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of the Project Site

Species	Status[a]	Habitat	Potential for Occurrence
Antrozous pallidus Pallid bat	-/CSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rockier areas for roosting. Needs roosts that protect bats from high temperature and disturbance.	Suitable roosting habitat may be present existing warehouse buildings on the project site based on their currently vacant status.
Nyctinomops macrotis Big free-tailed bat	-/CSC	Low-lying arid areas in Southern California. Needs high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	No habitat suitable present. Single occurrence within 5 miles of the site is based on an unknown number of specimens collected in 1916 at an unknown location in Berkeley.
Corynorhinus townsendii Townsend's big-eared bat	SCT/CSC	Riparian woodlands, wetlands, forest edges, and open woodlands; roosts in caves, mines, and old buildings.	No suitable roosting habitat present. May forage over the site or Aquatic Park. The single CNDDB occurrence within 5 miles of the site is based on specimens collected in 1938.

Source: California Natural Diversity Database (California Department of Fish and Wildlife, May 2020).

[a] Status:

Federal/State

FE = Federally Endangered — FT = Federally Threatened
FD = Federally Delisted — SE = State Endangered
ST = State Threatened — SCT = State Candidate Threatened
SCE = State Candidate Endangered — SD = State Delisted
CSC = California Species of Special Concern — CFP = California Fully Protected Species

[b] Winter colonies recognized by CDFW and USFWS as a sensitive species in California and tracked by the CNDDB, but do not have a special status.

[c] On June 12, 2019, the California Fish and Game Commission (Commission) voted to accept a petition from the Xerces Society (2018) to consider listing four subspecies of bumble bee, including the Western bumble bee (Bombus occidentalis), under CESA. As a result of this decision, the Western bumble bee is a state candidate endangered species; as such, it is temporarily afforded the same protection as state-listed threatened or endangered species.

[d] ENVIRON. 2010. *Berkeley Aquatic Park Fisheries and Benthic Ecology Impact Assessment*.

[e] Moyle, P.B. 2002. *Inland Fishes of California*. University of California Press, Berkeley.

[f] Leidy, R. A. 2007. *Ecology, Assemblage Structure, Distribution, and Status of Fishes in Streams Tributary to the San Francisco Estuary, California*. San Francisco Estuary Institute Contribution No. 530. San Francisco Estuary Institute, Oakland, California.

[g] ESU = Evolutionarily Significant Unit. The National Marine Fisheries Service considers an ESU a "species" under the Endangered Species Act.

[h] The federal Candidate status is for the San Francisco Bay-Delta Distinct Population Segment.

[i] LSA observations and East Bay Regional Park District observations 2009 and 2010 as cited in LSA Associates, Inc. 2002a. Habitat Issues - Animal Life section in Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District.

[j] Birds at the Albany Shoreline, Albany Neck and Bulb Bird Survey.

Special-status species that may nest in nearby Aquatic Park include Alameda song sparrow (*Melospiza melodia pusillula*; California Species of Special Concern), Bryant's savanna sparrow (*Passerculus sandwichensis alaudinus*; California Species of Special Concern), and San Francisco common yellowthroat (*Geothlypis trichas sinuosa*; California Species of Special Concern), but these species are unlikely to nest on or within 100 feet of the Project site due to the lack of suitable marsh, riparian, or undisturbed grassland habitat. The northern harrier (*Circus hudsonius*; California Species of Special Concern) has nested northwest of the site in the Berkeley Meadow[21] but this species is unlikely to nest at Aquatic Park and adjacent areas, including the Project site, due to the lack of suitable undisturbed expanses of grassland. The white-tailed kite (*Elanus leucurus*, California Fully Protected species) is known to nest in parks and residential neighborhoods in Berkeley, but the trees on the site are too small and isolated for the species to nest in. According to LSA biologists' personal observations, burrowing owls (*Athene cunicularia*; California Species of Special Concern) regularly winter approximately 1 mile northwest of the site at Cesar Chavez Park, but this species is not known to winter or nest in Aquatic Park or adjacent areas. Due to the large numbers of people recreating in Aquatic Park it is unlikely a burrowing owl would go undetected.

The tidewater goby (*Eucyclogobius newberryi*; Federally Endangered; California Species of Special Concern) historically occurred in the ponds in Aquatic Park, but the species is currently considered extirpated from the ponds at Aquatic Park and the San Francisco Bay.[22] There is a low potential for Sacramento perch (*Archoplites interruptus*; California Species of Special Concern) to occur in the ponds at Aquatic Park. Water in the park periodically has low dissolved oxygen concentrations, which is not favorable to sustaining fish populations.[23] Therefore, the Project would have no adverse effect on Sacramento perch or other fishes in Aquatic Park. As further detailed in Section 3.10 Hydrology and Water Quality, the Project sponsor would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the C.3 Stormwater Technical Guidance[24] to detail the Best Management Practices (BMPs) to be implemented as part of the Project. The Project would comply with all applicable NPDES regulations, including the Construction General Permit, COA: Stormwater Requirements and MRP. Construction and operational BMPs would be implemented to reduce pollutants of concern in stormwater runoff from the Project site. Additionally, groundwater dewatering would comply with the requirements of the City's Toxics Management Division to ensure that dewatering activities do not introduce pollutants into surface waters. Compliance with existing regulations would ensure that potential impacts related to additional sources of polluted runoff that could reach the lagoons of Aquatic Park would be less than significant.

A population of wintering Monarch butterflies (*Danaus plexippus*;) was recorded in November 2015, overwintering in clusters of hundreds in eucalyptus trees approximately 0.5 miles south of the Project site, just east of the 14th hole of the disc golf course at the west end of Carleton Street. This species has a State rank of S2S3, which means it is between imperiled and vulnerable in California.

21 California Department of Fish and Wildlife. 2016, op. cit.

22 U.S. Fish and Wildlife Service. 2005. Recovery Plan for the Tidewater Goby (*Eucyclogobius newberryi*), Portland, Oregon: U.S. Fish and Wildlife Service.

23 Berkeley, City of. 2012a. *Aquatic Park Improvement Program Draft Environmental Impact Report, Section 4.2 Biological Resources*.

24 Clean Water Program. 2017. C.3 Stormwater Technical Guidance, Version 6.0, October.

Overwintering sites are tracked by the CNDDB. The monarch butterflies that overwintered in Aquatic Park chose the site despite nearby human disturbance (i.e., active railroad tracks, in a busy park, less than 0.25 miles from I-80). Other nearby overwintering sites have included eucalyptus trees at UC Berkeley's Richmond Field Station, the Gill Tract, Albany Hill, and the San Leandro Golf Course. Overwintering monarch butterfly populations have declined by over 95 percent since the 1980s.[25] The cause of this decline is likely due to some combination of habitat loss, insecticides, climate change, parasites, disease, and predators. The proposed Project would not include the removal of any trees the monarchs are known to have overwintered in. Therefore, the proposed Project would have a less-than-significant impact related to monarch butterflies.

Construction activities would result in the removal of trees and structures that could be used by nesting birds. If conducted during the nesting season (February 1 to August 31), such activities could directly impact nesting birds. Construction-related disturbance (e.g., noise, vehicle traffic, personnel working adjacent to nesting habitat) could also indirectly impact nesting birds by causing adults to abandon nests in nearby trees or other vegetation, resulting in nest failure and reduced reproductive potential. However, development projects that require a Use Permit are required to comply with the following COA that addresses these potential impacts:

> ***COA: Avoid Disturbance of Nesting Birds.*** Initial site disturbance activities, including vegetation and concrete removal, shall be prohibited during the general avian nesting season (February 1 to August 31), if feasible. If nesting season avoidance is not feasible, the applicant shall retain a qualified biologist to conduct a preconstruction nesting bird survey to determine the presence/absence, location, and activity status of any active nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the Migratory Bird Treaty Act and the California Fish and Game Code, nesting bird surveys shall be performed not more than 14 days prior to scheduled vegetation and concrete removal. In the event that active nests are discovered, a suitable buffer (typically a minimum buffer of 50 feet for passerines 250 feet for raptors) shall be established around such active nests and no construction shall be allowed inside the buffer areas until a qualified biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest). No ground-disturbing activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between August 31 and January 31.

The proposed Project would increase the amount of reflective glass material in the area through the introduction of a new three-story, approximately 45-foot-tall building on the West Block. The proposed five-story parking garage on the East Block is not anticipated to include reflective glass materials on the exterior façades. Birds generally do not see glass, so they fly into it, causing injury

[25] Western Association of Fish and Wildlife Agencies. 2019. *Western monarch butterfly conservation plan, 2019–2069*. Version 1.0.

and mortality. Annually, it is estimated that between 365 and 988 million birds are killed by window collisions in the United States.[26] An increase in the amount of glass and the increased height of the building on the West Block would increase the risk of birds colliding with windows that face west, towards Aquatic Park. In addition, at night, during spring and fall bird migrations when inclement weather occurs, birds can be attracted to lighted structures, although this is less common within developed urban environments. The majority of bird collisions occur during daytime hours.

The City of Berkeley considers the size and location of proposed new building construction within the City and applies applicable project-specific conditions related to bird safe building standards where necessary. The USFWS provides guidance and best practices for the use of building glass, lighting, and landscaping infrastructure and design. In addition, a local agency with shoreline along San Francisco Bay, the City and County of San Francisco, has adopted Standards for Bird Safe Buildings,[27] which specifically identify expanses of uninterrupted glazed building segments of 24 square feet or larger as a hazard to birds. Due to the Project site's proximity to Aquatic Park, the following mitigation measure, which incorporate relevant measures from the City's bird safe conditions applied to other development projects within sensitive areas, is required to ensure that the potential for bird strikes is reduced to the extent feasible. Implementation of Mitigation Measure BIO-1 would reduce potential window strikes of birds to a less-than-significant level.

Mitigation Measure BIO-1: The Project sponsor shall implement applicable measures identified in the City's project-specific bird safe building standards and the U.S. Fish and Wildlife Service's best practices for reducing bird strikes with buildings.[21] Specifically, and at a minimum, windows of the proposed buildings shall include external film and/or glass coverings designed to reduce bird strikes. Such measures shall incorporate one or more of the following glazing options for 90 percent of the windows on the west facing building façade, or a lesser amount if appropriate and agreed to by a qualified biologist; 100 percent of all glass balcony elements shall include the same treatments:

- Glass that reflects the ultraviolet light, such as "Ornilux;"
- Glass which has photovoltaic cells embedded such as "IQ Glass," or "Voltalux;"
- Dichroic glass;
- Fritted glass such as Viracon silk-screen;
- Etched glass;
- Translucent glass such as "Profilit;" or
- Film.

26 U.S. Fish and Wildlife Service. 2016. Division of Migratory Bird Management. *Reducing Bird Collisions With Buildings And Building Glass Best Practices*. July.

27 City and County of San Francisco. 2020. *Design Guide: Standards for Bird-Safe Buildings*. Available online at: sfplanning.org/sites/default/files/resources/2019-09/Design%20Guide%20Standards%20for%20Bird%20Safe%20Bldgs_Final.pdf (accessed January 11, 2021).

In addition, all exterior lighting included as a part of the proposed project shall light downwards instead of towards the sky, interior lights shall be turned off at night and limited to required security lighting during all times of the year. Furthermore, interior plantings shall be located away from any untreated windows where birds may see them and attempt to fly into them.

The proposed building treatments and window glazing shall be incorporated into the Final Design Plans and submitted to the City of Berkeley Planning Department for review and approval by a qualified biologist prior to approval of Final Design by the Design Review Committee.

Onsite buildings may contain suitable openings for bats such as pallid bats and various myotis species. Demolition of structures while bats are present could result in loss of the roost and impacts to bats. Implementation of the following mitigation measures would reduce potential impacts to a less-than-significant level.

Mitigation Measure BIO-2a: Prior to the initiation of demolition activities occurring during the spring, summer, or fall months (March 1 through November 30), the Project sponsor shall retain a qualified biologist to conduct a presence/absence survey to evaluate the site for the occurrence of bats and bat roosts. The surveys shall be scheduled to allow sufficient time to implement mitigation if bats are found during the survey. The Project sponsor shall submit a memorandum with the demolition permit application identifying the qualified biologist retained to conduct the survey and the date of the survey. A second memorandum detailing the findings shall be prepared by the qualified biologist and submitted to the City after completion of the survey.

Mitigation Measure BIO-2b: If a bat roost is found in any onsite buildings, the species of bat using the roost shall be identified. If the roost is occupied by common species and is not used as a maternity roost, as determined by a qualified biologist, then methods to encourage the bats to leave the roost or to prevent them from returning to the roost shall be implemented prior to roost removal. A mitigation plan shall be developed by the qualified biologist to specify the methods to be used and the timing of the activities. These methods could include removal of roosting sites during the time of day the roost is unoccupied or the installation of one-way doors, allowing the bats to leave the roost but not to re-enter. This mitigation plan shall be submitted to the City for review and approval prior to the initiation of demolition or tree removal activities.

Mitigation Measure BIO-2c: If only common species are observed during the survey of the site and the site is not found to be used as a maternity roost, the Project sponsor shall retain a qualified biologist to conduct preconstruction surveys for bat roosts in existing buildings prior to construction activities. The survey shall take place no more than 30 days prior to construction/demolition/removal activities. Preconstruction surveys shall be repeated if demolition or construction activities are delayed more than 30 days.

Mitigation Measure BIO-2d: If special-status bats (e.g., pallid bat) are found onsite, and the roost would be disturbed or destroyed during development, an artificial roost shall be provided. The roost shall be constructed and placed onsite or at a City- and CDFW-approved off-site mitigation area prior to removal of the original roost. Materials from the roost site shall be salvaged, when feasible, to be used in the construction of artificial roosts. A mitigation plan specifying the construction details and siting of the structure shall be prepared by the qualified biologist and approved by the City and CDFW prior to removal of the existing roost. The Project sponsor shall provide a secure source of funding for the monitoring of the artificial roost for a period of 5 years and for implementing actions to remediate the artificial roost if it does not attract bats. A report documenting the implementation of the plan shall be provided to the City and CDFW within one month of completion of the artificial roost. Annual monitoring reports shall be provided to the City and CDFW by the Project sponsor by November 30 of each year, for the 5-year period. The mitigation plan shall be completed and implemented prior to the issuance of the demolition permit.

Mitigation Measure BIO-2e: Removal of maternity roosts for any species of bats either common or special-status shall be coordinated with CDFW prior to removal. Maternity roosts for any species of bat, either common or special status, shall not be demolished until a qualified biologist has determined that the young are able to fly independently of their mothers.

With implementation of the above COA and mitigation measures, implementation of the proposed Project would result in less-than-significant impacts to special-status wildlife species, including special-status and common bird species that are present within the immediate vicinity of Aquatic Park.

b. Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ***(No Impact)***

The proposed Project would not adversely affect any riparian habitat, which is absent from the site. Northern coastal salt marsh (a baylands habitat) is the only special-status natural community that

the CNDDB lists within 5 miles of the site. Northern coastal salt marsh is not present at the Project site and would not be affected by the proposed Project. Therefore, there would be no impact to riparian habitats or sensitive natural communities.

c. Would the Project have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ***(No Impact)***

As previously described, aside from a small yard associated with the residential duplex at 2212 Fifth Street, the entire Project site is developed and covered with impervious surfaces and does not contain any State or federally protected wetlands. Therefore, the proposed Project would have no impact related to State or federally protected wetlands.

d. Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ***(Less-Than-Significant with Mitigation Incorporated)***

The Project site is not located within a migratory wildlife movement corridor. Furthermore, most of the species that likely use the site are "generalists" that are adept at moving through urban landscapes. However, trees, shrubs, other vegetation, and structures have the potential to support nests of many common native bird species. All native birds and their nests, regardless of their regulatory status, are protected by California Fish and Game Code. If conducted during the breeding season (February through August), vegetation removal and other demolition or construction activities could directly impact nesting birds by removing trees and/or vegetation, or structures that support active nests. Implementation of COA: Avoid Disturbance of Nesting Birds would ensure that potential impacts to nesting birds would be less than significant. In addition, potential operation period impacts to special-status and common bird species present within the vicinity of the site would be reduced to a less-than-significant level with implementation of Mitigation Measure BIO-1.

Although no bats have been observed on the project site, the buildings on the site appear to contain suitable openings for bats and these structures, especially if they remain abandoned, could attract roosting bats. All maternity bat roosts, regardless of the species' status, are protected as sensitive habitat. Impacts to maternity roosting sites for bats would be considered significant. Demolition of buildings while bats are present could result in loss of the roost and impacts to bats. Implementation of Mitigation Measures BIO-2a through BIO-2f would reduce potential impacts to other roosting bats to a less-than significant level.

e. Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ***(Less-Than-Significant Impact)***

BMC Section 12.44.020[28] protects certain trees, and the City's Coast Live Oak Tree Ordinance[29] restricts removal of certain coast live oaks within the City. The proposed Project would not include the removal of any protected trees or coast live oak trees.[30,31] Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources, and this impact would be less than significant.

f. Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? ***(No Impact)***

The Project area is not subject to any adopted habitat conservation plan or natural community conservation plan. Therefore, the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional, or State habitat conservation plan and no impact would occur.

28 BMC Section 12.44.020: It unlawful for any person to cut, trim, remove, mutilate, injure or in any way impair the growth of any tree, shrub or plant being or growing in or on any public property within the City, or to cause or permit the same to be done. Provided, however, that in the event that any person desires permission to cut, trim, remove or in any way impair the natural growth of any such tree, shrub or plant, application shall first be made to the Director of Recreation and Parks for a permit therefor. Upon receipt of such application, the Director of Recreation and Parks may cause an inspection to be made and may thereafter issue or refuse to issue a permit for such work. Provided, further, that whenever it is deemed necessary by the Director of Recreation and Parks, he may require the work specified in said application, or any part thereof, to be done under his supervision, and the cost of such supervision shall be borne by the applicant if so determined by the Director of Recreation and Parks.

29 Coast Live Oak Tree Ordinance (Ordinance No. 6,905 N-S): a) A moratorium is declared on the removal of any single stem coast live oak tree of a circumference of 18 inches or more or any multi-stemmed coast live oak with an aggregate circumference of 26 inches or more at a distance of four feet up from the ground; b) Any pruning of a coast live oak that is excessive and injurious (removal of more than one-fourth of the functioning leaf, stem, or root system in any 24 month period) to the tree is prohibited; and c) an exception may be made if the City Manager, or his designee, finds that the protected tree is a danger to life or limb due to the condition of the tree, or is in danger to property, and that the only mitigation would be removal of the tree.

30 HortScience | Bartlett Consulting. 2021a, op. cit.

31 HortScience | Bartlett Consulting. 2021b, op. cit.

3.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	☐	☐	☒	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

*a. Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? **(Less-Than-Significant Impact)***

For a cultural resource to be considered a historical resource (i.e., eligible for listing in the California Register of Historical Resources [California Register]), it generally must be 50 years or older. Under CEQA, historical resources can include pre-contact (i.e., Native American) archeological deposits, historic-period archeological deposits, historic buildings, and historic districts.

To identify potential historical resources on the project site: (1) a Cultural Resources Evaluation[32] was prepared, which included a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System, as well as an archeological field survey of the site; and (2) a Historical Resources Evaluation (HRE) was prepared to determine whether the existing buildings on the project site would be eligible for listing in the California Register.[33] The analysis in this section is based on these studies.

Historic Architectural Resources. CEQA Guidelines Section 15064.5(b) states that a proposed project may have a significant effect on the environment if it would create "…an effect that may cause a substantial adverse change in the significance of a historical resource." Specifically, substantial adverse changes include "…physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired." As previously described, the proposed project would include the demolition of the existing buildings on the project site and the construction of a new R&D building and parking garage. The HRE found that the existing warehouse buildings at 701, 703, 705, 705A, and 747 Bancroft Way and the single-family duplex at 2212 Fifth Street would not be eligible for designation as a City of Berkeley Landmark or Structure of Merit and would not be eligible for listing on the California Register. Therefore, none of the buildings on the Project site are considered historical resources for the purposes of CEQA and impacts to historic architectural resources would be less than significant.

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[32] Archeo-Tec Consulting Archaeologists. 2021. *Cultural Resources Evaluation for the 787 Bancroft Project, Alameda County, California.* May.

[33] LSA. 2022. *Historical Resources Evaluation, TheLAB Project, Berkeley, Alameda County, California*. February.

NWIC Records Search. A search of the NWIC database indicates that there are no previously recorded archeological cultural resources at the Project site. The two closest archeological cultural resources to the Project site are CA-ALA-307 and CA-ALA-390. These archeological cultural resources are described below.

- **CA-ALA-307 (West Berkeley Shellmound—Berkeley City Landmark #227):** The West Berkeley Shellmound (the "Shellmound"), which the State has assigned a trinomial of CA-ALA-307 and the City has designated City Landmark #227, is recorded north of University Avenue, one block north of the Project site. There are two "official" boundaries of CA-ALA-307: the more inclusive boundary recognized by the State Office of Historic Preservation, as indicated on the NWIC's cultural resource site locations mapping, and the City's Landmark boundary for the Shellmound. The State's boundary for CA-ALA-307 extends from just west of Second Street to just west of Fifth Street; the north and south boundary extends from just north of Hearst Avenue to University Avenue on the south. The City's Landmark designation for the resource encompasses a rectangular area bound by University Avenue on the south, Hearst Avenue on the north, Second Street on the west, and Fourth Street on the east.

  In its original condition, the Shellmound was a large ovate mound located on the north bank of Strawberry Creek, in proximity to the stream's entrance to San Francisco Bay. In 1949, archaeologist Arnold Pilling prepared an Archaeological Site Survey Record for the Shellmound – based on Nels Nelson's survey information compiled in the first decade of the 20th century – and stated that the site was "between Hearst and University streets and between 2nd and 4th streets."[34]

  Intensive investigation of the Shellmound took place in the mid-20th century. By this time, however, most of the Shellmound had been systematically demolished by development and related ground disturbance. Shellmound materials were scattered throughout the surrounding area as agricultural fertilizer and for road construction and paving. As a result, the original conditions of the Shellmound's exact boundaries were never properly defined. Based on Wallace and Lathrap's estimates, the original mound dimensions were 350 by 600 feet, with its long axis paralleling Strawberry Creek; however, when investigated by UC Berkeley in 1950, only a 45- by 100-foot portion of the site remained.[35]

  On February 7, 2000, the Berkeley Landmarks Preservation Commission voted to designate the Shellmound as Berkeley City Landmark #227.[36] Due to its listing in the California Register of Historical Resources and status as a City Landmark, the Shellmound is a "historical resource" as defined in the CEQA Guidelines (Section 15064.5(a)).

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34 Sonoma State University. 1949. Anthropological Studies Center. Archaeological Site Record for Site Trinomial CA-ALA-307.

35 Ibid.

36 Berkeley Landmarks Preservation Commission. 2000. *Notice of Decision – February 7, 2000*. Meeting notes within property file for 701 University Avenue on file at Berkeley Architectural Heritage Association, Berkeley, California.

- **CA-ALA-390:**This cultural resource consists of a precontact archeological site. Originally recorded in 1977 by archaeologist Peter Banks, the site occupies several city blocks south of University Avenue and west of Fifth Street. Banks described CA-ALA-390 as "A partially destroyed occupation site with an approximately 100 m x 250 m area of well-developed midden and a more extensive area with a sparse trace of shell midden."[37]

The proposed Project would consist of demolition of the existing buildings on the project site and the construction of new buildings, all of which would require ground-disturbing activities. Should project excavation unearth intact archeological deposits, a substantial adverse change to a historical resource would occur due to the partial or complete destruction of the resource. This destruction would undermine the integrity of the resource, such that it would no longer be eligible for listing in the California Register. As such, ground-disturbing activities could have a substantial adverse change on buried archeological deposits that qualify as historical resources, as defined in CEQA Guidelines Section 15064.5, and could materially impair pre-contact archeological deposits. However, implementation of the City's COAs related to the accidental discovery of potential archeological resources would ensure that this impact would be less than significant.

> ***COA: Archaeological Resources.*** (*Ongoing throughout demolition, grading, and/or construction*). Pursuant to CEQA Guidelines section 15064.5(f), "provisions for historical or unique archeological resources accidentally discovered during construction" should be instituted. Therefore:
>
> A. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist, historian or paleontologist to assess the significance of the find.
> B. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified professional would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Berkeley. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by the qualified professional according to current professional standards.
> C. In considering any suggested measure proposed by the qualified professional, the project applicant shall determine whether avoidance is necessary or feasible in light of factors such as the uniqueness of the find, project design, costs, and other considerations.
> D. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation measures for cultural resources is carried out.
> E. If significant materials are recovered, the qualified professional shall prepare a report on the findings for submittal to the Northwest Information Center.

[37] Sonoma State University. 1977. Department of Anthropology. Archaeological Site Survey Record for Site CA-ALA-390. August 20.

b. Would the Project cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5? ***(Less-Than-Significant Impact)***

Pursuant to CEQA Guidelines Section 15064.5(c)(1), "When a project will impact an archeological site, a lead agency shall first determine whether the site is an historical resource." Those archeological sites that do not qualify as historical resources shall be assessed to determine if they qualify as "unique archeological resources" pursuant to California Public Resources Code Section 21083.2. Archaeological cultural resources identified during Project construction shall be treated by the City—in consultation with a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology—in accordance with the City's standard COA for accidental discovery of archeological resources as identified above in Section 3.5.a. With implementation of these measures, impacts to archeological resources would be less than significant.

c. Would the Project disturb any humans remains, including those interred outside of formal cemeteries? ***(Less-Than-Significant Impact)***

No human remains have been identified at the Project site. However, numerous Native American burials and disarticulated skeletal remains have been identified to the north of the Project site.[38]

Holocene-age landforms, which have a potential to contain Native American archeological deposits, including human burials, underlie Project site fill. Any human remains encountered during Project-related ground-disturbing activities would be treated in accordance with California Health and Safety Code Section 7050.5 and Public Resources Code 5097.98, as described below.

Section 7050.5 of the California Health and Safety Code states that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendent (MLD) to inspect the site, and the MLD shall recommend the proper treatment of the remains and associated grave goods.

Section 5097.98 of the Public Resources Code states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Section 7050.5, shall immediately notify those persons (i.e., the MLD) it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or

[38] Wallace, William J., and Donald W. Lathrap. 1975. *West Berkeley (CA-Ala-307): A Culturally Stratified Shellmound on the East Shore of San Francisco Bay*. Contributions of the Archaeological Research Facility, University of California, Berkeley no 29. Archaeological Research Facility, Department of Anthropology, University of California, Berkeley.

preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site. Additionally, development projects that require a use permit are required to comply with the following COA that addresses these potential impacts:

> ***COA: Human Remains.*** (*Ongoing throughout demolition, grading, and/or construction*). In the event that human skeletal remains are uncovered at the Project site during ground-disturbing activities, all work shall immediately halt, and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

Implementation of the appropriate procedures required under State law and by COA: Human Remains for the treatment of Native American remains would ensure that descendant communities have significant input in the treatment and final disposition of human remains, if encountered at the Project site. With these regulations and Project conditions in place, the Project would have a less-than-significant impact on human remains, including those interred outside of formal cemeteries.

3.6 ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

*a. Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation? **(Less-Than-Significant Impact)***

Construction Energy Use. The anticipated construction schedule assumes that the proposed Project would be built over a period of 12 to 15 months, beginning in May 2023 and ending in December 2024. The proposed Project would require demolition, grading, site preparation, and building activities during construction.

Construction of the proposed Project would require energy for the manufacture and transport of building materials, preparation of the site for grading activities, and building construction. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. In order to increase energy efficiency on the site during Project construction, the Project would restrict equipment idling times to 5 minutes or less and would require construction workers to shut off idle equipment, as required by COA: Public Works – Implement BAAQMD-Recommended Measures During Construction. Energy usage on the Project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources.

Operational Energy Use. Typically, the consumption of energy during the operation of a project is associated with fuel used for vehicle trips and natural gas use and energy use. However, the proposed Project would not increase the demand for natural gas as the proposed buildings would be designed to be all-electric and would not include the use of any natural gas systems, consistent with the City's 2019 Prohibition on Natural Gas Ordinance.

In 2018, Senate Bill (SB) 100 was passed, which has committed California to generate all electricity from carbon free sources by 2045. The all-electric building design would result in decreasing emissions as California's grid becomes cleaner, and once the grid consists of 100 percent renewable generation sources, the building would have zero operational emissions associated with electricity usage. With all-electric building construction and compliance with the building code requirements, operation of the proposed Project would not result in an increase in the consumption of electricity or natural gas derived from non-renewable resources.

Energy consumption was estimated for the proposed Project using default energy intensities by building type in CalEEMod. Electricity estimates associated with the proposed Project are shown in Table 3.D. In addition, the proposed Project would result in energy usage associated with gasoline to fuel Project-related trips. Based on the CalEEMod analysis, the proposed Project would result in approximately 2,254,665 VMT per year. The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 mpg in 1980 to 22.2 mpg in 2019.[39] Therefore, using the average fuel economy estimates for 2019, the proposed Project would result in the consumption of approximately 101,561 gallons of gasoline per year. Table 3.F, below, shows the estimated potential increased electricity and gasoline demand associated with the proposed Project.

Table 3.F: Estimated Annual Energy Use of Proposed Project

Land Use	Electricity Use (kWh per year)	Gasoline (gallons per year)
Research & Development	736,886	74,885
General Light Industry	195,058	26,676
Parking Structure	507,644	0
Parking Lot	10,864	0
Total	**1,450,452**	**101,561**

Source: LSA (October 2021).

As shown in Table 3.F, the estimated potential increased electricity demand associated with the proposed Project is 1,450,452 kilowatt-hours (kWh) per year. In 2020, California consumed approximately 279,510 gigawatt-hours (GWh) or 279,510,007,246 kilowatt-hours (kWh).[40] Of this total, Alameda County consumed 10,247 GWh or 10,247,410,444 kWh.[41] Therefore, electricity demand associated with the proposed Project would only be approximately 0.01 percent of Alameda County's total electricity demand. In addition, the proposed Project would be designed to achieve LEED Silver equivalence and would include PV solar panels on the rooftops of the proposed buildings, as well as various other sustainable features, which would help to reduce electricity demand.

In addition, the proposed Project would result in energy usage associated with gasoline to fuel Project-related trips. As shown above in Table 3.F, vehicle trips associated with the proposed Project would consume approximately 101,561 gallons of gasoline per year. In 2015, vehicles in California consumed approximately 15.1 billion gallons of gasoline.[42] Therefore, gasoline demand generated by

[39] U.S. Department of Transportation (DOT). "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: www.bts.dot.gov/bts/bts/content/average-fuel-efficiency-us-light-duty-vehicles (accessed October 2021).

[40] California Energy Commission. 2021. Energy Consumption Data Management Service. Electricity Consumption by County. Website: www.ecdms.energy.ca.gov/elecbycounty.aspx (accessed September 2021).

[41] Ibid.

[42] California Energy Commission. 2017. California Gasoline Data, Facts, and Statistics. Available online at: www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics (accessed September 2021).

vehicle trips associated with the proposed Project would be a minimal fraction of gasoline and diesel fuel consumption in California. In addition, as further discussed in Section 3.3.a, Air Quality, and Section 3.17, Transportation, given the location of the Project and proposed improvements, including implementation of the proposed TDM Plan[43] and provision of EV charging spaces and infrastructure consistent with the requirements of BMC Section 19.37, the proposed Project would facilitate use of alternative and cleaner modes of transportation. Therefore, given the location of the Project and proposed improvements, implementation of the Project would not result in a substantial increase in electricity, natural gas, or transportation-related energy, such that it would result in a wasteful, inefficient, or unnecessary consumption of energy resources. This impact would be less than significant.

*b. Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? **(Less-Than-Significant Impact)***

In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy policy report for electricity, natural gas, and transportation fuels every two years. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the lowest cost to the environment and energy sources. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles and associated infrastructure needs, and encouraging urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The most recently adopted CEC energy report is the 2020 Integrated Energy Policy Report. The 2020 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The 2020 Integrated Energy Policy Report covers a broad range of topics, including implementation of Senate Bill 350, integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas (in response to Senate Bill 1383), updates on Southern California electricity reliability, natural gas outlook, and climate adaptation and resiliency.

As indicated above, energy usage on the Project site during construction would be temporary in nature. Once operational, energy usage associated with the proposed Project would be relatively small in comparison to the State's available energy sources. In addition, the proposed Project would be designed to achieve LEED Silver equivalence and would include PV solar panels on the rooftops of the proposed buildings, as well as various other sustainable features. Therefore, because the Project's total impact to regional energy supplies would be minor, the proposed Project would not conflict with California's energy conservation plans as described in the CEC's 2020 Integrated Energy Policy Report. In addition, as discussed in Section 3.8, Greenhouse Gas Emissions, the proposed Project would be consistent the City's CAP, commitment to carbon neutrality by 2045, and the

[43] Fehr & Peers. 2021, op. cit.

Climate Emergency declaration. Thus, as shown above, the Project would avoid or reduce the inefficient, wasteful, and unnecessary consumption of energy and the proposed Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. This impact would be less than significant.

3.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☐	☒
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

The information presented in this section is based on data and findings provided in the Geotechnical Investigation prepared for the R&D building proposed for the West Block[44] and the Geotechnical Investigation prepared for the parking garage proposed for the East Block,[45] unless otherwise noted.

The California Geological Survey (CGS) has mapped Seismic Hazard Zones that delineate areas susceptible to liquefaction that require additional investigation to determine the extent and magnitude of potential ground failure. According to the CGS, the Project site is located within a Seismic Hazard Zone for liquefaction.[46] The Seismic Hazards Mapping Act requires that site-specific geotechnical investigations be conducted that identify the hazard and provide recommendations prior to permit approval for most developments designed for human occupancy within the Zones of Required Investigation. In addition, as specified under Policy S-14 in the Disaster Preparedness and Safety Element of the City of Berkeley General Plan,[47] soil investigation and/or geotechnical reports

44 Rockridge Geotechnical, 2021a. *Geotechnical Investigation, Proposed Life Science Building, 787 Bancroft Way, Berkeley, California*. April 13.

45 Rockridge Geotechnical, 2021b. *Final Report, Proposed Parking Structure, 2221 Fourth Street, Berkeley, California*. March 4.

46 California Geological Survey, 2003. *Seismic Hazard Zones; Oakland West Quadrangle*. February 14.

47 City of Berkeley. 2001. *City of Berkeley General Plan*.

in conjunction with development and/or redevelopment would be required on sites within designated hazard zones such as areas with high potential for soil erosion, landslide, fault rupture, liquefaction and other soil-related constraints.

Furthermore, the City of Berkeley has adopted the 2019 California Building Code (Title 24, California Code of Regulations), with local amendments, which provides for stringent construction requirements for projects in areas of high seismic risk. The design and construction are required to conform with, or exceed, current best standards for earthquake resistant construction in accordance with the 2019 California Building Code (or more recent applicable code) and with the generally accepted standards of geotechnical practice for seismic design in Northern California.

a. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Landslides? ***(No Impact)***

The California Supreme Court concluded in its *CBIA v. BAAQMD* decision that "CEQA generally does not require an analysis of how existing environmental conditions will affect a project's future users or residents." With this ruling, CEQA no longer considers the impact of the environment on a project (such as the impact of existing seismic hazards on new project occupants) to be an environmental impact, unless the project could exacerbate an existing environmental hazard. The proposed Project would not change existing seismic hazards and, therefore, would not exacerbate existing hazards related to surface fault rupture and seismic ground shaking. As such, the following discussions of seismic hazards are provided for informational purposes only.

Fault Rupture. Surface fault rupture occurs when the ground surface is broken due to fault movement during an earthquake. Fault rupture is generally expected to occur along known active fault traces. Areas susceptible to fault rupture are delineated by the CGS Alquist-Priolo Earthquake Fault Zones map and require specific geological investigations prior to development to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake-induced ground failure. The Project site is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone[48] or an active or potentially active fault. Therefore, the proposed Project would not adversely affect people and structures related to fault rupture.

Ground Shaking. Seismic ground shaking generally refers to all aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events.

[48] California Geological Survey, 1982. Special Studies Zones, Oakland West. January 1.

The Geotechnical Investigations prepared for the proposed Project characterize the potential level of ground shaking at the site to be strong to very strong during a large earthquake.[49,50]

The risk of ground shaking impacts is reduced through adherence to the design and materials standards set forth in the California Building Code and recommendations in a site-specific geotechnical investigation and/or geotechnical report (which is required by the Seismic Hazards Mapping Act and City of Berkeley General Plan).

The 2019 CBC requires that a site-specific geotechnical investigation be conducted and a geohazard report be prepared by a licensed professional for all proposed construction to evaluate geologic and seismic hazards, except for one-story, wood-frame and light-steel-frame buildings that are located outside of the Earthquake Fault Zones or Seismic Hazard Zones as shown in the CGS maps with less than or equal to 4,000 square feet in floor area. The purpose of a site-specific geotechnical investigation is to identify seismic and geologic conditions that may need to be addressed to ensure safety and adequate performance of improvements, such as ground shaking, liquefaction, differential settlement, and expansive soils. Based on the conditions of the site, the building code requires specific design parameters to ensure construction of buildings that will resist collapse during an earthquake. These design parameters do not protect buildings from all earthquake shaking hazards but are designed to reduce hazards to a manageable level. Requirements for the geotechnical investigation are presented in Chapter 16 "Structural Design" and Chapter 18 "Soils and Foundation" of the 2019 CBC.

The Geotechnical Investigations prepared for the proposed life science building and the parking garage are final design-level geotechnical investigations, which are in accordance with the seismic design provisions presented in the 2019 CBC and in Chapter 21 of American Society of Civil Engineers (ASCE) Standard 7-16.[51,52] Compliance with the 2019 CBC would ensure that the proposed Project would be designed and constructed in accordance with geotechnical recommendations to account for and withstand seismic and geologic hazards that could have adverse effects on the Project, thereby minimizing exposure of people and structures to substantial risk of loss, injury, or death during a large regional earthquake.

It is acknowledged that seismic hazards cannot be completely eliminated, even with site-specific geotechnical investigation/design and advanced building practices. However, the seismic design standards of the 2019 CBC are intended to prevent catastrophic building failure in the most severe earthquakes currently anticipated. Therefore, compliance with the existing building codes, described above, would ensure that potential impacts related to seismic ground shaking would be reduced to the extent feasible.

49 Rockridge Geotechnical. 2021a. Geotechnical Investigation, Proposed Life Science Building, 787 Bancroft Way, Berkeley, California. April 13.

50 Rockridge Geotechnical. 2021b. Final Report, Proposed Parking Structure, 2221 Fourth Street, Berkeley, California. March 4.

51 Rockridge Geotechnical. 2021a, op. cit.

52 Rockridge Geotechnical. 2021b, op. cit.

Seismic-Related Ground Failure and Liquefaction. The potential for different types of ground failure to occur during a seismic event is discussed below.

Liquefaction. Soil liquefaction is a phenomenon primarily associated with saturated soil layers located close to the ground surface. During ground shaking, these soils lose strength and acquire a "mobility" sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (silt and clay) may also liquefy. The Project site is located within a State-designated Liquefaction Hazard zone.

The Geotechnical Investigations prepared for the proposed life science building and the parking garage conclude that the underlying soils below the groundwater table are not susceptible to liquefaction because of the cohesion. Therefore, adverse effects related to liquefaction would occur.

Lateral Spreading. Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary or a creek bank. In a lateral spread failure, a layer of ground at the surface is carried on an underlying layer of liquefied material over a nearly flat surface toward a free face.[53] The lateral spreading hazard tends to mirror the liquefaction hazard for a site (when a free face is present). The Geotechnical Investigations prepared for the life science building and the parking garage conclude that the risk of lateral spreading is nil because the Project site is relatively flat and the nature of the soil underlying the Project site is cohesive. Therefore, adverse effects related to lateral spreading would occur.

Surface Settlement. The Geotechnical Investigations prepared for the proposed life science building and the parking garage conclude that zones within the clay layers at depths between 7 and 44 feet below ground surface may experience pore pressure buildup and strength loss, referred to as cyclic softening, from cyclic loading during a major earthquake event. Dissipation of the excess pore pressures in the clay after an earthquake would result in ground surface settlement. The potential total and differential ground settlement resulting from post-earthquake reconsolidation of the underlying clay following a Maximum Considered Earthquake[54] event are estimated to be on the order of ½ inch and ¼ inch across a horizontal distance of 30 feet, respectively.

The Geotechnical Investigation prepared for the proposed life science building suggests the proposed Project use deepened spread footings to reduce total and differential settlement. The Geotechnical Investigation prepared for the proposed parking garage suggests conventional spread footings bottomed on firm native soil and/or engineered fill to reduce total and

[53] Association of Bay Area Governments (ABAG). 2001. The REAL Dirt on Liquefaction, A Guide to the Liquefaction Hazard in Future Earthquakes Affecting the San Francisco Bay Area, February.

[54] A Maximum Considered Earthquake is an earthquake that is expected to occur once in approximately 2,500 years; that is, it has a 2-percent probability of being exceeded in 50 years.

differential settlement. Adherence to the requirements in the Geotechnical Investigations would ensure that surface settlement would be avoided and/or reduced to acceptable standards.

Cyclic Densification. Cyclic densification (also referred to as differential compaction) of non-saturated sand (sand above groundwater table) can occur during an earthquake, resulting in settlement of the ground surface and overlying improvements. The Geotechnical Investigations prepared for the proposed Project conclude that the potential for cyclic densification at the Project site is low because the soil encountered above the groundwater table is cohesive. Therefore, cyclic densification is not anticipated to occur.

In summary, adverse effects related to seismic-related ground failure would not occur.

Landslides. Seismically induced landslides occur as the rapid movement of large masses of soil on unstable slopes during an earthquake. The Seismic Hazard Zones mapped by CGS delineate areas susceptible to seismically induced landslides that require additional investigation to determine the extent and magnitude of potential ground failure. The Project site is relatively flat and according to CGS, the Project site is not located within a Seismic Hazard Zone for seismically induced landslides.[55] Therefore, no adverse effects related to landslides would occur.

b. Would the Project result in substantial soil erosion or the loss of topsoil? ***(Less-Than-Significant Impact)***

Soil erosion, which is discussed in detail in Section 3.10, Hydrology and Water Quality, could occur during Project grading and construction. As described in Section 3.10, compliance with the State Water Resources Control Board's Construction General Permit, including the preparation and implementation of Stormwater Pollution Prevention Plan, would ensure that the proposed Project would result in less-than-significant impacts related to erosion or loss of topsoil during construction of the proposed Project. During operation of the proposed Project, the Project site would be covered with buildings, pavement surfaces, and landscaping, which would minimize post-development erosion. Therefore, the potential impacts related to substantial erosion or loss of topsoil would be less than significant.

c. Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? ***(Less-Than-Significant Impact)***

Subsidence or Collapse. Subsidence or collapse can result from the removal of subsurface water resulting in either catastrophic or gradual depression of the surface elevation of a Project site. The Geotechnical Investigations prepared for the proposed Project conclude that the historic high groundwater is approximately 7 feet below ground surface at the site. As a result, temporary dewatering from excavations could be necessary during construction. The temporary dewatering of excavations (if needed), which is the only removal of subsurface water associated with the proposed Project, would be temporary and of relatively low magnitude. Additionally, land subsidence

[55] California Geological Survey, 2003. *Seismic Hazard Zones; Oakland West Quadrangle*. February 14.

generally does not occur in response to declines in shallow groundwater;[56] therefore, potential impacts related to subsidence or soil collapse would be less than significant.

Liquefaction or Lateral Spreading. As discussed above, the Geotechnical Investigations prepared for the proposed Project conclude that the underlying soils below the groundwater are not susceptible to liquefaction because of the cohesion. In addition, the risk of lateral spreading is nil because the Project site is relatively flat and the nature of the soil underlying the Project site is cohesive. Therefore, no impacts related to liquefaction or lateral spreading would occur.

Landslide. As discussed above, no impacts related to landslides or other slope stability hazards would occur.

Settlement. According to the Geotechnical Investigations prepared for the proposed Project, zones within the clay layers at depths between 7 and 44 feet below ground surface may experience pore pressure buildup and strength loss, referred to as cyclic softening, from cyclic loading during a major earthquake event. Dissipation of the excess pore pressures in the clay after an earthquake would result in ground surface settlement. The total and differential ground settlement resulting from post-earthquake reconsolidation of the underlying clay following a Maximum Considered Earthquake[57] event are estimated to be on the order of ½ inch and ¼ inch across a horizontal distance of 30 feet, respectively.

The Geotechnical Investigation prepared for the proposed life science building suggests deepened spread footings to reduce total and differential settlement. The Geotechnical Investigation prepared for the proposed parking garage suggests conventional spread footings bottomed on firm native soil and/or engineered fill to reduce total and differential settlement. Adherence to the requirements in the Geotechnical Investigations would ensure that potential impacts related to surface settlement would be less than significant.

In summary, the potential impacts related to unstable soils would be less than significant.

d. Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? ***(Less-Than-Significant Impact)***

Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent change of the soil volume. Plasticity indexes greater than 15 usually indicate a swelling problem may exist, and the percent swell generally increase with the plasticity indexes.[58]

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56 East Bay Municipal Utility District GSA and City of Hayward GSA. 2021. East Bay Plan Subbasin, Groundwater Sustainability Plan, Public Review Draft, September 17, Chapter 2, page 35.

57 A Maximum Considered Earthquake is an earthquake that is expected to occur once in approximately 2,500 years; that is, it has a 2-percent probability of being exceeded in 50 years.

58 Federal Highway Administration, 1977. An evaluation of expedient methodology for identification of potentially expansive soils. Report No. FHWA-RD-77-94, June.

The Geotechnical Investigation prepared for the proposed life science building suggests that the near-surface soil is highly to very highly expansive, with plasticity ranging from 34 to 43. Although its expansive potential is relatively low at its current moisture content, the expansive near-surface clay is subject to volume changes during seasonal fluctuations in moisture content, which could cause cracking of foundations and slabs. The Geotechnical Investigation recommends deepened spread footings to mitigate the potential impacts related to expansive soil. Adherence to the requirements in the Geotechnical Investigation would ensure that potential impacts related to expansive soils at the proposed life science building would be less than significant.

The Geotechnical Investigation prepared for the proposed parking garage required fill used for grading (which may consist of on-site soil or imported soil) to have a plasticity index lower than 15, and to be approved by the Geotechnical Engineer. Therefore, potential impacts related to expansive soils would be less than significant.

In summary, the potential impacts related to expansive soils at the Project site would be less than significant.

e. Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ***(No Impact)***

The proposed Project would not involve the use of septic tanks or alternative wastewater disposal systems; therefore, no impact would occur.

f. Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ***(Less-Than-Significant Impact)***

There are no identified paleontological resources or unique geologic features or sites within, or in the vicinity of, the Project site.[59] However, demolition, site preparation, and construction activities associated with the proposed Project could adversely impact previously unidentified fossils. Such fossils, if present, could be identified during deep excavation. However, development projects that require a use permit are required to comply with the following COA that addresses this potential impact. Implementation of this COA would ensure that this impact would be less than significant.

> ***COA: Paleontological Resources.*** (Ongoing throughout demolition, grading, and/or construction). In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards [SVP 1995,1996]). The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an

[59] City of Berkeley. 2010. West Berkeley Project Draft Environmental Impact Report. January.

excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the City for review and approval.

3.8 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF_6).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

a. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ***(Less-Than-Significant Impact)***

This section describes the proposed Project's construction- and operational-related GHG emissions and contribution to global climate change. The BAAQMD CEQA Guidelines do not address construction emissions thresholds; however, the BAAQMD encourages quantification and disclosure. Thus, construction emissions are discussed in this section.

Construction Activities. Construction activities associated with the proposed Project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from onsite construction activities would vary daily as construction activity levels change.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod, it is estimated that construction of the proposed Project would generate approximately 1,075.6 metric tons of CO_2e (refer to Appendix A for model outputs). Implementation of COA: Public Works – Implement BAAQMD-Recommended Measures During Construction, as identified in Section 3.3.b, Air Quality, would reduce GHG emissions by reducing the amount of construction vehicle idling and by requiring the use of properly maintained equipment. Therefore, Project construction impacts associated with GHG emissions would be less than significant.

Operational Emissions. Long-term GHG emissions are typically generated from mobile sources (e.g., cars, trucks and buses), area sources (e.g., maintenance activities and landscaping), stationary sources (e.g., backup generator), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions typically include project-generated vehicle trips to and from a project.

Following guidance from the BAAQMD, GHG emissions were estimated using CalEEMod. Table 3.D shows the calculated GHG emissions for the proposed Project. The proposed Project would generate minimal area-source emissions associated with activities such as landscaping and maintenance on the Project site.

The proposed Project would incorporate an all-electric building design, which would result in decreasing emissions as California's grid becomes cleaner, and once the grid consists of 100 percent renewable generation sources, the building would have zero operational emissions associated with electricity usage. While utilizing an all-electric building design would result in significant emissions savings, the proposed Project would be designed to achieve LEED Silver equivalence and would include PV solar panels on the rooftops of the proposed buildings, as well as various other sustainable features. Therefore, the proposed Project would generate minimal energy source emissions.

Trip generation rates for the Project were based on the Project's Transportation Impact Analysis,[60] which estimates that the proposed Project would generate approximately 610 net new trips per day. The proposed Project would also generate waste source emissions associated with energy generated by land filling and other methods of disposal related to transporting and managing Project generated waste. In addition, the proposed Project would generate water source emissions associated water supply and conveyance, water treatment, water distribution, and wastewater treatment.

The BAAQMD CEQA Guidelines specify quantitative GHG thresholds of significance for operational emissions. The thresholds set by the BAAQMD were calculated to achieve the State's 2020 target for GHG emissions levels (and not the Senate Bill [SB] 32 specified target of 40 percent below the 1990 GHG emissions level). The proposed Project would not be fully constructed and operational until 2024. Because the Project would begin operations in the post-2020 timeframe, the BAAQMD thresholds of 1,100 metric tons of CO_2e per year and 4.6 metric tons of CO_2e per year per service population, would not apply.

BAAQMD has yet to publish a GHG efficiency threshold for the 2030 target. A scaled threshold consistent with State goals detailed in SB 32, Executive Order B-30-15, and Executive Order S-3-05 to reduce GHG emissions by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, respectively was developed for 2024. Though the BAAQMD has not published a quantified threshold beyond 2020, this assessment uses a threshold of 924 metric tons of CO_2e per year or 3.9 metric tons of CO_2e per capita service population (employees plus residents) per year, which was calculated for the buildout year of 2024 based on the GHG reduction goals of SB 32 and Executive Order B-30-15.

As shown in Table 3.G, motor vehicle emissions are the largest source of GHG emissions for the Project at approximately 60 percent of the total. Energy use is the next largest category at 27 percent. Water use is about 10 percent of the total emissions. Additional calculation details are included in Appendix A.[61]

Therefore, the proposed Project would not have a significant effect on the environment if it would meet one of the following criteria:

- Result in operational-related GHG emissions of less than 924 metric tons of CO_2e a year; or
- Result in operational-related GHG emissions of less than 3.9 metric tons of CO_2e per capita service population (employees plus residents) per year.

[60] Fehr & Peers. 2021. TheLAB Transportation Impact Analysis. September.

[61] The emissions shown in Table 3.G were calculated using a trip generation of 1,090 new trips. As described in Section 3.17, Transportation, the net new project trips would be 610. Therefore, this analysis is conservative and likely overestimates operational project emissions.

Table 3.G: GHG Emissions (Metric Tons Per Year)

Emissions Source	Operational Emissions				
	CO_2	CH_4	N_2O	CO_2e	Percent of Total
Area Source Emissions	<0.1	<0.1	0.0	<0.1	0
Energy Source Emissions	327.8	<0.1	<0.1	330.3	27
Mobile Source Emissions	724.7	<0.1	<0.1	736.0	60
Stationary Source Emissions	9.2	<0.1	0.0	9.2	1
Waste Source Emissions	10.3	0.6	0.0	25.6	2
Water Source Emissions	56.9	2.3	0.1	129.8	10
Total Annual Emissions				**1,231.0**	**100**
BAAQMD Threshold				**924**	-
Exceed?				**Yes**	-
Service Population Emissions				**3.5**	-
BAAQMD Threshold				**3.9**	-
Exceed?				**No**	-

Source: LSA (October 2021).
BAAQMD = Bay Area Air Quality Management District
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

Model results indicate the Project would generate approximately 1,231.0 metric tons of CO_2e, which would exceed the numeric threshold of 924 metric tons CO_2e per year. However, the proposed Project is anticipated to have approximately 354 employees. The Project would not include residences and would not increase population. Therefore, the total service population (employees plus population) would be 354. The Project would result in per service population emissions of 3.5 metric tons CO_2e, which is below the service population threshold of 3.9 metric tons CO_2e per service population. Therefore, the Project would not generate greenhouse gas emissions that would have a significant effect on the environment and this impact would be less than significant.

*b. Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? **(Less-Than-Significant Impact)***

The City of Berkeley Climate Action Plan (CAP), adopted in 2009, outlines actions to implement in order to achieve a greenhouse gas reduction target of 80 percent below 2000 emission levels by the year 2050, consistent with the State's direction to local governments. In 2018, then-Governor Brown committed California to carbon neutrality by 2045, the Berkeley City Council resolved to become a "Fossil Fuel Free City," and the Council declared a Climate Emergency, all steps to signal the urgency of these ambitious goals and the need to act on climate threats in an equitable manner. The CAP actions and associated goals and policies, as well as the more recent Berkeley climate actions, relate to sustainable transportation and land use, buildings energy use, waste reduction and recycling, community outreach and empowerment, including equity, and preparing for climate change.

As further discussed in Section 3.3, Air Quality, and Section 3.17, Transportation, given the location of the Project and proposed improvements, including implementation of the proposed TDM Plan[62] and provision of EV charging spaces and infrastructure consistent with the requirements of BMC Section 19.37, the proposed Project would facilitate use of alternative and cleaner modes of transportation. Therefore, the proposed Project would not conflict with sustainable transportation and land use measures identified in the CAP.

In addition, the proposed Project would be designed to achieve LEED Silver equivalence and would include PV solar panels on the rooftops of the proposed buildings, as well as various other sustainable features. The proposed buildings would be designed to be all-electric and would not include the use of any traditional natural gas systems. Further, all landscaping would be planted and irrigated compliant with the State's Water Efficiency Landscape Ordinance and Bay-friendly landscape requirements. The proposed Project would be consistent with the CalRecycle Waste Diversion and Recycling Mandate which would reduce solid waste production by 75 percent and the Berkeley Green Code which also requires 100 percent of concrete, asphalt, and land clearing debris to be reused and recycled. Therefore, the proposed Project would not conflict with any of the building energy use or waste and recycling measures identified in the CAP. In addition, the following COAs would require implementation of a Construction Waste Management Plan and compliance with the Berkeley Green Code.

> ***COA: Construction and Demolition Diversion.*** Applicant shall submit a Construction Waste Management Plan that meets the requirements of BMC Chapter 19.37 including 100 percent diversion of asphalt, concrete, excavated soil and land-clearing debris and a minimum of 65 percent diversion of other nonhazardous construction and demolition waste.
>
> ***COA: Low-Carbon Concrete.*** The Project shall verify compliance with the Berkeley Green Code (BMC Chapter 19.37) including use of concrete mix design with a cement reduction of at least 25 percent.

Given the above, the proposed Project would be consistent the City's CAP, commitment to carbon neutrality by 2045, and the Climate Emergency declaration and would implement measures designed to reduce GHG emissions. In addition, the proposed Project would not generate emissions that would exceed the Project-level significance criteria established by the BAAQMD. The proposed Project would be subject to all applicable permit and planning requirements in place or adopted by the City. Therefore, the proposed Project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions. This impact would be less than significant.

62 Fehr & Peers. 2021, op. cit.

3.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

*a. Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **(Less-Than-Significant Impact)***

The proposed Project would result in the demolition of all existing structures and surface pavement on the Project site and redevelopment of the Project site with a new parking structure on the East Block and new structure on the West Block that would be used for light manufacturing and R&D.

Hazardous materials (e.g., oil, grease, fuels, paint) would be transported and used onsite for proposed construction activities. The operational phase of the proposed Project may also include storage and use of hazardous materials (e.g., R&D/light manufacturing related chemicals and wastes) on the Project site. In addition, equipment installed at the Project site, such as hydraulic elevator systems and backup generators, may involve the use and storage of hydraulic fluid, fuels, and other hazardous materials. The routine transport, use, or disposal of these hazardous materials could pose a potential hazard to construction workers and future employees working at the Project site as they would be handling the hazardous materials and could therefore be exposed through inhalation of vapors, direct contact with skin, or accidental ingestion. The routine transport, use, or disposal of these hazardous materials would not pose a significant hazard to the public or

environment unless the hazardous materials were accidentally spilled or released into the environment, as discussed in Section 3.9.b, below.

All future uses on the Project site would be subject to existing regulatory programs for hazardous materials. A Hazardous Materials Business Plan (HMBP), in compliance with BMC Section 15.12.040, must be submitted to the Berkeley Toxics Management Division (TMD) within 30 days if onsite hazardous materials exceed in aggregate any of the following: 55 gallons for liquids; 500 pounds for solids; or 200 cubic feet of gases at standard temperature and pressure. This requirement is outlined in COA: Toxics(D), below.

> ***COA: Toxics.*** The applicant shall contact the Toxics Management Division (TMD) at 1947 Center Street or (510) 981-7470 to determine which of the following documents are required and timing for their submittal:
>
> a. Environmental Site Assessments:
>
> 1. Phase I & Phase II Environmental Site Assessments (latest ASTM 1527-13). A recent Phase I ESA (less than 2 years old*) shall be submitted to TMD for developments for:
>
> - All new commercial, industrial and mixed-use developments and all large improvement projects.
>
> - All new residential buildings with 5 or more dwelling units located in the Environmental Management Area (or EMA).
>
> - EMA is available online at: http://www.cityofberkeley.info/uploadedFiles/IT/Level_3_-_General/ema.pdf
>
> 2. Phase II ESA is required to evaluate Recognized Environmental Conditions (REC) identified in the Phase I or other RECs identified by TMD staff. The TMD may require a third-party toxicologist to review human or ecological health risks that may be identified. The applicant may apply to the appropriate state, regional or county cleanup agency to evaluate the risks.
>
> 3. If the Phase I is over 2 years old, it will require a new site reconnaissance and interviews. If the facility was subject to regulation under Title 15 of the Berkeley Municipal Code since the last Phase I was conducted, a new records review must be performed.
>
> b. Soil and Groundwater Management Plan:
>
> 1. A Soil and Groundwater Management Plan (SGMP) shall be submitted to TMD for all non-residential projects, and residential or mixed-use projects with five or more dwelling units, that: (1) are in the Environmental Management Area (EMA) and (2) propose any excavations deeper than 5

feet below grade. The SGMP shall be site specific and identify procedures for soil and groundwater management including identification of pollutants and disposal methods. The SGMP will identify permits required and comply with all applicable local, state and regional requirements.

2. The SGMP shall require notification to TMD of any hazardous materials found in soils and groundwater during development. The SGMP will provide guidance on managing odors during excavation. The SGMP will provide the name and phone number of the individual responsible for implementing the SGMP and post the name and phone number for the person responding to community questions and complaints.

3. TMD may impose additional conditions as deemed necessary. All requirements of the approved SGMP shall be deemed conditions of approval of this Use Permit.

c. Building Materials Survey:

1. Prior to approving any permit for partial or complete demolition and renovation activities involving the removal of 20 square or lineal feet of interior or exterior walls, a building materials survey shall be conducted by a qualified professional. The survey shall include, but not be limited to, identification of any lead-based paint, asbestos, polychlorinated biphenyl (PCB) containing equipment, hydraulic fluids in elevators or lifts, refrigeration systems, treated wood and mercury containing devices (including fluorescent light bulbs and mercury switches). The Survey shall include plans on hazardous waste or hazardous materials removal, reuse or disposal procedures to be implemented that fully comply state hazardous waste generator requirements (22 California Code of Regulations 66260 et seq). The Survey becomes a condition of any building or demolition permit for the Project. Documentation evidencing disposal of hazardous waste in compliance with the survey shall be submitted to TMD within 30 days of the completion of the demolition. If asbestos is identified, Bay Area Air Quality Management District Regulation 11-2-401.3 a notification must be made, and the J number must be made available to the City of Berkeley Permit Service Center.

d. Hazardous Materials Business Plan:

1. A Hazardous Materials Business Plan (HMBP) in compliance with BMC Section 15.12.040 shall be submitted electronically at http://cers.calepa.ca.gov/ within 30 days if onsite hazardous materials exceed BMC 15.20.040. HMBP requirement can be found at http://ci.berkeley.ca.us/hmr/.

Worker health and safety is regulated at the federal level by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). OSHA regulations include training requirements for construction workers and a requirement that hazardous materials are accompanied by manufacturer's Safety Data Sheets (SDSs). The Federal Occupational Safety and Health Act of 1970 authorizes states to establish their own safety and health programs with OSHA approval. Worker health and safety protections in California are regulated by the California Department of Industrial Relations (DIR). The DIR includes the Division of Occupational Safety and Health (DOSH), which acts to protect workers from safety hazards through its California OSHA (Cal/OSHA) program. Cal/OSHA regulations include requirements for protective clothing, training, and limits on exposure to hazardous materials. California standards for workers dealing with hazardous materials are contained in CCR Title 8 and include practices for all industries (General Industrial Safety Orders), and specific practices for construction, and other industries. The routine transport, use, and disposal of hazardous materials at the Project site during construction activities would be required to comply with a project Health and Safety Plan (HASP) prepared in accordance with CCR Title 8, which would mitigate potential health hazards for construction workers from the routine transport, use, or disposal of hazardous materials to a less-than-significant level.

Because the proposed Project would result in soil disturbance greater than 1 acre, management of hazardous materials during construction activities would be subject to the requirements of the Stormwater Construction General Permit (CGP) issued by the State Water Resources Control Board, which requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes hazardous materials storage requirements. For example, construction site operators must store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

In 1990 and 1994, the federal Hazardous Material Transportation Act was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The United States Department of Transportation (USDOT) developed hazardous materials regulations, which govern the classification, packaging, communication, transportation, and handling of hazardous materials, as well as employee training and incident reporting. The transportation of hazardous materials is subject to DOT, Resource Conservation and Recovery Act (RCRA), and State regulations. The California Highway Patrol, the California Department of Transportation (Caltrans), and the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials.

Construction of the proposed Project would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that may be classified as hazardous waste. Hazardous wastes would be required to be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by DOT, RCRA, and State regulations.

Compliance with the regulations described above, including BMC Section 15.12.040, OSHA and Cal/OSHA regulations, CCR Title 8; the CGP; and DOT, RCRA, and State regulations, would ensure that the proposed Project would not create a significant hazard to the public or the environment associated with the routine transport, use, or disposal of hazardous materials by ensuring that these

materials are properly handled during construction of the proposed Project. Therefore, this impact would be less than significant.

b. Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ***(Less-Than-Significant Impact)***

Users of the completed Project could be exposed to hazards related to accidents that may occur on the nearby UPRR alignment which is located adjacent to the western boundary of the West Block of the Project site. This rail line is used by both cargo (which may transport hazardous materials and wastes) and passenger trains. An increase in vehicle traffic generated by the proposed Project would create more activity at the adjacent crossing at Bancroft Way and the nearby crossing at Addison Street; however, as further discussed in Section 3.17, Transportation, improvements that would be made in connection with the approved 600 Addison Street Project would ensure that safety standards are maintained once the Project is completed. In addition, a subsurface hazardous liquid pipeline is located within the rail right-of-way, west of the Project site. For security reasons, very little public information is available about this pipeline. As previously described in Section 3.7, Geology and Soils, CEQA no longer considers the impact of the existing environment on a project to be an environmental impact, unless the project could exacerbate an existing environmental hazard. The proposed Project would not change existing conditions related to this nearby pipeline. Neither construction nor operation of the Project would exacerbate the hazards associated with the rail alignment or the pipeline.

The public and/or the environment could be affected by the release of hazardous materials from the proposed Project into the environment, by: (1) exposing workers, the public, or the environment to potentially contaminated soil and groundwater during construction and/or operation of the Project, or (2) exposing workers, the public, or the environment to hazardous building materials (e.g., PCBs, lead paint, asbestos) during demolition of existing commercial structures. However, development projects that require a use permit are required to comply with COA, Toxics that addresses each of these potential impacts (see Section 3.9.a, above).

Onsite Hazardous Building Materials. Due to the age of the existing buildings on the Project site, hazardous building materials such as asbestos-containing materials (ACMs), lead-based paints (LBP), PCBs containing equipment/materials, and mercury containing devices may be present. Demolition activities could cause the release of hazardous building materials into the environment if hazardous building materials are present in the buildings and are not identified and abated prior to demolition activities.

COA: Toxics(C), as outlined above, requires that prior to approval of any permit for partial or complete demolition activities involving the removal of 20 square or lineal feet of interior or exterior walls, a building materials survey shall be conducted by a qualified professional. The survey shall include, but not be limited to, identification of any lead-based paint, asbestos, containing equipment, hydraulic fluids in elevators or lifts, refrigeration systems, treated wood and mercury containing devices (including fluorescent light bulbs and mercury switches). The survey shall include plans on hazardous waste or hazardous materials removal, reuse or disposal procedures to be implemented that fully comply with state hazardous waste generator requirements (22 California

Code of Regulations 66260 et seq). The survey becomes a condition of any building or demolition permit for the Project. Documentation evidencing disposal of hazardous waste in compliance with the survey shall be submitted to TMD within 30 days of the completion of the demolition. If asbestos is identified, BAAQMD Regulation 11-2-401.3 notification must be made and the BAAQMD Job Number (or "J Number") must be made available to the City of Berkeley Permit Service Center. Compliance with the requirements described above and outlined in COA: Toxics would ensure that potential impacts related to hazardous building materials would be less than significant.

Hazardous Soil and Groundwater Conditions. The Project site has been the subject of several environmental investigations and remediation activities have previously been performed at the West Block of the Project site. Unless indicated otherwise, the information presented below regarding past environmental investigations and remediation activities at the Project site was obtained from the Phase I Environmental Site Assessment (ESA)[63] prepared for the Project site and adjacent areas in February 2021.

Past operations at the Project site, including former pesticide mixing, resulted in the release of chlorinated pesticides (including aldrin, lindane, chlordane, dichlorodiphenyldichloroethane [DDD], and dieldrin), solvents, and petroleum hydrocarbons which have impacted soil and groundwater beneath 2220 Fourth Street on the West Block of the Project site. The previous onsite business operations historically used pentachlorophenol (PCP), kerosene, diesel, metals, hydrocarbon fuels, oils, lubricant, degreasers, cutting fluids, solvents, acids, bases, and dyes/paint intermediates. In 1984, approximately 80 cubic yards of pesticide impacted soils were excavated and removed from the 2220 Fourth Street property and the area was backfilled with imported soils. Following the soil removal action, the property was redeveloped with the existing building and a new concrete slab-on-grade floor was constructed as an engineered cap which fully covered the formerly unpaved area. The California Department of Toxic Substances Control (DTSC) originally provided regulatory oversight for this engineered cap, and then transferred this oversight to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board), which is currently providing regulatory oversight for the ongoing investigation and cleanup of the 2220 Fourth Street property. Residual contamination from past hazardous materials releases remains beneath the 2220 Fourth Street property at concentrations exceeding Environmental Screening Levels (ESLs) established by the Regional Water Board.

In 1984, a vending machine sales and service company that previously occupied the buildings at 701 to 705 Bancroft Way installed a 5,000-gallon underground storage tank (UST) in the southwest portion of the Project site to store gasoline for company vehicles. The UST was permitted and inspected by the Berkeley Fire Department and was removed in 1991. Environmental investigation of the former UST area was performed in 1992 and no petroleum hydrocarbon impacts to either soil or groundwater were identified in the vicinity of the former UST. In 1992, an additional investigation identified foundry material beneath the floor slab of the 703 Bancroft Way building. The soil and foundry material beneath this building contained metals at concentrations below hazardous waste thresholds, and remedial action for the foundry material was not performed. In 1993, investigative and remediation (excavation and disposal of hydrocarbon impacted soil) was performed near a

[63] Haley & Aldrich Inc. 2021a. ASTM Phase I Environmental Site Assessment, TheLAB Berkeley, Berkeley, California. February 19.

former compressor area in the southwest portion of the Project site. In 1995, a closure letter was issued by the City of Berkeley Emergency and Toxic Management Program (now Berkeley TMD) which indicated that confirmation sampling appeared to indicate that metals concentrations were consistent with background levels and the City of Berkeley had no further requirements at that time.

In 1987, the potential for a UST to be present beneath the former parking lot east and adjacent to the 2220 Fourth Street building was identified. A UST removal permit was obtained from Berkeley TMD and excavation of soils at the location of the suspected UST was conducted; however, a UST was not found. Soil samples were collected from the base of the excavation and from the associated stockpiled soil and impacts from petroleum hydrocarbons were detected primarily in the stockpiled soil. Berkeley TMD allowed the soil to be aerated onsite and used to backfill the excavation area. In 2013, Berkeley TMD transferred the leaking UST (LUST) case to the Regional Water Board.

The Phase I ESA included the review and summary of findings from several more recent environmental investigations performed at the Project site between 2015 and 2020. Relevant findings from these investigations include the following:

- There are chlorinated solvents in groundwater beneath the Project site from a regional groundwater plume and known or potential hazardous materials (e.g., petroleum hydrocarbons and solvents) releases were identified at the Project site and adjacent properties.[64]

- In 2019, soil vapor and indoor air sampling was performed at the Project site and adjacent areas. Concentrations of volatile organic compounds (VOCs) exceeding ESLs for commercial properties were detected in several soil vapor and indoor air samples collected across the West Block of the Project site. Concentrations of VOCs detected in soil vapor and indoor air samples collected from the East Block of the Project site were below ESLs for commercial properties.[65]

- In 2020, soil borings were advanced in the northern portion of the East Block where historical agricultural operations were identified and in the southwestern corner of the West Block adjacent to the former UST, within a former foundry operations area, and at an active auto mechanic and glass works facility. All detected analytes were below their respective commercial/industrial ESLs except for arsenic, which was attributed to naturally occurring background levels. Based on the soil results, additional remediation activities were not recommended for these investigated areas if the Project site were to remain a commercial/industrial property.[66]

The Phase I ESA indicated that staining was observed on the concrete floor slabs of various buildings at the Project site and stained soil was also observed in the unpaved alley on the east side of the 705 Bancroft Way building. The concrete slabs were observed to be in good condition, with no cracks or exposure to the subsurface, with the exception of the 703 Bancroft Way building, where several

64 Baseline Environmental Consulting. 2015. Phase I Environmental Site Assessment, Peerless Research and Community Development Project, Berkeley, California. April 6.

65 PES Environmental, Inc. 2019. Draft Limited Phase II Investigation (Draft Tables, Figures, and Boring Logs Only), Fourth and Fifth Streets, Berkeley, California. August.

66 Haley & Aldrich Inc. 2020. Limited Phase II Environmental Investigation Report, West Berkeley Project, Berkeley, California. January 3.

cracks were observed in the concrete slab floor. The Phase I ESA indicated that it is possible that releases of hazardous materials and/or petroleum products may have occurred through cracks in the building's foundation. The Phase I ESA recommended that if these buildings are demolished in the future, the underlying conditions should be inspected for signs of potential impacts and sampling performed as warranted in order to assess the subsurface environment for potential impacts. The Phase I ESA also indicated that given the age of the single residential building (1903) in the northeast corner of the Project site, there is a potential for a historical home heating oil UST to exist in the vicinity of the structure.

In October 2021, a Risk Management Plan (RMP)[67] was prepared for the West Block of the Project site. The RMP summarized findings from an August 2021 soil vapor investigation performed at the West Block of the Project site, which found concentrations of several VOCs exceeding soil vapor ESLs for commercial/industrial properties at one location near the suspected form UST at the 2220 Fourth Street property. ESLs were not exceeded in the other sample locations within the adjacent 747 Bancroft Way building except for chloroform, which was attributed to its presence in municipal tap water. The RMP outlined risk management procedures that would be implemented to manage potential risks associated with the impacted subsurface conditions at the Project Site. The risk management measures would include the following:

- Protection and maintenance of the existing cap and/or construction of a new engineered cap (surface parking lot) to prevent contact with pesticides impacted soil, or removal of the pesticides impacted soil.

- Mitigation of vapor intrusion risks including delineation and excavation of the soil vapor impact source area at the Project site believed to be located in the vicinity of the suspected former UST at the 2220 Fourth Street property, and installation of a 60-millimeter chemically resistant vapor barrier liner below the new concrete slab that would be constructed at 787 Bancroft Way.

- Preparation of a Site Management Plan after the final construction details for redevelopment the Project site are completed. The Site Management Plan would include an example Health and Safety Plan, soil management protocols (e.g., soil sampling protocols for on-site reuse or off-site disposal, contingency protocols for handling and managing impacted soil, procedures for screening soil and air during earthwork activities, import fill criteria, dust control plan, decontamination procedures); and a SWPPP.

- Post-redevelopment measures including groundwater monitoring, cap maintenance and monitoring, indoor air monitoring, and recording a Land Use Covenant (LUC) with Alameda County referencing the engineered cap and restricting the use of underlying shallow groundwater.

The RMP also indicates that if any existing groundwater monitoring wells cannot be incorporated into the proposed redevelopment design, they would be properly abandoned in accordance with permit requirements from the Berkeley TMD. Replacement groundwater monitoring wells would be

[67] Haley & Aldrich Inc. 2021b. Risk Management Plan, TheLAB West Block Redevelopment, 2220 Fourth Street, Berkeley, California. October 7.

proposed by an environmental professional, with their design and locations approved by the Regional Water Board, and the wells would be installed in accordance with permit requirements from the Berkeley TMD.

The proposed Project is located within the City's EMA.[68] These areas in the City are known or suspected to have groundwater contamination.[69] COA: Toxics(B) requires that an SGMP be prepared for all non-residential projects, and residential or mixed-use projects with five or more units, that: (1) are located within the EMA; and (2) propose any excavations deeper than 5 feet below grade. The proposed Project is a non-residential development within the EMA and would require excavation deeper than 5 feet below grade for construction of utilities and foundations; therefore, preparation of a SGMP would be required for the proposed Project.

According to COA: Toxics, the SGMP must be site-specific and include the following:

- Identify procedures for soil and groundwater management including identification of pollutants and disposal methods.
- Identify permits required and comply with all applicable local, State and regional requirements.
- Require notification to the City's TMD of any hazardous materials found in soils and groundwater during development.
- Provide guidance on managing odors during excavation.
- Provide the name and phone number of the individual responsible for implementing the SGMP and post the name and phone number for the person responding to community questions and complaints.

TMD may impose additional conditions as deemed necessary. All requirements of the approved SGMP would be conditions of approval of the requested Use Permit(s). Preparation and implementation of a SGMP in accordance with the requirements of COA: Toxics, and implementation of the measures identified in the RMP (including the preparation and implementation of a Site Management Plan) for the West Block under the oversight of the Regional Water Board would ensure that potential impacts associated with contaminated soil, soil vapor, and groundwater would be less than significant.

[68] Berkeley, City of. 2010. Environmental Management Area. Available online at: www.cityofberkeley.info/uploadedFiles/IT/Level_3_-_General/ema.pdf (accessed November 3, 2021).

[69] Berkeley, City of. 2021. Environmental Management Area Website. Website: www.ci.berkeley.ca.us/Planning_and_Development/Toxics_Management/Environmental_Management_Area.aspx (accessed November 3).

c. Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ***(Less-Than-Significant Impact)***

Black Pine Circle School, a private school located at 2027 Seventh Street, and Via Center, a private school located at 2126 Sixth Street, are less than 0.25 miles northeast the Project site. Rosa Parks Elementary School, a public school located at 920 Allston Way, and Nia House, a private preschool located at 2234 Ninth Street, are less than 0.25 miles east of the Project site. Compliance with federal, State, and local regulations for the management of hazardous materials as discussed in Section 3.9.a, above, preparation and implementation of a SGMP in accordance with the requirements of COA: Toxics, and implementation of the measures identified in the RMP (including the preparation and implementation of a Site Management Plan) for the West Block under the oversight of the Regional Water Board as discussed in Section 3.9.b, above, would ensure that potential impacts to nearby schools associated with hazardous materials emissions and use at the Project site would be less than significant.

d. Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ***(Less-Than-Significant Impact)***

The provisions of Government Code Section 65962.5 require DTSC, State Water Board, California Department of Health Services, and California Department of Resources Recycling and Recovery (formerly the California Integrated Waste Management Board) to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking underground storage tank (LUST) sites, and/or hazardous materials releases to the Secretary of Cal/EPA. The property located at 2220 Fourth Street, which is within the northwest portion of the Project site, is listed as a LUST site on the State Water Board's Geotracker database.[70] The Project site is therefore included on lists of hazardous materials release sites compiled pursuant to Government Code Section 65962.5.

As discussed in Section 3.9.b, above, the Project site has been the subject of several environmental investigations and remediation activities performed under oversight of regulatory agencies. Preparation and implementation of a SGMP in accordance with the requirements of COA: Toxics, and implementation of the measures identified in the RMP (including the preparation and implementation of a Site Management Plan) for the West Block under the oversight of the Regional Water Board would ensure that the Project would result in less than significant impacts to construction workers, the surrounding public, future site occupants, and the environment related to past releases of hazardous materials from the Project site into the environment.

[70] State Water Resources Control Board. 2021. Geotracker page for 2220 Fourth Street. Website: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101057 (accessed November 3).

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area? ***(No Impact)***

The Project site is located approximately 10 miles north of the Oakland International Airport, which is the nearest public airport. The Project site is not located within a public airport land use plan area or within 2 miles of a public use airport.[71] Therefore, the proposed Project would not result in a safety hazard to people working or residing in the area due to the proximity of an airport.

f. Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ***(Less-Than-Significant Impact)***

The proposed Project would be consistent with the policies outlined in the City of Berkeley General Plan's Disaster Preparedness and Safety Element and would not obstruct emergency evacuation routes.[72] University Avenue, Sixth Street, and Dwight Way are the designated emergency access and evacuation routes in the Project area. Ingress and egress to and from the Project site would be via Fourth Street and Bancroft Way. The proposed Project would not alter the existing roadway network with the exception that a crosswalk would be added between the East Block and West Block, and a parklet may be constructed along Fourth Street frontage of the West Block which would narrow the roadway slightly; however, the parklet would not obstruct existing traffic lanes. During construction the Project may require temporary closure of portions of adjacent streets. Compliance with traffic control requirements imposed by the City for the permitting of temporary closure of street areas would ensure that appropriate emergency access is maintained at all times during construction activities. Therefore, the proposed Project would not be expected to impair the function of nearby emergency evacuation routes and would have a less-than-significant impact on implementation of an adopted emergency response plan or emergency evacuation plan.

g. Would the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ***(No Impact)***

The Project site is in an urban area and is not within or adjacent to a wildland fire hazard area. Therefore, the proposed Project would not expose people or structures to a significant loss, injury or death involving wildland fires.

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71 Alameda County Community Development Agency. 2010. *Oakland International Airport, Airport Land Use Compatibility Plan*. December.

72 Berkeley, City of. 2001. Disaster Preparedness and Safety Element, April 23. Available online at: https://www.cityofberkeley.info/Planning_and_Development/Home/General_Plan_-_Disaster_Preparedness_and_Safety_Element.aspx (accessed November 3, 2021).

3.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i. Result in substantial erosion or siltation on- or offsite;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

*a. Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? **(Less-Than-Significant Impact)***

Existing Drainage Conditions. The Project site is located within the Strawberry Creek Watershed and is adjacent to the north and east boundary of the Potter/Derby Creek Watershed.[73] The dominant hydrologic features in the vicinity of the Project site are the lagoons of Aquatic Park, which include the Main Lagoon, Model Yacht Club Basin, and Radio Tower Pond, and cover about 68 acres of the park. The lagoons are mostly shallow, subtidal aquatic habitat with a sandy/muddy bottom, similar to adjacent portions of central San Francisco Bay. Under typical conditions, hydrology within the lagoons is strongly influenced by tidal hydrology, as the lagoons are directly and indirectly connected to Central San Francisco Bay.[74]

Stormwater runoff from the Project site is conveyed from roof downspouts and surface flow into adjacent streets and the unpaved railroad corridor adjacent to the west of the West Block. Stormwater runoff from the southern portion of the West Block is conveyed to Bancroft Avenue,

[73] Sowers, Janet M. 1993. Creek and Watershed Map of Oakland and Berkeley, The Oakland Museum of California. Website: explore.museumca.org/creeks/MapOak.html (accessed May 2020). Revised. 2000.

[74] Berkeley, City of. 2012. Aquatic Park Improvement Program Draft Environmental Impact Report.

where it is conveyed into the Aquatic Park Main Lagoon through street gutters and subsurface storm drains along Bancroft Avenue. Stormwater runoff from the East Block and the northern portion of the West Block is conveyed to the Strawberry Creek culvert through street gutters and subsurface storm drains.[75] Strawberry Creek is conveyed through a culvert beneath University Avenue which discharges to the north end of the Aquatic Park Main Lagoon and into San Francisco Bay to the west of the Main Lagoon.[76]

Regulatory Framework. Water quality in the State of California is regulated by the State Water Board and the nine Regional Water Quality Control Boards. The City of Berkeley is located in the jurisdiction of San Francisco Bay Regional Water Board. Section 303(d) of the Federal Clean Water Act (CWA) requires that states identify water bodies including bays, rivers, streams, creeks, and coastal areas that do not meet water quality standards and the pollutants that are causing the impairment. Total Maximum Daily Loads (TMDLs) describe the maximum amount of a pollutant that a water body can receive while still meeting established water quality standards. A TMDL requires that all sources of pollution and all aspects of a watershed's drainage system be reviewed and set forth action plans that examine factors and sources adversely affecting water quality and identify specific plans to improve overall water quality and reduce pollutant discharges into impaired water bodies. Central San Francisco Bay is listed as an impaired water body for several pollutants including pesticides (chlordane, DDT, and dieldrin), dioxins, furans, invasive species, mercury, PCBs, selenium, and trash in water. TMDLs have been established for mercury, PCBs, and selenium and will ultimately be prepared for other pollutants affecting the Bay.[77]

The National Pollutant Discharge Elimination System (NPDES) was created under the CWA and is regulated by the State Water Board in California to prohibit the discharge of pollutants to receiving waters unless the discharge is in compliance with NPDES permit requirements. NPDES requirements that would apply to both the construction-phase and the operation phase of the Project are described below.

The San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)[78] establishes beneficial water uses for waterways, water bodies, and groundwater within the region and is a master policy document for managing water quality in the region. The Central San Francisco Bay is listed in the Basin Plan as providing the beneficial uses of industrial service supply, industrial process supply, commercial and sport fishing, shellfish harvesting, estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habitat, water contact and noncontact recreation, and navigation. Berkeley Aquatic Park is listed in the Basin Plan as providing existing beneficial uses of estuarine habitat, fish migration, wildlife habitat, water contact and noncontact recreation, and the potential beneficial use of fish spawning. The Project site is located

75 Berkeley, City of. 2012. *Aquatic Park Improvement Program Draft Environmental Impact Report.*

76 Sowers, Janet M. 1993. Creek and Watershed Map of Oakland and Berkeley, The Oakland Museum of California. Website: explore.museumca.org/creeks/MapOak.html (accessed May 2020). Rev. 2000.

77 State Water Resources Control Board (State Water Board). 2018. Final 2018 California Integrated Report (Clean Water Act Section 303(d) List/305(b) Report). Available online at: www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html (Accessed September 27, 2021.

78 San Francisco Bay Regional Water Quality Control Board, 2017. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*. Incorporating all amendments as of May 4.

within the Santa Clara Valley Groundwater Basin, East Bay Plain Groundwater Subbasin. The East Bay Plain Subbasin is listed in the Basin Plan as providing the beneficial uses of municipal and domestic water supply, industrial process water supply, industrial service water supply, and agricultural water supply.

Construction. The Proposed Project includes demolition of the majority of existing onsite buildings and surface pavements and parking lots, excavation of up to 10,000 cubic yards of soil, construction of the R&D building and parking structure, and streetscape improvements along Fourth Street. Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, oils and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported via storm water runoff into receiving waters (i.e., the Berkeley Aquatic Park and Central San Francisco Bay).

During construction, the total disturbed soil area on the Project site would be approximately 3 acres. Because construction of the proposed Project would disturb greater than 1 acre of soil, the Project would be subject to the requirements of the State Water Board's NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Orders No. 2010-0014-DWQ and 2012-0006-DWQ) (Construction General Permit) and the City's COA: Stormwater Requirements, outlined below. Existing regulations require that a Notice of Intent be filed with the State Water Board via the Stormwater Multiple Application and Report Tracking System (SMARTS) in order to obtain coverage under the Construction General Permit for the proposed Project. In compliance with the requirements of the Construction General Permit, a SWPPP would be prepared, and construction Best Management Practices (BMPs) detailed in the SWPPP would be implemented during construction activities. A SWPPP identifies all potential pollutants and their sources, including erosion, sediments and constructions materials and includes a list of BMPs to reduce discharges of construction-related stormwater pollutants. A SWPPP includes a detailed description of controls to reduce pollutants and outlines maintenance and inspection procedures and is kept onsite for ongoing monitoring requirements. The SWPPP also requires a construction site monitoring program. Depending on a particular project's risk level, the monitoring program may include visual observations of site discharges, water quality monitoring of site discharges (pH, turbidity, and non-visible pollutants, if applicable), and receiving water monitoring (pH, turbidity, suspended sediment concentration, and bioassessment). The Construction General Permit requires that all dischargers develop a sampling and analysis strategy for monitoring non-visible pollutants in stormwater at any construction site where the discharge can cause or contribute to an exceedance of a water quality objective.

As discussed in Section 3.9 Hazards and Hazardous Materials, the Project site is impacted by pesticides in soil including chlordane and dieldrin. As discussed above, the water quality of Central San Francisco Bay is impaired by these pesticides; therefore, any additional discharge of these pesticides in stormwater runoff could contribute to the impairment and would be considered a violation of water quality standards. Sampling for pesticides in stormwater runoff would be required as part of the non-

visible pollutant monitoring program of the SWPPP as required by the Construction General Permit. A SWPPP would be included in the Site Management Plan to be prepared for the West Block of the Project site under the oversight of the Regional Water Board. Review of the SWPPP by the Regional Water Board and their oversight of contaminated soil disturbance during construction would ensure that appropriate BMPs and stormwater runoff monitoring would be implemented to protect water quality during construction.

As described in the Construction General Permit, construction BMPs would include, but not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site; and "Good Housekeeping" BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. In addition, provision C.6 of the Regional Water Board's Municipal Regional Permit (MRP, described further under *Operation* below) requires the City to implement a construction site inspection and control program at all construction sites, with follow-up and enforcement, to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. Inspections must confirm implementation of appropriate and effective erosion and other construction pollutant controls by construction site operators/ developers; and reporting must demonstrate the effectiveness of this inspection and problem solution. Compliance with the requirements of the Construction General Permit and the COAs, as outlined below, including incorporation of construction BMPs to target and reduce pollutants of concern in stormwater runoff and sampling for non-visible pollutants in stormwater runoff, would ensure that construction impacts related to violation of waste discharge requirements and water quality standards and degradation of water quality would be less than significant.

> ***COA: Stormwater Requirements.*** The applicant shall demonstrate compliance with the requirements of the City's National Pollution Discharge Elimination System (NPDES) permit as described in BMC Section 17.20. The following conditions apply:
>
> A. The Project plans shall identify and show site-specific Best Management Practices (BMPs) appropriate to activities conducted onsite to limit to the maximum extent practicable the discharge of pollutants to the City's storm drainage system, regardless of season or weather conditions.
>
> B. Trash enclosures and/or recycling area(s) shall be covered; no other area shall drain onto this area. Drains in any wash or process area shall not discharge to the storm drain system; these drains should connect to the sanitary sewer. Applicant shall contact the City of Berkeley and EBMUD for specific connection and discharge requirements. Discharges to the sanitary sewer are subject to the review, approval and conditions of the City of Berkeley and EBMUD.
>
> C. Landscaping shall be designed with efficient irrigation to reduce runoff, promote surface infiltration and minimize the use of fertilizers and pesticides that contribute to stormwater pollution. Where feasible, landscaping should be designed and operated to treat runoff. When and where possible, xeriscape and drought tolerant plants shall be incorporated into new development plans.

D. Design, location and maintenance requirements and schedules for any stormwater quality treatment structural controls shall be submitted to the Department of Public Works for review with respect to reasonable adequacy of the controls. The review does not relieve the property owner of the responsibility for complying with BMC Chapter 17.20 and future revisions to the City's overall stormwater quality ordinances. This review shall be [sic] conducted prior to the issuance of a Building Permit.

E. All paved outdoor storage areas must be designed to reduce/limit the potential for runoff to contact pollutants.

F. All onsite storm drain inlets/catch basins must be cleaned at least once a year immediately prior to the rainy season. The property owner shall be responsible for all costs associated with proper operation and maintenance of all storm drainage facilities (pipelines, inlets, catch basins, outlets, etc.) associated with the Project, unless the City accepts such facilities by Council action. Additional cleaning may be required by City of Berkeley Public Works Engineering Dept.

G. All private or public projects that create and/or replace 10,000 square feet or more of impervious surface must comply with Provision C.3 of the Alameda County NPDES permit and must incorporate stormwater controls to enhance water quality. Permit submittals shall include a Stormwater Requirement Checklist and detailed information showing how the proposed Project will meet Provision C.3 stormwater requirements, including a) Site design measures to reduce impervious surfaces, promote infiltration, and reduce water quality impacts; b) Source Control Measures to keep pollutants out of stormwater runoff; c) Stormwater treatment measures that are hydraulically sized to remove pollutants from stormwater; d) an O & M (Operations and Maintenance) agreement for all stormwater treatment devices and installations; and e) Engineering calculations for all stormwater devices (both mechanical and biological).

H. All onsite storm drain inlets must be labeled “No Dumping – Drains to Bay” or equivalent using methods approved by the City.

I. Most washing and/or steam cleaning must be done at an appropriately equipped facility that drains to the sanitary sewer. Any outdoor washing or pressure washing must be managed in such a way that there is no discharge or soaps or other pollutants to the storm drain. Sanitary connections are subject to the review, approval and conditions of the sanitary district with jurisdiction for receiving the discharge.

J. All loading areas must be designated to minimize “run-on” or runoff from the area. Accumulated wastewater that may contribute to the pollution of stormwater must be drained to the sanitary sewer or intercepted and pretreated prior to discharge to the storm drain system. The property owner

shall ensure that BMPs are implemented to prevent potential stormwater pollution. These BMPs shall include, but are not limited to, a regular program of sweeping, litter control and spill cleanup.

K. Sidewalks and parking lots shall be swept regularly to prevent the accumulation of litter and debris. If pressure washed, debris must be trapped and collected to prevent entry to the storm drain system. If any cleaning agent or degreaser is used, wash water shall not discharge to the storm drains; wash waters should be collected and discharged to the sanitary sewer. Discharges to the sanitary sewer are subject to the review, approval and conditions of the sanitary district with jurisdiction for receiving the discharge.

L. The applicant is responsible for ensuring that all contractors and sub-contractors are aware of and implement all stormwater quality control measures. Failure to comply with the approved construction BMPs shall result in the issuance of correction notices, citations, or a Project stop work order.

COA: Public Works.All piles of debris, soil, sand, or other loose materials shall be covered at night and during rainy weather with plastic at least one-eighth millimeter thick and secured to the ground.

COA: Public Works.The applicant shall ensure that all excavation takes into account surface and subsurface waters and underground streams so as not to adversely affect adjacent properties and rights-of-way.

COA: Public Works.The project applicant shall maintain sandbags or other devices around the site perimeter during the rainy season to prevent onsite soils from being washed off site and into the storm drain system. The project applicant shall comply with all City ordinances regarding construction and grading.

COA: Public Works.Prior to any excavation, grading, clearing, or other activities involving soil disturbance during the rainy season the applicant shall obtain approval of an erosion prevention plan by the Building and Safety Division and the Public Works Department. The applicant shall be responsible for following these and any other measures required by the Building and Safety Division and the Public Works Department.

COA: Public Works – Construction. Construction must comply with the State-wide general permit requiring owner to (1) notify the State; (2) prepare and implement a Stormwater Pollution Prevention Plan (SWPPP); and (3) monitor the effectiveness of the plan. Additional information may be found online at http://www.swrcb.ca.gov. As part of the permit submittal, the Public Works Department will need a) a copy of the "Notice of Intent" filed with the State Water Resources Control Board (SWRCB)/Division of Water Quality; b) the Waste Discharger Identification (WDID) number issued by the SWRCB for the project; c) a copy of the SWPPP prepared for

each phase of the project; and d) the name of the individual who will be responsible for monitoring the site for compliance to the approved SWPPP.

The Geotechnical Investigations prepared for the Project site concluded the historic high groundwater is approximately seven feet below ground surface at the Project site.[79, 80] The proposed 787 Bancroft building would require a maximum depth of excavation of approximately 4 feet, while the 2213 Fourth Street parking garage would require a maximum excavation depth of 6 feet. As a result, dewatering from excavations is not anticipated to be required; however, it is possible that temporary dewatering from isolated areas of deeper excavation (e.g., excavation for remediation of contaminated soil and groundwater) could be necessary during construction. Improper management and discharge of dewatering effluent into the storm drainage system could adversely affect water quality as contaminants and sediment may be present in the dewatering effluent.

The Construction General Permit allows non-stormwater discharge of dewatering effluent if the water is not contaminated and is properly filtered or treated, using appropriate technologies such as clarifier tanks or sand filters. If the dewatering activity is deemed by the Regional Water Board not to be covered by the Construction General Permit or other NPDES permit, and discharge of groundwater to the storm drain system is planned, then the discharger would be required to prepare a Report of Waste Discharge, and if approved by the Regional Water Board, be issued site-specific waste discharge requirements (WDRs) under NPDES regulations. Site-specific WDRs contain rigorous monitoring requirements and performance standards that, when implemented, ensure that receiving water quality is not substantially degraded. The discharge of dewatering effluent is authorized under the Construction General Permit if the following conditions are met:

- The discharge does not cause or contribute to a violation of any water quality standard.
- The discharge does not violate any other provision of the Construction General Permit.
- The discharge is not prohibited by the applicable Basin Plan.
- The discharger has included and implemented specific BMPs required by the Construction General Permit to prevent or reduce the contact of the non-stormwater discharge with construction materials or equipment.
- The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants.
- The discharge is monitored and meets the applicable numeric action levels.
- The discharger reports the sampling information in the annual report.

79 Rockridge Geotechnical, 2021a. *Geotechnical Investigation, Proposed Life Science Building, 787 Bancroft Way, Berkeley, California*. April 13.

80 Rockridge Geotechnical. 2021b. *Final Report, Proposed Parking Structure, 2221 Fourth Street, Berkeley, California*. March 4.

If any of the above conditions are not satisfied, the discharge of dewatering effluent is not authorized by the Construction General Permit. Groundwater dewatering effluent could also be discharge to the sanitary sewer, subject to EBMUD permit requirements, which would ensure that discharge standards are met through permit requirements for dewatering effluent testing and treatment.

As discussed in Section 3.9 Hazards and Hazardous Materials, the Project site is located within the City's mapped EMA, and soil and groundwater contamination are present beneath the Project site and adjacent areas. For development projects within the EMA where dewatering is anticipated, the City's Toxics Management Division has adopted specific requirements. Since dewatering activities can draw in contamination from outside areas, monitoring of the groundwater discharges may be required. The TMD may require dewatering and monitoring plans to ensure the discharge of clean water and the protection of the community from vapors or other health hazards. Additionally, where there is sufficient information indicating soil contamination is present, the TMD could require testing of excavation spoils and documentation of proper disposal.[81] The specific requirements for the proposed Project would be specified by the City as standard conditions of approval, as outlined in COA: Toxics (refer to Section 3.9, Hazards and Hazardous Materials), and at a minimum would require the preparation of a SGMP that would identify procedures for groundwater management. Compliance with the City of Berkeley requirements would ensure that contaminated groundwater is not discharged to surface water. Therefore, potential groundwater dewatering impacts related to violation of waste discharge requirements and water quality standards and degradation of water quality would be less than significant.

Infiltration of stormwater has the potential to affect groundwater quality in areas of shallow groundwater. As stated previously, the Geotechnical Investigations concluded that groundwater is anticipated to exist on the Project site at depths as shallow as approximately 7 feet below the existing ground surface. Therefore, due to the shallow groundwater table, stormwater may infiltrate during Project construction, potentially affecting groundwater quality given the direct path for pollutants to reach the groundwater table. Proposed construction BMPs, as required by the Construction General Permit and COA: Stormwater Requirements, would reduce infiltration of pollutants to groundwater during construction. Therefore, Project construction would not substantially degrade groundwater quality and this impact would also be less than significant.

Operation. The Project would intensify vehicle traffic and parking on the Project site compared to existing conditions, which would increase the potential for pollutants of concern (e.g., leaks of fuels and lubricants, tire wear particulates, brake dust, and fallout from exhaust emissions) to be generated on the Project site and could result in a greater potential to convey petroleum hydrocarbons, heavy metals, and sediment off site during storm events. The proposed landscaping could contain residual pesticides and nutrients used for landscape maintenance. The intensification of land uses could result in increased trash generation over existing conditions.

[81] Berkeley, City of. Toxics Management Division. Environmental Management Area. Website: www.cityofberkeley. info/Planning_and_Development/Toxics_Management/Environmental_ Management_Area.aspx (accessed May 2020)

Project operation and maintenance would be subject to the Regional Water Board's MRP, Order R2-2015-0049, NPDES Permit No. CAS612008. Provision C.3 of the MRP sets forth appropriate and site-specific source control, site design, and stormwater treatment measures for new and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new projects. The proposed Project is considered a regulated project because it is a redevelopment project that would replace over 10,000 square feet of impervious surfaces. Additionally, stormwater treatment systems would be required to be designed and sized to treat stormwater runoff from the entire Project site pursuant to the requirements of Provision C.3 of the MRP[82] and COA: Stormwater Requirements.

The Alameda County Clean Water Program (ACCWP) C.3 Stormwater Technical Guidance document assists in the design, implementation, and maintenance of required stormwater infrastructure.[83] Regulated projects must prepare plans in accordance with the C.3 Stormwater Technical Guidance to detail the BMPs to be implemented as part of the Project. Regulated projects must implement source control, site design, and treatment BMPs. Source control BMPs are preventative measures that are implemented to prevent the introduction of pollutants into stormwater. Site design BMPs are stormwater management strategies that emphasize conservation and use of existing site features to reduce the amount of runoff and pollutant loading generated from a project site. Treatment BMPs are structural BMPs designed to treat and reduce pollutants in stormwater runoff prior to releasing it to receiving waters.

In Section F.3 of the C.3 Stormwater Technical Guidance, ACCWP acknowledges that stormwater treatment designs should generally maximize infiltration to the underlying soils; however, at sites with shallow groundwater and/or groundwater contamination, where stormwater infiltration could promote migration of contamination and/or interfere with remediation, flow-through planters and other stormwater controls that are isolated from underlying soils are appropriate.[84] The stormwater control and treatment plans would be reviewed by the City to ensure compliance with the Provision C.3 requirement of the of MRP and ACCWP guidelines. According to the Stormwater Requirements Checklist prepared for the proposed parking structure,[85] stormwater treatment BMPs would include biotreatment areas (flow-through planters).

As previously discussed, infiltration of stormwater could affect groundwater quality in areas of shallow groundwater. Due to the groundwater depth being as shallow as approximately 7 feet below the existing ground surface of the Project site, stormwater infiltration during Project operation could affect groundwater quality given the direct path for pollutants to reach the groundwater table. The proposed Project would be required to implement operational BMPs (including source control, site design, and treatment BMPs) to treat stormwater before it could reach groundwater. These proposed BMPs would treat stormwater runoff onsite and would reduce

82 San Francisco Bay Regional Water Quality Control Board. 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008. November.

83 Steelwave. 2021. Stormwater Requirements Checklist, The Labs Parking Garage. January 29.

84 Alameda County Clean Water Program (ACCWP), 2021. C.3 Stormwater Technical Guidance, 3rd Revision, Version 7.1. February 8.

85 Steelwave. 2021. Stormwater Requirements Checklist, The Labs Parking Garage. January 29.

the volume of stormwater and the infiltration of pollutants into groundwater during operation. Therefore, Project operation would not substantially degrade groundwater quality.

Compliance with the requirements of the MRP and COA: Stormwater Requirements, including incorporation of operational BMPs to target pollutants of concern, would ensure that operational impacts related to violation of waste discharge requirements and water quality standards and degradation of water quality would be less than significant.

b. Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? ***(Less-Than-Significant Impact)***

Groundwater Basins. The City of Berkeley is located within the Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin, which encompasses approximately 122 square miles in Alameda and Contra Costa counties. The East Bay Plain Subbasin generally extends from north to south from the San Pablo Bay to the Niles Cone Groundwater Basin near Hayward. A substantial amount of artificial fill (thicknesses ranging from 1 to 50 feet) has been placed within the basin, with thickest deposits found nearer to San Francisco Bay. Historical groundwater levels in the East Bay Plain Subbasin have varied between 10 to 140 feet below mean sea level; however, levels have been rising continuously since the 1950s. [86]

Construction. As discussed in Section 3.10.a, according to the Geotechnical Investigations prepared for the proposed Project, groundwater may be present as shallow as approximately 7 feet below the existing ground surface, and the Project is anticipated to require a maximum excavation depth of 6 feet. As a result, dewatering from excavations is not anticipated to be required; however, it is possible that temporary dewatering from isolated areas of deeper excavation (e.g., excavation for remediation of contaminated soil and groundwater) could be necessary during construction. Such dewatering would be localized and temporary and would not result in the lowering of surrounding groundwater levels.

Operation. Water supply to the proposed Project would be provided by the EBMUD water system, which is supplied from the Mokelumne River.[87] Because EBMUD does use groundwater from the East Bay Plain Subbasin for municipal water supply, water use during operation of the proposed Project would not affect groundwater. Groundwater would not be extracted during operation of the Project except for very small volumes of groundwater that would be extracted/sampled from monitoring wells as part of the on-going investigation and remediation of the groundwater contamination at the Project site. The majority of the Project site is covered with impervious surfaces. Development of the Project would result in a reduction in impervious surfaces on the Project site from approximately 131,445 square feet to approximately 124,845 square feet. Therefore, the proposed project would not interfere with groundwater recharge. For the reasons

86 California Department of Water Resources. 2004. *California's Groundwater Bulletin 118 – Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin*. February 27. Website: water.ca.gov/Programs/Groundwater-Management/Bulletin-118 (accessed May 2020).

87 East Bay Municipal Utility District. 2021. Water Supply. Website: www.ebmud.com/water/about-your-water/water-supply (accessed January 11, 2021)

listed above, impacts related to the decrease of groundwater supplies or interference with groundwater recharge would be less than significant.

c. Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i. Result in substantial erosion or siltation on- or off-site; ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off site; iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. Impede or redirect flood flows? ***(Less-Than-Significant Impact)***

Erosion or Siltation. The proposed Project would not alter the course of a stream or a river. Site preparation and the proposed removal of approximately 10,000 cubic yards of soil and grading and excavation activities may slightly and temporarily alter onsite drainage; however, the existing drainage patterns would generally be maintained and would not be substantially altered or modified. During construction, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. Compliance with the Construction General Permit, COA: Stormwater Requirements, preparation and implementation of a SWPPP, would reduce impacts related to erosion and siltation.

At Project completion, approximately 124,845 square feet of the Project site would be impervious surface area and not prone to onsite erosion or siltation because no exposed soil would be present in these areas. The remaining portion of the site would consist of pervious surface area, which would contain landscaping that would minimize onsite erosion and siltation by stabilizing the soil. Therefore, onsite erosion and siltation impacts would be minimal. Additionally, compliance with standard conditions of approval require applicants to establish and maintain drainage patterns so as to not adversely affect adjacent properties and rights-of-way. For these reasons, potential on- and off-site erosion and siltation impacts would be less than significant.

Flooding. The Project would decrease the amount of impervious surface area on the Project site which would decrease the volume and rate of stormwater runoff discharged from the Project site, and therefore reduce the potential for off-site flooding. The proposed Project would convey stormwater runoff to biotreatment areas (flow-through planters). The onsite stormwater drainage systems would discharge to the City's existing off-site stormwater drainage systems. The onsite stormwater drainage systems would be sized to convey stormwater runoff such that onsite flooding would not occur.

Storm Drain Capacity. As described above, the Project would decrease the amount of impervious surface area on the Project site, which would decrease the volume and rate of stormwater runoff discharged from the Project site. Therefore, potential impacts related to exceeding the capacity of existing or planned stormwater drainage systems would be less than significant.

Additional Sources of Polluted Runoff. As described above under Section 3.10.a, the proposed Project would be required to comply with all applicable NPDES regulations and City COAs, including the Construction General Permit and MRP. Construction and operational BMPs would be implemented to reduce pollutants of concern in stormwater runoff from the Project site.

Additionally, groundwater dewatering activities, if necessary, would be required to comply with applicable NPDES/EBMUD permit provisions and the City COAs to ensure that dewatering activities do not introduce pollutants into surface waters. Compliance with existing regulations would ensure that potential impacts related to additional sources of polluted runoff would be less than significant.

Flood Flows. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No 06001C0056H,[88] the Project site is within Zone X, Areas of Minimal Flood Hazard, and is not located within a 100-year or 500-year flood hazard zone. Therefore, the proposed Project would not impede or redirect flood flows.

d. In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to project inundation? ***(Less-Than-Significant Impact)***

As discussed in Section 3.10.c, the Project site is not located within a 100-year or 500-year flood hazard zone. The Project site is not located in an area mapped by the California Emergency Management Agency as being potentially inundated by a tsunami.[89] Seiches are waves that are created in an enclosed body of water such as a bay, lake, or harbor and go up and down or oscillate and do not progress forward like standard ocean waves. Seiches are also referred to as standing waves and are triggered by strong winds, changes in atmospheric pressure, earthquakes, tsunamis or tidal influence. The height and frequency of seiches are determined by the strength of the triggering factor(s) and the size of the basin. Aquatic Park includes three enclosed water bodies (lagoons); the nearest Main Lagoon is located approximately 430 feet west of the Project site. Based on the distance of the Project site from the Aquatic Park lagoons and its elevation above the lagoons, potential seiches at Aquatic Park would not impact the Project site. Therefore, potential impacts related to the release of pollutants in the event of inundation from flooding would be less than significant.

e. Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? ***(Less-Than-Significant Impact)***

As discussed in Section 3.10.a, the Basin Plan is the master policy document that establishes the water quality objectives and strategies needed to protect designated beneficial water uses in the San Francisco Bay region. The State Water Board and the Regional Water Board enforce compliance with the water quality objectives of the Basin Plan through the issuance of NPDES permits. The Project's compliance with existing permit requirements and the City's COAs would ensure that the proposed Project would not have the potential to conflict with the Basin Plan.

A sustainable groundwater management plan has not been finalized for the Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin; however, a draft Groundwater Sustainability Plan

88 Federal Emergency Management Agency. 2018. Flood Insurance Rate Map (FIRM) No. 06001C0056H, effective December 21. Available online at: https://msc.fema.gov/portal/search?AddressQuery=berkeley%20ca#searchresultsanchor (accessed November 4, 2021).

89 California Emergency Management Agency (CalEMA). 2009. Tsunami Inundation Map for Emergency Planning, Oakland West Quadrangle. July.

(GSP)[90] was recently issued by EBMUD and City of Hayward groundwater sustainability agencies (GSAs) for public review. According to the draft GSP, the sustainability goal for the East Bay Plain Subbasin is to manage and protect the Subbasin in a manner that avoids the six undesirable results listed below while continuing to collect and analyze data to support science-based decision making to evaluate new opportunities for sustainable groundwater beneficial uses:

- Chronic lowering of groundwater levels, indicating a significant and unreasonable depletion of supply.
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable seawater intrusion.
- Significant and unreasonable degraded water quality.
- Significant and unreasonable land subsidence.
- Depletions of interconnected surface water and groundwater that have significant and unreasonable reductions in beneficial uses of surface water, including beneficial use by ecosystems that depend on groundwater.

According to the draft GSP, the East Bay Plain Subbasin is not experiencing a chronic lowering of groundwater levels and is currently in a sustainable and stable condition because estimated groundwater pumping from the 1990s to present is well below the estimated sustainable yield of the Subbasin. Additionally, the Subbasin has not experienced significant seawater intrusion even during historical periods of much greater groundwater pumping than is occurring today, and the Subbasin has no observed inelastic land subsidence even during historical periods of much greater groundwater pumping and much lower confined aquifer groundwater elevations than are occurring today.

As detailed in Section 3.10.b, any groundwater extracted during construction dewatering would be minimal and would not interfere with the sustainable management of the groundwater basin. Additionally, Project operation would not require groundwater extraction other than small volumes for groundwater quality monitoring. Municipal water for the Project would not be supplied from the groundwater basin. For these reasons, the proposed Project would not conflict with or obstruct the implementation of a sustainable groundwater management plan and this impact would be less than significant.

[90] EBMUD GSA and City of Hayward GSA. 2021. East Bay Plan Subbasin, Groundwater Sustainability Plan, Public Review Draft, September 17

3.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☒	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

*a. Would the Project physically divide an established community? **(Less-Than-Significant Impact)***

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. For instance, the construction of an interstate highway though an existing community may constrain travel from one side of the community to another; similarly, such construction may also impair travel to areas outside of the community.

The Project site is located in West Berkeley and occupies a portion of two blocks bordered by Allston Way and commercial uses to the north, Fifth Street to the east, Bancroft Way and manufacturing and light-industrial uses to the south, and to the west by the UPRR rail corridor. The site is surrounded by a mix of commercial, residential, manufacturing, light industrial and recreational uses. The Project site is currently developed with a mix of warehouse and light manufacturing buildings. The proposed Project would result in redevelopment of the site with an R&D campus and associated site improvements. Redevelopment of the Project site with the proposed uses would represent a general continuation of the type, scale, and intensity of development within the Project vicinity. Building heights would not exceed 45 feet and taller Project elements would be set back from the surrounding roadways compared to the existing buildings on the project site, which are generally located against the project boundaries.

In addition, the configuration of the existing city block that the site occupies would not be altered. Currently, vehicular access to the site is provided via driveways along Fourth Street, Fifth Street, and Bancroft Way. With development of the proposed Project, primary access to the parking garage on the East Block would be provided via Fourth Street and vehicular access to the proposed surface parking lot on the West Block would be provided via a Bancroft Way. Therefore, the proposed Project would not physically divide an established community.

b. Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? ***(Less-Than-Significant Impact)***

The Project site is designated Manufacturing and Manufacturing Mixed Use in the City's General Plan Land Use Diagram. The City's Zoning map classifies the Project site as Mixed Use-Light Industrial (MU-LI) and Mixed Use Residential (MU-R).[91]

Following is an evaluation of the Project's consistency with applicable goals and policies of the City's General Plan, West Berkeley Plan, and Zoning Ordinance. Other applicable plans, policies, ordinances, and regulatory requirements adopted for the purpose of mitigating environmental effects, and the Project's consistency with these measures, are addressed in each topical section of this Initial Study, as appropriate. In reviewing this section, it is important to understand that the determination of whether a project is consistent with a specific policy can be subjective, and that consistency determinations are best made with a broad understanding of the often-competing policy objectives in a planning document. As a result, policy consistency determinations are ultimately made by the local decision-making body. As previously discussed, the City of Berkeley is the lead agency for environmental review. Therefore, the City's Zoning Adjustments Board, in coordination with the Design Review Committee, would determine the Project's consistency with the City's applicable plans and policies. The analysis in this section is intended to provide decision-makers with a list of the goals and policies that are pertinent to the Project and the Project area, and a recommendation regarding whether or not the proposed Project would directly conflict with any of those relevant goals and policies. These recommendations are intended to supplement decision-makers' own understanding of the various policy considerations.

It should be noted that according to CEQA, policy conflicts do not, in and of themselves, constitute a significant environmental impact. Policy conflicts are considered to be environmental impacts only when they would result in direct physical impacts or where those conflicts relate to avoiding or mitigating environmental impacts. As such, associated physical environmental impacts are discussed in this Initial Study under specific topical sections.

General Plan. The Berkeley General Plan is a comprehensive, long-range, and internally consistent statement of policies for the development and preservation of Berkeley. The General Plan identifies seven major goals: (1) Preserve Berkeley's unique character and quality of life; (2) Ensure that Berkeley has an adequate supply of decent housing, living-wage jobs, and businesses providing basic goods and services; (3) Protect local and regional environmental quality; (4) Maximize and improve citizen participation in municipal decision-making; (5) Create a sustainable Berkeley; (6) Make Berkeley a disaster-resistant community, that can survive, recover from, and thrive after a disaster; and (7) Maintain Berkeley's infrastructure, including streets, sidewalks, buildings, and facilities; storm drains and sanitary sewers; and open space, parks, pathways, and recreation facilities.[92] The Plan's goals are implemented through decisions and actions consistent with the objectives, policies, and actions of each of the nine Elements.

91 Berkeley, City of. 1999. *Official Zoning Map of the City of Berkeley, California*. March 18.

92 Berkeley, City of. 2001, op. cit.

The Project site is designated Manufacturing and Manufacturing Mixed Use in the General Plan Land Use Diagram. In Berkeley, this area is intended to maintain and preserve areas for manufacturing and industrial uses necessary for a multi-faceted economy and job growth. Appropriate uses for West Berkeley include light manufacturing, general manufacturing, retailing, offices, residences, and arts and crafts, along with other uses. Within these areas, building intensity will generally range from a FAR of less than 1.0 to 2.0.

R&D and light manufacturing uses are consistent with the overall intent of the Manufacturing and Manufacturing Mixed Use land use designation for the West Berkeley area. The proposed Project would have a FAR of 0.9. The proposed Project would be compatible with the intensity of development envisioned in the General Plan for properties with the Manufacturing land use designation.

Applicable policies of the General Plan are listed below, followed by a description of the proposed Project's general consistency with each group of policies.

- **Policy LU-1: Community Character.** Maintain the character of Berkeley as a special, diverse, unique place to live and work.
- **Policy LU-3: Infill Development.** Encourage infill development that is architecturally and environmentally sensitive, embodies principle of sustainable planning and construction, and is compatible with neighboring land uses and architectural design and scale.
- **Policy LU-34: Industrial Protections.** Protect Industrial uses in West Berkeley.
- **Policy UD-3: Regulation of Neighborhood Character.** Use regulations to protect the character of neighborhoods and districts and respect the particular conditions of each area.
- **Policy UD-16: Context.** The design and scale of new or remodeled buildings should respect the built environment in the area, particularly where the character of the built environment is largely defined by an aggregation of historically and architecturally significant buildings.
- **Policy UD-17: Design Elements.** In relating a new design to the surrounding area, the factors to consider should include height, massing, materials, color, and detailing or ornament.
- **Policy UD-18: Contrast and Cohesiveness.** The overall urban experience should contain variety and stimulating contrasts achieved largely through contrast between different areas each of which is visually cohesive.
- **Policy UD-19: Visually Heterogeneous Areas.** In areas that are now visually heterogeneous, a project should be responsive to the best design elements of the area or neighborhood.
- **Policy UD-22: Regulating New Construction and Alterations.** Regulate new construction and alterations to ensure that they are individually well-designed and that they are so designed and located as to duly respect and where possible enhance the existing built environment.

- **Policy UD-23: Design Review.** Ensure that the design review process ensures excellence in design and that new construction and alterations to existing buildings are compatible with the best elements of the character of the area.

- **Policy UD-24: Area Character.** Regulate new construction and alterations to ensure that they are truly compatible with and, where feasible, reinforce the desirable design characteristics of the particular area they are in.

- **Policy T-16: Access by Proximity.** Improve access by increasing proximity of residents to services, goods, and employment centers.

The proposed Project would result in redevelopment of an underutilized site with R&D and light manufacturing uses. The Project would increase the number of employees on the site and contribute to job growth within the research and development and light manufacturing sectors and within West Berkeley. The proposed Project would conform to the type and intensity of development envisioned in the General Plan for this area. The proposed Project would include demolition of existing building and new construction. The design review process would ensure that the proposed Project is compatible with the best elements of the character of the area, including surrounding life science campuses such as the adjacent 600 Addison Street Project, the light manufacturing uses south of the Project site, and the nearby Bayer campus. Based on the above, the proposed Project is not expected to be inconsistent with General Plan policies that relate to urban design and character.

- **Policy UD-26: Pedestrian-Friendly Design.** Architecture and site design should give special emphasis to enjoyment by, and convenience and safety for, pedestrians.

- **Policy UD-27: Relation to Sidewalk.** Projects generally should be designed to orient the main entrance toward the public sidewalk, not a parking lot, and avoid confronting the sidewalk with a large windowless wall or tall solid fence.

- **Policy UD-30: Planting.** Ensure that, where feasible, new developments respect and contribute to the urban landscape by retaining existing onsite trees and/or, if appropriate, planting suitable new ones onsite or in the street right-of-way.

The proposed Project would include the installation of a midblock crossing that would provide pedestrian access between the parking garage and the proposed R&D/light manufacturing building. All landscaping would be planted and irrigated compliant with the State's Model Water Efficient Landscaping Ordinance and Bay-friendly landscaping requirements. Approximately 88 new trees would be planted on the Project site, including 77 on the West Block along Fourth Street, the northern boundary, and within the surface parking lot and plaza, and 11 on the East Block, including within the landscaped area and along both Fourth and Fifth streets. New trees would be a minimum of 24-inch box size. Based on the above, the proposed Project is not expected to be inconsistent with General Plan policies that relate to streetscape design and open space.

West Berkeley Plan. The West Berkeley Plan, adopted in 1993, was a long-range plan for West Berkeley intended to guide the development of West Berkeley until at least the year 2005. West

Berkeley is defined as the area between San Pablo Avenue (incorporating both sides of the street) and the Eastshore Freeway. The West Berkeley Plan sets forth the City's key land use, environmental, economic development, transportation, housing and social services, and physical form (urban design, historic preservation, and open space) policies for West Berkeley.

The Project site is located near the center of the West Berkeley Plan Area, along the western edge. The Project site is located within the West Berkeley Plan's MU-LI and MU-R Districts. The MU-LI district is the largest in the West Berkeley Plan area, besides purely residential, covering approximately 300 acres. At the time that the West Berkeley Plan was prepared, it contained the highest employment of any district, accounting for approximately 44 percent of the jobs in the West Berkeley area. The MU-R district tends to include smaller business than other districts but contained more than 200 businesses at the time the West Berkeley Plan was prepared. While the Oceanview Gardens/Delaware St. Historic District site, which is primarily made up of six-unit structures, contains approximately 25 percent of the residential units within the MU-R area, the majority of residential structures are single-family residential units.[93] The proposed Project furthers the goals of the MU-LI and MU-R districts with the inclusion of laboratory, manufacturing, and office uses, and would serve as an employment center within the districts.

The three main purposes of the West Berkeley Plan are to: (i) Maintain the full range of land uses and economic activities – residences, manufacturing, services, retailing, and other activities – in West Berkeley; (ii) Maintain the ethnic and economic diversity of West Berkeley's resident population; and (iii) Maintain and improve the quality of urban life – including environmental quality, public and private service availability, transit and transportation, and aesthetic and physical qualities – for West Berkeley residents and workers. The proposed Project would contribute to the full range of land uses and economic activities in the area by providing space for R&D and light manufacturing uses within the site. The proposed Project would not affect ethnic and economic diversity of West Berkeley's resident population as it would contribute a wide variety of job types that are already present in West Berkeley, including management, professional, and administrative. The Project would create jobs and improve circulation to and adjacent to the site. The proposed Project would improve the visual quality of the current site by removing vacant and underutilized warehouse buildings and by providing landscaping, including street trees. Therefore, the proposed Project would be consistent with the purposes of the West Berkeley Plan.

The proposed Project is generally consistent with the applicable policies in the West Berkeley Plan. Applicable policies of the West Berkeley Plan are listed below, followed by a description of the proposed Project's general consistency with each group of policies.

- **Land Use Goal 1:** Over the economically active area of West Berkeley, provide for a continued economic and land use mix, incorporating manufacturing, other industrial, retail and office/ laboratory uses, to benefit Berkeley residents and businesses economically, benefit the City government fiscally, and promotes the varied and interest character of the area.

[93] Berkeley, City of. 1993. *West Berkeley Plan.*

  - **LU Policy 1-B:** Providing, through zoning districts, development standards, and other tools, space and incentives for expansion of manufacturing firms, particularly the growing light manufacturing sector.

  - **LU Policy 1-D:** Providing space for, and designating appropriate locations for, office, service, and laboratory businesses, particularly growing Berkeley based businesses which are particularly suited to West Berkeley's physical environment.

- **Land Use Goal 2:** Channel development—both new business and residences and the expansion of existing businesses—to districts which are appropriate for the various existing elements of the West Berkeley land use mix.

  - **LU Policy 2-C:** Create a Light Manufacturing district which allows a wide range of light manufacturers to continue to operate and expand and limits loss of their spaces to other uses, while providing an opportunity for office development where it will not unduly interfere with light manufacturing uses, and for laboratory development in appropriate locations.

- **Land Use Goal 4:** Assure that new development in any sector is of a scale and design that is appropriate to its surroundings, while respecting the genuine economic and physical needs of the development.

- **Economic Development Goal 4:** Continue to support the growth of advanced technology manufacturing (such as biotechnology) and advanced technology services (such as research laboratories) in appropriate locations, under appropriate environmental safeguards.

  - **ED Policy 4-A:** Provide assistance to advanced technology firms to help them establish or expand businesses in appropriate locations.

The proposed Project would result in redevelopment of the site with R&D and light manufacturing uses, providing economic growth and new job opportunities within the life sciences sector in West Berkeley. Approximately 82 percent (approximately 125,796 square feet) of the space would be R&D use (consisting of lab and office space), with the remaining 18 percent (33,347 square feet) occupied by light manufacturing. These uses allow for the support and growth of the advanced technology services (such as R&D). The proposed Project would generally be consistent with the scale and design of land uses within the immediate vicinity, including mixed commercial and retail to the north and east, manufacturing and R&D to the south, and office and R&D to the east. The Project site is an appropriate location for the proposed development. Therefore, the proposed Project supports the goals and policies in the Land Use and Economic Development sections of the West Berkeley Plan.

- **Physical Form Goal 5:** Development on major sites of one acre or more should be both internally cohesive and sensitively designed on the site's publicly used edges.

- **PF Policy 5.1:** Development on major sites should use building scale, architecture, building placement, landscaping, and other site elements to create the sense of a cohesive development which is integrated with its surroundings.

- **PF Policy 5.2:** Such major projects should--to the greatest degree possible--reinforce the existing street pattern, development pattern, and overall fabric of an area, rather than being isolated from these patterns.

- **PF Policy 5.3:** Major development projects should - to the greatest degree possible - be compatible with existing development on the edges of their sites, particularly on those edges which are heavily used by the public.

The approximately 3.02-acre Project site would be developed as a campus-like environment, whether occupied by a single user or multiple users/tenants. Streetscape improvements along the Project site frontage, including public sidewalks and landscaping, would physically and visually connect the development to the surrounding area while improving pedestrian connections. Therefore, the proposed Project supports the goals and policies in the Physical Form section of the West Berkeley Plan.

Zoning Ordinance. The City of Berkeley City Zoning Ordinance (Zoning Ordinance) implements the policies of the General Plan and other City plans, policies, and ordinances. The Zoning Ordinance divides the City into districts, each of which is assigned different regulations. These regulations direct the construction, nature, and extent of building use.

The Project site is located within the MU-LI zoning district (BMC Chapter 23.206.080). The primary purposes of the MU-LI zoning district are to: (1) implement the West Berkeley Plan's designation of a Light Manufacturing District; (2) encourage development of a mixed use-light industrial area for a range of compatible uses; (3) encourage development of an area where light manufacturers can operate free from the economic, physical and social constraints caused by incompatible uses; (4) encourage the creation and continuation of well paid jobs which do not require advanced degrees; (5) provide for the continued availability of manufacturing and industrial buildings for manufacturing uses, especially of larger spaces needed by medium sized and larger light manufacturers; (6) provide opportunities for office development when it will not unduly interfere with light manufacturing uses and/or the light manufacturing building stock; (7) provide the opportunity for laboratory development in appropriate locations; (8) support the development of businesses which contribute to the maintenance and improvement of the environment; (9) allow on site ancillary retail as a tool to maintain and enhance the economic viability of manufacturers in the district; and (10) maintain and improve the quality of the West Berkeley environment, while allowing the lawful and reasonable operation of light industrial uses.

Development standards for the MU-LI zoning district are specified in the Zoning Ordinance. There is a maximum FAR of 2.0 and a maximum building height of 45 feet. The proposed Project would redevelop the site at a FAR of approximately 0.9 the proposed buildings would not exceed 45 feet in height. The MU-LI zoning district does not include minimum building setbacks.

The Project site is also located within the MU-R zoning district (BMC Chapter 23.206.090). The primary purposes of the MU-R zoning district are to: (1) Implement the West Berkeley Plan Mixed Residential District designation; (2) Support the continued development of a mixed-use district which combines residential, live/work, light industrial, arts and crafts and other compatible uses; (3) Strengthen residential concentrations which exist within the district; (4) Provide appropriate locations for a broad range of live/work activities to occur; (5) Provide a transitional district between the Residential Districts to the east of the district and the Manufacturing Districts to the west of the district; (6) Encourage light manufacturers and wholesalers which are compatible with a mixed use-residential district; (7) Support the development of businesses of all types which contribute to the maintenance and improvement of the environment; (8) Protect residents from unreasonably detrimental effect of nonresidential uses, such as noise, vibration, odors, smoke, fumes, gases, dust, heat and glare, to the extent possible and reasonable within a mixed-use West Berkeley context; (9) To the extent feasible, protect industrial uses, particularly light industrial uses, from unreasonable intrusions on their ability to operate lawfully; and (10) Permit retail and food service activities which are either limited and small scale, primarily serving persons living and/or working in the district, but not a citywide or regional clientele, or which are ancillary and designed to maintain and enhance the economic viability of manufacturers in the district.

Development standards for the MU-R zoning district are specified in the Zoning Ordinance. There is a maximum FAR of 1.0 and a maximum building height of 35 feet. The proposed Project would redevelop the site at a FAR of approximately 0.9. The 787 Bancroft Building would have a maximum height of 45 feet. The parking garage would have an average height of 35 feet on the Fifth Street frontage, which is the portion of the site within the MU-R zoning district, and 45 feet on the Fourth Street frontage, which is within the MU-LI zoning district.

The Project sponsor is requesting the following permits:

- **Phase II (East Block)**
    - Use Permit, per BMC Section 23.326.070, to allow demolition of existing non-residential buildings;
    - Use Permit, per BMC Section 23.326.030, to demolish a duplex;
    - Use Permit, per BMC Section 23.206.050, to remove protected floor area used for manufacturing, wholesale trade, warehousing or Material Recovery Enterprise;
    - Administrative Use Permit, per BMC Section 23.302.070.G, to construct a parking structure on a split-zoned parcel in the MULI and MUR districts; and
    - Administrative Use Permit, per BMC Section 23.304.050, to allow rooftop equipment projections to exceed the height limit in a non-residential district.

- **Phase III (West Block)**
    - Use Permit, per BMC Section 23.326.070, to allow demolition of existing non-residential buildings;
    - Use Permit, per BMC Section 23.206.050, to change more than 25 percent of manufacturing and warehouse uses to R&D use;
    - Use Permit, per BMC Section 23.206.030.A, to construct between 20,000 and 30,000 square feet of new floor area as Manufacturing and Wholesale Trade, as per BMC Table 23.206-2;
    - Administrative Use Permit, per BMC Section 23.322.100.C.5, to reduce the number of on-site loading spaces from seven to five;
    - Administrative Use Permit, per BMC Section 23.304.050, to allow rooftop equipment projections to exceed the height limit in a non-residential district;
    - Administrative Use Permit, per BME Section 23.206.020, to establish more than 30,000 square feet of R&D use; and
    - Variance, per BMC Section 23.406.050.B, from the protected use requirement, to allow replacement of protected floor area to be made available after the demolition or change of use of the space.

The existing MU-LI and MU-R zoning on the Project site allows for manufacturing and wholesale trade; other industrial uses; automobile and other vehicle-oriented uses; parking, outdoor, and exterior services; retail sales, personal, and household services; and many other types of uses.[94] The proposed Project would result in redevelopment of the site with R&D and light manufacturing uses and would be consistent with the overall standards and intent of the MU-LI and MU-R zoning designations.

The Zoning Ordinance contains development standards that may be modified with a Use Permit upon finding that the requested modification is not detrimental. Such modifications are typically requested as part of similar development projects and are not considered to be in conflict with the Zoning Ordinance. The City's Zoning Adjustments Board would consider granting the Use Permits and other permits as it reviews the proposed Project. Therefore, the proposed Project would be consistent with the City's Zoning Ordinance.

Given the above, the proposed Project would not obviously conflict with any policy or regulation adopted for the purpose of mitigating an environmental effect, and this impact would be less than significant.

[94] Berkeley, City of. 2016b. *BMC Table 23.206-1* as amended. July.

3.12 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

a. Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? ***(No Impact)***

The Project site is located within an urban area on an infill site. There are no known mineral resources within or in the vicinity of the Project site.[95] The proposed Project would not result in the loss of availability of a known mineral resource of value to the region or residents of the State, and no impact related to the loss of mineral resources would occur.

b. Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? ***(No Impact)***

Please refer to Section 3.12.a. The proposed Project would not result in the loss of availability of any known locally important mineral recovery sites.

95 Berkeley, City of. 2001, op. cit.

3.13 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Noise is usually defined as unwanted sound and consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on dBA. CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

A project would have a significant noise effect if it would substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of applicable regulatory agencies, including, as appropriate, the City of Berkeley.

Certain land uses are considered more sensitive to noise than others. Examples of these land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The Project site is surrounded by a mix of uses within an urban area of the City. The Project site is located within West Berkeley, which is characterized by a mix of uses, including manufacturing, light industrial, office, residential, and commercial/restaurant uses. Land-uses across Fifth Street are zoned as mixed-use. The closest sensitive receptors are multi-family residential uses located at 2209 Fifth Street, approximately 65 feet east of the Project site. Commercial, office, and restaurant uses are also across Fifth Street from the Project Site.

The City of Berkeley General Plan addresses excessive noise in the Environmental Management Element.[96] The General Plan provides policies and actions to protect the community from excessive noise levels. Policies and actions applicable to the proposed Project include the following:

- **Policy EM-43: Noise Reduction.** Reduce significant noise levels and minimize sources of noise.
- **Policy EM-44: Noise Prevention and Elimination.** Protect public health and welfare by eliminating existing noise problems where feasible and by preventing significant future degradation of the acoustic environment.
- **Policy EM-45: Traffic Noise.** Work with local and regional agencies to reduce local and regional traffic, which is the single largest source of unacceptable noise in the city.
- **Policy EM-46: Noise Mitigation.** Require operational limitations and all feasible noise buffering for new uses that generate significant noise impacts near residential, institutional, or recreational uses.

BMC Title 13: Public Peace, Morals and Welfare, Chapter 13.40 (Community Noise) addresses noise impacts. The ordinance establishes exterior and interior noise standards at receiving land uses and construction activity noise regulations as included below.

The City's exterior and interior noise limits are shown in Table 3.H. The hourly noise level standards vary based on the receiving land use type and the time period. In order to assess intermittent or maximum noise levels, the time weighted noise level additions presented in BMC Section 13.40.050 and described in further detail below, should be applied.

The maximum noise levels vary based on the receiving land use type and the time period. The ordinance also limits noise generated by construction. The ordinance restricts construction activities to weekdays between the hours of 7:00 a.m. and 7:00 p.m. and on weekdays and holidays, between 9:00 a.m. and 8:00 p.m., except for emergency work.

96 Berkeley, City of. 2001, op. cit.

Table 3.H: Exterior and Interior Noise Limits, BMC Section 13.40.050

Zoning District	Time Period	Noise Level (dBA)
Exterior Noise Limits		
R-1, R-2, R-1A, R-2A, and ESR	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.	55 45
R-3 and above	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.	60 55
Commercial	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.	65 60
Industry	Anytime	70
Interior Noise Limits		
All	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.	45 40

Source: City of Berkeley Municipal Code Tables 13.40-1 and 13.40-2 (2014).
dBA = A-weighted decibels

The following noise standards are outlined in BMC Chapter 13.40.050:

A. Maximum permissible sound levels shall be determined by the zoning district of the property subject to the noise, not the property from which the noise originates.

1. The noise standards for the various categories of land use in Table 6 [of BMC Chapter 13.40.050 and shown in Table 3.H of the Initial Study Checklist] shall, unless otherwise specifically indicated in other codes, apply to all such property within a designated zone.

2. No person shall operate or cause to be operated any source of sound at any location within the incorporated City or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the sound level when measured on any other property to exceed:

a. The noise standard for that land use as specified in Table 6 [Table 3.H of the Initial Study] for a cumulative period of more than 30 minutes in any hour; or

b. The noise standard for that land use as specified in Table 6 [Table 3.H of the Initial Study] plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or

c. The noise standard for that land use as specified in Table 6 [Table 3.H of the Initial Study] plus 10 dBA for a cumulative period of more than 5 minutes in any hour; or

d. The noise standard for that land use as specified in Table 6 [Table 3.H of the Initial Study] plus 15 dBA for a cumulative period of more than 1 minute in any hour; or

e. The noise standard for that land use as specified in Table 6 [Table 3.H of the Initial Study] plus 20 dBA for any period of time.

The following interior noise standards are outlined in BMC Section 13.40.060:

1. No person shall operate or cause to be operated within a multi-family dwelling unit any source of sound or allow the creation of any noise which causes the sound level when measured inside a neighboring dwelling unit to exceed:

   a. The noise standard as specified in Table 6 [Table 3.H of the Initial Study] for a cumulative period of more than 5 minutes in any hour; or

   b. The noise standard as specified in Table 6 [Table 3.H of the Initial Study] plus 5 dBA for a cumulative period of more than one minute in any hour; or

   c. The noise standard as specified in Table 6 [Table 3.H of the Initial Study] plus 10 dBA for any period of time.

Section 13.40.070 of the BMC restricts construction activities to weekdays between the hours of 7:00 a.m. and 7:00 p.m. and on weekends and holidays between 9:00 a.m. and 8:00 p.m., except for emergency work. Construction activities are divided into two categories: mobile equipment and stationary equipment. Mobile equipment, as defined by BMC Section 13.40.070, includes sound levels for nonscheduled, intermittent, short-term operation of less than 10 days of jackhammers, drills, saws, sander grinder, and similar tools. Stationary equipment, according to BMC Section 13.40.070, would be repetitively scheduled and relatively long-term operation for longer than 10 days. Equipment used during construction of the proposed Project would be considered stationary because construction would last longer than 10 days. Where technically and economically feasible, construction activities shall be conducted in such a manner that maximum sound levels at affected properties will not exceed those listed in Table 3.I below.

Table 3.I: Maximum Stationary Equipment Construction Noise Levels (dBA L_{eq}), BMC Section 13.40.070

Time of Day	R-1, R-2 Residential	R-3 and above Multi-Family Residential	Commercial/ Industrial
Weekdays 7:00 a.m. to 7:00 p.m.	60	65	70
Weekends 9:00 a.m. to 8:00 p.m. and legal holidays	50	55	60

Source: City of Berkeley Municipal Code Table 13.40-4 (2014).

Existing Noise Environment. Major noise sources in project vicinity include transportation, industrial plant noise, and activities associated with neighborhoods. LSA conducted three short-term noise measurements at the boundaries of the project site and at surrounding uses on October 15, 2021. Noise monitoring locations are shown in Figure 3-1. The short-term noise measurements were gathered to estimate the existing noise levels in the vicinity of the proposed project.

The results of the short-term measurements are shown in Table 3.J and show that daytime noise levels range from 55.7 L_{eq} to 80.7 L_{eq} throughout the site and surrounding vicinity. Traffic on surrounding roadways and trains passing were reported as the primary noise sources at the Project site. Sporadic instantaneous noise levels were shown to have a significant effect on the hourly noise levels.

Table 3.J: Noise Level Monitoring Results (10/15/2021)

Location	Description	Time	dBA	
			L_{eq}	L_{max}
ST-1	Driveway of 2207 Fifth Street, 35 ft from center line, approximately 100 ft south of Allston Way.	12:25 p.m. to 12:40 p.m.	55.7	74.5
ST-2	15 ft east of center of Fourth Street, 45 ft north of Allston Way, approximately 225 ft from nearest brewery equipment to the west.	12:43 p.m. to 12:58 p.m.	63.6	75.7
ST-3	30 ft west of center of nearest railroad track, 30 ft south of Bancroft Way.	1:12 p.m. to 1:27 p.m.	80.7	107.5

Source: Compiled by LSA (October 2021).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
L_{max} = Maximum instantaneous sound level
ft = feet

a. Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? ***(Less-Than-Significant Impact)***

The following describes how the short-term construction and long-term operational noise impacts of the proposed Project would be less than significant, according to the standards set forth above.

Short-Term (Construction) Noise Impacts. Project construction would result in short-term noise impacts on the nearby sensitive receptors. The closest sensitive receptors include the multi-family residential uses located approximately 65 feet east of the Project site. Project construction would result in short-term noise impacts on these receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The entire construction duration is expected to occur for approximately 21 months. The level and types of noise impacts that would occur during construction are described below.

LSA

FIGURE 3-1

0 200 400
FEET

N

Short Term Monitoring Locations

Project Site Boundaries

theLAB Project IS/MND

Noise Monitoring Locations

SOURCES: Google Earth, 8/6/2020; LSA, 2021

P:\CBE1906.03 theLAB\PRODUCTS\Graphics\Figure 3-1.ai (10/21/2021)

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Short-term noise impacts would occur during grading and site preparation activities. Table 3.K lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the FHWA Roadway Construction Noise Model. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the Project area but would no longer occur once construction of the Project is completed.

Table 3.K: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet[1]
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
L_{max} = maximum instantaneous sound level

Two types of short-term noise impacts could occur during construction of the proposed Project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the site. As shown in Table 3.K, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA L_{max} with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during excavation, grading, and construction on the Project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment,

similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 3.K lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels range up to 87 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation and rough grading phases, including excavation and grading of the site, tend to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

As identified above, the Project site is approximately 65 feet from the closest noise-sensitive receptors (multi-family residential uses) located to the east across Fifth Street. The 65-foot distance would decrease the noise level by 2.3 dBA compared to the noise level measured at 50 feet from the construction activity. Therefore, the closest off-site residences may be subject to short-term construction noise levels of 84.7 dBA L_{max} when construction is occurring at the northern Project site boundary.

According to the City of Berkeley Noise Ordinance (BMC Section 13.40.070), noise from construction activities is permitted to exceed the established maximum allowable noise performance standards, provided that the activities occur during the permissible hours for construction and all technically and economically feasible noise reduction measures are incorporated. Construction impacts at residential land uses, although permitted and exempted during the construction hours specified by the City, would exceed the suggested maximum noise levels for stationary sources as established by the City.

Implementation of the following standard conditions of approval would reduce construction noise impacts on the off-site nearby sensitive receptors and would require the Project sponsor to implement all technically and economically feasible measures to reduce construction noise, consistent with the requirements of BMC Section 13.40.070.

> ***COA: Construction Noise Reduction Program.*** The applicant shall develop a site-specific noise reduction program prepared by a qualified acoustical consultant to reduce construction noise impacts to the maximum extent feasible, subject to review and approval of the Zoning Officer. The noise reduction program shall include the time limits for construction listed above, as measures needed to ensure that construction complies with BMC Section 13.40.070. The noise reduction program should include, but shall not be limited to, the following available controls to reduce construction noise levels as low as practical:
>
> - Construction equipment should be well maintained and used judiciously to be as quiet as practical.

- Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.

- Utilize "quiet" models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.

- Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible.

- Prohibit unnecessary idling of internal combustion engines.

- If impact pile driving is required, pre-drill foundation pile holes to minimize the number of impacts required to seat the pile.

- Construct solid plywood fences around construction sites adjacent to operational business, residences or other noise-sensitive land uses where the noise control plan analysis determines that a barrier would be effective at reducing noise.

- Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.

- Route construction related traffic along major roadways and away from sensitive receptors where feasible.

COA: Construction Noise Management - Public Notice Required. At least two weeks prior to initiating any construction activities at the site, the applicant shall provide notice to businesses and residents within 500 feet of the Project site. This notice shall at a minimum provide the following: (1) project description, (2) description of construction activities during extended work hours and reason for extended hours, (3) daily construction schedule (i.e., time of day) and expected duration (number of months), (4) the name and phone number of the Project Liaison for the Project that is responsible for responding to any local complaints, and (5) that construction work is about to commence. The liaison would determine the cause of all construction-related complaints (e.g., starting too early, bad muffler, worker parking, etc.) and institute reasonable measures to correct the problem. A copy of such notice and methodology for distributing the notice shall be provided in advance to the City for review and approval.

COA: Construction Phases. The applicant shall provide the Zoning Officer with a schedule of major construction phases with start dates and expected duration, a description of the activities and anticipated noise levels of each phase, and the

name(s) and phone number(s) of the individual(s) directly supervising each phase. The Zoning Officer or his/her designee shall have the authority to require an onsite meeting with these individuals as necessary to ensure compliance with these conditions. The applicant shall notify the Zoning Officer of any changes to this schedule as soon as possible.

COA: Construction Hours. Construction activity shall be limited to between the hours of 7:00 a.m. and 6:00 p.m. on Monday through Friday, and between 9:00 a.m. and 4:00 p.m. on Saturday. No construction-related activity shall occur on Sunday or any Federal Holiday.

COA: Construction Hours- Exceptions. It is recognized that certain construction activities, such as the placement of concrete, must be performed in a continuous manner and may require an extension of these work hours. Prior to initiating any activity that might require a longer period, the developer must notify the Zoning Officer and request an exception for a finite period of time. If the Zoning Officer approves the request, then two weeks prior to the expanded schedule, the developer shall notify businesses and residents within 500 feet of the Project site describing the expanded construction hours. A copy of such notice and methodology for distributing the notice shall be provided in advance to the City for review and approval. The Project shall not be allowed more than 15 extended working days.

COA: Project Construction Website. The applicant shall establish a Project construction website with the following information clearly accessible and updated monthly or more frequently as changes warrant:

- Contact information (i.e., "hotline" phone number, and email address) for the Project construction manager
- Calendar and schedule of daily/weekly/monthly construction activities
- The final Conditions of Approval, Mitigation Monitoring and Reporting Program, Transportation Construction Plan, Construction Noise Reduction Program, and any other reports or programs related to construction noise, air quality, and traffic.

Implementation of the City's standard conditions of approval would reduce construction noise impacts to the extent feasible, as required by BMC Section 13.40.070. With implementation of the City's standard conditions of approval, construction noise impacts would be reduced to a less-than-significant level.

Operational Noise Impacts. The proposed Project would generate long-term noise impacts from both traffic and stationary noise sources, as discussed below.

Traffic Noise Impacts. Off-site traffic noise impacts would result in a significant impact if traffic noise increased by 4 dBA or more over ambient noise levels without the Project. The guidelines included in the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) were used to evaluate traffic-related noise conditions in the vicinity of the Project site. This approach requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the L_{dn} values (refer to Appendix C for noise modeling outputs).

Traffic volumes along the roadways in the Project study area were obtained from the TIA[97] prepared for the proposed Project. Table 3.L lists traffic noise levels adjacent to roadway segments in the Project vicinity. These noise levels represent worst-case scenarios, which assume that no shielding is provided between the traffic and the location where the noise contours are drawn.

As shown in Table 3.L, the roadway segments that would experience the greatest increase caused by Project-generated traffic volumes would be Bancroft Way west of Fourth Street (1.6 dBA increase) and Fifth Street from Allston Way to Bancroft Way (1.2 dBA increase). Traffic noise increases along these segments are less than 4 dBA over ambient noise levels without the Project. Therefore, traffic noise impacts would be less than significant, and the proposed Project would not create a substantial permanent increase in ambient noise levels.

Stationary Source Noise Impacts. Stationary noise sources associated with the proposed Project include occasional truck delivery loading/unloading activities, typical motor vehicle/parking area activities, and rooftop mechanical equipment. As described above, the City of Berkeley establishes the acceptable daytime and nighttime maximum noise levels at receiving land uses. Daytime is considered to be between the hours of 7:00 a.m. and 10:00 p.m., and nighttime hours are between 10:00 p.m. and 7:00 a.m. BMC Section 13.40 establishes interior and exterior noise level standards (as measured at receiving sensitive land uses) not to be exceeded for more than thirty minutes any hour on commercial land uses as 60 dBA during nighttime hours and 65 dBA during daytime hours, and on residential land uses as 45 dBA during nighttime hours and 55 dBA during daytime hours.

Of the onsite stationary noise sources during operation of the Project, noise generated by delivery truck activity would generate the highest maximum noise levels. Typical parking lot activities, such as people conversing or doors slamming, would generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet, while delivery truck loading and unloading activities would result in maximum noise levels generate a noise level of 75 dBA L_{max} at 50 feet based on measurements previously conducted by LSA. Additionally, an existing parking lot is located where the Project's parking activity is proposed.

97 Fehr & Peers. 2021, op. cit.

Table 3.L: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing Without Project		Existing With Project			Near-Term		Near-Term With Project		
	ADT	L_{dn} (dBA) 50 feet from Centerline of Nearest Lane	ADT	L_{dn} (dBA) 50 feet from Centerline of Nearest Lane	Increase from Existing Conditions	ADT	L_{dn} (dBA) 50 feet from Centerline of Nearest Lane	ADT	L_{dn} (dBA) 50 feet from Centerline of Nearest Lane	Increase from Near-Term Conditions
Sixth Street—University to Addison Street	11,870	61.5	12,770	61.8	0.3	13,580	62.1	14,480	62.3	0.2
Sixth Street—Addison Street to Allston Way	11,230	61.2	12,130	61.6	0.4	13,240	61.9	14,140	62.2	0.3
Sixth Street—Allston Way to Bancroft Way	10,740	61	10,950	61.1	0.1	12,750	61.8	12,960	61.9	0.1
University Avenue—6th Street to 5th Street	27,510	67.1	28,710	67.3	0.2	30,240	67.5	31,440	67.7	0.2
Allston Way—5th Street to 6th Street	3,750	56.5	4,440	57.2	0.7	3,750	56.5	4,440	57.2	0.7
Allston Way—5th Street to 4th Street	2,790	55.2	2,790	55.2	0	2,790	55.2	2,790	55.2	0
Fifth Street—Allston Way to Addison Street	2,780	55.2	2,780	55.2	0	2,840	55.3	2,840	55.3	0
Fifth Street—Allston Way to Bancroft Way	2,200	54.1	2,890	55.3	1.2	2,260	54.3	2,950	55.4	1.1
Bancroft Way—5th Street to 6th Street	3,660	56.4	4,180	56.9	0.5	4,890	57.6	5,410	58.1	0.5
Bancroft Way—5th Street to 4th Street	3,410	56.1	3,680	56.4	0.3	3,700	56.4	3,780	56.5	0.1
Bancroft Way—4th Street to RR right-of-way	790	49.7	1,140	51.3	1.6	2,520	54.7	2,870	55.3	0.6
Fourth Street—south of Bancroft Way	2,380	54.5	2,380	54.5	0	2,380	54.5	2,380	54.5	0
Fourth Street—Bancroft Way to Allston Way	3,140	55.7	3,220	55.8	0.1	3,700	56.4	3,780	56.5	0.1
Fifth Street— south of Bancroft Way	1,950	53.6	1,950	53.6	0	1,950	53.6	1,950	53.6	0

Source: LSA (November 2021).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.
Shaded cells indicated roadway segments adjacent to the Project site.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
L_{dn} = day-night average noise level

Maximum noise levels from rooftop mechanical equipment depends on the specific selection of equipment. While the proposed 15-foot mechanical screen and roof parapet walls would reduce noise from the Project's rooftop equipment, a detailed acoustical study should be performed prior to or during the selection of mechanical equipment to show compliance with BMC Section 13.40 noise standards, and as required by the following COA.

COA: Rooftop Mechanical Equipment. Prior to issuance of a building permit, a specific noise analysis of the rooftop mechanical equipment at 787 Bancroft Way shall be completed to confirm that operations during both daytime and nighttime hours would comply with BMC Section 13.40 noise standards. Should expected noise impacts exceed the applicable criteria, noise reduction features would be required to ensure compliance.

Loading activities at the Project site could include the unloading of necessary materials and the loading of manufactured goods produced on the site. These activities are potential noise sources that could affect noise-sensitive receptors in the Project site vicinity. As shown in Figure 1-6, the proposed Project would include a drop-off area at the southern border of the site, with access from Bancroft Way. The closest sensitive receptors include the multi-family residential uses located approximately 625 feet northeast of the proposed loading area. At 625 feet, there would be a decrease of approximately 11 dBA due to the decreased distance from the baseline noise level of 75 dBA L_{max} at 50 feet. Therefore, maximum noise levels generated by loading and unloading activities would be approximately 64 dBA L_{max} at the closest sensitive receptor. However, peak noise levels from loading and unloading would be intermittent and when averaged over one hour, these sources would not exceed the BMC standard. The following standard condition of approval would further ensure that all loading/unloading activities would occur between 7:00 a.m. and 10:00 p.m. daily.

COA: Loading. All loading/unloading activities associated with deliveries to all uses shall be restricted to the hours of 7:00 a.m. to 10:00 p.m. daily.

With implementation of COA: Rooftop Mechanical Equipment and COA: Loading, it is not expected that the proposed Project would substantially increase noise levels over existing conditions and impacts would be less than significant.

b. Would the Project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? ***(Less-Than-Significant Impact)***

Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. As the vibration propagates from the foundation throughout the remainder of the building, the vibration of floors and walls may cause perceptible vibration from the rattling of windows or a rumbling noise. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. When assessing annoyance from groundborne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as "VdB." Human perception to vibration in indoor environments starts at levels as low as 67 VdB and sometimes lower. Annoyance due to vibration in residential settings starts at 70 VdB. Groundborne vibration is almost never annoying to people who are outdoors. Although the motion

of the ground may be perceived, without the effects associated with the shaking of the building, the motion does not provoke the same adverse human reaction.

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment.

Construction and operation of the proposed Project could expose sensitive structures and residential receptors to excessive groundborne vibration, as discussed below.

Construction Vibration. Construction activities that would occur at the Project site have the potential to generate low levels of groundborne vibration or groundborne noise levels. The Project would require demolition of the existing structures on the Project site, as well as site clearing and grading activities. These activities would occur within approximately 65 feet of existing sensitive residential uses. No impact pile driving would occur as part of the proposed Project.

For all other equipment associated with the proposed construction activities, vibration impacts would approach 0.089 inches per second at a distance of 25 feet. This level would not exceed the 0.12 inches per second threshold at which there is virtually no risk resulting in architectural damage to buildings extremely susceptible to vibration damage. It would be structurally safe from the construction activity and equipment operation for these adjacent buildings and no structural damages would occur as a result of onsite construction. In addition, the following COA requires an analysis of potential damage due to construction prior to, or concurrent with a demolition building permit.

> ***COA: Damage Due to Construction Vibration.*** The Project applicant shall submit screening level analysis prior to, or concurrent with demolition building permit. If a screening level analysis shows that the Project has the potential to result in damage to structures, a structural engineer or other appropriate professional shall be retained to prepare a vibration impact assessment (assessment). The assessment shall take into account Project specific information such as the composition of the structures, location of the various types of equipment used during each phase of the Project, as well as the soil characteristics in the Project area, in order to determine whether Project construction may cause damage to any of the structures identified as potentially impacted in the screening level analysis. If the assessment finds that the Project may cause damage to nearby structures, the structural engineer or other appropriate professional shall recommend design means and methods of construction that to avoid the potential damage, if feasible. The assessment and its recommendations shall be reviewed and approved by the Building and Safety Division and the Zoning Officer. If there are no feasible design means or methods to eliminate the potential for damage, the structural engineer or other appropriate professional shall undertake an existing conditions study (study) of any structures (or, in case of large buildings, of the portions of the structures) that may experience damage. This study shall:

- Establish the baseline condition of these structures, including, but not limited to, the location and extent of any visible cracks or spalls; and

- Include written descriptions and photographs.

With implementation of COA: Damage Due to Construction Vibration, construction of the proposed Project would not result in substantial groundborne vibration on properties adjacent to the Project site. Therefore, impacts associated with groundborne vibration and groundborne noise levels during construction would be less than significant.

Operational Vibration. No permanent noise sources that would expose persons to excessive groundborne vibration or noise levels would be located within the Project site. In addition, long-term operational activities associated with the proposed Project would not involve the use of any equipment or processes that would result in potentially significant levels of ground vibration. Therefore, this impact would be less than significant.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels? ***(No Impact)***

The airports nearest to the Project site are the Oakland International Airport (approximately 10 miles south of the site) and San Francisco International Airport (approximately 18 miles southwest of the site). The nearest private airport, Buchanan Field Airport, is located approximately 16 miles northeast of the site. Although aircraft-related noise is occasionally audible on the Project site, the site does not lie within an airport land use plan area or within the 60 dBA L_{dn} noise contours of any of these public airports or private airfields. Therefore, the proposed Project would not expose people residing or working in the Project area to excessive noise levels due to the proximity of a public airport. There would be no impact.

3.14 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

*a. Would the Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? **(Less-Than-Significant Impact)***

The proposed Project does not include housing, and therefore would not directly induce population growth on the Project site through the introduction of new residents on the site. In addition, the Project site is located within an urban area and is currently developed with a mix of uses. Introducing new R&D and light manufacturing uses to an infill site would not result in an extension of infrastructure beyond that which is needed to serve the proposed Project or expand roadway capacity within the site's vicinity. A fraction of the 294 future employees may move to Berkeley solely for reasons of employment, although employees would likely commute from various communities throughout the Bay Area, due to the proximity of the I-80 corridor and nearby transit opportunities. Therefore, the proposed Project would not directly or indirectly induce substantial population growth on the site or in the surrounding area through the increase in employment on the site.

It should be noted that the City requires applicants for large scale office, retail, industrial, and/or other commercial development projects to off-set the Project's impacts on affordable housing. This ordinance applies to all such projects within non-residential and R-4 zones. The proposed Project would be subject to the requirements set forth for construction of new industrial projects, which requires an in-lieu fee not to exceed $4.00 per square foot of the Project's gross square floor area devoted to office and/or retail end use, and $2.00 per square foot of the Project's gross floor area devoted to industrial end use. The Project sponsor would be required to pay the appropriate fees prior to issuance of a certificate of occupancy.

*b. Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? **(Less-Than-Significant Impact)***

The vacant residential duplex located at 2212 Fifth Street would be demolished or relocated as part of the proposed Project. General Plan Policy H-9 requires the maintenance and preservation of the existing housing supply in the City, thus requiring that residents not be displaced by development projects. Where new development does propose to remove existing housing, General Plan Policy H-

21 and BMC Section 23.326.030.A, Demolition and Dwelling Unit Controls, require the Project applicant to move the building containing the units to a different location within the City of Berkeley with no net loss of units and no change in the affordability levels of the units. Therefore, compliance with the Berkeley Municipal Code would ensure that the proposed Project would not displace substantial numbers of existing people or housing, and this impact would be less than significant.

3.15 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☒	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☒	☐
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☒	☐

a. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: i. Fire protection? ii. Police protection? iii. Schools? iv. Parks? v. Other public facilities? ***(Less-Than-Significant Impact)***

The following section addresses the Project's potential effects on fire service, police service, schools, parks, and other public facilities. Impacts to public services would occur if the Project increased demand for services such that new or expanded facilities would be required, and these new facilities would themselves cause environmental impacts.

Fire Protection. The Berkeley Fire Department provides fire protection and emergency medical services to the Project site. The Berkeley Fire Department operates seven fire stations including seven engine companies, two truck companies, and three ambulances.

Primary services to the Project site are provided by Station 1, located at 2442 Eighth Street (at Dwight Way) and Station 6, located at 999 Cedar Street (at Ninth Street). These stations are located approximately 0.5 miles southeast and 1 mile northeast of the Project site, respectively. Station 1 houses an ambulance and is continually staffed by two firefighters/paramedics. Station 6 also houses one engine company and is continually staffed by three firefighters. Station 2, located at 2029 Berkeley Way, provides hazardous materials emergency services and is located approximately 2 miles east of the site. The station is staffed by 16 firefighters, of which four are specially trained hazardous materials response technicians. Station 2 is equipped with one engine company including an aerial ladder truck, engine, medic ambulance, Type IV four-wheel drive truck, hazardous materials vehicle and one reserve truck and ambulance.

Currently, the Fire Department is staffed with 138 sworn fire fighters and 15 civilian staff.[98] The City's goal for staffing is reviewed each budget cycle and considers historical and current year information related to fire and emergency services. Due to increased call volume, the Fire Department has identified a need for additional ambulance response capability.

The City of Berkeley General Plan includes a standard response time goal of four minutes for Berkeley Fire Department's response to Priority 1 non-emergency medical calls. The standard response time for emergency medical service calls is 4.97 minutes.

Development of the proposed Project would increase the daytime population on the site and in West Berkeley in general, incrementally increasing the demand for emergency fire services. The proposed Project would construct R&D and light manufacturing uses on the site and the building on the West Block would reach up to 45 feet. However, the Fire Department's aerial ladder truck reaches 100 feet, and the Department has the appropriate equipment to access this building. The proposed Project would be required to comply with all applicable codes for fire safety and emergency access and the Fire Department would ensure that the appropriate measures are implemented to reduce hazardous conditions at the site. The proposed Project would not adversely affect existing response times to the site or within the City.

The Berkeley Fire Department would continue to provide services to the Project site and would not require additional firefighters to serve the proposed Project. The construction of new or expanded fire stations would not be required to meet response time goals. Therefore, the proposed Project would not result in a substantial adverse physical impact associated with the provision of additional fire facilities or services.

In addition, the Berkeley Fire Department administers the Uniform Fire Code and applicable sections of the California Health and Safety Code, California Administrative Codes, Title 19, Public Safety and Title 24, Building Standards in reviewing and improving plans for development. The proposed Project would be required to comply with all applicable codes for fire safety and emergency access and additional review by the Fire Department to ensure that appropriate measures are implemented to reduce hazardous conditions at the site and provide for adequate emergency access. Compliance with the Uniform Fire Code would further ensure that potential impacts to fire services would be less than significant.

Police Protection. The Berkeley Police Department provides police protection to the Project site. Police headquarters are located at 2100 Martin Luther King Jr. Way, approximately 2 miles east of the Project site. The Police Department consists of 285 employees including 195 sworn officers.[99] This allows for a ratio of 1.5 sworn officers per 1,000 residents. The City's goal for staffing is reviewed each budget cycle and considers historical and current year information related to police services. City population increases are not weighed in the Police Department's staffing needs.

98 Berkeley, City of. 2021. Proposed Annual Budget, Fiscal Year 2022. June 29.

99 Ibid.

The Police Department is transitioning to a 16-Beat system; the Project site is located within Beats 13N and 14S.[100] Primary law enforcement concerns in this area include vehicle burglary, family offenses, and robbery.[101] The standard City-wide response time for Priority 1 calls (life-threatening situations) is 5 minutes from the time of dispatch.

Development of the proposed Project would increase the daytime population on the site and within West Berkeley in general, incrementally increasing the demand for police services. However, the increased daytime population, circulation and mid-block crossing between East and West blocks, and onsite landscaping would also discourage illegal activity in the area by providing more "eyes on the street" and through increasing opportunities for recreational activity in the area. The site would also be fenced, and public access would be prohibited, particularly after business hours. Increased demand for police services on the site would not require the alteration of existing police facilities or construction of new facilities in order to maintain existing service standards or staffing ratios. Therefore, the Project would result in a less than significant environmental impact related to demand for police services.

Schools. The Berkeley Unified School District (BUSD) operates 20 schools, including 11 public elementary schools (grades K-5), 3 middle schools (grades 6-8), one high school (grades 9-12), and an alternative high school (grades 9-12). In addition, the district has three preschool facilities and one Adult School serving several thousand students each year.[102] The BUSD has not developed student generation rates to estimate the number of students that might be anticipated with new development. However, the proposed Project does not include any residential uses, and would not directly affect student population. As previously discussed in Section 3.14, a fraction of employees may move to Berkeley solely for employment, but this growth would only result in an incremental increase in student population, and may be spread amongst the whole school district, depending upon place of residence.

Senate Bill 50 (SB50), which revised the existing limitation on developer fees for school facilities, was enacted as urgency legislation which became effective on November 4, 1998, as a result of the California voters approving a bond measure (Proposition 1A). SB50 established a 1998 base amount of allowable developer fees (Level One fee) for residential construction (subject to adjustment) and prohibits school districts, cities, and counties from imposing school impact mitigation fees or other requirements in excess or in addition to those provided in the statute.

The BUSD requires payment of a school impact fee of $0.56 per square foot of new commercial and industrial development. The proposed Project would be required to pay this fee, prior to issuance of a certificate of occupancy. The BUSD is responsible for implementing the specific methods for mitigating school impacts under the Government Code. These fees would be directed towards maintaining adequate service levels, which would ensure that any impact to schools that could

[100] Berkeley, City of. 2020. *City of Berkeley Community GIS Portal*. Website: www.cityofberkeley.info/gisportal/?config=config_OtherCityServices.json (accessed July 2020).
[101] CrimeMapping. 2020. Home. Website: www.crimemapping.com/home (accessed July 2020).
[102] Berkeley Unified School District. 2020. Website: www.berkeleyschools.net/about-the-district/about (accessed November 2021).

result from the proposed Project would be offset by development fees, and in effect, reduce potential impacts to a less-than-significant level.

Parks. The closest park to the Project site is Aquatic Park, which is one of the City's largest parks. Aquatic Park consists of approximately 33 acres of land and approximately 68 acres of open water within three lagoons and is located approximately 0.2 miles west of the Project site. Aquatic Park was originally built as part of the Berkeley Waterfront Plan along with the construction of the Bayshore Highway (I-80) and Yacht Harbor. Tide gates were constructed to help keep the water level constant in Aquatic Park Lake. In addition to providing various recreation opportunities such as rowing and picnicking, there are numerous wetlands associated with the park the provide bird and fish habitat.[103] Access to Aquatic Park is provided by Bolivar Drive, Addison Street, and Bancroft Way.

A portion of the San Francisco Bay Trail runs through Aquatic Park and provides access to McLaughlin Eastshore State Park and Cesar Chavez State Park (located northwest of the Project site) via a pedestrian bridge at the intersection of Addison Street and Second Street, adjacent to the Project site. Cesar Chavez Park provides 90 acres of parkland and McLaughlin Eastshore provides 8.5 miles of parkland along the East Bay shoreline from the Bay Bridge to Richmond. McLaughlin Eastshore State Park includes 1,854 acres of upland and tidelands along the waterfront that parallels I-580, the most heavily travelled corridor in the East Bay. Other recreation opportunities in the vicinity include James Kenney Recreation Center, a community recreation center that includes outdoor tennis courts, basketball courts, and softball park located on Eighth Street, northeast of the Project site; and San Pablo Park, which is located southeast of the Project site, provides softball and baseball diamonds, a multi-purpose turf used for soccer and other sports, tennis courts, and a children's playground, among other amenities.

Development of the proposed Project could increase the use of these parks as well as other parks within the City and within the region. However, this increase is expected to be incremental due to the absence of residential uses in the proposed Project and is not expected to adversely affect the physical conditions of local and regional open space areas or recreational facilities or require the provision of new parks of facilities in order to meet established service goals. In addition, interior landscaped and common areas to be provided as a part of the proposed Project at the ground and terrace levels would reduce the increase in demand for public parks and recreational facilities in Berkeley as these amenities would also be available onsite. Therefore, although the proposed Project would be expected to increase use at surrounding parks, including Aquatic Park, this increase is not expected to require the need for new or physically altered recreational facilities, and this impact would be less than significant.

[103] Berkeley, City of. 2020. Parks and Recreation. Trees and Parks. Website: www.ci.berkeley.ca.us/Parks_Rec_Waterfront/Trees_Parks/Parks__Aquatic_Park.aspx (accessed November 2021).

Other Public Facilities. Development of the Project is unlikely to increase the demand for other public services, including libraries, community centers, and public health care facilities, because no direct population growth would occur. Therefore, the proposed Project is not expected to substantially increase the usage of these facilities, such that new facilities would be needed to maintain service standards and this impact would be less than significant.

3.16 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ***(Less-Than-Significant Impact)***

As discussed in Section 3.15, tenants, employees, and visitors to the Project site would be expected to use local parks and community facilities in Berkeley as well as regional recreational facilities. Although the Project would incrementally increase use of these facilities, this minor increase in use is not expected to result in substantial physical deterioration of local parks, trails, and community centers and this impact would be less than significant. Therefore, the proposed Project would not otherwise detract from the user experience or result in the physical deterioration of the park and this impact would be less than significant.

b. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? ***(No Impact)***

The proposed Project would consist of the redevelopment of the site with R&D and light manufacturing uses. The proposed Project does not include or require the construction or expansion of existing public recreational facilities. Therefore, development of the proposed Project and associated recreational opportunities for use by Project occupants would not result in additional environmental effects beyond those described in this document.

3.17 TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b. Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☒	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

Unless otherwise noted, the information below is based on the Transportation Impact Analysis (TIA) prepared for the proposed Project[104] and the City of Berkeley VMT Criteria and Thresholds Report (VMT Guidelines).[105]

a. Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? ***(Less-Than-Significant Impact)***

The following includes an evaluation of the proposed Project's potential to conflict with applicable programs, plans, ordinances, and policies addressing the circulation system, including the City's Transportation Strategic Plan.[106] The section begins with a description of the proposed Project's trip generating potential, compared to existing conditions, followed by an analysis of potential impacts to transit, bicycle, pedestrian, and roadway facilities. As discussed, this impact would be less than significant.

Trip Generation. Trip generation is the process of estimating the number of vehicles that would likely access the Project site. Trip generation data is estimated using the data and methodology published by the Institute of Transportation Engineers (ITE) in the Trip Generation Manual, Tenth Edition. However, ITE data does not include a land use code that is well-matched to the life sciences office/R&D use included in the proposed Project. The proposed Project would have more dispersed arrivals and departures than typical office buildings but would be more concentrated than land uses exclusively used for research and development. Trip generation data collected at several life sciences office/R&D sites in South San Francisco are used instead of ITE data because the uses are similar to the proposed Project, and workers at the Project site are expected to have similar

104 Fehr & Peers. 2021, op. cit.
105 Berkeley, City of. 2020. *City of Berkeley VMT Criteria and Thresholds*. June 29.
106 Berkeley, City of. 2016c. *Berkeley Strategic Transportation Plan*. June.

automobile usage.[107] Table 3.M compares the ITE trip generation rates for office and R&D uses to the observed trip generation rates at the office/R&D sites in South San Francisco. Nationwide, 86 percent of workers commute via automobile, compared to 75 percent of workers in West Berkeley. However, the trip generation rates were not adjusted to account for the potentially higher share of non-automobile uses at the project site. Therefore, this represents a conservative assumption to ensure that net new automobile trips added to the local roadways are not overestimated.

Table 3.M: Trip Generation Rate Comparison

Source	AM Peak Hour	PM Peak Hour
ITE – General Office Building (Land Use Code 710)[a]	1.16	1.15
ITE – Research and Development Center (Land Use Code 760)[a]	0.42	0.49
Life Sciences Office/R&D Mix[b]	0.83	0.92

Source: Fehr & Peers (2021).
[a] ITE Trip Generation (10th Edition)
[b] Data collected by Fehr & Peers at Life Sciences Office/R&D in South San Francisco in November 2019.

Table 3.N summarizes the automobile trip generation for the proposed Project based on the ITE methodology and accounts for the non-automobile trips and trips generated by the existing site uses. As shown in Table 3.N, it is estimated that the proposed Project would generate approximately 109 AM peak hour and 117 PM peak hour net new vehicle trips. Although the Project would include a TDM Plan,[108] which is discussed in more detail in the following section, that would reduce the automobile trips generated by the Project, the Project trip generation does not account for the effectiveness of the TDM Plan in order to present a conservative estimate.

Table 3.N: Proposed Project Automobile Trip Generation

Land Use	ITE Code	Size (ksf)	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
Phase 2 – Parking Garage								
Existing Light Manufacturing	110	4.0	-3	0	-3	0	-3	-3
Phase 2 Removed Existing Automobile Trips			***-3***	***0***	***-3***	***0***	***-3***	***-3***
Phase 3 – 787 Bancroft Way								
Office/R&D	--	125.8	89	15	104	22	94	116
Light Manufacturing	110	33.3	20	3	23	3	18	21
Phase 3 Total Automobile Trips			**109**	**18**	**127**	**25**	**112**	**137**
Existing Light Manufacturing	110	2.4	-2	0	-2	0	-2	-2
Existing Warehouse	150	77.8	-10	-3	-13	-4	-11	-15
Phase 3 Removed Existing Automobile Trips			***-12***	***-3***	***-15***	***-4***	***-13***	***-17***
Phase 3 Net New Automobile Trips			**97**	**15**	**112**	**21**	**99**	**120**
Project Net New Automobile Trips			**94**	**15**	**109**	**21**	**96**	**117**

Source: TheLAB Transportation Impact Analysis (Fehr & Peers, September 2021).
ITE = Institute of Transportation Engineers
ksf = 1,000 square feet
R&D = research and development

[107] Transportation surveys collected at these sites in South San Francisco indicated an automobile mode share of 78 percent. Based on 2012-2016 American Community Survey 5-Year Estimates, workers in West Berkeley have a 75 percent automobile mode share.
[108] Fehr & Peers. 2021, op. cit.

Table 3.O summarizes the total trip generation by different travel modes based on current mode splits in West Berkeley. The travel modes include automobile, transit, bicycle, and pedestrian. The proposed Project is estimated to generate a total of 137 AM peak hour and 146 PM peak hour trips.

Table 3.O: Trip Generation by Travel Mode

Mode	Mode Share Adjustment Factors[a]	AM Peak Hour	PM Peak Hour
Automobile	1.00	109	117
Transit	0.10	11	12
Bicycle	0.08	9	9
Pedestrian	0.07	8	8
	Total Trips	**137**	**146**

Source: TheLAB Transportation Impact Analysis (Fehr & Peers, September 2021).

[a] Based on mode share estimates as compiled in the American Community Survey 2016 five-year estimate for workers in West Berkeley.

Transportation Demand Management Plan. The proposed Project includes a TDM Plan,[109] which would include the following strategies to reduce trip generation and parking demand:

- Provide shuttle service between the project and a BART station during weekday peak commute periods (6:00 a.m. to 10:00 a.m. and 3:00 p.m. to 7:00 p.m.). The proposed Project would also explore the feasibility, and if feasible, will coordinate the shuttle service with existing shuttle services, and/or other employers in West Berkeley. Shuttle service would be adjusted based on ridership.

- Provide bike lockers, showers, personal lockers, and a repair station on-site to encourage bicycling to the site.

- Coordinate with the City of Berkeley and/or regional agencies to facilitate the potential installation of a BayWheels bikeshare station along the project frontage.

- Offer to provide free parking spaces for at least two car share vehicles (ZIP Car, etc.). Offer carpool/ride-matching services, such as ZimRide, ComoVee, or 511.org RideShare, to pair employees interested in forming commute carpools.

- Provide at least 10 spaces of preferential carpool parking, including free parking for carpoolers if employees are charged for on-site parking. Carpool parking spaces not occupied by 10:00 a.m. would be available to other vehicles.

- Require tenants to provide full or partial transit subsidy to project employees. Tenants may offer one of the following to employees that request it:

    - A monthly commuter check (or alternatively Clipper Card, which is accepted by BART, AC Transit, and other major transit providers in the Bay Area);

[109] Fehr & Peers. 2021, op. cit.

  - Subsidized AC Transit bus pass; or
  - Subsidized Capital Corridor monthly ticket.

- Require tenants to provide pre-tax commuter benefits for project employees.
- Regularly provide project tenants and employees information about various transportation options in the area and the TDM strategies provided by the project. The main lobby of each major project building shall also provide all the information on transportation options, such as a TransitScreen.
- Provide information on the Bay Area Commuter Benefits Program to all building tenants. As of September 30, 2014, Bay Area employers with 50 or more full-time employees within the Bay Area Air Quality Management District (Air District) geographic boundaries are required to register and offer commuter benefits to their employees in order to comply with Air District Regulation 14, Rule 1, also known as the Bay Area Commuter Benefits Program. Employers must select one of four Commuter Benefit options to offer their employees: a pre-tax benefit, an employer-provided subsidy, employer-provided transit, or an alternative commute benefit. (Information about Commute Benefits Program is at 511.org/employers/commuter/overview.)

Transit Facilities. The proposed Project would have a significant impact related to transit facilities if it would conflict with the goals and policies related to transit use in the Berkeley Strategic Transportation Plan, which was adopted in 2016.[110] In particular, the proposed Project would result in a conflict if it would discourage people from using transit or decrease transit efficiency.

The proposed Project is located within close proximity to a variety of transit services, which would encourage the use of these services. In addition, the proposed TDM Plan includes incentives to encourage the use of transit, such as provision of transit subsidies and commuter benefits, as well as provision of real-time transit information. As shown in Table 3.E, the proposed Project is estimated to generate about 11 AM peak hour and 12 PM peak hour transit trips. It is expected that most of these trips would use AC Transit buses, with some trips using BART or Amtrak. Approximately 30 buses (Routes 36, 51B, 72, 72M, 72R, 80) operate within 0.5 miles of the site during the peak hours. Assuming that all transit trips would be by bus, the Project would increase bus ridership by about one to two riders per bus during the peak hours. This minimal incremental increase would not have a substantial effect on the efficiency of AC Transit bus service.

The North Berkeley BART Station is about 1.6 miles northeast of the Project site and the Berkeley Amtrak Station is about 0.2 miles north of the Project site. The proposed Project is expected to generate a fractional increase in BART and Amtrak trips. Therefore, the proposed Project's small incremental contribution to both BART and Amtrak would be minimal and not have a substantial effect on the efficiency of these systems.

Multiple bus stops are provided within walking distance of the Project site, with most stops located northeast of the Project site. Bus riders would use the sidewalks, mostly on Fourth Street, Fifth

[110] Berkeley, City of. 2016c, op. cit.

Street, Bancroft Way, and Allston Way to walk between the Project site and the nearby bus stops or the Amtrak Station. No shuttle service is currently provided on the streets adjacent to the Project site. The proposed Project would include shuttle service between the Project site and a BART station and require employers to provide transit passes as part of the TDM Plan for the Project. Within the Project site, shuttles would be accommodated in the pick-up/drop-off area for each building. Therefore, because the proposed Project would encourage transit use, but would not generate so many transit trips as to decrease the efficiency of public transit in the area, this impact would be a less than significant.

In addition to the existing transit in the vicinity, the Water Emergency Transportation Authority (WETA) is also currently studying the feasibility of ferry service from the Berkeley Marina, which is located approximately 1.2 miles west of the Project site. In the event that ferry service is implemented, the San Francisco Bay Trail would provide pedestrian and bicycle access from the potential ferry terminal to the Project site, therefore further encouraging the use of public transit.

Bicycle Facilities. The proposed Project would have a significant impact on bicycle facilities if it would conflict with the goals and policies related to bicycle use in the Berkeley Strategic Transportation Plan. In particular, the proposed Project would result in a conflict if it would impair the implementation of any planned bicycle boulevards, result in street design that would be unsafe for bicyclists, or discourage bicycle use in the vicinity of the Project site.

Bicycle access to the proposed Project would be provided via Class III bicycle routes on Bancroft Way and Fourth Street, which connect with Class II bicycle lanes on Sixth Street and bicycle boulevards on Ninth Street. The Class I Aquatic Park Path is located about one block west of the Project site, and access to the Bay Trail is provided through the Eastshore Pedestrian Overcrossing about 0.3 miles northwest of the Project site. Additionally, the City of Berkeley 2017 Bicycle Plan identifies Addison Street as a future bicycle boulevard.

The Project site plan identifies long-term and short-term bicycle parking for the proposed Project in a secure bicycle storage area and in front of the building lobby of the proposed R&D/light manufacturing building on Fourth Street. Therefore, cyclists would approach the site from the north, south, and east and use the driveways on Fourth Street and Bancroft Way to reach the bicycle parking facilities.

As shown in Table 3.E, the proposed Project is estimated to generate approximately 9 bicycle trips in both the AM and PM peak hours. Project generated bicycle trips would be served by adjacent bicycle facilities described above which currently operate under capacity. BMC Section 23.332.090 requires one bicycle parking space per 2,000 square feet of new floor area. The proposed Project would include approximately 159,100 square feet of new non-residential floor area, and therefore would be required to provide 80 bicycle parking spaces. In addition, the City's Bicycle Parking Plan recommends one long-term bicycle parking space per 2,500 square feet of office space and one short-term bicycle parking space per 10,000 square feet of space.[111] Therefore, the bicycle parking guidelines would be to provide a minimum of 57 long-term bicycle parking spaces and a minimum of

[111] The City's Bicycle Parking Plan does not specify bicycle parking requirements for office/R&D uses. Therefore, the guidelines for office uses were applied instead.

13 short-term bicycle parking spaces. The proposed Project would provide a total of 80 parking spaces, including 68 long-term spaces and 22 short-term spaces, and therefore would comply with BMC Section 23.332.090 and the City's Bicycle Parking Plan.

Automobile traffic generated by the proposed Project would increase traffic on designated bicycle facilities serving the project, especially on Bancroft Way and Fourth Street. Both streets include pavement markings that notify drivers that they are on a shared-mode facility, and these streets would remain low-volume streets with the addition of Project traffic. Therefore, the proposed Project would have a less-than-significant impact related to bicycle facilities.

Pedestrian Facilities. The proposed Project would have a significant impact on pedestrian facilities if it would conflict with the goals and policies related to bicycle use in the Berkeley Strategic Transportation Plan. In particular, the proposed Project would result in a conflict if it would discourage walking in commercial districts, result in street design that would be unsafe for pedestrians, or discourage walking in the vicinity of the Project site.

Primary pedestrian access for the proposed 787 Bancroft Way building would be provided via the building lobby, with entrances on Fourth Street and on the west side of the building adjacent to the surface parking lot. Pedestrian access for the parking garage would be provided via a pedestrian entrance on Fourth Street between the main garage driveway and the loading space driveway.

Fourth Street currently provides 12-foot sidewalk on the west side of the street along the frontage of the West Block and on the east side of the street along the frontage of the East Block. The proposed Project would maintain the existing sidewalk widths, providing a 6-foot pedestrian through zone, a 4-foot tree well, and a 2-foot furniture/planter zone on both sides of the street.

The proposed Project would provide marked crosswalks on all four approaches of the Bancroft Way/Fourth Street and Allston Way/Fourth Street intersections and provide curb ramps with truncated domes at all four corners of the Allston Way/Fourth Street intersection. The proposed Project would also include an uncontrolled midblock marked crosswalk on Fourth Street, connecting the parking garage and the main lobby entrance for the proposed 787 Bancroft Way building. The proposed Project would be required to install a rectangular rapid flashing beacon (RRFB) at the midblock crossing.

Pedestrians would access the proposed Project along Bancroft Way and Fourth Street. As shown in Table 3.E, the proposed Project is estimated to generate approximately 8 pedestrian trips during both the AM and PM peak hours. The proposed Project would also generate approximately 11 AM and 12 PM peak hour transit trips that would most likely include pedestrian trips between the Project site and the transit stops. The new pedestrian trips generated by the proposed Project can be accommodated on the existing facilities serving the Project site. Therefore, because the proposed Project would result in enhanced and safer pedestrian facilities within and adjacent to the Project site and would encourage walking, the proposed Project would have a less-than-significant impact related to pedestrian safety or facilities.

Roadways. Pursuant to SB 743, described in Section 3.17.b, level of service (LOS) or other measures of automobile delay can no longer be used to identify significant impacts under CEQA. Therefore,

the following summary of the proposed Project's effects on roadway operations is provided for informational purposes only. For a detailed discussion of the potential LOS impacts related to implementation of the proposed Project, please refer to the TIA.

The TIA evaluated the potential effects of the traffic generated by the proposed Project on traffic operations during the AM and PM peak hours at six intersections under Near-Term Plus Project Conditions. The proposed Project would result in substantial effects at the Bancroft Way/Sixth Street intersection during the PM peak hour (unacceptable LOS F). However, the installation of a traffic signal would improve the intersection to an acceptable LOS during both the AM and PM peak hours (LOS A and LOS B, respectively). The adjacent 600 Addison Street Project is conditioned to install a traffic signal at this intersection.

*b. Would the Project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)? **(Less-Than-Significant Impact)***

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that changed the way transportation impact analysis is conducted as part of CEQA compliance. These changes include elimination of automobile delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts under CEQA. According to SB 743, these changes are intended to "more appropriately balance the needs of congestion management with Statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

In December 2018, the State Office of Planning and Research (OPR) completed an update to the CEQA Guidelines to implement the requirements of SB 743. The Guidelines state that VMT must be the metric used to determine significant transportation impacts. The Guidelines require all lead agencies in California to use VMT-based thresholds of significance in CEQA documents published after July 1, 2020.

The OPR Guidelines recommend developing screening criteria for development projects that meet certain criteria that can readily lead to the conclusion that they would not cause a significant impact on VMT. The OPR Guidelines also recommend evaluating VMT impacts using an efficiency-based version of the metric, such as VMT per resident for residential developments and/or VMT per worker for office or other employment-based developments. The City of Berkeley uses the metric of home-work VMT per worker for evaluating the impacts of employment-based uses, such as the proposed Project. The home-work VMT per worker measures all of the driving commute trips between homes and workplaces and divides that total distance by the number of workers at the site. Based on the City of Berkeley's guidelines, an employment-generating project's VMT impact is considered less-than-significant if its home-work VMT per worker is at least 15 percent below the regional average home-work VMT per worker.

VMT Screening. The concept of project screening is that some projects have characteristics that would readily lead to the conclusion that they would not cause a VMT impact, and therefore those projects could be screened out of doing a detailed VMT analysis. The screening criteria applicable to the Transit Priority Area (TPA) criterion, based on the Project site's proximity to a major transit

stop[112] or a stop along a high-quality transit corridor.[113] In addition, the following criteria need to be satisfied for a project to be screened out:

- Has a Floor Area Ratio (FAR) of 0.75 or greater for office uses;
- Includes 200,000 square feet or less of office or commercial space;
- Does not include more parking supply than the project's estimated demand;
- Is consistent with the City's General Plan, an applicable Specific Plan, or an applicable Sustainable Communities Strategy (as determined by the City, with input from MTC); and
- Does not have project-specific or location specific information that indicates that the project will generate significant levels of VMT.

The Project site is located approximately 0.3 miles south of the Berkeley Amtrak station, which is considered a major transit stop. The proposed Project would satisfy the TPA criterion because it would also meet the above five conditions:

- The proposed Project would have an FAR of 0.9, which is greater than 0.75.
- The proposed Project would include approximately 159,100 square feet of new office or commercial space, which is less than 200,000 square feet.
- The proposed Project includes a total of 491 parking spaces, consisting of the 415-space parking garage and 76 surface parking spaces at the proposed 787 Bancroft Way site on the West Block. However, only 198 spaces within the parking garage would be allocated to the proposed Project. The remaining spaces would be utilized by surrounding developments. Therefore, the proposed Project would provide a total of 295 parking spaces. In total, the proposed Project would develop approximately 125,796 square feet of office/R&D space and 33,347 square feet of light manufacturing space, which is estimated to accommodate 444 to 524 employees. Based on the driving mode split for workers in West Berkeley from U.S. Census data, parking demand is estimated to be 0.69 parking spaces per employee, corresponding to a parking demand of approximately 306 to 361 spaces. Therefore, the parking supply serving the proposed Project is not greater than the estimated parking demand.
- The proposed Project would be consistent with the City of Berkeley General Plan.
- The proposed Project does not have other project-specific or location-specific attributes that would indicate that the Project would generate significant levels of VMT.

[112] Major transit stop is defined as an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[113] High-quality transit corridor is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Therefore, the proposed Project would satisfy the Transit Priority Area criterion and is therefore presumed to have a less-than-significant impact related to VMT.

Although the proposed Project would not have a significant impact on VMT and no mitigation is required, the proposed Project would include implementation of a TDM Plan to further reduce VMT. The TDM Plan is described above under Section 3.17.a, and the effectiveness of each strategy is summarized in Table 3.P.

Table 3.P: TDM Plan Measures and Effectiveness

TDM Strategy	Description	Estimated VMT Reduction[a]
BART Shuttle	Provide peak commute period shuttle service to BART	3-6%
Bicycle Amenities	Provide secure bicycle parking, showers and lockers, and repair station	<1%
Bike Share	Allow and facilitate installation of a BayWheels bikeshare station along the site frontage	
Carshare Parking Spaces	Dedicate onsite carshare parking spaces	<1%
Carpool and Ride-Matching Assistance	Assist Project employees in forming carpools and provide preferential carpool parking spaces	1%
Transit Fare Subsidy	Require tenants to provide a monthly transit subsidy to employees	4-8%[b]
Pre-Tax Commuter Benefits	Require tenants to provide pre-tax commuter benefits to employees	
Marketing and Education	Active marketing and education of employees on various commuting options	N/A[c]
	Estimated VMT Reduction	**8-15%**

Source: TheLAB Project Transportation Impact Analysis (Fehr & Peers, September 2021).

[a] Based on Quantifying Greenhouse Gas Mitigation Measures (California Air Pollution Control Officers Association, August 2010)

[b] Assuming a subsidy of about $2.50 per day per employee (value to transit user and not necessarily the cost) available to about half of the Project employees.

[c] The effectiveness of this strategy cannot be quantified at this time. This does not necessarily imply that the strategy is ineffective. It only demonstrates that existing literature does not provide a robust methodology for calculating its effectiveness. In addition, many strategies are complementary to each other and isolating their specific effectiveness may not be feasible.

BART = Bay Area Rapid Transit
N/A = not applicable
TDM = Transportation Demand Management
VMT = vehicle miles traveled

Furthermore, although the Project site is located adjacent to I-80 and the proposed Project would not provide a reduced number of vehicle parking spaces compared to the City's parking requirements — two conditions which could contribute to employees that are located outside of the City to prefer driving to the site due to ease of access and parking opportunities — given the location of the Project and proposed improvements, including the proposed TDM Plan, the proposed Project would facilitate transit use and use of alternative modes of transportation, offsetting these conditions to some degree. Specifically, the Project's location supports the use of non-auto travel given that the site is located within a TPA and is within 0.5 miles of several major transit stops/intersecting major bus routes.

As previously described, the Berkeley Amtrak Station is located two blocks north of the site and three AC Transit stops are located within four blocks of the site. A mix of bicycle paths, bicycle boulevards, and bicycle lanes provide access to Project site. Bancroft Way and Fourth Street adjacent to the Project site and Addison Street west of Fourth Street just north of the Project site are identified as Class III bicycle routes. Existing bicycle boulevards near the Project site include Virginia Street and Channing Way in the east-west direction and Ninth Street in the north-south direction. The Class I Eastshore Pedestrian Overcrossing which connects to the Berkeley Marina is just northwest of the Project site, and Class II bicycle lanes are currently provided on Sixth Street between Addison Street and Channing Way. The nearest BayWheels bikeshare station is located on Addison Street just east of Fourth Street.

In addition, per the proposed TDM Plan described above,[114] the proposed Project would provide the following public transit connections, bicycle facilities, carpooling and carsharing, and incentives: shuttle connection to BART; transit subsidies; onsite amenities for bike commuters; bike sharing; carsharing parking spaces; carpool/ride-match services and preferential parking; real-time transportation information; and would meet the requirements of the BAAQMD Bay Area Commuter Benefits Program.

c. Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ***(Less-Than-Significant with Mitigation Incorporated)***

On-Site Vehicular Circulation. Automobile access for the proposed Project would utilize the proposed parking garage and the proposed surface parking lot on the West Block. This section assesses access and circulation for each of these facilities.

Proposed Parking Garage (East Block). The proposed Project would include a five-level parking garage accommodating 415 parking spaces. Automobiles would access the garage via full-access driveways on Fourth Street about 180 feet south of Allston Way and on Fifth Street about 240 feet south of Allston Way. Each driveway would provide one entering lane and one exiting lane, with 11-foot-wide lanes.

Garage access would be controlled by gates located approximately 20 feet inside the garage. This would provide adequate space for one vehicle to queue fully inside the garage. Based on the expected number of vehicle arrivals during the AM peak hour and the expected distribution of vehicles between the two driveways, 95th percentile queues[115] are expected to be two cars long at the Fourth Street driveway and one car long at the Fifth Street driveway. The one-car queues on Fifth Street can be accommodated within the garage entry. However, the two-car queues on Fourth Street would result in one vehicle spilling back on the adjacent sidewalk or street.

[114] Fehr & Peers. 2021, op. cit.

[115] 95th percentile queue is defined as the queue length that has only a five percent probability of being exceeded during the analyzed peak hour.

Considering the low traffic volumes on Fourth Street and that the queues are expected to dissipate quickly, the queue spillover is not expected to interrupt traffic flow or block upstream driveways or intersections. The proposed Project would also provide "Do Not Block Sidewalk" signage at both driveways that activates when vehicle queues are detected to maintain a clear path of travel for pedestrians on the sidewalk.

The parking garage driveways would provide adequate sight distance between exiting motorists and pedestrians on the adjacent sidewalk. Adequate sight distance is defined as a clear line-of-sight between a motorist 10 feet back from the sidewalk and a pedestrian 10 feet away on each side of the driveway. The proposed Project would designate at least 20 feet of red curb on the north and south sides of the garage driveways on Fourth and Fifth Streets to ensure adequate sight distance between exiting motorists and cyclists or motorists on Fourth and Fifth streets.

Internal circulation in the garage would be provided by a single two-way drive aisle with parking spaces on both sides. The drive aisle would be about 24 feet wide, providing adequate space for vehicles to circulate through the garage and maneuver into and out of parking spaces.

Proposed 787 Bancroft Way Surface Parking Lot (West Block). The proposed Project would include a surface parking lot accommodating 76 parking spaces on the West Block to serve the proposed 787 Bancroft Way building. Automobiles would access the parking lot via a 20-foot-wide full-access driveway on Bancroft Way about 210 feet west of Fourth Street and 35 feet east of the railroad control gate. Truck loading spaces would also be provided and accessed on Bancroft Way about 90 feet east of the proposed parking lot driveway.

The parking lot and loading space driveways would provide adequate sight distance between exiting motorists and pedestrians on the adjacent sidewalk. The proposed Project would designate red curb on the north side of Bancroft Way between the railroad gate and the parking lot driveway, as well as 25 feet on the east side of the parking lot driveway, to ensure adequate sight distance between exiting motorists and cyclists or motorists on Bancroft Way. No gates would be provided at the parking lot driveway entrance, which would minimize queueing on Bancroft Way.

Internal circulation for the proposed surface parking lot would be provided by a two-way drive aisle that connects the driveway with a one-way counterclockwise drive aisle. The two-way drive aisle would have perpendicular parking spaces on the west side and parallel truck loading spaces on the east side. When the truck loading spaces are occupied, the drive aisle would be about 15 feet wide, which would provide adequate space for most vehicles to pass and maneuver into and out of the parking spaces. Larger vehicles may need to wait for vehicles in the opposite direction to go through before proceeding when one or more of the parallel loading spaces are occupied. The one-way counterclockwise drive aisle would be generally 24 feet wide with perpendicular parking spaces on both sides, and it would narrow to 17.5 feet at pinch points. The parking lot would provide adequate space for vehicles to circulate through the parking lot and maneuver into and out of parking spaces.

On-Site Truck Loading. BMC Section 23.332.100 requires one off-street loading space for the first 10,000 square feet of new commercial or manufacturing floor area, and one space for each

additional 25,000 square feet of floor area. Off-street loading spaces are required to have minimum dimensions of 12 feet wide and 25 feet long, with a minimum vertical clearance of 14 feet. All trucks are expected to travel to and from the Project site from the east. Most trucks would access the site from either northbound or southbound Sixth Street and turn at Allston Way to access the parking garage or Bancroft Way to access the proposed building at 787 Bancroft Way. Most trucks would leave the Project site by following the same path of travel in the opposite direction.

The proposed 787 Bancroft Way building would add about 159,100 square feet of new commercial space. Therefore, seven off-street loading spaces would be required. The Project sponsor is requesting an Administrative Use Permit under BMC Section 23.322.100.C.5 to reduce the number of spaces provided from seven to five.[116] The surface parking lot on the West Block would provide three parallel loading spaces on the east side of the drive aisle of the parking lot and two enclosed loading spaces with access on Bancroft Way east of the parking lot driveway. All loading spaces would be at least 12 feet wide and 25 feet long, with at least 14 feet of vertical clearance, which would meet code requirements for loading space quantity and dimension. The proposed Project would also provide 44 feet of yellow curb for commercial loading on the Bancroft Way frontage just west of the enclosed loading spaces.

Trucks accessing the parallel loading spaces in the surface parking lot proposed for the West Block would enter the parking lot through the driveway head-first and would maneuver into the spaces either head-first or by passing the space and then backing into it. To leave the loading spaces, trucks would perform a three-point turn in the surface parking lot. The parking lot would restrict truck access to SU-30 or smaller trucks, which would have adequate space to maneuver.

The enclosed loading spaces on the West Block would be accessed via a driveway about 90 feet east of the surface parking lot driveway. Considering the roadway network serving the Project site, trucks are expected to access the loading spaces at the West Block from the east. Trucks accessing the enclosed spaces would approach on westbound Bancroft Way and back into the loading spaces, and they would leave head-first on eastbound Bancroft Way. Trucks would have adequate space to maneuver into and out of the loading spaces.

Given the above, truck access and circulation patterns would not result in hazardous conditions on- or off-site and this impact would be less than significant.

At-Grade Railroad Crossings. The proposed Project would be located just west of active railroad tracks, and the proposed 787 Bancroft Way building on the West Block would be adjacent to an at-grade rail crossing on Bancroft Way. The at-grade crossing provides automated gate arms on the vehicular approach directions and flashing warning devices, and the pedestrian crossings do not meet ADA standards.

The proposed Project is estimated to add approximately 15 AM and 3 PM peak hour vehicles to the crossing, increasing the total traffic volume crossing the at-grade crossing under Near-Term Plus

[116] BMC Section 23.322.100.C.5: Modified Requirements. In all Manufacturing and Commercial Districts other than the C-T district, the Zoning Officer in consultation with the City Traffic Engineer may approve an AUP to modify the on-site loading spaces standards in this section.

Project conditions to approximately 165 vehicles during the AM peak hour and 255 vehicles during the PM peak hour.

The proposed Project's driveway on Bancroft Way would be about 35 feet east of the at-grade crossing, providing queueing space for one eastbound vehicle on Bancroft Way turning left into the parking lot. The proposed Project would designate red curb on the south side of Bancroft Way between the railroad gate and 25 feet east of the parking lot driveway to allow vehicles traveling east on Bancroft Way to travel around a vehicle waiting to turn left into the parking lot and eliminate potential vehicle queue spillover on the railroad tracks. As discussed previously, no gates would be provided at the parking lot driveway entrance, which would further minimize queueing.

Table 3.Q summarizes the average and 95th percentile queues at the proposed 787 Bancroft Way driveway and the proposed 600 Addison Street driveway on Bancroft Way during the AM and PM peak hours for typical operations under Near-Term Plus Project conditions. As show in Table 3.Q, queues are not expected to spill back and block the at-grade crossing under typical operating conditions.

Table 3.Q: Queues at Intersections Adjacent to Railroad Crossings

Location	Queue Storage Length (feet)	AM Peak Hour Average and 95th Percentile Queues in feet[a]	PM Peak Hour Average and 95th Percentile Queues in feet[a]
Eastbound Bancroft Way at 787 Bancroft Way Parking Lot Driveway	35	<20 (<20)	<20 (<20)
Westbound Bancroft Way at 600 Addison Street Garage Driveway	90	<20 (<20)	<20 (<20)

Source: TheLAB Project Transportation Impact Analysis (Fehr & Peers, September 2021).
[a] Average (95th percentile) queues as calculated by SimTraffic Software based on average of 10 simulation runs.

In addition to automobile traffic, the proposed Project would increase the number of pedestrians and cyclists crossing the at-grade crossing.

The 600 Addition Street Project has been conditioned to improve the existing at-grade railroad crossing at Bancroft Way and is coordinating with the City, UPRR, and California Public Utilities Commission (CPUC) to identify improvements at the at-grade crossing. The improvements under consideration may include:

- Improve the automatic gate and warning devices at the crossing;
- Eliminate the on-street parking on the north side of Bancroft Way west of the railroad tracks; or
- Improve the sidewalk on the north side of Bancroft Way, including across the railroad tracks, to meet ADA requirements.

Implementation of these improvements would ensure potential impacts related to pedestrian and bicycle safety at the at-grade railroad crossings would be less than significant. However, the

proposed Project may be occupied prior to the implementation of these improvements. To ensure that potential conflicts associated with increased pedestrian and cyclist activity associated with the proposed Project are avoided and would be reduced to a less-than-significant level, one or more of these improvements shall be implemented in coordination with UPRR, CPUC, and the City of Berkeley.

Mitigation Measure TRA-1: One or more of the following improvements at the Addison Street and Bancroft Way at-grade railroad crossings shall be implemented prior to issuance of a certificate of occupancy, in coordination with the Union Pacific Railroad, the California Public Utilities Commission, and the City of Berkeley.

- Potential improvements at the Addison Street at-grade crossing shall include one or more of the following:
    - Relocate the existing gate on eastbound Addison Street to improve truck turns from the service access driveway;
    - Install pedestrian warning devices in the northwest and southeast quadrants of the crossing; and
    - If a permanent median is installed on Addison Street, consider providing mountable curbs to allow large trucks and emergency vehicles to access the service access driveway;
- Potential improvements at the Bancroft Way at-grade crossing shall include one or more of the following:
    - Improve the automatic gate and warning devices at the crossing;
    - Parking on the north side of Bancroft Way west of the railroad tracks would already be eliminated. Note that parking on the south side of Bancroft Way east of the tracks is currently prohibited.
    - Improve the sidewalk on the north side of Bancroft Way, including across the railroad tracks, to meet ADA requirements.

d. Would the Project result in inadequate emergency access? ***(Less-Than-Significant Impact)***

Emergency vehicle access to the Project site would be provided from Bancroft Way, Fifth Street, and Fourth Street. The Project would not modify the existing roadway network. The streets surrounding the Project site would all accommodate fire apparatuses. As previously described, the nearest fire

station to the Project site is Station 1 at 2442 Eighth Street just north of Dwight Way, about 0.5 miles southeast of the Project site. Although general traffic congestion may delay emergency vehicle response during peak commute times, response times are expected to remain less than five minutes. Therefore, the proposed Project would have a less-than-significant impact related to emergency access.

3.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or	☐	☐	☒	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

a. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. ***(Less-Than-Significant Impact)***

As previously described in Section 1.0, Project Information, a request form describing the Project and map depicting the Project site was sent to the NAHC in West Sacramento requesting a list of tribes eligible to consult with the City, pursuant to Public Resources Code section 21080.3.1. On October 10, 2021, the NAHC responded in a letter with a list of tribal contacts. The City sent letters to these individuals via certified mail on October 15, 2021, notifying them of their opportunity to consult for this Project.

On November 10, 2021, Ms. Gould, representative of the Lisjan Tribe responded to the City's letter and requested more information and potential consultation. The City and archeological consultants

met with Ms. Gould and other representatives of the Lisjan Tribe on December 1, 2021 to discuss the Project, share information, and identify potential mitigation measures. In response to concerns articulated by representatives of the Lisjan Tribe, the applicant prepared and provided the tribe with a plan for Ohlone Commemoration, should ancestral resources be encountered during ground disturbing activities. The City, archeological consultants, and tribal representatives met to review the plan on February 2, 2022. The measures outlined in the plan were agreed to at this meeting and the consultation process is considered completed. The agreed-upon measures are incorporated into the proposed Project and are identified below as Project-specific conditions of approval, as follows:

> ***Project-Specific COA-1:*** During all earth moving activities, the Project sponsor will engage a Most Likely Descendent (MLD) or MLD designee to observe the duration of such activities. If an item of Native American cultural relevance is encountered, activity within 25 feet of the find will be stopped to allow the MLD to examine the item and determine whether it should be removed from site, reburied on the site, or left in situ.
>
> If items are discovered at the extent of foundation grading, or in areas that will not support the proposed building program, then the MLD may choose to leave the item in situ. An on-site reburial area will be agreed to by the Project sponsor and MLD; only the MLD will be informed about the location of the designated reburial area. Any find of cultural significance will also be subject to the City's standard COAs related to the accidental discovery of archeological resources.
>
> ***Project-Specific COA-2:*** The Project sponsor will place a publicly-viewable storyboard on the site that recognizes the significance of the Ohlone in this area of Berkeley and also discusses or showcases the efforts that are currently underway to discover the Ohlone culture (e.g., food and language). The content of the storyboard will be at the discretion of the Ohlone. The storyboard shall be included in the final plans and be installed prior to issuance of a certificate of occupancy or final inspection.
>
> ***Project-Specific COA-3:*** The Project sponsor will place an Ohlone medicinal/herb garden at the southwest corner of the Project site for use by, and at the discretion of, the Ohlone. At the discretion of the Ohlone, interpretive signage can also be placed at this location. The garden and any signage shall be included in the final plans and be installed prior to issuance of a certificate of occupancy or final inspection.

As described in Section 3.5, Cultural Resources, no archeological historical resources were identified at the Project site. However, if significant archeological deposits were unearthed during project construction, a substantial adverse change in the significance of a historical resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired (CEQA Guidelines Section 15064.5(b)(1)). With implementation of the City's standard COAs identified in Section 3.5, impacts to archeological deposits and human remains that may qualify as Tribal Cultural Resources would be less than significant. The potential impact would be substantially reduced through the implementation of measures developed as the result of consultation conducted per the provisions of Assembly Bill 52, which requires an opportunity for tribal input on the potential for such impacts, as well as feasible means to reduce the severity of the impacts. The inclusion of a traditional medicinal plant/herb garden on the site, the provision of an

on-site re-interment area for disturbance human remains, and the requirement for tribal monitoring of earth moving activities during construction provide the means for addressing potential deposits and remains in a manner that is respectful of tribal perspectives and concerns.

3.19 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a. Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? ***(Less-Than-Significant Impact)***

The EBMUD Orinda Water Treatment Plant (Orinda WTP) and the Main Wastewater Treatment Plant (MWWTP) serve the Project site and surrounding area.[117] The proposed Project would connect to existing water delivery and sanitary sewer systems within the vicinity of the site. The proposed Project would connect to these existing facilities, and it is anticipated that these pipelines would have sufficient capacity to support Project water and wastewater flows. However, as a condition of project approval, the Project sponsor would be required to coordinate with EBMUD, the City's Fire Department, and the City's Public Works Department to assess water and wastewater flow and ensure the proposed Project would comply with the applicable requirements.

The proposed Project would increase the building area on the site from approximately 90,917 square feet to approximately 159,143 square feet and result in 294 new employees on the Project site. The existing Project site is developed with 10 vacant buildings, and pervious surfaces on the site are limited to a small yard associated with 2212 Fifth Street. Development of the Project would result in a reduction in impervious surfaces on the Project site from approximately 131,445 square feet to approximately 124,845 square feet. Runoff would be treated in accordance with the applicable MRP, including C.3 requirements, before flowing to the City's storm drain. Please see

[117] East Bay Municipal Utility District. 2016. *2015 Urban Water Management Plan*. June 28.

Section 3.10, Hydrology and Water Quality, for a complete discussion of stormwater drainage facilities and associated impacts, which would be less than significant.

The Project site is currently served by electrical, natural gas, and telecommunications facilities. Therefore, because the proposed Project would consist of infill development on a previously developed site that is currently served by utilities, the expansion of electrical, natural gas, or telecommunications facilities would not be required. In addition, as described in Section 1.0, Project Information, the proposed buildings would be designed to be all-electric, and therefore would not include the use of any traditional gas systems or facilities. Therefore, this impact would be less than significant.

b. Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? ***(Less-Than-Significant Impact)***

Water service at the Project site and in the Project area is provided by EBMUD. EBMUD obtains approximately 90 percent of its water from the Mokelumne River watershed and transports it through pipe aqueducts to temporary storage reservoirs in the East Bay hills. EBMUD has water rights and facilities to divert up to a daily maximum of 325 mgd from the Mokelumne River.[118] Average daily water demand within the entire EBMUD service area is projected to be 267 million gallons per day (mgd) in 2020, and 312 mgd in 2040.[119]

The proposed Project would increase the building area on the site from approximately 90,917 square feet to approximately 159,143 square feet and result in 294 new employees on the Project site. For research and laboratory and office uses, based on similar projects with similar uses, it is assumed that each employee would increase the demand for water by approximately 20 gallons per day (or 0.00002 mgd), or to approximately 0.0058 mgd compared to existing conditions.[120] This accounts for less than 0.01 percent of EBMUD's projected service-wide daily water demand for 2020. Furthermore, EBMUD's projected water demand accounts for projected growth within the region as identified by the Association of Bay Area Governments. Refer to Section 3.14, Population and Housing. EBMUD would not require new or expanded water entitlements to serve the proposed Project.

EBMUD completed development of a revised Water Supply Management Program (WSMP) 2040 in April of 2012, which is the District's plan for providing water to its customers for a span of 30 years.[121] According to the WSMP, EBMUD's water supplies are estimated to be sufficient during the planning period (2010-2040) in normal and single dry years. Therefore, EBMUD would have

118 Ibid.

119 The planning level of demand differs from actual 2015 demand, as the planning level does not reflect the effects of implementing measures to reduce water use. After a drought, a rebound effect is expected wherein demand rises back to projected levels, thus, the projected demand reflects the total planning level demand.

120 All of the existing buildings on the Project site are vacant, and therefore no existing water demand is assumed.

121 East Bay Municipal Utility District. 2012. *Water Supply Management Program 2040 Plan*. April.

adequate water supply to provide water service to the proposed Project and the impact related to sufficient water supplies would be less than significant.

The WSMP 2040 emphasizes maximum conservation and recycling strategies, with a total of 50 mgd of future supply to be provided from those two component categories. However, looking toward 2040, EBMUD's current supply is insufficient to meet customer needs during multi-year droughts despite EBMUD's aggressive water conservation and recycled water programs.[122] According to the WSMP, the combination of rationing, conservation, and raw and recycled water will satisfy increased customer demand through 2040.[123] Supplemental supply will also be needed to keep rationing at a lower level and to meet the need for water in drought years.

In response to Governor's Executive Order B-29-15, issued on April 1, 2015, EBMUD implemented mandatory water restrictions on all customers within its service area, with the goal of reducing water demand by 20 percent. EBMUD's Policy 3.07 ensures that priority for new water service connections during restrictive periods is given to proposed developments within EBMUD's service area that include housing units affordable to lower income households in accordance with California Government Code 65589.7. The policy also states that EBMUD will not deny an application for services to a proposed development that includes affordable housing unless certain conditions are met (e.g., water shortage emergency conditions are in effect). On May 10, 2016, EBMUD declared an end to the drought emergency in its service area, and eased the drought level to Stage 0, indicating normal water supplies. On April 7, 2017, the drought emergency was lifted for Alameda County. The State Water Board will maintain urban water use reporting requirements and prohibitions on wasteful practices.[124]

Future users of the site (and all EBMUD customers) should plan for shortages in times of drought. Policy EM-26 in the City of Berkeley General Plan promotes water conservation through City programs and requirements, including cooperation with EBMUD to make recycled water available for irrigation and other uses. Compliance with Policy EM-26 of the City's General Plan for incorporating water conservation measures into the Project design will ensure efficient use of water at the Project site and minimize the Project's potential water demand such that the Project's impact would be less than significant.

EBMUD also imposes a system capacity charge on new developments to fund system maintenance and the development of new water sources. The Project sponsor would be required to pay this fee and undertake water conservation measures to conserve water such as the installation of low-flow toilets. In addition, the Project sponsor would also be required to comply with the City's condition of approval related to Water Efficient Landscaping. The Project sponsor would be required to provide a Bay-Friendly Basics Landscape Checklist that includes detailed notes of any measures that would not be fully met by the Project (if any). Landscape improvements are required to be consistent with the current versions of the State's Water Efficient Landscape Ordinance and Section 31 of EBMUD's Water Service Regulations (Water Efficiency Requirements), which require applicable water-

122 East Bay Municipal Utility District. 2016, op. cit.

123 East Bay Municipal Utility District. 2012, op. cit.

124 California, State of. 2017. *Statewide Water Savings Exceed 25 Percent in February; Conservation to Remain a California Way of Life.* April 7.

efficiency measures be installed on water-using equipment at the Project sponsor's expense. The proposed Project meets this by including installation of water-efficient fixtures. The Project sponsor would also be required to coordinate with EBMUD and the City of Berkeley Fire Department to assess fire flow requirements and comply with them as part of the Project.

c. Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? ***(Less-Than-Significant Impact)***

In Berkeley, sanitary sewage flows to the EBMUD's wastewater interceptors, which then directly flows to EBMUD's MWWTP in the City of Oakland. Berkeley's network of pipes consists of lower laterals and sewer mains. Building connects at the upper laterals are privately owned and maintained. Within the City of Berkeley, there are approximately 400 miles of sanitary sewer mains, with an estimated 28,000 lateral connections. The sewer mains vary from 1 to 100 years old and vary in size from 6 to 48 inches in diameter.

The City's sewer system is connected to trunk lines that convey flows to the MWWTP. The MWWTP has a primary treatment capacity of 320 million gallons per day (mgd) and a secondary treatment capacity of 168 mgd.[125] Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd. The average annual daily flow into the MWWTP is approximately 63 mgd, representing approximately 37.5 percent of the plant's secondary treatment capacity. Treated effluent is disinfected, dechlorinated, and discharged through a deep-water outfall 1 mile off the East Bay shoreline into San Francisco Bay.

In compliance with the July 28, 2014, Consent Decree, the City has implemented a long-term mandated Sanitary Sewer Capital Improvement Program to eliminate Sanitary Sewer Overflows and reduce storm water infiltration and inflow (I/I) into the sanitary sewer system. Under this program, the City utilizes a comprehensive asset management approach based on complex and evolving hydrologic and hydraulic modeling and condition assessments to repair, replace, or upgrade the City's portion of the sanitary sewer system, ultimately to aid EBMUD in eliminating discharges from their Wet Weather Facilities (which provide additional treatment capacity during storm events) by the end of 2035.

According to a capacity assessment conducted for the City's sewer system,[126] future development within the West Berkeley area includes a total projected development of 1,420 dwelling units and 2 million square feet of non-residential uses. The Project sponsor is required to submit projected flow rate information during the building permit process to ensure whether upgrades to the sanitary sewer would be needed as a result of the proposed Project.

The proposed Project would generate wastewater, treated by the EBMUD treatment facilities. EBMUD is required to meet applicable Regional Water Board treatment requirements in compliance

[125] East Bay Municipal Utility District. 2016. Wastewater Treatment. Website: www.ebmud.com/wastewater/collection-treatment/wastewater-treatment (accessed July 2020)

[126] RMC Water and Environment. 2012. *Final Report, Sewer System Hydraulic Modeling and Capacity Assessment*. October.

with the MRP. In addition, the proposed Project would use an incremental portion of EBMUD's wet weather treatment capacity. Wastewater generated by the proposed Project is assumed to be 10 percent of water demand, or approximately 0.00058 mgd (refer to Section 3.19.b, above), which comprises less than one percent of the remaining capacity of the MWWTP. Therefore, the proposed Project would not generate wastewater exceeding the wastewater treatment requirements of the Regional Water Board.

Wastewater discharges that may occur at the Project site would be required to comply with the terms of the applicable MRP and may be subject to monitoring by EBMUD to ensure that the development's sewage discharge does not impair the ability of the MWWTP to meet wastewater treatment objectives and requirements. Therefore, the impact to wastewater treatment requirements would be less than significant.

d. Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? ***(Less-Than-Significant Impact)***

The City of Berkeley is one of the few cities in Northern California to operate its own refuse collection system. The City provides curbside recycling and refuse collection services to the Project site. There are two permitted landfills in Alameda County with the capacity to accommodate solid waste generated in Berkeley: Altamont Landfill and the Vasco Road Sanitary Landfill. The combined permitted capacity of waste for these two landfills is 95 million cubic yards, which the proposed Project would not exceed. Solid waste from the site would be transported to the Berkeley Transfer Station, located at 1021 Second Street, and then on to the Altamont Landfill and Resource Recovery Facility, located near the Altamont Pass, northeast of the City of Livermore. In 2011, the City of Berkeley diverted approximately 74 percent of its solid waste from landfills through recycling and/or composting efforts.[127] The proposed Project would not be served by a landfill with insufficient capacity to accommodate the Project's waste disposal needs and this impact would be less than significant.

The existing Project site consists of ten buildings and surface pavements. It is estimated that approximately 1,400 tons of demolition waste would be generated by the Project. All demolition and construction waste would be recycled consistent with State and City requirements. The State requires 65 percent diversion (recycling and reuse) of construction waste, and the City requires 100 percent of concrete, asphalt, and land clearing debris to be diverted from landfills. The Project sponsor would be required to prepare a Construction Demolition Recycling Plan prior to issuance of a Demolition Permit for the proposed Project. The purpose of the plan is to divert as much debris as possible from the waste stream, consistent with, and in addition to, State and City requirements.

Prior to approval of large development projects, the City of Berkeley Solid Waste Management Division staff reviews proposed plans for the adequate design of trash and recycling facilities. Alameda County Waste Management Authority (ACWMA) Ordinance 2008-01 requires businesses in Alameda County generating four or more cubic yards of garbage per week to separate all plant

[127] Berkeley, City of. 2012. *Department of Public Works Memo to City Council and Mayor. Solid Waste Management: Accomplishments and Operational Improvements*. November 13.

debris from garbage and recyclable materials. Additionally, development projects that require a use permit are required to comply with the following COA that addresses these potential impacts:

> ***COA: Recycling and Organics Collection.*** The Project applicant shall provide recycling and organics collection areas for occupants, clearly marked on site plans, which comply with the Alameda County Mandatory Recycling Ordinance (ACWMA Ordinance 201-01).

Therefore, the proposed Project would not generate solid waste in excess of local standards, and this impact would be less than significant.

e. Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? ***(Less-Than-Significant Impact)***

The proposed Project would comply with all Federal, State, and Local solid waste statutes and/or regulations related to solid waste. Also refer to Section 3.19.f.

3.20 WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

*a. Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan? **(No Impact)***

As described in Section 3.9, Hazards and Hazardous Materials, the proposed Project would not impair the implementation of, or physically interfere with, and adopted emergency response plan and is not within a very high fire hazard severity zone.[128] In addition, the Project site is not located within a State Responsibility Area (SRA) for fire service.[129] Therefore, the proposed Project would have no impact.

*b. Would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? **(No Impact)***

Refer to Section 3.20.a. The proposed Project would not exacerbate wildfire risks and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire and no impact would occur.

[128] Berkeley, City of. 2002, op. cit.

[129] California, State of. 2021. Board of Forestry and Fire Protection. State Responsibility Area View. Website: bof.fire.ca.gov/projects-and-programs/state-responsibility-area-viewer (accessed November 2021).

c. Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? ***(No Impact)***

Refer to Section 3.20.a. The proposed Project is not located within an SRA for fire service and is not within a very high fire hazard severity zone. Therefore, the proposed Project would not require the installation or maintenance of associated infrastructure and no impact would occur.

d. Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? ***(No Impact)***

Refer to Section 3.20.a and 3.20.b. The Project site is generally level and is not located within an SRA for fire service or a very high fire hazard severity zone. Therefore, the proposed Project would not expose people or structures to significant risks as a result of post-fire slope instability or drainage and runoff changes.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

a. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ***(Less-Than-Significant with Mitigation Incorporated)***

Implementation of Mitigation Measures BIO-1 through BIO-2e would ensure that potential impacts related to special-status species are reduced to a less-than-significant level. As discussed in Section 3.5, Cultural Resources, the proposed Project would not eliminate important examples of the major periods of California history, and this topic would be less than significant with implementation of the City's standard conditions of approval.

b. Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? ***(Less-Than-Significant Impact)***

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound to increase other environmental impacts." Section 15130 of the CEQA Guidelines requires evaluation of potential environmental impacts when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of "reasonably foreseeable probable future" projects, per CEQA Section 15355. Cumulative impacts can result from

a combination of the proposed project together with other closely related projects that cause an adverse change in the environment. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

For all of the topics discussed in this Initial Study, the proposed Project's impacts would be individually limited and not cumulatively considerable, because the impacts are either temporary in nature (i.e., limited to the construction period) or limited to the Project site (i.e., accidental discovery). Additionally, for each of the topics analyzed in the Initial Study, the proposed Project would have no impacts, less-than-significant impacts, or less-than-significant impacts with mitigation incorporated, and therefore would not substantially contribute to any potential cumulative impacts.

When future development proposals are considered by the City, these proposals would undergo environmental review pursuant to CEQA, and when necessary, mitigation measures would be adopted as appropriate. In most cases, this environmental review and compliance with Project conditions of approval, relevant policies and mitigation measures, and the General Plan, and compliance with applicable regulations would ensure that significant impacts would be avoided or otherwise mitigated to less-than-significant levels.

Implementation of these measures would ensure that the impacts of the Project and other projects within the vicinity would be below established thresholds of significance and that these impacts would not combine with the impacts of other cumulative projects to result in a cumulatively considerable impact on the environment as a result of Project development. Therefore, this impact would be less than significant.

c. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ***(No Impact)***

The proposed Project would not result in any environmental effects that would cause substantial direct or indirect adverse effects to human beings, beyond those topics discussed in Sections 3.1 through 3.21 of this Initial Study.

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APPENDIX A

AIR QUALITY EMISSIONS DATA

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theLAB Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

theLAB Project

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	125.80	1000sqft	1.43	125,800.00	0
General Light Industry	33.30	1000sqft	0.37	33,300.00	0
Enclosed Parking with Elevator	415.00	Space	0.79	124,667.00	0
Parking Lot	97.00	Space	0.43	38,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The proposed Project would consist of a new research and development (R&D) building and an above-ground parking garage, totaling approximately 283,810 gross square feet and a total of 512 parking spaces.

Construction Phase - Construction phasing based on construction activities and schedule assumptions provided by the Project applicant. Default architectural coating duration.

Demolition - Approximately 1,400 tons of construction debris, such as old foundations, pavements, and structures, would be collected and off-hauled.

Grading - Up to 10,000 cubic yards of soils would be excavated from the site and off-hauled.

Vehicle Trips - Trip generation rates based on the Project’s Transportation Impact Analysis (Fehr & Peers, 2021).

Energy Mitigation - The proposed Project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver equivalence and would include photovoltaic (PV) solar panels on the rooftops of the proposed buildings.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	8.00	11.00
tblConstructionPhase	NumDays	230.00	363.00
tblConstructionPhase	NumDays	18.00	40.00
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LandUseSquareFeet	166,000.00	124,667.00
tblLandUse	LotAcreage	2.89	1.43
tblLandUse	LotAcreage	0.76	0.37
tblLandUse	LotAcreage	3.73	0.79
tblLandUse	LotAcreage	0.87	0.43
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	670.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.10
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	36.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	WD_TR	4.96	7.13
tblVehicleTrips	WD_TR	11.26	6.78

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2925	2.8739	2.2792	5.0500e-003	0.7194	0.1322	0.8516	0.3448	0.1229	0.4676	0.0000	451.5266	451.5266	0.0962	0.0138	458.0504
2023	0.2727	2.3809	2.8148	6.3700e-003	0.1747	0.1021	0.2769	0.0475	0.0960	0.1435	0.0000	571.6119	571.6119	0.0877	0.0229	580.6292
2024	0.8804	0.1393	0.1765	4.1000e-004	0.0123	5.6100e-003	0.0180	3.3500e-003	5.3100e-003	8.6600e-003	0.0000	36.3877	36.3877	4.8800e-003	1.4100e-003	36.9299
Maximum	**0.8804**	**2.8739**	**2.8148**	**6.3700e-003**	**0.7194**	**0.1322**	**0.8516**	**0.3448**	**0.1229**	**0.4676**	**0.0000**	**571.6119**	**571.6119**	**0.0962**	**0.0229**	**580.6292**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0708	0.4711	2.4643	5.0500e-003	0.3654	8.4100e-003	0.3738	0.1665	8.2900e-003	0.1748	0.0000	451.5262	451.5262	0.0962	0.0138	458.0500
2023	0.0969	0.6446	2.9998	6.3700e-003	0.1747	8.3500e-003	0.1831	0.0475	8.2200e-003	0.0558	0.0000	571.6115	571.6115	0.0877	0.0229	580.6288
2024	0.8699	0.0398	0.1870	4.1000e-004	0.0123	5.2000e-004	0.0129	3.3500e-003	5.1000e-004	3.8600e-003	0.0000	36.3876	36.3876	4.8800e-003	1.4100e-003	36.9298
Maximum	**0.8699**	**0.6446**	**2.9998**	**6.3700e-003**	**0.3654**	**8.4100e-003**	**0.3738**	**0.1665**	**8.2900e-003**	**0.1748**	**0.0000**	**571.6115**	**571.6115**	**0.0962**	**0.0229**	**580.6288**

theLAB Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**28.22**	**78.58**	**-7.22**	**0.00**	**39.05**	**92.80**	**50.30**	**45.07**	**92.41**	**62.18**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-16-2022**	**8-15-2022**	1.0496	0.1024
2	**8-16-2022**	**11-15-2022**	1.7351	0.3302
3	**11-16-2022**	**2-15-2023**	0.6584	0.1959
4	**2-16-2023**	**5-15-2023**	0.6008	0.1751
5	**5-16-2023**	**8-15-2023**	0.6181	0.1780
6	**8-16-2023**	**11-15-2023**	0.6808	0.1889
7	**11-16-2023**	**2-15-2024**	1.4182	0.9776
		Highest	1.7351	0.9776

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7189	6.0000e-005	6.1600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0120	0.0120	3.0000e-005	0.0000	0.0128
Energy	0.0211	0.1916	0.1610	1.1500e-003		0.0146	0.0146		0.0146	0.0146	0.0000	381.9824	381.9824	0.0321	7.2200e-003	384.9364
Mobile	0.3813	0.4431	3.6584	7.7200e-003	0.8310	5.6900e-003	0.8367	0.2220	5.3000e-003	0.2273	0.0000	724.6901	724.6901	0.0460	0.0342	736.0309
Stationary	0.0198	0.0553	0.0505	1.0000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	9.1848	9.1848	1.2900e-003	0.0000	9.2170
Waste						0.0000	0.0000		0.0000	0.0000	10.3221	0.0000	10.3221	0.6100	0.0000	25.5725
Water						0.0000	0.0000		0.0000	0.0000	22.0668	34.8228	56.8896	2.2721	0.0542	129.8437
Total	**1.1411**	**0.6901**	**3.8759**	**8.9700e-003**	**0.8310**	**0.0232**	**0.8542**	**0.2220**	**0.0228**	**0.2448**	**32.3889**	**1,150.6920**	**1,183.0809**	**2.9615**	**0.0956**	**1,285.6133**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7189	6.0000e-005	6.1600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0120	0.0120	3.0000e-005	0.0000	0.0128
Energy	0.0196	0.1778	0.1494	1.0700e-003		0.0135	0.0135		0.0135	0.0135	0.0000	327.8029	327.8029	0.0254	6.1800e-003	330.2804
Mobile	0.3813	0.4431	3.6584	7.7200e-003	0.8310	5.6900e-003	0.8367	0.2220	5.3000e-003	0.2273	0.0000	724.6901	724.6901	0.0460	0.0342	736.0309
Stationary	0.0198	0.0553	0.0505	1.0000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	9.1848	9.1848	1.2900e-003	0.0000	9.2170
Waste						0.0000	0.0000		0.0000	0.0000	10.3221	0.0000	10.3221	0.6100	0.0000	25.5725
Water						0.0000	0.0000		0.0000	0.0000	22.0668	34.8228	56.8896	2.2721	0.0542	129.8437
Total	**1.1395**	**0.6763**	**3.8644**	**8.8900e-003**	**0.8310**	**0.0221**	**0.8532**	**0.2220**	**0.0218**	**0.2438**	**32.3889**	**1,096.5126**	**1,128.9015**	**2.9549**	**0.0946**	**1,230.9574**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.13**	**2.00**	**0.30**	**0.89**	**0.00**	**4.49**	**0.12**	**0.00**	**4.56**	**0.42**	**0.00**	**4.71**	**4.58**	**0.22**	**1.09**	**4.25**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/16/2022	8/15/2022	5	66	
2	Site Preparation	Site Preparation	8/8/2022	10/28/2022	5	60	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3	Grading	Grading	8/16/2022	8/30/2022	5	11	
4	Building Construction	Building Construction	9/1/2022	1/22/2024	5	363	
5	Paving	Paving	10/30/2023	12/22/2023	5	40	
6	Architectural Coating	Architectural Coating	1/22/2024	2/14/2024	5	18	

Acres of Grading (Site Preparation Phase): 90

Acres of Grading (Grading Phase): 11

Acres of Paving: 1.22

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 238,650; Non-Residential Outdoor: 79,550; Striped Parking Area: 9,808 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	138.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	989.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	123.00	53.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0150	0.0000	0.0150	2.2700e-003	0.0000	2.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0871	0.8487	0.6796	1.2800e-003		0.0410	0.0410		0.0381	0.0381	0.0000	112.1678	112.1678	0.0315	0.0000	112.9554
Total	**0.0871**	**0.8487**	**0.6796**	**1.2800e-003**	**0.0150**	**0.0410**	**0.0560**	**2.2700e-003**	**0.0381**	**0.0404**	**0.0000**	**112.1678**	**112.1678**	**0.0315**	**0.0000**	**112.9554**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2000e-004	0.0119	2.5300e-003	4.0000e-005	1.1700e-003	1.1000e-004	1.2700e-003	3.2000e-004	1.0000e-004	4.2000e-004	0.0000	4.3252	4.3252	1.4000e-004	6.9000e-004	4.5329
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	9.8000e-004	0.0118	3.0000e-005	3.9100e-003	2.0000e-005	3.9300e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.1458	3.1458	1.0000e-004	9.0000e-005	3.1753
Total	**1.6800e-003**	**0.0129**	**0.0144**	**7.0000e-005**	**5.0800e-003**	**1.3000e-004**	**5.2000e-003**	**1.3600e-003**	**1.2000e-004**	**1.4800e-003**	**0.0000**	**7.4710**	**7.4710**	**2.4000e-004**	**7.8000e-004**	**7.7082**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.7400e-003	0.0000	6.7400e-003	1.0200e-003	0.0000	1.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0153	0.0661	0.7682	1.2800e-003		2.0300e-003	2.0300e-003		2.0300e-003	2.0300e-003	0.0000	112.1676	112.1676	0.0315	0.0000	112.9553
Total	**0.0153**	**0.0661**	**0.7682**	**1.2800e-003**	**6.7400e-003**	**2.0300e-003**	**8.7700e-003**	**1.0200e-003**	**2.0300e-003**	**3.0500e-003**	**0.0000**	**112.1676**	**112.1676**	**0.0315**	**0.0000**	**112.9553**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2000e-004	0.0119	2.5300e-003	4.0000e-005	1.1700e-003	1.1000e-004	1.2700e-003	3.2000e-004	1.0000e-004	4.2000e-004	0.0000	4.3252	4.3252	1.4000e-004	6.9000e-004	4.5329
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	9.8000e-004	0.0118	3.0000e-005	3.9100e-003	2.0000e-005	3.9300e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.1458	3.1458	1.0000e-004	9.0000e-005	3.1753
Total	**1.6800e-003**	**0.0129**	**0.0144**	**7.0000e-005**	**5.0800e-003**	**1.3000e-004**	**5.2000e-003**	**1.3600e-003**	**1.2000e-004**	**1.4800e-003**	**0.0000**	**7.4710**	**7.4710**	**2.4000e-004**	**7.8000e-004**	**7.7082**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5897	0.0000	0.5897	0.3031	0.0000	0.3031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3182	100.3182	0.0324	0.0000	101.1293
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.5897**	**0.0484**	**0.6381**	**0.3031**	**0.0445**	**0.3476**	**0.0000**	**100.3182**	**100.3182**	**0.0324**	**0.0000**	**101.1293**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.0700e-003	0.0129	4.0000e-005	4.2700e-003	2.0000e-005	4.2900e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.4318	3.4318	1.1000e-004	1.0000e-004	3.4639
Total	**1.4800e-003**	**1.0700e-003**	**0.0129**	**4.0000e-005**	**4.2700e-003**	**2.0000e-005**	**4.2900e-003**	**1.1400e-003**	**2.0000e-005**	**1.1600e-003**	**0.0000**	**3.4318**	**3.4318**	**1.1000e-004**	**1.0000e-004**	**3.4639**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2654	0.0000	0.2654	0.1364	0.0000	0.1364	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.0605	0.6261	1.1400e-003		1.8600e-003	1.8600e-003		1.8600e-003	1.8600e-003	0.0000	100.3181	100.3181	0.0324	0.0000	101.1292
Total	**0.0140**	**0.0605**	**0.6261**	**1.1400e-003**	**0.2654**	**1.8600e-003**	**0.2672**	**0.1364**	**1.8600e-003**	**0.1382**	**0.0000**	**100.3181**	**100.3181**	**0.0324**	**0.0000**	**101.1292**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.0700e-003	0.0129	4.0000e-005	4.2700e-003	2.0000e-005	4.2900e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.4318	3.4318	1.1000e-004	1.0000e-004	3.4639
Total	**1.4800e-003**	**1.0700e-003**	**0.0129**	**4.0000e-005**	**4.2700e-003**	**2.0000e-005**	**4.2900e-003**	**1.1400e-003**	**2.0000e-005**	**1.1600e-003**	**0.0000**	**3.4318**	**3.4318**	**1.1000e-004**	**1.0000e-004**	**3.4639**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0390	0.0000	0.0390	0.0188	0.0000	0.0188	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1147	0.0840	1.6000e-004		5.1700e-003	5.1700e-003		4.7600e-003	4.7600e-003	0.0000	14.3301	14.3301	4.6300e-003	0.0000	14.4460
Total	**0.0107**	**0.1147**	**0.0840**	**1.6000e-004**	**0.0390**	**5.1700e-003**	**0.0441**	**0.0188**	**4.7600e-003**	**0.0236**	**0.0000**	**14.3301**	**14.3301**	**4.6300e-003**	**0.0000**	**14.4460**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.3100e-003	0.0851	0.0181	3.1000e-004	8.3600e-003	7.6000e-004	9.1300e-003	2.3000e-003	7.3000e-004	3.0300e-003	0.0000	30.9974	30.9974	1.0200e-003	4.9100e-003	32.4860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.6000e-004	1.9700e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5243	0.5243	2.0000e-005	2.0000e-005	0.5292
Total	**2.5400e-003**	**0.0853**	**0.0201**	**3.2000e-004**	**9.0100e-003**	**7.6000e-004**	**9.7900e-003**	**2.4700e-003**	**7.3000e-004**	**3.2100e-003**	**0.0000**	**31.5217**	**31.5217**	**1.0400e-003**	**4.9300e-003**	**33.0152**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0175	0.0000	0.0175	8.4800e-003	0.0000	8.4800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0000e-003	8.6600e-003	0.0976	1.6000e-004		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	14.3301	14.3301	4.6300e-003	0.0000	14.4460
Total	**2.0000e-003**	**8.6600e-003**	**0.0976**	**1.6000e-004**	**0.0175**	**2.7000e-004**	**0.0178**	**8.4800e-003**	**2.7000e-004**	**8.7500e-003**	**0.0000**	**14.3301**	**14.3301**	**4.6300e-003**	**0.0000**	**14.4460**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.3100e-003	0.0851	0.0181	3.1000e-004	8.3600e-003	7.6000e-004	9.1300e-003	2.3000e-003	7.3000e-004	3.0300e-003	0.0000	30.9974	30.9974	1.0200e-003	4.9100e-003	32.4860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.6000e-004	1.9700e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5243	0.5243	2.0000e-005	2.0000e-005	0.5292
Total	**2.5400e-003**	**0.0853**	**0.0201**	**3.2000e-004**	**9.0100e-003**	**7.6000e-004**	**9.7900e-003**	**2.4700e-003**	**7.3000e-004**	**3.2100e-003**	**0.0000**	**31.5217**	**31.5217**	**1.0400e-003**	**4.9300e-003**	**33.0152**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0742	0.6793	0.7118	1.1700e-003		0.0352	0.0352		0.0331	0.0331	0.0000	100.8005	100.8005	0.0242	0.0000	101.4042
Total	**0.0742**	**0.6793**	**0.7118**	**1.1700e-003**		**0.0352**	**0.0352**		**0.0331**	**0.0331**	**0.0000**	**100.8005**	**100.8005**	**0.0242**	**0.0000**	**101.4042**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9300e-003	0.1288	0.0375	4.9000e-004	0.0151	1.3300e-003	0.0165	4.3800e-003	1.2700e-003	5.6400e-003	0.0000	47.4824	47.4824	1.0300e-003	7.0400e-003	49.6063
Worker	0.0147	0.0106	0.1280	3.7000e-004	0.0423	2.3000e-004	0.0425	0.0113	2.1000e-004	0.0115	0.0000	34.0032	34.0032	1.0500e-003	9.8000e-004	34.3219
Total	**0.0196**	**0.1394**	**0.1655**	**8.6000e-004**	**0.0574**	**1.5600e-003**	**0.0590**	**0.0156**	**1.4800e-003**	**0.0171**	**0.0000**	**81.4856**	**81.4856**	**2.0800e-003**	**8.0200e-003**	**83.9282**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0143	0.0972	0.7595	1.1700e-003		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	100.8004	100.8004	0.0242	0.0000	101.4041
Total	**0.0143**	**0.0972**	**0.7595**	**1.1700e-003**		**1.7700e-003**	**1.7700e-003**		**1.7700e-003**	**1.7700e-003**	**0.0000**	**100.8004**	**100.8004**	**0.0242**	**0.0000**	**101.4041**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9300e-003	0.1288	0.0375	4.9000e-004	0.0151	1.3300e-003	0.0165	4.3800e-003	1.2700e-003	5.6400e-003	0.0000	47.4824	47.4824	1.0300e-003	7.0400e-003	49.6063
Worker	0.0147	0.0106	0.1280	3.7000e-004	0.0423	2.3000e-004	0.0425	0.0113	2.1000e-004	0.0115	0.0000	34.0032	34.0032	1.0500e-003	9.8000e-004	34.3219
Total	**0.0196**	**0.1394**	**0.1655**	**8.6000e-004**	**0.0574**	**1.5600e-003**	**0.0590**	**0.0156**	**1.4800e-003**	**0.0171**	**0.0000**	**81.4856**	**81.4856**	**2.0800e-003**	**8.0200e-003**	**83.9282**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.3400e-003	0.3063	0.0958	1.4000e-003	0.0452	1.7900e-003	0.0470	0.0131	1.7100e-003	0.0148	0.0000	136.0055	136.0055	2.7700e-003	0.0201	142.0704
Worker	0.0409	0.0280	0.3546	1.0700e-003	0.1264	6.5000e-004	0.1270	0.0336	6.0000e-004	0.0342	0.0000	99.0259	99.0259	2.8500e-003	2.7200e-003	99.9068
Total	**0.0483**	**0.3344**	**0.4504**	**2.4700e-003**	**0.1716**	**2.4400e-003**	**0.1740**	**0.0467**	**2.3100e-003**	**0.0490**	**0.0000**	**235.0314**	**235.0314**	**5.6200e-003**	**0.0228**	**241.9772**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2905	2.2698	3.5000e-003		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.0426**	**0.2905**	**2.2698**	**3.5000e-003**		**5.3000e-003**	**5.3000e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.3400e-003	0.3063	0.0958	1.4000e-003	0.0452	1.7900e-003	0.0470	0.0131	1.7100e-003	0.0148	0.0000	136.0055	136.0055	2.7700e-003	0.0201	142.0704
Worker	0.0409	0.0280	0.3546	1.0700e-003	0.1264	6.5000e-004	0.1270	0.0336	6.0000e-004	0.0342	0.0000	99.0259	99.0259	2.8500e-003	2.7200e-003	99.9068
Total	**0.0483**	**0.3344**	**0.4504**	**2.4700e-003**	**0.1716**	**2.4400e-003**	**0.1740**	**0.0467**	**2.3100e-003**	**0.0490**	**0.0000**	**235.0314**	**235.0314**	**5.6200e-003**	**0.0228**	**241.9772**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0118	0.1076	0.1293	2.2000e-004		4.9100e-003	4.9100e-003		4.6200e-003	4.6200e-003	0.0000	18.5479	18.5479	4.3900e-003	0.0000	18.6576
Total	**0.0118**	**0.1076**	**0.1293**	**2.2000e-004**		**4.9100e-003**	**4.9100e-003**		**4.6200e-003**	**4.6200e-003**	**0.0000**	**18.5479**	**18.5479**	**4.3900e-003**	**0.0000**	**18.6576**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4000e-004	0.0189	5.7700e-003	8.0000e-005	2.7800e-003	1.1000e-004	2.8900e-003	8.0000e-004	1.1000e-004	9.1000e-004	0.0000	8.2392	8.2392	1.7000e-004	1.2200e-003	8.6065
Worker	2.3600e-003	1.5400e-003	0.0204	6.0000e-005	7.7800e-003	4.0000e-005	7.8100e-003	2.0700e-003	4.0000e-005	2.1000e-003	0.0000	5.9436	5.9436	1.6000e-004	1.6000e-004	5.9940
Total	**2.8000e-003**	**0.0204**	**0.0262**	**1.4000e-004**	**0.0106**	**1.5000e-004**	**0.0107**	**2.8700e-003**	**1.5000e-004**	**3.0100e-003**	**0.0000**	**14.1828**	**14.1828**	**3.3000e-004**	**1.3800e-003**	**14.6005**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6200e-003	0.0179	0.1397	2.2000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	18.5479	18.5479	4.3900e-003	0.0000	18.6576
Total	**2.6200e-003**	**0.0179**	**0.1397**	**2.2000e-004**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**	**0.0000**	**18.5479**	**18.5479**	**4.3900e-003**	**0.0000**	**18.6576**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4000e-004	0.0189	5.7700e-003	8.0000e-005	2.7800e-003	1.1000e-004	2.8900e-003	8.0000e-004	1.1000e-004	9.1000e-004	0.0000	8.2392	8.2392	1.7000e-004	1.2200e-003	8.6065
Worker	2.3600e-003	1.5400e-003	0.0204	6.0000e-005	7.7800e-003	4.0000e-005	7.8100e-003	2.0700e-003	4.0000e-005	2.1000e-003	0.0000	5.9436	5.9436	1.6000e-004	1.6000e-004	5.9940
Total	**2.8000e-003**	**0.0204**	**0.0262**	**1.4000e-004**	**0.0106**	**1.5000e-004**	**0.0107**	**2.8700e-003**	**1.5000e-004**	**3.0100e-003**	**0.0000**	**14.1828**	**14.1828**	**3.3000e-004**	**1.3800e-003**	**14.6005**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0184	0.1758	0.2438	3.8000e-004		8.7100e-003	8.7100e-003		8.0500e-003	8.0500e-003	0.0000	32.7572	32.7572	0.0103	0.0000	33.0145
Paving	5.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0189**	**0.1758**	**0.2438**	**3.8000e-004**		**8.7100e-003**	**8.7100e-003**		**8.0500e-003**	**8.0500e-003**	**0.0000**	**32.7572**	**32.7572**	**0.0103**	**0.0000**	**33.0145**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0200e-003	7.0000e-004	8.8700e-003	3.0000e-005	3.1600e-003	2.0000e-005	3.1800e-003	8.4000e-004	2.0000e-005	8.6000e-004	0.0000	2.4772	2.4772	7.0000e-005	7.0000e-005	2.4992
Total	**1.0200e-003**	**7.0000e-004**	**8.8700e-003**	**3.0000e-005**	**3.1600e-003**	**2.0000e-005**	**3.1800e-003**	**8.4000e-004**	**2.0000e-005**	**8.6000e-004**	**0.0000**	**2.4772**	**2.4772**	**7.0000e-005**	**7.0000e-005**	**2.4992**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.3900e-003	0.0190	0.2707	3.8000e-004		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	32.7571	32.7571	0.0103	0.0000	33.0145
Paving	5.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.9500e-003**	**0.0190**	**0.2707**	**3.8000e-004**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**32.7571**	**32.7571**	**0.0103**	**0.0000**	**33.0145**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0200e-003	7.0000e-004	8.8700e-003	3.0000e-005	3.1600e-003	2.0000e-005	3.1800e-003	8.4000e-004	2.0000e-005	8.6000e-004	0.0000	2.4772	2.4772	7.0000e-005	7.0000e-005	2.4992
Total	**1.0200e-003**	**7.0000e-004**	**8.8700e-003**	**3.0000e-005**	**3.1600e-003**	**2.0000e-005**	**3.1800e-003**	**8.4000e-004**	**2.0000e-005**	**8.6000e-004**	**0.0000**	**2.4772**	**2.4772**	**7.0000e-005**	**7.0000e-005**	**2.4992**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8637					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	**0.8653**	**0.0110**	**0.0163**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3012**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.5000e-004	4.6600e-003	1.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3591	1.3591	4.0000e-005	4.0000e-005	1.3706
Total	**5.4000e-004**	**3.5000e-004**	**4.6600e-003**	**1.0000e-005**	**1.7800e-003**	**1.0000e-005**	**1.7900e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.3591**	**1.3591**	**4.0000e-005**	**4.0000e-005**	**1.3706**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8637					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	1.1600e-003	0.0165	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3012
Total	**0.8640**	**1.1600e-003**	**0.0165**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.2979**	**2.2979**	**1.3000e-004**	**0.0000**	**2.3012**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	3.5000e-004	4.6600e-003	1.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3591	1.3591	4.0000e-005	4.0000e-005	1.3706
Total	**5.4000e-004**	**3.5000e-004**	**4.6600e-003**	**1.0000e-005**	**1.7800e-003**	**1.0000e-005**	**1.7900e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.3591**	**1.3591**	**4.0000e-005**	**4.0000e-005**	**1.3706**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3813	0.4431	3.6584	7.7200e-003	0.8310	5.6900e-003	0.8367	0.2220	5.3000e-003	0.2273	0.0000	724.6901	724.6901	0.0460	0.0342	736.0309
Unmitigated	0.3813	0.4431	3.6584	7.7200e-003	0.8310	5.6900e-003	0.8367	0.2220	5.3000e-003	0.2273	0.0000	724.6901	724.6901	0.0460	0.0342	736.0309

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Light Industry	237.43	66.27	166.50	592,207	592,207
Parking Lot	0.00	0.00	0.00		
Research & Development	852.92	239.02	139.64	1,662,458	1,662,458
Total	1,090.35	305.29	306.14	2,254,665	2,254,665

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
General Light Industry	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Parking Lot	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Research & Development	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

theLAB Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	134.2013	134.2013	0.0217	2.6300e-003	135.5283
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	173.3786	173.3786	0.0281	3.4000e-003	175.0930
NaturalGas Mitigated	0.0196	0.1778	0.1494	1.0700e-003		0.0135	0.0135		0.0135	0.0135	0.0000	193.6016	193.6016	3.7100e-003	3.5500e-003	194.7521
NaturalGas Unmitigated	0.0211	0.1916	0.1610	1.1500e-003		0.0146	0.0146		0.0146	0.0146	0.0000	208.6038	208.6038	4.0000e-003	3.8200e-003	209.8434

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	818181	4.4100e-003	0.0401	0.0337	2.4000e-004		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	43.6613	43.6613	8.4000e-004	8.0000e-004	43.9207
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	3.09091e+006	0.0167	0.1515	0.1273	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.9425	164.9425	3.1600e-003	3.0200e-003	165.9227
Total		**0.0211**	**0.1916**	**0.1610**	**1.1500e-003**		**0.0146**	**0.0146**		**0.0146**	**0.0146**	**0.0000**	**208.6038**	**208.6038**	**4.0000e-003**	**3.8200e-003**	**209.8434**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	759340	4.0900e-003	0.0372	0.0313	2.2000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	40.5213	40.5213	7.8000e-004	7.4000e-004	40.7621
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	2.86862e+006	0.0155	0.1406	0.1181	8.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	153.0804	153.0804	2.9300e-003	2.8100e-003	153.9900
Total		**0.0196**	**0.1778**	**0.1494**	**1.0600e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**193.6016**	**193.6016**	**3.7100e-003**	**3.5500e-003**	**194.7521**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	678188	62.7486	0.0102	1.2300e-003	63.3690
General Light Industry	247419	22.8921	3.7000e-003	4.5000e-004	23.1185
Parking Lot	13580	1.2565	2.0000e-004	2.0000e-005	1.2689
Research & Development	934694	86.4814	0.0140	1.7000e-003	87.3366
Total		**173.3786**	**0.0280**	**3.4000e-003**	**175.0930**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	507644	46.9691	7.6000e-003	9.2000e-004	47.4336
General Light Industry	195058	18.0475	2.9200e-003	3.5000e-004	18.2260
Parking Lot	10864	1.0052	1.6000e-004	2.0000e-005	1.0151
Research & Development	736886	68.1795	0.0110	1.3400e-003	68.8537
Total		**134.2013**	**0.0217**	**2.6300e-003**	**135.5283**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7189	6.0000e-005	6.1600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0120	0.0120	3.0000e-005	0.0000	0.0128
Unmitigated	0.7189	6.0000e-005	6.1600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0120	0.0120	3.0000e-005	0.0000	0.0128

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0864					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6319					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.7000e-004	6.0000e-005	6.1600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0120	0.0120	3.0000e-005	0.0000	0.0128
Total	**0.7189**	**6.0000e-005**	**6.1600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0120**	**0.0120**	**3.0000e-005**	**0.0000**	**0.0128**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0864					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6319					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.7000e-004	6.0000e-005	6.1600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0120	0.0120	3.0000e-005	0.0000	0.0128
Total	**0.7189**	**6.0000e-005**	**6.1600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0120**	**0.0120**	**3.0000e-005**	**0.0000**	**0.0128**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	56.8896	2.2721	0.0542	129.8437
Unmitigated	56.8896	2.2721	0.0542	129.8437

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Light Industry	7.70062 / 0	6.2983	0.2516	6.0000e-003	14.3752
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	61.8551 / 0	50.5913	2.0206	0.0482	115.4685
Total		**56.8896**	**2.2721**	**0.0542**	**129.8437**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Light Industry	7.70062 / 0	6.2983	0.2516	6.0000e-003	14.3752
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Research & Development	61.8551 / 0	50.5913	2.0206	0.0482	115.4685
Total		**56.8896**	**2.2721**	**0.0542**	**129.8437**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.3221	0.6100	0.0000	25.5725
Unmitigated	10.3221	0.6100	0.0000	25.5725

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	41.29	8.3815	0.4953	0.0000	20.7648
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	9.56	1.9406	0.1147	0.0000	4.8077
Total		**10.3221**	**0.6100**	**0.0000**	**25.5725**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	41.29	8.3815	0.4953	0.0000	20.7648
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Research & Development	9.56	1.9406	0.1147	0.0000	4.8077
Total		**10.3221**	**0.6100**	**0.0000**	**25.5725**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.1	36	670	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (600 - 750 HP)	0.0198	0.0553	0.0505	1.0000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	9.1848	9.1848	1.2900e-003	0.0000	9.2170
Total	**0.0198**	**0.0553**	**0.0505**	**1.0000e-004**		**2.9100e-003**	**2.9100e-003**		**2.9100e-003**	**2.9100e-003**	**0.0000**	**9.1848**	**9.1848**	**1.2900e-003**	**0.0000**	**9.2170**

11.0 Vegetation

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

theLAB Project

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	125.80	1000sqft	1.43	125,800.00	0
General Light Industry	33.30	1000sqft	0.37	33,300.00	0
Enclosed Parking with Elevator	415.00	Space	0.79	124,667.00	0
Parking Lot	97.00	Space	0.43	38,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The proposed Project would consist of a new research and development (R&D) building and an above-ground parking garage, totaling approximately 283,810 gross square feet and a total of 512 parking spaces.

Construction Phase - Construction phasing based on construction activities and schedule assumptions provided by the Project applicant. Default architectural coating duration.

Demolition - Approximately 1,400 tons of construction debris, such as old foundations, pavements, and structures, would be collected and off-hauled.

Grading - Up to 10,000 cubic yards of soils would be excavated from the site and off-hauled.

Vehicle Trips - Trip generation rates based on the Project’s Transportation Impact Analysis (Fehr & Peers, 2021).

Energy Mitigation - The proposed Project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver equivalence and would include photovoltaic (PV) solar panels on the rooftops of the proposed buildings.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	8.00	11.00
tblConstructionPhase	NumDays	230.00	363.00
tblConstructionPhase	NumDays	18.00	40.00
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LandUseSquareFeet	166,000.00	124,667.00
tblLandUse	LotAcreage	2.89	1.43
tblLandUse	LotAcreage	0.76	0.37
tblLandUse	LotAcreage	3.73	0.79
tblLandUse	LotAcreage	0.87	0.43
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	670.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.10
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	36.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	WD_TR	4.96	7.13
tblVehicleTrips	WD_TR	11.26	6.78

2.0 Emissions Summary

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.9152	68.9227	41.2210	0.1272	28.5831	2.8599	31.2767	14.0301	2.6432	16.5133	0.0000	13,016.6264	13,016.6264	2.3327	0.9900	13,369.9549
2023	2.9635	25.6706	32.5788	0.0668	1.5337	1.1550	2.6886	0.4149	1.0795	1.4944	0.0000	6,555.4320	6,555.4320	1.2250	0.1951	6,644.1991
2024	98.0492	17.1422	21.9849	0.0507	1.5748	0.6939	2.2686	0.4258	0.6564	1.0822	0.0000	5,023.6413	5,023.6413	0.6683	0.1916	5,097.4324
Maximum	**98.0492**	**68.9227**	**41.2210**	**0.1272**	**28.5831**	**2.8599**	**31.2767**	**14.0301**	**2.6432**	**16.5133**	**0.0000**	**13,016.6264**	**13,016.6264**	**2.3327**	**0.9900**	**13,369.9549**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3481	18.5752	45.0780	0.1272	13.8763	0.2507	14.1270	6.5901	0.2446	6.8347	0.0000	13,016.6264	13,016.6264	2.3327	0.9900	13,369.9549
2023	1.0199	5.6810	35.1370	0.0668	1.5337	0.0896	1.6233	0.4149	0.0886	0.5035	0.0000	6,555.4320	6,555.4320	1.2250	0.1951	6,644.1991
2024	96.7544	4.8431	23.3006	0.0507	1.5748	0.0644	1.6391	0.4258	0.0633	0.4891	0.0000	5,023.6413	5,023.6413	0.6683	0.1916	5,097.4324
Maximum	**96.7544**	**18.5752**	**45.0780**	**0.1272**	**13.8763**	**0.2507**	**14.1270**	**6.5901**	**0.2446**	**6.8347**	**0.0000**	**13,016.6264**	**13,016.6264**	**2.3327**	**0.9900**	**13,369.9549**

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.30**	**73.96**	**-8.07**	**0.00**	**46.41**	**91.41**	**52.01**	**50.03**	**90.95**	**59.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9422	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Energy	0.1155	1.0500	0.8820	6.3000e-003		0.0798	0.0798		0.0798	0.0798		1,259.9797	1,259.9797	0.0242	0.0231	1,267.4671
Mobile	2.9147	2.8128	25.2984	0.0562	5.9582	0.0393	5.9975	1.5869	0.0366	1.6235		5,810.3496	5,810.3496	0.3289	0.2470	5,892.1876
Stationary	0.1100	0.3073	0.2804	5.3000e-004		0.0162	0.0162		0.0162	0.0162		56.2475	56.2475	7.8900e-003		56.4446
Total	**7.0824**	**4.1707**	**26.5292**	**0.0630**	**5.9582**	**0.1355**	**6.0937**	**1.5869**	**0.1328**	**1.7197**		**7,126.7236**	**7,126.7236**	**0.3613**	**0.2701**	**7,216.2558**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9422	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Energy	0.1072	0.9745	0.8186	5.8500e-003		0.0741	0.0741		0.0741	0.0741		1,169.3658	1,169.3658	0.0224	0.0214	1,176.3147
Mobile	2.9147	2.8128	25.2984	0.0562	5.9582	0.0393	5.9975	1.5869	0.0366	1.6235		5,810.3496	5,810.3496	0.3289	0.2470	5,892.1876
Stationary	0.1100	0.3073	0.2804	5.3000e-004		0.0162	0.0162		0.0162	0.0162		56.2475	56.2475	7.8900e-003		56.4446
Total	**7.0740**	**4.0952**	**26.4658**	**0.0626**	**5.9582**	**0.1298**	**6.0880**	**1.5869**	**0.1271**	**1.7140**		**7,036.1097**	**7,036.1097**	**0.3596**	**0.2685**	**7,125.1034**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.12**	**1.81**	**0.24**	**0.71**	**0.00**	**4.24**	**0.09**	**0.00**	**4.32**	**0.33**	**0.00**	**1.27**	**1.27**	**0.48**	**0.61**	**1.26**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/16/2022	8/15/2022	5	66	
2	Site Preparation	Site Preparation	8/8/2022	10/28/2022	5	60	
3	Grading	Grading	8/16/2022	8/30/2022	5	11	
4	Building Construction	Building Construction	9/1/2022	1/22/2024	5	363	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Paving	Paving	10/30/2023	12/22/2023	5	40	
6	Architectural Coating	Architectural Coating	1/22/2024	2/14/2024	5	18	

Acres of Grading (Site Preparation Phase): 90

Acres of Grading (Grading Phase): 11

Acres of Paving: 1.22

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 238,650; Non-Residential Outdoor: 79,550; Striped Parking Area: 9,808 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	138.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	989.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	123.00	53.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4539	0.0000	0.4539	0.0687	0.0000	0.0687			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**0.4539**	**1.2427**	**1.6966**	**0.0687**	**1.1553**	**1.2240**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.8500e-003	0.3471	0.0761	1.3300e-003	0.0366	3.2300e-003	0.0398	0.0100	3.0900e-003	0.0131		144.4572	144.4572	4.7700e-003	0.0229	151.3944
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0436	0.0263	0.3878	1.1000e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		112.2095	112.2095	3.0600e-003	2.8000e-003	113.1197
Total	**0.0535**	**0.3734**	**0.4639**	**2.4300e-003**	**0.1598**	**3.8700e-003**	**0.1637**	**0.0427**	**3.6800e-003**	**0.0464**		**256.6666**	**256.6666**	**7.8300e-003**	**0.0257**	**264.5141**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2043	0.0000	0.2043	0.0309	0.0000	0.0309			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**0.4623**	**2.0032**	**23.2798**	**0.0388**	**0.2043**	**0.0616**	**0.2659**	**0.0309**	**0.0616**	**0.0926**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.8500e-003	0.3471	0.0761	1.3300e-003	0.0366	3.2300e-003	0.0398	0.0100	3.0900e-003	0.0131		144.4572	144.4572	4.7700e-003	0.0229	151.3944
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0436	0.0263	0.3878	1.1000e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		112.2095	112.2095	3.0600e-003	2.8000e-003	113.1197
Total	**0.0535**	**0.3734**	**0.4639**	**2.4300e-003**	**0.1598**	**3.8700e-003**	**0.1637**	**0.0427**	**3.6800e-003**	**0.0464**		**256.6666**	**256.6666**	**7.8300e-003**	**0.0257**	**264.5141**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0524	0.0316	0.4653	1.3200e-003	0.1479	7.7000e-004	0.1486	0.0392	7.1000e-004	0.0399		134.6513	134.6513	3.6700e-003	3.3600e-003	135.7437
Total	**0.0524**	**0.0316**	**0.4653**	**1.3200e-003**	**0.1479**	**7.7000e-004**	**0.1486**	**0.0392**	**7.1000e-004**	**0.0399**		**134.6513**	**134.6513**	**3.6700e-003**	**3.3600e-003**	**135.7437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**8.8457**	**0.0621**	**8.9077**	**4.5461**	**0.0621**	**4.6082**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0524	0.0316	0.4653	1.3200e-003	0.1479	7.7000e-004	0.1486	0.0392	7.1000e-004	0.0399		134.6513	134.6513	3.6700e-003	3.3600e-003	135.7437
Total	**0.0524**	**0.0316**	**0.4653**	**1.3200e-003**	**0.1479**	**7.7000e-004**	**0.1486**	**0.0392**	**7.1000e-004**	**0.0399**		**134.6513**	**134.6513**	**3.6700e-003**	**3.3600e-003**	**135.7437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4234	14.9262	3.2715	0.0571	1.5724	0.1388	1.7112	0.4310	0.1328	0.5638		6,211.6573	6,211.6573	0.2049	0.9838	6,509.9576
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0436	0.0263	0.3878	1.1000e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		112.2095	112.2095	3.0600e-003	2.8000e-003	113.1197
Total	**0.4671**	**14.9525**	**3.6593**	**0.0582**	**1.6956**	**0.1394**	**1.8351**	**0.4637**	**0.1334**	**0.5970**		**6,323.8668**	**6,323.8668**	**0.2080**	**0.9866**	**6,623.0773**

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**3.1872**	**0.0484**	**3.2356**	**1.5411**	**0.0484**	**1.5896**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4234	14.9262	3.2715	0.0571	1.5724	0.1388	1.7112	0.4310	0.1328	0.5638		6,211.6573	6,211.6573	0.2049	0.9838	6,509.9576
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0436	0.0263	0.3878	1.1000e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		112.2095	112.2095	3.0600e-003	2.8000e-003	113.1197
Total	**0.4671**	**14.9525**	**3.6593**	**0.0582**	**1.6956**	**0.1394**	**1.8351**	**0.4637**	**0.1334**	**0.5970**		**6,323.8668**	**6,323.8668**	**0.2080**	**0.9866**	**6,623.0773**

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1144	2.8591	0.8492	0.0112	0.3589	0.0305	0.3894	0.1033	0.0291	0.1325		1,203.0250	1,203.0250	0.0262	0.1783	1,256.8003
Worker	0.3578	0.2158	3.1797	9.0400e-003	1.0104	5.2800e-003	1.0157	0.2680	4.8600e-003	0.2729		920.1175	920.1175	0.0251	0.0229	927.5817
Total	**0.4722**	**3.0748**	**4.0289**	**0.0203**	**1.3694**	**0.0357**	**1.4051**	**0.3713**	**0.0340**	**0.4053**		**2,123.1424**	**2,123.1424**	**0.0513**	**0.2012**	**2,184.3820**

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1144	2.8591	0.8492	0.0112	0.3589	0.0305	0.3894	0.1033	0.0291	0.1325		1,203.0250	1,203.0250	0.0262	0.1783	1,256.8003
Worker	0.3578	0.2158	3.1797	9.0400e-003	1.0104	5.2800e-003	1.0157	0.2680	4.8600e-003	0.2729		920.1175	920.1175	0.0251	0.0229	927.5817
Total	**0.4722**	**3.0748**	**4.0289**	**0.0203**	**1.3694**	**0.0357**	**1.4051**	**0.3713**	**0.0340**	**0.4053**		**2,123.1424**	**2,123.1424**	**0.0513**	**0.2012**	**2,184.3820**

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0577	2.2732	0.7260	0.0107	0.3590	0.0138	0.3727	0.1033	0.0132	0.1165		1,152.5434	1,152.5434	0.0236	0.1704	1,203.9070
Worker	0.3327	0.1911	2.9403	8.7600e-003	1.0104	5.0100e-003	1.0154	0.2680	4.6100e-003	0.2726		896.4793	896.4793	0.0226	0.0213	903.3824
Total	**0.3904**	**2.4643**	**3.6663**	**0.0195**	**1.3694**	**0.0188**	**1.3881**	**0.3714**	**0.0178**	**0.3891**		**2,049.0227**	**2,049.0227**	**0.0462**	**0.1917**	**2,107.2894**

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0577	2.2732	0.7260	0.0107	0.3590	0.0138	0.3727	0.1033	0.0132	0.1165		1,152.5434	1,152.5434	0.0236	0.1704	1,203.9070
Worker	0.3327	0.1911	2.9403	8.7600e-003	1.0104	5.0100e-003	1.0154	0.2680	4.6100e-003	0.2726		896.4793	896.4793	0.0226	0.0213	903.3824
Total	**0.3904**	**2.4643**	**3.6663**	**0.0195**	**1.3694**	**0.0188**	**1.3881**	**0.3714**	**0.0178**	**0.3891**		**2,049.0227**	**2,049.0227**	**0.0462**	**0.1917**	**2,107.2894**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0560	2.2743	0.7105	0.0106	0.3590	0.0139	0.3728	0.1033	0.0133	0.1166		1,134.5678	1,134.5678	0.0235	0.1677	1,185.1301
Worker	0.3108	0.1706	2.7405	8.4700e-003	1.0104	4.7700e-003	1.0152	0.2680	4.3900e-003	0.2724		874.2362	874.2362	0.0205	0.0198	880.6554
Total	**0.3668**	**2.4449**	**3.4509**	**0.0190**	**1.3694**	**0.0187**	**1.3880**	**0.3714**	**0.0177**	**0.3890**		**2,008.8040**	**2,008.8040**	**0.0439**	**0.1875**	**2,065.7855**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0560	2.2743	0.7105	0.0106	0.3590	0.0139	0.3728	0.1033	0.0133	0.1166		1,134.5678	1,134.5678	0.0235	0.1677	1,185.1301
Worker	0.3108	0.1706	2.7405	8.4700e-003	1.0104	4.7700e-003	1.0152	0.2680	4.3900e-003	0.2724		874.2362	874.2362	0.0205	0.0198	880.6554
Total	**0.3668**	**2.4449**	**3.4509**	**0.0190**	**1.3694**	**0.0187**	**1.3880**	**0.3714**	**0.0177**	**0.3890**		**2,008.8040**	**2,008.8040**	**0.0439**	**0.1875**	**2,065.7855**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.0282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9463**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0541	0.0311	0.4781	1.4200e-003	0.1643	8.1000e-004	0.1651	0.0436	7.5000e-004	0.0443		145.7690	145.7690	3.6800e-003	3.4600e-003	146.8915
Total	**0.0541**	**0.0311**	**0.4781**	**1.4200e-003**	**0.1643**	**8.1000e-004**	**0.1651**	**0.0436**	**7.5000e-004**	**0.0443**		**145.7690**	**145.7690**	**3.6800e-003**	**3.4600e-003**	**146.8915**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2194	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.0282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2476**	**0.9509**	**13.5323**	**0.0189**		**0.0293**	**0.0293**		**0.0293**	**0.0293**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0541	0.0311	0.4781	1.4200e-003	0.1643	8.1000e-004	0.1651	0.0436	7.5000e-004	0.0443		145.7690	145.7690	3.6800e-003	3.4600e-003	146.8915
Total	**0.0541**	**0.0311**	**0.4781**	**1.4200e-003**	**0.1643**	**8.1000e-004**	**0.1651**	**0.0436**	**7.5000e-004**	**0.0443**		**145.7690**	**145.7690**	**3.6800e-003**	**3.4600e-003**	**146.8915**

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	95.9669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**96.1477**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0632	0.0347	0.5570	1.7200e-003	0.2054	9.7000e-004	0.2063	0.0545	8.9000e-004	0.0554		177.6903	177.6903	4.1600e-003	4.0300e-003	178.9950
Total	**0.0632**	**0.0347**	**0.5570**	**1.7200e-003**	**0.2054**	**9.7000e-004**	**0.2063**	**0.0545**	**8.9000e-004**	**0.0554**		**177.6903**	**177.6903**	**4.1600e-003**	**4.0300e-003**	**178.9950**

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	95.9669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**95.9966**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0632	0.0347	0.5570	1.7200e-003	0.2054	9.7000e-004	0.2063	0.0545	8.9000e-004	0.0554		177.6903	177.6903	4.1600e-003	4.0300e-003	178.9950
Total	**0.0632**	**0.0347**	**0.5570**	**1.7200e-003**	**0.2054**	**9.7000e-004**	**0.2063**	**0.0545**	**8.9000e-004**	**0.0554**		**177.6903**	**177.6903**	**4.1600e-003**	**4.0300e-003**	**178.9950**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9147	2.8128	25.2984	0.0562	5.9582	0.0393	5.9975	1.5869	0.0366	1.6235		5,810.3496	5,810.3496	0.3289	0.2470	5,892.1876
Unmitigated	2.9147	2.8128	25.2984	0.0562	5.9582	0.0393	5.9975	1.5869	0.0366	1.6235		5,810.3496	5,810.3496	0.3289	0.2470	5,892.1876

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Light Industry	237.43	66.27	166.50	592,207	592,207
Parking Lot	0.00	0.00	0.00		
Research & Development	852.92	239.02	139.64	1,662,458	1,662,458
Total	1,090.35	305.29	306.14	2,254,665	2,254,665

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
General Light Industry	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Parking Lot	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Research & Development	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1072	0.9745	0.8186	5.8500e-003		0.0741	0.0741		0.0741	0.0741		1,169.3658	1,169.3658	0.0224	0.0214	1,176.3147
NaturalGas Unmitigated	0.1155	1.0500	0.8820	6.3000e-003		0.0798	0.0798		0.0798	0.0798		1,259.9797	1,259.9797	0.0242	0.0231	1,267.4671

theLAB Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	2241.59	0.0242	0.2198	0.1846	1.3200e-003		0.0167	0.0167		0.0167	0.0167		263.7167	263.7167	5.0500e-003	4.8300e-003	265.2838
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	8468.24	0.0913	0.8302	0.6974	4.9800e-003		0.0631	0.0631		0.0631	0.0631		996.2630	996.2630	0.0191	0.0183	1,002.1833
Total		**0.1155**	**1.0500**	**0.8820**	**6.3000e-003**		**0.0798**	**0.0798**		**0.0798**	**0.0798**		**1,259.9797**	**1,259.9797**	**0.0242**	**0.0231**	**1,267.4671**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	2.08038	0.0224	0.2040	0.1713	1.2200e-003		0.0155	0.0155		0.0155	0.0155		244.7510	244.7510	4.6900e-003	4.4900e-003	246.2054
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	7.85923	0.0848	0.7705	0.6472	4.6200e-003		0.0586	0.0586		0.0586	0.0586		924.6148	924.6148	0.0177	0.0170	930.1093
Total		**0.1072**	**0.9745**	**0.8186**	**5.8400e-003**		**0.0741**	**0.0741**		**0.0741**	**0.0741**		**1,169.3658**	**1,169.3658**	**0.0224**	**0.0214**	**1,176.3147**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9422	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Unmitigated	3.9422	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4733					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4626					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3200e-003	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Total	**3.9422**	**6.2000e-004**	**0.0684**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**		**0.1469**	**0.1469**	**3.8000e-004**		**0.1565**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4733					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4626					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3200e-003	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Total	**3.9422**	**6.2000e-004**	**0.0684**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**		**0.1469**	**0.1469**	**3.8000e-004**		**0.1565**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.1	36	670	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (600 - 750 HP)	0.1100	0.3073	0.2804	5.3000e-004		0.0162	0.0162		0.0162	0.0162		56.2475	56.2475	7.8900e-003		56.4446
Total	**0.1100**	**0.3073**	**0.2804**	**5.3000e-004**		**0.0162**	**0.0162**		**0.0162**	**0.0162**		**56.2475**	**56.2475**	**7.8900e-003**		**56.4446**

11.0 Vegetation

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

theLAB Project

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	125.80	1000sqft	1.43	125,800.00	0
General Light Industry	33.30	1000sqft	0.37	33,300.00	0
Enclosed Parking with Elevator	415.00	Space	0.79	124,667.00	0
Parking Lot	97.00	Space	0.43	38,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The proposed Project would consist of a new research and development (R&D) building and an above-ground parking garage, totaling approximately 283,810 gross square feet and a total of 512 parking spaces.

Construction Phase - Construction phasing based on construction activities and schedule assumptions provided by the Project applicant. Default architectural coating duration.

Demolition - Approximately 1,400 tons of construction debris, such as old foundations, pavements, and structures, would be collected and off-hauled.

Grading - Up to 10,000 cubic yards of soils would be excavated from the site and off-hauled.

Vehicle Trips - Trip generation rates based on the Project’s Transportation Impact Analysis (Fehr & Peers, 2021).

Energy Mitigation - The proposed Project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver equivalence and would include photovoltaic (PV) solar panels on the rooftops of the proposed buildings.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	8.00	11.00
tblConstructionPhase	NumDays	230.00	363.00
tblConstructionPhase	NumDays	18.00	40.00
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LandUseSquareFeet	166,000.00	124,667.00
tblLandUse	LotAcreage	2.89	1.43
tblLandUse	LotAcreage	0.76	0.37
tblLandUse	LotAcreage	3.73	0.79
tblLandUse	LotAcreage	0.87	0.43
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	670.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.10
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	36.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	WD_TR	4.96	7.13
tblVehicleTrips	WD_TR	11.26	6.78

2.0 Emissions Summary

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.9170	69.7594	41.1829	0.1270	28.5831	2.8599	31.2769	14.0301	2.6432	16.5135	0.0000	13,001.1037	13,001.1037	2.3330	0.9913	13,354.8314
2023	2.9714	25.8548	32.4592	0.0661	1.5337	1.1550	2.6887	0.4149	1.0795	1.4944	0.0000	6,483.2040	6,483.2040	1.2284	0.1993	6,573.2997
2024	98.0583	17.3224	21.8814	0.0500	1.5748	0.6939	2.2687	0.4258	0.6564	1.0823	0.0000	4,950.8968	4,950.8968	0.6716	0.1956	5,025.9655
Maximum	**98.0583**	**69.7594**	**41.1829**	**0.1270**	**28.5831**	**2.8599**	**31.2769**	**14.0301**	**2.6432**	**16.5135**	**0.0000**	**13,001.1037**	**13,001.1037**	**2.3330**	**0.9913**	**13,354.8314**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3406	19.4119	45.0398	0.1270	13.8763	0.2509	14.1272	6.5901	0.2448	6.8349	0.0000	13,001.1037	13,001.1037	2.3330	0.9913	13,354.8314
2023	1.0278	5.8652	35.0173	0.0661	1.5337	0.0897	1.6234	0.4149	0.0886	0.5036	0.0000	6,483.2040	6,483.2040	1.2284	0.1993	6,573.2997
2024	96.7635	5.0233	23.1971	0.0500	1.5748	0.0644	1.6392	0.4258	0.0634	0.4892	0.0000	4,950.8968	4,950.8968	0.6716	0.1956	5,025.9655
Maximum	**96.7635**	**19.4119**	**45.0398**	**0.1270**	**13.8763**	**0.2509**	**14.1272**	**6.5901**	**0.2448**	**6.8349**	**0.0000**	**13,001.1037**	**13,001.1037**	**2.3330**	**0.9913**	**13,354.8314**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.31**	**73.17**	**-8.09**	**0.00**	**46.41**	**91.40**	**52.01**	**50.03**	**90.94**	**59.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9422	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Energy	0.1155	1.0500	0.8820	6.3000e-003		0.0798	0.0798		0.0798	0.0798		1,259.9797	1,259.9797	0.0242	0.0231	1,267.4671
Mobile	2.6433	3.2361	26.8801	0.0530	5.9582	0.0393	5.9975	1.5869	0.0367	1.6235		5,485.0087	5,485.0087	0.3706	0.2706	5,574.8979
Stationary	0.1100	0.3073	0.2804	5.3000e-004		0.0162	0.0162		0.0162	0.0162		56.2475	56.2475	7.8900e-003		56.4446
Total	**6.8110**	**4.5940**	**28.1109**	**0.0599**	**5.9582**	**0.1355**	**6.0937**	**1.5869**	**0.1329**	**1.7198**		**6,801.3827**	**6,801.3827**	**0.4030**	**0.2937**	**6,898.9661**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9422	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Energy	0.1072	0.9745	0.8186	5.8500e-003		0.0741	0.0741		0.0741	0.0741		1,169.3658	1,169.3658	0.0224	0.0214	1,176.3147
Mobile	2.6433	3.2361	26.8801	0.0530	5.9582	0.0393	5.9975	1.5869	0.0367	1.6235		5,485.0087	5,485.0087	0.3706	0.2706	5,574.8979
Stationary	0.1100	0.3073	0.2804	5.3000e-004		0.0162	0.0162		0.0162	0.0162		56.2475	56.2475	7.8900e-003		56.4446
Total	**6.8027**	**4.5185**	**28.0474**	**0.0594**	**5.9582**	**0.1298**	**6.0880**	**1.5869**	**0.1271**	**1.7140**		**6,710.7688**	**6,710.7688**	**0.4013**	**0.2920**	**6,807.8137**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.12**	**1.64**	**0.23**	**0.75**	**0.00**	**4.23**	**0.09**	**0.00**	**4.32**	**0.33**	**0.00**	**1.33**	**1.33**	**0.43**	**0.57**	**1.32**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/16/2022	8/15/2022	5	66	
2	Site Preparation	Site Preparation	8/8/2022	10/28/2022	5	60	
3	Grading	Grading	8/16/2022	8/30/2022	5	11	
4	Building Construction	Building Construction	9/1/2022	1/22/2024	5	363	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Paving	Paving	10/30/2023	12/22/2023	5	40	
6	Architectural Coating	Architectural Coating	1/22/2024	2/14/2024	5	18	

Acres of Grading (Site Preparation Phase): 90

Acres of Grading (Grading Phase): 11

Acres of Paving: 1.22

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 238,650; Non-Residential Outdoor: 79,550; Striped Parking Area: 9,808 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	138.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	989.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	123.00	53.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4539	0.0000	0.4539	0.0687	0.0000	0.0687			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**0.4539**	**1.2427**	**1.6966**	**0.0687**	**1.1553**	**1.2240**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.6200e-003	0.3663	0.0773	1.3300e-003	0.0366	3.2300e-003	0.0398	0.0100	3.0900e-003	0.0131		144.5041	144.5041	4.7500e-003	0.0229	151.4436
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0446	0.0325	0.3699	1.0200e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		104.2358	104.2358	3.4600e-003	3.2200e-003	105.2827
Total	**0.0542**	**0.3987**	**0.4472**	**2.3500e-003**	**0.1598**	**3.8700e-003**	**0.1637**	**0.0427**	**3.6800e-003**	**0.0464**		**248.7399**	**248.7399**	**8.2100e-003**	**0.0261**	**256.7263**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2043	0.0000	0.2043	0.0309	0.0000	0.0309			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**0.4623**	**2.0032**	**23.2798**	**0.0388**	**0.2043**	**0.0616**	**0.2659**	**0.0309**	**0.0616**	**0.0926**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.6200e-003	0.3663	0.0773	1.3300e-003	0.0366	3.2300e-003	0.0398	0.0100	3.0900e-003	0.0131		144.5041	144.5041	4.7500e-003	0.0229	151.4436
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0446	0.0325	0.3699	1.0200e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		104.2358	104.2358	3.4600e-003	3.2200e-003	105.2827
Total	**0.0542**	**0.3987**	**0.4472**	**2.3500e-003**	**0.1598**	**3.8700e-003**	**0.1637**	**0.0427**	**3.6800e-003**	**0.0464**		**248.7399**	**248.7399**	**8.2100e-003**	**0.0261**	**256.7263**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0535	0.0390	0.4438	1.2300e-003	0.1479	7.7000e-004	0.1486	0.0392	7.1000e-004	0.0399		125.0830	125.0830	4.1600e-003	3.8700e-003	126.3392
Total	**0.0535**	**0.0390**	**0.4438**	**1.2300e-003**	**0.1479**	**7.7000e-004**	**0.1486**	**0.0392**	**7.1000e-004**	**0.0399**		**125.0830**	**125.0830**	**4.1600e-003**	**3.8700e-003**	**126.3392**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**8.8457**	**0.0621**	**8.9077**	**4.5461**	**0.0621**	**4.6082**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0535	0.0390	0.4438	1.2300e-003	0.1479	7.7000e-004	0.1486	0.0392	7.1000e-004	0.0399		125.0830	125.0830	4.1600e-003	3.8700e-003	126.3392
Total	**0.0535**	**0.0390**	**0.4438**	**1.2300e-003**	**0.1479**	**7.7000e-004**	**0.1486**	**0.0392**	**7.1000e-004**	**0.0399**		**125.0830**	**125.0830**	**4.1600e-003**	**3.8700e-003**	**126.3392**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4138	15.7493	3.3241	0.0571	1.5724	0.1390	1.7114	0.4310	0.1330	0.5640		6,213.6767	6,213.6767	0.2044	0.9842	6,512.0757
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0446	0.0325	0.3699	1.0200e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		104.2358	104.2358	3.4600e-003	3.2200e-003	105.2827
Total	**0.4584**	**15.7817**	**3.6939**	**0.0581**	**1.6956**	**0.1396**	**1.8353**	**0.4637**	**0.1336**	**0.5972**		**6,317.9125**	**6,317.9125**	**0.2078**	**0.9874**	**6,617.3583**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**3.1872**	**0.0484**	**3.2356**	**1.5411**	**0.0484**	**1.5896**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4138	15.7493	3.3241	0.0571	1.5724	0.1390	1.7114	0.4310	0.1330	0.5640		6,213.6767	6,213.6767	0.2044	0.9842	6,512.0757
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0446	0.0325	0.3699	1.0200e-003	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		104.2358	104.2358	3.4600e-003	3.2200e-003	105.2827
Total	**0.4584**	**15.7817**	**3.6939**	**0.0581**	**1.6956**	**0.1396**	**1.8353**	**0.4637**	**0.1336**	**0.5972**		**6,317.9125**	**6,317.9125**	**0.2078**	**0.9874**	**6,617.3583**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1131	3.0153	0.8788	0.0112	0.3589	0.0305	0.3895	0.1033	0.0292	0.1326		1,203.5122	1,203.5122	0.0261	0.1785	1,257.3653
Worker	0.3655	0.2663	3.0329	8.4000e-003	1.0104	5.2800e-003	1.0157	0.2680	4.8600e-003	0.2729		854.7336	854.7336	0.0284	0.0264	863.3179
Total	**0.4786**	**3.2816**	**3.9117**	**0.0196**	**1.3694**	**0.0358**	**1.4052**	**0.3713**	**0.0341**	**0.4054**		**2,058.2459**	**2,058.2459**	**0.0545**	**0.2050**	**2,120.6832**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1131	3.0153	0.8788	0.0112	0.3589	0.0305	0.3895	0.1033	0.0292	0.1326		1,203.5122	1,203.5122	0.0261	0.1785	1,257.3653
Worker	0.3655	0.2663	3.0329	8.4000e-003	1.0104	5.2800e-003	1.0157	0.2680	4.8600e-003	0.2729		854.7336	854.7336	0.0284	0.0264	863.3179
Total	**0.4786**	**3.2816**	**3.9117**	**0.0196**	**1.3694**	**0.0358**	**1.4052**	**0.3713**	**0.0341**	**0.4054**		**2,058.2459**	**2,058.2459**	**0.0545**	**0.2050**	**2,120.6832**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0557	2.4055	0.7507	0.0108	0.3590	0.0138	0.3728	0.1033	0.0132	0.1166		1,154.1920	1,154.1920	0.0234	0.1708	1,205.6811
Worker	0.3412	0.2358	2.8161	8.1400e-003	1.0104	5.0100e-003	1.0154	0.2680	4.6100e-003	0.2726		832.9351	832.9351	0.0257	0.0245	840.8730
Total	**0.3969**	**2.6413**	**3.5669**	**0.0189**	**1.3694**	**0.0188**	**1.3882**	**0.3714**	**0.0178**	**0.3892**		**1,987.1271**	**1,987.1271**	**0.0491**	**0.1953**	**2,046.5541**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0557	2.4055	0.7507	0.0108	0.3590	0.0138	0.3728	0.1033	0.0132	0.1166		1,154.1920	1,154.1920	0.0234	0.1708	1,205.6811
Worker	0.3412	0.2358	2.8161	8.1400e-003	1.0104	5.0100e-003	1.0154	0.2680	4.6100e-003	0.2726		832.9351	832.9351	0.0257	0.0245	840.8730
Total	**0.3969**	**2.6413**	**3.5669**	**0.0189**	**1.3694**	**0.0188**	**1.3882**	**0.3714**	**0.0178**	**0.3892**		**1,987.1271**	**1,987.1271**	**0.0491**	**0.1953**	**2,046.5541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0540	2.4065	0.7351	0.0106	0.3590	0.0139	0.3729	0.1033	0.0133	0.1167		1,136.2287	1,136.2287	0.0233	0.1681	1,186.9120
Worker	0.3200	0.2105	2.6340	7.8800e-003	1.0104	4.7700e-003	1.0152	0.2680	4.3900e-003	0.2724		812.3994	812.3994	0.0233	0.0228	819.7797
Total	**0.3740**	**2.6170**	**3.3691**	**0.0185**	**1.3694**	**0.0187**	**1.3881**	**0.3714**	**0.0177**	**0.3891**		**1,948.6281**	**1,948.6281**	**0.0466**	**0.1909**	**2,006.6917**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0540	2.4065	0.7351	0.0106	0.3590	0.0139	0.3729	0.1033	0.0133	0.1167		1,136.2287	1,136.2287	0.0233	0.1681	1,186.9120
Worker	0.3200	0.2105	2.6340	7.8800e-003	1.0104	4.7700e-003	1.0152	0.2680	4.3900e-003	0.2724		812.3994	812.3994	0.0233	0.0228	819.7797
Total	**0.3740**	**2.6170**	**3.3691**	**0.0185**	**1.3694**	**0.0187**	**1.3881**	**0.3714**	**0.0177**	**0.3891**		**1,948.6281**	**1,948.6281**	**0.0466**	**0.1909**	**2,006.6917**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.0282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9463**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0555	0.0383	0.4579	1.3200e-003	0.1643	8.1000e-004	0.1651	0.0436	7.5000e-004	0.0443		135.4366	135.4366	4.1800e-003	3.9800e-003	136.7273
Total	**0.0555**	**0.0383**	**0.4579**	**1.3200e-003**	**0.1643**	**8.1000e-004**	**0.1651**	**0.0436**	**7.5000e-004**	**0.0443**		**135.4366**	**135.4366**	**4.1800e-003**	**3.9800e-003**	**136.7273**

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2194	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.0282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2476**	**0.9509**	**13.5323**	**0.0189**		**0.0293**	**0.0293**		**0.0293**	**0.0293**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0555	0.0383	0.4579	1.3200e-003	0.1643	8.1000e-004	0.1651	0.0436	7.5000e-004	0.0443		135.4366	135.4366	4.1800e-003	3.9800e-003	136.7273
Total	**0.0555**	**0.0383**	**0.4579**	**1.3200e-003**	**0.1643**	**8.1000e-004**	**0.1651**	**0.0436**	**7.5000e-004**	**0.0443**		**135.4366**	**135.4366**	**4.1800e-003**	**3.9800e-003**	**136.7273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	95.9669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**96.1477**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0651	0.0428	0.5354	1.6000e-003	0.2054	9.7000e-004	0.2063	0.0545	8.9000e-004	0.0554		165.1218	165.1218	4.7400e-003	4.6400e-003	166.6219
Total	**0.0651**	**0.0428**	**0.5354**	**1.6000e-003**	**0.2054**	**9.7000e-004**	**0.2063**	**0.0545**	**8.9000e-004**	**0.0554**		**165.1218**	**165.1218**	**4.7400e-003**	**4.6400e-003**	**166.6219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	95.9669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**95.9966**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0651	0.0428	0.5354	1.6000e-003	0.2054	9.7000e-004	0.2063	0.0545	8.9000e-004	0.0554		165.1218	165.1218	4.7400e-003	4.6400e-003	166.6219
Total	**0.0651**	**0.0428**	**0.5354**	**1.6000e-003**	**0.2054**	**9.7000e-004**	**0.2063**	**0.0545**	**8.9000e-004**	**0.0554**		**165.1218**	**165.1218**	**4.7400e-003**	**4.6400e-003**	**166.6219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6433	3.2361	26.8801	0.0530	5.9582	0.0393	5.9975	1.5869	0.0367	1.6235		5,485.0087	5,485.0087	0.3706	0.2706	5,574.8979
Unmitigated	2.6433	3.2361	26.8801	0.0530	5.9582	0.0393	5.9975	1.5869	0.0367	1.6235		5,485.0087	5,485.0087	0.3706	0.2706	5,574.8979

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Light Industry	237.43	66.27	166.50	592,207	592,207
Parking Lot	0.00	0.00	0.00		
Research & Development	852.92	239.02	139.64	1,662,458	1,662,458
Total	1,090.35	305.29	306.14	2,254,665	2,254,665

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
General Light Industry	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Parking Lot	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871
Research & Development	0.553342	0.058522	0.188738	0.121080	0.023016	0.005623	0.010412	0.007562	0.000987	0.000568	0.026444	0.000834	0.002871

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1072	0.9745	0.8186	5.8500e-003		0.0741	0.0741		0.0741	0.0741		1,169.3658	1,169.3658	0.0224	0.0214	1,176.3147
NaturalGas Unmitigated	0.1155	1.0500	0.8820	6.3000e-003		0.0798	0.0798		0.0798	0.0798		1,259.9797	1,259.9797	0.0242	0.0231	1,267.4671

theLAB Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	2241.59	0.0242	0.2198	0.1846	1.3200e-003		0.0167	0.0167		0.0167	0.0167		263.7167	263.7167	5.0500e-003	4.8300e-003	265.2838
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	8468.24	0.0913	0.8302	0.6974	4.9800e-003		0.0631	0.0631		0.0631	0.0631		996.2630	996.2630	0.0191	0.0183	1,002.1833
Total		**0.1155**	**1.0500**	**0.8820**	**6.3000e-003**		**0.0798**	**0.0798**		**0.0798**	**0.0798**		**1,259.9797**	**1,259.9797**	**0.0242**	**0.0231**	**1,267.4671**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	2.08038	0.0224	0.2040	0.1713	1.2200e-003		0.0155	0.0155		0.0155	0.0155		244.7510	244.7510	4.6900e-003	4.4900e-003	246.2054
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Research & Development	7.85923	0.0848	0.7705	0.6472	4.6200e-003		0.0586	0.0586		0.0586	0.0586		924.6148	924.6148	0.0177	0.0170	930.1093
Total		**0.1072**	**0.9745**	**0.8186**	**5.8400e-003**		**0.0741**	**0.0741**		**0.0741**	**0.0741**		**1,169.3658**	**1,169.3658**	**0.0224**	**0.0214**	**1,176.3147**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9422	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Unmitigated	3.9422	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4733					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4626					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3200e-003	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Total	**3.9422**	**6.2000e-004**	**0.0684**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**		**0.1469**	**0.1469**	**3.8000e-004**		**0.1565**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4733					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4626					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3200e-003	6.2000e-004	0.0684	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1469	0.1469	3.8000e-004		0.1565
Total	**3.9422**	**6.2000e-004**	**0.0684**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**		**0.1469**	**0.1469**	**3.8000e-004**		**0.1565**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.1	36	670	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (600 - 750 HP)	0.1100	0.3073	0.2804	5.3000e-004		0.0162	0.0162		0.0162	0.0162		56.2475	56.2475	7.8900e-003		56.4446
Total	**0.1100**	**0.3073**	**0.2804**	**5.3000e-004**		**0.0162**	**0.0162**		**0.0162**	**0.0162**		**56.2475**	**56.2475**	**7.8900e-003**		**56.4446**

11.0 Vegetation

APPENDIX B

HEALTH RISK ASSESSMENT DATA

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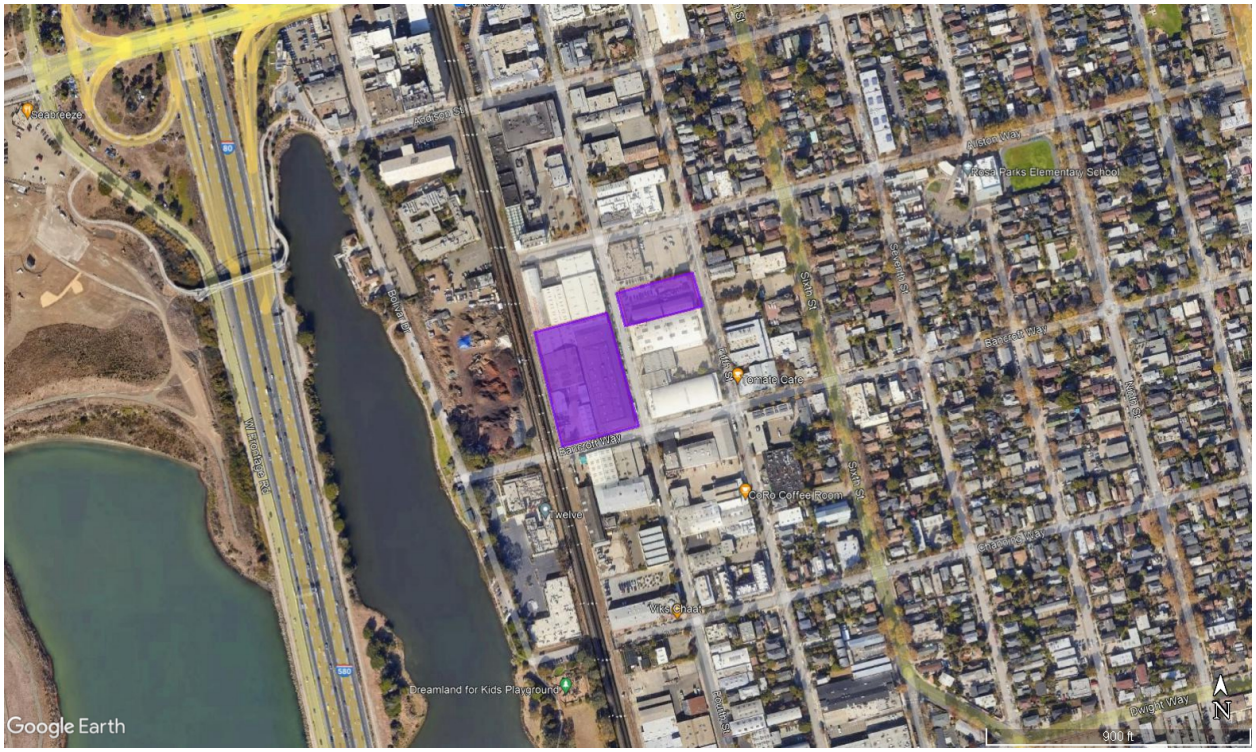
Project Site

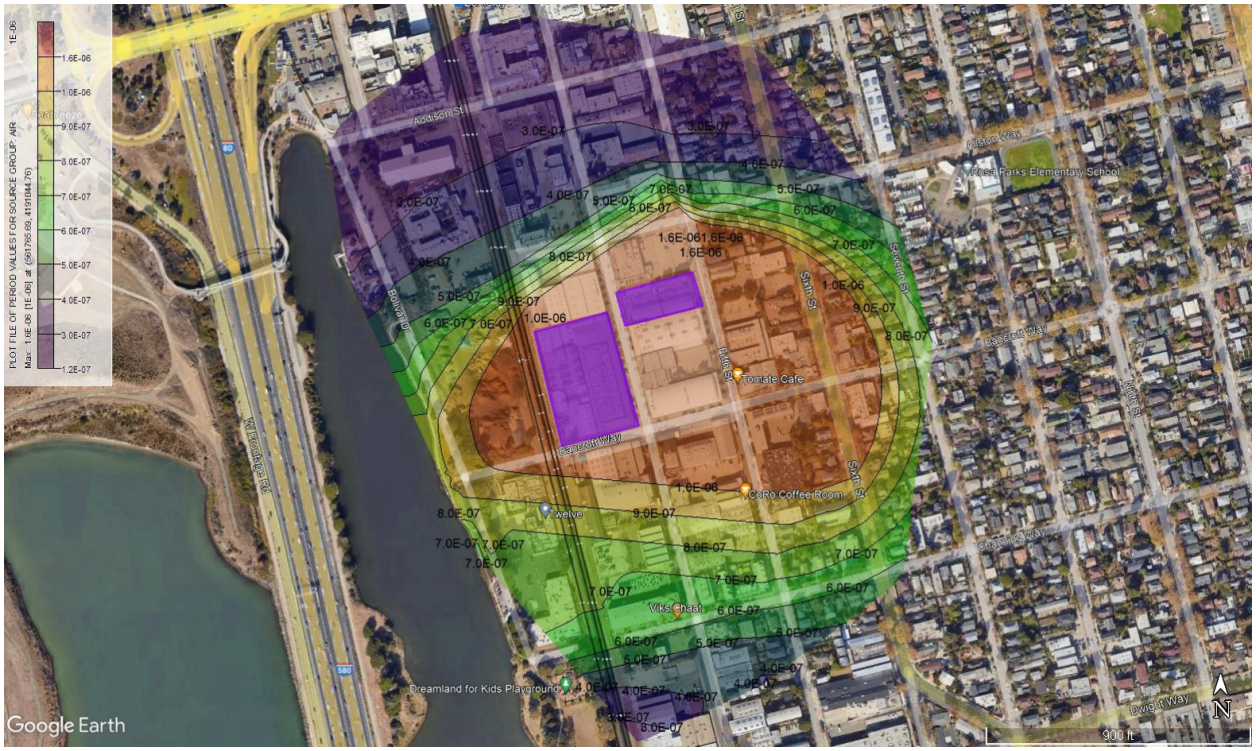


Site Plan

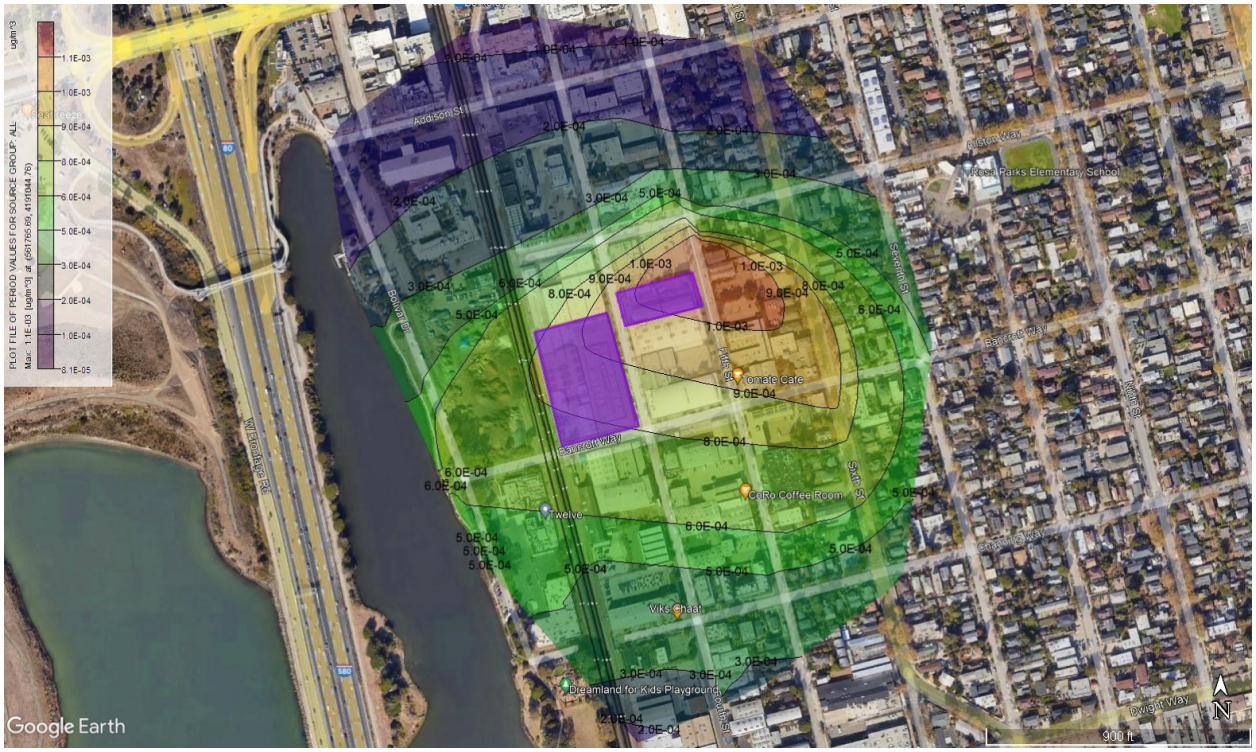

5TH STREET
THE LAB
PARKING STRUCTURE
2229 4TH STREET
2233 4TH STREET
2246 5TH STREET
724-6 ALLSTON WAY
2201-2209 4TH STREET
4TH STREET
2200 4TH STREET
716 ALLSTON WAY
787 BANCROFT WAY
ALLSTON WAY
BANCROFT WAY
703 BANCROFT WAY
678-700 ALLSTON WAY
787 BANCROFT PROPERTY LINE

Residential Receptors

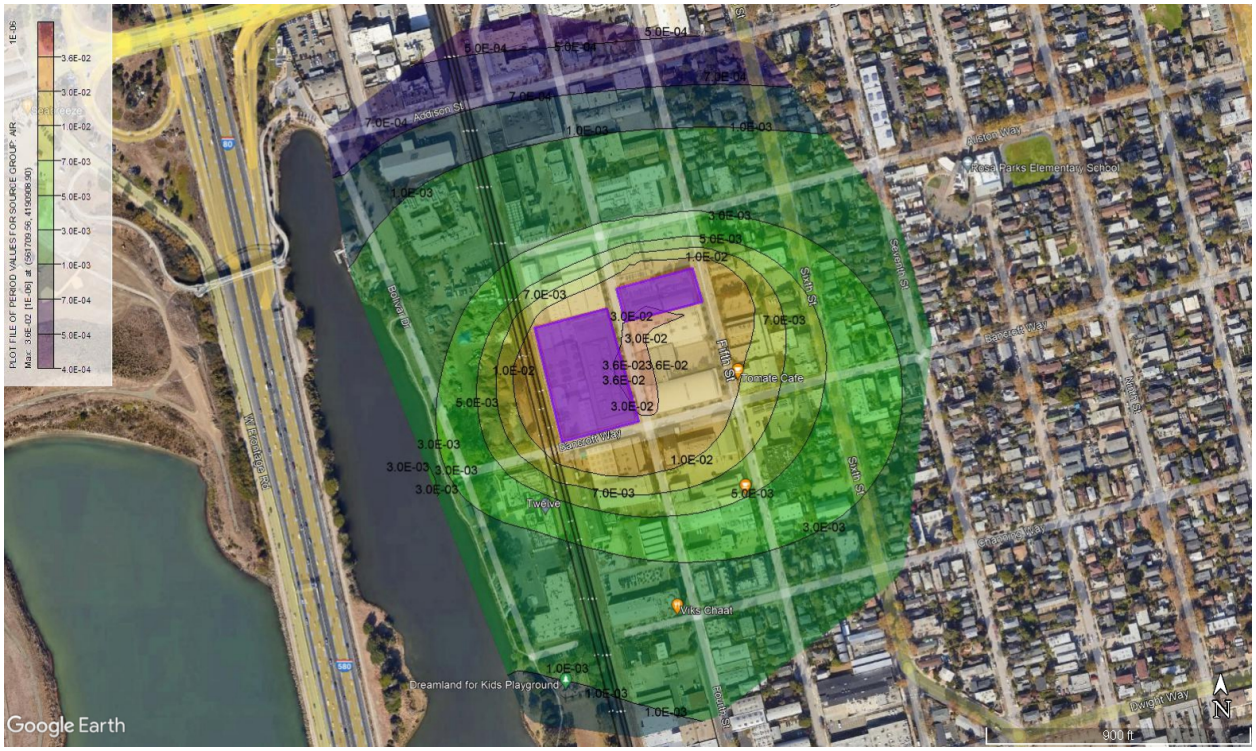
Cancer Risk



Chronic Hazard Index



$PM_{2.5}$ Concentration



	PM10		
	Tons	Unmitigated	Mitigated
6	2022	0.1322	8.41E-03
12	2023	0.1021	8.35E-03
2	2024	5.61E-03	5.20E-04

PM2.5		
Tons	Unmitigated	Mitigated
2022	0.1229	8.29E-03
2023	0.096	8.22E-03
2024	5.31E-03	5.10E-04

PM10		
Lbs/Yr	Unmitigated	Mitigated
2022	264.4	16.82
2023	204.2	16.7
2024	11.22	1.04

PM2.5		
Lbs/Yr	Unmitigated	Mitigated
2022	245.8	16.58
2023	192	16.44
2024	10.62	1.02

Source	Sq. Area	% of Total
West Block	9560.7	77%
East Block	2907.2	23%
Total	12467.9	100%

PM10			
Lbs/Yr	Source	Unmitigated	Mitigated
2022	West Block	202.75	12.90
	East Block	61.65	3.92
2023	West Block	156.59	12.81
	East Block	47.61	3.89
2024	West Block	8.60	0.80
	East Block	2.62	0.24

PM2.5			
Lbs/Yr	Source	Unmitigated	Mitigated
2022	West Block	188.49	12.71
	East Block	57.31	3.87
2023	West Block	147.23	12.61
	East Block	44.77	3.83
2024	West Block	8.14	0.78
	East Block	2.48	0.24

0.000183961
5.59384E-05

						1.64E-06
			2022	2023	2024	Total
1	561514.6	4190802	4.84E-07	4.44E-07	5.56E-09	9.34E-07
2	561520.1	4190795	4.88E-07	4.47E-07	5.60E-09	9.41E-07
3	561509.2	4190810	4.77E-07	4.37E-07	5.47E-09	9.20E-07
4	561507	4190819	4.82E-07	4.42E-07	5.54E-09	9.30E-07
5	561504.8	4190828	4.84E-07	4.44E-07	5.56E-09	9.34E-07
6	561502.6	4190837	4.83E-07	4.43E-07	5.55E-09	9.32E-07
7	561500.3	4190846	4.81E-07	4.42E-07	5.53E-09	9.28E-07
8	561498.1	4190855	4.76E-07	4.37E-07	5.46E-09	9.18E-07
9	561495.9	4190864	4.68E-07	4.29E-07	5.37E-09	9.02E-07
10	561493.7	4190873	4.56E-07	4.18E-07	5.23E-09	8.79E-07
11	561491.5	4190882	4.41E-07	4.04E-07	5.06E-09	8.50E-07
12	561489.3	4190891	4.25E-07	3.89E-07	4.87E-09	8.19E-07
13	561505	4190800	4.45E-07	4.08E-07	5.10E-09	8.58E-07
14	561515.7	4190786	4.50E-07	4.13E-07	5.17E-09	8.68E-07
15	561521	4190778	4.48E-07	4.11E-07	5.14E-09	8.64E-07
16	561531.8	4190764	4.32E-07	3.96E-07	4.95E-09	8.32E-07
17	561497.4	4190816	4.42E-07	4.05E-07	5.07E-09	8.52E-07
18	561495.2	4190825	4.43E-07	4.06E-07	5.09E-09	8.55E-07
19	561493	4190834	4.42E-07	4.05E-07	5.07E-09	8.52E-07
20	561490.8	4190843	4.38E-07	4.02E-07	5.03E-09	8.45E-07
21	561488.6	4190852	4.32E-07	3.96E-07	4.96E-09	8.34E-07
22	561486.4	4190861	4.24E-07	3.89E-07	4.86E-09	8.17E-07
23	561484.2	4190870	4.13E-07	3.79E-07	4.74E-09	7.96E-07
24	561482	4190879	4.00E-07	3.67E-07	4.59E-09	7.71E-07
25	561479.8	4190888	3.86E-07	3.54E-07	4.42E-09	7.43E-07
26	561477.5	4190897	3.70E-07	3.40E-07	4.25E-09	7.14E-07
27	561475.3	4190906	3.55E-07	3.25E-07	4.07E-09	6.84E-07
28	561473.1	4190915	3.39E-07	3.11E-07	3.89E-09	6.54E-07
29	561470.9	4190924	3.24E-07	2.97E-07	3.72E-09	6.25E-07
30	561516.5	4190769	4.13E-07	3.78E-07	4.73E-09	7.96E-07
31	561527.1	4190755	3.96E-07	3.63E-07	4.54E-09	7.63E-07
32	561537.7	4190741	3.71E-07	3.40E-07	4.25E-09	7.15E-07
33	561468	4190895	3.40E-07	3.11E-07	3.90E-09	6.55E-07
34	561465.8	4190904	3.26E-07	2.99E-07	3.74E-09	6.29E-07
35	561463.6	4190913	3.13E-07	2.87E-07	3.59E-09	6.03E-07
36	561461.4	4190922	2.99E-07	2.75E-07	3.44E-09	5.78E-07
37	561538	4190725	3.30E-07	3.02E-07	3.79E-09	6.36E-07
38	561464.2	4190941	2.91E-07	2.67E-07	3.34E-09	5.62E-07
39	561462.8	4190932	2.95E-07	2.71E-07	3.39E-09	5.70E-07
40	561457.3	4190957	2.62E-07	2.40E-07	3.00E-09	5.05E-07
41	561455.9	4190947	2.66E-07	2.44E-07	3.06E-09	5.14E-07
42	561454.5	4190938	2.70E-07	2.48E-07	3.10E-09	5.22E-07
43	561453.2	4190929	2.74E-07	2.51E-07	3.15E-09	5.29E-07
44	561450.3	4190972	2.35E-07	2.16E-07	2.70E-09	4.54E-07

45	561449	4190963	2.40E-07	2.20E-07	2.75E-09	4.63E-07
46	561447.6	4190954	2.44E-07	2.24E-07	2.80E-09	4.71E-07
47	561446.3	4190945	2.48E-07	2.28E-07	2.85E-09	4.79E-07
48	561442	4190978	2.17E-07	1.99E-07	2.49E-09	4.18E-07
49	561440.7	4190969	2.21E-07	2.03E-07	2.54E-09	4.26E-07
50	561439.3	4190960	2.25E-07	2.06E-07	2.58E-09	4.34E-07
51	561435.8	4190998	1.95E-07	1.79E-07	2.23E-09	3.76E-07
52	561434.4	4190989	1.99E-07	1.82E-07	2.28E-09	3.83E-07
53	561433	4190979	2.03E-07	1.86E-07	2.33E-09	3.91E-07
54	561428.8	4191013	1.77E-07	1.63E-07	2.03E-09	3.42E-07
55	561427.5	4191004	1.81E-07	1.66E-07	2.08E-09	3.49E-07
56	561426.1	4190994	1.85E-07	1.70E-07	2.12E-09	3.57E-07
57	561424.7	4190985	1.89E-07	1.73E-07	2.16E-09	3.64E-07
58	561421.8	4191028	1.61E-07	1.48E-07	1.85E-09	3.11E-07
59	561420.5	4191019	1.65E-07	1.52E-07	1.90E-09	3.19E-07
60	561419.1	4191009	1.69E-07	1.55E-07	1.94E-09	3.26E-07
61	561417.7	4191000	1.73E-07	1.58E-07	1.98E-09	3.33E-07
62	561416.3	4190991	1.76E-07	1.61E-07	2.02E-09	3.39E-07
63	561415	4190982	1.79E-07	1.64E-07	2.05E-09	3.45E-07
64	561414.8	4191042	1.48E-07	1.35E-07	1.69E-09	2.85E-07
65	561413.4	4191033	1.51E-07	1.39E-07	1.73E-09	2.92E-07
66	561412.1	4191024	1.55E-07	1.42E-07	1.77E-09	2.98E-07
67	561410.7	4191015	1.58E-07	1.45E-07	1.81E-09	3.05E-07
68	561409.3	4191006	1.61E-07	1.48E-07	1.85E-09	3.11E-07
69	561408	4190997	1.64E-07	1.51E-07	1.89E-09	3.17E-07
70	561407.6	4191056	1.36E-07	1.24E-07	1.56E-09	2.62E-07
71	561406.2	4191046	1.39E-07	1.28E-07	1.60E-09	2.69E-07
72	561404.8	4191037	1.43E-07	1.31E-07	1.64E-09	2.75E-07
73	561403.3	4191027	1.46E-07	1.34E-07	1.68E-09	2.82E-07
74	561401.9	4191018	1.49E-07	1.37E-07	1.71E-09	2.88E-07
75	561397.7	4191052	1.31E-07	1.21E-07	1.51E-09	2.53E-07
76	561396.3	4191042	1.35E-07	1.23E-07	1.54E-09	2.59E-07
77	561398.5	4191092	1.15E-07	1.05E-07	1.32E-09	2.21E-07
78	561522.3	4191197	9.44E-08	8.66E-08	1.08E-09	1.82E-07
79	561515	4191191	9.66E-08	8.86E-08	1.11E-09	1.86E-07
80	561507.6	4191186	9.88E-08	9.06E-08	1.13E-09	1.90E-07
81	561500.3	4191180	1.01E-07	9.25E-08	1.15E-09	1.94E-07
82	561529.7	4191202	9.21E-08	8.45E-08	1.06E-09	1.78E-07
83	561539	4191205	9.17E-08	8.41E-08	1.05E-09	1.77E-07
84	561548.4	4191207	9.11E-08	8.35E-08	1.04E-09	1.76E-07
85	561557.7	4191210	9.04E-08	8.29E-08	1.04E-09	1.74E-07
86	561567.1	4191212	8.97E-08	8.22E-08	1.03E-09	1.73E-07
87	561576.4	4191215	8.89E-08	8.15E-08	1.02E-09	1.71E-07
88	561585.8	4191217	8.81E-08	8.08E-08	1.01E-09	1.70E-07
89	561595.1	4191220	8.73E-08	8.00E-08	9.99E-10	1.68E-07
90	561604.5	4191222	8.65E-08	7.93E-08	9.90E-10	1.67E-07
91	561519.5	4191206	8.90E-08	8.16E-08	1.02E-09	1.72E-07

92	561511.9	4191200	9.12E-08	8.36E-08	1.04E-09	1.76E-07
93	561504.2	4191195	9.33E-08	8.55E-08	1.07E-09	1.80E-07
94	561496.6	4191189	9.53E-08	8.74E-08	1.09E-09	1.84E-07
95	561489	4191183	9.73E-08	8.92E-08	1.11E-09	1.88E-07
96	561481.3	4191177	9.92E-08	9.09E-08	1.14E-09	1.91E-07
97	561527.2	4191212	8.68E-08	7.96E-08	9.94E-10	1.67E-07
98	561536.5	4191214	8.63E-08	7.92E-08	9.89E-10	1.66E-07
99	561545.9	4191217	8.57E-08	7.86E-08	9.82E-10	1.65E-07
100	561555.2	4191219	8.51E-08	7.80E-08	9.74E-10	1.64E-07
101	561564.6	4191222	8.44E-08	7.74E-08	9.66E-10	1.63E-07
102	561573.9	4191224	8.36E-08	7.67E-08	9.57E-10	1.61E-07
103	561583.2	4191227	8.28E-08	7.59E-08	9.48E-10	1.60E-07
104	561592.6	4191229	8.20E-08	7.52E-08	9.39E-10	1.58E-07
105	561601.9	4191232	8.13E-08	7.45E-08	9.30E-10	1.57E-07
106	561517.1	4191216	8.40E-08	7.70E-08	9.62E-10	1.62E-07
107	561509.5	4191210	8.60E-08	7.88E-08	9.85E-10	1.66E-07
108	561502	4191204	8.80E-08	8.07E-08	1.01E-09	1.70E-07
109	561494.4	4191198	8.99E-08	8.25E-08	1.03E-09	1.73E-07
110	561486.8	4191193	9.18E-08	8.42E-08	1.05E-09	1.77E-07
111	561479.3	4191187	9.36E-08	8.58E-08	1.07E-09	1.80E-07
112	561471.7	4191181	9.52E-08	8.73E-08	1.09E-09	1.84E-07
113	561464.1	4191176	9.67E-08	8.87E-08	1.11E-09	1.87E-07
114	561456.6	4191170	9.81E-08	8.99E-08	1.12E-09	1.89E-07
115	561388.5	4191118	1.00E-07	9.19E-08	1.15E-09	1.93E-07
116	561524.6	4191221	8.19E-08	7.51E-08	9.38E-10	1.58E-07
117	561534	4191224	8.14E-08	7.47E-08	9.33E-10	1.57E-07
118	561543.3	4191226	8.08E-08	7.41E-08	9.26E-10	1.56E-07
119	561552.7	4191229	8.02E-08	7.35E-08	9.18E-10	1.55E-07
120	561562	4191231	7.95E-08	7.29E-08	9.10E-10	1.53E-07
121	561571.4	4191234	7.88E-08	7.22E-08	9.02E-10	1.52E-07
122	561580.7	4191236	7.80E-08	7.15E-08	8.93E-10	1.50E-07
123	561590.1	4191239	7.73E-08	7.08E-08	8.85E-10	1.49E-07
124	561599.4	4191241	7.65E-08	7.02E-08	8.76E-10	1.48E-07
125	561514.6	4191225	7.93E-08	7.27E-08	9.08E-10	1.53E-07
126	561507.1	4191220	8.12E-08	7.45E-08	9.30E-10	1.57E-07
127	561499.6	4191214	8.31E-08	7.62E-08	9.52E-10	1.60E-07
128	561492.1	4191208	8.50E-08	7.79E-08	9.73E-10	1.64E-07
129	561484.7	4191203	8.67E-08	7.95E-08	9.94E-10	1.67E-07
130	561477.2	4191197	8.84E-08	8.11E-08	1.01E-09	1.71E-07
131	561469.7	4191191	9.00E-08	8.26E-08	1.03E-09	1.74E-07
132	561462.2	4191186	9.15E-08	8.39E-08	1.05E-09	1.76E-07
133	561454.7	4191180	9.28E-08	8.51E-08	1.06E-09	1.79E-07
134	561447.2	4191174	9.40E-08	8.62E-08	1.08E-09	1.81E-07
135	561439.7	4191169	9.50E-08	8.71E-08	1.09E-09	1.83E-07
136	561432.2	4191163	9.57E-08	8.78E-08	1.10E-09	1.85E-07
137	561522.1	4191231	7.74E-08	7.10E-08	8.86E-10	1.49E-07
138	561531.5	4191233	7.69E-08	7.05E-08	8.81E-10	1.48E-07

139	561540.8	4191236	7.64E-08	7.00E-08	8.75E-10	1.47E-07
140	561550.2	4191238	7.57E-08	6.94E-08	8.67E-10	1.46E-07
141	561559.5	4191241	7.51E-08	6.88E-08	8.59E-10	1.45E-07
142	561568.9	4191243	7.44E-08	6.82E-08	8.51E-10	1.43E-07
143	561578.2	4191246	7.36E-08	6.75E-08	8.43E-10	1.42E-07
144	561587.6	4191248	7.29E-08	6.69E-08	8.35E-10	1.41E-07
145	561596.9	4191251	7.22E-08	6.62E-08	8.27E-10	1.39E-07
146	561512.2	4191235	7.51E-08	6.88E-08	8.60E-10	1.45E-07
147	561504.7	4191229	7.68E-08	7.04E-08	8.80E-10	1.48E-07
148	561497.3	4191224	7.86E-08	7.21E-08	9.00E-10	1.52E-07
149	561489.9	4191218	8.04E-08	7.37E-08	9.21E-10	1.55E-07
150	561482.5	4191212	8.21E-08	7.52E-08	9.40E-10	1.58E-07
151	561475	4191207	8.37E-08	7.67E-08	9.59E-10	1.61E-07
152	561467.6	4191201	8.52E-08	7.81E-08	9.76E-10	1.64E-07
153	561460.2	4191195	8.66E-08	7.94E-08	9.93E-10	1.67E-07
154	561452.7	4191190	8.79E-08	8.06E-08	1.01E-09	1.70E-07
155	561445.3	4191184	8.91E-08	8.17E-08	1.02E-09	1.72E-07
156	561437.9	4191179	9.01E-08	8.27E-08	1.03E-09	1.74E-07
157	561430.5	4191173	9.10E-08	8.34E-08	1.04E-09	1.75E-07
158	561423	4191167	9.16E-08	8.40E-08	1.05E-09	1.77E-07
159	561415.6	4191162	9.20E-08	8.44E-08	1.05E-09	1.77E-07
160	561519.6	4191240	7.33E-08	6.72E-08	8.39E-10	1.41E-07
161	561528.9	4191243	7.28E-08	6.68E-08	8.34E-10	1.40E-07
162	561538.3	4191245	7.23E-08	6.63E-08	8.27E-10	1.39E-07
163	561547.6	4191248	7.16E-08	6.57E-08	8.20E-10	1.38E-07
164	561557	4191250	7.10E-08	6.51E-08	8.13E-10	1.37E-07
165	561566.3	4191253	7.03E-08	6.45E-08	8.05E-10	1.36E-07
166	561575.7	4191255	6.96E-08	6.38E-08	7.97E-10	1.34E-07
167	561585	4191258	6.89E-08	6.32E-08	7.89E-10	1.33E-07
168	561594.4	4191260	6.83E-08	6.26E-08	7.81E-10	1.32E-07
169	561509.4	4191244	7.12E-08	6.53E-08	8.15E-10	1.37E-07
170	561501.7	4191238	7.29E-08	6.69E-08	8.35E-10	1.41E-07
171	561494.1	4191232	7.47E-08	6.85E-08	8.55E-10	1.44E-07
172	561486.4	4191227	7.64E-08	7.01E-08	8.75E-10	1.47E-07
173	561478.7	4191221	7.81E-08	7.16E-08	8.94E-10	1.51E-07
174	561471	4191215	7.97E-08	7.30E-08	9.12E-10	1.54E-07
175	561463.3	4191209	8.12E-08	7.44E-08	9.30E-10	1.57E-07
176	561455.7	4191203	8.26E-08	7.57E-08	9.46E-10	1.59E-07
177	561448	4191198	8.39E-08	7.69E-08	9.61E-10	1.62E-07
178	561440.3	4191192	8.50E-08	7.80E-08	9.74E-10	1.64E-07
179	561425	4191180	8.69E-08	7.96E-08	9.95E-10	1.67E-07
180	561417.3	4191174	8.75E-08	8.02E-08	1.00E-09	1.69E-07
181	561409.6	4191169	8.79E-08	8.06E-08	1.01E-09	1.70E-07
182	561401.9	4191163	8.82E-08	8.09E-08	1.01E-09	1.70E-07
183	561378.9	4191145	8.81E-08	8.08E-08	1.01E-09	1.70E-07
184	561517.1	4191250	6.94E-08	6.37E-08	7.95E-10	1.34E-07
185	561526.4	4191252	6.90E-08	6.33E-08	7.90E-10	1.33E-07

186	561535.8	4191255	6.85E-08	6.28E-08	7.84E-10	1.32E-07
187	561545.1	4191257	6.79E-08	6.22E-08	7.77E-10	1.31E-07
188	561554.5	4191260	6.72E-08	6.17E-08	7.70E-10	1.30E-07
189	561563.8	4191262	6.66E-08	6.11E-08	7.63E-10	1.28E-07
190	561573.2	4191265	6.59E-08	6.05E-08	7.55E-10	1.27E-07
191	561582.5	4191267	6.53E-08	5.99E-08	7.48E-10	1.26E-07
192	561591.9	4191270	6.46E-08	5.93E-08	7.40E-10	1.25E-07
193	561507	4191254	6.76E-08	6.19E-08	7.74E-10	1.30E-07
194	561499.3	4191248	6.92E-08	6.35E-08	7.93E-10	1.33E-07
195	561491.7	4191242	7.08E-08	6.50E-08	8.11E-10	1.37E-07
196	561484.1	4191236	7.25E-08	6.64E-08	8.30E-10	1.40E-07
197	561476.5	4191231	7.40E-08	6.79E-08	8.48E-10	1.43E-07
198	561468.9	4191225	7.56E-08	6.93E-08	8.65E-10	1.46E-07
199	561461.3	4191219	7.70E-08	7.06E-08	8.82E-10	1.48E-07
200	561453.7	4191213	7.84E-08	7.18E-08	8.98E-10	1.51E-07
201	561446.1	4191208	7.96E-08	7.30E-08	9.12E-10	1.54E-07
202	561438.5	4191202	8.08E-08	7.41E-08	9.25E-10	1.56E-07
203	561430.9	4191196	8.18E-08	7.50E-08	9.37E-10	1.58E-07
204	561423.3	4191190	8.27E-08	7.58E-08	9.48E-10	1.59E-07
205	561415.7	4191185	8.34E-08	7.65E-08	9.56E-10	1.61E-07
206	561408.1	4191179	8.39E-08	7.69E-08	9.62E-10	1.62E-07
207	561400.4	4191173	8.43E-08	7.73E-08	9.66E-10	1.63E-07
208	561392.8	4191167	8.45E-08	7.75E-08	9.68E-10	1.63E-07
209	561514.6	4191259	6.59E-08	6.04E-08	7.55E-10	1.27E-07
210	561523.9	4191262	6.55E-08	6.00E-08	7.50E-10	1.26E-07
211	561533.3	4191264	6.50E-08	5.96E-08	7.44E-10	1.25E-07
212	561542.6	4191267	6.44E-08	5.90E-08	7.37E-10	1.24E-07
213	561552	4191269	6.38E-08	5.85E-08	7.30E-10	1.23E-07
214	561561.3	4191272	6.32E-08	5.79E-08	7.23E-10	1.22E-07
215	561570.6	4191274	6.26E-08	5.74E-08	7.16E-10	1.21E-07
216	561580	4191277	6.19E-08	5.68E-08	7.09E-10	1.19E-07
217	561589.3	4191279	6.13E-08	5.62E-08	7.02E-10	1.18E-07
218	561765.7	4191045	8.49E-07	7.79E-07	9.69E-09	1.64E-06
219	561775.5	4191047	7.85E-07	7.19E-07	8.95E-09	1.51E-06
220	561764.7	4191061	5.82E-07	5.34E-07	6.65E-09	1.12E-06
221	561785.3	4191049	7.19E-07	6.59E-07	8.20E-09	1.39E-06
222	561774.6	4191063	5.52E-07	5.06E-07	6.30E-09	1.06E-06
223	561798.6	4191047	7.14E-07	6.54E-07	8.14E-09	1.38E-06
224	561792.9	4191054	6.28E-07	5.76E-07	7.17E-09	1.21E-06
225	561787.3	4191062	5.53E-07	5.07E-07	6.31E-09	1.07E-06
226	561781.6	4191069	4.88E-07	4.47E-07	5.57E-09	9.40E-07
227	561764.6	4191090	3.45E-07	3.17E-07	3.95E-09	6.66E-07
228	561758.9	4191097	3.11E-07	2.85E-07	3.56E-09	6.00E-07
229	561808.4	4191050	6.50E-07	5.96E-07	7.42E-09	1.25E-06
230	561802.8	4191057	5.81E-07	5.32E-07	6.63E-09	1.12E-06
231	561791.6	4191071	4.62E-07	4.24E-07	5.28E-09	8.91E-07
232	561774.8	4191092	3.36E-07	3.08E-07	3.84E-09	6.48E-07

233	561763.6	4191106	2.77E-07	2.54E-07	3.16E-09	5.34E-07
234	561716.6	4191125	2.16E-07	1.98E-07	2.48E-09	4.17E-07
235	561823.6	4191045	6.51E-07	5.97E-07	7.43E-09	1.26E-06
236	561812.6	4191059	5.39E-07	4.94E-07	6.15E-09	1.04E-06
237	561801.5	4191073	4.37E-07	4.01E-07	4.99E-09	8.42E-07
238	561779.4	4191101	2.96E-07	2.71E-07	3.38E-09	5.70E-07
239	561768.3	4191115	2.48E-07	2.27E-07	2.84E-09	4.78E-07
240	561748.4	4191130	2.07E-07	1.90E-07	2.37E-09	4.00E-07
241	561833.2	4191048	5.91E-07	5.42E-07	6.75E-09	1.14E-06
242	561822.3	4191061	5.00E-07	4.58E-07	5.71E-09	9.64E-07
243	561811.4	4191075	4.14E-07	3.79E-07	4.73E-09	7.98E-07
244	561789.5	4191103	2.86E-07	2.62E-07	3.27E-09	5.52E-07
245	561778.5	4191117	2.42E-07	2.22E-07	2.77E-09	4.68E-07
246	561767.6	4191131	2.07E-07	1.90E-07	2.37E-09	4.00E-07
247	561753.4	4191139	1.90E-07	1.74E-07	2.17E-09	3.66E-07
248	561842.8	4191050	5.40E-07	4.95E-07	6.16E-09	1.04E-06
249	561832	4191064	4.65E-07	4.26E-07	5.31E-09	8.97E-07
250	561821.2	4191077	3.92E-07	3.59E-07	4.47E-09	7.55E-07
251	561799.5	4191105	2.76E-07	2.53E-07	3.16E-09	5.33E-07
252	561788.6	4191119	2.36E-07	2.17E-07	2.70E-09	4.55E-07
253	561777.8	4191132	2.03E-07	1.87E-07	2.33E-09	3.92E-07
254	561758.3	4191147	1.75E-07	1.60E-07	2.00E-09	3.37E-07
255	561741	4191149	1.70E-07	1.56E-07	1.95E-09	3.28E-07
256	561861.7	4191021	6.78E-07	6.22E-07	7.74E-09	1.31E-06
257	561864.3	4191012	7.23E-07	6.62E-07	8.25E-09	1.39E-06
258	561851.5	4191054	4.90E-07	4.50E-07	5.60E-09	9.46E-07
259	561845.8	4191061	4.58E-07	4.19E-07	5.23E-09	8.82E-07
260	561840.1	4191068	4.24E-07	3.89E-07	4.84E-09	8.17E-07
261	561834.4	4191075	3.91E-07	3.58E-07	4.46E-09	7.53E-07
262	561828.7	4191083	3.58E-07	3.29E-07	4.09E-09	6.91E-07
263	561823	4191090	3.28E-07	3.01E-07	3.75E-09	6.33E-07
264	561817.3	4191097	3.01E-07	2.76E-07	3.44E-09	5.80E-07
265	561811.6	4191104	2.76E-07	2.53E-07	3.16E-09	5.32E-07
266	561806	4191111	2.54E-07	2.33E-07	2.90E-09	4.90E-07
267	561800.3	4191119	2.35E-07	2.15E-07	2.68E-09	4.53E-07
268	561794.6	4191126	2.17E-07	1.99E-07	2.49E-09	4.19E-07
269	561788.9	4191133	2.02E-07	1.85E-07	2.31E-09	3.89E-07
270	561783.2	4191140	1.87E-07	1.72E-07	2.14E-09	3.61E-07
271	561777.5	4191147	1.74E-07	1.60E-07	1.99E-09	3.36E-07
272	561762.7	4191156	1.61E-07	1.48E-07	1.84E-09	3.10E-07
273	561753.6	4191157	1.59E-07	1.46E-07	1.82E-09	3.07E-07
274	561744.5	4191158	1.57E-07	1.44E-07	1.79E-09	3.02E-07
275	561735.4	4191159	1.55E-07	1.42E-07	1.77E-09	2.98E-07
276	561872.4	4191042	5.01E-07	4.59E-07	5.72E-09	9.65E-07
277	561844.2	4191078	3.69E-07	3.38E-07	4.21E-09	7.11E-07
278	561838.6	4191085	3.41E-07	3.12E-07	3.89E-09	6.57E-07
279	561833	4191092	3.14E-07	2.88E-07	3.59E-09	6.06E-07

280	561821.7	4191106	2.67E-07	2.45E-07	3.05E-09	5.15E-07
281	561810.4	4191120	2.29E-07	2.10E-07	2.61E-09	4.41E-07
282	561799.2	4191135	1.98E-07	1.81E-07	2.26E-09	3.81E-07
283	561787.9	4191149	1.72E-07	1.58E-07	1.97E-09	3.31E-07
284	561767.7	4191164	1.49E-07	1.37E-07	1.70E-09	2.87E-07
285	561758.6	4191166	1.47E-07	1.35E-07	1.69E-09	2.84E-07
286	561749.6	4191167	1.46E-07	1.33E-07	1.66E-09	2.81E-07
287	561740.6	4191168	1.43E-07	1.32E-07	1.64E-09	2.77E-07
288	561731.6	4191169	1.41E-07	1.30E-07	1.62E-09	2.73E-07
289	561880.6	4191026	5.56E-07	5.10E-07	6.35E-09	1.07E-06
290	561883.2	4191017	5.90E-07	5.41E-07	6.74E-09	1.14E-06
291	561885.8	4191008	6.21E-07	5.69E-07	7.09E-09	1.20E-06
292	561888.3	4190999	6.47E-07	5.93E-07	7.39E-09	1.25E-06
293	561890.9	4190990	6.68E-07	6.12E-07	7.63E-09	1.29E-06
294	561893.5	4190982	6.84E-07	6.27E-07	7.81E-09	1.32E-06
295	561896.1	4190973	6.95E-07	6.37E-07	7.94E-09	1.34E-06
296	561898.7	4190964	7.01E-07	6.43E-07	8.01E-09	1.35E-06
297	561901.2	4190955	7.03E-07	6.45E-07	8.04E-09	1.36E-06
298	561903.8	4190946	7.02E-07	6.44E-07	8.03E-09	1.35E-06
299	561906.4	4190937	6.98E-07	6.40E-07	7.98E-09	1.35E-06
300	561909	4190928	6.91E-07	6.33E-07	7.90E-09	1.33E-06
301	561911.6	4190919	6.82E-07	6.25E-07	7.80E-09	1.31E-06
302	561881.9	4191045	4.60E-07	4.21E-07	5.25E-09	8.86E-07
303	561870.7	4191059	4.19E-07	3.84E-07	4.79E-09	8.09E-07
304	561865.2	4191066	3.97E-07	3.64E-07	4.53E-09	7.65E-07
305	561842.9	4191094	3.00E-07	2.75E-07	3.43E-09	5.79E-07
306	561831.7	4191108	2.58E-07	2.36E-07	2.95E-09	4.97E-07
307	561820.5	4191122	2.22E-07	2.04E-07	2.54E-09	4.28E-07
308	561815	4191129	2.07E-07	1.90E-07	2.37E-09	3.99E-07
309	561803.8	4191144	1.81E-07	1.66E-07	2.07E-09	3.48E-07
310	561792.7	4191158	1.58E-07	1.45E-07	1.81E-09	3.05E-07
311	561772.6	4191173	1.38E-07	1.27E-07	1.58E-09	2.67E-07
312	561754.7	4191175	1.35E-07	1.24E-07	1.55E-09	2.61E-07
313	561736.9	4191178	1.32E-07	1.21E-07	1.51E-09	2.54E-07
314	561890.1	4191029	5.08E-07	4.66E-07	5.80E-09	9.80E-07
315	561892.6	4191020	5.38E-07	4.94E-07	6.15E-09	1.04E-06
316	561895.2	4191011	5.66E-07	5.19E-07	6.46E-09	1.09E-06
317	561897.8	4191002	5.90E-07	5.41E-07	6.74E-09	1.14E-06
318	561900.4	4190993	6.10E-07	5.59E-07	6.97E-09	1.18E-06
319	561903	4190984	6.26E-07	5.74E-07	7.15E-09	1.21E-06
320	561905.5	4190975	6.38E-07	5.84E-07	7.29E-09	1.23E-06
321	561908.1	4190966	6.45E-07	5.92E-07	7.38E-09	1.24E-06
322	561910.7	4190958	6.49E-07	5.95E-07	7.43E-09	1.25E-06
323	561913.3	4190949	6.50E-07	5.96E-07	7.44E-09	1.25E-06
324	561915.9	4190940	6.48E-07	5.95E-07	7.42E-09	1.25E-06
325	561918.4	4190931	6.44E-07	5.90E-07	7.37E-09	1.24E-06
326	561921	4190922	6.37E-07	5.84E-07	7.29E-09	1.23E-06

327	561891.4	4191047	4.24E-07	3.89E-07	4.85E-09	8.18E-07
328	561880.3	4191061	3.89E-07	3.57E-07	4.45E-09	7.51E-07
329	561869.3	4191075	3.50E-07	3.20E-07	3.99E-09	6.74E-07
330	561847.2	4191103	2.67E-07	2.45E-07	3.05E-09	5.15E-07
331	561836.1	4191117	2.31E-07	2.12E-07	2.65E-09	4.46E-07
332	561825.1	4191131	2.01E-07	1.84E-07	2.30E-09	3.88E-07
333	561814	4191145	1.76E-07	1.62E-07	2.02E-09	3.40E-07
334	561802.9	4191159	1.56E-07	1.43E-07	1.78E-09	3.00E-07
335	561791.9	4191173	1.38E-07	1.26E-07	1.58E-09	2.66E-07
336	561777.5	4191181	1.29E-07	1.18E-07	1.48E-09	2.49E-07
337	561759.8	4191184	1.26E-07	1.16E-07	1.45E-09	2.44E-07
338	561742.1	4191186	1.23E-07	1.13E-07	1.41E-09	2.38E-07
339	561899.5	4191032	4.67E-07	4.28E-07	5.34E-09	9.01E-07
340	561902.1	4191023	4.94E-07	4.53E-07	5.64E-09	9.53E-07
341	561904.7	4191014	5.19E-07	4.75E-07	5.93E-09	1.00E-06
342	561907.3	4191005	5.41E-07	4.96E-07	6.18E-09	1.04E-06
343	561909.8	4190996	5.59E-07	5.13E-07	6.39E-09	1.08E-06
344	561912.4	4190987	5.75E-07	5.27E-07	6.57E-09	1.11E-06
345	561915	4190978	5.87E-07	5.38E-07	6.71E-09	1.13E-06
346	561917.6	4190969	5.96E-07	5.46E-07	6.81E-09	1.15E-06
347	561920.2	4190960	6.01E-07	5.51E-07	6.87E-09	1.16E-06
348	561922.7	4190951	6.04E-07	5.53E-07	6.90E-09	1.16E-06
349	561925.3	4190942	6.03E-07	5.53E-07	6.90E-09	1.16E-06
350	561927.9	4190934	6.01E-07	5.51E-07	6.87E-09	1.16E-06
351	561930.5	4190925	5.96E-07	5.47E-07	6.82E-09	1.15E-06
352	561900.9	4191050	3.94E-07	3.61E-07	4.50E-09	7.59E-07
353	561889.9	4191064	3.63E-07	3.33E-07	4.15E-09	7.00E-07
354	561879	4191078	3.28E-07	3.01E-07	3.75E-09	6.33E-07
355	561868	4191092	2.92E-07	2.68E-07	3.34E-09	5.63E-07
356	561857	4191106	2.56E-07	2.35E-07	2.93E-09	4.95E-07
357	561846	4191120	2.24E-07	2.05E-07	2.56E-09	4.32E-07
358	561835.1	4191133	1.96E-07	1.79E-07	2.24E-09	3.77E-07
359	561824.1	4191147	1.72E-07	1.58E-07	1.97E-09	3.32E-07
360	561813.1	4191161	1.52E-07	1.40E-07	1.74E-09	2.94E-07
361	561802.2	4191175	1.36E-07	1.24E-07	1.55E-09	2.62E-07
362	561782.4	4191190	1.21E-07	1.11E-07	1.38E-09	2.33E-07
363	561764.9	4191192	1.18E-07	1.08E-07	1.35E-09	2.28E-07
364	561747.3	4191195	1.15E-07	1.06E-07	1.32E-09	2.23E-07
365	561729.8	4191197	1.13E-07	1.03E-07	1.29E-09	2.17E-07
366	561909	4191034	4.32E-07	3.96E-07	4.93E-09	8.32E-07
367	561911.5	4191025	4.56E-07	4.18E-07	5.21E-09	8.78E-07
368	561914.1	4191016	4.78E-07	4.38E-07	5.46E-09	9.21E-07
369	561916.7	4191008	4.98E-07	4.56E-07	5.69E-09	9.60E-07
370	561919.3	4190999	5.15E-07	4.72E-07	5.89E-09	9.93E-07
371	561921.9	4190990	5.30E-07	4.86E-07	6.06E-09	1.02E-06
372	561924.5	4190981	5.42E-07	4.97E-07	6.19E-09	1.04E-06
373	561927	4190972	5.51E-07	5.05E-07	6.30E-09	1.06E-06

374	561929.6	4190963	5.57E-07	5.11E-07	6.37E-09	1.07E-06
375	561932.2	4190954	5.61E-07	5.14E-07	6.41E-09	1.08E-06
376	561934.8	4190945	5.62E-07	5.15E-07	6.43E-09	1.08E-06
377	561937.4	4190936	5.61E-07	5.14E-07	6.42E-09	1.08E-06
378	561939.9	4190927	5.58E-07	5.11E-07	6.38E-09	1.08E-06
379	561910.1	4191053	3.66E-07	3.36E-07	4.18E-09	7.06E-07
380	561904.4	4191060	3.53E-07	3.23E-07	4.03E-09	6.80E-07
381	561898.7	4191068	3.38E-07	3.10E-07	3.86E-09	6.51E-07
382	561893	4191075	3.22E-07	2.95E-07	3.68E-09	6.20E-07
383	561887.3	4191082	3.05E-07	2.80E-07	3.49E-09	5.89E-07
384	561881.6	4191089	2.89E-07	2.65E-07	3.30E-09	5.57E-07
385	561875.9	4191096	2.72E-07	2.49E-07	3.11E-09	5.24E-07
386	561870.2	4191104	2.55E-07	2.34E-07	2.92E-09	4.93E-07
387	561864.5	4191111	2.39E-07	2.19E-07	2.74E-09	4.62E-07
388	561858.8	4191118	2.24E-07	2.05E-07	2.56E-09	4.32E-07
389	561853.1	4191125	2.09E-07	1.92E-07	2.39E-09	4.03E-07
390	561847.4	4191133	1.95E-07	1.79E-07	2.24E-09	3.77E-07
391	561841.7	4191140	1.83E-07	1.68E-07	2.09E-09	3.53E-07
392	561836	4191147	1.71E-07	1.57E-07	1.96E-09	3.30E-07
393	561830.3	4191154	1.61E-07	1.47E-07	1.84E-09	3.10E-07
394	561824.6	4191161	1.51E-07	1.39E-07	1.73E-09	2.91E-07
395	561818.9	4191169	1.42E-07	1.31E-07	1.63E-09	2.75E-07
396	561813.2	4191176	1.34E-07	1.23E-07	1.54E-09	2.59E-07
397	561807.5	4191183	1.27E-07	1.16E-07	1.45E-09	2.45E-07
398	561801.8	4191190	1.20E-07	1.10E-07	1.37E-09	2.32E-07
399	561786.9	4191199	1.13E-07	1.04E-07	1.29E-09	2.18E-07
400	561777.8	4191200	1.12E-07	1.03E-07	1.28E-09	2.16E-07
401	561768.7	4191201	1.11E-07	1.01E-07	1.27E-09	2.13E-07
402	561759.6	4191202	1.09E-07	1.00E-07	1.25E-09	2.11E-07
403	561750.4	4191203	1.08E-07	9.91E-08	1.24E-09	2.08E-07
404	561741.3	4191205	1.07E-07	9.79E-08	1.22E-09	2.06E-07
405	561732.2	4191206	1.05E-07	9.66E-08	1.21E-09	2.03E-07
406	561723.1	4191207	1.04E-07	9.54E-08	1.19E-09	2.01E-07
407	561622.7	4191220	8.90E-08	8.16E-08	1.02E-09	1.72E-07
408	561613.6	4191221	8.77E-08	8.04E-08	1.00E-09	1.69E-07
409	561915.8	4191046	3.78E-07	3.47E-07	4.32E-09	7.29E-07
410	561918.4	4191037	4.01E-07	3.67E-07	4.58E-09	7.72E-07
411	561921	4191028	4.22E-07	3.87E-07	4.82E-09	8.13E-07
412	561923.6	4191019	4.42E-07	4.05E-07	5.05E-09	8.52E-07
413	561926.2	4191010	4.60E-07	4.22E-07	5.26E-09	8.87E-07
414	561928.7	4191001	4.76E-07	4.36E-07	5.44E-09	9.18E-07
415	561931.3	4190992	4.90E-07	4.49E-07	5.60E-09	9.44E-07
416	561933.9	4190984	5.01E-07	4.60E-07	5.73E-09	9.66E-07
417	561936.5	4190975	5.10E-07	4.68E-07	5.83E-09	9.84E-07
418	561939.1	4190966	5.17E-07	4.74E-07	5.91E-09	9.97E-07
419	561941.7	4190957	5.21E-07	4.78E-07	5.96E-09	1.01E-06
420	561944.2	4190948	5.24E-07	4.80E-07	5.99E-09	1.01E-06

421	561946.8	4190939	5.24E-07	4.80E-07	6.00E-09	1.01E-06
422	561949.4	4190930	5.23E-07	4.79E-07	5.98E-09	1.01E-06
423	561919.6	4191056	3.42E-07	3.14E-07	3.91E-09	6.60E-07
424	561914	4191063	3.30E-07	3.03E-07	3.78E-09	6.37E-07
425	561908.3	4191070	3.17E-07	2.91E-07	3.63E-09	6.12E-07
426	561902.7	4191077	3.03E-07	2.78E-07	3.47E-09	5.85E-07
427	561897	4191084	2.89E-07	2.65E-07	3.30E-09	5.57E-07
428	561885.7	4191099	2.59E-07	2.37E-07	2.96E-09	4.99E-07
429	561880.1	4191106	2.44E-07	2.24E-07	2.79E-09	4.71E-07
430	561874.4	4191113	2.30E-07	2.11E-07	2.63E-09	4.43E-07
431	561868.7	4191120	2.16E-07	1.98E-07	2.47E-09	4.16E-07
432	561863.1	4191127	2.03E-07	1.86E-07	2.32E-09	3.91E-07
433	561857.4	4191135	1.90E-07	1.74E-07	2.17E-09	3.66E-07
434	561851.8	4191142	1.78E-07	1.63E-07	2.04E-09	3.44E-07
435	561840.5	4191156	1.57E-07	1.44E-07	1.80E-09	3.03E-07
436	561834.8	4191163	1.48E-07	1.36E-07	1.69E-09	2.86E-07
437	561829.2	4191170	1.40E-07	1.28E-07	1.60E-09	2.69E-07
438	561823.5	4191177	1.32E-07	1.21E-07	1.51E-09	2.55E-07
439	561812.2	4191192	1.18E-07	1.09E-07	1.35E-09	2.28E-07
440	561791.9	4191207	1.06E-07	9.71E-08	1.21E-09	2.04E-07
441	561782.8	4191208	1.05E-07	9.63E-08	1.20E-09	2.03E-07
442	561773.8	4191210	1.04E-07	9.53E-08	1.19E-09	2.01E-07
443	561764.7	4191211	1.03E-07	9.44E-08	1.18E-09	1.98E-07
444	561755.7	4191212	1.02E-07	9.33E-08	1.16E-09	1.96E-07
445	561746.6	4191213	1.01E-07	9.22E-08	1.15E-09	1.94E-07
446	561737.6	4191214	9.94E-08	9.11E-08	1.14E-09	1.92E-07
447	561728.6	4191215	9.81E-08	8.99E-08	1.12E-09	1.89E-07
448	561647.2	4191226	8.68E-08	7.96E-08	9.94E-10	1.67E-07
449	561638.1	4191227	8.57E-08	7.86E-08	9.81E-10	1.65E-07
450	561629.1	4191228	8.46E-08	7.76E-08	9.68E-10	1.63E-07
451	561620	4191229	8.35E-08	7.65E-08	9.56E-10	1.61E-07
452	561611	4191230	8.24E-08	7.55E-08	9.43E-10	1.59E-07
453	561925.3	4191049	3.53E-07	3.24E-07	4.03E-09	6.81E-07
454	561927.9	4191040	3.73E-07	3.42E-07	4.26E-09	7.19E-07
455	561930.5	4191031	3.92E-07	3.59E-07	4.48E-09	7.55E-07
456	561933	4191022	4.10E-07	3.76E-07	4.68E-09	7.90E-07
457	561935.6	4191013	4.26E-07	3.91E-07	4.87E-09	8.22E-07
458	561938.2	4191004	4.41E-07	4.04E-07	5.04E-09	8.50E-07
459	561940.8	4190995	4.54E-07	4.16E-07	5.19E-09	8.75E-07
460	561943.4	4190986	4.65E-07	4.26E-07	5.32E-09	8.97E-07
461	561945.9	4190977	4.74E-07	4.35E-07	5.42E-09	9.14E-07
462	561948.5	4190968	4.81E-07	4.41E-07	5.50E-09	9.27E-07
463	561951.1	4190960	4.86E-07	4.46E-07	5.56E-09	9.37E-07
464	561953.7	4190951	4.89E-07	4.48E-07	5.59E-09	9.43E-07
465	561956.3	4190942	4.90E-07	4.50E-07	5.61E-09	9.46E-07
466	561958.9	4190933	4.90E-07	4.49E-07	5.61E-09	9.45E-07
467	561929.1	4191059	3.21E-07	2.94E-07	3.67E-09	6.19E-07

468	561917.9	4191073	2.99E-07	2.74E-07	3.42E-09	5.76E-07
469	561906.7	4191087	2.74E-07	2.51E-07	3.13E-09	5.28E-07
470	561895.5	4191101	2.47E-07	2.26E-07	2.82E-09	4.76E-07
471	561889.9	4191108	2.34E-07	2.14E-07	2.67E-09	4.51E-07
472	561878.7	4191122	2.08E-07	1.91E-07	2.38E-09	4.01E-07
473	561873	4191129	1.96E-07	1.80E-07	2.24E-09	3.78E-07
474	561861.8	4191144	1.74E-07	1.59E-07	1.99E-09	3.35E-07
475	561850.6	4191158	1.54E-07	1.41E-07	1.76E-09	2.97E-07
476	561845	4191165	1.45E-07	1.33E-07	1.66E-09	2.80E-07
477	561833.8	4191179	1.30E-07	1.19E-07	1.48E-09	2.50E-07
478	561828.2	4191186	1.23E-07	1.13E-07	1.40E-09	2.37E-07
479	561817	4191200	1.11E-07	1.02E-07	1.27E-09	2.13E-07
480	561796.8	4191216	9.95E-08	9.13E-08	1.14E-09	1.92E-07
481	561787.8	4191217	9.89E-08	9.06E-08	1.13E-09	1.91E-07
482	561778.8	4191218	9.79E-08	8.98E-08	1.12E-09	1.89E-07
483	561769.9	4191219	9.70E-08	8.89E-08	1.11E-09	1.87E-07
484	561760.9	4191220	9.60E-08	8.80E-08	1.10E-09	1.85E-07
485	561751.9	4191222	9.49E-08	8.70E-08	1.09E-09	1.83E-07
486	561743	4191223	9.39E-08	8.61E-08	1.07E-09	1.81E-07
487	561725	4191225	9.15E-08	8.39E-08	1.05E-09	1.76E-07
488	561671.2	4191232	8.47E-08	7.76E-08	9.69E-10	1.63E-07
489	561662.2	4191233	8.36E-08	7.66E-08	9.57E-10	1.61E-07
490	561653.2	4191234	8.25E-08	7.57E-08	9.45E-10	1.59E-07
491	561644.3	4191235	8.15E-08	7.47E-08	9.33E-10	1.57E-07
492	561635.3	4191237	8.05E-08	7.38E-08	9.21E-10	1.55E-07
493	561626.3	4191238	7.95E-08	7.29E-08	9.10E-10	1.53E-07
494	561608.4	4191240	7.75E-08	7.11E-08	8.87E-10	1.49E-07
495	561937.3	4191042	3.48E-07	3.19E-07	3.98E-09	6.71E-07
496	561939.9	4191034	3.65E-07	3.34E-07	4.17E-09	7.04E-07
497	561942.5	4191025	3.81E-07	3.49E-07	4.36E-09	7.35E-07
498	561945.1	4191016	3.96E-07	3.63E-07	4.53E-09	7.64E-07
499	561947.7	4191007	4.10E-07	3.76E-07	4.69E-09	7.90E-07
500	561950.2	4190998	4.22E-07	3.87E-07	4.83E-09	8.14E-07
501	561952.8	4190989	4.33E-07	3.97E-07	4.95E-09	8.34E-07
502	561955.4	4190980	4.41E-07	4.05E-07	5.05E-09	8.51E-07
503	561958	4190971	4.48E-07	4.11E-07	5.13E-09	8.65E-07
504	561960.6	4190962	4.54E-07	4.16E-07	5.19E-09	8.75E-07
505	561963.1	4190953	4.57E-07	4.19E-07	5.23E-09	8.82E-07
506	561965.7	4190944	4.59E-07	4.21E-07	5.26E-09	8.86E-07
507	561968.3	4190936	4.60E-07	4.22E-07	5.26E-09	8.87E-07
508	561938.6	4191061	3.01E-07	2.76E-07	3.44E-09	5.81E-07
509	561927.5	4191075	2.82E-07	2.59E-07	3.22E-09	5.44E-07
510	561916.4	4191089	2.60E-07	2.38E-07	2.97E-09	5.01E-07
511	561910.8	4191096	2.48E-07	2.27E-07	2.83E-09	4.78E-07
512	561899.7	4191110	2.24E-07	2.05E-07	2.56E-09	4.32E-07
513	561888.5	4191125	2.00E-07	1.84E-07	2.29E-09	3.86E-07
514	561877.4	4191139	1.79E-07	1.64E-07	2.04E-09	3.45E-07

515	561866.3	4191153	1.59E-07	1.46E-07	1.82E-09	3.07E-07
516	561855.1	4191167	1.42E-07	1.30E-07	1.63E-09	2.74E-07
517	561844	4191181	1.27E-07	1.17E-07	1.46E-09	2.45E-07
518	561832.9	4191195	1.15E-07	1.05E-07	1.31E-09	2.21E-07
519	561821.7	4191209	1.04E-07	9.53E-08	1.19E-09	2.00E-07
520	561801.7	4191224	9.38E-08	8.60E-08	1.07E-09	1.81E-07
521	561792.8	4191225	9.32E-08	8.54E-08	1.07E-09	1.80E-07
522	561775	4191228	9.16E-08	8.40E-08	1.05E-09	1.77E-07
523	561766.1	4191229	9.07E-08	8.31E-08	1.04E-09	1.75E-07
524	561748.3	4191231	8.88E-08	8.14E-08	1.02E-09	1.71E-07
525	561694.8	4191238	8.25E-08	7.56E-08	9.44E-10	1.59E-07
526	561677	4191240	8.05E-08	7.38E-08	9.21E-10	1.55E-07
527	561668.1	4191241	7.95E-08	7.29E-08	9.10E-10	1.53E-07
528	561650.3	4191244	7.75E-08	7.11E-08	8.88E-10	1.50E-07
529	561632.5	4191246	7.57E-08	6.94E-08	8.67E-10	1.46E-07
530	561614.7	4191248	7.39E-08	6.78E-08	8.47E-10	1.43E-07
531	561946.8	4191045	3.25E-07	2.98E-07	3.72E-09	6.27E-07
532	561949.4	4191036	3.41E-07	3.13E-07	3.90E-09	6.57E-07
533	561951.9	4191027	3.56E-07	3.26E-07	4.07E-09	6.86E-07
534	561954.5	4191018	3.69E-07	3.39E-07	4.22E-09	7.12E-07
535	561957.1	4191010	3.82E-07	3.50E-07	4.37E-09	7.37E-07
536	561959.7	4191001	3.94E-07	3.61E-07	4.50E-09	7.59E-07
537	561962.3	4190992	4.04E-07	3.70E-07	4.61E-09	7.78E-07
538	561964.9	4190983	4.12E-07	3.78E-07	4.71E-09	7.95E-07
539	561967.4	4190974	4.19E-07	3.84E-07	4.79E-09	8.08E-07
540	561970	4190965	4.25E-07	3.89E-07	4.86E-09	8.19E-07
541	561972.6	4190956	4.29E-07	3.93E-07	4.90E-09	8.26E-07
542	561975.2	4190947	4.31E-07	3.95E-07	4.93E-09	8.31E-07
543	561977.8	4190938	4.32E-07	3.96E-07	4.95E-09	8.34E-07
544	561948.1	4191064	2.83E-07	2.60E-07	3.24E-09	5.47E-07
545	561937.1	4191078	2.66E-07	2.44E-07	3.05E-09	5.14E-07
546	561926	4191092	2.47E-07	2.26E-07	2.82E-09	4.76E-07
547	561915	4191106	2.26E-07	2.07E-07	2.58E-09	4.35E-07
548	561903.9	4191120	2.04E-07	1.87E-07	2.33E-09	3.93E-07
549	561892.8	4191134	1.83E-07	1.68E-07	2.09E-09	3.53E-07
550	561881.8	4191148	1.64E-07	1.50E-07	1.87E-09	3.16E-07
551	561870.7	4191162	1.47E-07	1.35E-07	1.68E-09	2.83E-07
552	561859.7	4191176	1.32E-07	1.21E-07	1.51E-09	2.54E-07
553	561848.6	4191190	1.19E-07	1.09E-07	1.36E-09	2.29E-07
554	561837.6	4191204	1.07E-07	9.85E-08	1.23E-09	2.07E-07
555	561826.5	4191218	9.78E-08	8.96E-08	1.12E-09	1.89E-07
556	561806.6	4191233	8.86E-08	8.12E-08	1.01E-09	1.71E-07
557	561788.9	4191235	8.74E-08	8.01E-08	1.00E-09	1.68E-07
558	561771.2	4191237	8.58E-08	7.87E-08	9.83E-10	1.66E-07
559	561718.2	4191244	8.03E-08	7.37E-08	9.20E-10	1.55E-07
560	561700.5	4191247	7.84E-08	7.19E-08	8.98E-10	1.51E-07
561	561682.8	4191249	7.66E-08	7.02E-08	8.77E-10	1.48E-07

562	561665.1	4191251	7.48E-08	6.86E-08	8.56E-10	1.44E-07
563	561647.4	4191253	7.30E-08	6.70E-08	8.36E-10	1.41E-07
564	561629.8	4191256	7.14E-08	6.55E-08	8.18E-10	1.38E-07
565	561612.1	4191258	6.98E-08	6.40E-08	7.99E-10	1.35E-07
566	561956.2	4191048	3.06E-07	2.80E-07	3.49E-09	5.89E-07
567	561958.8	4191039	3.20E-07	2.93E-07	3.65E-09	6.16E-07
568	561961.4	4191030	3.33E-07	3.05E-07	3.81E-09	6.42E-07
569	561964	4191021	3.46E-07	3.17E-07	3.95E-09	6.66E-07
570	561966.6	4191012	3.57E-07	3.28E-07	4.09E-09	6.89E-07
571	561969.1	4191003	3.68E-07	3.37E-07	4.21E-09	7.09E-07
572	561971.7	4190995	3.77E-07	3.46E-07	4.32E-09	7.28E-07
573	561974.3	4190986	3.86E-07	3.53E-07	4.41E-09	7.43E-07
574	561976.9	4190977	3.92E-07	3.60E-07	4.49E-09	7.57E-07
575	561979.5	4190968	3.98E-07	3.65E-07	4.55E-09	7.67E-07
576	561982.1	4190959	4.02E-07	3.69E-07	4.60E-09	7.76E-07
577	561984.6	4190950	4.05E-07	3.72E-07	4.64E-09	7.81E-07
578	561987.2	4190941	4.07E-07	3.73E-07	4.66E-09	7.85E-07
579	561957.4	4191067	2.67E-07	2.45E-07	3.06E-09	5.15E-07
580	561951.7	4191074	2.59E-07	2.38E-07	2.97E-09	5.00E-07
581	561946	4191081	2.51E-07	2.30E-07	2.87E-09	4.84E-07
582	561940.3	4191089	2.42E-07	2.22E-07	2.77E-09	4.67E-07
583	561934.5	4191096	2.33E-07	2.13E-07	2.66E-09	4.49E-07
584	561928.8	4191103	2.23E-07	2.04E-07	2.55E-09	4.30E-07
585	561923.1	4191110	2.13E-07	1.95E-07	2.44E-09	4.11E-07
586	561917.4	4191117	2.03E-07	1.86E-07	2.32E-09	3.91E-07
587	561911.7	4191125	1.93E-07	1.77E-07	2.20E-09	3.71E-07
588	561906	4191132	1.83E-07	1.67E-07	2.09E-09	3.52E-07
589	561900.3	4191139	1.73E-07	1.59E-07	1.98E-09	3.33E-07
590	561894.6	4191146	1.64E-07	1.50E-07	1.87E-09	3.15E-07
591	561888.8	4191154	1.55E-07	1.42E-07	1.77E-09	2.98E-07
592	561883.1	4191161	1.46E-07	1.34E-07	1.68E-09	2.82E-07
593	561877.4	4191168	1.39E-07	1.27E-07	1.59E-09	2.67E-07
594	561871.7	4191175	1.31E-07	1.20E-07	1.50E-09	2.53E-07
595	561866	4191182	1.25E-07	1.14E-07	1.43E-09	2.40E-07
596	561860.3	4191190	1.18E-07	1.08E-07	1.35E-09	2.28E-07
597	561854.6	4191197	1.12E-07	1.03E-07	1.28E-09	2.16E-07
598	561848.9	4191204	1.07E-07	9.78E-08	1.22E-09	2.06E-07
599	561843.1	4191211	1.02E-07	9.32E-08	1.16E-09	1.96E-07
600	561837.4	4191219	9.69E-08	8.89E-08	1.11E-09	1.87E-07
601	561831.7	4191226	9.26E-08	8.49E-08	1.06E-09	1.79E-07
602	561826	4191233	8.83E-08	8.10E-08	1.01E-09	1.70E-07
603	561811.2	4191241	8.38E-08	7.68E-08	9.59E-10	1.62E-07
604	561802	4191243	8.32E-08	7.62E-08	9.52E-10	1.60E-07
605	561738.1	4191251	7.79E-08	7.14E-08	8.92E-10	1.50E-07
606	561728.9	4191252	7.70E-08	7.06E-08	8.81E-10	1.48E-07
607	561719.8	4191253	7.60E-08	6.97E-08	8.71E-10	1.47E-07
608	561710.6	4191254	7.51E-08	6.89E-08	8.60E-10	1.45E-07

609	561701.5	4191256	7.42E-08	6.81E-08	8.50E-10	1.43E-07
610	561692.4	4191257	7.33E-08	6.72E-08	8.40E-10	1.41E-07
611	561683.2	4191258	7.25E-08	6.64E-08	8.30E-10	1.40E-07
612	561674.1	4191259	7.16E-08	6.56E-08	8.20E-10	1.38E-07
613	561665	4191260	7.07E-08	6.49E-08	8.10E-10	1.36E-07
614	561655.8	4191261	6.99E-08	6.41E-08	8.01E-10	1.35E-07
615	561646.7	4191263	6.91E-08	6.34E-08	7.91E-10	1.33E-07
616	561637.5	4191264	6.83E-08	6.26E-08	7.82E-10	1.32E-07
617	561628.4	4191265	6.75E-08	6.19E-08	7.73E-10	1.30E-07
618	561619.3	4191266	6.68E-08	6.12E-08	7.65E-10	1.29E-07
619	561610.1	4191267	6.60E-08	6.06E-08	7.56E-10	1.27E-07
620	561601	4191269	6.53E-08	5.99E-08	7.48E-10	1.26E-07
621	561963.1	4191060	2.75E-07	2.52E-07	3.14E-09	5.29E-07
622	561965.7	4191051	2.88E-07	2.64E-07	3.29E-09	5.55E-07
623	561968.3	4191042	3.01E-07	2.76E-07	3.44E-09	5.80E-07
624	561970.9	4191033	3.13E-07	2.87E-07	3.58E-09	6.03E-07
625	561973.4	4191024	3.24E-07	2.97E-07	3.71E-09	6.25E-07
626	561976	4191015	3.35E-07	3.07E-07	3.83E-09	6.46E-07
627	561978.6	4191006	3.45E-07	3.16E-07	3.94E-09	6.65E-07
628	561981.2	4190997	3.54E-07	3.24E-07	4.04E-09	6.82E-07
629	561983.8	4190988	3.61E-07	3.31E-07	4.13E-09	6.97E-07
630	561986.3	4190979	3.68E-07	3.38E-07	4.21E-09	7.10E-07
631	561988.9	4190971	3.74E-07	3.43E-07	4.28E-09	7.21E-07
632	561991.5	4190962	3.78E-07	3.47E-07	4.33E-09	7.30E-07
633	561994.1	4190953	3.82E-07	3.50E-07	4.37E-09	7.36E-07
634	561996.7	4190944	3.84E-07	3.52E-07	4.39E-09	7.41E-07
635	561966.9	4191070	2.53E-07	2.32E-07	2.89E-09	4.88E-07
636	561961.2	4191077	2.46E-07	2.26E-07	2.81E-09	4.74E-07
637	561955.6	4191084	2.38E-07	2.18E-07	2.72E-09	4.59E-07
638	561949.9	4191091	2.30E-07	2.11E-07	2.63E-09	4.44E-07
639	561944.2	4191098	2.22E-07	2.03E-07	2.53E-09	4.27E-07
640	561938.5	4191105	2.13E-07	1.95E-07	2.43E-09	4.11E-07
641	561932.9	4191113	2.04E-07	1.87E-07	2.33E-09	3.93E-07
642	561927.2	4191120	1.95E-07	1.79E-07	2.23E-09	3.76E-07
643	561921.5	4191127	1.86E-07	1.70E-07	2.12E-09	3.58E-07
644	561910.2	4191141	1.68E-07	1.54E-07	1.92E-09	3.23E-07
645	561904.5	4191148	1.59E-07	1.46E-07	1.82E-09	3.06E-07
646	561893.2	4191163	1.43E-07	1.31E-07	1.63E-09	2.75E-07
647	561887.5	4191170	1.35E-07	1.24E-07	1.55E-09	2.61E-07
648	561881.8	4191177	1.29E-07	1.18E-07	1.47E-09	2.48E-07
649	561870.5	4191191	1.16E-07	1.06E-07	1.33E-09	2.24E-07
650	561864.8	4191199	1.10E-07	1.01E-07	1.26E-09	2.13E-07
651	561859.2	4191206	1.05E-07	9.64E-08	1.20E-09	2.03E-07
652	561853.5	4191213	1.00E-07	9.18E-08	1.15E-09	1.93E-07
653	561847.8	4191220	9.56E-08	8.77E-08	1.09E-09	1.84E-07
654	561842.1	4191227	9.14E-08	8.38E-08	1.05E-09	1.76E-07
655	561836.5	4191235	8.74E-08	8.01E-08	1.00E-09	1.68E-07

656	561830.8	4191242	8.36E-08	7.66E-08	9.57E-10	1.61E-07
657	561816.1	4191250	7.94E-08	7.28E-08	9.09E-10	1.53E-07
658	561761.7	4191257	7.57E-08	6.94E-08	8.66E-10	1.46E-07
659	561752.6	4191258	7.49E-08	6.87E-08	8.58E-10	1.44E-07
660	561743.5	4191259	7.41E-08	6.80E-08	8.49E-10	1.43E-07
661	561734.4	4191261	7.33E-08	6.72E-08	8.39E-10	1.41E-07
662	561725.4	4191262	7.25E-08	6.64E-08	8.30E-10	1.40E-07
663	561716.3	4191263	7.16E-08	6.57E-08	8.20E-10	1.38E-07
664	561707.2	4191264	7.08E-08	6.49E-08	8.10E-10	1.36E-07
665	561698.2	4191265	7.00E-08	6.41E-08	8.01E-10	1.35E-07
666	561689.1	4191266	6.92E-08	6.34E-08	7.92E-10	1.33E-07
667	561680	4191268	6.84E-08	6.27E-08	7.83E-10	1.32E-07
668	561671	4191269	6.76E-08	6.20E-08	7.74E-10	1.30E-07
669	561661.9	4191270	6.68E-08	6.13E-08	7.65E-10	1.29E-07
670	561652.8	4191271	6.61E-08	6.06E-08	7.56E-10	1.27E-07
671	561643.8	4191272	6.53E-08	5.99E-08	7.48E-10	1.26E-07
672	561634.7	4191273	6.46E-08	5.92E-08	7.39E-10	1.25E-07
673	561625.6	4191275	6.39E-08	5.86E-08	7.31E-10	1.23E-07
674	561616.5	4191276	6.32E-08	5.79E-08	7.24E-10	1.22E-07
675	561607.5	4191277	6.25E-08	5.73E-08	7.16E-10	1.21E-07
676	561598.4	4191278	6.19E-08	5.68E-08	7.09E-10	1.19E-07
677	561972.6	4191062	2.60E-07	2.38E-07	2.97E-09	5.01E-07
678	561975.1	4191053	2.72E-07	2.49E-07	3.11E-09	5.24E-07
679	561977.7	4191045	2.84E-07	2.60E-07	3.24E-09	5.47E-07
680	561980.3	4191036	2.95E-07	2.70E-07	3.37E-09	5.68E-07
681	561982.9	4191027	3.05E-07	2.80E-07	3.49E-09	5.88E-07
682	561985.5	4191018	3.15E-07	2.89E-07	3.60E-09	6.07E-07
683	561988.1	4191009	3.24E-07	2.97E-07	3.71E-09	6.25E-07
684	561990.6	4191000	3.33E-07	3.05E-07	3.80E-09	6.41E-07
685	561993.2	4190991	3.40E-07	3.12E-07	3.89E-09	6.56E-07
686	561995.8	4190982	3.47E-07	3.18E-07	3.97E-09	6.69E-07
687	561998.4	4190973	3.52E-07	3.23E-07	4.03E-09	6.79E-07
688	562001	4190964	3.57E-07	3.27E-07	4.08E-09	6.88E-07
689	562003.5	4190955	3.60E-07	3.30E-07	4.12E-09	6.95E-07
690	562006.1	4190947	3.63E-07	3.33E-07	4.15E-09	7.00E-07
691	561907.5	4190884	6.90E-07	6.33E-07	7.91E-09	1.33E-06
692	561909.5	4190902	6.91E-07	6.34E-07	7.91E-09	1.33E-06
693	561913.9	4190861	6.40E-07	5.87E-07	7.33E-09	1.23E-06
694	561915.9	4190878	6.49E-07	5.95E-07	7.44E-09	1.25E-06
695	561918	4190896	6.51E-07	5.97E-07	7.46E-09	1.26E-06
696	561812.4	4190668	3.09E-07	2.83E-07	3.54E-09	5.96E-07
697	561826.2	4190678	3.29E-07	3.01E-07	3.77E-09	6.34E-07
698	561920.3	4190838	5.87E-07	5.38E-07	6.72E-09	1.13E-06
699	561922.4	4190855	6.02E-07	5.52E-07	6.90E-09	1.16E-06
700	561924.4	4190873	6.11E-07	5.60E-07	7.00E-09	1.18E-06
701	561926.4	4190890	6.15E-07	5.64E-07	7.04E-09	1.19E-06
702	561928.5	4190907	6.10E-07	5.59E-07	6.98E-09	1.18E-06

703	561809.7	4190654	2.82E-07	2.59E-07	3.24E-09	5.45E-07
704	561816.9	4190660	2.92E-07	2.68E-07	3.35E-09	5.63E-07
705	561824.1	4190665	3.02E-07	2.77E-07	3.46E-09	5.82E-07
706	561831.3	4190671	3.11E-07	2.85E-07	3.57E-09	6.00E-07
707	561838.5	4190677	3.21E-07	2.94E-07	3.68E-09	6.18E-07
708	561845.7	4190682	3.30E-07	3.03E-07	3.79E-09	6.36E-07
709	561926.2	4190810	5.24E-07	4.80E-07	6.01E-09	1.01E-06
710	561927.2	4190819	5.36E-07	4.92E-07	6.15E-09	1.03E-06
711	561928.3	4190828	5.47E-07	5.02E-07	6.28E-09	1.06E-06
712	561929.4	4190837	5.57E-07	5.11E-07	6.38E-09	1.07E-06
713	561930.4	4190846	5.65E-07	5.18E-07	6.47E-09	1.09E-06
714	561931.5	4190855	5.71E-07	5.24E-07	6.54E-09	1.10E-06
715	561932.5	4190864	5.75E-07	5.28E-07	6.59E-09	1.11E-06
716	561933.6	4190873	5.79E-07	5.31E-07	6.63E-09	1.12E-06
717	561934.7	4190882	5.80E-07	5.32E-07	6.65E-09	1.12E-06
718	561935.7	4190891	5.80E-07	5.32E-07	6.64E-09	1.12E-06
719	561936.8	4190900	5.78E-07	5.30E-07	6.61E-09	1.11E-06
720	561937.8	4190909	5.73E-07	5.26E-07	6.56E-09	1.11E-06
721	561804.8	4190639	2.56E-07	2.35E-07	2.94E-09	4.94E-07
722	561811.9	4190645	2.65E-07	2.43E-07	3.04E-09	5.11E-07
723	561819.1	4190650	2.74E-07	2.51E-07	3.14E-09	5.28E-07
724	561826.2	4190656	2.83E-07	2.59E-07	3.25E-09	5.45E-07
725	561833.4	4190661	2.92E-07	2.67E-07	3.35E-09	5.62E-07
726	561840.5	4190667	3.00E-07	2.75E-07	3.45E-09	5.79E-07
727	561847.6	4190672	3.09E-07	2.83E-07	3.54E-09	5.95E-07
728	561854.8	4190678	3.17E-07	2.91E-07	3.64E-09	6.12E-07
729	561861.9	4190683	3.25E-07	2.98E-07	3.73E-09	6.27E-07
730	561869.1	4190689	3.33E-07	3.05E-07	3.82E-09	6.42E-07
731	561876.2	4190694	3.41E-07	3.12E-07	3.91E-09	6.57E-07
732	561932.6	4190787	4.68E-07	4.29E-07	5.36E-09	9.02E-07
733	561933.6	4190796	4.81E-07	4.41E-07	5.52E-09	9.28E-07
734	561934.7	4190805	4.94E-07	4.53E-07	5.66E-09	9.52E-07
735	561935.7	4190813	5.05E-07	4.64E-07	5.80E-09	9.75E-07
736	561936.8	4190822	5.16E-07	4.73E-07	5.91E-09	9.95E-07
737	561937.8	4190831	5.25E-07	4.82E-07	6.02E-09	1.01E-06
738	561938.9	4190840	5.33E-07	4.89E-07	6.11E-09	1.03E-06
739	561941	4190858	5.44E-07	4.99E-07	6.23E-09	1.05E-06
740	561942	4190867	5.47E-07	5.02E-07	6.27E-09	1.05E-06
741	561943.1	4190876	5.49E-07	5.03E-07	6.29E-09	1.06E-06
742	561944.1	4190885	5.49E-07	5.04E-07	6.29E-09	1.06E-06
743	561945.2	4190894	5.48E-07	5.02E-07	6.27E-09	1.06E-06
744	561946.2	4190903	5.44E-07	4.99E-07	6.23E-09	1.05E-06
745	561947.3	4190912	5.39E-07	4.94E-07	6.17E-09	1.04E-06
746	561821.2	4190640	2.57E-07	2.36E-07	2.95E-09	4.96E-07
747	561835.4	4190651	2.74E-07	2.51E-07	3.14E-09	5.28E-07
748	561842.5	4190657	2.82E-07	2.58E-07	3.23E-09	5.44E-07
749	561856.7	4190668	2.97E-07	2.73E-07	3.41E-09	5.74E-07

750	561870.9	4190679	3.12E-07	2.86E-07	3.58E-09	6.02E-07
751	561878	4190684	3.19E-07	2.93E-07	3.66E-09	6.16E-07
752	561892.2	4190695	3.32E-07	3.05E-07	3.81E-09	6.41E-07
753	561899.3	4190701	3.38E-07	3.10E-07	3.88E-09	6.52E-07
754	561938	4190755	4.01E-07	3.68E-07	4.60E-09	7.74E-07
755	561940.1	4190772	4.29E-07	3.93E-07	4.92E-09	8.27E-07
756	561942.2	4190790	4.55E-07	4.17E-07	5.21E-09	8.77E-07
757	561943.2	4190799	4.66E-07	4.28E-07	5.35E-09	8.99E-07
758	561945.3	4190817	4.87E-07	4.47E-07	5.58E-09	9.39E-07
759	561946.3	4190826	4.96E-07	4.55E-07	5.68E-09	9.56E-07
760	561948.4	4190844	5.10E-07	4.67E-07	5.84E-09	9.83E-07
761	561949.5	4190853	5.15E-07	4.72E-07	5.90E-09	9.92E-07
762	561951.5	4190870	5.20E-07	4.77E-07	5.96E-09	1.00E-06
763	561953.6	4190888	5.20E-07	4.76E-07	5.95E-09	1.00E-06
764	561954.7	4190897	5.17E-07	4.74E-07	5.92E-09	9.97E-07
765	561956.8	4190915	5.07E-07	4.65E-07	5.80E-09	9.77E-07
766	561837.6	4190641	2.57E-07	2.36E-07	2.95E-09	4.96E-07
767	561851.7	4190652	2.72E-07	2.50E-07	3.12E-09	5.25E-07
768	561865.8	4190663	2.87E-07	2.63E-07	3.29E-09	5.53E-07
769	561879.9	4190674	3.00E-07	2.75E-07	3.44E-09	5.78E-07
770	561894	4190685	3.12E-07	2.86E-07	3.58E-09	6.02E-07
771	561908.1	4190696	3.23E-07	2.97E-07	3.71E-09	6.24E-07
772	561922.3	4190707	3.33E-07	3.05E-07	3.81E-09	6.41E-07
773	561944.5	4190732	3.55E-07	3.25E-07	4.07E-09	6.84E-07
774	561946.5	4190750	3.81E-07	3.49E-07	4.37E-09	7.35E-07
775	561948.6	4190767	4.07E-07	3.73E-07	4.66E-09	7.84E-07
776	561949.6	4190776	4.19E-07	3.84E-07	4.80E-09	8.07E-07
777	561951.7	4190794	4.41E-07	4.05E-07	5.06E-09	8.51E-07
778	561953.8	4190812	4.61E-07	4.22E-07	5.28E-09	8.88E-07
779	561954.8	4190820	4.69E-07	4.30E-07	5.38E-09	9.04E-07
780	561956.9	4190838	4.82E-07	4.42E-07	5.53E-09	9.30E-07
781	561959	4190856	4.91E-07	4.50E-07	5.62E-09	9.46E-07
782	561960	4190865	4.93E-07	4.52E-07	5.65E-09	9.51E-07
783	561962.1	4190882	4.94E-07	4.53E-07	5.65E-09	9.52E-07
784	561964.2	4190900	4.88E-07	4.48E-07	5.59E-09	9.42E-07
785	561966.2	4190918	4.77E-07	4.37E-07	5.46E-09	9.20E-07
786	561839.7	4190632	2.43E-07	2.23E-07	2.78E-09	4.68E-07
787	561853.7	4190642	2.56E-07	2.35E-07	2.94E-09	4.94E-07
788	561867.8	4190653	2.70E-07	2.47E-07	3.10E-09	5.20E-07
789	561881.8	4190664	2.82E-07	2.59E-07	3.24E-09	5.44E-07
790	561895.9	4190675	2.94E-07	2.70E-07	3.37E-09	5.67E-07
791	561909.9	4190686	3.05E-07	2.79E-07	3.50E-09	5.88E-07
792	561923.9	4190697	3.14E-07	2.88E-07	3.60E-09	6.06E-07
793	561938	4190707	3.21E-07	2.94E-07	3.68E-09	6.19E-07
794	561953	4190727	3.38E-07	3.10E-07	3.88E-09	6.52E-07
795	561955.1	4190745	3.62E-07	3.32E-07	4.16E-09	6.99E-07
796	561957.1	4190762	3.86E-07	3.54E-07	4.43E-09	7.44E-07

797	561959.2	4190780	4.08E-07	3.74E-07	4.68E-09	7.87E-07
798	561960.2	4190789	4.18E-07	3.83E-07	4.79E-09	8.06E-07
799	561962.3	4190806	4.36E-07	4.00E-07	5.00E-09	8.42E-07
800	561964.4	4190824	4.51E-07	4.14E-07	5.17E-09	8.70E-07
801	561965.4	4190833	4.57E-07	4.19E-07	5.24E-09	8.81E-07
802	561967.5	4190850	4.66E-07	4.27E-07	5.33E-09	8.98E-07
803	561969.5	4190868	4.69E-07	4.30E-07	5.37E-09	9.05E-07
804	561970.5	4190877	4.69E-07	4.30E-07	5.37E-09	9.05E-07
805	561972.6	4190894	4.65E-07	4.27E-07	5.33E-09	8.97E-07
806	561974.7	4190912	4.56E-07	4.18E-07	5.22E-09	8.79E-07
807	561841.9	4190622	2.29E-07	2.10E-07	2.63E-09	4.42E-07
808	561855.9	4190633	2.42E-07	2.22E-07	2.78E-09	4.66E-07
809	561869.8	4190643	2.54E-07	2.33E-07	2.92E-09	4.90E-07
810	561883.8	4190654	2.66E-07	2.44E-07	3.05E-09	5.13E-07
811	561897.7	4190665	2.77E-07	2.54E-07	3.18E-09	5.35E-07
812	561911.7	4190676	2.88E-07	2.64E-07	3.30E-09	5.55E-07
813	561925.7	4190686	2.97E-07	2.72E-07	3.40E-09	5.72E-07
814	561939.6	4190697	3.04E-07	2.79E-07	3.49E-09	5.86E-07
815	561953.6	4190708	3.09E-07	2.84E-07	3.55E-09	5.97E-07
816	561961.6	4190722	3.23E-07	2.96E-07	3.70E-09	6.22E-07
817	561963.6	4190740	3.45E-07	3.17E-07	3.96E-09	6.66E-07
818	561965.7	4190757	3.67E-07	3.37E-07	4.21E-09	7.08E-07
819	561967.7	4190775	3.87E-07	3.55E-07	4.44E-09	7.47E-07
820	561969.8	4190792	4.06E-07	3.72E-07	4.65E-09	7.83E-07
821	561971.8	4190810	4.21E-07	3.86E-07	4.83E-09	8.13E-07
822	561973.9	4190827	4.34E-07	3.98E-07	4.97E-09	8.36E-07
823	561975.9	4190845	4.42E-07	4.05E-07	5.06E-09	8.52E-07
824	561978	4190862	4.46E-07	4.09E-07	5.11E-09	8.60E-07
825	561980	4190880	4.46E-07	4.09E-07	5.10E-09	8.60E-07
826	561982.1	4190897	4.41E-07	4.04E-07	5.04E-09	8.50E-07
827	561984.1	4190915	4.31E-07	3.95E-07	4.93E-09	8.30E-07
828	561832.1	4190603	2.06E-07	1.89E-07	2.37E-09	3.98E-07
829	561839.3	4190608	2.13E-07	1.95E-07	2.44E-09	4.10E-07
830	561846.5	4190614	2.19E-07	2.01E-07	2.51E-09	4.22E-07
831	561853.7	4190619	2.25E-07	2.06E-07	2.58E-09	4.34E-07
832	561860.9	4190625	2.31E-07	2.12E-07	2.65E-09	4.46E-07
833	561868.1	4190631	2.37E-07	2.17E-07	2.72E-09	4.57E-07
834	561882.6	4190642	2.49E-07	2.28E-07	2.85E-09	4.80E-07
835	561889.8	4190647	2.54E-07	2.33E-07	2.92E-09	4.90E-07
836	561897	4190653	2.60E-07	2.38E-07	2.98E-09	5.01E-07
837	561904.2	4190658	2.65E-07	2.43E-07	3.04E-09	5.12E-07
838	561911.4	4190664	2.70E-07	2.48E-07	3.10E-09	5.22E-07
839	561918.6	4190670	2.75E-07	2.52E-07	3.16E-09	5.31E-07
840	561925.8	4190675	2.80E-07	2.57E-07	3.21E-09	5.40E-07
841	561933.1	4190681	2.84E-07	2.60E-07	3.26E-09	5.47E-07
842	561940.3	4190686	2.88E-07	2.64E-07	3.30E-09	5.54E-07
843	561947.5	4190692	2.91E-07	2.67E-07	3.34E-09	5.61E-07

844	561954.7	4190697	2.94E-07	2.69E-07	3.37E-09	5.66E-07
845	561961.9	4190703	2.96E-07	2.72E-07	3.40E-09	5.71E-07
846	561970.2	4190718	3.09E-07	2.83E-07	3.54E-09	5.96E-07
847	561971.2	4190727	3.20E-07	2.93E-07	3.67E-09	6.17E-07
848	561972.3	4190736	3.31E-07	3.03E-07	3.79E-09	6.38E-07
849	561973.4	4190745	3.41E-07	3.13E-07	3.91E-09	6.58E-07
850	561974.4	4190754	3.52E-07	3.22E-07	4.03E-09	6.78E-07
851	561975.5	4190763	3.62E-07	3.32E-07	4.15E-09	6.97E-07
852	561976.5	4190772	3.71E-07	3.40E-07	4.25E-09	7.15E-07
853	561977.6	4190781	3.80E-07	3.48E-07	4.36E-09	7.33E-07
854	561978.7	4190790	3.88E-07	3.56E-07	4.45E-09	7.49E-07
855	561979.7	4190799	3.96E-07	3.63E-07	4.54E-09	7.64E-07
856	561980.8	4190808	4.03E-07	3.70E-07	4.62E-09	7.77E-07
857	561981.8	4190817	4.09E-07	3.75E-07	4.69E-09	7.89E-07
858	561982.9	4190826	4.14E-07	3.80E-07	4.75E-09	7.99E-07
859	561984	4190835	4.19E-07	3.84E-07	4.80E-09	8.07E-07
860	561985	4190844	4.22E-07	3.87E-07	4.84E-09	8.14E-07
861	561986.1	4190853	4.24E-07	3.89E-07	4.86E-09	8.18E-07
862	561987.1	4190862	4.25E-07	3.90E-07	4.87E-09	8.20E-07
863	561988.2	4190871	4.25E-07	3.90E-07	4.87E-09	8.20E-07
864	561989.3	4190880	4.24E-07	3.89E-07	4.86E-09	8.18E-07
865	561990.3	4190889	4.22E-07	3.87E-07	4.83E-09	8.14E-07
866	561991.4	4190899	4.18E-07	3.84E-07	4.79E-09	8.07E-07
867	561992.4	4190908	4.14E-07	3.79E-07	4.74E-09	7.98E-07
868	561993.5	4190917	4.08E-07	3.74E-07	4.67E-09	7.87E-07
869	561994.6	4190926	4.01E-07	3.68E-07	4.59E-09	7.73E-07
870	561995.6	4190935	3.93E-07	3.60E-07	4.50E-09	7.58E-07
871	561834.3	4190593	1.96E-07	1.80E-07	2.25E-09	3.78E-07
872	561841.5	4190599	2.02E-07	1.85E-07	2.31E-09	3.89E-07
873	561848.6	4190604	2.07E-07	1.90E-07	2.38E-09	4.00E-07
874	561855.8	4190610	2.13E-07	1.95E-07	2.44E-09	4.11E-07
875	561863	4190615	2.19E-07	2.01E-07	2.51E-09	4.22E-07
876	561870.1	4190621	2.24E-07	2.06E-07	2.57E-09	4.32E-07
877	561877.3	4190626	2.30E-07	2.11E-07	2.63E-09	4.43E-07
878	561884.5	4190632	2.35E-07	2.16E-07	2.70E-09	4.53E-07
879	561891.7	4190637	2.40E-07	2.20E-07	2.76E-09	4.63E-07
880	561898.8	4190643	2.46E-07	2.25E-07	2.82E-09	4.74E-07
881	561906	4190648	2.51E-07	2.30E-07	2.88E-09	4.84E-07
882	561913.2	4190654	2.56E-07	2.35E-07	2.93E-09	4.93E-07
883	561920.3	4190659	2.60E-07	2.39E-07	2.99E-09	5.02E-07
884	561927.5	4190665	2.65E-07	2.43E-07	3.04E-09	5.11E-07
885	561934.7	4190670	2.69E-07	2.47E-07	3.08E-09	5.19E-07
886	561941.8	4190676	2.73E-07	2.50E-07	3.13E-09	5.26E-07
887	561949	4190682	2.76E-07	2.53E-07	3.16E-09	5.32E-07
888	561956.2	4190687	2.79E-07	2.56E-07	3.20E-09	5.38E-07
889	561963.3	4190693	2.82E-07	2.58E-07	3.23E-09	5.43E-07
890	561970.5	4190698	2.84E-07	2.60E-07	3.26E-09	5.47E-07

891	561978.7	4190713	2.96E-07	2.71E-07	3.39E-09	5.70E-07
892	561979.8	4190722	3.06E-07	2.80E-07	3.51E-09	5.90E-07
893	561980.8	4190731	3.16E-07	2.90E-07	3.62E-09	6.09E-07
894	561981.9	4190740	3.26E-07	2.99E-07	3.74E-09	6.28E-07
895	561983	4190749	3.35E-07	3.08E-07	3.85E-09	6.47E-07
896	561984	4190758	3.45E-07	3.16E-07	3.95E-09	6.64E-07
897	561985.1	4190767	3.53E-07	3.24E-07	4.05E-09	6.81E-07
898	561986.1	4190776	3.62E-07	3.32E-07	4.15E-09	6.97E-07
899	561988.2	4190794	3.77E-07	3.46E-07	4.32E-09	7.27E-07
900	561989.3	4190803	3.84E-07	3.52E-07	4.40E-09	7.40E-07
901	561990.3	4190812	3.89E-07	3.57E-07	4.46E-09	7.51E-07
902	561991.4	4190821	3.95E-07	3.62E-07	4.52E-09	7.61E-07
903	561992.4	4190830	3.99E-07	3.66E-07	4.57E-09	7.69E-07
904	561993.5	4190839	4.02E-07	3.69E-07	4.61E-09	7.75E-07
905	561994.5	4190848	4.05E-07	3.71E-07	4.63E-09	7.80E-07
906	561995.6	4190857	4.06E-07	3.72E-07	4.65E-09	7.83E-07
907	561996.6	4190866	4.06E-07	3.73E-07	4.65E-09	7.83E-07
908	561997.7	4190875	4.06E-07	3.72E-07	4.65E-09	7.82E-07
909	561998.8	4190884	4.04E-07	3.70E-07	4.62E-09	7.79E-07
910	561999.8	4190893	4.01E-07	3.68E-07	4.59E-09	7.73E-07
911	562000.9	4190902	3.97E-07	3.64E-07	4.55E-09	7.66E-07
912	562001.9	4190911	3.92E-07	3.60E-07	4.49E-09	7.56E-07
913	562003	4190920	3.86E-07	3.54E-07	4.42E-09	7.45E-07
914	562004	4190929	3.79E-07	3.48E-07	4.34E-09	7.31E-07
915	562005.1	4190938	3.71E-07	3.41E-07	4.25E-09	7.16E-07
916	561713.3	4190536	1.30E-07	1.19E-07	1.49E-09	2.51E-07
917	561704.5	4190533	1.27E-07	1.16E-07	1.46E-09	2.45E-07

			1.124E-03	1.116E-03	6.91E-05
			2022	2023	2024
1	561514.6	4190802	6.41E-04	6.36E-04	3.97E-05
2	561520.1	4190795	6.45E-04	6.41E-04	4.00E-05
3	561509.2	4190810	6.31E-04	6.27E-04	3.91E-05
4	561507	4190819	6.38E-04	6.34E-04	3.95E-05
5	561504.8	4190828	6.41E-04	6.36E-04	3.97E-05
6	561502.6	4190837	6.39E-04	6.35E-04	3.96E-05
7	561500.3	4190846	6.37E-04	6.32E-04	3.94E-05
8	561498.1	4190855	6.30E-04	6.26E-04	3.90E-05
9	561495.9	4190864	6.19E-04	6.14E-04	3.83E-05
10	561493.7	4190873	6.03E-04	5.98E-04	3.73E-05
11	561491.5	4190882	5.83E-04	5.79E-04	3.61E-05
12	561489.3	4190891	5.62E-04	5.58E-04	3.48E-05
13	561505	4190800	5.88E-04	5.84E-04	3.64E-05
14	561515.7	4190786	5.96E-04	5.91E-04	3.69E-05
15	561521	4190778	5.93E-04	5.89E-04	3.67E-05
16	561531.8	4190764	5.71E-04	5.67E-04	3.54E-05
17	561497.4	4190816	5.85E-04	5.81E-04	3.62E-05
18	561495.2	4190825	5.86E-04	5.82E-04	3.63E-05
19	561493	4190834	5.84E-04	5.80E-04	3.62E-05
20	561490.8	4190843	5.80E-04	5.76E-04	3.59E-05
21	561488.6	4190852	5.72E-04	5.68E-04	3.54E-05
22	561486.4	4190861	5.61E-04	5.57E-04	3.47E-05
23	561484.2	4190870	5.46E-04	5.42E-04	3.38E-05
24	561482	4190879	5.29E-04	5.25E-04	3.27E-05
25	561479.8	4190888	5.10E-04	5.06E-04	3.16E-05
26	561477.5	4190897	4.90E-04	4.87E-04	3.03E-05
27	561475.3	4190906	4.69E-04	4.66E-04	2.91E-05
28	561473.1	4190915	4.49E-04	4.46E-04	2.78E-05
29	561470.9	4190924	4.29E-04	4.26E-04	2.65E-05
30	561516.5	4190769	5.46E-04	5.42E-04	3.38E-05
31	561527.1	4190755	5.23E-04	5.20E-04	3.24E-05
32	561537.7	4190741	4.90E-04	4.87E-04	3.04E-05
33	561468	4190895	4.49E-04	4.46E-04	2.78E-05
34	561465.8	4190904	4.32E-04	4.29E-04	2.67E-05
35	561463.6	4190913	4.14E-04	4.11E-04	2.56E-05
36	561461.4	4190922	3.96E-04	3.93E-04	2.45E-05
37	561538	4190725	4.36E-04	4.33E-04	2.70E-05
38	561464.2	4190941	3.85E-04	3.83E-04	2.39E-05
39	561462.8	4190932	3.91E-04	3.88E-04	2.42E-05
40	561457.3	4190957	3.46E-04	3.44E-04	2.14E-05
41	561455.9	4190947	3.52E-04	3.50E-04	2.18E-05
42	561454.5	4190938	3.58E-04	3.55E-04	2.21E-05
43	561453.2	4190929	3.63E-04	3.60E-04	2.24E-05
44	561450.3	4190972	3.11E-04	3.09E-04	1.93E-05

45	561449	4190963	3.17E-04	3.15E-04	1.96E-05
46	561447.6	4190954	3.23E-04	3.21E-04	2.00E-05
47	561446.3	4190945	3.28E-04	3.26E-04	2.03E-05
48	561442	4190978	2.87E-04	2.85E-04	1.77E-05
49	561440.7	4190969	2.92E-04	2.90E-04	1.81E-05
50	561439.3	4190960	2.98E-04	2.96E-04	1.84E-05
51	561435.8	4190998	2.58E-04	2.56E-04	1.59E-05
52	561434.4	4190989	2.63E-04	2.61E-04	1.63E-05
53	561433	4190979	2.68E-04	2.67E-04	1.66E-05
54	561428.8	4191013	2.35E-04	2.33E-04	1.45E-05
55	561427.5	4191004	2.40E-04	2.38E-04	1.48E-05
56	561426.1	4190994	2.45E-04	2.43E-04	1.51E-05
57	561424.7	4190985	2.49E-04	2.48E-04	1.54E-05
58	561421.8	4191028	2.14E-04	2.12E-04	1.32E-05
59	561420.5	4191019	2.19E-04	2.17E-04	1.35E-05
60	561419.1	4191009	2.24E-04	2.22E-04	1.38E-05
61	561417.7	4191000	2.28E-04	2.27E-04	1.41E-05
62	561416.3	4190991	2.33E-04	2.31E-04	1.44E-05
63	561415	4190982	2.37E-04	2.35E-04	1.47E-05
64	561414.8	4191042	1.95E-04	1.94E-04	1.21E-05
65	561413.4	4191033	2.00E-04	1.99E-04	1.24E-05
66	561412.1	4191024	2.05E-04	2.03E-04	1.27E-05
67	561410.7	4191015	2.09E-04	2.08E-04	1.29E-05
68	561409.3	4191006	2.13E-04	2.12E-04	1.32E-05
69	561408	4190997	2.17E-04	2.16E-04	1.35E-05
70	561407.6	4191056	1.80E-04	1.78E-04	1.11E-05
71	561406.2	4191046	1.84E-04	1.83E-04	1.14E-05
72	561404.8	4191037	1.89E-04	1.88E-04	1.17E-05
73	561403.3	4191027	1.93E-04	1.92E-04	1.20E-05
74	561401.9	4191018	1.98E-04	1.96E-04	1.22E-05
75	561397.7	4191052	1.74E-04	1.73E-04	1.08E-05
76	561396.3	4191042	1.78E-04	1.77E-04	1.10E-05
77	561398.5	4191092	1.52E-04	1.51E-04	9.39E-06
78	561522.3	4191197	1.25E-04	1.24E-04	7.72E-06
79	561515	4191191	1.28E-04	1.27E-04	7.90E-06
80	561507.6	4191186	1.31E-04	1.30E-04	8.07E-06
81	561500.3	4191180	1.33E-04	1.32E-04	8.24E-06
82	561529.7	4191202	1.22E-04	1.21E-04	7.53E-06
83	561539	4191205	1.21E-04	1.20E-04	7.49E-06
84	561548.4	4191207	1.21E-04	1.20E-04	7.44E-06
85	561557.7	4191210	1.20E-04	1.19E-04	7.39E-06
86	561567.1	4191212	1.19E-04	1.18E-04	7.33E-06
87	561576.4	4191215	1.18E-04	1.17E-04	7.26E-06
88	561585.8	4191217	1.17E-04	1.16E-04	7.20E-06
89	561595.1	4191220	1.15E-04	1.15E-04	7.13E-06
90	561604.5	4191222	1.14E-04	1.14E-04	7.07E-06
91	561519.5	4191206	1.18E-04	1.17E-04	7.28E-06

92	561511.9	4191200	1.21E-04	1.20E-04	7.45E-06
93	561504.2	4191195	1.23E-04	1.23E-04	7.62E-06
94	561496.6	4191189	1.26E-04	1.25E-04	7.79E-06
95	561489	4191183	1.29E-04	1.28E-04	7.96E-06
96	561481.3	4191177	1.31E-04	1.30E-04	8.11E-06
97	561527.2	4191212	1.15E-04	1.14E-04	7.09E-06
98	561536.5	4191214	1.14E-04	1.13E-04	7.06E-06
99	561545.9	4191217	1.13E-04	1.13E-04	7.01E-06
100	561555.2	4191219	1.13E-04	1.12E-04	6.95E-06
101	561564.6	4191222	1.12E-04	1.11E-04	6.89E-06
102	561573.9	4191224	1.11E-04	1.10E-04	6.83E-06
103	561583.2	4191227	1.10E-04	1.09E-04	6.77E-06
104	561592.6	4191229	1.09E-04	1.08E-04	6.70E-06
105	561601.9	4191232	1.08E-04	1.07E-04	6.64E-06
106	561517.1	4191216	1.11E-04	1.10E-04	6.86E-06
107	561509.5	4191210	1.14E-04	1.13E-04	7.03E-06
108	561502	4191204	1.16E-04	1.16E-04	7.19E-06
109	561494.4	4191198	1.19E-04	1.18E-04	7.35E-06
110	561486.8	4191193	1.21E-04	1.21E-04	7.51E-06
111	561479.3	4191187	1.24E-04	1.23E-04	7.65E-06
112	561471.7	4191181	1.26E-04	1.25E-04	7.79E-06
113	561464.1	4191176	1.28E-04	1.27E-04	7.91E-06
114	561456.6	4191170	1.30E-04	1.29E-04	8.02E-06
115	561388.5	4191118	1.33E-04	1.32E-04	8.20E-06
116	561524.6	4191221	1.08E-04	1.08E-04	6.69E-06
117	561534	4191224	1.08E-04	1.07E-04	6.66E-06
118	561543.3	4191226	1.07E-04	1.06E-04	6.61E-06
119	561552.7	4191229	1.06E-04	1.05E-04	6.55E-06
120	561562	4191231	1.05E-04	1.04E-04	6.50E-06
121	561571.4	4191234	1.04E-04	1.03E-04	6.44E-06
122	561580.7	4191236	1.03E-04	1.02E-04	6.38E-06
123	561590.1	4191239	1.02E-04	1.01E-04	6.31E-06
124	561599.4	4191241	1.01E-04	1.01E-04	6.25E-06
125	561514.6	4191225	1.05E-04	1.04E-04	6.48E-06
126	561507.1	4191220	1.07E-04	1.07E-04	6.64E-06
127	561499.6	4191214	1.10E-04	1.09E-04	6.79E-06
128	561492.1	4191208	1.12E-04	1.12E-04	6.94E-06
129	561484.7	4191203	1.15E-04	1.14E-04	7.09E-06
130	561477.2	4191197	1.17E-04	1.16E-04	7.23E-06
131	561469.7	4191191	1.19E-04	1.18E-04	7.36E-06
132	561462.2	4191186	1.21E-04	1.20E-04	7.48E-06
133	561454.7	4191180	1.23E-04	1.22E-04	7.59E-06
134	561447.2	4191174	1.24E-04	1.23E-04	7.69E-06
135	561439.7	4191169	1.26E-04	1.25E-04	7.77E-06
136	561432.2	4191163	1.27E-04	1.26E-04	7.83E-06
137	561522.1	4191231	1.02E-04	1.02E-04	6.33E-06
138	561531.5	4191233	1.02E-04	1.01E-04	6.29E-06

139	561540.8	4191236	1.01E-04	1.00E-04	6.24E-06
140	561550.2	4191238	1.00E-04	9.95E-05	6.19E-06
141	561559.5	4191241	9.93E-05	9.86E-05	6.13E-06
142	561568.9	4191243	9.84E-05	9.77E-05	6.08E-06
143	561578.2	4191246	9.74E-05	9.67E-05	6.02E-06
144	561587.6	4191248	9.65E-05	9.58E-05	5.96E-06
145	561596.9	4191251	9.55E-05	9.48E-05	5.90E-06
146	561512.2	4191235	9.93E-05	9.86E-05	6.13E-06
147	561504.7	4191229	1.02E-04	1.01E-04	6.28E-06
148	561497.3	4191224	1.04E-04	1.03E-04	6.43E-06
149	561489.9	4191218	1.06E-04	1.06E-04	6.57E-06
150	561482.5	4191212	1.09E-04	1.08E-04	6.71E-06
151	561475	4191207	1.11E-04	1.10E-04	6.84E-06
152	561467.6	4191201	1.13E-04	1.12E-04	6.97E-06
153	561460.2	4191195	1.15E-04	1.14E-04	7.08E-06
154	561452.7	4191190	1.16E-04	1.16E-04	7.19E-06
155	561445.3	4191184	1.18E-04	1.17E-04	7.29E-06
156	561437.9	4191179	1.19E-04	1.18E-04	7.37E-06
157	561430.5	4191173	1.20E-04	1.19E-04	7.44E-06
158	561423	4191167	1.21E-04	1.20E-04	7.49E-06
159	561415.6	4191162	1.22E-04	1.21E-04	7.52E-06
160	561519.6	4191240	9.69E-05	9.62E-05	5.99E-06
161	561528.9	4191243	9.63E-05	9.56E-05	5.95E-06
162	561538.3	4191245	9.56E-05	9.49E-05	5.90E-06
163	561547.6	4191248	9.48E-05	9.41E-05	5.85E-06
164	561557	4191250	9.39E-05	9.32E-05	5.80E-06
165	561566.3	4191253	9.30E-05	9.24E-05	5.75E-06
166	561575.7	4191255	9.21E-05	9.15E-05	5.69E-06
167	561585	4191258	9.12E-05	9.06E-05	5.63E-06
168	561594.4	4191260	9.03E-05	8.97E-05	5.58E-06
169	561509.4	4191244	9.42E-05	9.35E-05	5.82E-06
170	561501.7	4191238	9.65E-05	9.58E-05	5.96E-06
171	561494.1	4191232	9.88E-05	9.81E-05	6.11E-06
172	561486.4	4191227	1.01E-04	1.00E-04	6.25E-06
173	561478.7	4191221	1.03E-04	1.03E-04	6.38E-06
174	561471	4191215	1.05E-04	1.05E-04	6.51E-06
175	561463.3	4191209	1.07E-04	1.07E-04	6.64E-06
176	561455.7	4191203	1.09E-04	1.08E-04	6.75E-06
177	561448	4191198	1.11E-04	1.10E-04	6.86E-06
178	561440.3	4191192	1.12E-04	1.12E-04	6.95E-06
179	561425	4191180	1.15E-04	1.14E-04	7.10E-06
180	561417.3	4191174	1.16E-04	1.15E-04	7.16E-06
181	561409.6	4191169	1.16E-04	1.16E-04	7.19E-06
182	561401.9	4191163	1.17E-04	1.16E-04	7.21E-06
183	561378.9	4191145	1.17E-04	1.16E-04	7.21E-06
184	561517.1	4191250	9.19E-05	9.12E-05	5.68E-06
185	561526.4	4191252	9.13E-05	9.06E-05	5.64E-06

186	561535.8	4191255	9.06E-05	8.99E-05	5.60E-06
187	561545.1	4191257	8.98E-05	8.91E-05	5.55E-06
188	561554.5	4191260	8.90E-05	8.83E-05	5.50E-06
189	561563.8	4191262	8.81E-05	8.75E-05	5.44E-06
190	561573.2	4191265	8.73E-05	8.66E-05	5.39E-06
191	561582.5	4191267	8.64E-05	8.58E-05	5.34E-06
192	561591.9	4191270	8.55E-05	8.49E-05	5.28E-06
193	561507	4191254	8.94E-05	8.87E-05	5.52E-06
194	561499.3	4191248	9.16E-05	9.09E-05	5.66E-06
195	561491.7	4191242	9.37E-05	9.31E-05	5.79E-06
196	561484.1	4191236	9.59E-05	9.52E-05	5.92E-06
197	561476.5	4191231	9.80E-05	9.73E-05	6.05E-06
198	561468.9	4191225	1.00E-04	9.92E-05	6.18E-06
199	561461.3	4191219	1.02E-04	1.01E-04	6.29E-06
200	561453.7	4191213	1.04E-04	1.03E-04	6.41E-06
201	561446.1	4191208	1.05E-04	1.05E-04	6.51E-06
202	561438.5	4191202	1.07E-04	1.06E-04	6.60E-06
203	561430.9	4191196	1.08E-04	1.07E-04	6.69E-06
204	561423.3	4191190	1.09E-04	1.09E-04	6.76E-06
205	561415.7	4191185	1.10E-04	1.10E-04	6.82E-06
206	561408.1	4191179	1.11E-04	1.10E-04	6.86E-06
207	561400.4	4191173	1.11E-04	1.11E-04	6.89E-06
208	561392.8	4191167	1.12E-04	1.11E-04	6.91E-06
209	561514.6	4191259	8.72E-05	8.66E-05	5.39E-06
210	561523.9	4191262	8.66E-05	8.60E-05	5.35E-06
211	561533.3	4191264	8.60E-05	8.53E-05	5.31E-06
212	561542.6	4191267	8.52E-05	8.46E-05	5.26E-06
213	561552	4191269	8.44E-05	8.38E-05	5.21E-06
214	561561.3	4191272	8.36E-05	8.30E-05	5.16E-06
215	561570.6	4191274	8.28E-05	8.22E-05	5.11E-06
216	561580	4191277	8.19E-05	8.14E-05	5.06E-06
217	561589.3	4191279	8.11E-05	8.05E-05	5.01E-06
218	561765.7	4191045	1.12E-03	1.12E-03	6.91E-05
219	561775.5	4191047	1.04E-03	1.03E-03	6.39E-05
220	561764.7	4191061	7.70E-04	7.65E-04	4.74E-05
221	561785.3	4191049	9.51E-04	9.44E-04	5.85E-05
222	561774.6	4191063	7.30E-04	7.25E-04	4.50E-05
223	561798.6	4191047	9.44E-04	9.37E-04	5.81E-05
224	561792.9	4191054	8.31E-04	8.25E-04	5.12E-05
225	561787.3	4191062	7.31E-04	7.26E-04	4.50E-05
226	561781.6	4191069	6.45E-04	6.41E-04	3.97E-05
227	561764.6	4191090	4.57E-04	4.54E-04	2.82E-05
228	561758.9	4191097	4.12E-04	4.09E-04	2.54E-05
229	561808.4	4191050	8.60E-04	8.53E-04	5.29E-05
230	561802.8	4191057	7.68E-04	7.62E-04	4.73E-05
231	561791.6	4191071	6.11E-04	6.07E-04	3.77E-05
232	561774.8	4191092	4.44E-04	4.41E-04	2.74E-05

233	561763.6	4191106	3.66E-04	3.63E-04	2.26E-05
234	561716.6	4191125	2.86E-04	2.84E-04	1.77E-05
235	561823.6	4191045	8.61E-04	8.55E-04	5.30E-05
236	561812.6	4191059	7.13E-04	7.07E-04	4.39E-05
237	561801.5	4191073	5.78E-04	5.74E-04	3.56E-05
238	561779.4	4191101	3.91E-04	3.88E-04	2.41E-05
239	561768.3	4191115	3.28E-04	3.26E-04	2.02E-05
240	561748.4	4191130	2.74E-04	2.72E-04	1.69E-05
241	561833.2	4191048	7.82E-04	7.76E-04	4.82E-05
242	561822.3	4191061	6.62E-04	6.57E-04	4.07E-05
243	561811.4	4191075	5.47E-04	5.43E-04	3.37E-05
244	561789.5	4191103	3.79E-04	3.76E-04	2.33E-05
245	561778.5	4191117	3.21E-04	3.18E-04	1.98E-05
246	561767.6	4191131	2.74E-04	2.72E-04	1.69E-05
247	561753.4	4191139	2.51E-04	2.49E-04	1.55E-05
248	561842.8	4191050	7.14E-04	7.09E-04	4.40E-05
249	561832	4191064	6.15E-04	6.11E-04	3.79E-05
250	561821.2	4191077	5.18E-04	5.14E-04	3.19E-05
251	561799.5	4191105	3.66E-04	3.63E-04	2.25E-05
252	561788.6	4191119	3.12E-04	3.10E-04	1.93E-05
253	561777.8	4191132	2.69E-04	2.67E-04	1.66E-05
254	561758.3	4191147	2.31E-04	2.29E-04	1.43E-05
255	561741	4191149	2.25E-04	2.23E-04	1.39E-05
256	561861.7	4191021	8.97E-04	8.91E-04	5.53E-05
257	561864.3	4191012	9.56E-04	9.49E-04	5.89E-05
258	561851.5	4191054	6.49E-04	6.44E-04	4.00E-05
259	561845.8	4191061	6.05E-04	6.01E-04	3.73E-05
260	561840.1	4191068	5.61E-04	5.57E-04	3.46E-05
261	561834.4	4191075	5.17E-04	5.13E-04	3.18E-05
262	561828.7	4191083	4.74E-04	4.71E-04	2.92E-05
263	561823	4191090	4.34E-04	4.31E-04	2.68E-05
264	561817.3	4191097	3.98E-04	3.95E-04	2.45E-05
265	561811.6	4191104	3.65E-04	3.63E-04	2.25E-05
266	561806	4191111	3.36E-04	3.34E-04	2.07E-05
267	561800.3	4191119	3.11E-04	3.08E-04	1.92E-05
268	561794.6	4191126	2.88E-04	2.86E-04	1.77E-05
269	561788.9	4191133	2.67E-04	2.65E-04	1.65E-05
270	561783.2	4191140	2.48E-04	2.46E-04	1.53E-05
271	561777.5	4191147	2.31E-04	2.29E-04	1.42E-05
272	561762.7	4191156	2.13E-04	2.11E-04	1.31E-05
273	561753.6	4191157	2.10E-04	2.09E-04	1.30E-05
274	561744.5	4191158	2.08E-04	2.06E-04	1.28E-05
275	561735.4	4191159	2.04E-04	2.03E-04	1.26E-05
276	561872.4	4191042	6.62E-04	6.57E-04	4.08E-05
277	561844.2	4191078	4.88E-04	4.84E-04	3.00E-05
278	561838.6	4191085	4.51E-04	4.47E-04	2.78E-05
279	561833	4191092	4.16E-04	4.13E-04	2.56E-05

280	561821.7	4191106	3.53E-04	3.51E-04	2.18E-05
281	561810.4	4191120	3.02E-04	3.00E-04	1.86E-05
282	561799.2	4191135	2.62E-04	2.60E-04	1.61E-05
283	561787.9	4191149	2.27E-04	2.26E-04	1.40E-05
284	561767.7	4191164	1.97E-04	1.96E-04	1.22E-05
285	561758.6	4191166	1.95E-04	1.94E-04	1.20E-05
286	561749.6	4191167	1.93E-04	1.91E-04	1.19E-05
287	561740.6	4191168	1.90E-04	1.88E-04	1.17E-05
288	561731.6	4191169	1.87E-04	1.86E-04	1.16E-05
289	561880.6	4191026	7.35E-04	7.30E-04	4.53E-05
290	561883.2	4191017	7.80E-04	7.75E-04	4.81E-05
291	561885.8	4191008	8.21E-04	8.15E-04	5.06E-05
292	561888.3	4190999	8.56E-04	8.50E-04	5.27E-05
293	561890.9	4190990	8.84E-04	8.77E-04	5.45E-05
294	561893.5	4190982	9.05E-04	8.98E-04	5.58E-05
295	561896.1	4190973	9.19E-04	9.13E-04	5.67E-05
296	561898.7	4190964	9.28E-04	9.21E-04	5.72E-05
297	561901.2	4190955	9.31E-04	9.24E-04	5.74E-05
298	561903.8	4190946	9.29E-04	9.22E-04	5.73E-05
299	561906.4	4190937	9.23E-04	9.16E-04	5.69E-05
300	561909	4190928	9.14E-04	9.07E-04	5.64E-05
301	561911.6	4190919	9.02E-04	8.95E-04	5.57E-05
302	561881.9	4191045	6.08E-04	6.04E-04	3.75E-05
303	561870.7	4191059	5.55E-04	5.51E-04	3.42E-05
304	561865.2	4191066	5.25E-04	5.21E-04	3.23E-05
305	561842.9	4191094	3.97E-04	3.94E-04	2.45E-05
306	561831.7	4191108	3.41E-04	3.39E-04	2.10E-05
307	561820.5	4191122	2.94E-04	2.92E-04	1.81E-05
308	561815	4191129	2.74E-04	2.72E-04	1.69E-05
309	561803.8	4191144	2.39E-04	2.37E-04	1.47E-05
310	561792.7	4191158	2.09E-04	2.08E-04	1.29E-05
311	561772.6	4191173	1.83E-04	1.82E-04	1.13E-05
312	561754.7	4191175	1.79E-04	1.78E-04	1.11E-05
313	561736.9	4191178	1.74E-04	1.73E-04	1.08E-05
314	561890.1	4191029	6.72E-04	6.67E-04	4.14E-05
315	561892.6	4191020	7.12E-04	7.07E-04	4.39E-05
316	561895.2	4191011	7.49E-04	7.43E-04	4.61E-05
317	561897.8	4191002	7.80E-04	7.75E-04	4.81E-05
318	561900.4	4190993	8.07E-04	8.01E-04	4.97E-05
319	561903	4190984	8.28E-04	8.22E-04	5.10E-05
320	561905.5	4190975	8.43E-04	8.37E-04	5.20E-05
321	561908.1	4190966	8.54E-04	8.48E-04	5.26E-05
322	561910.7	4190958	8.59E-04	8.53E-04	5.30E-05
323	561913.3	4190949	8.60E-04	8.54E-04	5.31E-05
324	561915.9	4190940	8.58E-04	8.52E-04	5.29E-05
325	561918.4	4190931	8.52E-04	8.46E-04	5.26E-05
326	561921	4190922	8.43E-04	8.37E-04	5.21E-05

327	561891.4	4191047	5.61E-04	5.57E-04	3.46E-05
328	561880.3	4191061	5.15E-04	5.12E-04	3.18E-05
329	561869.3	4191075	4.62E-04	4.59E-04	2.85E-05
330	561847.2	4191103	3.54E-04	3.51E-04	2.18E-05
331	561836.1	4191117	3.06E-04	3.04E-04	1.89E-05
332	561825.1	4191131	2.66E-04	2.64E-04	1.64E-05
333	561814	4191145	2.33E-04	2.32E-04	1.44E-05
334	561802.9	4191159	2.06E-04	2.04E-04	1.27E-05
335	561791.9	4191173	1.82E-04	1.81E-04	1.13E-05
336	561777.5	4191181	1.71E-04	1.70E-04	1.05E-05
337	561759.8	4191184	1.67E-04	1.66E-04	1.03E-05
338	561742.1	4191186	1.63E-04	1.62E-04	1.01E-05
339	561899.5	4191032	6.18E-04	6.14E-04	3.81E-05
340	561902.1	4191023	6.54E-04	6.49E-04	4.03E-05
341	561904.7	4191014	6.86E-04	6.81E-04	4.23E-05
342	561907.3	4191005	7.15E-04	7.10E-04	4.41E-05
343	561909.8	4190996	7.40E-04	7.35E-04	4.56E-05
344	561912.4	4190987	7.61E-04	7.55E-04	4.69E-05
345	561915	4190978	7.76E-04	7.71E-04	4.79E-05
346	561917.6	4190969	7.88E-04	7.82E-04	4.86E-05
347	561920.2	4190960	7.95E-04	7.89E-04	4.90E-05
348	561922.7	4190951	7.99E-04	7.93E-04	4.93E-05
349	561925.3	4190942	7.98E-04	7.92E-04	4.93E-05
350	561927.9	4190934	7.95E-04	7.89E-04	4.91E-05
351	561930.5	4190925	7.89E-04	7.83E-04	4.87E-05
352	561900.9	4191050	5.21E-04	5.17E-04	3.21E-05
353	561889.9	4191064	4.80E-04	4.77E-04	2.96E-05
354	561879	4191078	4.35E-04	4.31E-04	2.68E-05
355	561868	4191092	3.87E-04	3.84E-04	2.38E-05
356	561857	4191106	3.39E-04	3.37E-04	2.09E-05
357	561846	4191120	2.96E-04	2.94E-04	1.83E-05
358	561835.1	4191133	2.59E-04	2.57E-04	1.60E-05
359	561824.1	4191147	2.28E-04	2.26E-04	1.40E-05
360	561813.1	4191161	2.02E-04	2.00E-04	1.24E-05
361	561802.2	4191175	1.80E-04	1.78E-04	1.11E-05
362	561782.4	4191190	1.60E-04	1.58E-04	9.85E-06
363	561764.9	4191192	1.56E-04	1.55E-04	9.65E-06
364	561747.3	4191195	1.53E-04	1.52E-04	9.43E-06
365	561729.8	4191197	1.49E-04	1.48E-04	9.20E-06
366	561909	4191034	5.71E-04	5.67E-04	3.52E-05
367	561911.5	4191025	6.03E-04	5.98E-04	3.71E-05
368	561914.1	4191016	6.32E-04	6.27E-04	3.90E-05
369	561916.7	4191008	6.58E-04	6.54E-04	4.06E-05
370	561919.3	4190999	6.82E-04	6.77E-04	4.20E-05
371	561921.9	4190990	7.01E-04	6.96E-04	4.32E-05
372	561924.5	4190981	7.17E-04	7.12E-04	4.42E-05
373	561927	4190972	7.29E-04	7.23E-04	4.49E-05

374	561929.6	4190963	7.37E-04	7.31E-04	4.54E-05
375	561932.2	4190954	7.42E-04	7.36E-04	4.57E-05
376	561934.8	4190945	7.43E-04	7.38E-04	4.59E-05
377	561937.4	4190936	7.42E-04	7.37E-04	4.58E-05
378	561939.9	4190927	7.38E-04	7.33E-04	4.56E-05
379	561910.1	4191053	4.84E-04	4.81E-04	2.99E-05
380	561904.4	4191060	4.66E-04	4.63E-04	2.88E-05
381	561898.7	4191068	4.47E-04	4.43E-04	2.75E-05
382	561893	4191075	4.26E-04	4.23E-04	2.62E-05
383	561887.3	4191082	4.04E-04	4.01E-04	2.49E-05
384	561881.6	4191089	3.82E-04	3.79E-04	2.36E-05
385	561875.9	4191096	3.60E-04	3.57E-04	2.22E-05
386	561870.2	4191104	3.38E-04	3.36E-04	2.08E-05
387	561864.5	4191111	3.17E-04	3.14E-04	1.95E-05
388	561858.8	4191118	2.96E-04	2.94E-04	1.83E-05
389	561853.1	4191125	2.77E-04	2.75E-04	1.71E-05
390	561847.4	4191133	2.59E-04	2.57E-04	1.60E-05
391	561841.7	4191140	2.42E-04	2.40E-04	1.49E-05
392	561836	4191147	2.27E-04	2.25E-04	1.40E-05
393	561830.3	4191154	2.13E-04	2.11E-04	1.31E-05
394	561824.6	4191161	2.00E-04	1.99E-04	1.23E-05
395	561818.9	4191169	1.88E-04	1.87E-04	1.16E-05
396	561813.2	4191176	1.78E-04	1.76E-04	1.10E-05
397	561807.5	4191183	1.68E-04	1.67E-04	1.04E-05
398	561801.8	4191190	1.59E-04	1.58E-04	9.81E-06
399	561786.9	4191199	1.49E-04	1.48E-04	9.22E-06
400	561777.8	4191200	1.48E-04	1.47E-04	9.13E-06
401	561768.7	4191201	1.46E-04	1.45E-04	9.04E-06
402	561759.6	4191202	1.45E-04	1.44E-04	8.94E-06
403	561750.4	4191203	1.43E-04	1.42E-04	8.83E-06
404	561741.3	4191205	1.41E-04	1.40E-04	8.72E-06
405	561732.2	4191206	1.39E-04	1.38E-04	8.61E-06
406	561723.1	4191207	1.38E-04	1.37E-04	8.50E-06
407	561622.7	4191220	1.18E-04	1.17E-04	7.27E-06
408	561613.6	4191221	1.16E-04	1.15E-04	7.17E-06
409	561915.8	4191046	5.00E-04	4.97E-04	3.09E-05
410	561918.4	4191037	5.30E-04	5.26E-04	3.27E-05
411	561921	4191028	5.58E-04	5.54E-04	3.44E-05
412	561923.6	4191019	5.85E-04	5.80E-04	3.60E-05
413	561926.2	4191010	6.08E-04	6.04E-04	3.75E-05
414	561928.7	4191001	6.30E-04	6.25E-04	3.88E-05
415	561931.3	4190992	6.48E-04	6.43E-04	4.00E-05
416	561933.9	4190984	6.63E-04	6.58E-04	4.09E-05
417	561936.5	4190975	6.75E-04	6.70E-04	4.16E-05
418	561939.1	4190966	6.84E-04	6.79E-04	4.22E-05
419	561941.7	4190957	6.90E-04	6.85E-04	4.26E-05
420	561944.2	4190948	6.93E-04	6.88E-04	4.28E-05

421	561946.8	4190939	6.93E-04	6.88E-04	4.28E-05
422	561949.4	4190930	6.91E-04	6.86E-04	4.27E-05
423	561919.6	4191056	4.53E-04	4.50E-04	2.79E-05
424	561914	4191063	4.37E-04	4.34E-04	2.70E-05
425	561908.3	4191070	4.20E-04	4.17E-04	2.59E-05
426	561902.7	4191077	4.01E-04	3.98E-04	2.47E-05
427	561897	4191084	3.82E-04	3.79E-04	2.36E-05
428	561885.7	4191099	3.43E-04	3.40E-04	2.11E-05
429	561880.1	4191106	3.23E-04	3.21E-04	1.99E-05
430	561874.4	4191113	3.04E-04	3.02E-04	1.88E-05
431	561868.7	4191120	2.86E-04	2.84E-04	1.76E-05
432	561863.1	4191127	2.68E-04	2.66E-04	1.65E-05
433	561857.4	4191135	2.51E-04	2.50E-04	1.55E-05
434	561851.8	4191142	2.36E-04	2.34E-04	1.46E-05
435	561840.5	4191156	2.08E-04	2.07E-04	1.28E-05
436	561834.8	4191163	1.96E-04	1.94E-04	1.21E-05
437	561829.2	4191170	1.85E-04	1.83E-04	1.14E-05
438	561823.5	4191177	1.75E-04	1.73E-04	1.08E-05
439	561812.2	4191192	1.57E-04	1.55E-04	9.67E-06
440	561791.9	4191207	1.40E-04	1.39E-04	8.65E-06
441	561782.8	4191208	1.39E-04	1.38E-04	8.58E-06
442	561773.8	4191210	1.38E-04	1.37E-04	8.49E-06
443	561764.7	4191211	1.36E-04	1.35E-04	8.41E-06
444	561755.7	4191212	1.35E-04	1.34E-04	8.31E-06
445	561746.6	4191213	1.33E-04	1.32E-04	8.22E-06
446	561737.6	4191214	1.31E-04	1.31E-04	8.12E-06
447	561728.6	4191215	1.30E-04	1.29E-04	8.01E-06
448	561647.2	4191226	1.15E-04	1.14E-04	7.09E-06
449	561638.1	4191227	1.13E-04	1.13E-04	7.00E-06
450	561629.1	4191228	1.12E-04	1.11E-04	6.91E-06
451	561620	4191229	1.10E-04	1.10E-04	6.82E-06
452	561611	4191230	1.09E-04	1.08E-04	6.73E-06
453	561925.3	4191049	4.67E-04	4.64E-04	2.88E-05
454	561927.9	4191040	4.93E-04	4.90E-04	3.04E-05
455	561930.5	4191031	5.18E-04	5.14E-04	3.20E-05
456	561933	4191022	5.42E-04	5.38E-04	3.34E-05
457	561935.6	4191013	5.64E-04	5.60E-04	3.48E-05
458	561938.2	4191004	5.83E-04	5.79E-04	3.60E-05
459	561940.8	4190995	6.01E-04	5.96E-04	3.70E-05
460	561943.4	4190986	6.15E-04	6.11E-04	3.79E-05
461	561945.9	4190977	6.27E-04	6.23E-04	3.87E-05
462	561948.5	4190968	6.36E-04	6.32E-04	3.93E-05
463	561951.1	4190960	6.43E-04	6.38E-04	3.97E-05
464	561953.7	4190951	6.47E-04	6.42E-04	3.99E-05
465	561956.3	4190942	6.49E-04	6.44E-04	4.00E-05
466	561958.9	4190933	6.48E-04	6.44E-04	4.00E-05
467	561929.1	4191059	4.24E-04	4.21E-04	2.62E-05

468	561917.9	4191073	3.95E-04	3.93E-04	2.44E-05
469	561906.7	4191087	3.62E-04	3.59E-04	2.23E-05
470	561895.5	4191101	3.27E-04	3.24E-04	2.01E-05
471	561889.9	4191108	3.09E-04	3.07E-04	1.91E-05
472	561878.7	4191122	2.75E-04	2.73E-04	1.70E-05
473	561873	4191129	2.59E-04	2.57E-04	1.60E-05
474	561861.8	4191144	2.30E-04	2.28E-04	1.42E-05
475	561850.6	4191158	2.04E-04	2.02E-04	1.26E-05
476	561845	4191165	1.92E-04	1.91E-04	1.19E-05
477	561833.8	4191179	1.71E-04	1.70E-04	1.06E-05
478	561828.2	4191186	1.62E-04	1.61E-04	1.00E-05
479	561817	4191200	1.46E-04	1.45E-04	9.04E-06
480	561796.8	4191216	1.32E-04	1.31E-04	8.13E-06
481	561787.8	4191217	1.31E-04	1.30E-04	8.08E-06
482	561778.8	4191218	1.30E-04	1.29E-04	8.00E-06
483	561769.9	4191219	1.28E-04	1.27E-04	7.92E-06
484	561760.9	4191220	1.27E-04	1.26E-04	7.84E-06
485	561751.9	4191222	1.26E-04	1.25E-04	7.76E-06
486	561743	4191223	1.24E-04	1.23E-04	7.67E-06
487	561725	4191225	1.21E-04	1.20E-04	7.48E-06
488	561671.2	4191232	1.12E-04	1.11E-04	6.92E-06
489	561662.2	4191233	1.11E-04	1.10E-04	6.83E-06
490	561653.2	4191234	1.09E-04	1.08E-04	6.74E-06
491	561644.3	4191235	1.08E-04	1.07E-04	6.66E-06
492	561635.3	4191237	1.06E-04	1.06E-04	6.57E-06
493	561626.3	4191238	1.05E-04	1.04E-04	6.49E-06
494	561608.4	4191240	1.03E-04	1.02E-04	6.33E-06
495	561937.3	4191042	4.60E-04	4.57E-04	2.84E-05
496	561939.9	4191034	4.83E-04	4.79E-04	2.98E-05
497	561942.5	4191025	5.04E-04	5.00E-04	3.11E-05
498	561945.1	4191016	5.24E-04	5.20E-04	3.23E-05
499	561947.7	4191007	5.42E-04	5.38E-04	3.34E-05
500	561950.2	4190998	5.58E-04	5.54E-04	3.44E-05
501	561952.8	4190989	5.72E-04	5.68E-04	3.53E-05
502	561955.4	4190980	5.84E-04	5.80E-04	3.60E-05
503	561958	4190971	5.93E-04	5.89E-04	3.66E-05
504	561960.6	4190962	6.00E-04	5.96E-04	3.70E-05
505	561963.1	4190953	6.05E-04	6.01E-04	3.73E-05
506	561965.7	4190944	6.08E-04	6.04E-04	3.75E-05
507	561968.3	4190936	6.09E-04	6.04E-04	3.76E-05
508	561938.6	4191061	3.98E-04	3.96E-04	2.46E-05
509	561927.5	4191075	3.73E-04	3.70E-04	2.30E-05
510	561916.4	4191089	3.44E-04	3.41E-04	2.12E-05
511	561910.8	4191096	3.28E-04	3.26E-04	2.02E-05
512	561899.7	4191110	2.96E-04	2.94E-04	1.83E-05
513	561888.5	4191125	2.65E-04	2.63E-04	1.64E-05
514	561877.4	4191139	2.37E-04	2.35E-04	1.46E-05

515	561866.3	4191153	2.11E-04	2.09E-04	1.30E-05
516	561855.1	4191167	1.88E-04	1.87E-04	1.16E-05
517	561844	4191181	1.68E-04	1.67E-04	1.04E-05
518	561832.9	4191195	1.52E-04	1.50E-04	9.36E-06
519	561821.7	4191209	1.37E-04	1.36E-04	8.49E-06
520	561801.7	4191224	1.24E-04	1.23E-04	7.66E-06
521	561792.8	4191225	1.23E-04	1.22E-04	7.61E-06
522	561775	4191228	1.21E-04	1.20E-04	7.48E-06
523	561766.1	4191229	1.20E-04	1.19E-04	7.41E-06
524	561748.3	4191231	1.17E-04	1.17E-04	7.25E-06
525	561694.8	4191238	1.09E-04	1.08E-04	6.74E-06
526	561677	4191240	1.06E-04	1.06E-04	6.57E-06
527	561668.1	4191241	1.05E-04	1.04E-04	6.49E-06
528	561650.3	4191244	1.03E-04	1.02E-04	6.34E-06
529	561632.5	4191246	1.00E-04	9.95E-05	6.19E-06
530	561614.7	4191248	9.78E-05	9.71E-05	6.04E-06
531	561946.8	4191045	4.31E-04	4.27E-04	2.66E-05
532	561949.4	4191036	4.51E-04	4.48E-04	2.78E-05
533	561951.9	4191027	4.71E-04	4.67E-04	2.90E-05
534	561954.5	4191018	4.89E-04	4.85E-04	3.01E-05
535	561957.1	4191010	5.06E-04	5.02E-04	3.12E-05
536	561959.7	4191001	5.21E-04	5.17E-04	3.21E-05
537	561962.3	4190992	5.34E-04	5.30E-04	3.29E-05
538	561964.9	4190983	5.45E-04	5.41E-04	3.36E-05
539	561967.4	4190974	5.54E-04	5.50E-04	3.42E-05
540	561970	4190965	5.62E-04	5.58E-04	3.47E-05
541	561972.6	4190956	5.67E-04	5.63E-04	3.50E-05
542	561975.2	4190947	5.70E-04	5.66E-04	3.52E-05
543	561977.8	4190938	5.72E-04	5.68E-04	3.53E-05
544	561948.1	4191064	3.75E-04	3.72E-04	2.31E-05
545	561937.1	4191078	3.52E-04	3.50E-04	2.17E-05
546	561926	4191092	3.27E-04	3.24E-04	2.01E-05
547	561915	4191106	2.98E-04	2.96E-04	1.84E-05
548	561903.9	4191120	2.70E-04	2.68E-04	1.66E-05
549	561892.8	4191134	2.42E-04	2.40E-04	1.49E-05
550	561881.8	4191148	2.17E-04	2.15E-04	1.34E-05
551	561870.7	4191162	1.94E-04	1.93E-04	1.20E-05
552	561859.7	4191176	1.74E-04	1.73E-04	1.08E-05
553	561848.6	4191190	1.57E-04	1.56E-04	9.69E-06
554	561837.6	4191204	1.42E-04	1.41E-04	8.77E-06
555	561826.5	4191218	1.29E-04	1.28E-04	7.99E-06
556	561806.6	4191233	1.17E-04	1.16E-04	7.23E-06
557	561788.9	4191235	1.16E-04	1.15E-04	7.14E-06
558	561771.2	4191237	1.14E-04	1.13E-04	7.01E-06
559	561718.2	4191244	1.06E-04	1.06E-04	6.56E-06
560	561700.5	4191247	1.04E-04	1.03E-04	6.41E-06
561	561682.8	4191249	1.01E-04	1.01E-04	6.26E-06

562	561665.1	4191251	9.89E-05	9.82E-05	6.11E-06
563	561647.4	4191253	9.66E-05	9.59E-05	5.97E-06
564	561629.8	4191256	9.45E-05	9.38E-05	5.83E-06
565	561612.1	4191258	9.23E-05	9.17E-05	5.70E-06
566	561956.2	4191048	4.04E-04	4.01E-04	2.49E-05
567	561958.8	4191039	4.23E-04	4.20E-04	2.61E-05
568	561961.4	4191030	4.41E-04	4.38E-04	2.72E-05
569	561964	4191021	4.57E-04	4.54E-04	2.82E-05
570	561966.6	4191012	4.73E-04	4.69E-04	2.92E-05
571	561969.1	4191003	4.87E-04	4.83E-04	3.00E-05
572	561971.7	4190995	4.99E-04	4.96E-04	3.08E-05
573	561974.3	4190986	5.10E-04	5.06E-04	3.15E-05
574	561976.9	4190977	5.19E-04	5.15E-04	3.20E-05
575	561979.5	4190968	5.26E-04	5.23E-04	3.25E-05
576	561982.1	4190959	5.32E-04	5.28E-04	3.28E-05
577	561984.6	4190950	5.36E-04	5.32E-04	3.31E-05
578	561987.2	4190941	5.39E-04	5.35E-04	3.32E-05
579	561957.4	4191067	3.54E-04	3.51E-04	2.18E-05
580	561951.7	4191074	3.43E-04	3.41E-04	2.12E-05
581	561946	4191081	3.32E-04	3.30E-04	2.05E-05
582	561940.3	4191089	3.20E-04	3.18E-04	1.98E-05
583	561934.5	4191096	3.08E-04	3.06E-04	1.90E-05
584	561928.8	4191103	2.95E-04	2.93E-04	1.82E-05
585	561923.1	4191110	2.82E-04	2.80E-04	1.74E-05
586	561917.4	4191117	2.68E-04	2.66E-04	1.66E-05
587	561911.7	4191125	2.55E-04	2.53E-04	1.57E-05
588	561906	4191132	2.42E-04	2.40E-04	1.49E-05
589	561900.3	4191139	2.29E-04	2.27E-04	1.41E-05
590	561894.6	4191146	2.16E-04	2.15E-04	1.34E-05
591	561888.8	4191154	2.05E-04	2.03E-04	1.26E-05
592	561883.1	4191161	1.94E-04	1.92E-04	1.20E-05
593	561877.4	4191168	1.83E-04	1.82E-04	1.13E-05
594	561871.7	4191175	1.74E-04	1.73E-04	1.07E-05
595	561866	4191182	1.65E-04	1.64E-04	1.02E-05
596	561860.3	4191190	1.56E-04	1.55E-04	9.65E-06
597	561854.6	4191197	1.48E-04	1.47E-04	9.17E-06
598	561848.9	4191204	1.41E-04	1.40E-04	8.72E-06
599	561843.1	4191211	1.34E-04	1.33E-04	8.30E-06
600	561837.4	4191219	1.28E-04	1.27E-04	7.92E-06
601	561831.7	4191226	1.22E-04	1.22E-04	7.56E-06
602	561826	4191233	1.17E-04	1.16E-04	7.22E-06
603	561811.2	4191241	1.11E-04	1.10E-04	6.84E-06
604	561802	4191243	1.10E-04	1.09E-04	6.79E-06
605	561738.1	4191251	1.03E-04	1.02E-04	6.36E-06
606	561728.9	4191252	1.02E-04	1.01E-04	6.29E-06
607	561719.8	4191253	1.01E-04	9.99E-05	6.21E-06
608	561710.6	4191254	9.94E-05	9.87E-05	6.14E-06

609	561701.5	4191256	9.82E-05	9.75E-05	6.06E-06
610	561692.4	4191257	9.70E-05	9.63E-05	5.99E-06
611	561683.2	4191258	9.59E-05	9.52E-05	5.92E-06
612	561674.1	4191259	9.47E-05	9.40E-05	5.85E-06
613	561665	4191260	9.36E-05	9.29E-05	5.78E-06
614	561655.8	4191261	9.25E-05	9.18E-05	5.71E-06
615	561646.7	4191263	9.14E-05	9.08E-05	5.65E-06
616	561637.5	4191264	9.04E-05	8.97E-05	5.58E-06
617	561628.4	4191265	8.94E-05	8.87E-05	5.52E-06
618	561619.3	4191266	8.84E-05	8.77E-05	5.46E-06
619	561610.1	4191267	8.74E-05	8.67E-05	5.40E-06
620	561601	4191269	8.64E-05	8.58E-05	5.34E-06
621	561963.1	4191060	3.63E-04	3.61E-04	2.24E-05
622	561965.7	4191051	3.81E-04	3.78E-04	2.35E-05
623	561968.3	4191042	3.98E-04	3.95E-04	2.45E-05
624	561970.9	4191033	4.14E-04	4.11E-04	2.55E-05
625	561973.4	4191024	4.29E-04	4.26E-04	2.65E-05
626	561976	4191015	4.43E-04	4.40E-04	2.73E-05
627	561978.6	4191006	4.56E-04	4.53E-04	2.81E-05
628	561981.2	4190997	4.68E-04	4.64E-04	2.89E-05
629	561983.8	4190988	4.78E-04	4.75E-04	2.95E-05
630	561986.3	4190979	4.87E-04	4.84E-04	3.01E-05
631	561988.9	4190971	4.95E-04	4.91E-04	3.05E-05
632	561991.5	4190962	5.01E-04	4.97E-04	3.09E-05
633	561994.1	4190953	5.05E-04	5.02E-04	3.12E-05
634	561996.7	4190944	5.08E-04	5.04E-04	3.14E-05
635	561966.9	4191070	3.35E-04	3.32E-04	2.07E-05
636	561961.2	4191077	3.25E-04	3.23E-04	2.01E-05
637	561955.6	4191084	3.15E-04	3.13E-04	1.94E-05
638	561949.9	4191091	3.04E-04	3.02E-04	1.88E-05
639	561944.2	4191098	2.93E-04	2.91E-04	1.81E-05
640	561938.5	4191105	2.82E-04	2.80E-04	1.74E-05
641	561932.9	4191113	2.70E-04	2.68E-04	1.66E-05
642	561927.2	4191120	2.58E-04	2.56E-04	1.59E-05
643	561921.5	4191127	2.46E-04	2.44E-04	1.52E-05
644	561910.2	4191141	2.22E-04	2.20E-04	1.37E-05
645	561904.5	4191148	2.10E-04	2.09E-04	1.30E-05
646	561893.2	4191163	1.89E-04	1.88E-04	1.17E-05
647	561887.5	4191170	1.79E-04	1.78E-04	1.11E-05
648	561881.8	4191177	1.70E-04	1.69E-04	1.05E-05
649	561870.5	4191191	1.54E-04	1.52E-04	9.48E-06
650	561864.8	4191199	1.46E-04	1.45E-04	9.02E-06
651	561859.2	4191206	1.39E-04	1.38E-04	8.58E-06
652	561853.5	4191213	1.33E-04	1.32E-04	8.18E-06
653	561847.8	4191220	1.26E-04	1.26E-04	7.81E-06
654	561842.1	4191227	1.21E-04	1.20E-04	7.46E-06
655	561836.5	4191235	1.16E-04	1.15E-04	7.14E-06

656	561830.8	4191242	1.11E-04	1.10E-04	6.83E-06
657	561816.1	4191250	1.05E-04	1.04E-04	6.49E-06
658	561761.7	4191257	1.00E-04	9.94E-05	6.18E-06
659	561752.6	4191258	9.91E-05	9.84E-05	6.12E-06
660	561743.5	4191259	9.81E-05	9.74E-05	6.06E-06
661	561734.4	4191261	9.70E-05	9.63E-05	5.99E-06
662	561725.4	4191262	9.59E-05	9.52E-05	5.92E-06
663	561716.3	4191263	9.47E-05	9.41E-05	5.85E-06
664	561707.2	4191264	9.36E-05	9.30E-05	5.78E-06
665	561698.2	4191265	9.26E-05	9.19E-05	5.72E-06
666	561689.1	4191266	9.15E-05	9.08E-05	5.65E-06
667	561680	4191268	9.04E-05	8.98E-05	5.59E-06
668	561671	4191269	8.94E-05	8.88E-05	5.52E-06
669	561661.9	4191270	8.84E-05	8.78E-05	5.46E-06
670	561652.8	4191271	8.74E-05	8.68E-05	5.40E-06
671	561643.8	4191272	8.64E-05	8.58E-05	5.34E-06
672	561634.7	4191273	8.54E-05	8.48E-05	5.28E-06
673	561625.6	4191275	8.45E-05	8.39E-05	5.22E-06
674	561616.5	4191276	8.36E-05	8.30E-05	5.16E-06
675	561607.5	4191277	8.27E-05	8.21E-05	5.11E-06
676	561598.4	4191278	8.19E-05	8.13E-05	5.06E-06
677	561972.6	4191062	3.44E-04	3.41E-04	2.12E-05
678	561975.1	4191053	3.60E-04	3.57E-04	2.22E-05
679	561977.7	4191045	3.75E-04	3.73E-04	2.31E-05
680	561980.3	4191036	3.90E-04	3.87E-04	2.41E-05
681	561982.9	4191027	4.04E-04	4.01E-04	2.49E-05
682	561985.5	4191018	4.16E-04	4.13E-04	2.57E-05
683	561988.1	4191009	4.29E-04	4.26E-04	2.65E-05
684	561990.6	4191000	4.40E-04	4.37E-04	2.71E-05
685	561993.2	4190991	4.50E-04	4.47E-04	2.78E-05
686	561995.8	4190982	4.59E-04	4.55E-04	2.83E-05
687	561998.4	4190973	4.66E-04	4.63E-04	2.88E-05
688	562001	4190964	4.72E-04	4.69E-04	2.91E-05
689	562003.5	4190955	4.77E-04	4.73E-04	2.94E-05
690	562006.1	4190947	4.80E-04	4.76E-04	2.96E-05
691	561907.5	4190884	9.13E-04	9.07E-04	5.64E-05
692	561909.5	4190902	9.14E-04	9.08E-04	5.65E-05
693	561913.9	4190861	8.46E-04	8.40E-04	5.23E-05
694	561915.9	4190878	8.59E-04	8.53E-04	5.31E-05
695	561918	4190896	8.62E-04	8.56E-04	5.32E-05
696	561812.4	4190668	4.09E-04	4.06E-04	2.53E-05
697	561826.2	4190678	4.35E-04	4.32E-04	2.69E-05
698	561920.3	4190838	7.76E-04	7.71E-04	4.80E-05
699	561922.4	4190855	7.96E-04	7.91E-04	4.92E-05
700	561924.4	4190873	8.09E-04	8.03E-04	5.00E-05
701	561926.4	4190890	8.13E-04	8.07E-04	5.02E-05
702	561928.5	4190907	8.07E-04	8.01E-04	4.98E-05

703	561809.7	4190654	3.74E-04	3.71E-04	2.31E-05
704	561816.9	4190660	3.87E-04	3.84E-04	2.39E-05
705	561824.1	4190665	3.99E-04	3.96E-04	2.47E-05
706	561831.3	4190671	4.12E-04	4.09E-04	2.55E-05
707	561838.5	4190677	4.24E-04	4.21E-04	2.63E-05
708	561845.7	4190682	4.36E-04	4.33E-04	2.70E-05
709	561926.2	4190810	6.93E-04	6.88E-04	4.29E-05
710	561927.2	4190819	7.10E-04	7.04E-04	4.39E-05
711	561928.3	4190828	7.24E-04	7.19E-04	4.48E-05
712	561929.4	4190837	7.37E-04	7.32E-04	4.56E-05
713	561930.4	4190846	7.47E-04	7.42E-04	4.62E-05
714	561931.5	4190855	7.55E-04	7.50E-04	4.67E-05
715	561932.5	4190864	7.61E-04	7.56E-04	4.71E-05
716	561933.6	4190873	7.66E-04	7.60E-04	4.73E-05
717	561934.7	4190882	7.68E-04	7.62E-04	4.74E-05
718	561935.7	4190891	7.68E-04	7.62E-04	4.74E-05
719	561936.8	4190900	7.64E-04	7.59E-04	4.72E-05
720	561937.8	4190909	7.58E-04	7.53E-04	4.68E-05
721	561804.8	4190639	3.39E-04	3.36E-04	2.10E-05
722	561811.9	4190645	3.51E-04	3.48E-04	2.17E-05
723	561819.1	4190650	3.62E-04	3.60E-04	2.24E-05
724	561826.2	4190656	3.74E-04	3.72E-04	2.32E-05
725	561833.4	4190661	3.86E-04	3.83E-04	2.39E-05
726	561840.5	4190667	3.97E-04	3.94E-04	2.46E-05
727	561847.6	4190672	4.09E-04	4.06E-04	2.53E-05
728	561854.8	4190678	4.20E-04	4.17E-04	2.60E-05
729	561861.9	4190683	4.30E-04	4.27E-04	2.66E-05
730	561869.1	4190689	4.41E-04	4.38E-04	2.73E-05
731	561876.2	4190694	4.51E-04	4.47E-04	2.79E-05
732	561932.6	4190787	6.19E-04	6.14E-04	3.83E-05
733	561933.6	4190796	6.37E-04	6.32E-04	3.94E-05
734	561934.7	4190805	6.53E-04	6.49E-04	4.04E-05
735	561935.7	4190813	6.69E-04	6.64E-04	4.14E-05
736	561936.8	4190822	6.83E-04	6.78E-04	4.22E-05
737	561937.8	4190831	6.95E-04	6.90E-04	4.30E-05
738	561938.9	4190840	7.05E-04	7.00E-04	4.36E-05
739	561941	4190858	7.20E-04	7.14E-04	4.45E-05
740	561942	4190867	7.24E-04	7.19E-04	4.47E-05
741	561943.1	4190876	7.26E-04	7.21E-04	4.49E-05
742	561944.1	4190885	7.27E-04	7.21E-04	4.49E-05
743	561945.2	4190894	7.25E-04	7.19E-04	4.48E-05
744	561946.2	4190903	7.20E-04	7.15E-04	4.45E-05
745	561947.3	4190912	7.13E-04	7.08E-04	4.40E-05
746	561821.2	4190640	3.41E-04	3.38E-04	2.11E-05
747	561835.4	4190651	3.62E-04	3.60E-04	2.24E-05
748	561842.5	4190657	3.73E-04	3.70E-04	2.31E-05
749	561856.7	4190668	3.94E-04	3.91E-04	2.44E-05

750	561870.9	4190679	4.13E-04	4.10E-04	2.56E-05
751	561878	4190684	4.22E-04	4.19E-04	2.61E-05
752	561892.2	4190695	4.40E-04	4.36E-04	2.72E-05
753	561899.3	4190701	4.47E-04	4.44E-04	2.77E-05
754	561938	4190755	5.31E-04	5.27E-04	3.28E-05
755	561940.1	4190772	5.68E-04	5.63E-04	3.51E-05
756	561942.2	4190790	6.02E-04	5.97E-04	3.72E-05
757	561943.2	4190799	6.17E-04	6.13E-04	3.82E-05
758	561945.3	4190817	6.45E-04	6.40E-04	3.99E-05
759	561946.3	4190826	6.56E-04	6.51E-04	4.06E-05
760	561948.4	4190844	6.74E-04	6.69E-04	4.17E-05
761	561949.5	4190853	6.81E-04	6.76E-04	4.21E-05
762	561951.5	4190870	6.88E-04	6.83E-04	4.25E-05
763	561953.6	4190888	6.88E-04	6.83E-04	4.25E-05
764	561954.7	4190897	6.84E-04	6.79E-04	4.22E-05
765	561956.8	4190915	6.70E-04	6.66E-04	4.14E-05
766	561837.6	4190641	3.41E-04	3.38E-04	2.11E-05
767	561851.7	4190652	3.60E-04	3.58E-04	2.23E-05
768	561865.8	4190663	3.79E-04	3.77E-04	2.35E-05
769	561879.9	4190674	3.97E-04	3.94E-04	2.46E-05
770	561894	4190685	4.13E-04	4.10E-04	2.56E-05
771	561908.1	4190696	4.28E-04	4.25E-04	2.65E-05
772	561922.3	4190707	4.40E-04	4.37E-04	2.72E-05
773	561944.5	4190732	4.69E-04	4.66E-04	2.90E-05
774	561946.5	4190750	5.04E-04	5.00E-04	3.12E-05
775	561948.6	4190767	5.38E-04	5.34E-04	3.33E-05
776	561949.6	4190776	5.54E-04	5.50E-04	3.43E-05
777	561951.7	4190794	5.84E-04	5.80E-04	3.61E-05
778	561953.8	4190812	6.10E-04	6.05E-04	3.77E-05
779	561954.8	4190820	6.21E-04	6.16E-04	3.84E-05
780	561956.9	4190838	6.38E-04	6.34E-04	3.94E-05
781	561959	4190856	6.49E-04	6.45E-04	4.01E-05
782	561960	4190865	6.52E-04	6.48E-04	4.03E-05
783	561962.1	4190882	6.53E-04	6.48E-04	4.03E-05
784	561964.2	4190900	6.46E-04	6.41E-04	3.99E-05
785	561966.2	4190918	6.31E-04	6.27E-04	3.90E-05
786	561839.7	4190632	3.21E-04	3.19E-04	1.99E-05
787	561853.7	4190642	3.39E-04	3.37E-04	2.10E-05
788	561867.8	4190653	3.57E-04	3.54E-04	2.21E-05
789	561881.8	4190664	3.73E-04	3.71E-04	2.31E-05
790	561895.9	4190675	3.89E-04	3.86E-04	2.41E-05
791	561909.9	4190686	4.03E-04	4.00E-04	2.50E-05
792	561923.9	4190697	4.15E-04	4.13E-04	2.57E-05
793	561938	4190707	4.25E-04	4.22E-04	2.63E-05
794	561953	4190727	4.47E-04	4.44E-04	2.77E-05
795	561955.1	4190745	4.79E-04	4.76E-04	2.97E-05
796	561957.1	4190762	5.11E-04	5.07E-04	3.16E-05

797	561959.2	4190780	5.40E-04	5.36E-04	3.34E-05
798	561960.2	4190789	5.53E-04	5.49E-04	3.42E-05
799	561962.3	4190806	5.77E-04	5.73E-04	3.57E-05
800	561964.4	4190824	5.97E-04	5.93E-04	3.69E-05
801	561965.4	4190833	6.05E-04	6.00E-04	3.74E-05
802	561967.5	4190850	6.16E-04	6.11E-04	3.81E-05
803	561969.5	4190868	6.21E-04	6.16E-04	3.84E-05
804	561970.5	4190877	6.21E-04	6.16E-04	3.84E-05
805	561972.6	4190894	6.16E-04	6.11E-04	3.80E-05
806	561974.7	4190912	6.03E-04	5.99E-04	3.73E-05
807	561841.9	4190622	3.03E-04	3.01E-04	1.88E-05
808	561855.9	4190633	3.20E-04	3.18E-04	1.98E-05
809	561869.8	4190643	3.36E-04	3.34E-04	2.08E-05
810	561883.8	4190654	3.52E-04	3.50E-04	2.18E-05
811	561897.7	4190665	3.67E-04	3.64E-04	2.27E-05
812	561911.7	4190676	3.81E-04	3.78E-04	2.36E-05
813	561925.7	4190686	3.93E-04	3.90E-04	2.43E-05
814	561939.6	4190697	4.02E-04	3.99E-04	2.49E-05
815	561953.6	4190708	4.09E-04	4.06E-04	2.53E-05
816	561961.6	4190722	4.27E-04	4.24E-04	2.64E-05
817	561963.6	4190740	4.57E-04	4.54E-04	2.83E-05
818	561965.7	4190757	4.86E-04	4.82E-04	3.00E-05
819	561967.7	4190775	5.13E-04	5.09E-04	3.17E-05
820	561969.8	4190792	5.37E-04	5.33E-04	3.32E-05
821	561971.8	4190810	5.58E-04	5.54E-04	3.45E-05
822	561973.9	4190827	5.74E-04	5.70E-04	3.55E-05
823	561975.9	4190845	5.85E-04	5.81E-04	3.61E-05
824	561978	4190862	5.90E-04	5.86E-04	3.65E-05
825	561980	4190880	5.90E-04	5.86E-04	3.64E-05
826	561982.1	4190897	5.83E-04	5.79E-04	3.60E-05
827	561984.1	4190915	5.70E-04	5.66E-04	3.52E-05
828	561832.1	4190603	2.73E-04	2.71E-04	1.69E-05
829	561839.3	4190608	2.81E-04	2.79E-04	1.74E-05
830	561846.5	4190614	2.90E-04	2.87E-04	1.79E-05
831	561853.7	4190619	2.98E-04	2.96E-04	1.84E-05
832	561860.9	4190625	3.06E-04	3.04E-04	1.89E-05
833	561868.1	4190631	3.14E-04	3.11E-04	1.94E-05
834	561882.6	4190642	3.29E-04	3.27E-04	2.04E-05
835	561889.8	4190647	3.36E-04	3.34E-04	2.08E-05
836	561897	4190653	3.44E-04	3.41E-04	2.13E-05
837	561904.2	4190658	3.51E-04	3.49E-04	2.17E-05
838	561911.4	4190664	3.58E-04	3.55E-04	2.21E-05
839	561918.6	4190670	3.64E-04	3.62E-04	2.25E-05
840	561925.8	4190675	3.70E-04	3.68E-04	2.29E-05
841	561933.1	4190681	3.76E-04	3.73E-04	2.32E-05
842	561940.3	4190686	3.80E-04	3.78E-04	2.35E-05
843	561947.5	4190692	3.85E-04	3.82E-04	2.38E-05

844	561954.7	4190697	3.89E-04	3.86E-04	2.40E-05
845	561961.9	4190703	3.92E-04	3.89E-04	2.42E-05
846	561970.2	4190718	4.09E-04	4.06E-04	2.53E-05
847	561971.2	4190727	4.23E-04	4.20E-04	2.62E-05
848	561972.3	4190736	4.37E-04	4.34E-04	2.71E-05
849	561973.4	4190745	4.52E-04	4.48E-04	2.79E-05
850	561974.4	4190754	4.65E-04	4.62E-04	2.88E-05
851	561975.5	4190763	4.78E-04	4.75E-04	2.96E-05
852	561976.5	4190772	4.91E-04	4.87E-04	3.04E-05
853	561977.6	4190781	5.03E-04	4.99E-04	3.11E-05
854	561978.7	4190790	5.14E-04	5.10E-04	3.18E-05
855	561979.7	4190799	5.24E-04	5.20E-04	3.24E-05
856	561980.8	4190808	5.33E-04	5.29E-04	3.30E-05
857	561981.8	4190817	5.41E-04	5.38E-04	3.35E-05
858	561982.9	4190826	5.48E-04	5.44E-04	3.39E-05
859	561984	4190835	5.54E-04	5.50E-04	3.42E-05
860	561985	4190844	5.58E-04	5.54E-04	3.45E-05
861	561986.1	4190853	5.61E-04	5.57E-04	3.47E-05
862	561987.1	4190862	5.63E-04	5.59E-04	3.48E-05
863	561988.2	4190871	5.63E-04	5.59E-04	3.48E-05
864	561989.3	4190880	5.61E-04	5.57E-04	3.47E-05
865	561990.3	4190889	5.58E-04	5.54E-04	3.45E-05
866	561991.4	4190899	5.54E-04	5.50E-04	3.42E-05
867	561992.4	4190908	5.47E-04	5.44E-04	3.38E-05
868	561993.5	4190917	5.40E-04	5.36E-04	3.33E-05
869	561994.6	4190926	5.31E-04	5.27E-04	3.28E-05
870	561995.6	4190935	5.20E-04	5.16E-04	3.21E-05
871	561834.3	4190593	2.59E-04	2.57E-04	1.60E-05
872	561841.5	4190599	2.67E-04	2.65E-04	1.65E-05
873	561848.6	4190604	2.74E-04	2.72E-04	1.70E-05
874	561855.8	4190610	2.82E-04	2.80E-04	1.74E-05
875	561863	4190615	2.89E-04	2.87E-04	1.79E-05
876	561870.1	4190621	2.97E-04	2.95E-04	1.84E-05
877	561877.3	4190626	3.04E-04	3.02E-04	1.88E-05
878	561884.5	4190632	3.11E-04	3.09E-04	1.92E-05
879	561891.7	4190637	3.18E-04	3.16E-04	1.97E-05
880	561898.8	4190643	3.25E-04	3.23E-04	2.01E-05
881	561906	4190648	3.32E-04	3.29E-04	2.05E-05
882	561913.2	4190654	3.38E-04	3.36E-04	2.09E-05
883	561920.3	4190659	3.45E-04	3.42E-04	2.13E-05
884	561927.5	4190665	3.50E-04	3.48E-04	2.17E-05
885	561934.7	4190670	3.56E-04	3.53E-04	2.20E-05
886	561941.8	4190676	3.61E-04	3.58E-04	2.23E-05
887	561949	4190682	3.65E-04	3.62E-04	2.26E-05
888	561956.2	4190687	3.69E-04	3.66E-04	2.28E-05
889	561963.3	4190693	3.73E-04	3.70E-04	2.30E-05
890	561970.5	4190698	3.75E-04	3.73E-04	2.32E-05

891	561978.7	4190713	3.91E-04	3.88E-04	2.42E-05
892	561979.8	4190722	4.05E-04	4.02E-04	2.50E-05
893	561980.8	4190731	4.18E-04	4.15E-04	2.59E-05
894	561981.9	4190740	4.31E-04	4.28E-04	2.67E-05
895	561983	4190749	4.44E-04	4.41E-04	2.75E-05
896	561984	4190758	4.56E-04	4.53E-04	2.82E-05
897	561985.1	4190767	4.67E-04	4.64E-04	2.89E-05
898	561986.1	4190776	4.78E-04	4.75E-04	2.96E-05
899	561988.2	4190794	4.99E-04	4.95E-04	3.08E-05
900	561989.3	4190803	5.07E-04	5.04E-04	3.14E-05
901	561990.3	4190812	5.15E-04	5.12E-04	3.19E-05
902	561991.4	4190821	5.22E-04	5.18E-04	3.23E-05
903	561992.4	4190830	5.28E-04	5.24E-04	3.26E-05
904	561993.5	4190839	5.32E-04	5.28E-04	3.29E-05
905	561994.5	4190848	5.35E-04	5.31E-04	3.31E-05
906	561995.6	4190857	5.37E-04	5.33E-04	3.32E-05
907	561996.6	4190866	5.37E-04	5.34E-04	3.32E-05
908	561997.7	4190875	5.37E-04	5.33E-04	3.32E-05
909	561998.8	4190884	5.34E-04	5.30E-04	3.30E-05
910	561999.8	4190893	5.31E-04	5.27E-04	3.28E-05
911	562000.9	4190902	5.25E-04	5.22E-04	3.24E-05
912	562001.9	4190911	5.19E-04	5.15E-04	3.20E-05
913	562003	4190920	5.11E-04	5.07E-04	3.16E-05
914	562004	4190929	5.02E-04	4.98E-04	3.10E-05
915	562005.1	4190938	4.91E-04	4.88E-04	3.03E-05
916	561713.3	4190536	1.72E-04	1.71E-04	1.07E-05
917	561704.5	4190533	1.68E-04	1.67E-04	1.04E-05

			9.29E-08	9.22E-08	5.75E-09	1.91E-07
			2022	2023	2024	Total
1	561593	4190840	2.60E-08	2.58E-08	1.61E-09	5.35E-08
2	561590.8	4190849	2.77E-08	2.76E-08	1.72E-09	5.70E-08
3	561588.6	4190858	2.91E-08	2.89E-08	1.80E-09	5.98E-08
4	561586.4	4190867	3.00E-08	2.98E-08	1.86E-09	6.17E-08
5	561584.2	4190876	3.03E-08	3.00E-08	1.87E-09	6.22E-08
6	561582	4190885	3.01E-08	2.99E-08	1.86E-09	6.18E-08
7	561579.8	4190894	2.95E-08	2.93E-08	1.83E-09	6.06E-08
8	561577.6	4190903	2.85E-08	2.83E-08	1.77E-09	5.86E-08
9	561575.4	4190912	2.71E-08	2.69E-08	1.68E-09	5.57E-08
10	561573.2	4190921	2.53E-08	2.51E-08	1.56E-09	5.19E-08
11	561571	4190930	2.31E-08	2.29E-08	1.43E-09	4.74E-08
12	561568.7	4190939	2.06E-08	2.05E-08	1.28E-09	4.24E-08
13	561566.5	4190948	1.82E-08	1.80E-08	1.12E-09	3.73E-08
14	561599.3	4190810	1.85E-08	1.84E-08	1.15E-09	3.80E-08
15	561583.5	4190837	2.18E-08	2.17E-08	1.35E-09	4.48E-08
16	561581.2	4190846	2.30E-08	2.28E-08	1.43E-09	4.73E-08
17	561579	4190855	2.39E-08	2.38E-08	1.48E-09	4.92E-08
18	561576.8	4190864	2.46E-08	2.44E-08	1.52E-09	5.05E-08
19	561574.6	4190873	2.47E-08	2.45E-08	1.53E-09	5.08E-08
20	561572.4	4190882	2.45E-08	2.43E-08	1.52E-09	5.04E-08
21	561570.2	4190891	2.40E-08	2.38E-08	1.49E-09	4.93E-08
22	561568	4190900	2.32E-08	2.30E-08	1.43E-09	4.76E-08
23	561565.8	4190910	2.20E-08	2.19E-08	1.36E-09	4.52E-08
24	561563.6	4190919	2.06E-08	2.04E-08	1.28E-09	4.23E-08
25	561561.4	4190928	1.89E-08	1.88E-08	1.17E-09	3.89E-08
26	561559.2	4190937	1.72E-08	1.71E-08	1.06E-09	3.53E-08
27	561557	4190946	1.55E-08	1.54E-08	9.57E-10	3.18E-08
28	561589.7	4190808	1.63E-08	1.62E-08	1.01E-09	3.36E-08
29	561606.3	4190794	1.53E-08	1.52E-08	9.49E-10	3.15E-08
30	561573.9	4190835	1.86E-08	1.85E-08	1.15E-09	3.83E-08
31	561571.7	4190844	1.95E-08	1.94E-08	1.21E-09	4.01E-08
32	561569.5	4190853	2.01E-08	2.00E-08	1.25E-09	4.14E-08
33	561567.3	4190862	2.05E-08	2.04E-08	1.27E-09	4.22E-08
34	561565.1	4190871	2.06E-08	2.05E-08	1.28E-09	4.24E-08
35	561562.9	4190880	2.04E-08	2.03E-08	1.26E-09	4.19E-08
36	561560.7	4190889	1.99E-08	1.98E-08	1.23E-09	4.09E-08
37	561558.4	4190898	1.92E-08	1.90E-08	1.19E-09	3.94E-08
38	561556.2	4190907	1.82E-08	1.81E-08	1.13E-09	3.75E-08
39	561554	4190916	1.71E-08	1.70E-08	1.06E-09	3.52E-08
40	561551.8	4190925	1.59E-08	1.58E-08	9.86E-10	3.27E-08
41	561549.6	4190934	1.46E-08	1.45E-08	9.07E-10	3.01E-08
42	561547.4	4190943	1.34E-08	1.33E-08	8.27E-10	2.75E-08
43	561577.4	4190809	1.49E-08	1.48E-08	9.21E-10	3.05E-08
44	561582.9	4190802	1.43E-08	1.42E-08	8.84E-10	2.93E-08

45	561588.3	4190794	1.35E-08	1.34E-08	8.38E-10	2.78E-08
46	561602.8	4190786	1.32E-08	1.31E-08	8.15E-10	2.71E-08
47	561611.8	4190784	1.36E-08	1.35E-08	8.42E-10	2.79E-08
48	561564.3	4190833	1.62E-08	1.61E-08	1.00E-09	3.32E-08
49	561562.1	4190842	1.68E-08	1.66E-08	1.04E-09	3.44E-08
50	561559.9	4190851	1.72E-08	1.70E-08	1.06E-09	3.53E-08
51	561557.7	4190860	1.74E-08	1.72E-08	1.08E-09	3.57E-08
52	561555.5	4190869	1.73E-08	1.72E-08	1.07E-09	3.56E-08
53	561553.3	4190878	1.71E-08	1.70E-08	1.06E-09	3.51E-08
54	561551.1	4190887	1.67E-08	1.66E-08	1.03E-09	3.43E-08
55	561548.9	4190896	1.61E-08	1.60E-08	9.98E-10	3.31E-08
56	561546.7	4190905	1.54E-08	1.53E-08	9.53E-10	3.16E-08
57	561544.5	4190914	1.45E-08	1.44E-08	9.01E-10	2.99E-08
58	561542.3	4190923	1.36E-08	1.35E-08	8.43E-10	2.80E-08
59	561540.1	4190932	1.27E-08	1.26E-08	7.83E-10	2.60E-08
60	561537.9	4190941	1.17E-08	1.16E-08	7.24E-10	2.40E-08
61	561572.8	4190800	1.29E-08	1.28E-08	8.02E-10	2.66E-08
62	561583.4	4190786	1.18E-08	1.17E-08	7.30E-10	2.42E-08
63	561597.5	4190777	1.14E-08	1.13E-08	7.06E-10	2.34E-08
64	561615.1	4190775	1.20E-08	1.19E-08	7.44E-10	2.47E-08
65	561554.8	4190830	1.41E-08	1.40E-08	8.75E-10	2.90E-08
66	561552.6	4190839	1.45E-08	1.44E-08	8.99E-10	2.98E-08
67	561550.4	4190848	1.48E-08	1.47E-08	9.14E-10	3.03E-08
68	561548.2	4190857	1.48E-08	1.47E-08	9.19E-10	3.05E-08
69	561545.9	4190866	1.48E-08	1.47E-08	9.14E-10	3.03E-08
70	561543.7	4190875	1.45E-08	1.44E-08	9.01E-10	2.99E-08
71	561541.5	4190884	1.42E-08	1.41E-08	8.80E-10	2.92E-08
72	561539.3	4190893	1.37E-08	1.36E-08	8.51E-10	2.82E-08
73	561537.1	4190902	1.32E-08	1.31E-08	8.16E-10	2.71E-08
74	561534.9	4190911	1.25E-08	1.24E-08	7.75E-10	2.57E-08
75	561532.7	4190920	1.18E-08	1.17E-08	7.31E-10	2.42E-08
76	561530.5	4190930	1.10E-08	1.10E-08	6.83E-10	2.27E-08
77	561528.3	4190939	1.03E-08	1.02E-08	6.36E-10	2.11E-08
78	561563	4190798	1.18E-08	1.17E-08	7.28E-10	2.42E-08
79	561573.3	4190784	1.09E-08	1.08E-08	6.76E-10	2.24E-08
80	561592.3	4190769	1.00E-08	9.94E-09	6.20E-10	2.06E-08
81	561609.6	4190766	1.05E-08	1.04E-08	6.49E-10	2.15E-08
82	561545.2	4190828	1.25E-08	1.24E-08	7.73E-10	2.56E-08
83	561543	4190837	1.27E-08	1.26E-08	7.88E-10	2.62E-08
84	561540.8	4190846	1.29E-08	1.28E-08	7.96E-10	2.64E-08
85	561538.6	4190855	1.29E-08	1.28E-08	7.96E-10	2.64E-08
86	561536.4	4190864	1.27E-08	1.26E-08	7.88E-10	2.62E-08
87	561534.2	4190873	1.25E-08	1.24E-08	7.76E-10	2.57E-08
88	561532	4190882	1.23E-08	1.22E-08	7.59E-10	2.52E-08
89	561529.8	4190891	1.19E-08	1.18E-08	7.37E-10	2.45E-08
90	561527.6	4190900	1.14E-08	1.14E-08	7.09E-10	2.35E-08
91	561525.4	4190909	1.09E-08	1.08E-08	6.75E-10	2.24E-08

92	561523.1	4190918	1.03E-08	1.02E-08	6.39E-10	2.12E-08
93	561520.9	4190927	9.69E-09	9.63E-09	6.00E-10	1.99E-08
94	561518.7	4190936	9.07E-09	9.00E-09	5.61E-10	1.86E-08
95	561553.2	4190796	1.07E-08	1.07E-08	6.65E-10	2.21E-08
96	561563.4	4190782	1.01E-08	1.00E-08	6.26E-10	2.08E-08
97	561573.6	4190769	9.27E-09	9.20E-09	5.74E-10	1.90E-08
98	561587.1	4190760	8.92E-09	8.86E-09	5.53E-10	1.83E-08
99	561604.1	4190758	9.24E-09	9.17E-09	5.72E-10	1.90E-08
100	561535.6	4190826	1.11E-08	1.10E-08	6.88E-10	2.28E-08
101	561533.4	4190835	1.13E-08	1.12E-08	6.98E-10	2.32E-08
102	561531.2	4190844	1.13E-08	1.13E-08	7.02E-10	2.33E-08
103	561529	4190853	1.13E-08	1.12E-08	7.01E-10	2.33E-08
104	561526.8	4190862	1.12E-08	1.12E-08	6.95E-10	2.31E-08
105	561524.6	4190871	1.11E-08	1.10E-08	6.85E-10	2.27E-08
106	561522.4	4190880	1.08E-08	1.07E-08	6.70E-10	2.22E-08
107	561520.2	4190889	1.05E-08	1.04E-08	6.49E-10	2.15E-08
108	561518	4190898	1.01E-08	1.00E-08	6.24E-10	2.07E-08
109	561515.8	4190907	9.62E-09	9.55E-09	5.95E-10	1.98E-08
110	561513.6	4190916	9.12E-09	9.05E-09	5.64E-10	1.87E-08
111	561511.4	4190925	8.60E-09	8.54E-09	5.32E-10	1.77E-08
112	561509.2	4190934	8.08E-09	8.02E-09	5.00E-10	1.66E-08
113	561533.3	4190808	9.91E-09	9.84E-09	6.14E-10	2.04E-08
114	561543.4	4190794	9.84E-09	9.77E-09	6.10E-10	2.02E-08
115	561553.5	4190780	9.41E-09	9.34E-09	5.83E-10	1.93E-08
116	561563.6	4190767	8.73E-09	8.67E-09	5.41E-10	1.79E-08
117	561582	4190752	8.03E-09	7.97E-09	4.97E-10	1.65E-08
118	561598.8	4190750	8.21E-09	8.16E-09	5.09E-10	1.69E-08
119	561615.5	4190747	8.52E-09	8.46E-09	5.27E-10	1.75E-08
120	561526.1	4190823	1.00E-08	9.93E-09	6.19E-10	2.06E-08
121	561523.9	4190832	1.01E-08	1.00E-08	6.26E-10	2.08E-08
122	561521.7	4190841	1.01E-08	1.01E-08	6.28E-10	2.09E-08
123	561519.5	4190850	1.01E-08	1.01E-08	6.27E-10	2.08E-08
124	561517.3	4190859	1.00E-08	9.96E-09	6.21E-10	2.06E-08
125	561515.1	4190868	9.87E-09	9.80E-09	6.11E-10	2.03E-08
126	561512.8	4190877	9.63E-09	9.56E-09	5.96E-10	1.98E-08
127	561510.6	4190886	9.32E-09	9.26E-09	5.77E-10	1.92E-08
128	561508.4	4190895	8.96E-09	8.90E-09	5.55E-10	1.84E-08
129	561506.2	4190904	8.56E-09	8.50E-09	5.30E-10	1.76E-08
130	561504	4190913	8.13E-09	8.08E-09	5.03E-10	1.67E-08
131	561501.8	4190922	7.70E-09	7.64E-09	4.77E-10	1.58E-08
132	561499.6	4190931	7.27E-09	7.22E-09	4.50E-10	1.49E-08
133	561523.7	4190805	9.03E-09	8.97E-09	5.59E-10	1.86E-08
134	561533.7	4190792	9.06E-09	8.99E-09	5.61E-10	1.86E-08
135	561543.7	4190778	8.77E-09	8.70E-09	5.43E-10	1.80E-08
136	561553.6	4190765	8.23E-09	8.17E-09	5.10E-10	1.69E-08
137	561563.6	4190751	7.59E-09	7.53E-09	4.70E-10	1.56E-08
138	561576.9	4190744	7.29E-09	7.24E-09	4.52E-10	1.50E-08

139	561593.5	4190741	7.38E-09	7.32E-09	4.57E-10	1.52E-08
140	561610.1	4190739	7.58E-09	7.52E-09	4.69E-10	1.56E-08
141	561516.5	4190821	9.06E-09	8.99E-09	5.61E-10	1.86E-08
142	561514.3	4190830	9.12E-09	9.06E-09	5.65E-10	1.87E-08
143	561512.1	4190839	9.13E-09	9.07E-09	5.65E-10	1.88E-08
144	561509.9	4190848	9.10E-09	9.04E-09	5.63E-10	1.87E-08
145	561507.7	4190857	9.01E-09	8.95E-09	5.58E-10	1.85E-08
146	561505.5	4190866	8.87E-09	8.81E-09	5.49E-10	1.82E-08
147	561503.3	4190875	8.64E-09	8.58E-09	5.35E-10	1.78E-08
148	561501.1	4190884	8.36E-09	8.30E-09	5.17E-10	1.72E-08
149	561498.9	4190893	8.04E-09	7.98E-09	4.97E-10	1.65E-08
150	561496.7	4190902	7.69E-09	7.64E-09	4.76E-10	1.58E-08
151	561494.5	4190911	7.33E-09	7.28E-09	4.54E-10	1.51E-08
152	561492.3	4190920	6.97E-09	6.92E-09	4.31E-10	1.43E-08
153	561490.1	4190929	6.61E-09	6.56E-09	4.09E-10	1.36E-08
154	561514.6	4190802	8.27E-09	8.22E-09	5.12E-10	1.70E-08
155	561520.1	4190795	8.34E-09	8.28E-09	5.16E-10	1.71E-08
156	561525.5	4190788	8.33E-09	8.27E-09	5.16E-10	1.71E-08
157	561530.9	4190780	8.25E-09	8.19E-09	5.11E-10	1.70E-08
158	561536.4	4190773	8.09E-09	8.03E-09	5.01E-10	1.66E-08
159	561541.8	4190766	7.85E-09	7.79E-09	4.86E-10	1.61E-08
160	561547.3	4190758	7.57E-09	7.51E-09	4.69E-10	1.56E-08
161	561552.7	4190751	7.27E-09	7.21E-09	4.50E-10	1.49E-08
162	561558.1	4190744	6.95E-09	6.90E-09	4.30E-10	1.43E-08
163	561572.6	4190735	6.68E-09	6.63E-09	4.13E-10	1.37E-08
164	561581.7	4190734	6.71E-09	6.66E-09	4.16E-10	1.38E-08
165	561590.7	4190732	6.74E-09	6.69E-09	4.17E-10	1.38E-08
166	561599.8	4190731	6.79E-09	6.74E-09	4.20E-10	1.39E-08
167	561608.8	4190730	6.85E-09	6.80E-09	4.24E-10	1.41E-08
168	561617.9	4190729	6.91E-09	6.86E-09	4.28E-10	1.42E-08
169	561626.9	4190727	7.00E-09	6.95E-09	4.33E-10	1.44E-08
170	561509.2	4190810	8.15E-09	8.09E-09	5.05E-10	1.67E-08
171	561507	4190819	8.24E-09	8.18E-09	5.10E-10	1.69E-08
172	561504.8	4190828	8.28E-09	8.22E-09	5.12E-10	1.70E-08
173	561502.6	4190837	8.26E-09	8.20E-09	5.11E-10	1.70E-08
174	561500.3	4190846	8.23E-09	8.17E-09	5.09E-10	1.69E-08
175	561498.1	4190855	8.14E-09	8.08E-09	5.04E-10	1.67E-08
176	561495.9	4190864	7.99E-09	7.94E-09	4.95E-10	1.64E-08
177	561493.7	4190873	7.78E-09	7.73E-09	4.82E-10	1.60E-08
178	561491.5	4190882	7.53E-09	7.48E-09	4.66E-10	1.55E-08
179	561489.3	4190891	7.25E-09	7.20E-09	4.49E-10	1.49E-08
180	561487.1	4190900	6.96E-09	6.91E-09	4.31E-10	1.43E-08
181	561484.9	4190909	6.65E-09	6.60E-09	4.12E-10	1.37E-08
182	561482.7	4190918	6.34E-09	6.29E-09	3.92E-10	1.30E-08
183	561480.5	4190927	6.03E-09	5.99E-09	3.73E-10	1.24E-08
184	561505	4190800	7.60E-09	7.54E-09	4.70E-10	1.56E-08
185	561515.7	4190786	7.69E-09	7.64E-09	4.76E-10	1.58E-08

186	561521	4190778	7.66E-09	7.60E-09	4.74E-10	1.57E-08
187	561531.8	4190764	7.38E-09	7.32E-09	4.57E-10	1.52E-08
188	561537.1	4190757	7.15E-09	7.10E-09	4.43E-10	1.47E-08
189	561542.5	4190749	6.90E-09	6.86E-09	4.27E-10	1.42E-08
190	561553.2	4190735	6.37E-09	6.32E-09	3.94E-10	1.31E-08
191	561567.5	4190727	6.14E-09	6.09E-09	3.80E-10	1.26E-08
192	561576.4	4190725	6.16E-09	6.12E-09	3.82E-10	1.27E-08
193	561585.3	4190724	6.18E-09	6.14E-09	3.83E-10	1.27E-08
194	561603.1	4190722	6.22E-09	6.17E-09	3.85E-10	1.28E-08
195	561612	4190720	6.24E-09	6.20E-09	3.87E-10	1.28E-08
196	561629.9	4190718	6.38E-09	6.33E-09	3.95E-10	1.31E-08
197	561497.4	4190816	7.55E-09	7.50E-09	4.68E-10	1.55E-08
198	561495.2	4190825	7.57E-09	7.52E-09	4.69E-10	1.56E-08
199	561493	4190834	7.55E-09	7.49E-09	4.67E-10	1.55E-08
200	561490.8	4190843	7.49E-09	7.44E-09	4.64E-10	1.54E-08
201	561488.6	4190852	7.39E-09	7.34E-09	4.57E-10	1.52E-08
202	561486.4	4190861	7.24E-09	7.19E-09	4.48E-10	1.49E-08
203	561484.2	4190870	7.05E-09	7.00E-09	4.37E-10	1.45E-08
204	561482	4190879	6.83E-09	6.78E-09	4.23E-10	1.40E-08
205	561479.8	4190888	6.59E-09	6.54E-09	4.08E-10	1.35E-08
206	561477.5	4190897	6.33E-09	6.28E-09	3.92E-10	1.30E-08
207	561475.3	4190906	6.06E-09	6.02E-09	3.75E-10	1.25E-08
208	561473.1	4190915	5.80E-09	5.76E-09	3.59E-10	1.19E-08
209	561470.9	4190924	5.54E-09	5.50E-09	3.43E-10	1.14E-08
210	561516.5	4190769	7.05E-09	7.00E-09	4.36E-10	1.45E-08
211	561527.1	4190755	6.76E-09	6.71E-09	4.19E-10	1.39E-08
212	561537.7	4190741	6.33E-09	6.29E-09	3.92E-10	1.30E-08
213	561548.2	4190726	5.86E-09	5.82E-09	3.63E-10	1.20E-08
214	561562.3	4190718	5.66E-09	5.62E-09	3.51E-10	1.16E-08
215	561579.9	4190716	5.69E-09	5.65E-09	3.53E-10	1.17E-08
216	561597.5	4190713	5.71E-09	5.67E-09	3.53E-10	1.17E-08
217	561615.1	4190711	5.73E-09	5.69E-09	3.55E-10	1.18E-08
218	561632.7	4190708	5.88E-09	5.84E-09	3.64E-10	1.21E-08
219	561468	4190895	5.80E-09	5.76E-09	3.59E-10	1.19E-08
220	561465.8	4190904	5.57E-09	5.54E-09	3.45E-10	1.15E-08
221	561463.6	4190913	5.35E-09	5.31E-09	3.31E-10	1.10E-08
222	561461.4	4190922	5.12E-09	5.08E-09	3.17E-10	1.05E-08
223	561538	4190725	5.64E-09	5.60E-09	3.49E-10	1.16E-08
224	561557.2	4190710	5.24E-09	5.20E-09	3.24E-10	1.08E-08
225	561574.6	4190707	5.27E-09	5.23E-09	3.26E-10	1.08E-08
226	561592	4190705	5.27E-09	5.24E-09	3.27E-10	1.08E-08
227	561609.4	4190702	5.29E-09	5.25E-09	3.27E-10	1.09E-08
228	561626.8	4190700	5.35E-09	5.31E-09	3.31E-10	1.10E-08
229	561552.1	4190701	4.86E-09	4.83E-09	3.01E-10	9.99E-09
230	561569.3	4190699	4.90E-09	4.86E-09	3.03E-10	1.01E-08
231	561586.6	4190696	4.89E-09	4.86E-09	3.03E-10	1.01E-08
232	561603.8	4190694	4.90E-09	4.86E-09	3.03E-10	1.01E-08

233	561621.1	4190692	4.92E-09	4.89E-09	3.05E-10	1.01E-08
234	561638.3	4190689	5.04E-09	5.01E-09	3.12E-10	1.04E-08
235	561547.6	4190693	4.53E-09	4.50E-09	2.80E-10	9.31E-09
236	561556.8	4190691	4.55E-09	4.52E-09	2.82E-10	9.36E-09
237	561565.9	4190690	4.56E-09	4.53E-09	2.83E-10	9.38E-09
238	561575.1	4190689	4.56E-09	4.53E-09	2.82E-10	9.37E-09
239	561584.2	4190688	4.56E-09	4.52E-09	2.82E-10	9.36E-09
240	561593.4	4190686	4.55E-09	4.52E-09	2.82E-10	9.36E-09
241	561602.6	4190685	4.56E-09	4.52E-09	2.82E-10	9.36E-09
242	561611.7	4190684	4.57E-09	4.53E-09	2.83E-10	9.38E-09
243	561620.9	4190682	4.58E-09	4.55E-09	2.84E-10	9.41E-09
244	561630.1	4190681	4.62E-09	4.59E-09	2.86E-10	9.50E-09
245	561639.2	4190680	4.68E-09	4.65E-09	2.90E-10	9.62E-09
246	561551.5	4190683	4.25E-09	4.22E-09	2.63E-10	8.73E-09
247	561560.6	4190682	4.26E-09	4.23E-09	2.63E-10	8.75E-09
248	561569.6	4190680	4.26E-09	4.23E-09	2.64E-10	8.75E-09
249	561578.7	4190679	4.26E-09	4.23E-09	2.64E-10	8.75E-09
250	561587.7	4190678	4.26E-09	4.23E-09	2.64E-10	8.75E-09
251	561596.8	4190677	4.26E-09	4.23E-09	2.64E-10	8.76E-09
252	561605.8	4190675	4.26E-09	4.23E-09	2.64E-10	8.76E-09
253	561614.9	4190674	4.27E-09	4.24E-09	2.64E-10	8.77E-09
254	561623.9	4190673	4.28E-09	4.25E-09	2.65E-10	8.79E-09
255	561633	4190672	4.32E-09	4.29E-09	2.68E-10	8.88E-09
256	561642.1	4190670	4.37E-09	4.34E-09	2.71E-10	8.99E-09
257	561555.3	4190673	3.98E-09	3.95E-09	2.46E-10	8.17E-09
258	561564.2	4190672	3.98E-09	3.95E-09	2.46E-10	8.17E-09
259	561573.2	4190671	3.98E-09	3.95E-09	2.46E-10	8.18E-09
260	561582.1	4190669	3.99E-09	3.96E-09	2.47E-10	8.19E-09
261	561591.1	4190668	4.00E-09	3.97E-09	2.47E-10	8.21E-09
262	561600.1	4190667	4.00E-09	3.97E-09	2.47E-10	8.21E-09
263	561609	4190666	3.99E-09	3.97E-09	2.47E-10	8.21E-09
264	561618	4190664	4.00E-09	3.97E-09	2.47E-10	8.21E-09
265	561626.9	4190663	4.01E-09	3.99E-09	2.48E-10	8.25E-09
266	561635.9	4190662	4.05E-09	4.02E-09	2.51E-10	8.32E-09
267	561644.9	4190661	4.09E-09	4.06E-09	2.53E-10	8.41E-09
268	561567.7	4190662	3.73E-09	3.70E-09	2.31E-10	7.66E-09
269	561585.5	4190660	3.75E-09	3.72E-09	2.32E-10	7.70E-09
270	561603.2	4190657	3.75E-09	3.73E-09	2.32E-10	7.71E-09
271	561621	4190655	3.75E-09	3.73E-09	2.32E-10	7.72E-09
272	561638.7	4190652	3.81E-09	3.78E-09	2.36E-10	7.83E-09
273	561562.3	4190654	3.50E-09	3.47E-09	2.16E-10	7.18E-09
274	561579.9	4190651	3.52E-09	3.49E-09	2.18E-10	7.23E-09
275	561597.5	4190649	3.54E-09	3.51E-09	2.19E-10	7.26E-09
276	561615.2	4190647	3.54E-09	3.51E-09	2.19E-10	7.27E-09
277	561632.8	4190644	3.57E-09	3.54E-09	2.21E-10	7.33E-09
278	561650.4	4190642	3.61E-09	3.59E-09	2.24E-10	7.42E-09
279	561574.5	4190643	3.31E-09	3.28E-09	2.05E-10	6.80E-09

280	561591.9	4190641	3.33E-09	3.31E-09	2.06E-10	6.84E-09
281	561609.4	4190638	3.34E-09	3.32E-09	2.07E-10	6.86E-09
282	561626.9	4190636	3.36E-09	3.34E-09	2.08E-10	6.91E-09
283	561644.3	4190633	3.39E-09	3.36E-09	2.10E-10	6.96E-09
284	561572.2	4190634	3.12E-09	3.10E-09	1.93E-10	6.41E-09
285	561581.3	4190633	3.13E-09	3.11E-09	1.94E-10	6.43E-09
286	561599.6	4190630	3.15E-09	3.13E-09	1.95E-10	6.47E-09
287	561608.7	4190629	3.16E-09	3.14E-09	1.95E-10	6.49E-09
288	561617.9	4190628	3.17E-09	3.15E-09	1.96E-10	6.52E-09
289	561627	4190627	3.18E-09	3.16E-09	1.97E-10	6.54E-09
290	561636.1	4190625	3.19E-09	3.17E-09	1.97E-10	6.55E-09
291	561645.3	4190624	3.20E-09	3.17E-09	1.98E-10	6.57E-09
292	561654.4	4190623	3.21E-09	3.19E-09	1.99E-10	6.60E-09
293	561575.7	4190625	2.96E-09	2.93E-09	1.83E-10	6.07E-09
294	561584.7	4190623	2.96E-09	2.94E-09	1.83E-10	6.09E-09
295	561593.8	4190622	2.97E-09	2.95E-09	1.84E-10	6.11E-09
296	561602.8	4190621	2.98E-09	2.96E-09	1.84E-10	6.12E-09
297	561611.9	4190620	2.99E-09	2.97E-09	1.85E-10	6.14E-09
298	561620.9	4190618	3.00E-09	2.98E-09	1.86E-10	6.17E-09
299	561630	4190617	3.01E-09	2.99E-09	1.86E-10	6.19E-09
300	561639	4190616	3.02E-09	3.00E-09	1.87E-10	6.20E-09
301	561648.1	4190614	3.03E-09	3.01E-09	1.87E-10	6.22E-09
302	561657.2	4190613	3.05E-09	3.03E-09	1.89E-10	6.28E-09
303	561579.1	4190615	2.80E-09	2.78E-09	1.73E-10	5.75E-09
304	561588	4190614	2.80E-09	2.79E-09	1.74E-10	5.76E-09
305	561597	4190612	2.81E-09	2.79E-09	1.74E-10	5.78E-09
306	561606	4190611	2.82E-09	2.80E-09	1.75E-10	5.80E-09
307	561615	4190610	2.84E-09	2.81E-09	1.75E-10	5.83E-09
308	561624	4190609	2.85E-09	2.83E-09	1.76E-10	5.86E-09
309	561632.9	4190607	2.86E-09	2.84E-09	1.77E-10	5.87E-09
310	561641.9	4190606	2.87E-09	2.84E-09	1.77E-10	5.89E-09
311	561650.9	4190605	2.88E-09	2.86E-09	1.78E-10	5.91E-09
312	561659.9	4190604	2.91E-09	2.89E-09	1.80E-10	5.98E-09
313	561582.4	4190605	2.66E-09	2.64E-09	1.64E-10	5.46E-09
314	561600.2	4190603	2.67E-09	2.65E-09	1.65E-10	5.48E-09
315	561609.1	4190602	2.68E-09	2.66E-09	1.66E-10	5.51E-09
316	561626.9	4190599	2.71E-09	2.69E-09	1.67E-10	5.56E-09
317	561635.9	4190598	2.71E-09	2.69E-09	1.68E-10	5.58E-09
318	561653.7	4190595	2.74E-09	2.72E-09	1.70E-10	5.63E-09
319	561662.6	4190594	2.77E-09	2.75E-09	1.72E-10	5.70E-09
320	561585.6	4190596	2.52E-09	2.50E-09	1.56E-10	5.18E-09
321	561603.3	4190593	2.54E-09	2.52E-09	1.57E-10	5.21E-09
322	561621	4190591	2.56E-09	2.54E-09	1.58E-10	5.26E-09
323	561638.7	4190588	2.58E-09	2.56E-09	1.60E-10	5.30E-09
324	561656.4	4190586	2.62E-09	2.60E-09	1.62E-10	5.38E-09
325	561584.2	4190587	2.40E-09	2.38E-09	1.49E-10	4.93E-09
326	561593.4	4190585	2.40E-09	2.39E-09	1.49E-10	4.94E-09

327	561602.5	4190584	2.41E-09	2.39E-09	1.49E-10	4.95E-09
328	561611.7	4190583	2.42E-09	2.40E-09	1.50E-10	4.97E-09
329	561620.9	4190582	2.43E-09	2.41E-09	1.50E-10	4.99E-09
330	561630.1	4190580	2.44E-09	2.42E-09	1.51E-10	5.01E-09
331	561639.3	4190579	2.45E-09	2.44E-09	1.52E-10	5.04E-09
332	561648.5	4190578	2.47E-09	2.45E-09	1.53E-10	5.08E-09
333	561657.6	4190576	2.50E-09	2.48E-09	1.54E-10	5.13E-09
334	561666.8	4190575	2.52E-09	2.51E-09	1.56E-10	5.19E-09
335	561587.5	4190577	2.29E-09	2.27E-09	1.42E-10	4.70E-09
336	561596.6	4190576	2.29E-09	2.28E-09	1.42E-10	4.71E-09
337	561605.7	4190575	2.30E-09	2.28E-09	1.42E-10	4.72E-09
338	561614.9	4190573	2.30E-09	2.29E-09	1.43E-10	4.73E-09
339	561624	4190572	2.31E-09	2.29E-09	1.43E-10	4.75E-09
340	561633.1	4190571	2.33E-09	2.31E-09	1.44E-10	4.78E-09
341	561642.2	4190569	2.34E-09	2.33E-09	1.45E-10	4.81E-09
342	561651.3	4190568	2.36E-09	2.35E-09	1.46E-10	4.86E-09
343	561660.4	4190567	2.39E-09	2.37E-09	1.48E-10	4.91E-09
344	561669.6	4190566	2.41E-09	2.40E-09	1.49E-10	4.96E-09
345	561590.8	4190567	2.19E-09	2.17E-09	1.35E-10	4.49E-09
346	561599.8	4190566	2.19E-09	2.17E-09	1.35E-10	4.50E-09
347	561608.9	4190565	2.19E-09	2.18E-09	1.36E-10	4.50E-09
348	561617.9	4190564	2.20E-09	2.18E-09	1.36E-10	4.51E-09
349	561627	4190562	2.21E-09	2.19E-09	1.37E-10	4.54E-09
350	561636	4190561	2.22E-09	2.21E-09	1.38E-10	4.57E-09
351	561645.1	4190560	2.24E-09	2.23E-09	1.39E-10	4.61E-09
352	561654.2	4190559	2.26E-09	2.25E-09	1.40E-10	4.65E-09
353	561663.2	4190557	2.28E-09	2.27E-09	1.41E-10	4.70E-09
354	561672.3	4190556	2.31E-09	2.29E-09	1.43E-10	4.74E-09
355	561585	4190559	2.09E-09	2.07E-09	1.29E-10	4.29E-09
356	561594	4190558	2.09E-09	2.07E-09	1.29E-10	4.29E-09
357	561603	4190557	2.09E-09	2.08E-09	1.29E-10	4.30E-09
358	561612	4190555	2.10E-09	2.08E-09	1.30E-10	4.31E-09
359	561621	4190554	2.11E-09	2.09E-09	1.30E-10	4.33E-09
360	561630	4190553	2.12E-09	2.10E-09	1.31E-10	4.35E-09
361	561639	4190552	2.13E-09	2.12E-09	1.32E-10	4.38E-09
362	561648	4190550	2.15E-09	2.13E-09	1.33E-10	4.41E-09
363	561657	4190549	2.17E-09	2.15E-09	1.34E-10	4.45E-09
364	561666	4190548	2.19E-09	2.17E-09	1.35E-10	4.50E-09
365	561674.9	4190547	2.21E-09	2.19E-09	1.37E-10	4.54E-09
366	561597.2	4190548	2.00E-09	1.98E-09	1.24E-10	4.10E-09
367	561606.1	4190547	2.00E-09	1.99E-09	1.24E-10	4.11E-09
368	561615	4190546	2.01E-09	2.00E-09	1.24E-10	4.13E-09
369	561624	4190545	2.02E-09	2.01E-09	1.25E-10	4.15E-09
370	561632.9	4190543	2.03E-09	2.02E-09	1.26E-10	4.18E-09
371	561641.9	4190542	2.05E-09	2.03E-09	1.27E-10	4.20E-09
372	561650.8	4190541	2.06E-09	2.04E-09	1.27E-10	4.23E-09
373	561659.7	4190540	2.08E-09	2.06E-09	1.29E-10	4.27E-09

374	561668.7	4190538	2.10E-09	2.08E-09	1.30E-10	4.31E-09
375	561677.6	4190537	2.12E-09	2.10E-09	1.31E-10	4.35E-09
376	561592.7	4190964	2.52E-08	2.50E-08	1.56E-09	5.18E-08
377	561602.1	4190967	2.88E-08	2.86E-08	1.78E-09	5.91E-08
378	561611.4	4190969	3.24E-08	3.22E-08	2.01E-09	6.65E-08
379	561620.7	4190972	3.58E-08	3.55E-08	2.21E-09	7.35E-08
380	561630.1	4190974	3.82E-08	3.79E-08	2.36E-09	7.84E-08
381	561639.4	4190977	3.98E-08	3.95E-08	2.46E-09	8.18E-08
382	561648.8	4190979	4.10E-08	4.07E-08	2.54E-09	8.43E-08
383	561658.1	4190982	4.21E-08	4.18E-08	2.60E-09	8.66E-08
384	561667.5	4190984	4.42E-08	4.38E-08	2.73E-09	9.07E-08
385	561599.5	4190976	2.19E-08	2.18E-08	1.36E-09	4.51E-08
386	561608.9	4190979	2.40E-08	2.38E-08	1.48E-09	4.92E-08
387	561618.2	4190981	2.58E-08	2.56E-08	1.60E-09	5.30E-08
388	561627.6	4190984	2.73E-08	2.71E-08	1.69E-09	5.60E-08
389	561636.9	4190986	2.84E-08	2.82E-08	1.76E-09	5.84E-08
390	561646.3	4190989	2.94E-08	2.92E-08	1.82E-09	6.05E-08
391	561655.6	4190991	3.07E-08	3.04E-08	1.89E-09	6.30E-08
392	561665	4190994	3.25E-08	3.23E-08	2.01E-09	6.69E-08
393	561597	4190986	1.73E-08	1.72E-08	1.07E-09	3.55E-08
394	561606.4	4190988	1.85E-08	1.84E-08	1.14E-09	3.80E-08
395	561615.7	4190991	1.96E-08	1.95E-08	1.21E-09	4.03E-08
396	561625.1	4190993	2.06E-08	2.05E-08	1.27E-09	4.23E-08
397	561634.4	4190996	2.14E-08	2.13E-08	1.32E-09	4.40E-08
398	561643.7	4190998	2.22E-08	2.21E-08	1.37E-09	4.57E-08
399	561653.1	4191001	2.32E-08	2.30E-08	1.43E-09	4.77E-08
400	561662.4	4191003	2.45E-08	2.44E-08	1.51E-09	5.04E-08
401	561560.3	4190968	1.34E-08	1.33E-08	8.26E-10	2.74E-08
402	561594.5	4190995	1.41E-08	1.40E-08	8.69E-10	2.89E-08
403	561603.8	4190998	1.49E-08	1.47E-08	9.19E-10	3.05E-08
404	561613.2	4191000	1.56E-08	1.55E-08	9.64E-10	3.20E-08
405	561622.5	4191003	1.63E-08	1.62E-08	1.01E-09	3.34E-08
406	561631.9	4191005	1.69E-08	1.67E-08	1.04E-09	3.46E-08
407	561641.2	4191008	1.75E-08	1.73E-08	1.08E-09	3.59E-08
408	561650.6	4191010	1.82E-08	1.80E-08	1.12E-09	3.73E-08
409	561659.9	4191013	1.90E-08	1.89E-08	1.17E-09	3.90E-08
410	561551.5	4190971	1.14E-08	1.13E-08	7.07E-10	2.35E-08
411	561550.2	4190962	1.22E-08	1.21E-08	7.52E-10	2.50E-08
412	561548.8	4190952	1.28E-08	1.27E-08	7.93E-10	2.63E-08
413	561592	4191005	1.17E-08	1.16E-08	7.25E-10	2.41E-08
414	561601.3	4191007	1.23E-08	1.22E-08	7.59E-10	2.52E-08
415	561610.7	4191010	1.28E-08	1.27E-08	7.90E-10	2.63E-08
416	561620	4191012	1.33E-08	1.32E-08	8.20E-10	2.73E-08
417	561629.4	4191015	1.37E-08	1.36E-08	8.47E-10	2.82E-08
418	561638.7	4191017	1.41E-08	1.40E-08	8.73E-10	2.91E-08
419	561648.1	4191020	1.46E-08	1.45E-08	9.02E-10	3.00E-08
420	561657.4	4191022	1.51E-08	1.50E-08	9.33E-10	3.11E-08

421	561543.1	4190976	9.76E-09	9.69E-09	6.04E-10	2.01E-08
422	561541.8	4190967	1.03E-08	1.03E-08	6.39E-10	2.12E-08
423	561539.2	4190950	1.13E-08	1.12E-08	7.01E-10	2.33E-08
424	561589.4	4191014	9.97E-09	9.90E-09	6.17E-10	2.05E-08
425	561598.8	4191017	1.04E-08	1.03E-08	6.40E-10	2.13E-08
426	561608.1	4191019	1.07E-08	1.06E-08	6.62E-10	2.20E-08
427	561617.5	4191022	1.11E-08	1.10E-08	6.84E-10	2.27E-08
428	561626.8	4191024	1.14E-08	1.13E-08	7.04E-10	2.34E-08
429	561636.2	4191027	1.17E-08	1.16E-08	7.23E-10	2.40E-08
430	561645.5	4191029	1.20E-08	1.19E-08	7.42E-10	2.47E-08
431	561654.9	4191032	1.23E-08	1.22E-08	7.60E-10	2.53E-08
432	561542.9	4190995	8.21E-09	8.15E-09	5.08E-10	1.69E-08
433	561534.7	4190981	8.47E-09	8.41E-09	5.24E-10	1.74E-08
434	561532.1	4190964	9.34E-09	9.27E-09	5.78E-10	1.92E-08
435	561541.1	4191005	7.36E-09	7.31E-09	4.55E-10	1.51E-08
436	561526.3	4190987	7.42E-09	7.37E-09	4.59E-10	1.52E-08
437	561523.8	4190970	8.09E-09	8.03E-09	5.01E-10	1.66E-08
438	561521.2	4190953	8.65E-09	8.59E-09	5.35E-10	1.78E-08
439	561549.6	4191023	6.66E-09	6.62E-09	4.12E-10	1.37E-08
440	561542	4191017	6.64E-09	6.59E-09	4.11E-10	1.36E-08
441	561534.3	4191012	6.57E-09	6.52E-09	4.06E-10	1.35E-08
442	561526.7	4191006	6.45E-09	6.40E-09	3.99E-10	1.32E-08
443	561517.6	4190991	6.61E-09	6.56E-09	4.09E-10	1.36E-08
444	561516.2	4190981	6.92E-09	6.87E-09	4.28E-10	1.42E-08
445	561514.8	4190972	7.21E-09	7.15E-09	4.46E-10	1.48E-08
446	561513.4	4190962	7.46E-09	7.41E-09	4.62E-10	1.53E-08
447	561512	4190953	7.69E-09	7.64E-09	4.76E-10	1.58E-08
448	561510.6	4190943	7.90E-09	7.84E-09	4.89E-10	1.62E-08
449	561572.5	4191041	6.46E-09	6.41E-09	3.99E-10	1.33E-08
450	561581.9	4191043	6.62E-09	6.57E-09	4.09E-10	1.36E-08
451	561591.2	4191045	6.76E-09	6.71E-09	4.18E-10	1.39E-08
452	561600.6	4191048	6.90E-09	6.85E-09	4.26E-10	1.42E-08
453	561609.9	4191050	7.03E-09	6.98E-09	4.34E-10	1.44E-08
454	561619.3	4191053	7.16E-09	7.10E-09	4.42E-10	1.47E-08
455	561628.6	4191055	7.26E-09	7.21E-09	4.48E-10	1.49E-08
456	561638	4191058	7.35E-09	7.29E-09	4.53E-10	1.51E-08
457	561647.3	4191060	7.41E-09	7.36E-09	4.57E-10	1.52E-08
458	561540.3	4191028	5.98E-09	5.94E-09	3.70E-10	1.23E-08
459	561532.9	4191022	5.95E-09	5.91E-09	3.68E-10	1.22E-08
460	561525.4	4191016	5.88E-09	5.84E-09	3.64E-10	1.21E-08
461	561518	4191011	5.78E-09	5.74E-09	3.58E-10	1.19E-08
462	561509.2	4190996	5.90E-09	5.86E-09	3.65E-10	1.21E-08
463	561507.8	4190987	6.15E-09	6.11E-09	3.81E-10	1.26E-08
464	561506.5	4190978	6.38E-09	6.33E-09	3.95E-10	1.31E-08
465	561505.1	4190968	6.58E-09	6.54E-09	4.07E-10	1.35E-08
466	561503.7	4190959	6.76E-09	6.72E-09	4.19E-10	1.39E-08
467	561502.4	4190950	6.95E-09	6.90E-09	4.30E-10	1.43E-08

468	561501	4190941	7.13E-09	7.07E-09	4.41E-10	1.46E-08
469	561570	4191050	5.75E-09	5.71E-09	3.56E-10	1.18E-08
470	561579.4	4191053	5.87E-09	5.83E-09	3.63E-10	1.21E-08
471	561588.7	4191055	5.98E-09	5.94E-09	3.69E-10	1.23E-08
472	561598.1	4191057	6.08E-09	6.04E-09	3.76E-10	1.25E-08
473	561607.4	4191060	6.18E-09	6.13E-09	3.81E-10	1.27E-08
474	561616.8	4191062	6.26E-09	6.22E-09	3.87E-10	1.29E-08
475	561626.1	4191065	6.33E-09	6.29E-09	3.91E-10	1.30E-08
476	561635.4	4191067	6.38E-09	6.34E-09	3.94E-10	1.31E-08
477	561644.8	4191070	6.42E-09	6.37E-09	3.96E-10	1.32E-08
478	561538.4	4191038	5.41E-09	5.37E-09	3.34E-10	1.11E-08
479	561523.9	4191027	5.37E-09	5.33E-09	3.32E-10	1.10E-08
480	561516.6	4191021	5.31E-09	5.27E-09	3.28E-10	1.09E-08
481	561509.4	4191016	5.22E-09	5.19E-09	3.23E-10	1.07E-08
482	561500.8	4191001	5.32E-09	5.28E-09	3.29E-10	1.09E-08
483	561499.4	4190992	5.52E-09	5.49E-09	3.42E-10	1.14E-08
484	561498.1	4190983	5.72E-09	5.68E-09	3.54E-10	1.17E-08
485	561496.8	4190974	5.90E-09	5.86E-09	3.65E-10	1.21E-08
486	561495.4	4190965	6.07E-09	6.03E-09	3.76E-10	1.25E-08
487	561494.1	4190956	6.22E-09	6.18E-09	3.85E-10	1.28E-08
488	561492.7	4190947	6.37E-09	6.33E-09	3.94E-10	1.31E-08
489	561491.4	4190938	6.50E-09	6.45E-09	4.02E-10	1.34E-08
490	561567.5	4191060	5.15E-09	5.12E-09	3.18E-10	1.06E-08
491	561576.8	4191062	5.24E-09	5.21E-09	3.24E-10	1.08E-08
492	561586.2	4191065	5.33E-09	5.29E-09	3.29E-10	1.09E-08
493	561595.5	4191067	5.40E-09	5.36E-09	3.33E-10	1.11E-08
494	561604.9	4191069	5.47E-09	5.43E-09	3.38E-10	1.12E-08
495	561614.2	4191072	5.53E-09	5.49E-09	3.41E-10	1.14E-08
496	561623.6	4191074	5.57E-09	5.53E-09	3.44E-10	1.15E-08
497	561632.9	4191077	5.60E-09	5.56E-09	3.46E-10	1.15E-08
498	561642.3	4191079	5.61E-09	5.57E-09	3.46E-10	1.15E-08
499	561536.4	4191048	4.91E-09	4.87E-09	3.03E-10	1.01E-08
500	561522.2	4191037	4.91E-09	4.88E-09	3.04E-10	1.01E-08
501	561515.1	4191031	4.88E-09	4.84E-09	3.02E-10	1.00E-08
502	561500.8	4191021	4.75E-09	4.71E-09	2.94E-10	9.75E-09
503	561492.3	4191006	4.82E-09	4.79E-09	2.98E-10	9.91E-09
504	561489.7	4190989	5.17E-09	5.13E-09	3.20E-10	1.06E-08
505	561488.4	4190980	5.33E-09	5.29E-09	3.30E-10	1.09E-08
506	561485.8	4190962	5.62E-09	5.58E-09	3.48E-10	1.15E-08
507	561484.4	4190953	5.75E-09	5.70E-09	3.56E-10	1.18E-08
508	561481.8	4190936	5.95E-09	5.91E-09	3.68E-10	1.22E-08
509	561574.3	4191072	4.71E-09	4.68E-09	2.91E-10	9.67E-09
510	561583.7	4191074	4.77E-09	4.74E-09	2.95E-10	9.80E-09
511	561593	4191077	4.83E-09	4.79E-09	2.98E-10	9.92E-09
512	561602.4	4191079	4.87E-09	4.84E-09	3.01E-10	1.00E-08
513	561611.7	4191081	4.91E-09	4.87E-09	3.03E-10	1.01E-08
514	561621.1	4191084	4.94E-09	4.90E-09	3.05E-10	1.01E-08

515	561630.4	4191086	4.95E-09	4.91E-09	3.05E-10	1.02E-08
516	561639.8	4191089	4.95E-09	4.91E-09	3.06E-10	1.02E-08
517	561527.3	4191052	4.49E-09	4.46E-09	2.78E-10	9.23E-09
518	561513.3	4191041	4.48E-09	4.45E-09	2.77E-10	9.22E-09
519	561499.2	4191031	4.40E-09	4.37E-09	2.72E-10	9.04E-09
520	561483.9	4191012	4.40E-09	4.37E-09	2.72E-10	9.03E-09
521	561481.3	4190994	4.70E-09	4.66E-09	2.91E-10	9.65E-09
522	561478.7	4190977	4.97E-09	4.93E-09	3.07E-10	1.02E-08
523	561476.1	4190959	5.21E-09	5.18E-09	3.23E-10	1.07E-08
524	561473.5	4190942	5.40E-09	5.36E-09	3.34E-10	1.11E-08
525	561571.8	4191081	4.25E-09	4.22E-09	2.63E-10	8.74E-09
526	561581.2	4191084	4.30E-09	4.27E-09	2.65E-10	8.83E-09
527	561590.5	4191086	4.33E-09	4.30E-09	2.68E-10	8.90E-09
528	561599.8	4191089	4.36E-09	4.33E-09	2.69E-10	8.96E-09
529	561609.2	4191091	4.38E-09	4.35E-09	2.71E-10	9.01E-09
530	561618.5	4191093	4.40E-09	4.37E-09	2.72E-10	9.04E-09
531	561627.9	4191096	4.40E-09	4.37E-09	2.72E-10	9.05E-09
532	561637.2	4191098	4.40E-09	4.37E-09	2.71E-10	9.04E-09
533	561529.7	4191065	4.10E-09	4.07E-09	2.53E-10	8.42E-09
534	561522.1	4191060	4.12E-09	4.10E-09	2.55E-10	8.48E-09
535	561514.5	4191054	4.13E-09	4.10E-09	2.56E-10	8.49E-09
536	561507	4191048	4.12E-09	4.09E-09	2.55E-10	8.47E-09
537	561499.4	4191042	4.09E-09	4.06E-09	2.53E-10	8.41E-09
538	561491.9	4191037	4.04E-09	4.01E-09	2.50E-10	8.30E-09
539	561484.3	4191031	3.97E-09	3.94E-09	2.45E-10	8.15E-09
540	561475.3	4191016	4.04E-09	4.01E-09	2.50E-10	8.29E-09
541	561473.9	4191007	4.18E-09	4.15E-09	2.59E-10	8.59E-09
542	561472.5	4190997	4.32E-09	4.29E-09	2.67E-10	8.88E-09
543	561471.1	4190988	4.45E-09	4.42E-09	2.76E-10	9.15E-09
544	561469.7	4190978	4.58E-09	4.55E-09	2.83E-10	9.41E-09
545	561468.3	4190969	4.70E-09	4.66E-09	2.91E-10	9.65E-09
546	561467	4190960	4.81E-09	4.77E-09	2.97E-10	9.88E-09
547	561465.6	4190950	4.90E-09	4.86E-09	3.03E-10	1.01E-08
548	561464.2	4190941	4.98E-09	4.94E-09	3.08E-10	1.02E-08
549	561462.8	4190932	5.05E-09	5.01E-09	3.12E-10	1.04E-08
550	561559.9	4191088	3.82E-09	3.80E-09	2.36E-10	7.85E-09
551	561569.3	4191091	3.86E-09	3.83E-09	2.38E-10	7.93E-09
552	561578.6	4191093	3.89E-09	3.86E-09	2.40E-10	7.99E-09
553	561588	4191096	3.91E-09	3.88E-09	2.42E-10	8.04E-09
554	561597.3	4191098	3.93E-09	3.90E-09	2.43E-10	8.07E-09
555	561606.7	4191101	3.94E-09	3.91E-09	2.43E-10	8.09E-09
556	561616	4191103	3.95E-09	3.92E-09	2.44E-10	8.11E-09
557	561625.4	4191105	3.94E-09	3.92E-09	2.43E-10	8.10E-09
558	561634.7	4191108	3.93E-09	3.91E-09	2.43E-10	8.08E-09
559	561527.7	4191075	3.76E-09	3.73E-09	2.32E-10	7.73E-09
560	561520.3	4191070	3.79E-09	3.77E-09	2.34E-10	7.79E-09
561	561512.8	4191064	3.81E-09	3.78E-09	2.36E-10	7.83E-09

562	561505.4	4191058	3.81E-09	3.79E-09	2.36E-10	7.83E-09
563	561498	4191053	3.80E-09	3.77E-09	2.35E-10	7.80E-09
564	561490.6	4191047	3.76E-09	3.73E-09	2.33E-10	7.73E-09
565	561483.1	4191042	3.71E-09	3.69E-09	2.30E-10	7.63E-09
566	561475.7	4191036	3.65E-09	3.62E-09	2.26E-10	7.50E-09
567	561466.9	4191021	3.72E-09	3.69E-09	2.30E-10	7.65E-09
568	561465.5	4191012	3.85E-09	3.82E-09	2.38E-10	7.91E-09
569	561464.1	4191003	3.97E-09	3.94E-09	2.45E-10	8.15E-09
570	561462.8	4190993	4.08E-09	4.05E-09	2.52E-10	8.38E-09
571	561461.4	4190984	4.19E-09	4.16E-09	2.59E-10	8.60E-09
572	561460	4190975	4.29E-09	4.26E-09	2.65E-10	8.81E-09
573	561458.7	4190966	4.39E-09	4.35E-09	2.71E-10	9.01E-09
574	561457.3	4190957	4.47E-09	4.44E-09	2.77E-10	9.19E-09
575	561455.9	4190947	4.55E-09	4.52E-09	2.82E-10	9.35E-09
576	561454.5	4190938	4.62E-09	4.59E-09	2.86E-10	9.50E-09
577	561453.2	4190929	4.69E-09	4.65E-09	2.90E-10	9.63E-09
578	561557.4	4191098	3.50E-09	3.47E-09	2.16E-10	7.18E-09
579	561566.8	4191100	3.52E-09	3.49E-09	2.17E-10	7.23E-09
580	561576.1	4191103	3.54E-09	3.51E-09	2.19E-10	7.27E-09
581	561585.5	4191105	3.55E-09	3.52E-09	2.19E-10	7.29E-09
582	561594.8	4191108	3.55E-09	3.53E-09	2.19E-10	7.30E-09
583	561604.2	4191110	3.56E-09	3.54E-09	2.20E-10	7.32E-09
584	561613.5	4191112	3.56E-09	3.54E-09	2.20E-10	7.32E-09
585	561622.8	4191115	3.56E-09	3.53E-09	2.20E-10	7.31E-09
586	561632.2	4191117	3.54E-09	3.52E-09	2.19E-10	7.28E-09
587	561525.6	4191085	3.46E-09	3.43E-09	2.14E-10	7.11E-09
588	561518.3	4191080	3.50E-09	3.47E-09	2.16E-10	7.18E-09
589	561511	4191074	3.52E-09	3.49E-09	2.18E-10	7.23E-09
590	561503.7	4191068	3.53E-09	3.51E-09	2.18E-10	7.25E-09
591	561496.4	4191063	3.53E-09	3.51E-09	2.18E-10	7.25E-09
592	561489.1	4191057	3.51E-09	3.49E-09	2.17E-10	7.22E-09
593	561481.7	4191052	3.48E-09	3.45E-09	2.15E-10	7.15E-09
594	561474.4	4191046	3.43E-09	3.40E-09	2.12E-10	7.04E-09
595	561467.1	4191041	3.38E-09	3.36E-09	2.09E-10	6.95E-09
596	561458.4	4191026	3.45E-09	3.42E-09	2.13E-10	7.09E-09
597	561457.1	4191017	3.56E-09	3.53E-09	2.20E-10	7.32E-09
598	561455.7	4191008	3.66E-09	3.64E-09	2.27E-10	7.53E-09
599	561454.4	4190999	3.76E-09	3.73E-09	2.33E-10	7.72E-09
600	561453	4190990	3.85E-09	3.82E-09	2.38E-10	7.91E-09
601	561451.7	4190981	3.94E-09	3.91E-09	2.44E-10	8.09E-09
602	561450.3	4190972	4.02E-09	3.99E-09	2.49E-10	8.26E-09
603	561449	4190963	4.10E-09	4.07E-09	2.54E-10	8.43E-09
604	561447.6	4190954	4.17E-09	4.14E-09	2.58E-10	8.58E-09
605	561446.3	4190945	4.24E-09	4.21E-09	2.62E-10	8.71E-09
606	561554.9	4191107	3.21E-09	3.18E-09	1.98E-10	6.59E-09
607	561564.2	4191110	3.22E-09	3.20E-09	1.99E-10	6.62E-09
608	561573.6	4191112	3.23E-09	3.21E-09	2.00E-10	6.64E-09

609	561582.9	4191115	3.24E-09	3.22E-09	2.00E-10	6.65E-09
610	561592.3	4191117	3.24E-09	3.22E-09	2.00E-10	6.65E-09
611	561601.6	4191120	3.24E-09	3.22E-09	2.00E-10	6.65E-09
612	561611	4191122	3.23E-09	3.21E-09	2.00E-10	6.64E-09
613	561620.3	4191124	3.22E-09	3.20E-09	1.99E-10	6.63E-09
614	561629.7	4191127	3.21E-09	3.19E-09	1.98E-10	6.59E-09
615	561523.5	4191095	3.19E-09	3.17E-09	1.97E-10	6.56E-09
616	561509.1	4191084	3.26E-09	3.23E-09	2.01E-10	6.69E-09
617	561501.9	4191079	3.28E-09	3.25E-09	2.03E-10	6.73E-09
618	561494.6	4191073	3.29E-09	3.26E-09	2.03E-10	6.75E-09
619	561487.4	4191068	3.28E-09	3.26E-09	2.03E-10	6.75E-09
620	561473	4191057	3.23E-09	3.21E-09	2.00E-10	6.64E-09
621	561465.8	4191051	3.19E-09	3.17E-09	1.97E-10	6.56E-09
622	561458.6	4191046	3.15E-09	3.13E-09	1.95E-10	6.47E-09
623	561450	4191031	3.21E-09	3.18E-09	1.98E-10	6.59E-09
624	561448.7	4191022	3.31E-09	3.28E-09	2.04E-10	6.79E-09
625	561447.3	4191014	3.40E-09	3.37E-09	2.10E-10	6.98E-09
626	561446	4191005	3.48E-09	3.46E-09	2.15E-10	7.15E-09
627	561444.7	4190996	3.56E-09	3.53E-09	2.20E-10	7.31E-09
628	561442	4190978	3.70E-09	3.68E-09	2.29E-10	7.61E-09
629	561440.7	4190969	3.78E-09	3.75E-09	2.34E-10	7.76E-09
630	561439.3	4190960	3.85E-09	3.82E-09	2.38E-10	7.90E-09
631	561552.4	4191117	2.95E-09	2.93E-09	1.82E-10	6.07E-09
632	561561.7	4191119	2.96E-09	2.94E-09	1.83E-10	6.09E-09
633	561571.1	4191122	2.97E-09	2.95E-09	1.83E-10	6.10E-09
634	561580.4	4191124	2.97E-09	2.95E-09	1.83E-10	6.10E-09
635	561589.8	4191127	2.96E-09	2.94E-09	1.83E-10	6.09E-09
636	561599.1	4191129	2.96E-09	2.94E-09	1.83E-10	6.08E-09
637	561608.5	4191132	2.95E-09	2.93E-09	1.82E-10	6.06E-09
638	561617.8	4191134	2.94E-09	2.92E-09	1.81E-10	6.04E-09
639	561627.2	4191136	2.92E-09	2.90E-09	1.80E-10	6.00E-09
640	561526.9	4191109	2.92E-09	2.90E-09	1.80E-10	5.99E-09
641	561519.3	4191103	2.96E-09	2.94E-09	1.83E-10	6.09E-09
642	561511.6	4191097	3.00E-09	2.98E-09	1.86E-10	6.17E-09
643	561504	4191092	3.03E-09	3.01E-09	1.87E-10	6.23E-09
644	561496.4	4191086	3.05E-09	3.03E-09	1.89E-10	6.28E-09
645	561488.7	4191080	3.07E-09	3.05E-09	1.90E-10	6.30E-09
646	561481.1	4191074	3.07E-09	3.05E-09	1.90E-10	6.31E-09
647	561473.4	4191068	3.05E-09	3.03E-09	1.89E-10	6.28E-09
648	561465.8	4191063	3.02E-09	3.00E-09	1.87E-10	6.21E-09
649	561458.2	4191057	2.99E-09	2.97E-09	1.85E-10	6.14E-09
650	561450.5	4191051	2.95E-09	2.93E-09	1.82E-10	6.05E-09
651	561441.5	4191036	3.00E-09	2.98E-09	1.85E-10	6.16E-09
652	561440.1	4191026	3.09E-09	3.07E-09	1.91E-10	6.35E-09
653	561438.6	4191017	3.18E-09	3.15E-09	1.97E-10	6.53E-09
654	561437.2	4191007	3.25E-09	3.23E-09	2.01E-10	6.69E-09
655	561435.8	4190998	3.33E-09	3.30E-09	2.06E-10	6.84E-09

656	561434.4	4190989	3.40E-09	3.37E-09	2.10E-10	6.98E-09
657	561433	4190979	3.47E-09	3.44E-09	2.15E-10	7.12E-09
658	561549.9	4191126	2.73E-09	2.71E-09	1.68E-10	5.60E-09
659	561559.2	4191129	2.73E-09	2.71E-09	1.69E-10	5.61E-09
660	561568.5	4191131	2.73E-09	2.71E-09	1.69E-10	5.61E-09
661	561577.9	4191134	2.73E-09	2.71E-09	1.69E-10	5.61E-09
662	561587.2	4191136	2.72E-09	2.70E-09	1.68E-10	5.59E-09
663	561596.6	4191139	2.71E-09	2.69E-09	1.67E-10	5.57E-09
664	561605.9	4191141	2.70E-09	2.68E-09	1.67E-10	5.55E-09
665	561615.3	4191144	2.69E-09	2.67E-09	1.66E-10	5.52E-09
666	561624.6	4191146	2.67E-09	2.65E-09	1.65E-10	5.49E-09
667	561517.2	4191113	2.75E-09	2.73E-09	1.70E-10	5.65E-09
668	561509.7	4191107	2.79E-09	2.77E-09	1.72E-10	5.73E-09
669	561502.2	4191102	2.82E-09	2.80E-09	1.74E-10	5.79E-09
670	561494.6	4191096	2.85E-09	2.83E-09	1.76E-10	5.85E-09
671	561487.1	4191090	2.86E-09	2.84E-09	1.77E-10	5.89E-09
672	561479.6	4191085	2.87E-09	2.85E-09	1.78E-10	5.91E-09
673	561472	4191079	2.87E-09	2.85E-09	1.78E-10	5.90E-09
674	561464.5	4191073	2.85E-09	2.83E-09	1.76E-10	5.86E-09
675	561457	4191067	2.83E-09	2.81E-09	1.75E-10	5.81E-09
676	561449.5	4191062	2.79E-09	2.77E-09	1.73E-10	5.74E-09
677	561441.9	4191056	2.76E-09	2.74E-09	1.70E-10	5.66E-09
678	561433	4191041	2.80E-09	2.78E-09	1.73E-10	5.75E-09
679	561431.6	4191032	2.88E-09	2.86E-09	1.78E-10	5.91E-09
680	561430.2	4191022	2.96E-09	2.94E-09	1.83E-10	6.07E-09
681	561428.8	4191013	3.03E-09	3.01E-09	1.87E-10	6.22E-09
682	561427.5	4191004	3.10E-09	3.07E-09	1.92E-10	6.36E-09
683	561426.1	4190994	3.16E-09	3.14E-09	1.96E-10	6.49E-09
684	561424.7	4190985	3.22E-09	3.20E-09	1.99E-10	6.62E-09
685	561547.3	4191136	2.53E-09	2.51E-09	1.56E-10	5.19E-09
686	561556.7	4191138	2.53E-09	2.51E-09	1.56E-10	5.19E-09
687	561566	4191141	2.52E-09	2.51E-09	1.56E-10	5.19E-09
688	561575.4	4191143	2.52E-09	2.50E-09	1.56E-10	5.17E-09
689	561584.7	4191146	2.51E-09	2.49E-09	1.55E-10	5.15E-09
690	561594.1	4191148	2.50E-09	2.48E-09	1.54E-10	5.13E-09
691	561603.4	4191151	2.48E-09	2.47E-09	1.53E-10	5.10E-09
692	561612.8	4191153	2.47E-09	2.45E-09	1.53E-10	5.07E-09
693	561622.1	4191156	2.45E-09	2.44E-09	1.51E-10	5.04E-09
694	561515.1	4191123	2.55E-09	2.54E-09	1.58E-10	5.25E-09
695	561507.7	4191117	2.59E-09	2.57E-09	1.60E-10	5.33E-09
696	561500.2	4191112	2.63E-09	2.61E-09	1.62E-10	5.40E-09
697	561492.8	4191106	2.66E-09	2.64E-09	1.64E-10	5.46E-09
698	561485.4	4191100	2.68E-09	2.66E-09	1.66E-10	5.50E-09
699	561477.9	4191095	2.69E-09	2.67E-09	1.66E-10	5.53E-09
700	561470.5	4191089	2.70E-09	2.68E-09	1.67E-10	5.54E-09
701	561463.1	4191083	2.69E-09	2.67E-09	1.66E-10	5.52E-09
702	561455.7	4191078	2.67E-09	2.65E-09	1.65E-10	5.49E-09

703	561448.2	4191072	2.64E-09	2.63E-09	1.64E-10	5.43E-09
704	561440.8	4191067	2.62E-09	2.60E-09	1.62E-10	5.37E-09
705	561433.4	4191061	2.58E-09	2.56E-09	1.60E-10	5.31E-09
706	561424.6	4191046	2.62E-09	2.60E-09	1.62E-10	5.38E-09
707	561423.2	4191037	2.69E-09	2.67E-09	1.66E-10	5.53E-09
708	561421.8	4191028	2.76E-09	2.74E-09	1.71E-10	5.67E-09
709	561420.5	4191019	2.83E-09	2.81E-09	1.75E-10	5.81E-09
710	561419.1	4191009	2.89E-09	2.87E-09	1.79E-10	5.93E-09
711	561417.7	4191000	2.95E-09	2.93E-09	1.82E-10	6.06E-09
712	561416.3	4190991	3.00E-09	2.98E-09	1.86E-10	6.17E-09
713	561415	4190982	3.06E-09	3.04E-09	1.89E-10	6.29E-09
714	561544.8	4191145	2.34E-09	2.33E-09	1.45E-10	4.82E-09
715	561554.2	4191148	2.34E-09	2.33E-09	1.45E-10	4.81E-09
716	561563.5	4191150	2.34E-09	2.32E-09	1.44E-10	4.80E-09
717	561572.9	4191153	2.33E-09	2.31E-09	1.44E-10	4.79E-09
718	561582.2	4191155	2.32E-09	2.30E-09	1.43E-10	4.76E-09
719	561591.5	4191158	2.31E-09	2.29E-09	1.42E-10	4.74E-09
720	561600.9	4191160	2.29E-09	2.28E-09	1.42E-10	4.71E-09
721	561610.2	4191163	2.28E-09	2.26E-09	1.41E-10	4.68E-09
722	561619.6	4191165	2.26E-09	2.24E-09	1.40E-10	4.64E-09
723	561512.9	4191133	2.38E-09	2.36E-09	1.47E-10	4.89E-09
724	561505.6	4191127	2.42E-09	2.40E-09	1.49E-10	4.96E-09
725	561498.2	4191121	2.45E-09	2.43E-09	1.52E-10	5.04E-09
726	561490.9	4191116	2.48E-09	2.46E-09	1.53E-10	5.10E-09
727	561483.6	4191110	2.51E-09	2.49E-09	1.55E-10	5.15E-09
728	561476.2	4191105	2.52E-09	2.51E-09	1.56E-10	5.19E-09
729	561468.9	4191099	2.53E-09	2.51E-09	1.56E-10	5.20E-09
730	561461.5	4191094	2.53E-09	2.51E-09	1.56E-10	5.19E-09
731	561454.2	4191088	2.52E-09	2.50E-09	1.56E-10	5.17E-09
732	561446.8	4191083	2.50E-09	2.48E-09	1.55E-10	5.14E-09
733	561439.5	4191077	2.48E-09	2.46E-09	1.53E-10	5.10E-09
734	561432.2	4191072	2.46E-09	2.44E-09	1.52E-10	5.05E-09
735	561424.8	4191066	2.43E-09	2.41E-09	1.50E-10	4.98E-09
736	561416.1	4191051	2.46E-09	2.44E-09	1.52E-10	5.05E-09
737	561414.8	4191042	2.52E-09	2.50E-09	1.56E-10	5.18E-09
738	561413.4	4191033	2.58E-09	2.57E-09	1.60E-10	5.31E-09
739	561412.1	4191024	2.64E-09	2.63E-09	1.64E-10	5.43E-09
740	561410.7	4191015	2.70E-09	2.68E-09	1.67E-10	5.55E-09
741	561409.3	4191006	2.76E-09	2.74E-09	1.71E-10	5.66E-09
742	561408	4190997	2.81E-09	2.79E-09	1.74E-10	5.77E-09
743	561542.3	4191155	2.18E-09	2.17E-09	1.35E-10	4.48E-09
744	561551.6	4191157	2.18E-09	2.16E-09	1.35E-10	4.48E-09
745	561561	4191160	2.17E-09	2.16E-09	1.34E-10	4.46E-09
746	561570.3	4191162	2.16E-09	2.15E-09	1.34E-10	4.44E-09
747	561579.7	4191165	2.15E-09	2.14E-09	1.33E-10	4.42E-09
748	561589	4191167	2.14E-09	2.12E-09	1.32E-10	4.39E-09
749	561598.4	4191170	2.12E-09	2.11E-09	1.31E-10	4.36E-09

750	561607.7	4191172	2.11E-09	2.09E-09	1.30E-10	4.33E-09
751	561617.1	4191175	2.09E-09	2.08E-09	1.29E-10	4.30E-09
752	561516.7	4191147	2.19E-09	2.17E-09	1.35E-10	4.49E-09
753	561509	4191141	2.23E-09	2.21E-09	1.38E-10	4.58E-09
754	561501.3	4191135	2.27E-09	2.25E-09	1.40E-10	4.66E-09
755	561493.6	4191129	2.30E-09	2.29E-09	1.42E-10	4.73E-09
756	561478.2	4191118	2.36E-09	2.34E-09	1.46E-10	4.85E-09
757	561470.5	4191112	2.37E-09	2.36E-09	1.47E-10	4.88E-09
758	561462.9	4191106	2.38E-09	2.36E-09	1.47E-10	4.89E-09
759	561455.2	4191100	2.38E-09	2.36E-09	1.47E-10	4.88E-09
760	561447.5	4191095	2.37E-09	2.35E-09	1.46E-10	4.87E-09
761	561439.8	4191089	2.36E-09	2.34E-09	1.46E-10	4.84E-09
762	561432.1	4191083	2.34E-09	2.32E-09	1.45E-10	4.80E-09
763	561424.4	4191077	2.31E-09	2.30E-09	1.43E-10	4.76E-09
764	561416.7	4191071	2.29E-09	2.27E-09	1.41E-10	4.70E-09
765	561407.6	4191056	2.32E-09	2.30E-09	1.43E-10	4.76E-09
766	561406.2	4191046	2.38E-09	2.36E-09	1.47E-10	4.89E-09
767	561404.8	4191037	2.44E-09	2.42E-09	1.51E-10	5.01E-09
768	561403.3	4191027	2.50E-09	2.48E-09	1.54E-10	5.13E-09
769	561401.9	4191018	2.55E-09	2.53E-09	1.58E-10	5.24E-09
770	561539.8	4191164	2.04E-09	2.02E-09	1.26E-10	4.18E-09
771	561549.1	4191167	2.03E-09	2.02E-09	1.25E-10	4.17E-09
772	561558.5	4191169	2.02E-09	2.01E-09	1.25E-10	4.16E-09
773	561567.8	4191172	2.01E-09	2.00E-09	1.24E-10	4.13E-09
774	561577.2	4191174	2.00E-09	1.99E-09	1.24E-10	4.11E-09
775	561586.5	4191177	1.99E-09	1.97E-09	1.23E-10	4.08E-09
776	561595.9	4191179	1.97E-09	1.96E-09	1.22E-10	4.05E-09
777	561605.2	4191182	1.96E-09	1.94E-09	1.21E-10	4.02E-09
778	561506.9	4191151	2.08E-09	2.07E-09	1.29E-10	4.28E-09
779	561499.3	4191145	2.12E-09	2.11E-09	1.31E-10	4.36E-09
780	561491.7	4191139	2.16E-09	2.14E-09	1.33E-10	4.43E-09
781	561484.1	4191134	2.19E-09	2.17E-09	1.35E-10	4.50E-09
782	561476.5	4191128	2.21E-09	2.20E-09	1.37E-10	4.55E-09
783	561468.9	4191122	2.23E-09	2.22E-09	1.38E-10	4.59E-09
784	561461.3	4191116	2.24E-09	2.23E-09	1.39E-10	4.61E-09
785	561453.7	4191111	2.24E-09	2.23E-09	1.39E-10	4.61E-09
786	561446.1	4191105	2.24E-09	2.22E-09	1.38E-10	4.60E-09
787	561438.5	4191099	2.23E-09	2.22E-09	1.38E-10	4.59E-09
788	561430.9	4191093	2.22E-09	2.21E-09	1.38E-10	4.57E-09
789	561423.3	4191088	2.21E-09	2.19E-09	1.37E-10	4.54E-09
790	561415.7	4191082	2.18E-09	2.17E-09	1.35E-10	4.49E-09
791	561408.1	4191076	2.16E-09	2.14E-09	1.34E-10	4.44E-09
792	561397.7	4191052	2.25E-09	2.23E-09	1.39E-10	4.61E-09
793	561396.3	4191042	2.30E-09	2.28E-09	1.42E-10	4.72E-09
794	561537.2	4191174	1.90E-09	1.89E-09	1.18E-10	3.91E-09
795	561546.6	4191176	1.90E-09	1.88E-09	1.17E-10	3.90E-09
796	561555.9	4191179	1.89E-09	1.87E-09	1.17E-10	3.88E-09

797	561565.3	4191181	1.88E-09	1.86E-09	1.16E-10	3.86E-09
798	561574.6	4191184	1.86E-09	1.85E-09	1.15E-10	3.83E-09
799	561584	4191186	1.85E-09	1.84E-09	1.14E-10	3.80E-09
800	561593.3	4191189	1.84E-09	1.82E-09	1.13E-10	3.77E-09
801	561602.7	4191191	1.82E-09	1.81E-09	1.12E-10	3.74E-09
802	561504.7	4191161	1.95E-09	1.94E-09	1.21E-10	4.01E-09
803	561497.2	4191155	1.99E-09	1.98E-09	1.23E-10	4.09E-09
804	561489.7	4191149	2.02E-09	2.01E-09	1.25E-10	4.16E-09
805	561482.2	4191144	2.05E-09	2.04E-09	1.27E-10	4.22E-09
806	561474.7	4191138	2.08E-09	2.07E-09	1.29E-10	4.28E-09
807	561467.2	4191132	2.10E-09	2.09E-09	1.30E-10	4.32E-09
808	561459.7	4191127	2.12E-09	2.10E-09	1.31E-10	4.35E-09
809	561452.1	4191121	2.12E-09	2.11E-09	1.31E-10	4.36E-09
810	561444.6	4191115	2.12E-09	2.11E-09	1.31E-10	4.36E-09
811	561437.1	4191110	2.12E-09	2.10E-09	1.31E-10	4.36E-09
812	561429.6	4191104	2.11E-09	2.10E-09	1.31E-10	4.34E-09
813	561422.1	4191098	2.10E-09	2.09E-09	1.30E-10	4.32E-09
814	561414.6	4191093	2.09E-09	2.07E-09	1.29E-10	4.29E-09
815	561407.1	4191087	2.07E-09	2.05E-09	1.28E-10	4.25E-09
816	561517.3	4191182	1.76E-09	1.74E-09	1.09E-10	3.61E-09
817	561502.5	4191170	1.83E-09	1.82E-09	1.13E-10	3.76E-09
818	561495.1	4191165	1.87E-09	1.85E-09	1.15E-10	3.84E-09
819	561487.6	4191159	1.90E-09	1.89E-09	1.18E-10	3.91E-09
820	561480.2	4191154	1.93E-09	1.92E-09	1.19E-10	3.97E-09
821	561472.8	4191148	1.96E-09	1.94E-09	1.21E-10	4.02E-09
822	561465.3	4191142	1.98E-09	1.97E-09	1.22E-10	4.07E-09
823	561457.9	4191137	2.00E-09	1.99E-09	1.24E-10	4.11E-09
824	561450.5	4191131	2.01E-09	2.00E-09	1.24E-10	4.13E-09
825	561443.1	4191125	2.02E-09	2.00E-09	1.25E-10	4.14E-09
826	561435.6	4191120	2.02E-09	2.00E-09	1.25E-10	4.14E-09
827	561428.2	4191114	2.01E-09	2.00E-09	1.24E-10	4.13E-09
828	561420.8	4191109	2.01E-09	1.99E-09	1.24E-10	4.12E-09
829	561413.3	4191103	2.00E-09	1.98E-09	1.23E-10	4.10E-09
830	561405.9	4191097	1.98E-09	1.97E-09	1.22E-10	4.07E-09
831	561398.5	4191092	1.96E-09	1.95E-09	1.21E-10	4.03E-09
832	561522.3	4191197	1.61E-09	1.60E-09	9.97E-11	3.31E-09
833	561515	4191191	1.65E-09	1.64E-09	1.02E-10	3.39E-09
834	561507.6	4191186	1.69E-09	1.68E-09	1.04E-10	3.47E-09
835	561500.3	4191180	1.72E-09	1.71E-09	1.06E-10	3.54E-09
836	561492.9	4191175	1.76E-09	1.74E-09	1.09E-10	3.61E-09
837	561485.5	4191169	1.79E-09	1.78E-09	1.11E-10	3.68E-09
838	561478.2	4191163	1.82E-09	1.81E-09	1.12E-10	3.74E-09
839	561470.8	4191158	1.85E-09	1.83E-09	1.14E-10	3.79E-09
840	561463.5	4191152	1.87E-09	1.85E-09	1.15E-10	3.84E-09
841	561456.1	4191147	1.89E-09	1.87E-09	1.17E-10	3.88E-09
842	561448.7	4191141	1.90E-09	1.89E-09	1.18E-10	3.91E-09
843	561441.4	4191136	1.91E-09	1.90E-09	1.18E-10	3.93E-09

844	561434	4191130	1.92E-09	1.90E-09	1.18E-10	3.93E-09
845	561426.7	4191124	1.91E-09	1.90E-09	1.18E-10	3.93E-09
846	561419.3	4191119	1.91E-09	1.90E-09	1.18E-10	3.92E-09
847	561412	4191113	1.90E-09	1.89E-09	1.18E-10	3.91E-09
848	561404.6	4191108	1.89E-09	1.88E-09	1.17E-10	3.89E-09
849	561397.2	4191102	1.88E-09	1.87E-09	1.16E-10	3.86E-09
850	561529.7	4191202	1.57E-09	1.56E-09	9.73E-11	3.24E-09
851	561539	4191205	1.57E-09	1.56E-09	9.68E-11	3.22E-09
852	561548.4	4191207	1.56E-09	1.55E-09	9.61E-11	3.20E-09
853	561557.7	4191210	1.55E-09	1.53E-09	9.54E-11	3.17E-09
854	561567.1	4191212	1.53E-09	1.52E-09	9.46E-11	3.15E-09
855	561576.4	4191215	1.52E-09	1.51E-09	9.38E-11	3.12E-09
856	561585.8	4191217	1.51E-09	1.49E-09	9.30E-11	3.09E-09
857	561595.1	4191220	1.49E-09	1.48E-09	9.21E-11	3.06E-09
858	561604.5	4191222	1.48E-09	1.47E-09	9.13E-11	3.04E-09
859	561519.5	4191206	1.52E-09	1.51E-09	9.40E-11	3.13E-09
860	561511.9	4191200	1.56E-09	1.55E-09	9.63E-11	3.20E-09
861	561504.2	4191195	1.59E-09	1.58E-09	9.85E-11	3.27E-09
862	561496.6	4191189	1.63E-09	1.62E-09	1.01E-10	3.35E-09
863	561489	4191183	1.66E-09	1.65E-09	1.03E-10	3.42E-09
864	561481.3	4191177	1.69E-09	1.68E-09	1.05E-10	3.48E-09
865	561473.7	4191171	1.72E-09	1.71E-09	1.07E-10	3.54E-09
866	561466	4191166	1.75E-09	1.74E-09	1.08E-10	3.60E-09
867	561458.4	4191160	1.77E-09	1.76E-09	1.10E-10	3.64E-09
868	561450.8	4191154	1.79E-09	1.78E-09	1.11E-10	3.68E-09
869	561435.5	4191143	1.82E-09	1.80E-09	1.12E-10	3.73E-09
870	561427.8	4191137	1.82E-09	1.81E-09	1.13E-10	3.74E-09
871	561420.2	4191131	1.82E-09	1.81E-09	1.12E-10	3.74E-09
872	561412.5	4191125	1.82E-09	1.80E-09	1.12E-10	3.73E-09
873	561404.9	4191119	1.81E-09	1.80E-09	1.12E-10	3.72E-09
874	561397.3	4191114	1.80E-09	1.79E-09	1.11E-10	3.70E-09
875	561527.2	4191212	1.48E-09	1.47E-09	9.16E-11	3.05E-09
876	561536.5	4191214	1.48E-09	1.46E-09	9.11E-11	3.03E-09
877	561545.9	4191217	1.47E-09	1.45E-09	9.05E-11	3.01E-09
878	561555.2	4191219	1.45E-09	1.44E-09	8.98E-11	2.99E-09
879	561564.6	4191222	1.44E-09	1.43E-09	8.90E-11	2.96E-09
880	561573.9	4191224	1.43E-09	1.42E-09	8.82E-11	2.94E-09
881	561583.2	4191227	1.42E-09	1.41E-09	8.74E-11	2.91E-09
882	561592.6	4191229	1.40E-09	1.39E-09	8.65E-11	2.88E-09
883	561601.9	4191232	1.39E-09	1.38E-09	8.58E-11	2.85E-09
884	561517.1	4191216	1.43E-09	1.42E-09	8.86E-11	2.95E-09
885	561509.5	4191210	1.47E-09	1.46E-09	9.08E-11	3.02E-09
886	561502	4191204	1.50E-09	1.49E-09	9.29E-11	3.09E-09
887	561494.4	4191198	1.54E-09	1.53E-09	9.50E-11	3.16E-09
888	561486.8	4191193	1.57E-09	1.56E-09	9.69E-11	3.22E-09
889	561479.3	4191187	1.60E-09	1.59E-09	9.88E-11	3.29E-09
890	561471.7	4191181	1.63E-09	1.62E-09	1.01E-10	3.34E-09

891	561464.1	4191176	1.65E-09	1.64E-09	1.02E-10	3.40E-09
892	561456.6	4191170	1.68E-09	1.66E-09	1.04E-10	3.44E-09
893	561449	4191164	1.70E-09	1.68E-09	1.05E-10	3.49E-09
894	561441.4	4191158	1.71E-09	1.70E-09	1.06E-10	3.52E-09
895	561433.9	4191153	1.72E-09	1.71E-09	1.07E-10	3.54E-09
896	561426.3	4191147	1.73E-09	1.72E-09	1.07E-10	3.55E-09
897	561418.7	4191141	1.73E-09	1.72E-09	1.07E-10	3.56E-09
898	561411.2	4191136	1.73E-09	1.72E-09	1.07E-10	3.55E-09
899	561403.6	4191130	1.73E-09	1.71E-09	1.07E-10	3.55E-09
900	561396.1	4191124	1.72E-09	1.71E-09	1.06E-10	3.54E-09
901	561388.5	4191118	1.71E-09	1.70E-09	1.06E-10	3.52E-09
902	561524.6	4191221	1.40E-09	1.39E-09	8.65E-11	2.88E-09
903	561534	4191224	1.39E-09	1.38E-09	8.60E-11	2.86E-09
904	561543.3	4191226	1.38E-09	1.37E-09	8.53E-11	2.84E-09
905	561552.7	4191229	1.37E-09	1.36E-09	8.46E-11	2.82E-09
906	561562	4191231	1.36E-09	1.35E-09	8.39E-11	2.79E-09
907	561571.4	4191234	1.35E-09	1.34E-09	8.31E-11	2.77E-09
908	561580.7	4191236	1.33E-09	1.32E-09	8.23E-11	2.74E-09
909	561590.1	4191239	1.32E-09	1.31E-09	8.15E-11	2.71E-09
910	561599.4	4191241	1.31E-09	1.30E-09	8.08E-11	2.69E-09
911	561514.6	4191225	1.36E-09	1.35E-09	8.37E-11	2.78E-09
912	561507.1	4191220	1.39E-09	1.38E-09	8.57E-11	2.85E-09
913	561499.6	4191214	1.42E-09	1.41E-09	8.77E-11	2.92E-09
914	561492.1	4191208	1.45E-09	1.44E-09	8.97E-11	2.98E-09
915	561484.7	4191203	1.48E-09	1.47E-09	9.16E-11	3.05E-09
916	561477.2	4191197	1.51E-09	1.50E-09	9.34E-11	3.11E-09
917	561469.7	4191191	1.54E-09	1.53E-09	9.51E-11	3.16E-09
918	561462.2	4191186	1.56E-09	1.55E-09	9.66E-11	3.21E-09
919	561454.7	4191180	1.59E-09	1.58E-09	9.80E-11	3.26E-09
920	561447.2	4191174	1.61E-09	1.60E-09	9.93E-11	3.30E-09
921	561439.7	4191169	1.62E-09	1.61E-09	1.00E-10	3.34E-09
922	561432.2	4191163	1.64E-09	1.62E-09	1.01E-10	3.36E-09
923	561424.7	4191157	1.64E-09	1.63E-09	1.02E-10	3.38E-09
924	561417.2	4191152	1.65E-09	1.64E-09	1.02E-10	3.39E-09
925	561409.7	4191146	1.65E-09	1.64E-09	1.02E-10	3.39E-09
926	561402.2	4191140	1.65E-09	1.64E-09	1.02E-10	3.39E-09
927	561394.7	4191135	1.65E-09	1.63E-09	1.02E-10	3.38E-09
928	561387.2	4191129	1.64E-09	1.63E-09	1.01E-10	3.37E-09
929	561522.1	4191231	1.32E-09	1.31E-09	8.17E-11	2.72E-09
930	561531.5	4191233	1.31E-09	1.31E-09	8.12E-11	2.70E-09
931	561540.8	4191236	1.31E-09	1.30E-09	8.06E-11	2.68E-09
932	561550.2	4191238	1.29E-09	1.28E-09	7.99E-11	2.66E-09
933	561559.5	4191241	1.28E-09	1.27E-09	7.92E-11	2.64E-09
934	561568.9	4191243	1.27E-09	1.26E-09	7.85E-11	2.61E-09
935	561578.2	4191246	1.26E-09	1.25E-09	7.77E-11	2.59E-09
936	561587.6	4191248	1.25E-09	1.24E-09	7.70E-11	2.56E-09
937	561596.9	4191251	1.23E-09	1.23E-09	7.62E-11	2.54E-09

938	561512.2	4191235	1.28E-09	1.27E-09	7.92E-11	2.64E-09
939	561504.7	4191229	1.31E-09	1.30E-09	8.11E-11	2.70E-09
940	561497.3	4191224	1.34E-09	1.33E-09	8.30E-11	2.76E-09
941	561489.9	4191218	1.37E-09	1.36E-09	8.49E-11	2.82E-09
942	561482.5	4191212	1.40E-09	1.39E-09	8.66E-11	2.88E-09
943	561475	4191207	1.43E-09	1.42E-09	8.84E-11	2.94E-09
944	561467.6	4191201	1.46E-09	1.45E-09	9.00E-11	2.99E-09
945	561460.2	4191195	1.48E-09	1.47E-09	9.15E-11	3.04E-09
946	561452.7	4191190	1.50E-09	1.49E-09	9.29E-11	3.09E-09
947	561445.3	4191184	1.52E-09	1.51E-09	9.41E-11	3.13E-09
948	561437.9	4191179	1.54E-09	1.53E-09	9.52E-11	3.16E-09
949	561430.5	4191173	1.55E-09	1.54E-09	9.61E-11	3.19E-09
950	561423	4191167	1.56E-09	1.55E-09	9.67E-11	3.22E-09
951	561415.6	4191162	1.57E-09	1.56E-09	9.72E-11	3.23E-09
952	561408.2	4191156	1.58E-09	1.56E-09	9.74E-11	3.24E-09
953	561400.7	4191151	1.58E-09	1.57E-09	9.75E-11	3.24E-09
954	561393.3	4191145	1.58E-09	1.56E-09	9.74E-11	3.24E-09
955	561385.9	4191139	1.57E-09	1.56E-09	9.71E-11	3.23E-09
956	561519.6	4191240	1.25E-09	1.24E-09	7.73E-11	2.57E-09
957	561528.9	4191243	1.24E-09	1.24E-09	7.68E-11	2.56E-09
958	561538.3	4191245	1.23E-09	1.23E-09	7.63E-11	2.54E-09
959	561547.6	4191248	1.22E-09	1.22E-09	7.56E-11	2.52E-09
960	561557	4191250	1.21E-09	1.20E-09	7.49E-11	2.49E-09
961	561566.3	4191253	1.20E-09	1.19E-09	7.42E-11	2.47E-09
962	561575.7	4191255	1.19E-09	1.18E-09	7.35E-11	2.44E-09
963	561585	4191258	1.18E-09	1.17E-09	7.28E-11	2.42E-09
964	561594.4	4191260	1.17E-09	1.16E-09	7.20E-11	2.40E-09
965	561509.4	4191244	1.22E-09	1.21E-09	7.52E-11	2.50E-09
966	561501.7	4191238	1.25E-09	1.24E-09	7.70E-11	2.56E-09
967	561494.1	4191232	1.28E-09	1.27E-09	7.89E-11	2.62E-09
968	561486.4	4191227	1.31E-09	1.30E-09	8.07E-11	2.68E-09
969	561478.7	4191221	1.33E-09	1.32E-09	8.24E-11	2.74E-09
970	561471	4191215	1.36E-09	1.35E-09	8.41E-11	2.80E-09
971	561463.3	4191209	1.39E-09	1.38E-09	8.57E-11	2.85E-09
972	561455.7	4191203	1.41E-09	1.40E-09	8.72E-11	2.90E-09
973	561448	4191198	1.43E-09	1.42E-09	8.86E-11	2.94E-09
974	561440.3	4191192	1.45E-09	1.44E-09	8.98E-11	2.99E-09
975	561425	4191180	1.48E-09	1.47E-09	9.17E-11	3.05E-09
976	561417.3	4191174	1.50E-09	1.48E-09	9.24E-11	3.07E-09
977	561409.6	4191169	1.50E-09	1.49E-09	9.29E-11	3.09E-09
978	561401.9	4191163	1.51E-09	1.50E-09	9.32E-11	3.10E-09
979	561394.3	4191157	1.51E-09	1.50E-09	9.32E-11	3.10E-09
980	561386.6	4191151	1.51E-09	1.50E-09	9.32E-11	3.10E-09
981	561378.9	4191145	1.51E-09	1.49E-09	9.31E-11	3.09E-09
982	561517.1	4191250	1.19E-09	1.18E-09	7.33E-11	2.44E-09
983	561526.4	4191252	1.18E-09	1.17E-09	7.28E-11	2.42E-09
984	561535.8	4191255	1.17E-09	1.16E-09	7.23E-11	2.40E-09

985	561545.1	4191257	1.16E-09	1.15E-09	7.16E-11	2.38E-09
986	561554.5	4191260	1.15E-09	1.14E-09	7.10E-11	2.36E-09
987	561563.8	4191262	1.14E-09	1.13E-09	7.03E-11	2.34E-09
988	561573.2	4191265	1.13E-09	1.12E-09	6.96E-11	2.32E-09
989	561582.5	4191267	1.12E-09	1.11E-09	6.89E-11	2.29E-09
990	561591.9	4191270	1.10E-09	1.10E-09	6.82E-11	2.27E-09
991	561507	4191254	1.15E-09	1.15E-09	7.13E-11	2.37E-09
992	561499.3	4191248	1.18E-09	1.17E-09	7.31E-11	2.43E-09
993	561491.7	4191242	1.21E-09	1.20E-09	7.48E-11	2.49E-09
994	561484.1	4191236	1.24E-09	1.23E-09	7.65E-11	2.54E-09
995	561476.5	4191231	1.27E-09	1.26E-09	7.82E-11	2.60E-09
996	561468.9	4191225	1.29E-09	1.28E-09	7.98E-11	2.65E-09
997	561461.3	4191219	1.32E-09	1.31E-09	8.13E-11	2.70E-09
998	561453.7	4191213	1.34E-09	1.33E-09	8.27E-11	2.75E-09
999	561446.1	4191208	1.36E-09	1.35E-09	8.41E-11	2.80E-09
1000	561438.5	4191202	1.38E-09	1.37E-09	8.53E-11	2.84E-09
1001	561430.9	4191196	1.40E-09	1.39E-09	8.64E-11	2.87E-09
1002	561423.3	4191190	1.41E-09	1.40E-09	8.73E-11	2.90E-09
1003	561415.7	4191185	1.43E-09	1.42E-09	8.81E-11	2.93E-09
1004	561408.1	4191179	1.43E-09	1.42E-09	8.86E-11	2.95E-09
1005	561400.4	4191173	1.44E-09	1.43E-09	8.90E-11	2.96E-09
1006	561392.8	4191167	1.44E-09	1.43E-09	8.92E-11	2.97E-09
1007	561385.2	4191162	1.44E-09	1.43E-09	8.93E-11	2.97E-09
1008	561377.6	4191156	1.45E-09	1.43E-09	8.94E-11	2.97E-09
1009	561514.6	4191259	1.13E-09	1.12E-09	6.96E-11	2.31E-09
1010	561523.9	4191262	1.12E-09	1.11E-09	6.91E-11	2.30E-09
1011	561533.3	4191264	1.11E-09	1.10E-09	6.86E-11	2.28E-09
1012	561542.6	4191267	1.10E-09	1.09E-09	6.80E-11	2.26E-09
1013	561552	4191269	1.09E-09	1.08E-09	6.73E-11	2.24E-09
1014	561561.3	4191272	1.08E-09	1.07E-09	6.67E-11	2.22E-09
1015	561570.6	4191274	1.07E-09	1.06E-09	6.60E-11	2.20E-09
1016	561580	4191277	1.06E-09	1.05E-09	6.54E-11	2.17E-09
1017	561589.3	4191279	1.05E-09	1.04E-09	6.47E-11	2.15E-09
1018	561696.7	4190953	8.95E-08	8.88E-08	5.53E-09	1.84E-07
1019	561699.2	4190945	9.03E-08	8.96E-08	5.58E-09	1.85E-07
1020	561701.8	4190936	9.11E-08	9.04E-08	5.64E-09	1.87E-07
1021	561704.4	4190927	9.19E-08	9.13E-08	5.69E-09	1.89E-07
1022	561707	4190918	9.26E-08	9.20E-08	5.74E-09	1.90E-07
1023	561709.6	4190909	9.29E-08	9.22E-08	5.75E-09	1.91E-07
1024	561712.1	4190900	9.24E-08	9.17E-08	5.72E-09	1.90E-07
1025	561714.7	4190891	9.09E-08	9.03E-08	5.63E-09	1.87E-07
1026	561717.3	4190882	8.81E-08	8.75E-08	5.46E-09	1.81E-07
1027	561719.9	4190873	8.32E-08	8.26E-08	5.16E-09	1.71E-07
1028	561722.5	4190864	7.52E-08	7.47E-08	4.66E-09	1.55E-07
1029	561706.1	4190956	8.40E-08	8.34E-08	5.18E-09	1.73E-07
1030	561708.7	4190947	7.94E-08	7.88E-08	4.90E-09	1.63E-07
1031	561711.3	4190938	7.73E-08	7.68E-08	4.78E-09	1.59E-07

1032	561713.9	4190929	7.67E-08	7.62E-08	4.75E-09	1.58E-07
1033	561716.4	4190921	7.67E-08	7.61E-08	4.75E-09	1.58E-07
1034	561719	4190912	7.65E-08	7.60E-08	4.74E-09	1.57E-07
1035	561721.6	4190903	7.60E-08	7.54E-08	4.71E-09	1.56E-07
1036	561724.2	4190894	7.47E-08	7.42E-08	4.63E-09	1.53E-07
1037	561726.8	4190885	7.24E-08	7.19E-08	4.48E-09	1.49E-07
1038	561729.3	4190876	6.86E-08	6.82E-08	4.25E-09	1.41E-07
1039	561731.9	4190867	6.31E-08	6.27E-08	3.91E-09	1.30E-07
1040	561682	4191010	2.70E-08	2.68E-08	1.66E-09	5.54E-08
1041	561713	4190968	9.04E-08	8.97E-08	5.56E-09	1.86E-07
1042	561715.6	4190959	8.27E-08	8.21E-08	5.09E-09	1.70E-07
1043	561718.2	4190950	7.34E-08	7.28E-08	4.53E-09	1.51E-07
1044	561720.7	4190941	6.85E-08	6.80E-08	4.23E-09	1.41E-07
1045	561723.3	4190932	6.63E-08	6.59E-08	4.10E-09	1.36E-07
1046	561725.9	4190923	6.53E-08	6.49E-08	4.04E-09	1.34E-07
1047	561728.5	4190914	6.47E-08	6.42E-08	4.00E-09	1.33E-07
1048	561731.1	4190905	6.39E-08	6.35E-08	3.96E-09	1.31E-07
1049	561733.6	4190897	6.27E-08	6.23E-08	3.88E-09	1.29E-07
1050	561736.2	4190888	6.08E-08	6.04E-08	3.77E-09	1.25E-07
1051	561738.8	4190879	5.79E-08	5.75E-08	3.59E-09	1.19E-07
1052	561741.4	4190870	5.40E-08	5.36E-08	3.35E-09	1.11E-07
1053	561686.9	4191018	2.24E-08	2.22E-08	1.38E-09	4.59E-08
1054	561725	4190962	8.23E-08	8.17E-08	5.07E-09	1.69E-07
1055	561727.6	4190953	6.99E-08	6.94E-08	4.31E-09	1.44E-07
1056	561730.2	4190944	6.28E-08	6.24E-08	3.88E-09	1.29E-07
1057	561732.8	4190935	5.92E-08	5.87E-08	3.66E-09	1.22E-07
1058	561735.4	4190926	5.72E-08	5.68E-08	3.54E-09	1.18E-07
1059	561737.9	4190917	5.61E-08	5.57E-08	3.47E-09	1.15E-07
1060	561740.5	4190908	5.50E-08	5.46E-08	3.41E-09	1.13E-07
1061	561743.1	4190899	5.38E-08	5.34E-08	3.33E-09	1.11E-07
1062	561745.7	4190890	5.22E-08	5.18E-08	3.23E-09	1.07E-07
1063	561748.3	4190881	5.00E-08	4.96E-08	3.09E-09	1.03E-07
1064	561750.8	4190873	4.70E-08	4.67E-08	2.91E-09	9.66E-08
1065	561690.2	4191027	1.82E-08	1.81E-08	1.12E-09	3.74E-08
1066	561672.6	4191030	1.48E-08	1.47E-08	9.14E-10	3.05E-08
1067	561734.5	4190964	8.16E-08	8.10E-08	5.02E-09	1.68E-07
1068	561737.1	4190956	6.74E-08	6.69E-08	4.15E-09	1.38E-07
1069	561739.6	4190947	5.88E-08	5.83E-08	3.62E-09	1.21E-07
1070	561742.2	4190938	5.40E-08	5.36E-08	3.33E-09	1.11E-07
1071	561752.6	4190902	4.71E-08	4.68E-08	2.92E-09	9.68E-08
1072	561755.1	4190893	4.57E-08	4.53E-08	2.83E-09	9.38E-08
1073	561757.7	4190884	4.38E-08	4.35E-08	2.71E-09	9.00E-08
1074	561760.3	4190875	4.15E-08	4.12E-08	2.57E-09	8.53E-08
1075	561695.3	4191036	1.52E-08	1.51E-08	9.38E-10	3.13E-08
1076	561678.1	4191038	1.29E-08	1.28E-08	7.96E-10	2.65E-08
1077	561743.9	4190967	8.01E-08	7.95E-08	4.92E-09	1.65E-07
1078	561746.5	4190958	6.51E-08	6.46E-08	4.00E-09	1.34E-07

1079	561749.1	4190949	5.55E-08	5.51E-08	3.42E-09	1.14E-07
1080	561751.7	4190940	5.00E-08	4.97E-08	3.09E-09	1.03E-07
1081	561762	4190905	4.19E-08	4.16E-08	2.59E-09	8.61E-08
1082	561764.6	4190896	4.05E-08	4.03E-08	2.51E-09	8.33E-08
1083	561767.2	4190887	3.90E-08	3.87E-08	2.41E-09	8.01E-08
1084	561769.8	4190878	3.71E-08	3.68E-08	2.30E-09	7.62E-08
1085	561700.4	4191044	1.28E-08	1.27E-08	7.89E-10	2.63E-08
1086	561683.5	4191047	1.12E-08	1.11E-08	6.91E-10	2.30E-08
1087	561753.4	4190970	7.74E-08	7.69E-08	4.76E-09	1.59E-07
1088	561756	4190961	6.24E-08	6.19E-08	3.84E-09	1.28E-07
1089	561758.6	4190952	5.26E-08	5.22E-08	3.24E-09	1.08E-07
1090	561761.1	4190943	4.67E-08	4.64E-08	2.88E-09	9.60E-08
1091	561771.5	4190908	3.78E-08	3.75E-08	2.33E-09	7.76E-08
1092	561774	4190899	3.64E-08	3.62E-08	2.25E-09	7.49E-08
1093	561776.6	4190890	3.50E-08	3.48E-08	2.17E-09	7.20E-08
1094	561779.2	4190881	3.34E-08	3.32E-08	2.07E-09	6.87E-08
1095	561762.8	4190973	7.32E-08	7.27E-08	4.50E-09	1.50E-07
1096	561765.4	4190964	5.90E-08	5.86E-08	3.63E-09	1.21E-07
1097	561768	4190955	4.95E-08	4.92E-08	3.05E-09	1.02E-07
1098	561770.6	4190946	4.37E-08	4.33E-08	2.69E-09	8.97E-08
1099	561780.9	4190910	3.43E-08	3.40E-08	2.12E-09	7.04E-08
1100	561783.5	4190901	3.30E-08	3.28E-08	2.04E-09	6.78E-08
1101	561786.1	4190892	3.17E-08	3.15E-08	1.96E-09	6.52E-08
1102	561788.7	4190884	3.04E-08	3.02E-08	1.88E-09	6.24E-08
1103	561677.5	4191066	7.75E-09	7.70E-09	4.78E-10	1.59E-08
1104	561661.2	4191068	7.06E-09	7.00E-09	4.35E-10	1.45E-08
1105	561714.3	4191070	7.92E-09	7.87E-09	4.88E-10	1.63E-08
1106	561705.3	4191071	7.64E-09	7.59E-09	4.71E-10	1.57E-08
1107	561696.3	4191072	7.35E-09	7.30E-09	4.53E-10	1.51E-08
1108	561687.3	4191074	7.05E-09	6.99E-09	4.34E-10	1.45E-08
1109	561678.3	4191075	6.74E-09	6.69E-09	4.16E-10	1.39E-08
1110	561669.3	4191076	6.45E-09	6.40E-09	3.98E-10	1.32E-08
1111	561660.3	4191077	6.16E-09	6.11E-09	3.80E-10	1.26E-08
1112	561797.2	4190925	3.01E-08	2.99E-08	1.86E-09	6.19E-08
1113	561799.8	4190916	2.88E-08	2.86E-08	1.78E-09	5.92E-08
1114	561802.4	4190907	2.76E-08	2.74E-08	1.71E-09	5.68E-08
1115	561805	4190898	2.66E-08	2.64E-08	1.64E-09	5.46E-08
1116	561807.6	4190889	2.55E-08	2.54E-08	1.58E-09	5.25E-08
1117	561777.9	4191015	3.78E-08	3.75E-08	2.32E-09	7.77E-08
1118	561719.3	4191079	6.90E-09	6.85E-09	4.25E-10	1.42E-08
1119	561701.7	4191081	6.49E-09	6.44E-09	4.00E-10	1.33E-08
1120	561684	4191083	6.04E-09	5.99E-09	3.72E-10	1.24E-08
1121	561666.3	4191085	5.59E-09	5.55E-09	3.45E-10	1.15E-08
1122	561786	4190999	4.75E-08	4.71E-08	2.91E-09	9.75E-08
1123	561796.4	4190963	3.75E-08	3.72E-08	2.30E-09	7.70E-08
1124	561799	4190954	3.40E-08	3.37E-08	2.09E-09	6.98E-08
1125	561801.5	4190945	3.13E-08	3.11E-08	1.93E-09	6.44E-08

1126	561804.1	4190936	2.93E-08	2.91E-08	1.81E-09	6.03E-08
1127	561806.7	4190927	2.78E-08	2.76E-08	1.72E-09	5.71E-08
1128	561809.3	4190918	2.66E-08	2.64E-08	1.64E-09	5.46E-08
1129	561811.9	4190910	2.55E-08	2.53E-08	1.58E-09	5.24E-08
1130	561814.4	4190901	2.45E-08	2.44E-08	1.52E-09	5.04E-08
1131	561817	4190892	2.36E-08	2.34E-08	1.46E-09	4.85E-08
1132	561787.5	4191017	2.94E-08	2.91E-08	1.80E-09	6.03E-08
1133	561776.6	4191031	2.12E-08	2.11E-08	1.30E-09	4.36E-08
1134	561765.7	4191045	1.45E-08	1.44E-08	8.93E-10	2.98E-08
1135	561724.3	4191087	6.06E-09	6.02E-09	3.74E-10	1.24E-08
1136	561706.9	4191089	5.75E-09	5.71E-09	3.54E-10	1.18E-08
1137	561689.5	4191092	5.42E-09	5.38E-09	3.34E-10	1.11E-08
1138	561672.1	4191094	5.07E-09	5.04E-09	3.13E-10	1.04E-08
1139	561654.7	4191096	4.73E-09	4.70E-09	2.92E-10	9.72E-09
1140	561795.5	4191001	3.61E-08	3.58E-08	2.22E-09	7.41E-08
1141	561805.8	4190966	3.30E-08	3.28E-08	2.03E-09	6.78E-08
1142	561808.4	4190957	3.06E-08	3.04E-08	1.89E-09	6.30E-08
1143	561811	4190948	2.86E-08	2.84E-08	1.76E-09	5.88E-08
1144	561813.6	4190939	2.70E-08	2.68E-08	1.67E-09	5.55E-08
1145	561816.2	4190930	2.57E-08	2.55E-08	1.58E-09	5.28E-08
1146	561818.7	4190921	2.46E-08	2.44E-08	1.52E-09	5.05E-08
1147	561821.3	4190912	2.36E-08	2.34E-08	1.46E-09	4.85E-08
1148	561823.9	4190903	2.27E-08	2.26E-08	1.40E-09	4.67E-08
1149	561826.5	4190894	2.19E-08	2.17E-08	1.35E-09	4.49E-08
1150	561797	4191020	2.36E-08	2.35E-08	1.45E-09	4.86E-08
1151	561786.3	4191033	1.84E-08	1.82E-08	1.13E-09	3.77E-08
1152	561775.5	4191047	1.34E-08	1.33E-08	8.25E-10	2.76E-08
1153	561764.7	4191061	9.95E-09	9.88E-09	6.13E-10	2.04E-08
1154	561729.3	4191096	5.37E-09	5.33E-09	3.31E-10	1.10E-08
1155	561712.1	4191098	5.12E-09	5.08E-09	3.16E-10	1.05E-08
1156	561694.9	4191100	4.88E-09	4.85E-09	3.01E-10	1.00E-08
1157	561677.7	4191102	4.61E-09	4.58E-09	2.84E-10	9.47E-09
1158	561660.5	4191105	4.34E-09	4.31E-09	2.68E-10	8.91E-09
1159	561805	4191004	2.85E-08	2.83E-08	1.75E-09	5.86E-08
1160	561817.9	4190960	2.75E-08	2.73E-08	1.69E-09	5.64E-08
1161	561820.4	4190951	2.60E-08	2.58E-08	1.60E-09	5.35E-08
1162	561823	4190942	2.48E-08	2.46E-08	1.53E-09	5.09E-08
1163	561825.6	4190933	2.37E-08	2.35E-08	1.46E-09	4.87E-08
1164	561828.2	4190924	2.27E-08	2.26E-08	1.40E-09	4.67E-08
1165	561830.8	4190915	2.19E-08	2.17E-08	1.35E-09	4.50E-08
1166	561833.4	4190906	2.11E-08	2.09E-08	1.30E-09	4.33E-08
1167	561835.9	4190897	2.03E-08	2.02E-08	1.26E-09	4.18E-08
1168	561795.9	4191036	1.60E-08	1.59E-08	9.84E-10	3.29E-08
1169	561785.3	4191049	1.23E-08	1.22E-08	7.56E-10	2.52E-08
1170	561774.6	4191063	9.43E-09	9.36E-09	5.81E-10	1.94E-08
1171	561734.2	4191104	4.79E-09	4.76E-09	2.96E-10	9.85E-09
1172	561717.2	4191107	4.60E-09	4.56E-09	2.84E-10	9.45E-09

1173	561700.2	4191109	4.41E-09	4.38E-09	2.72E-10	9.06E-09
1174	561683.2	4191111	4.20E-09	4.17E-09	2.59E-10	8.62E-09
1175	561666.2	4191113	3.98E-09	3.95E-09	2.46E-10	8.17E-09
1176	561649.2	4191115	3.76E-09	3.73E-09	2.32E-10	7.73E-09
1177	561814.4	4191007	2.34E-08	2.32E-08	1.44E-09	4.80E-08
1178	561827.3	4190962	2.45E-08	2.43E-08	1.51E-09	5.03E-08
1179	561829.9	4190953	2.36E-08	2.34E-08	1.45E-09	4.84E-08
1180	561832.5	4190945	2.27E-08	2.25E-08	1.40E-09	4.65E-08
1181	561835.1	4190936	2.18E-08	2.16E-08	1.34E-09	4.48E-08
1182	561837.6	4190927	2.10E-08	2.09E-08	1.30E-09	4.32E-08
1183	561840.2	4190918	2.03E-08	2.01E-08	1.25E-09	4.17E-08
1184	561842.8	4190909	1.96E-08	1.95E-08	1.21E-09	4.03E-08
1185	561845.4	4190900	1.89E-08	1.88E-08	1.17E-09	3.89E-08
1186	561815.6	4191026	1.67E-08	1.66E-08	1.03E-09	3.43E-08
1187	561809.9	4191033	1.53E-08	1.52E-08	9.42E-10	3.15E-08
1188	561804.3	4191040	1.38E-08	1.37E-08	8.46E-10	2.83E-08
1189	561798.6	4191047	1.22E-08	1.21E-08	7.50E-10	2.50E-08
1190	561792.9	4191054	1.07E-08	1.07E-08	6.61E-10	2.21E-08
1191	561787.3	4191062	9.44E-09	9.37E-09	5.82E-10	1.94E-08
1192	561781.6	4191069	8.33E-09	8.27E-09	5.13E-10	1.71E-08
1193	561764.6	4191090	5.90E-09	5.86E-09	3.64E-10	1.21E-08
1194	561758.9	4191097	5.32E-09	5.28E-09	3.28E-10	1.09E-08
1195	561729.4	4191114	4.22E-09	4.19E-09	2.61E-10	8.68E-09
1196	561720.4	4191115	4.14E-09	4.11E-09	2.56E-10	8.51E-09
1197	561711.3	4191116	4.06E-09	4.03E-09	2.50E-10	8.34E-09
1198	561693.2	4191119	3.88E-09	3.85E-09	2.39E-10	7.97E-09
1199	561684.1	4191120	3.78E-09	3.76E-09	2.33E-10	7.77E-09
1200	561675	4191121	3.69E-09	3.66E-09	2.28E-10	7.58E-09
1201	561665.9	4191122	3.59E-09	3.57E-09	2.22E-10	7.38E-09
1202	561656.9	4191123	3.50E-09	3.47E-09	2.16E-10	7.19E-09
1203	561647.8	4191125	3.40E-09	3.38E-09	2.10E-10	6.99E-09
1204	561821.3	4191019	1.78E-08	1.77E-08	1.09E-09	3.65E-08
1205	561823.9	4191010	1.97E-08	1.95E-08	1.21E-09	4.04E-08
1206	561826.4	4191001	2.11E-08	2.10E-08	1.30E-09	4.34E-08
1207	561829	4190992	2.20E-08	2.18E-08	1.35E-09	4.52E-08
1208	561831.6	4190983	2.23E-08	2.22E-08	1.37E-09	4.59E-08
1209	561834.2	4190974	2.22E-08	2.21E-08	1.37E-09	4.57E-08
1210	561836.8	4190965	2.18E-08	2.17E-08	1.34E-09	4.49E-08
1211	561839.4	4190956	2.13E-08	2.11E-08	1.31E-09	4.37E-08
1212	561841.9	4190947	2.07E-08	2.05E-08	1.27E-09	4.24E-08
1213	561844.5	4190938	2.00E-08	1.99E-08	1.23E-09	4.11E-08
1214	561847.1	4190929	1.94E-08	1.93E-08	1.20E-09	3.99E-08
1215	561849.7	4190921	1.88E-08	1.87E-08	1.16E-09	3.86E-08
1216	561852.3	4190912	1.82E-08	1.81E-08	1.13E-09	3.74E-08
1217	561854.8	4190903	1.76E-08	1.75E-08	1.09E-09	3.62E-08
1218	561825.1	4191028	1.46E-08	1.44E-08	8.96E-10	2.99E-08
1219	561819.6	4191035	1.35E-08	1.34E-08	8.31E-10	2.77E-08

1220	561808.4	4191050	1.11E-08	1.10E-08	6.84E-10	2.28E-08
1221	561802.8	4191057	9.92E-09	9.85E-09	6.11E-10	2.04E-08
1222	561791.6	4191071	7.90E-09	7.84E-09	4.86E-10	1.62E-08
1223	561774.8	4191092	5.74E-09	5.70E-09	3.54E-10	1.18E-08
1224	561763.6	4191106	4.73E-09	4.69E-09	2.92E-10	9.71E-09
1225	561716.6	4191125	3.70E-09	3.67E-09	2.28E-10	7.60E-09
1226	561698.7	4191127	3.55E-09	3.52E-09	2.19E-10	7.29E-09
1227	561689.8	4191128	3.47E-09	3.45E-09	2.14E-10	7.13E-09
1228	561671.9	4191131	3.32E-09	3.29E-09	2.05E-10	6.81E-09
1229	561654	4191133	3.16E-09	3.14E-09	1.95E-10	6.49E-09
1230	561645	4191134	3.08E-09	3.06E-09	1.90E-10	6.33E-09
1231	561833.3	4191012	1.69E-08	1.68E-08	1.04E-09	3.47E-08
1232	561835.9	4191003	1.81E-08	1.80E-08	1.11E-09	3.72E-08
1233	561838.5	4190995	1.90E-08	1.88E-08	1.17E-09	3.90E-08
1234	561841.1	4190986	1.94E-08	1.93E-08	1.20E-09	4.00E-08
1235	561843.6	4190977	1.96E-08	1.94E-08	1.21E-09	4.02E-08
1236	561846.2	4190968	1.95E-08	1.93E-08	1.20E-09	4.00E-08
1237	561848.8	4190959	1.92E-08	1.90E-08	1.18E-09	3.94E-08
1238	561851.4	4190950	1.88E-08	1.87E-08	1.16E-09	3.86E-08
1239	561854	4190941	1.84E-08	1.82E-08	1.13E-09	3.77E-08
1240	561856.6	4190932	1.79E-08	1.78E-08	1.10E-09	3.68E-08
1241	561859.1	4190923	1.74E-08	1.73E-08	1.08E-09	3.58E-08
1242	561861.7	4190914	1.69E-08	1.68E-08	1.05E-09	3.48E-08
1243	561864.3	4190905	1.65E-08	1.63E-08	1.02E-09	3.38E-08
1244	561834.7	4191031	1.29E-08	1.28E-08	7.91E-10	2.64E-08
1245	561823.6	4191045	1.11E-08	1.10E-08	6.85E-10	2.29E-08
1246	561812.6	4191059	9.20E-09	9.13E-09	5.67E-10	1.89E-08
1247	561801.5	4191073	7.47E-09	7.41E-09	4.60E-10	1.53E-08
1248	561779.4	4191101	5.05E-09	5.02E-09	3.12E-10	1.04E-08
1249	561768.3	4191115	4.24E-09	4.21E-09	2.61E-10	8.71E-09
1250	561748.4	4191130	3.54E-09	3.52E-09	2.19E-10	7.28E-09
1251	561713.1	4191135	3.32E-09	3.30E-09	2.05E-10	6.82E-09
1252	561695.4	4191137	3.19E-09	3.17E-09	1.97E-10	6.56E-09
1253	561677.7	4191139	3.06E-09	3.04E-09	1.89E-10	6.30E-09
1254	561660	4191141	2.93E-09	2.91E-09	1.81E-10	6.03E-09
1255	561642.3	4191144	2.80E-09	2.78E-09	1.73E-10	5.75E-09
1256	561842.8	4191015	1.47E-08	1.46E-08	9.05E-10	3.02E-08
1257	561845.4	4191006	1.57E-08	1.56E-08	9.69E-10	3.23E-08
1258	561847.9	4190997	1.65E-08	1.64E-08	1.02E-09	3.40E-08
1259	561850.5	4190988	1.71E-08	1.70E-08	1.05E-09	3.51E-08
1260	561853.1	4190979	1.74E-08	1.72E-08	1.07E-09	3.57E-08
1261	561855.7	4190971	1.74E-08	1.73E-08	1.07E-09	3.58E-08
1262	561858.3	4190962	1.73E-08	1.72E-08	1.07E-09	3.56E-08
1263	561860.8	4190953	1.71E-08	1.70E-08	1.05E-09	3.51E-08
1264	561863.4	4190944	1.68E-08	1.67E-08	1.04E-09	3.46E-08
1265	561866	4190935	1.65E-08	1.64E-08	1.02E-09	3.39E-08
1266	561868.6	4190926	1.61E-08	1.60E-08	9.96E-10	3.32E-08

1267	561871.2	4190917	1.58E-08	1.56E-08	9.72E-10	3.24E-08
1268	561873.8	4190908	1.53E-08	1.52E-08	9.47E-10	3.15E-08
1269	561844.2	4191034	1.15E-08	1.14E-08	7.06E-10	2.36E-08
1270	561833.2	4191048	1.01E-08	1.00E-08	6.22E-10	2.08E-08
1271	561822.3	4191061	8.54E-09	8.48E-09	5.26E-10	1.76E-08
1272	561811.4	4191075	7.07E-09	7.02E-09	4.36E-10	1.45E-08
1273	561789.5	4191103	4.89E-09	4.85E-09	3.01E-10	1.00E-08
1274	561778.5	4191117	4.14E-09	4.11E-09	2.56E-10	8.51E-09
1275	561767.6	4191131	3.54E-09	3.52E-09	2.19E-10	7.28E-09
1276	561753.4	4191139	3.24E-09	3.22E-09	2.00E-10	6.66E-09
1277	561718.4	4191143	3.05E-09	3.03E-09	1.89E-10	6.28E-09
1278	561700.9	4191145	2.95E-09	2.93E-09	1.82E-10	6.06E-09
1279	561683.4	4191148	2.84E-09	2.82E-09	1.75E-10	5.83E-09
1280	561665.9	4191150	2.73E-09	2.71E-09	1.68E-10	5.60E-09
1281	561648.4	4191152	2.61E-09	2.60E-09	1.61E-10	5.37E-09
1282	561852.2	4191018	1.30E-08	1.29E-08	7.99E-10	2.67E-08
1283	561854.8	4191009	1.39E-08	1.38E-08	8.54E-10	2.85E-08
1284	561857.4	4191000	1.46E-08	1.45E-08	8.99E-10	3.00E-08
1285	561860	4190991	1.51E-08	1.50E-08	9.32E-10	3.11E-08
1286	561862.6	4190982	1.55E-08	1.54E-08	9.53E-10	3.18E-08
1287	561865.1	4190973	1.56E-08	1.55E-08	9.64E-10	3.21E-08
1288	561867.7	4190964	1.57E-08	1.56E-08	9.66E-10	3.22E-08
1289	561870.3	4190955	1.56E-08	1.55E-08	9.61E-10	3.20E-08
1290	561872.9	4190947	1.54E-08	1.53E-08	9.52E-10	3.17E-08
1291	561875.5	4190938	1.52E-08	1.51E-08	9.39E-10	3.13E-08
1292	561878	4190929	1.49E-08	1.48E-08	9.22E-10	3.07E-08
1293	561880.6	4190920	1.46E-08	1.45E-08	9.04E-10	3.01E-08
1294	561883.2	4190911	1.43E-08	1.42E-08	8.83E-10	2.94E-08
1295	561853.7	4191036	1.03E-08	1.03E-08	6.36E-10	2.12E-08
1296	561842.8	4191050	9.23E-09	9.16E-09	5.68E-10	1.90E-08
1297	561832	4191064	7.95E-09	7.89E-09	4.90E-10	1.63E-08
1298	561821.2	4191077	6.69E-09	6.65E-09	4.12E-10	1.38E-08
1299	561799.5	4191105	4.72E-09	4.69E-09	2.91E-10	9.70E-09
1300	561788.6	4191119	4.04E-09	4.01E-09	2.49E-10	8.29E-09
1301	561777.8	4191132	3.48E-09	3.45E-09	2.14E-10	7.14E-09
1302	561758.3	4191147	2.98E-09	2.96E-09	1.84E-10	6.13E-09
1303	561741	4191149	2.91E-09	2.89E-09	1.79E-10	5.97E-09
1304	561706.3	4191154	2.73E-09	2.71E-09	1.68E-10	5.61E-09
1305	561688.9	4191156	2.64E-09	2.62E-09	1.63E-10	5.41E-09
1306	561671.6	4191158	2.54E-09	2.52E-09	1.57E-10	5.22E-09
1307	561654.3	4191161	2.44E-09	2.42E-09	1.51E-10	5.02E-09
1308	561636.9	4191163	2.35E-09	2.33E-09	1.45E-10	4.83E-09
1309	561861.7	4191021	1.16E-08	1.15E-08	7.14E-10	2.38E-08
1310	561864.3	4191012	1.23E-08	1.23E-08	7.60E-10	2.54E-08
1311	561866.9	4191003	1.30E-08	1.29E-08	8.01E-10	2.67E-08
1312	561869.4	4190994	1.35E-08	1.34E-08	8.33E-10	2.78E-08
1313	561872	4190985	1.39E-08	1.38E-08	8.56E-10	2.86E-08

1314	561874.6	4190976	1.41E-08	1.40E-08	8.71E-10	2.90E-08
1315	561877.2	4190967	1.42E-08	1.41E-08	8.78E-10	2.93E-08
1316	561851.5	4191054	8.38E-09	8.32E-09	5.16E-10	1.72E-08
1317	561845.8	4191061	7.82E-09	7.76E-09	4.82E-10	1.61E-08
1318	561840.1	4191068	7.24E-09	7.19E-09	4.46E-10	1.49E-08
1319	561834.4	4191075	6.67E-09	6.62E-09	4.11E-10	1.37E-08
1320	561828.7	4191083	6.12E-09	6.08E-09	3.77E-10	1.26E-08
1321	561823	4191090	5.61E-09	5.57E-09	3.46E-10	1.15E-08
1322	561817.3	4191097	5.14E-09	5.10E-09	3.17E-10	1.06E-08
1323	561811.6	4191104	4.72E-09	4.68E-09	2.91E-10	9.69E-09
1324	561806	4191111	4.34E-09	4.31E-09	2.68E-10	8.92E-09
1325	561800.3	4191119	4.01E-09	3.98E-09	2.47E-10	8.24E-09
1326	561794.6	4191126	3.71E-09	3.69E-09	2.29E-10	7.63E-09
1327	561788.9	4191133	3.45E-09	3.42E-09	2.13E-10	7.08E-09
1328	561783.2	4191140	3.20E-09	3.18E-09	1.98E-10	6.58E-09
1329	561777.5	4191147	2.98E-09	2.96E-09	1.84E-10	6.12E-09
1330	561762.7	4191156	2.75E-09	2.73E-09	1.70E-10	5.65E-09
1331	561753.6	4191157	2.72E-09	2.70E-09	1.68E-10	5.58E-09
1332	561744.5	4191158	2.68E-09	2.66E-09	1.65E-10	5.51E-09
1333	561735.4	4191159	2.64E-09	2.62E-09	1.63E-10	5.43E-09
1334	561717.2	4191162	2.56E-09	2.54E-09	1.58E-10	5.26E-09
1335	561708.1	4191163	2.52E-09	2.50E-09	1.55E-10	5.17E-09
1336	561699	4191164	2.47E-09	2.46E-09	1.53E-10	5.08E-09
1337	561689.9	4191165	2.43E-09	2.41E-09	1.50E-10	4.99E-09
1338	561680.8	4191166	2.39E-09	2.37E-09	1.47E-10	4.90E-09
1339	561671.7	4191168	2.34E-09	2.33E-09	1.45E-10	4.81E-09
1340	561662.6	4191169	2.30E-09	2.28E-09	1.42E-10	4.72E-09
1341	561653.5	4191170	2.25E-09	2.24E-09	1.39E-10	4.63E-09
1342	561644.4	4191171	2.21E-09	2.20E-09	1.37E-10	4.55E-09
1343	561635.3	4191172	2.17E-09	2.16E-09	1.34E-10	4.46E-09
1344	561872.4	4191042	8.55E-09	8.49E-09	5.27E-10	1.76E-08
1345	561844.2	4191078	6.30E-09	6.25E-09	3.88E-10	1.29E-08
1346	561838.6	4191085	5.82E-09	5.78E-09	3.59E-10	1.20E-08
1347	561833	4191092	5.37E-09	5.33E-09	3.31E-10	1.10E-08
1348	561821.7	4191106	4.56E-09	4.53E-09	2.81E-10	9.37E-09
1349	561810.4	4191120	3.90E-09	3.88E-09	2.41E-10	8.02E-09
1350	561799.2	4191135	3.38E-09	3.35E-09	2.08E-10	6.94E-09
1351	561787.9	4191149	2.94E-09	2.91E-09	1.81E-10	6.03E-09
1352	561767.7	4191164	2.54E-09	2.53E-09	1.57E-10	5.23E-09
1353	561758.6	4191166	2.52E-09	2.50E-09	1.55E-10	5.18E-09
1354	561749.6	4191167	2.49E-09	2.47E-09	1.53E-10	5.11E-09
1355	561740.6	4191168	2.45E-09	2.43E-09	1.51E-10	5.04E-09
1356	561731.6	4191169	2.42E-09	2.40E-09	1.49E-10	4.97E-09
1357	561713.6	4191171	2.34E-09	2.33E-09	1.45E-10	4.82E-09
1358	561704.6	4191172	2.31E-09	2.29E-09	1.42E-10	4.74E-09
1359	561695.6	4191174	2.27E-09	2.25E-09	1.40E-10	4.66E-09
1360	561686.6	4191175	2.23E-09	2.22E-09	1.38E-10	4.59E-09

1361	561677.6	4191176	2.19E-09	2.18E-09	1.35E-10	4.51E-09
1362	561668.6	4191177	2.16E-09	2.14E-09	1.33E-10	4.43E-09
1363	561659.6	4191178	2.12E-09	2.10E-09	1.31E-10	4.35E-09
1364	561650.6	4191179	2.08E-09	2.07E-09	1.28E-10	4.27E-09
1365	561641.6	4191181	2.04E-09	2.03E-09	1.26E-10	4.20E-09
1366	561632.6	4191182	2.01E-09	2.00E-09	1.24E-10	4.13E-09
1367	561880.6	4191026	9.50E-09	9.43E-09	5.85E-10	1.95E-08
1368	561883.2	4191017	1.01E-08	1.00E-08	6.21E-10	2.07E-08
1369	561885.8	4191008	1.06E-08	1.05E-08	6.53E-10	2.18E-08
1370	561888.3	4190999	1.11E-08	1.10E-08	6.81E-10	2.27E-08
1371	561890.9	4190990	1.14E-08	1.13E-08	7.03E-10	2.34E-08
1372	561893.5	4190982	1.17E-08	1.16E-08	7.20E-10	2.40E-08
1373	561896.1	4190973	1.19E-08	1.18E-08	7.32E-10	2.44E-08
1374	561898.7	4190964	1.20E-08	1.19E-08	7.39E-10	2.46E-08
1375	561901.2	4190955	1.20E-08	1.19E-08	7.41E-10	2.47E-08
1376	561903.8	4190946	1.20E-08	1.19E-08	7.40E-10	2.46E-08
1377	561906.4	4190937	1.19E-08	1.18E-08	7.35E-10	2.45E-08
1378	561909	4190928	1.18E-08	1.17E-08	7.28E-10	2.42E-08
1379	561911.6	4190919	1.16E-08	1.16E-08	7.19E-10	2.39E-08
1380	561881.9	4191045	7.86E-09	7.80E-09	4.84E-10	1.61E-08
1381	561870.7	4191059	7.17E-09	7.11E-09	4.42E-10	1.47E-08
1382	561865.2	4191066	6.78E-09	6.73E-09	4.18E-10	1.39E-08
1383	561842.9	4191094	5.13E-09	5.10E-09	3.16E-10	1.05E-08
1384	561831.7	4191108	4.40E-09	4.37E-09	2.72E-10	9.05E-09
1385	561820.5	4191122	3.80E-09	3.77E-09	2.34E-10	7.80E-09
1386	561815	4191129	3.53E-09	3.51E-09	2.18E-10	7.26E-09
1387	561803.8	4191144	3.09E-09	3.06E-09	1.90E-10	6.34E-09
1388	561792.7	4191158	2.70E-09	2.68E-09	1.67E-10	5.55E-09
1389	561772.6	4191173	2.36E-09	2.35E-09	1.46E-10	4.86E-09
1390	561754.7	4191175	2.31E-09	2.30E-09	1.43E-10	4.75E-09
1391	561736.9	4191178	2.25E-09	2.24E-09	1.39E-10	4.63E-09
1392	561710.1	4191181	2.16E-09	2.14E-09	1.33E-10	4.43E-09
1393	561692.3	4191183	2.09E-09	2.08E-09	1.29E-10	4.30E-09
1394	561683.4	4191184	2.06E-09	2.04E-09	1.27E-10	4.23E-09
1395	561665.5	4191187	1.99E-09	1.98E-09	1.23E-10	4.09E-09
1396	561647.7	4191189	1.93E-09	1.91E-09	1.19E-10	3.96E-09
1397	561629.9	4191191	1.87E-09	1.85E-09	1.15E-10	3.83E-09
1398	561890.1	4191029	8.68E-09	8.62E-09	5.35E-10	1.78E-08
1399	561892.6	4191020	9.20E-09	9.13E-09	5.67E-10	1.89E-08
1400	561895.2	4191011	9.67E-09	9.60E-09	5.96E-10	1.99E-08
1401	561897.8	4191002	1.01E-08	1.00E-08	6.21E-10	2.07E-08
1402	561900.4	4190993	1.04E-08	1.03E-08	6.42E-10	2.14E-08
1403	561903	4190984	1.07E-08	1.06E-08	6.59E-10	2.20E-08
1404	561905.5	4190975	1.09E-08	1.08E-08	6.72E-10	2.24E-08
1405	561908.1	4190966	1.10E-08	1.09E-08	6.80E-10	2.27E-08
1406	561910.7	4190958	1.11E-08	1.10E-08	6.84E-10	2.28E-08
1407	561913.3	4190949	1.11E-08	1.10E-08	6.86E-10	2.28E-08

1408	561915.9	4190940	1.11E-08	1.10E-08	6.84E-10	2.28E-08
1409	561918.4	4190931	1.10E-08	1.09E-08	6.79E-10	2.26E-08
1410	561921	4190922	1.09E-08	1.08E-08	6.72E-10	2.24E-08
1411	561891.4	4191047	7.25E-09	7.19E-09	4.47E-10	1.49E-08
1412	561880.3	4191061	6.66E-09	6.61E-09	4.10E-10	1.37E-08
1413	561869.3	4191075	5.97E-09	5.93E-09	3.68E-10	1.23E-08
1414	561847.2	4191103	4.57E-09	4.53E-09	2.82E-10	9.38E-09
1415	561836.1	4191117	3.95E-09	3.92E-09	2.44E-10	8.12E-09
1416	561825.1	4191131	3.44E-09	3.41E-09	2.12E-10	7.06E-09
1417	561814	4191145	3.01E-09	2.99E-09	1.86E-10	6.19E-09
1418	561802.9	4191159	2.66E-09	2.64E-09	1.64E-10	5.46E-09
1419	561791.9	4191173	2.36E-09	2.34E-09	1.45E-10	4.84E-09
1420	561777.5	4191181	2.21E-09	2.19E-09	1.36E-10	4.53E-09
1421	561759.8	4191184	2.16E-09	2.14E-09	1.33E-10	4.43E-09
1422	561742.1	4191186	2.11E-09	2.09E-09	1.30E-10	4.33E-09
1423	561706.8	4191191	1.99E-09	1.98E-09	1.23E-10	4.09E-09
1424	561689.1	4191193	1.94E-09	1.92E-09	1.19E-10	3.98E-09
1425	561671.4	4191195	1.88E-09	1.86E-09	1.16E-10	3.85E-09
1426	561653.7	4191197	1.82E-09	1.80E-09	1.12E-10	3.73E-09
1427	561636	4191200	1.76E-09	1.75E-09	1.09E-10	3.62E-09
1428	561899.5	4191032	7.98E-09	7.93E-09	4.92E-10	1.64E-08
1429	561902.1	4191023	8.44E-09	8.38E-09	5.20E-10	1.73E-08
1430	561904.7	4191014	8.86E-09	8.80E-09	5.46E-10	1.82E-08
1431	561907.3	4191005	9.24E-09	9.17E-09	5.69E-10	1.90E-08
1432	561909.8	4190996	9.56E-09	9.49E-09	5.89E-10	1.96E-08
1433	561912.4	4190987	9.82E-09	9.75E-09	6.06E-10	2.02E-08
1434	561915	4190978	1.00E-08	9.96E-09	6.18E-10	2.06E-08
1435	561917.6	4190969	1.02E-08	1.01E-08	6.28E-10	2.09E-08
1436	561920.2	4190960	1.03E-08	1.02E-08	6.33E-10	2.11E-08
1437	561922.7	4190951	1.03E-08	1.02E-08	6.36E-10	2.12E-08
1438	561925.3	4190942	1.03E-08	1.02E-08	6.36E-10	2.12E-08
1439	561927.9	4190934	1.03E-08	1.02E-08	6.34E-10	2.11E-08
1440	561930.5	4190925	1.02E-08	1.01E-08	6.29E-10	2.09E-08
1441	561900.9	4191050	6.73E-09	6.68E-09	4.15E-10	1.38E-08
1442	561889.9	4191064	6.20E-09	6.16E-09	3.82E-10	1.27E-08
1443	561879	4191078	5.61E-09	5.57E-09	3.46E-10	1.15E-08
1444	561868	4191092	4.99E-09	4.96E-09	3.08E-10	1.03E-08
1445	561857	4191106	4.38E-09	4.35E-09	2.70E-10	9.00E-09
1446	561846	4191120	3.82E-09	3.80E-09	2.36E-10	7.86E-09
1447	561835.1	4191133	3.34E-09	3.32E-09	2.06E-10	6.87E-09
1448	561824.1	4191147	2.94E-09	2.92E-09	1.81E-10	6.04E-09
1449	561813.1	4191161	2.60E-09	2.58E-09	1.61E-10	5.35E-09
1450	561802.2	4191175	2.32E-09	2.30E-09	1.43E-10	4.77E-09
1451	561782.4	4191190	2.06E-09	2.05E-09	1.27E-10	4.23E-09
1452	561764.9	4191192	2.02E-09	2.00E-09	1.25E-10	4.15E-09
1453	561747.3	4191195	1.97E-09	1.96E-09	1.22E-10	4.05E-09
1454	561729.8	4191197	1.92E-09	1.91E-09	1.19E-10	3.95E-09

1455	561694.7	4191201	1.82E-09	1.81E-09	1.12E-10	3.74E-09
1456	561677.2	4191204	1.77E-09	1.76E-09	1.09E-10	3.63E-09
1457	561659.6	4191206	1.72E-09	1.70E-09	1.06E-10	3.53E-09
1458	561642.1	4191208	1.67E-09	1.66E-09	1.03E-10	3.43E-09
1459	561909	4191034	7.38E-09	7.32E-09	4.55E-10	1.52E-08
1460	561911.5	4191025	7.78E-09	7.73E-09	4.80E-10	1.60E-08
1461	561914.1	4191016	8.16E-09	8.10E-09	5.03E-10	1.68E-08
1462	561916.7	4191008	8.50E-09	8.44E-09	5.24E-10	1.75E-08
1463	561919.3	4190999	8.80E-09	8.74E-09	5.43E-10	1.81E-08
1464	561921.9	4190990	9.06E-09	8.99E-09	5.58E-10	1.86E-08
1465	561924.5	4190981	9.26E-09	9.19E-09	5.71E-10	1.90E-08
1466	561927	4190972	9.41E-09	9.34E-09	5.80E-10	1.93E-08
1467	561929.6	4190963	9.52E-09	9.45E-09	5.87E-10	1.96E-08
1468	561932.2	4190954	9.58E-09	9.51E-09	5.91E-10	1.97E-08
1469	561934.8	4190945	9.60E-09	9.53E-09	5.92E-10	1.97E-08
1470	561937.4	4190936	9.58E-09	9.51E-09	5.91E-10	1.97E-08
1471	561939.9	4190927	9.53E-09	9.46E-09	5.88E-10	1.96E-08
1472	561910.1	4191053	6.26E-09	6.21E-09	3.86E-10	1.29E-08
1473	561904.4	4191060	6.02E-09	5.98E-09	3.71E-10	1.24E-08
1474	561898.7	4191068	5.77E-09	5.73E-09	3.56E-10	1.19E-08
1475	561893	4191075	5.50E-09	5.46E-09	3.39E-10	1.13E-08
1476	561887.3	4191082	5.22E-09	5.18E-09	3.22E-10	1.07E-08
1477	561881.6	4191089	4.93E-09	4.90E-09	3.04E-10	1.01E-08
1478	561875.9	4191096	4.65E-09	4.61E-09	2.87E-10	9.55E-09
1479	561870.2	4191104	4.37E-09	4.33E-09	2.69E-10	8.97E-09
1480	561864.5	4191111	4.09E-09	4.06E-09	2.52E-10	8.40E-09
1481	561858.8	4191118	3.82E-09	3.80E-09	2.36E-10	7.86E-09
1482	561853.1	4191125	3.57E-09	3.55E-09	2.20E-10	7.34E-09
1483	561847.4	4191133	3.34E-09	3.32E-09	2.06E-10	6.86E-09
1484	561841.7	4191140	3.12E-09	3.10E-09	1.93E-10	6.42E-09
1485	561836	4191147	2.93E-09	2.90E-09	1.81E-10	6.01E-09
1486	561830.3	4191154	2.75E-09	2.73E-09	1.69E-10	5.64E-09
1487	561824.6	4191161	2.58E-09	2.56E-09	1.59E-10	5.31E-09
1488	561818.9	4191169	2.43E-09	2.42E-09	1.50E-10	5.00E-09
1489	561813.2	4191176	2.30E-09	2.28E-09	1.42E-10	4.72E-09
1490	561807.5	4191183	2.17E-09	2.15E-09	1.34E-10	4.46E-09
1491	561801.8	4191190	2.05E-09	2.04E-09	1.27E-10	4.22E-09
1492	561786.9	4191199	1.93E-09	1.92E-09	1.19E-10	3.96E-09
1493	561777.8	4191200	1.91E-09	1.90E-09	1.18E-10	3.93E-09
1494	561768.7	4191201	1.89E-09	1.88E-09	1.17E-10	3.88E-09
1495	561759.6	4191202	1.87E-09	1.86E-09	1.15E-10	3.84E-09
1496	561750.4	4191203	1.85E-09	1.83E-09	1.14E-10	3.80E-09
1497	561741.3	4191205	1.82E-09	1.81E-09	1.13E-10	3.75E-09
1498	561732.2	4191206	1.80E-09	1.79E-09	1.11E-10	3.70E-09
1499	561723.1	4191207	1.78E-09	1.76E-09	1.10E-10	3.65E-09
1500	561704.8	4191209	1.73E-09	1.72E-09	1.07E-10	3.55E-09
1501	561695.7	4191210	1.70E-09	1.69E-09	1.05E-10	3.50E-09

1502	561686.6	4191212	1.68E-09	1.67E-09	1.04E-10	3.45E-09
1503	561677.4	4191213	1.66E-09	1.64E-09	1.02E-10	3.40E-09
1504	561668.3	4191214	1.63E-09	1.62E-09	1.01E-10	3.35E-09
1505	561659.2	4191215	1.61E-09	1.60E-09	9.93E-11	3.30E-09
1506	561622.7	4191220	1.52E-09	1.51E-09	9.39E-11	3.12E-09
1507	561613.6	4191221	1.50E-09	1.49E-09	9.26E-11	3.08E-09
1508	561915.8	4191046	6.46E-09	6.42E-09	3.99E-10	1.33E-08
1509	561918.4	4191037	6.84E-09	6.79E-09	4.22E-10	1.41E-08
1510	561921	4191028	7.21E-09	7.16E-09	4.44E-10	1.48E-08
1511	561923.6	4191019	7.55E-09	7.49E-09	4.65E-10	1.55E-08
1512	561926.2	4191010	7.86E-09	7.80E-09	4.84E-10	1.61E-08
1513	561928.7	4191001	8.13E-09	8.07E-09	5.01E-10	1.67E-08
1514	561931.3	4190992	8.37E-09	8.31E-09	5.16E-10	1.72E-08
1515	561933.9	4190984	8.56E-09	8.50E-09	5.28E-10	1.76E-08
1516	561936.5	4190975	8.72E-09	8.66E-09	5.38E-10	1.79E-08
1517	561939.1	4190966	8.83E-09	8.77E-09	5.45E-10	1.81E-08
1518	561941.7	4190957	8.91E-09	8.85E-09	5.50E-10	1.83E-08
1519	561944.2	4190948	8.95E-09	8.88E-09	5.52E-10	1.84E-08
1520	561946.8	4190939	8.95E-09	8.89E-09	5.53E-10	1.84E-08
1521	561949.4	4190930	8.93E-09	8.86E-09	5.51E-10	1.83E-08
1522	561919.6	4191056	5.85E-09	5.81E-09	3.61E-10	1.20E-08
1523	561914	4191063	5.65E-09	5.60E-09	3.48E-10	1.16E-08
1524	561908.3	4191070	5.42E-09	5.38E-09	3.34E-10	1.11E-08
1525	561902.7	4191077	5.18E-09	5.15E-09	3.20E-10	1.06E-08
1526	561897	4191084	4.93E-09	4.90E-09	3.04E-10	1.01E-08
1527	561885.7	4191099	4.43E-09	4.39E-09	2.73E-10	9.09E-09
1528	561880.1	4191106	4.17E-09	4.14E-09	2.57E-10	8.57E-09
1529	561874.4	4191113	3.93E-09	3.90E-09	2.42E-10	8.07E-09
1530	561868.7	4191120	3.69E-09	3.66E-09	2.28E-10	7.58E-09
1531	561863.1	4191127	3.46E-09	3.44E-09	2.14E-10	7.12E-09
1532	561857.4	4191135	3.25E-09	3.22E-09	2.00E-10	6.67E-09
1533	561851.8	4191142	3.05E-09	3.02E-09	1.88E-10	6.26E-09
1534	561840.5	4191156	2.69E-09	2.67E-09	1.66E-10	5.52E-09
1535	561834.8	4191163	2.53E-09	2.51E-09	1.56E-10	5.20E-09
1536	561829.2	4191170	2.39E-09	2.37E-09	1.47E-10	4.90E-09
1537	561823.5	4191177	2.26E-09	2.24E-09	1.39E-10	4.63E-09
1538	561812.2	4191192	2.02E-09	2.01E-09	1.25E-10	4.15E-09
1539	561791.9	4191207	1.81E-09	1.80E-09	1.12E-10	3.72E-09
1540	561782.8	4191208	1.79E-09	1.78E-09	1.11E-10	3.69E-09
1541	561773.8	4191210	1.78E-09	1.76E-09	1.10E-10	3.65E-09
1542	561764.7	4191211	1.76E-09	1.75E-09	1.09E-10	3.61E-09
1543	561755.7	4191212	1.74E-09	1.73E-09	1.07E-10	3.57E-09
1544	561746.6	4191213	1.72E-09	1.71E-09	1.06E-10	3.53E-09
1545	561737.6	4191214	1.70E-09	1.69E-09	1.05E-10	3.49E-09
1546	561728.6	4191215	1.68E-09	1.66E-09	1.04E-10	3.44E-09
1547	561719.5	4191217	1.65E-09	1.64E-09	1.02E-10	3.40E-09
1548	561701.4	4191219	1.61E-09	1.60E-09	9.94E-11	3.31E-09

1549	561692.4	4191220	1.59E-09	1.58E-09	9.81E-11	3.26E-09
1550	561683.3	4191221	1.57E-09	1.56E-09	9.68E-11	3.22E-09
1551	561647.2	4191226	1.48E-09	1.47E-09	9.16E-11	3.05E-09
1552	561638.1	4191227	1.46E-09	1.45E-09	9.04E-11	3.01E-09
1553	561629.1	4191228	1.45E-09	1.44E-09	8.93E-11	2.97E-09
1554	561620	4191229	1.43E-09	1.42E-09	8.81E-11	2.93E-09
1555	561611	4191230	1.41E-09	1.40E-09	8.69E-11	2.89E-09
1556	561925.3	4191049	6.03E-09	5.99E-09	3.72E-10	1.24E-08
1557	561927.9	4191040	6.37E-09	6.32E-09	3.93E-10	1.31E-08
1558	561930.5	4191031	6.69E-09	6.64E-09	4.13E-10	1.38E-08
1559	561933	4191022	7.00E-09	6.95E-09	4.32E-10	1.44E-08
1560	561935.6	4191013	7.28E-09	7.23E-09	4.49E-10	1.50E-08
1561	561938.2	4191004	7.54E-09	7.48E-09	4.65E-10	1.55E-08
1562	561940.8	4190995	7.76E-09	7.70E-09	4.78E-10	1.59E-08
1563	561943.4	4190986	7.95E-09	7.89E-09	4.90E-10	1.63E-08
1564	561945.9	4190977	8.10E-09	8.04E-09	5.00E-10	1.66E-08
1565	561948.5	4190968	8.22E-09	8.16E-09	5.07E-10	1.69E-08
1566	561951.1	4190960	8.30E-09	8.24E-09	5.12E-10	1.71E-08
1567	561953.7	4190951	8.36E-09	8.30E-09	5.16E-10	1.72E-08
1568	561956.3	4190942	8.38E-09	8.32E-09	5.17E-10	1.72E-08
1569	561958.9	4190933	8.37E-09	8.31E-09	5.17E-10	1.72E-08
1570	561929.1	4191059	5.48E-09	5.44E-09	3.38E-10	1.13E-08
1571	561917.9	4191073	5.11E-09	5.07E-09	3.15E-10	1.05E-08
1572	561906.7	4191087	4.68E-09	4.64E-09	2.88E-10	9.61E-09
1573	561895.5	4191101	4.22E-09	4.19E-09	2.60E-10	8.67E-09
1574	561889.9	4191108	3.99E-09	3.96E-09	2.46E-10	8.20E-09
1575	561878.7	4191122	3.56E-09	3.53E-09	2.19E-10	7.30E-09
1576	561873	4191129	3.35E-09	3.32E-09	2.07E-10	6.88E-09
1577	561861.8	4191144	2.97E-09	2.95E-09	1.83E-10	6.10E-09
1578	561850.6	4191158	2.63E-09	2.61E-09	1.62E-10	5.40E-09
1579	561845	4191165	2.48E-09	2.46E-09	1.53E-10	5.10E-09
1580	561833.8	4191179	2.21E-09	2.20E-09	1.37E-10	4.55E-09
1581	561828.2	4191186	2.10E-09	2.08E-09	1.30E-10	4.31E-09
1582	561817	4191200	1.89E-09	1.88E-09	1.17E-10	3.89E-09
1583	561796.8	4191216	1.70E-09	1.69E-09	1.05E-10	3.49E-09
1584	561787.8	4191217	1.69E-09	1.68E-09	1.04E-10	3.47E-09
1585	561778.8	4191218	1.67E-09	1.66E-09	1.03E-10	3.44E-09
1586	561769.9	4191219	1.66E-09	1.65E-09	1.02E-10	3.41E-09
1587	561760.9	4191220	1.64E-09	1.63E-09	1.01E-10	3.37E-09
1588	561751.9	4191222	1.62E-09	1.61E-09	1.00E-10	3.33E-09
1589	561743	4191223	1.60E-09	1.59E-09	9.90E-11	3.30E-09
1590	561725	4191225	1.56E-09	1.55E-09	9.66E-11	3.21E-09
1591	561716	4191226	1.54E-09	1.53E-09	9.53E-11	3.17E-09
1592	561671.2	4191232	1.45E-09	1.44E-09	8.93E-11	2.97E-09
1593	561662.2	4191233	1.43E-09	1.42E-09	8.82E-11	2.93E-09
1594	561653.2	4191234	1.41E-09	1.40E-09	8.71E-11	2.90E-09
1595	561644.3	4191235	1.39E-09	1.38E-09	8.60E-11	2.86E-09

1596	561635.3	4191237	1.38E-09	1.37E-09	8.49E-11	2.83E-09
1597	561626.3	4191238	1.36E-09	1.35E-09	8.39E-11	2.79E-09
1598	561608.4	4191240	1.32E-09	1.31E-09	8.18E-11	2.72E-09
1599	561937.3	4191042	5.94E-09	5.90E-09	3.66E-10	1.22E-08
1600	561939.9	4191034	6.23E-09	6.19E-09	3.84E-10	1.28E-08
1601	561942.5	4191025	6.51E-09	6.46E-09	4.02E-10	1.34E-08
1602	561945.1	4191016	6.77E-09	6.72E-09	4.17E-10	1.39E-08
1603	561947.7	4191007	7.00E-09	6.95E-09	4.32E-10	1.44E-08
1604	561950.2	4190998	7.21E-09	7.16E-09	4.45E-10	1.48E-08
1605	561952.8	4190989	7.39E-09	7.34E-09	4.56E-10	1.52E-08
1606	561955.4	4190980	7.54E-09	7.49E-09	4.65E-10	1.55E-08
1607	561958	4190971	7.66E-09	7.61E-09	4.73E-10	1.57E-08
1608	561960.6	4190962	7.75E-09	7.70E-09	4.78E-10	1.59E-08
1609	561963.1	4190953	7.82E-09	7.76E-09	4.82E-10	1.61E-08
1610	561965.7	4190944	7.85E-09	7.79E-09	4.85E-10	1.61E-08
1611	561968.3	4190936	7.86E-09	7.80E-09	4.85E-10	1.61E-08
1612	561938.6	4191061	5.15E-09	5.11E-09	3.17E-10	1.06E-08
1613	561927.5	4191075	4.82E-09	4.78E-09	2.97E-10	9.90E-09
1614	561916.4	4191089	4.44E-09	4.41E-09	2.74E-10	9.12E-09
1615	561910.8	4191096	4.24E-09	4.21E-09	2.61E-10	8.70E-09
1616	561899.7	4191110	3.82E-09	3.80E-09	2.36E-10	7.86E-09
1617	561888.5	4191125	3.42E-09	3.40E-09	2.11E-10	7.04E-09
1618	561877.4	4191139	3.05E-09	3.03E-09	1.88E-10	6.28E-09
1619	561866.3	4191153	2.72E-09	2.70E-09	1.68E-10	5.59E-09
1620	561855.1	4191167	2.43E-09	2.41E-09	1.50E-10	4.99E-09
1621	561844	4191181	2.18E-09	2.16E-09	1.34E-10	4.47E-09
1622	561832.9	4191195	1.96E-09	1.94E-09	1.21E-10	4.02E-09
1623	561821.7	4191209	1.78E-09	1.76E-09	1.10E-10	3.65E-09
1624	561801.7	4191224	1.60E-09	1.59E-09	9.89E-11	3.29E-09
1625	561792.8	4191225	1.59E-09	1.58E-09	9.83E-11	3.27E-09
1626	561775	4191228	1.57E-09	1.55E-09	9.66E-11	3.22E-09
1627	561766.1	4191229	1.55E-09	1.54E-09	9.57E-11	3.18E-09
1628	561748.3	4191231	1.52E-09	1.51E-09	9.37E-11	3.12E-09
1629	561694.8	4191238	1.41E-09	1.40E-09	8.71E-11	2.90E-09
1630	561677	4191240	1.38E-09	1.37E-09	8.49E-11	2.83E-09
1631	561668.1	4191241	1.36E-09	1.35E-09	8.39E-11	2.79E-09
1632	561650.3	4191244	1.33E-09	1.32E-09	8.18E-11	2.72E-09
1633	561632.5	4191246	1.29E-09	1.28E-09	7.99E-11	2.66E-09
1634	561614.7	4191248	1.26E-09	1.25E-09	7.80E-11	2.60E-09
1635	561946.8	4191045	5.56E-09	5.52E-09	3.43E-10	1.14E-08
1636	561949.4	4191036	5.83E-09	5.78E-09	3.59E-10	1.20E-08
1637	561951.9	4191027	6.08E-09	6.03E-09	3.75E-10	1.25E-08
1638	561954.5	4191018	6.31E-09	6.27E-09	3.89E-10	1.30E-08
1639	561957.1	4191010	6.53E-09	6.48E-09	4.03E-10	1.34E-08
1640	561959.7	4191001	6.72E-09	6.68E-09	4.15E-10	1.38E-08
1641	561962.3	4190992	6.90E-09	6.85E-09	4.25E-10	1.42E-08
1642	561964.9	4190983	7.04E-09	6.99E-09	4.34E-10	1.45E-08

1643	561967.4	4190974	7.16E-09	7.11E-09	4.42E-10	1.47E-08
1644	561970	4190965	7.26E-09	7.20E-09	4.48E-10	1.49E-08
1645	561972.6	4190956	7.32E-09	7.27E-09	4.52E-10	1.50E-08
1646	561975.2	4190947	7.37E-09	7.31E-09	4.55E-10	1.51E-08
1647	561977.8	4190938	7.39E-09	7.33E-09	4.56E-10	1.52E-08
1648	561948.1	4191064	4.84E-09	4.81E-09	2.99E-10	9.95E-09
1649	561937.1	4191078	4.55E-09	4.52E-09	2.81E-10	9.35E-09
1650	561926	4191092	4.22E-09	4.19E-09	2.60E-10	8.67E-09
1651	561915	4191106	3.85E-09	3.83E-09	2.38E-10	7.92E-09
1652	561903.9	4191120	3.48E-09	3.46E-09	2.15E-10	7.16E-09
1653	561892.8	4191134	3.13E-09	3.10E-09	1.93E-10	6.42E-09
1654	561881.8	4191148	2.80E-09	2.78E-09	1.73E-10	5.75E-09
1655	561870.7	4191162	2.51E-09	2.49E-09	1.55E-10	5.15E-09
1656	561859.7	4191176	2.25E-09	2.24E-09	1.39E-10	4.63E-09
1657	561848.6	4191190	2.03E-09	2.01E-09	1.25E-10	4.17E-09
1658	561837.6	4191204	1.84E-09	1.82E-09	1.13E-10	3.77E-09
1659	561826.5	4191218	1.67E-09	1.66E-09	1.03E-10	3.43E-09
1660	561806.6	4191233	1.51E-09	1.50E-09	9.34E-11	3.11E-09
1661	561788.9	4191235	1.49E-09	1.48E-09	9.22E-11	3.07E-09
1662	561771.2	4191237	1.47E-09	1.46E-09	9.06E-11	3.01E-09
1663	561718.2	4191244	1.37E-09	1.36E-09	8.48E-11	2.82E-09
1664	561700.5	4191247	1.34E-09	1.33E-09	8.28E-11	2.75E-09
1665	561682.8	4191249	1.31E-09	1.30E-09	8.08E-11	2.69E-09
1666	561665.1	4191251	1.28E-09	1.27E-09	7.89E-11	2.62E-09
1667	561647.4	4191253	1.25E-09	1.24E-09	7.71E-11	2.56E-09
1668	561629.8	4191256	1.22E-09	1.21E-09	7.54E-11	2.51E-09
1669	561612.1	4191258	1.19E-09	1.18E-09	7.37E-11	2.45E-09
1670	561956.2	4191048	5.22E-09	5.18E-09	3.22E-10	1.07E-08
1671	561958.8	4191039	5.46E-09	5.42E-09	3.37E-10	1.12E-08
1672	561961.4	4191030	5.69E-09	5.65E-09	3.51E-10	1.17E-08
1673	561964	4191021	5.91E-09	5.86E-09	3.64E-10	1.21E-08
1674	561966.6	4191012	6.11E-09	6.06E-09	3.77E-10	1.25E-08
1675	561969.1	4191003	6.29E-09	6.24E-09	3.88E-10	1.29E-08
1676	561971.7	4190995	6.45E-09	6.40E-09	3.98E-10	1.32E-08
1677	561974.3	4190986	6.59E-09	6.54E-09	4.06E-10	1.35E-08
1678	561976.9	4190977	6.71E-09	6.66E-09	4.14E-10	1.38E-08
1679	561979.5	4190968	6.80E-09	6.75E-09	4.20E-10	1.40E-08
1680	561982.1	4190959	6.87E-09	6.82E-09	4.24E-10	1.41E-08
1681	561984.6	4190950	6.92E-09	6.87E-09	4.27E-10	1.42E-08
1682	561987.2	4190941	6.96E-09	6.91E-09	4.29E-10	1.43E-08
1683	561957.4	4191067	4.57E-09	4.53E-09	2.82E-10	9.38E-09
1684	561951.7	4191074	4.43E-09	4.40E-09	2.73E-10	9.11E-09
1685	561946	4191081	4.29E-09	4.26E-09	2.65E-10	8.81E-09
1686	561940.3	4191089	4.14E-09	4.11E-09	2.55E-10	8.50E-09
1687	561934.5	4191096	3.98E-09	3.95E-09	2.45E-10	8.17E-09
1688	561928.8	4191103	3.81E-09	3.78E-09	2.35E-10	7.83E-09
1689	561923.1	4191110	3.64E-09	3.61E-09	2.25E-10	7.48E-09

1690	561917.4	4191117	3.47E-09	3.44E-09	2.14E-10	7.12E-09
1691	561911.7	4191125	3.29E-09	3.27E-09	2.03E-10	6.76E-09
1692	561906	4191132	3.12E-09	3.10E-09	1.93E-10	6.41E-09
1693	561900.3	4191139	2.95E-09	2.93E-09	1.82E-10	6.07E-09
1694	561894.6	4191146	2.79E-09	2.77E-09	1.72E-10	5.74E-09
1695	561888.8	4191154	2.64E-09	2.63E-09	1.63E-10	5.43E-09
1696	561883.1	4191161	2.50E-09	2.48E-09	1.54E-10	5.14E-09
1697	561877.4	4191168	2.37E-09	2.35E-09	1.46E-10	4.87E-09
1698	561871.7	4191175	2.25E-09	2.23E-09	1.39E-10	4.61E-09
1699	561866	4191182	2.13E-09	2.11E-09	1.31E-10	4.37E-09
1700	561860.3	4191190	2.02E-09	2.01E-09	1.25E-10	4.15E-09
1701	561854.6	4191197	1.92E-09	1.90E-09	1.18E-10	3.94E-09
1702	561848.9	4191204	1.82E-09	1.81E-09	1.13E-10	3.75E-09
1703	561843.1	4191211	1.74E-09	1.72E-09	1.07E-10	3.57E-09
1704	561837.4	4191219	1.66E-09	1.64E-09	1.02E-10	3.40E-09
1705	561831.7	4191226	1.58E-09	1.57E-09	9.77E-11	3.25E-09
1706	561826	4191233	1.51E-09	1.50E-09	9.32E-11	3.10E-09
1707	561811.2	4191241	1.43E-09	1.42E-09	8.84E-11	2.94E-09
1708	561802	4191243	1.42E-09	1.41E-09	8.77E-11	2.92E-09
1709	561738.1	4191251	1.33E-09	1.32E-09	8.22E-11	2.73E-09
1710	561728.9	4191252	1.32E-09	1.31E-09	8.12E-11	2.70E-09
1711	561719.8	4191253	1.30E-09	1.29E-09	8.02E-11	2.67E-09
1712	561710.6	4191254	1.28E-09	1.27E-09	7.93E-11	2.64E-09
1713	561701.5	4191256	1.27E-09	1.26E-09	7.83E-11	2.61E-09
1714	561692.4	4191257	1.25E-09	1.24E-09	7.74E-11	2.57E-09
1715	561683.2	4191258	1.24E-09	1.23E-09	7.65E-11	2.54E-09
1716	561674.1	4191259	1.22E-09	1.21E-09	7.56E-11	2.51E-09
1717	561665	4191260	1.21E-09	1.20E-09	7.47E-11	2.48E-09
1718	561655.8	4191261	1.19E-09	1.19E-09	7.38E-11	2.45E-09
1719	561646.7	4191263	1.18E-09	1.17E-09	7.29E-11	2.43E-09
1720	561637.5	4191264	1.17E-09	1.16E-09	7.21E-11	2.40E-09
1721	561628.4	4191265	1.15E-09	1.15E-09	7.13E-11	2.37E-09
1722	561619.3	4191266	1.14E-09	1.13E-09	7.05E-11	2.34E-09
1723	561610.1	4191267	1.13E-09	1.12E-09	6.97E-11	2.32E-09
1724	561601	4191269	1.12E-09	1.11E-09	6.89E-11	2.29E-09
1725	561963.1	4191060	4.69E-09	4.66E-09	2.89E-10	9.64E-09
1726	561965.7	4191051	4.92E-09	4.88E-09	3.03E-10	1.01E-08
1727	561968.3	4191042	5.14E-09	5.10E-09	3.17E-10	1.06E-08
1728	561970.9	4191033	5.35E-09	5.31E-09	3.30E-10	1.10E-08
1729	561973.4	4191024	5.54E-09	5.50E-09	3.42E-10	1.14E-08
1730	561976	4191015	5.72E-09	5.68E-09	3.53E-10	1.18E-08
1731	561978.6	4191006	5.89E-09	5.85E-09	3.63E-10	1.21E-08
1732	561981.2	4190997	6.04E-09	6.00E-09	3.73E-10	1.24E-08
1733	561983.8	4190988	6.18E-09	6.13E-09	3.81E-10	1.27E-08
1734	561986.3	4190979	6.29E-09	6.25E-09	3.88E-10	1.29E-08
1735	561988.9	4190971	6.39E-09	6.34E-09	3.94E-10	1.31E-08
1736	561991.5	4190962	6.47E-09	6.42E-09	3.99E-10	1.33E-08

1737	561994.1	4190953	6.52E-09	6.48E-09	4.03E-10	1.34E-08
1738	561996.7	4190944	6.56E-09	6.51E-09	4.05E-10	1.35E-08
1739	561966.9	4191070	4.33E-09	4.29E-09	2.67E-10	8.89E-09
1740	561961.2	4191077	4.20E-09	4.17E-09	2.59E-10	8.63E-09
1741	561955.6	4191084	4.07E-09	4.04E-09	2.51E-10	8.36E-09
1742	561949.9	4191091	3.93E-09	3.90E-09	2.43E-10	8.08E-09
1743	561944.2	4191098	3.79E-09	3.76E-09	2.34E-10	7.78E-09
1744	561938.5	4191105	3.64E-09	3.61E-09	2.24E-10	7.47E-09
1745	561932.9	4191113	3.48E-09	3.46E-09	2.15E-10	7.16E-09
1746	561927.2	4191120	3.33E-09	3.31E-09	2.05E-10	6.84E-09
1747	561921.5	4191127	3.17E-09	3.15E-09	1.96E-10	6.52E-09
1748	561910.2	4191141	2.86E-09	2.84E-09	1.77E-10	5.88E-09
1749	561904.5	4191148	2.72E-09	2.70E-09	1.68E-10	5.58E-09
1750	561893.2	4191163	2.44E-09	2.42E-09	1.51E-10	5.01E-09
1751	561887.5	4191170	2.31E-09	2.30E-09	1.43E-10	4.75E-09
1752	561881.8	4191177	2.20E-09	2.18E-09	1.36E-10	4.51E-09
1753	561870.5	4191191	1.98E-09	1.97E-09	1.22E-10	4.07E-09
1754	561864.8	4191199	1.89E-09	1.87E-09	1.16E-10	3.88E-09
1755	561859.2	4191206	1.80E-09	1.78E-09	1.11E-10	3.69E-09
1756	561853.5	4191213	1.71E-09	1.70E-09	1.06E-10	3.52E-09
1757	561847.8	4191220	1.63E-09	1.62E-09	1.01E-10	3.36E-09
1758	561842.1	4191227	1.56E-09	1.55E-09	9.64E-11	3.21E-09
1759	561836.5	4191235	1.49E-09	1.48E-09	9.22E-11	3.07E-09
1760	561830.8	4191242	1.43E-09	1.42E-09	8.82E-11	2.93E-09
1761	561816.1	4191250	1.36E-09	1.35E-09	8.38E-11	2.79E-09
1762	561761.7	4191257	1.29E-09	1.28E-09	7.99E-11	2.66E-09
1763	561752.6	4191258	1.28E-09	1.27E-09	7.91E-11	2.63E-09
1764	561743.5	4191259	1.27E-09	1.26E-09	7.82E-11	2.60E-09
1765	561734.4	4191261	1.25E-09	1.24E-09	7.74E-11	2.57E-09
1766	561725.4	4191262	1.24E-09	1.23E-09	7.65E-11	2.54E-09
1767	561716.3	4191263	1.22E-09	1.21E-09	7.56E-11	2.51E-09
1768	561707.2	4191264	1.21E-09	1.20E-09	7.47E-11	2.49E-09
1769	561698.2	4191265	1.20E-09	1.19E-09	7.38E-11	2.46E-09
1770	561689.1	4191266	1.18E-09	1.17E-09	7.30E-11	2.43E-09
1771	561680	4191268	1.17E-09	1.16E-09	7.21E-11	2.40E-09
1772	561671	4191269	1.15E-09	1.15E-09	7.13E-11	2.37E-09
1773	561661.9	4191270	1.14E-09	1.13E-09	7.05E-11	2.35E-09
1774	561652.8	4191271	1.13E-09	1.12E-09	6.97E-11	2.32E-09
1775	561643.8	4191272	1.12E-09	1.11E-09	6.89E-11	2.29E-09
1776	561634.7	4191273	1.10E-09	1.10E-09	6.82E-11	2.27E-09
1777	561625.6	4191275	1.09E-09	1.08E-09	6.74E-11	2.24E-09
1778	561616.5	4191276	1.08E-09	1.07E-09	6.67E-11	2.22E-09
1779	561607.5	4191277	1.07E-09	1.06E-09	6.60E-11	2.20E-09
1780	561598.4	4191278	1.06E-09	1.05E-09	6.53E-11	2.17E-09
1781	561972.6	4191062	4.44E-09	4.41E-09	2.74E-10	9.12E-09
1782	561975.1	4191053	4.64E-09	4.61E-09	2.87E-10	9.54E-09
1783	561977.7	4191045	4.85E-09	4.81E-09	2.99E-10	9.96E-09

1784	561980.3	4191036	5.04E-09	5.00E-09	3.11E-10	1.03E-08
1785	561982.9	4191027	5.21E-09	5.18E-09	3.22E-10	1.07E-08
1786	561985.5	4191018	5.38E-09	5.34E-09	3.32E-10	1.11E-08
1787	561988.1	4191009	5.54E-09	5.50E-09	3.42E-10	1.14E-08
1788	561990.6	4191000	5.68E-09	5.64E-09	3.51E-10	1.17E-08
1789	561993.2	4190991	5.81E-09	5.77E-09	3.59E-10	1.19E-08
1790	561995.8	4190982	5.92E-09	5.88E-09	3.66E-10	1.22E-08
1791	561998.4	4190973	6.02E-09	5.98E-09	3.71E-10	1.24E-08
1792	562001	4190964	6.10E-09	6.05E-09	3.76E-10	1.25E-08
1793	562003.5	4190955	6.16E-09	6.11E-09	3.80E-10	1.26E-08
1794	562006.1	4190947	6.20E-09	6.15E-09	3.83E-10	1.27E-08
1795	561699.7	4190837	6.05E-08	6.01E-08	3.75E-09	1.24E-07
1796	561690.9	4190835	6.03E-08	5.99E-08	3.74E-09	1.24E-07
1797	561682	4190833	5.87E-08	5.83E-08	3.64E-09	1.21E-07
1798	561673.2	4190830	5.53E-08	5.49E-08	3.43E-09	1.14E-07
1799	561664.3	4190828	5.08E-08	5.04E-08	3.15E-09	1.04E-07
1800	561655.5	4190826	4.54E-08	4.50E-08	2.81E-09	9.32E-08
1801	561646.6	4190823	3.99E-08	3.96E-08	2.47E-09	8.19E-08
1802	561637.8	4190821	3.45E-08	3.43E-08	2.14E-09	7.10E-08
1803	561702.3	4190828	4.59E-08	4.56E-08	2.84E-09	9.43E-08
1804	561693.4	4190826	4.52E-08	4.49E-08	2.80E-09	9.29E-08
1805	561684.6	4190823	4.37E-08	4.34E-08	2.71E-09	8.98E-08
1806	561675.7	4190821	4.12E-08	4.09E-08	2.55E-09	8.46E-08
1807	561666.9	4190819	3.80E-08	3.77E-08	2.35E-09	7.80E-08
1808	561658	4190816	3.43E-08	3.41E-08	2.13E-09	7.06E-08
1809	561649.2	4190814	3.07E-08	3.05E-08	1.91E-09	6.32E-08
1810	561640.3	4190812	2.74E-08	2.72E-08	1.70E-09	5.64E-08
1811	561631.5	4190809	2.44E-08	2.42E-08	1.51E-09	5.02E-08
1812	561731.8	4190835	4.13E-08	4.10E-08	2.56E-09	8.48E-08
1813	561738.7	4190847	4.59E-08	4.55E-08	2.84E-09	9.43E-08
1814	561704.8	4190818	3.60E-08	3.57E-08	2.23E-09	7.39E-08
1815	561695.9	4190816	3.52E-08	3.49E-08	2.18E-09	7.23E-08
1816	561687.1	4190814	3.38E-08	3.36E-08	2.09E-09	6.95E-08
1817	561678.2	4190811	3.19E-08	3.17E-08	1.98E-09	6.55E-08
1818	561669.4	4190809	2.96E-08	2.94E-08	1.83E-09	6.08E-08
1819	561660.5	4190807	2.71E-08	2.69E-08	1.68E-09	5.57E-08
1820	561651.7	4190804	2.46E-08	2.44E-08	1.53E-09	5.06E-08
1821	561642.8	4190802	2.24E-08	2.22E-08	1.39E-09	4.60E-08
1822	561734.3	4190825	3.42E-08	3.39E-08	2.12E-09	7.02E-08
1823	561747.3	4190842	3.86E-08	3.84E-08	2.39E-09	7.94E-08
1824	561707.3	4190809	2.90E-08	2.88E-08	1.80E-09	5.96E-08
1825	561698.4	4190807	2.82E-08	2.80E-08	1.75E-09	5.80E-08
1826	561689.6	4190804	2.70E-08	2.69E-08	1.68E-09	5.56E-08
1827	561680.7	4190802	2.56E-08	2.54E-08	1.59E-09	5.26E-08
1828	561671.9	4190800	2.39E-08	2.37E-08	1.48E-09	4.90E-08
1829	561663	4190797	2.21E-08	2.19E-08	1.37E-09	4.54E-08
1830	561654.2	4190795	2.03E-08	2.02E-08	1.26E-09	4.17E-08

1831	561645.3	4190793	1.87E-08	1.85E-08	1.16E-09	3.83E-08
1832	561636.5	4190790	1.71E-08	1.70E-08	1.06E-09	3.51E-08
1833	561736.8	4190816	2.86E-08	2.84E-08	1.77E-09	5.88E-08
1834	561748.9	4190825	3.02E-08	3.00E-08	1.87E-09	6.21E-08
1835	561755.9	4190837	3.32E-08	3.29E-08	2.06E-09	6.82E-08
1836	561757.6	4190853	3.79E-08	3.76E-08	2.35E-09	7.78E-08
1837	561709.8	4190799	2.39E-08	2.38E-08	1.48E-09	4.92E-08
1838	561701	4190797	2.32E-08	2.30E-08	1.44E-09	4.77E-08
1839	561692.1	4190795	2.22E-08	2.21E-08	1.38E-09	4.57E-08
1840	561683.3	4190792	2.11E-08	2.10E-08	1.31E-09	4.34E-08
1841	561674.4	4190790	1.98E-08	1.97E-08	1.23E-09	4.07E-08
1842	561665.6	4190788	1.85E-08	1.83E-08	1.14E-09	3.79E-08
1843	561656.7	4190785	1.71E-08	1.70E-08	1.06E-09	3.52E-08
1844	561647.9	4190783	1.59E-08	1.58E-08	9.83E-10	3.26E-08
1845	561639	4190781	1.47E-08	1.46E-08	9.09E-10	3.02E-08
1846	561742.4	4190809	2.47E-08	2.46E-08	1.53E-09	5.08E-08
1847	561756.5	4190819	2.64E-08	2.62E-08	1.64E-09	5.43E-08
1848	561764.6	4190834	2.93E-08	2.91E-08	1.81E-09	6.02E-08
1849	561766.6	4190851	3.37E-08	3.35E-08	2.09E-09	6.93E-08
1850	561712.3	4190790	2.01E-08	2.00E-08	1.25E-09	4.14E-08
1851	561703.5	4190788	1.95E-08	1.94E-08	1.21E-09	4.01E-08
1852	561694.6	4190785	1.87E-08	1.86E-08	1.16E-09	3.84E-08
1853	561685.8	4190783	1.78E-08	1.77E-08	1.10E-09	3.65E-08
1854	561676.9	4190781	1.68E-08	1.67E-08	1.04E-09	3.45E-08
1855	561668.1	4190778	1.57E-08	1.56E-08	9.75E-10	3.23E-08
1856	561659.2	4190776	1.47E-08	1.46E-08	9.11E-10	3.02E-08
1857	561650.4	4190774	1.37E-08	1.36E-08	8.50E-10	2.82E-08
1858	561744.4	4190799	2.12E-08	2.10E-08	1.31E-09	4.35E-08
1859	561758.3	4190809	2.29E-08	2.27E-08	1.42E-09	4.71E-08
1860	561773.1	4190829	2.58E-08	2.56E-08	1.60E-09	5.30E-08
1861	561775.1	4190846	2.95E-08	2.93E-08	1.83E-09	6.07E-08
1862	561714.9	4190780	1.72E-08	1.71E-08	1.07E-09	3.54E-08
1863	561706	4190778	1.67E-08	1.65E-08	1.03E-09	3.42E-08
1864	561697.1	4190776	1.60E-08	1.59E-08	9.91E-10	3.29E-08
1865	561688.3	4190773	1.53E-08	1.51E-08	9.45E-10	3.13E-08
1866	561679.4	4190771	1.45E-08	1.44E-08	8.96E-10	2.97E-08
1867	561670.6	4190769	1.36E-08	1.35E-08	8.44E-10	2.80E-08
1868	561661.7	4190766	1.28E-08	1.27E-08	7.94E-10	2.63E-08
1869	561652.9	4190764	1.20E-08	1.19E-08	7.45E-10	2.47E-08
1870	561644	4190762	1.13E-08	1.12E-08	6.98E-10	2.32E-08
1871	561746.6	4190789	1.83E-08	1.82E-08	1.13E-09	3.76E-08
1872	561760.2	4190799	1.99E-08	1.98E-08	1.24E-09	4.10E-08
1873	561773.9	4190810	2.10E-08	2.09E-08	1.30E-09	4.32E-08
1874	561781.7	4190824	2.30E-08	2.28E-08	1.42E-09	4.72E-08
1875	561783.7	4190841	2.61E-08	2.60E-08	1.62E-09	5.37E-08
1876	561785.7	4190858	2.86E-08	2.84E-08	1.77E-09	5.88E-08
1877	561717.4	4190771	1.49E-08	1.48E-08	9.25E-10	3.07E-08

1878	561708.5	4190769	1.44E-08	1.43E-08	8.95E-10	2.97E-08
1879	561699.7	4190766	1.39E-08	1.38E-08	8.60E-10	2.85E-08
1880	561690.8	4190764	1.33E-08	1.32E-08	8.23E-10	2.73E-08
1881	561682	4190762	1.26E-08	1.25E-08	7.83E-10	2.60E-08
1882	561673.1	4190759	1.20E-08	1.19E-08	7.41E-10	2.46E-08
1883	561664.3	4190757	1.13E-08	1.12E-08	6.99E-10	2.32E-08
1884	561655.4	4190754	1.06E-08	1.06E-08	6.59E-10	2.19E-08
1885	561748.9	4190779	1.60E-08	1.58E-08	9.88E-10	3.28E-08
1886	561762.3	4190790	1.75E-08	1.73E-08	1.08E-09	3.59E-08
1887	561775.8	4190800	1.86E-08	1.85E-08	1.15E-09	3.82E-08
1888	561790.2	4190819	2.06E-08	2.05E-08	1.28E-09	4.24E-08
1889	561792.2	4190836	2.33E-08	2.32E-08	1.45E-09	4.80E-08
1890	561794.2	4190853	2.56E-08	2.54E-08	1.58E-09	5.26E-08
1891	561719.9	4190761	1.31E-08	1.30E-08	8.11E-10	2.69E-08
1892	561711	4190759	1.27E-08	1.26E-08	7.85E-10	2.60E-08
1893	561702.2	4190757	1.22E-08	1.21E-08	7.56E-10	2.51E-08
1894	561693.3	4190754	1.17E-08	1.16E-08	7.25E-10	2.40E-08
1895	561684.5	4190752	1.12E-08	1.11E-08	6.92E-10	2.29E-08
1896	561675.6	4190750	1.06E-08	1.05E-08	6.57E-10	2.18E-08
1897	561666.8	4190747	1.01E-08	9.98E-09	6.23E-10	2.07E-08
1898	561657.9	4190745	9.51E-09	9.44E-09	5.89E-10	1.95E-08
1899	561649.1	4190743	8.99E-09	8.93E-09	5.57E-10	1.85E-08
1900	561751.2	4190770	1.41E-08	1.40E-08	8.70E-10	2.89E-08
1901	561764.5	4190780	1.54E-08	1.53E-08	9.54E-10	3.17E-08
1902	561777.8	4190790	1.65E-08	1.64E-08	1.02E-09	3.39E-08
1903	561791.1	4190800	1.72E-08	1.71E-08	1.07E-09	3.54E-08
1904	561798.8	4190814	1.87E-08	1.85E-08	1.16E-09	3.83E-08
1905	561800.7	4190831	2.10E-08	2.09E-08	1.30E-09	4.32E-08
1906	561722.4	4190752	1.16E-08	1.15E-08	7.19E-10	2.38E-08
1907	561713.6	4190750	1.12E-08	1.12E-08	6.96E-10	2.31E-08
1908	561704.7	4190747	1.08E-08	1.08E-08	6.71E-10	2.23E-08
1909	561695.8	4190745	1.04E-08	1.03E-08	6.44E-10	2.14E-08
1910	561687	4190742	9.96E-09	9.89E-09	6.17E-10	2.05E-08
1911	561678.1	4190740	9.49E-09	9.42E-09	5.88E-10	1.95E-08
1912	561669.3	4190738	9.02E-09	8.96E-09	5.59E-10	1.85E-08
1913	561660.4	4190735	8.56E-09	8.50E-09	5.30E-10	1.76E-08
1914	561753.6	4190760	1.25E-08	1.24E-08	7.73E-10	2.56E-08
1915	561766.8	4190770	1.37E-08	1.36E-08	8.47E-10	2.81E-08
1916	561780	4190780	1.47E-08	1.46E-08	9.11E-10	3.02E-08
1917	561793.2	4190790	1.55E-08	1.54E-08	9.60E-10	3.18E-08
1918	561807.3	4190809	1.70E-08	1.69E-08	1.05E-09	3.49E-08
1919	561724.9	4190742	1.04E-08	1.03E-08	6.42E-10	2.13E-08
1920	561716.1	4190740	1.01E-08	9.98E-09	6.23E-10	2.07E-08
1921	561707.2	4190738	9.70E-09	9.63E-09	6.01E-10	1.99E-08
1922	561698.4	4190735	9.33E-09	9.27E-09	5.78E-10	1.92E-08
1923	561689.5	4190733	8.95E-09	8.89E-09	5.54E-10	1.84E-08
1924	561680.7	4190731	8.56E-09	8.50E-09	5.30E-10	1.76E-08

1925	561671.8	4190728	8.15E-09	8.10E-09	5.05E-10	1.68E-08
1926	561663	4190726	7.76E-09	7.71E-09	4.81E-10	1.60E-08
1927	561654.1	4190724	7.39E-09	7.34E-09	4.58E-10	1.52E-08
1928	561750.6	4190746	1.07E-08	1.06E-08	6.64E-10	2.20E-08
1929	561757.7	4190752	1.13E-08	1.12E-08	7.00E-10	2.32E-08
1930	561764.9	4190757	1.19E-08	1.18E-08	7.36E-10	2.44E-08
1931	561779.2	4190768	1.30E-08	1.29E-08	8.03E-10	2.67E-08
1932	561786.3	4190774	1.34E-08	1.34E-08	8.33E-10	2.76E-08
1933	561793.5	4190779	1.39E-08	1.38E-08	8.59E-10	2.85E-08
1934	561800.6	4190785	1.42E-08	1.41E-08	8.80E-10	2.92E-08
1935	561807.8	4190790	1.45E-08	1.44E-08	8.96E-10	2.97E-08
1936	561820.2	4190841	1.93E-08	1.91E-08	1.19E-09	3.96E-08
1937	561821.2	4190850	2.00E-08	1.98E-08	1.24E-09	4.10E-08
1938	561823.3	4190868	2.10E-08	2.09E-08	1.30E-09	4.32E-08
1939	561824.4	4190877	2.14E-08	2.12E-08	1.32E-09	4.40E-08
1940	561736.3	4190735	9.59E-09	9.53E-09	5.94E-10	1.97E-08
1941	561727.4	4190733	9.34E-09	9.27E-09	5.78E-10	1.92E-08
1942	561718.6	4190730	9.06E-09	8.99E-09	5.61E-10	1.86E-08
1943	561709.7	4190728	8.75E-09	8.69E-09	5.42E-10	1.80E-08
1944	561700.9	4190726	8.43E-09	8.37E-09	5.22E-10	1.73E-08
1945	561692	4190723	8.10E-09	8.04E-09	5.02E-10	1.66E-08
1946	561683.2	4190721	7.76E-09	7.71E-09	4.81E-10	1.60E-08
1947	561674.3	4190719	7.42E-09	7.37E-09	4.59E-10	1.52E-08
1948	561665.5	4190716	7.08E-09	7.03E-09	4.38E-10	1.45E-08
1949	561656.6	4190714	6.75E-09	6.70E-09	4.18E-10	1.39E-08
1950	561760	4190742	1.02E-08	1.01E-08	6.30E-10	2.09E-08
1951	561774.1	4190753	1.12E-08	1.11E-08	6.91E-10	2.29E-08
1952	561788.2	4190764	1.21E-08	1.20E-08	7.49E-10	2.48E-08
1953	561802.3	4190775	1.28E-08	1.28E-08	7.95E-10	2.64E-08
1954	561816.4	4190786	1.33E-08	1.33E-08	8.26E-10	2.74E-08
1955	561827.6	4190826	1.68E-08	1.67E-08	1.04E-09	3.46E-08
1956	561829.7	4190844	1.82E-08	1.81E-08	1.13E-09	3.74E-08
1957	561830.8	4190853	1.88E-08	1.86E-08	1.16E-09	3.86E-08
1958	561832.8	4190871	1.96E-08	1.95E-08	1.21E-09	4.03E-08
1959	561730	4190723	8.46E-09	8.40E-09	5.24E-10	1.74E-08
1960	561721.1	4190721	8.21E-09	8.16E-09	5.09E-10	1.69E-08
1961	561712.3	4190719	7.95E-09	7.89E-09	4.92E-10	1.63E-08
1962	561703.4	4190716	7.67E-09	7.61E-09	4.75E-10	1.58E-08
1963	561694.5	4190714	7.38E-09	7.32E-09	4.57E-10	1.52E-08
1964	561685.7	4190712	7.08E-09	7.03E-09	4.38E-10	1.45E-08
1965	561676.8	4190709	6.78E-09	6.73E-09	4.20E-10	1.39E-08
1966	561668	4190707	6.47E-09	6.43E-09	4.01E-10	1.33E-08
1967	561748.3	4190722	8.35E-09	8.29E-09	5.17E-10	1.72E-08
1968	561762.3	4190732	9.21E-09	9.14E-09	5.70E-10	1.89E-08
1969	561776.2	4190743	1.01E-08	1.00E-08	6.24E-10	2.07E-08
1970	561790.2	4190754	1.09E-08	1.08E-08	6.76E-10	2.24E-08
1971	561804.1	4190765	1.16E-08	1.16E-08	7.21E-10	2.39E-08

1972	561818.1	4190775	1.22E-08	1.21E-08	7.54E-10	2.50E-08
1973	561833.1	4190795	1.33E-08	1.32E-08	8.20E-10	2.72E-08
1974	561834.1	4190804	1.40E-08	1.39E-08	8.67E-10	2.88E-08
1975	561836.2	4190821	1.54E-08	1.53E-08	9.56E-10	3.17E-08
1976	561838.2	4190839	1.67E-08	1.66E-08	1.03E-09	3.43E-08
1977	561840.3	4190856	1.77E-08	1.76E-08	1.09E-09	3.63E-08
1978	561842.3	4190874	1.84E-08	1.82E-08	1.14E-09	3.77E-08
1979	561732.5	4190714	7.71E-09	7.66E-09	4.78E-10	1.59E-08
1980	561723.6	4190711	7.49E-09	7.44E-09	4.64E-10	1.54E-08
1981	561714.8	4190709	7.26E-09	7.21E-09	4.49E-10	1.49E-08
1982	561705.9	4190707	7.01E-09	6.96E-09	4.34E-10	1.44E-08
1983	561697.1	4190704	6.75E-09	6.70E-09	4.18E-10	1.39E-08
1984	561688.2	4190702	6.49E-09	6.44E-09	4.02E-10	1.33E-08
1985	561679.4	4190700	6.22E-09	6.17E-09	3.85E-10	1.28E-08
1986	561670.5	4190697	5.95E-09	5.90E-09	3.68E-10	1.22E-08
1987	561661.7	4190695	5.68E-09	5.64E-09	3.52E-10	1.17E-08
1988	561750.8	4190712	7.63E-09	7.57E-09	4.72E-10	1.57E-08
1989	561764.6	4190723	8.38E-09	8.32E-09	5.19E-10	1.72E-08
1990	561778.4	4190733	9.15E-09	9.08E-09	5.66E-10	1.88E-08
1991	561792.2	4190744	9.90E-09	9.83E-09	6.13E-10	2.03E-08
1992	561806.1	4190755	1.06E-08	1.05E-08	6.55E-10	2.17E-08
1993	561819.9	4190765	1.11E-08	1.10E-08	6.88E-10	2.28E-08
1994	561841.6	4190790	1.23E-08	1.22E-08	7.60E-10	2.52E-08
1995	561843.7	4190807	1.36E-08	1.35E-08	8.42E-10	2.80E-08
1996	561845.7	4190825	1.48E-08	1.47E-08	9.18E-10	3.05E-08
1997	561847.7	4190842	1.59E-08	1.58E-08	9.82E-10	3.26E-08
1998	561849.8	4190859	1.67E-08	1.65E-08	1.03E-09	3.42E-08
1999	561851.8	4190877	1.72E-08	1.71E-08	1.06E-09	3.54E-08
2000	561735	4190704	7.07E-09	7.02E-09	4.38E-10	1.45E-08
2001	561726.1	4190702	6.87E-09	6.82E-09	4.25E-10	1.41E-08
2002	561717.3	4190700	6.66E-09	6.61E-09	4.12E-10	1.37E-08
2003	561708.4	4190697	6.44E-09	6.39E-09	3.99E-10	1.32E-08
2004	561699.6	4190695	6.21E-09	6.16E-09	3.84E-10	1.28E-08
2005	561690.7	4190693	5.97E-09	5.93E-09	3.70E-10	1.23E-08
2006	561681.9	4190690	5.73E-09	5.69E-09	3.55E-10	1.18E-08
2007	561673	4190688	5.49E-09	5.45E-09	3.40E-10	1.13E-08
2008	561753.2	4190702	7.00E-09	6.95E-09	4.33E-10	1.44E-08
2009	561766.9	4190713	7.66E-09	7.61E-09	4.75E-10	1.57E-08
2010	561780.6	4190724	8.34E-09	8.28E-09	5.17E-10	1.71E-08
2011	561794.3	4190734	9.02E-09	8.96E-09	5.58E-10	1.85E-08
2012	561808.1	4190745	9.64E-09	9.57E-09	5.97E-10	1.98E-08
2013	561821.8	4190755	1.02E-08	1.01E-08	6.30E-10	2.09E-08
2014	561850.2	4190785	1.14E-08	1.13E-08	7.07E-10	2.35E-08
2015	561852.2	4190802	1.26E-08	1.25E-08	7.80E-10	2.59E-08
2016	561854.2	4190819	1.37E-08	1.36E-08	8.48E-10	2.82E-08
2017	561856.2	4190837	1.47E-08	1.46E-08	9.07E-10	3.01E-08
2018	561858.3	4190854	1.54E-08	1.53E-08	9.54E-10	3.17E-08

2019	561860.3	4190871	1.60E-08	1.58E-08	9.87E-10	3.28E-08
2020	561737.5	4190695	6.50E-09	6.46E-09	4.03E-10	1.34E-08
2021	561728.7	4190692	6.33E-09	6.28E-09	3.92E-10	1.30E-08
2022	561719.8	4190690	6.14E-09	6.09E-09	3.80E-10	1.26E-08
2023	561711	4190688	5.94E-09	5.90E-09	3.68E-10	1.22E-08
2024	561702.1	4190685	5.73E-09	5.69E-09	3.55E-10	1.18E-08
2025	561693.2	4190683	5.52E-09	5.48E-09	3.42E-10	1.13E-08
2026	561684.4	4190681	5.31E-09	5.27E-09	3.29E-10	1.09E-08
2027	561675.5	4190678	5.10E-09	5.06E-09	3.16E-10	1.05E-08
2028	561666.7	4190676	4.88E-09	4.85E-09	3.02E-10	1.00E-08
2029	561755.7	4190693	6.45E-09	6.41E-09	4.00E-10	1.33E-08
2030	561769.3	4190703	7.04E-09	6.99E-09	4.36E-10	1.45E-08
2031	561782.9	4190714	7.65E-09	7.59E-09	4.73E-10	1.57E-08
2032	561796.5	4190724	8.25E-09	8.19E-09	5.11E-10	1.70E-08
2033	561810.1	4190735	8.82E-09	8.76E-09	5.46E-10	1.81E-08
2034	561823.7	4190745	9.33E-09	9.26E-09	5.77E-10	1.92E-08
2035	561851	4190766	1.00E-08	9.97E-09	6.21E-10	2.06E-08
2036	561858.8	4190780	1.07E-08	1.06E-08	6.60E-10	2.19E-08
2037	561860.8	4190797	1.17E-08	1.16E-08	7.25E-10	2.41E-08
2038	561862.8	4190814	1.27E-08	1.26E-08	7.87E-10	2.61E-08
2039	561864.8	4190831	1.36E-08	1.35E-08	8.41E-10	2.79E-08
2040	561866.8	4190848	1.43E-08	1.42E-08	8.84E-10	2.94E-08
2041	561868.8	4190865	1.48E-08	1.47E-08	9.16E-10	3.05E-08
2042	561870.8	4190883	1.52E-08	1.50E-08	9.37E-10	3.11E-08
2043	561740	4190685	6.01E-09	5.97E-09	3.72E-10	1.23E-08
2044	561731.2	4190683	5.85E-09	5.81E-09	3.62E-10	1.20E-08
2045	561722.3	4190681	5.68E-09	5.64E-09	3.52E-10	1.17E-08
2046	561713.5	4190678	5.50E-09	5.46E-09	3.41E-10	1.13E-08
2047	561704.6	4190676	5.32E-09	5.28E-09	3.29E-10	1.09E-08
2048	561695.8	4190674	5.13E-09	5.09E-09	3.18E-10	1.05E-08
2049	561686.9	4190671	4.94E-09	4.91E-09	3.06E-10	1.02E-08
2050	561678.1	4190669	4.75E-09	4.72E-09	2.94E-10	9.76E-09
2051	561669.2	4190666	4.56E-09	4.52E-09	2.82E-10	9.36E-09
2052	561758.6	4190684	5.99E-09	5.95E-09	3.71E-10	1.23E-08
2053	561765.8	4190689	6.26E-09	6.22E-09	3.88E-10	1.29E-08
2054	561772.9	4190695	6.54E-09	6.49E-09	4.05E-10	1.34E-08
2055	561780.1	4190700	6.83E-09	6.78E-09	4.23E-10	1.40E-08
2056	561787.3	4190706	7.12E-09	7.07E-09	4.41E-10	1.46E-08
2057	561794.5	4190711	7.41E-09	7.36E-09	4.59E-10	1.52E-08
2058	561801.7	4190717	7.70E-09	7.64E-09	4.77E-10	1.58E-08
2059	561808.9	4190722	7.97E-09	7.92E-09	4.94E-10	1.64E-08
2060	561823.2	4190733	8.49E-09	8.43E-09	5.26E-10	1.74E-08
2061	561830.4	4190739	8.72E-09	8.66E-09	5.40E-10	1.79E-08
2062	561844.8	4190750	9.13E-09	9.06E-09	5.65E-10	1.88E-08
2063	561852	4190756	9.29E-09	9.22E-09	5.75E-10	1.91E-08
2064	561859.1	4190761	9.41E-09	9.35E-09	5.83E-10	1.93E-08
2065	561867.4	4190776	1.00E-08	9.94E-09	6.19E-10	2.06E-08

2066	561868.4	4190785	1.05E-08	1.04E-08	6.51E-10	2.16E-08
2067	561869.5	4190794	1.10E-08	1.09E-08	6.81E-10	2.26E-08
2068	561870.5	4190803	1.15E-08	1.14E-08	7.11E-10	2.36E-08
2069	561871.6	4190812	1.20E-08	1.19E-08	7.40E-10	2.46E-08
2070	561872.7	4190821	1.24E-08	1.23E-08	7.66E-10	2.55E-08
2071	561873.7	4190830	1.28E-08	1.27E-08	7.91E-10	2.63E-08
2072	561874.8	4190839	1.31E-08	1.30E-08	8.12E-10	2.70E-08
2073	561875.8	4190848	1.34E-08	1.33E-08	8.31E-10	2.76E-08
2074	561876.9	4190857	1.37E-08	1.36E-08	8.48E-10	2.82E-08
2075	561877.9	4190866	1.39E-08	1.38E-08	8.61E-10	2.86E-08
2076	561879	4190875	1.41E-08	1.40E-08	8.71E-10	2.90E-08
2077	561880	4190884	1.42E-08	1.41E-08	8.78E-10	2.92E-08
2078	561881.1	4190893	1.43E-08	1.42E-08	8.83E-10	2.94E-08
2079	561751.4	4190678	5.71E-09	5.67E-09	3.54E-10	1.17E-08
2080	561742.5	4190676	5.57E-09	5.53E-09	3.45E-10	1.15E-08
2081	561733.7	4190673	5.43E-09	5.39E-09	3.36E-10	1.12E-08
2082	561724.8	4190671	5.27E-09	5.24E-09	3.27E-10	1.08E-08
2083	561716	4190669	5.11E-09	5.08E-09	3.17E-10	1.05E-08
2084	561707.1	4190666	4.95E-09	4.91E-09	3.06E-10	1.02E-08
2085	561698.3	4190664	4.78E-09	4.75E-09	2.96E-10	9.82E-09
2086	561689.4	4190662	4.61E-09	4.58E-09	2.85E-10	9.47E-09
2087	561680.6	4190659	4.44E-09	4.41E-09	2.75E-10	9.12E-09
2088	561671.7	4190657	4.27E-09	4.24E-09	2.64E-10	8.76E-09
2089	561761	4190674	5.56E-09	5.52E-09	3.44E-10	1.14E-08
2090	561768.1	4190680	5.81E-09	5.77E-09	3.60E-10	1.19E-08
2091	561775.3	4190685	6.05E-09	6.01E-09	3.75E-10	1.24E-08
2092	561782.4	4190690	6.31E-09	6.27E-09	3.91E-10	1.30E-08
2093	561789.5	4190696	6.57E-09	6.53E-09	4.07E-10	1.35E-08
2094	561796.6	4190701	6.83E-09	6.78E-09	4.23E-10	1.40E-08
2095	561803.7	4190707	7.09E-09	7.04E-09	4.39E-10	1.46E-08
2096	561818	4190718	7.58E-09	7.53E-09	4.69E-10	1.56E-08
2097	561825.1	4190723	7.82E-09	7.76E-09	4.84E-10	1.61E-08
2098	561832.2	4190729	8.04E-09	7.98E-09	4.97E-10	1.65E-08
2099	561839.3	4190734	8.25E-09	8.19E-09	5.10E-10	1.69E-08
2100	561846.4	4190740	8.43E-09	8.38E-09	5.22E-10	1.73E-08
2101	561853.5	4190745	8.60E-09	8.54E-09	5.32E-10	1.77E-08
2102	561867.8	4190756	8.85E-09	8.79E-09	5.48E-10	1.82E-08
2103	561875.9	4190771	9.39E-09	9.32E-09	5.81E-10	1.93E-08
2104	561877	4190780	9.84E-09	9.77E-09	6.09E-10	2.02E-08
2105	561878	4190789	1.03E-08	1.02E-08	6.37E-10	2.11E-08
2106	561880.1	4190807	1.11E-08	1.11E-08	6.89E-10	2.29E-08
2107	561881.2	4190815	1.15E-08	1.15E-08	7.13E-10	2.37E-08
2108	561883.3	4190833	1.22E-08	1.21E-08	7.56E-10	2.51E-08
2109	561884.3	4190842	1.25E-08	1.24E-08	7.74E-10	2.57E-08
2110	561885.3	4190851	1.28E-08	1.27E-08	7.90E-10	2.62E-08
2111	561887.4	4190869	1.31E-08	1.31E-08	8.13E-10	2.70E-08
2112	561888.5	4190878	1.33E-08	1.32E-08	8.20E-10	2.73E-08

2113	561890.6	4190896	1.34E-08	1.33E-08	8.27E-10	2.75E-08
2114	561753.9	4190669	5.31E-09	5.28E-09	3.29E-10	1.09E-08
2115	561745.1	4190666	5.19E-09	5.15E-09	3.21E-10	1.07E-08
2116	561736.2	4190664	5.05E-09	5.02E-09	3.13E-10	1.04E-08
2117	561727.4	4190662	4.91E-09	4.88E-09	3.04E-10	1.01E-08
2118	561718.5	4190659	4.77E-09	4.74E-09	2.95E-10	9.80E-09
2119	561709.7	4190657	4.62E-09	4.59E-09	2.86E-10	9.49E-09
2120	561700.8	4190654	4.47E-09	4.43E-09	2.77E-10	9.18E-09
2121	561691.9	4190652	4.31E-09	4.28E-09	2.67E-10	8.86E-09
2122	561683.1	4190650	4.16E-09	4.13E-09	2.58E-10	8.55E-09
2123	561674.2	4190647	4.00E-09	3.97E-09	2.48E-10	8.22E-09
2124	561763.5	4190664	5.18E-09	5.14E-09	3.21E-10	1.06E-08
2125	561777.6	4190675	5.63E-09	5.59E-09	3.49E-10	1.16E-08
2126	561791.7	4190686	6.09E-09	6.04E-09	3.77E-10	1.25E-08
2127	561805.8	4190697	6.55E-09	6.51E-09	4.06E-10	1.35E-08
2128	561819.9	4190708	7.00E-09	6.95E-09	4.33E-10	1.44E-08
2129	561834.1	4190719	7.42E-09	7.37E-09	4.60E-10	1.53E-08
2130	561848.2	4190730	7.81E-09	7.75E-09	4.83E-10	1.60E-08
2131	561862.3	4190741	8.12E-09	8.07E-09	5.03E-10	1.67E-08
2132	561876.4	4190752	8.34E-09	8.28E-09	5.16E-10	1.71E-08
2133	561884.5	4190766	8.82E-09	8.76E-09	5.46E-10	1.81E-08
2134	561885.5	4190775	9.23E-09	9.16E-09	5.71E-10	1.90E-08
2135	561887.6	4190792	1.00E-08	9.96E-09	6.20E-10	2.06E-08
2136	561889.7	4190810	1.08E-08	1.07E-08	6.66E-10	2.21E-08
2137	561891.8	4190828	1.14E-08	1.13E-08	7.06E-10	2.34E-08
2138	561892.8	4190837	1.17E-08	1.16E-08	7.23E-10	2.40E-08
2139	561894.9	4190854	1.21E-08	1.20E-08	7.50E-10	2.49E-08
2140	561896.9	4190872	1.24E-08	1.23E-08	7.67E-10	2.55E-08
2141	561898	4190881	1.25E-08	1.24E-08	7.73E-10	2.57E-08
2142	561900	4190899	1.26E-08	1.25E-08	7.76E-10	2.58E-08
2143	561747.6	4190657	4.84E-09	4.81E-09	3.00E-10	9.95E-09
2144	561738.7	4190654	4.72E-09	4.69E-09	2.92E-10	9.70E-09
2145	561729.9	4190652	4.59E-09	4.56E-09	2.84E-10	9.43E-09
2146	561721	4190650	4.46E-09	4.43E-09	2.76E-10	9.16E-09
2147	561712.2	4190647	4.32E-09	4.29E-09	2.68E-10	8.89E-09
2148	561703.3	4190645	4.18E-09	4.15E-09	2.59E-10	8.60E-09
2149	561694.5	4190643	4.04E-09	4.02E-09	2.50E-10	8.31E-09
2150	561685.6	4190640	3.90E-09	3.88E-09	2.42E-10	8.02E-09
2151	561765.9	4190655	4.84E-09	4.81E-09	3.00E-10	9.94E-09
2152	561780	4190666	5.25E-09	5.21E-09	3.25E-10	1.08E-08
2153	561794	4190677	5.66E-09	5.62E-09	3.50E-10	1.16E-08
2154	561808	4190687	6.08E-09	6.03E-09	3.76E-10	1.25E-08
2155	561822	4190698	6.48E-09	6.44E-09	4.01E-10	1.33E-08
2156	561836	4190709	6.88E-09	6.83E-09	4.26E-10	1.41E-08
2157	561850	4190720	7.24E-09	7.19E-09	4.48E-10	1.49E-08
2158	561864	4190731	7.56E-09	7.50E-09	4.68E-10	1.55E-08
2159	561878	4190741	7.79E-09	7.73E-09	4.82E-10	1.60E-08

2160	561893.1	4190761	8.31E-09	8.25E-09	5.14E-10	1.71E-08
2161	561895.1	4190779	9.05E-09	8.98E-09	5.60E-10	1.86E-08
2162	561897.2	4190796	9.75E-09	9.68E-09	6.03E-10	2.00E-08
2163	561898.2	4190805	1.01E-08	1.00E-08	6.24E-10	2.07E-08
2164	561900.3	4190822	1.07E-08	1.06E-08	6.60E-10	2.19E-08
2165	561902.3	4190840	1.12E-08	1.11E-08	6.90E-10	2.29E-08
2166	561904.4	4190858	1.15E-08	1.14E-08	7.12E-10	2.37E-08
2167	561905.4	4190866	1.16E-08	1.16E-08	7.19E-10	2.39E-08
2168	561907.5	4190884	1.18E-08	1.17E-08	7.29E-10	2.42E-08
2169	561909.5	4190902	1.18E-08	1.17E-08	7.29E-10	2.43E-08
2170	561750.1	4190647	4.53E-09	4.50E-09	2.81E-10	9.31E-09
2171	561741.2	4190645	4.42E-09	4.39E-09	2.74E-10	9.08E-09
2172	561732.4	4190642	4.30E-09	4.27E-09	2.66E-10	8.84E-09
2173	561723.5	4190640	4.18E-09	4.15E-09	2.59E-10	8.59E-09
2174	561714.7	4190638	4.06E-09	4.03E-09	2.51E-10	8.34E-09
2175	561705.8	4190635	3.93E-09	3.90E-09	2.43E-10	8.08E-09
2176	561697	4190633	3.80E-09	3.77E-09	2.35E-10	7.81E-09
2177	561688.1	4190631	3.67E-09	3.65E-09	2.27E-10	7.55E-09
2178	561679.3	4190628	3.54E-09	3.52E-09	2.19E-10	7.28E-09
2179	561768.4	4190645	4.53E-09	4.50E-09	2.81E-10	9.32E-09
2180	561782.3	4190656	4.91E-09	4.87E-09	3.04E-10	1.01E-08
2181	561796.2	4190667	5.28E-09	5.24E-09	3.27E-10	1.08E-08
2182	561810.2	4190678	5.65E-09	5.61E-09	3.50E-10	1.16E-08
2183	561824.1	4190688	6.02E-09	5.98E-09	3.73E-10	1.24E-08
2184	561838	4190699	6.39E-09	6.34E-09	3.95E-10	1.31E-08
2185	561851.9	4190710	6.73E-09	6.69E-09	4.17E-10	1.38E-08
2186	561865.8	4190720	7.04E-09	6.99E-09	4.35E-10	1.45E-08
2187	561879.7	4190731	7.28E-09	7.23E-09	4.50E-10	1.50E-08
2188	561893.6	4190742	7.45E-09	7.40E-09	4.61E-10	1.53E-08
2189	561901.6	4190756	7.85E-09	7.79E-09	4.86E-10	1.61E-08
2190	561903.7	4190774	8.52E-09	8.46E-09	5.27E-10	1.75E-08
2191	561905.7	4190791	9.16E-09	9.10E-09	5.67E-10	1.88E-08
2192	561907.7	4190808	9.75E-09	9.68E-09	6.03E-10	2.00E-08
2193	561909.8	4190826	1.03E-08	1.02E-08	6.34E-10	2.11E-08
2194	561911.8	4190843	1.07E-08	1.06E-08	6.59E-10	2.19E-08
2195	561913.9	4190861	1.09E-08	1.09E-08	6.76E-10	2.25E-08
2196	561915.9	4190878	1.11E-08	1.10E-08	6.85E-10	2.28E-08
2197	561918	4190896	1.11E-08	1.11E-08	6.88E-10	2.29E-08
2198	561752.6	4190638	4.25E-09	4.22E-09	2.63E-10	8.74E-09
2199	561743.8	4190635	4.15E-09	4.12E-09	2.57E-10	8.53E-09
2200	561734.9	4190633	4.04E-09	4.01E-09	2.50E-10	8.30E-09
2201	561726.1	4190631	3.93E-09	3.90E-09	2.43E-10	8.08E-09
2202	561717.2	4190628	3.82E-09	3.79E-09	2.36E-10	7.85E-09
2203	561708.4	4190626	3.70E-09	3.68E-09	2.29E-10	7.61E-09
2204	561699.5	4190624	3.58E-09	3.56E-09	2.22E-10	7.36E-09
2205	561690.6	4190621	3.47E-09	3.44E-09	2.15E-10	7.12E-09
2206	561681.8	4190619	3.35E-09	3.33E-09	2.08E-10	6.89E-09

2207	561770.9	4190636	4.26E-09	4.23E-09	2.64E-10	8.75E-09
2208	561784.7	4190646	4.60E-09	4.56E-09	2.84E-10	9.44E-09
2209	561798.5	4190657	4.93E-09	4.90E-09	3.05E-10	1.01E-08
2210	561812.4	4190668	5.28E-09	5.24E-09	3.27E-10	1.08E-08
2211	561826.2	4190678	5.62E-09	5.58E-09	3.48E-10	1.15E-08
2212	561840	4190689	5.95E-09	5.91E-09	3.68E-10	1.22E-08
2213	561853.8	4190700	6.27E-09	6.23E-09	3.88E-10	1.29E-08
2214	561867.7	4190710	6.56E-09	6.52E-09	4.06E-10	1.35E-08
2215	561881.5	4190721	6.80E-09	6.76E-09	4.21E-10	1.40E-08
2216	561895.3	4190732	6.99E-09	6.94E-09	4.33E-10	1.44E-08
2217	561910.2	4190751	7.43E-09	7.37E-09	4.60E-10	1.53E-08
2218	561912.2	4190768	8.04E-09	7.98E-09	4.97E-10	1.65E-08
2219	561914.2	4190786	8.63E-09	8.57E-09	5.34E-10	1.77E-08
2220	561916.3	4190803	9.17E-09	9.11E-09	5.67E-10	1.88E-08
2221	561918.3	4190821	9.64E-09	9.57E-09	5.96E-10	1.98E-08
2222	561920.3	4190838	1.00E-08	9.95E-09	6.20E-10	2.06E-08
2223	561922.4	4190855	1.03E-08	1.02E-08	6.36E-10	2.11E-08
2224	561924.4	4190873	1.04E-08	1.04E-08	6.45E-10	2.15E-08
2225	561926.4	4190890	1.05E-08	1.04E-08	6.49E-10	2.16E-08
2226	561928.5	4190907	1.04E-08	1.03E-08	6.43E-10	2.14E-08
2227	561755.1	4190628	4.00E-09	3.97E-09	2.48E-10	8.22E-09
2228	561746.3	4190626	3.90E-09	3.88E-09	2.42E-10	8.02E-09
2229	561737.4	4190623	3.80E-09	3.78E-09	2.36E-10	7.82E-09
2230	561728.6	4190621	3.70E-09	3.68E-09	2.29E-10	7.61E-09
2231	561719.7	4190619	3.60E-09	3.57E-09	2.23E-10	7.40E-09
2232	561710.9	4190616	3.49E-09	3.47E-09	2.16E-10	7.18E-09
2233	561702	4190614	3.39E-09	3.36E-09	2.10E-10	6.96E-09
2234	561693.2	4190612	3.28E-09	3.26E-09	2.03E-10	6.74E-09
2235	561684.3	4190609	3.18E-09	3.16E-09	1.97E-10	6.53E-09
2236	561773.7	4190627	4.01E-09	3.99E-09	2.49E-10	8.25E-09
2237	561780.9	4190632	4.18E-09	4.15E-09	2.58E-10	8.58E-09
2238	561788.1	4190638	4.34E-09	4.31E-09	2.69E-10	8.91E-09
2239	561795.3	4190643	4.50E-09	4.47E-09	2.78E-10	9.24E-09
2240	561802.5	4190649	4.66E-09	4.63E-09	2.88E-10	9.58E-09
2241	561809.7	4190654	4.83E-09	4.79E-09	2.99E-10	9.92E-09
2242	561816.9	4190660	4.99E-09	4.96E-09	3.09E-10	1.03E-08
2243	561824.1	4190665	5.16E-09	5.12E-09	3.19E-10	1.06E-08
2244	561831.3	4190671	5.32E-09	5.28E-09	3.29E-10	1.09E-08
2245	561838.5	4190677	5.48E-09	5.44E-09	3.39E-10	1.13E-08
2246	561845.7	4190682	5.64E-09	5.60E-09	3.49E-10	1.16E-08
2247	561852.9	4190688	5.79E-09	5.75E-09	3.59E-10	1.19E-08
2248	561860.1	4190693	5.94E-09	5.90E-09	3.68E-10	1.22E-08
2249	561867.3	4190699	6.09E-09	6.04E-09	3.77E-10	1.25E-08
2250	561874.5	4190704	6.22E-09	6.18E-09	3.85E-10	1.28E-08
2251	561881.7	4190710	6.34E-09	6.30E-09	3.93E-10	1.30E-08
2252	561888.9	4190715	6.45E-09	6.41E-09	3.99E-10	1.33E-08
2253	561896.1	4190721	6.55E-09	6.51E-09	4.05E-10	1.35E-08

2254	561903.3	4190727	6.64E-09	6.59E-09	4.11E-10	1.36E-08
2255	561910.5	4190732	6.71E-09	6.66E-09	4.15E-10	1.38E-08
2256	561918.8	4190747	7.05E-09	7.00E-09	4.36E-10	1.45E-08
2257	561919.8	4190756	7.35E-09	7.30E-09	4.55E-10	1.51E-08
2258	561920.9	4190765	7.64E-09	7.59E-09	4.73E-10	1.57E-08
2259	561922	4190774	7.93E-09	7.87E-09	4.90E-10	1.63E-08
2260	561923	4190783	8.20E-09	8.15E-09	5.08E-10	1.69E-08
2261	561924.1	4190792	8.47E-09	8.41E-09	5.24E-10	1.74E-08
2262	561925.1	4190801	8.72E-09	8.66E-09	5.39E-10	1.79E-08
2263	561926.2	4190810	8.95E-09	8.89E-09	5.54E-10	1.84E-08
2264	561927.2	4190819	9.16E-09	9.10E-09	5.67E-10	1.88E-08
2265	561928.3	4190828	9.35E-09	9.29E-09	5.78E-10	1.92E-08
2266	561929.4	4190837	9.52E-09	9.45E-09	5.89E-10	1.96E-08
2267	561930.4	4190846	9.65E-09	9.58E-09	5.97E-10	1.98E-08
2268	561931.5	4190855	9.76E-09	9.69E-09	6.03E-10	2.00E-08
2269	561932.5	4190864	9.83E-09	9.76E-09	6.08E-10	2.02E-08
2270	561933.6	4190873	9.89E-09	9.82E-09	6.11E-10	2.03E-08
2271	561934.7	4190882	9.92E-09	9.85E-09	6.13E-10	2.04E-08
2272	561935.7	4190891	9.91E-09	9.84E-09	6.12E-10	2.04E-08
2273	561936.8	4190900	9.87E-09	9.80E-09	6.10E-10	2.03E-08
2274	561937.8	4190909	9.79E-09	9.72E-09	6.05E-10	2.01E-08
2275	561766.5	4190621	3.86E-09	3.83E-09	2.39E-10	7.92E-09
2276	561757.6	4190619	3.77E-09	3.74E-09	2.33E-10	7.75E-09
2277	561748.8	4190616	3.68E-09	3.66E-09	2.28E-10	7.57E-09
2278	561739.9	4190614	3.59E-09	3.56E-09	2.22E-10	7.38E-09
2279	561731.1	4190612	3.50E-09	3.47E-09	2.16E-10	7.18E-09
2280	561722.2	4190609	3.40E-09	3.38E-09	2.11E-10	6.99E-09
2281	561713.4	4190607	3.30E-09	3.28E-09	2.05E-10	6.79E-09
2282	561704.5	4190605	3.21E-09	3.18E-09	1.99E-10	6.59E-09
2283	561695.7	4190602	3.11E-09	3.09E-09	1.93E-10	6.39E-09
2284	561686.8	4190600	3.02E-09	3.00E-09	1.87E-10	6.20E-09
2285	561776.2	4190617	3.79E-09	3.76E-09	2.34E-10	7.78E-09
2286	561783.3	4190622	3.93E-09	3.91E-09	2.43E-10	8.08E-09
2287	561790.5	4190628	4.08E-09	4.05E-09	2.53E-10	8.39E-09
2288	561797.6	4190633	4.23E-09	4.20E-09	2.62E-10	8.69E-09
2289	561804.8	4190639	4.38E-09	4.34E-09	2.71E-10	8.99E-09
2290	561811.9	4190645	4.53E-09	4.50E-09	2.80E-10	9.30E-09
2291	561819.1	4190650	4.68E-09	4.65E-09	2.90E-10	9.62E-09
2292	561826.2	4190656	4.83E-09	4.80E-09	2.99E-10	9.93E-09
2293	561833.4	4190661	4.98E-09	4.95E-09	3.08E-10	1.02E-08
2294	561840.5	4190667	5.13E-09	5.09E-09	3.18E-10	1.05E-08
2295	561847.6	4190672	5.28E-09	5.24E-09	3.27E-10	1.08E-08
2296	561854.8	4190678	5.42E-09	5.38E-09	3.35E-10	1.11E-08
2297	561861.9	4190683	5.56E-09	5.52E-09	3.44E-10	1.14E-08
2298	561869.1	4190689	5.69E-09	5.65E-09	3.52E-10	1.17E-08
2299	561876.2	4190694	5.82E-09	5.78E-09	3.60E-10	1.20E-08
2300	561883.4	4190700	5.94E-09	5.90E-09	3.68E-10	1.22E-08

2301	561890.5	4190705	6.05E-09	6.01E-09	3.74E-10	1.24E-08
2302	561897.7	4190711	6.15E-09	6.11E-09	3.81E-10	1.26E-08
2303	561904.8	4190716	6.24E-09	6.20E-09	3.86E-10	1.28E-08
2304	561912	4190722	6.32E-09	6.27E-09	3.91E-10	1.30E-08
2305	561919.1	4190727	6.38E-09	6.33E-09	3.95E-10	1.31E-08
2306	561927.3	4190742	6.70E-09	6.65E-09	4.14E-10	1.38E-08
2307	561928.4	4190751	6.96E-09	6.92E-09	4.31E-10	1.43E-08
2308	561929.4	4190760	7.23E-09	7.18E-09	4.47E-10	1.49E-08
2309	561930.5	4190769	7.49E-09	7.44E-09	4.64E-10	1.54E-08
2310	561932.6	4190787	7.99E-09	7.93E-09	4.94E-10	1.64E-08
2311	561933.6	4190796	8.22E-09	8.16E-09	5.09E-10	1.69E-08
2312	561934.7	4190805	8.44E-09	8.38E-09	5.22E-10	1.73E-08
2313	561935.7	4190813	8.64E-09	8.58E-09	5.34E-10	1.77E-08
2314	561936.8	4190822	8.82E-09	8.75E-09	5.45E-10	1.81E-08
2315	561937.8	4190831	8.97E-09	8.91E-09	5.55E-10	1.84E-08
2316	561938.9	4190840	9.11E-09	9.04E-09	5.63E-10	1.87E-08
2317	561941	4190858	9.29E-09	9.23E-09	5.74E-10	1.91E-08
2318	561942	4190867	9.35E-09	9.28E-09	5.78E-10	1.92E-08
2319	561943.1	4190876	9.38E-09	9.31E-09	5.80E-10	1.93E-08
2320	561944.1	4190885	9.38E-09	9.32E-09	5.80E-10	1.93E-08
2321	561945.2	4190894	9.36E-09	9.29E-09	5.78E-10	1.92E-08
2322	561946.2	4190903	9.30E-09	9.23E-09	5.74E-10	1.91E-08
2323	561947.3	4190912	9.21E-09	9.14E-09	5.68E-10	1.89E-08
2324	561769	4190611	3.64E-09	3.62E-09	2.25E-10	7.48E-09
2325	561760.2	4190609	3.56E-09	3.54E-09	2.20E-10	7.32E-09
2326	561751.3	4190607	3.48E-09	3.45E-09	2.15E-10	7.15E-09
2327	561742.5	4190604	3.39E-09	3.37E-09	2.10E-10	6.97E-09
2328	561733.6	4190602	3.31E-09	3.28E-09	2.05E-10	6.80E-09
2329	561724.8	4190600	3.22E-09	3.20E-09	1.99E-10	6.61E-09
2330	561715.9	4190597	3.13E-09	3.11E-09	1.94E-10	6.43E-09
2331	561707.1	4190595	3.04E-09	3.02E-09	1.88E-10	6.25E-09
2332	561698.2	4190593	2.95E-09	2.93E-09	1.83E-10	6.07E-09
2333	561689.3	4190590	2.87E-09	2.85E-09	1.77E-10	5.89E-09
2334	561778.6	4190607	3.58E-09	3.55E-09	2.21E-10	7.35E-09
2335	561792.8	4190618	3.85E-09	3.82E-09	2.38E-10	7.91E-09
2336	561799.9	4190624	3.98E-09	3.95E-09	2.46E-10	8.18E-09
2337	561814.1	4190635	4.26E-09	4.23E-09	2.64E-10	8.75E-09
2338	561821.2	4190640	4.40E-09	4.37E-09	2.72E-10	9.04E-09
2339	561835.4	4190651	4.68E-09	4.64E-09	2.90E-10	9.61E-09
2340	561842.5	4190657	4.82E-09	4.78E-09	2.98E-10	9.90E-09
2341	561856.7	4190668	5.08E-09	5.05E-09	3.15E-10	1.04E-08
2342	561870.9	4190679	5.34E-09	5.30E-09	3.30E-10	1.10E-08
2343	561878	4190684	5.46E-09	5.42E-09	3.38E-10	1.12E-08
2344	561892.2	4190695	5.68E-09	5.64E-09	3.51E-10	1.17E-08
2345	561899.3	4190701	5.78E-09	5.74E-09	3.58E-10	1.19E-08
2346	561913.6	4190711	5.95E-09	5.91E-09	3.68E-10	1.22E-08
2347	561927.8	4190722	6.08E-09	6.03E-09	3.76E-10	1.25E-08

2348	561935.9	4190737	6.36E-09	6.32E-09	3.94E-10	1.31E-08
2349	561936.9	4190746	6.61E-09	6.56E-09	4.09E-10	1.36E-08
2350	561938	4190755	6.86E-09	6.81E-09	4.24E-10	1.41E-08
2351	561940.1	4190772	7.33E-09	7.28E-09	4.53E-10	1.51E-08
2352	561942.2	4190790	7.77E-09	7.71E-09	4.81E-10	1.60E-08
2353	561943.2	4190799	7.97E-09	7.91E-09	4.93E-10	1.64E-08
2354	561945.3	4190817	8.32E-09	8.27E-09	5.15E-10	1.71E-08
2355	561946.3	4190826	8.47E-09	8.41E-09	5.24E-10	1.74E-08
2356	561948.4	4190844	8.71E-09	8.65E-09	5.38E-10	1.79E-08
2357	561949.5	4190853	8.79E-09	8.73E-09	5.43E-10	1.81E-08
2358	561951.5	4190870	8.89E-09	8.82E-09	5.49E-10	1.83E-08
2359	561953.6	4190888	8.88E-09	8.82E-09	5.49E-10	1.82E-08
2360	561954.7	4190897	8.84E-09	8.77E-09	5.46E-10	1.82E-08
2361	561956.8	4190915	8.66E-09	8.60E-09	5.35E-10	1.78E-08
2362	561771.5	4190602	3.44E-09	3.42E-09	2.13E-10	7.08E-09
2363	561762.7	4190600	3.37E-09	3.35E-09	2.09E-10	6.93E-09
2364	561753.8	4190597	3.29E-09	3.27E-09	2.04E-10	6.77E-09
2365	561745	4190595	3.21E-09	3.19E-09	1.99E-10	6.61E-09
2366	561736.1	4190593	3.13E-09	3.11E-09	1.94E-10	6.44E-09
2367	561727.3	4190590	3.05E-09	3.03E-09	1.89E-10	6.27E-09
2368	561718.4	4190588	2.97E-09	2.95E-09	1.84E-10	6.10E-09
2369	561709.6	4190586	2.89E-09	2.87E-09	1.79E-10	5.93E-09
2370	561700.7	4190583	2.81E-09	2.79E-09	1.74E-10	5.77E-09
2371	561691.9	4190581	2.73E-09	2.71E-09	1.69E-10	5.61E-09
2372	561781.1	4190598	3.39E-09	3.36E-09	2.10E-10	6.96E-09
2373	561795.2	4190609	3.63E-09	3.61E-09	2.25E-10	7.47E-09
2374	561809.3	4190620	3.89E-09	3.86E-09	2.40E-10	7.98E-09
2375	561823.4	4190631	4.14E-09	4.11E-09	2.56E-10	8.51E-09
2376	561837.6	4190641	4.40E-09	4.37E-09	2.72E-10	9.04E-09
2377	561851.7	4190652	4.65E-09	4.62E-09	2.88E-10	9.56E-09
2378	561865.8	4190663	4.90E-09	4.86E-09	3.03E-10	1.01E-08
2379	561879.9	4190674	5.13E-09	5.09E-09	3.17E-10	1.05E-08
2380	561894	4190685	5.34E-09	5.30E-09	3.30E-10	1.10E-08
2381	561908.1	4190696	5.53E-09	5.49E-09	3.42E-10	1.14E-08
2382	561922.3	4190707	5.68E-09	5.64E-09	3.52E-10	1.17E-08
2383	561936.4	4190718	5.79E-09	5.75E-09	3.58E-10	1.19E-08
2384	561944.5	4190732	6.06E-09	6.01E-09	3.75E-10	1.24E-08
2385	561946.5	4190750	6.51E-09	6.46E-09	4.03E-10	1.34E-08
2386	561948.6	4190767	6.95E-09	6.90E-09	4.30E-10	1.43E-08
2387	561949.6	4190776	7.16E-09	7.10E-09	4.43E-10	1.47E-08
2388	561951.7	4190794	7.54E-09	7.49E-09	4.66E-10	1.55E-08
2389	561953.8	4190812	7.87E-09	7.82E-09	4.87E-10	1.62E-08
2390	561954.8	4190820	8.01E-09	7.96E-09	4.96E-10	1.65E-08
2391	561956.9	4190838	8.24E-09	8.18E-09	5.09E-10	1.69E-08
2392	561959	4190856	8.39E-09	8.33E-09	5.18E-10	1.72E-08
2393	561960	4190865	8.43E-09	8.37E-09	5.21E-10	1.73E-08
2394	561962.1	4190882	8.43E-09	8.37E-09	5.21E-10	1.73E-08

2395	561964.2	4190900	8.34E-09	8.28E-09	5.15E-10	1.71E-08
2396	561966.2	4190918	8.15E-09	8.09E-09	5.03E-10	1.67E-08
2397	561765.2	4190590	3.20E-09	3.17E-09	1.98E-10	6.57E-09
2398	561756.3	4190588	3.12E-09	3.10E-09	1.93E-10	6.42E-09
2399	561747.5	4190585	3.05E-09	3.03E-09	1.89E-10	6.27E-09
2400	561738.6	4190583	2.97E-09	2.95E-09	1.84E-10	6.11E-09
2401	561729.8	4190581	2.90E-09	2.88E-09	1.79E-10	5.96E-09
2402	561720.9	4190578	2.82E-09	2.80E-09	1.75E-10	5.80E-09
2403	561712.1	4190576	2.75E-09	2.73E-09	1.70E-10	5.64E-09
2404	561703.2	4190574	2.67E-09	2.65E-09	1.65E-10	5.49E-09
2405	561694.4	4190571	2.60E-09	2.58E-09	1.61E-10	5.34E-09
2406	561783.6	4190588	3.21E-09	3.19E-09	1.99E-10	6.60E-09
2407	561797.6	4190599	3.44E-09	3.42E-09	2.13E-10	7.07E-09
2408	561811.6	4190610	3.67E-09	3.65E-09	2.27E-10	7.55E-09
2409	561825.7	4190621	3.91E-09	3.88E-09	2.42E-10	8.03E-09
2410	561839.7	4190632	4.15E-09	4.12E-09	2.57E-10	8.52E-09
2411	561853.7	4190642	4.38E-09	4.35E-09	2.71E-10	9.00E-09
2412	561867.8	4190653	4.61E-09	4.58E-09	2.85E-10	9.47E-09
2413	561881.8	4190664	4.82E-09	4.79E-09	2.99E-10	9.91E-09
2414	561895.9	4190675	5.02E-09	4.99E-09	3.11E-10	1.03E-08
2415	561909.9	4190686	5.21E-09	5.17E-09	3.22E-10	1.07E-08
2416	561923.9	4190697	5.37E-09	5.33E-09	3.32E-10	1.10E-08
2417	561938	4190707	5.49E-09	5.45E-09	3.39E-10	1.13E-08
2418	561953	4190727	5.77E-09	5.73E-09	3.57E-10	1.19E-08
2419	561955.1	4190745	6.19E-09	6.15E-09	3.83E-10	1.27E-08
2420	561957.1	4190762	6.60E-09	6.55E-09	4.08E-10	1.36E-08
2421	561959.2	4190780	6.97E-09	6.92E-09	4.31E-10	1.43E-08
2422	561960.2	4190789	7.15E-09	7.10E-09	4.42E-10	1.47E-08
2423	561962.3	4190806	7.46E-09	7.40E-09	4.61E-10	1.53E-08
2424	561964.4	4190824	7.71E-09	7.65E-09	4.77E-10	1.58E-08
2425	561965.4	4190833	7.81E-09	7.75E-09	4.83E-10	1.60E-08
2426	561967.5	4190850	7.95E-09	7.90E-09	4.92E-10	1.63E-08
2427	561969.5	4190868	8.02E-09	7.96E-09	4.95E-10	1.65E-08
2428	561970.5	4190877	8.02E-09	7.96E-09	4.95E-10	1.65E-08
2429	561972.6	4190894	7.95E-09	7.89E-09	4.91E-10	1.63E-08
2430	561974.7	4190912	7.79E-09	7.74E-09	4.81E-10	1.60E-08
2431	561767.7	4190581	3.03E-09	3.01E-09	1.88E-10	6.24E-09
2432	561758.9	4190578	2.97E-09	2.95E-09	1.84E-10	6.10E-09
2433	561750	4190576	2.90E-09	2.88E-09	1.79E-10	5.96E-09
2434	561741.2	4190574	2.83E-09	2.81E-09	1.75E-10	5.81E-09
2435	561732.3	4190571	2.76E-09	2.74E-09	1.71E-10	5.67E-09
2436	561723.5	4190569	2.69E-09	2.67E-09	1.66E-10	5.52E-09
2437	561714.6	4190566	2.62E-09	2.60E-09	1.62E-10	5.38E-09
2438	561705.8	4190564	2.55E-09	2.53E-09	1.58E-10	5.23E-09
2439	561696.9	4190562	2.48E-09	2.46E-09	1.53E-10	5.10E-09
2440	561786.1	4190579	3.05E-09	3.03E-09	1.89E-10	6.27E-09
2441	561800	4190590	3.26E-09	3.24E-09	2.02E-10	6.70E-09

2442	561814	4190600	3.48E-09	3.45E-09	2.15E-10	7.14E-09
2443	561827.9	4190611	3.70E-09	3.67E-09	2.29E-10	7.59E-09
2444	561841.9	4190622	3.92E-09	3.89E-09	2.42E-10	8.05E-09
2445	561855.9	4190633	4.13E-09	4.10E-09	2.56E-10	8.49E-09
2446	561869.8	4190643	4.35E-09	4.31E-09	2.69E-10	8.93E-09
2447	561883.8	4190654	4.55E-09	4.52E-09	2.81E-10	9.34E-09
2448	561897.7	4190665	4.74E-09	4.71E-09	2.93E-10	9.74E-09
2449	561911.7	4190676	4.92E-09	4.88E-09	3.04E-10	1.01E-08
2450	561925.7	4190686	5.07E-09	5.03E-09	3.14E-10	1.04E-08
2451	561939.6	4190697	5.20E-09	5.16E-09	3.21E-10	1.07E-08
2452	561953.6	4190708	5.29E-09	5.25E-09	3.27E-10	1.09E-08
2453	561961.6	4190722	5.51E-09	5.47E-09	3.41E-10	1.13E-08
2454	561963.6	4190740	5.90E-09	5.86E-09	3.65E-10	1.21E-08
2455	561965.7	4190757	6.27E-09	6.23E-09	3.88E-10	1.29E-08
2456	561967.7	4190775	6.62E-09	6.57E-09	4.09E-10	1.36E-08
2457	561969.8	4190792	6.93E-09	6.88E-09	4.29E-10	1.42E-08
2458	561971.8	4190810	7.20E-09	7.15E-09	4.45E-10	1.48E-08
2459	561973.9	4190827	7.41E-09	7.36E-09	4.58E-10	1.52E-08
2460	561975.9	4190845	7.55E-09	7.50E-09	4.67E-10	1.55E-08
2461	561978	4190862	7.62E-09	7.57E-09	4.71E-10	1.57E-08
2462	561980	4190880	7.62E-09	7.56E-09	4.71E-10	1.56E-08
2463	561982.1	4190897	7.53E-09	7.47E-09	4.65E-10	1.55E-08
2464	561984.1	4190915	7.36E-09	7.30E-09	4.54E-10	1.51E-08
2465	561770.2	4190571	2.89E-09	2.87E-09	1.79E-10	5.93E-09
2466	561761.4	4190569	2.82E-09	2.80E-09	1.75E-10	5.80E-09
2467	561752.5	4190566	2.76E-09	2.74E-09	1.71E-10	5.67E-09
2468	561743.7	4190564	2.69E-09	2.67E-09	1.67E-10	5.53E-09
2469	561734.8	4190562	2.63E-09	2.61E-09	1.63E-10	5.40E-09
2470	561726	4190559	2.56E-09	2.54E-09	1.59E-10	5.26E-09
2471	561717.1	4190557	2.50E-09	2.48E-09	1.54E-10	5.13E-09
2472	561708.3	4190555	2.43E-09	2.41E-09	1.50E-10	5.00E-09
2473	561699.4	4190552	2.37E-09	2.35E-09	1.47E-10	4.87E-09
2474	561788.8	4190569	2.91E-09	2.89E-09	1.80E-10	5.97E-09
2475	561796	4190575	3.01E-09	2.99E-09	1.86E-10	6.18E-09
2476	561803.2	4190581	3.11E-09	3.09E-09	1.92E-10	6.39E-09
2477	561810.4	4190586	3.21E-09	3.19E-09	1.99E-10	6.60E-09
2478	561817.7	4190592	3.32E-09	3.29E-09	2.05E-10	6.82E-09
2479	561824.9	4190597	3.42E-09	3.40E-09	2.12E-10	7.03E-09
2480	561832.1	4190603	3.53E-09	3.50E-09	2.18E-10	7.25E-09
2481	561839.3	4190608	3.63E-09	3.61E-09	2.25E-10	7.47E-09
2482	561846.5	4190614	3.74E-09	3.71E-09	2.31E-10	7.68E-09
2483	561853.7	4190619	3.84E-09	3.82E-09	2.38E-10	7.90E-09
2484	561860.9	4190625	3.95E-09	3.92E-09	2.44E-10	8.11E-09
2485	561868.1	4190631	4.05E-09	4.02E-09	2.51E-10	8.32E-09
2486	561882.6	4190642	4.25E-09	4.22E-09	2.63E-10	8.73E-09
2487	561889.8	4190647	4.35E-09	4.32E-09	2.69E-10	8.93E-09
2488	561897	4190653	4.44E-09	4.41E-09	2.75E-10	9.13E-09

2489	561904.2	4190658	4.53E-09	4.50E-09	2.81E-10	9.32E-09
2490	561911.4	4190664	4.62E-09	4.59E-09	2.86E-10	9.50E-09
2491	561918.6	4190670	4.70E-09	4.67E-09	2.91E-10	9.67E-09
2492	561925.8	4190675	4.78E-09	4.75E-09	2.96E-10	9.82E-09
2493	561933.1	4190681	4.85E-09	4.82E-09	3.00E-10	9.97E-09
2494	561940.3	4190686	4.91E-09	4.88E-09	3.04E-10	1.01E-08
2495	561947.5	4190692	4.97E-09	4.93E-09	3.07E-10	1.02E-08
2496	561954.7	4190697	5.02E-09	4.98E-09	3.10E-10	1.03E-08
2497	561961.9	4190703	5.06E-09	5.02E-09	3.13E-10	1.04E-08
2498	561970.2	4190718	5.28E-09	5.24E-09	3.27E-10	1.08E-08
2499	561971.2	4190727	5.47E-09	5.43E-09	3.38E-10	1.12E-08
2500	561972.3	4190736	5.65E-09	5.61E-09	3.50E-10	1.16E-08
2501	561973.4	4190745	5.83E-09	5.79E-09	3.61E-10	1.20E-08
2502	561974.4	4190754	6.01E-09	5.97E-09	3.72E-10	1.23E-08
2503	561975.5	4190763	6.18E-09	6.13E-09	3.82E-10	1.27E-08
2504	561976.5	4190772	6.34E-09	6.29E-09	3.92E-10	1.30E-08
2505	561977.6	4190781	6.49E-09	6.45E-09	4.01E-10	1.33E-08
2506	561978.7	4190790	6.64E-09	6.59E-09	4.10E-10	1.36E-08
2507	561979.7	4190799	6.77E-09	6.72E-09	4.19E-10	1.39E-08
2508	561980.8	4190808	6.89E-09	6.84E-09	4.26E-10	1.42E-08
2509	561981.8	4190817	6.99E-09	6.94E-09	4.32E-10	1.44E-08
2510	561982.9	4190826	7.08E-09	7.03E-09	4.38E-10	1.46E-08
2511	561984	4190835	7.16E-09	7.10E-09	4.42E-10	1.47E-08
2512	561985	4190844	7.21E-09	7.16E-09	4.46E-10	1.48E-08
2513	561986.1	4190853	7.25E-09	7.20E-09	4.48E-10	1.49E-08
2514	561987.1	4190862	7.27E-09	7.22E-09	4.49E-10	1.49E-08
2515	561988.2	4190871	7.27E-09	7.22E-09	4.49E-10	1.49E-08
2516	561989.3	4190880	7.25E-09	7.20E-09	4.48E-10	1.49E-08
2517	561990.3	4190889	7.21E-09	7.16E-09	4.45E-10	1.48E-08
2518	561991.4	4190899	7.15E-09	7.10E-09	4.42E-10	1.47E-08
2519	561992.4	4190908	7.07E-09	7.02E-09	4.37E-10	1.45E-08
2520	561993.5	4190917	6.97E-09	6.92E-09	4.30E-10	1.43E-08
2521	561994.6	4190926	6.85E-09	6.80E-09	4.23E-10	1.41E-08
2522	561995.6	4190935	6.72E-09	6.67E-09	4.15E-10	1.38E-08
2523	561781.6	4190564	2.81E-09	2.79E-09	1.74E-10	5.77E-09
2524	561772.7	4190562	2.75E-09	2.73E-09	1.70E-10	5.65E-09
2525	561763.9	4190559	2.69E-09	2.67E-09	1.67E-10	5.53E-09
2526	561755	4190557	2.63E-09	2.61E-09	1.63E-10	5.40E-09
2527	561746.2	4190554	2.57E-09	2.55E-09	1.59E-10	5.28E-09
2528	561737.3	4190552	2.51E-09	2.49E-09	1.55E-10	5.15E-09
2529	561728.5	4190550	2.44E-09	2.43E-09	1.51E-10	5.02E-09
2530	561719.6	4190547	2.38E-09	2.37E-09	1.48E-10	4.90E-09
2531	561710.8	4190545	2.32E-09	2.31E-09	1.44E-10	4.77E-09
2532	561701.9	4190543	2.26E-09	2.25E-09	1.40E-10	4.65E-09
2533	561791.3	4190560	2.77E-09	2.75E-09	1.71E-10	5.69E-09
2534	561798.5	4190565	2.86E-09	2.84E-09	1.77E-10	5.88E-09
2535	561805.6	4190571	2.96E-09	2.94E-09	1.83E-10	6.07E-09

2536	561812.8	4190576	3.05E-09	3.03E-09	1.89E-10	6.27E-09
2537	561820	4190582	3.15E-09	3.13E-09	1.95E-10	6.47E-09
2538	561827.1	4190588	3.25E-09	3.23E-09	2.01E-10	6.67E-09
2539	561834.3	4190593	3.35E-09	3.32E-09	2.07E-10	6.88E-09
2540	561841.5	4190599	3.44E-09	3.42E-09	2.13E-10	7.08E-09
2541	561848.6	4190604	3.54E-09	3.52E-09	2.19E-10	7.28E-09
2542	561855.8	4190610	3.64E-09	3.61E-09	2.25E-10	7.48E-09
2543	561863	4190615	3.74E-09	3.71E-09	2.31E-10	7.68E-09
2544	561870.1	4190621	3.83E-09	3.80E-09	2.37E-10	7.87E-09
2545	561877.3	4190626	3.92E-09	3.90E-09	2.43E-10	8.06E-09
2546	561884.5	4190632	4.02E-09	3.99E-09	2.49E-10	8.25E-09
2547	561891.7	4190637	4.11E-09	4.08E-09	2.54E-10	8.44E-09
2548	561898.8	4190643	4.20E-09	4.17E-09	2.60E-10	8.62E-09
2549	561906	4190648	4.28E-09	4.25E-09	2.65E-10	8.80E-09
2550	561913.2	4190654	4.37E-09	4.34E-09	2.70E-10	8.98E-09
2551	561920.3	4190659	4.45E-09	4.42E-09	2.75E-10	9.15E-09
2552	561927.5	4190665	4.53E-09	4.49E-09	2.80E-10	9.30E-09
2553	561934.7	4190670	4.59E-09	4.56E-09	2.84E-10	9.44E-09
2554	561941.8	4190676	4.66E-09	4.62E-09	2.88E-10	9.57E-09
2555	561949	4190682	4.71E-09	4.68E-09	2.92E-10	9.69E-09
2556	561956.2	4190687	4.77E-09	4.73E-09	2.95E-10	9.79E-09
2557	561963.3	4190693	4.81E-09	4.78E-09	2.98E-10	9.89E-09
2558	561970.5	4190698	4.85E-09	4.82E-09	3.00E-10	9.97E-09
2559	561978.7	4190713	5.05E-09	5.02E-09	3.13E-10	1.04E-08
2560	561979.8	4190722	5.23E-09	5.19E-09	3.23E-10	1.07E-08
2561	561980.8	4190731	5.40E-09	5.36E-09	3.34E-10	1.11E-08
2562	561981.9	4190740	5.57E-09	5.53E-09	3.44E-10	1.14E-08
2563	561983	4190749	5.73E-09	5.69E-09	3.55E-10	1.18E-08
2564	561984	4190758	5.89E-09	5.85E-09	3.64E-10	1.21E-08
2565	561985.1	4190767	6.04E-09	5.99E-09	3.73E-10	1.24E-08
2566	561986.1	4190776	6.18E-09	6.13E-09	3.82E-10	1.27E-08
2567	561988.2	4190794	6.44E-09	6.39E-09	3.98E-10	1.32E-08
2568	561989.3	4190803	6.55E-09	6.51E-09	4.05E-10	1.35E-08
2569	561990.3	4190812	6.65E-09	6.61E-09	4.11E-10	1.37E-08
2570	561991.4	4190821	6.74E-09	6.69E-09	4.17E-10	1.39E-08
2571	561992.4	4190830	6.81E-09	6.77E-09	4.21E-10	1.40E-08
2572	561993.5	4190839	6.87E-09	6.82E-09	4.25E-10	1.41E-08
2573	561994.5	4190848	6.91E-09	6.86E-09	4.27E-10	1.42E-08
2574	561995.6	4190857	6.94E-09	6.89E-09	4.29E-10	1.43E-08
2575	561996.6	4190866	6.94E-09	6.89E-09	4.29E-10	1.43E-08
2576	561997.7	4190875	6.93E-09	6.88E-09	4.28E-10	1.42E-08
2577	561998.8	4190884	6.90E-09	6.85E-09	4.26E-10	1.42E-08
2578	561999.8	4190893	6.85E-09	6.80E-09	4.23E-10	1.41E-08
2579	562000.9	4190902	6.79E-09	6.74E-09	4.19E-10	1.39E-08
2580	562001.9	4190911	6.70E-09	6.65E-09	4.14E-10	1.38E-08
2581	562003	4190920	6.60E-09	6.55E-09	4.08E-10	1.36E-08
2582	562004	4190929	6.48E-09	6.44E-09	4.00E-10	1.33E-08

2583	562005.1	4190938	6.35E-09	6.30E-09	3.92E-10	1.30E-08
2584	561784.1	4190554	2.68E-09	2.66E-09	1.66E-10	5.50E-09
2585	561775.3	4190552	2.62E-09	2.60E-09	1.62E-10	5.39E-09
2586	561766.4	4190550	2.57E-09	2.55E-09	1.59E-10	5.27E-09
2587	561757.6	4190547	2.51E-09	2.49E-09	1.55E-10	5.16E-09
2588	561748.7	4190545	2.45E-09	2.44E-09	1.52E-10	5.04E-09
2589	561739.9	4190543	2.39E-09	2.38E-09	1.48E-10	4.92E-09
2590	561731	4190540	2.34E-09	2.32E-09	1.45E-10	4.80E-09
2591	561722.2	4190538	2.28E-09	2.26E-09	1.41E-10	4.68E-09
2592	561713.3	4190536	2.22E-09	2.21E-09	1.38E-10	4.57E-09
2593	561704.5	4190533	2.17E-09	2.15E-09	1.34E-10	4.45E-09

			7.19E-03	7.14E-03	4.45E-04
			2022	2023	2024
1	561593	4190840	2.02E-03	2.00E-03	1.25E-04
2	561590.8	4190849	2.15E-03	2.13E-03	1.33E-04
3	561588.6	4190858	2.25E-03	2.24E-03	1.40E-04
4	561586.4	4190867	2.32E-03	2.31E-03	1.44E-04
5	561584.2	4190876	2.34E-03	2.33E-03	1.45E-04
6	561582	4190885	2.33E-03	2.31E-03	1.44E-04
7	561579.8	4190894	2.28E-03	2.27E-03	1.42E-04
8	561577.6	4190903	2.21E-03	2.19E-03	1.37E-04
9	561575.4	4190912	2.10E-03	2.08E-03	1.30E-04
10	561573.2	4190921	1.96E-03	1.94E-03	1.21E-04
11	561571	4190930	1.78E-03	1.77E-03	1.11E-04
12	561568.7	4190939	1.60E-03	1.59E-03	9.89E-05
13	561566.5	4190948	1.41E-03	1.40E-03	8.71E-05
14	561599.3	4190810	1.43E-03	1.42E-03	8.87E-05
15	561583.5	4190837	1.69E-03	1.68E-03	1.05E-04
16	561581.2	4190846	1.78E-03	1.77E-03	1.10E-04
17	561579	4190855	1.85E-03	1.84E-03	1.15E-04
18	561576.8	4190864	1.90E-03	1.89E-03	1.18E-04
19	561574.6	4190873	1.91E-03	1.90E-03	1.19E-04
20	561572.4	4190882	1.90E-03	1.89E-03	1.18E-04
21	561570.2	4190891	1.86E-03	1.85E-03	1.15E-04
22	561568	4190900	1.79E-03	1.78E-03	1.11E-04
23	561565.8	4190910	1.70E-03	1.69E-03	1.06E-04
24	561563.6	4190919	1.59E-03	1.58E-03	9.87E-05
25	561561.4	4190928	1.47E-03	1.46E-03	9.08E-05
26	561559.2	4190937	1.33E-03	1.32E-03	8.24E-05
27	561557	4190946	1.20E-03	1.19E-03	7.41E-05
28	561589.7	4190808	1.26E-03	1.26E-03	7.83E-05
29	561606.3	4190794	1.19E-03	1.18E-03	7.35E-05
30	561573.9	4190835	1.44E-03	1.43E-03	8.94E-05
31	561571.7	4190844	1.51E-03	1.50E-03	9.35E-05
32	561569.5	4190853	1.56E-03	1.55E-03	9.66E-05
33	561567.3	4190862	1.59E-03	1.58E-03	9.85E-05
34	561565.1	4190871	1.60E-03	1.59E-03	9.90E-05
35	561562.9	4190880	1.58E-03	1.57E-03	9.79E-05
36	561560.7	4190889	1.54E-03	1.53E-03	9.54E-05
37	561558.4	4190898	1.48E-03	1.47E-03	9.19E-05
38	561556.2	4190907	1.41E-03	1.40E-03	8.75E-05
39	561554	4190916	1.33E-03	1.32E-03	8.22E-05
40	561551.8	4190925	1.23E-03	1.22E-03	7.64E-05
41	561549.6	4190934	1.13E-03	1.13E-03	7.02E-05
42	561547.4	4190943	1.03E-03	1.03E-03	6.41E-05
43	561577.4	4190809	1.15E-03	1.14E-03	7.13E-05
44	561582.9	4190802	1.11E-03	1.10E-03	6.85E-05

45	561588.3	4190794	1.05E-03	1.04E-03	6.49E-05
46	561602.8	4190786	1.02E-03	1.01E-03	6.31E-05
47	561611.8	4190784	1.05E-03	1.05E-03	6.52E-05
48	561564.3	4190833	1.25E-03	1.24E-03	7.76E-05
49	561562.1	4190842	1.30E-03	1.29E-03	8.04E-05
50	561559.9	4190851	1.33E-03	1.32E-03	8.23E-05
51	561557.7	4190860	1.34E-03	1.33E-03	8.33E-05
52	561555.5	4190869	1.34E-03	1.33E-03	8.32E-05
53	561553.3	4190878	1.32E-03	1.31E-03	8.20E-05
54	561551.1	4190887	1.29E-03	1.28E-03	8.00E-05
55	561548.9	4190896	1.25E-03	1.24E-03	7.72E-05
56	561546.7	4190905	1.19E-03	1.18E-03	7.38E-05
57	561544.5	4190914	1.13E-03	1.12E-03	6.97E-05
58	561542.3	4190923	1.05E-03	1.05E-03	6.53E-05
59	561540.1	4190932	9.80E-04	9.73E-04	6.06E-05
60	561537.9	4190941	9.05E-04	8.99E-04	5.60E-05
61	561572.8	4190800	1.00E-03	9.95E-04	6.21E-05
62	561583.4	4190786	9.13E-04	9.06E-04	5.65E-05
63	561597.5	4190777	8.83E-04	8.77E-04	5.47E-05
64	561615.1	4190775	9.30E-04	9.23E-04	5.76E-05
65	561554.8	4190830	1.09E-03	1.09E-03	6.78E-05
66	561552.6	4190839	1.12E-03	1.12E-03	6.96E-05
67	561550.4	4190848	1.14E-03	1.13E-03	7.08E-05
68	561548.2	4190857	1.15E-03	1.14E-03	7.12E-05
69	561545.9	4190866	1.14E-03	1.13E-03	7.08E-05
70	561543.7	4190875	1.13E-03	1.12E-03	6.97E-05
71	561541.5	4190884	1.10E-03	1.09E-03	6.81E-05
72	561539.3	4190893	1.06E-03	1.06E-03	6.59E-05
73	561537.1	4190902	1.02E-03	1.01E-03	6.31E-05
74	561534.9	4190911	9.69E-04	9.62E-04	6.00E-05
75	561532.7	4190920	9.14E-04	9.07E-04	5.66E-05
76	561530.5	4190930	8.55E-04	8.49E-04	5.29E-05
77	561528.3	4190939	7.95E-04	7.89E-04	4.92E-05
78	561563	4190798	9.10E-04	9.04E-04	5.64E-05
79	561573.3	4190784	8.46E-04	8.40E-04	5.24E-05
80	561592.3	4190769	7.75E-04	7.70E-04	4.80E-05
81	561609.6	4190766	8.11E-04	8.05E-04	5.02E-05
82	561545.2	4190828	9.66E-04	9.59E-04	5.98E-05
83	561543	4190837	9.86E-04	9.79E-04	6.10E-05
84	561540.8	4190846	9.95E-04	9.88E-04	6.16E-05
85	561538.6	4190855	9.95E-04	9.88E-04	6.16E-05
86	561536.4	4190864	9.85E-04	9.78E-04	6.10E-05
87	561534.2	4190873	9.70E-04	9.63E-04	6.00E-05
88	561532	4190882	9.50E-04	9.43E-04	5.88E-05
89	561529.8	4190891	9.22E-04	9.15E-04	5.71E-05
90	561527.6	4190900	8.86E-04	8.80E-04	5.49E-05
91	561525.4	4190909	8.45E-04	8.39E-04	5.23E-05

92	561523.1	4190918	7.99E-04	7.93E-04	4.94E-05
93	561520.9	4190927	7.51E-04	7.45E-04	4.65E-05
94	561518.7	4190936	7.02E-04	6.97E-04	4.35E-05
95	561553.2	4190796	8.31E-04	8.26E-04	5.15E-05
96	561563.4	4190782	7.83E-04	7.77E-04	4.85E-05
97	561573.6	4190769	7.18E-04	7.13E-04	4.44E-05
98	561587.1	4190760	6.91E-04	6.86E-04	4.28E-05
99	561604.1	4190758	7.15E-04	7.10E-04	4.43E-05
100	561535.6	4190826	8.60E-04	8.54E-04	5.33E-05
101	561533.4	4190835	8.72E-04	8.66E-04	5.40E-05
102	561531.2	4190844	8.78E-04	8.72E-04	5.44E-05
103	561529	4190853	8.77E-04	8.71E-04	5.43E-05
104	561526.8	4190862	8.69E-04	8.63E-04	5.38E-05
105	561524.6	4190871	8.56E-04	8.50E-04	5.30E-05
106	561522.4	4190880	8.37E-04	8.31E-04	5.18E-05
107	561520.2	4190889	8.12E-04	8.06E-04	5.03E-05
108	561518	4190898	7.80E-04	7.75E-04	4.83E-05
109	561515.8	4190907	7.45E-04	7.39E-04	4.61E-05
110	561513.6	4190916	7.06E-04	7.01E-04	4.37E-05
111	561511.4	4190925	6.66E-04	6.61E-04	4.12E-05
112	561509.2	4190934	6.26E-04	6.21E-04	3.87E-05
113	561533.3	4190808	7.68E-04	7.62E-04	4.75E-05
114	561543.4	4190794	7.62E-04	7.57E-04	4.72E-05
115	561553.5	4190780	7.29E-04	7.23E-04	4.51E-05
116	561563.6	4190767	6.76E-04	6.71E-04	4.19E-05
117	561582	4190752	6.22E-04	6.17E-04	3.85E-05
118	561598.8	4190750	6.36E-04	6.32E-04	3.94E-05
119	561615.5	4190747	6.59E-04	6.55E-04	4.08E-05
120	561526.1	4190823	7.74E-04	7.69E-04	4.79E-05
121	561523.9	4190832	7.83E-04	7.77E-04	4.85E-05
122	561521.7	4190841	7.86E-04	7.80E-04	4.86E-05
123	561519.5	4190850	7.84E-04	7.78E-04	4.85E-05
124	561517.3	4190859	7.77E-04	7.71E-04	4.81E-05
125	561515.1	4190868	7.64E-04	7.59E-04	4.73E-05
126	561512.8	4190877	7.45E-04	7.40E-04	4.62E-05
127	561510.6	4190886	7.22E-04	7.17E-04	4.47E-05
128	561508.4	4190895	6.94E-04	6.89E-04	4.30E-05
129	561506.2	4190904	6.63E-04	6.58E-04	4.10E-05
130	561504	4190913	6.30E-04	6.25E-04	3.90E-05
131	561501.8	4190922	5.96E-04	5.92E-04	3.69E-05
132	561499.6	4190931	5.63E-04	5.59E-04	3.49E-05
133	561523.7	4190805	6.99E-04	6.95E-04	4.33E-05
134	561533.7	4190792	7.01E-04	6.96E-04	4.34E-05
135	561543.7	4190778	6.79E-04	6.74E-04	4.20E-05
136	561553.6	4190765	6.37E-04	6.33E-04	3.95E-05
137	561563.6	4190751	5.87E-04	5.83E-04	3.64E-05
138	561576.9	4190744	5.65E-04	5.61E-04	3.50E-05

139	561593.5	4190741	5.71E-04	5.67E-04	3.54E-05
140	561610.1	4190739	5.87E-04	5.83E-04	3.63E-05
141	561516.5	4190821	7.01E-04	6.96E-04	4.34E-05
142	561514.3	4190830	7.06E-04	7.01E-04	4.37E-05
143	561512.1	4190839	7.07E-04	7.02E-04	4.38E-05
144	561509.9	4190848	7.05E-04	7.00E-04	4.36E-05
145	561507.7	4190857	6.98E-04	6.93E-04	4.32E-05
146	561505.5	4190866	6.87E-04	6.82E-04	4.25E-05
147	561503.3	4190875	6.69E-04	6.64E-04	4.14E-05
148	561501.1	4190884	6.47E-04	6.42E-04	4.01E-05
149	561498.9	4190893	6.22E-04	6.18E-04	3.85E-05
150	561496.7	4190902	5.96E-04	5.91E-04	3.69E-05
151	561494.5	4190911	5.68E-04	5.64E-04	3.51E-05
152	561492.3	4190920	5.39E-04	5.36E-04	3.34E-05
153	561490.1	4190929	5.12E-04	5.08E-04	3.17E-05
154	561514.6	4190802	6.41E-04	6.36E-04	3.97E-05
155	561520.1	4190795	6.45E-04	6.41E-04	4.00E-05
156	561525.5	4190788	6.45E-04	6.40E-04	3.99E-05
157	561530.9	4190780	6.39E-04	6.34E-04	3.96E-05
158	561536.4	4190773	6.26E-04	6.22E-04	3.88E-05
159	561541.8	4190766	6.07E-04	6.03E-04	3.76E-05
160	561547.3	4190758	5.86E-04	5.82E-04	3.63E-05
161	561552.7	4190751	5.63E-04	5.59E-04	3.48E-05
162	561558.1	4190744	5.38E-04	5.34E-04	3.33E-05
163	561572.6	4190735	5.17E-04	5.13E-04	3.20E-05
164	561581.7	4190734	5.20E-04	5.16E-04	3.22E-05
165	561590.7	4190732	5.22E-04	5.18E-04	3.23E-05
166	561599.8	4190731	5.26E-04	5.22E-04	3.25E-05
167	561608.8	4190730	5.30E-04	5.26E-04	3.28E-05
168	561617.9	4190729	5.35E-04	5.31E-04	3.31E-05
169	561626.9	4190727	5.42E-04	5.38E-04	3.35E-05
170	561509.2	4190810	6.31E-04	6.27E-04	3.91E-05
171	561507	4190819	6.38E-04	6.34E-04	3.95E-05
172	561504.8	4190828	6.41E-04	6.36E-04	3.97E-05
173	561502.6	4190837	6.39E-04	6.35E-04	3.96E-05
174	561500.3	4190846	6.37E-04	6.32E-04	3.94E-05
175	561498.1	4190855	6.30E-04	6.26E-04	3.90E-05
176	561495.9	4190864	6.19E-04	6.14E-04	3.83E-05
177	561493.7	4190873	6.03E-04	5.98E-04	3.73E-05
178	561491.5	4190882	5.83E-04	5.79E-04	3.61E-05
179	561489.3	4190891	5.62E-04	5.58E-04	3.48E-05
180	561487.1	4190900	5.39E-04	5.35E-04	3.33E-05
181	561484.9	4190909	5.15E-04	5.11E-04	3.19E-05
182	561482.7	4190918	4.91E-04	4.87E-04	3.04E-05
183	561480.5	4190927	4.67E-04	4.64E-04	2.89E-05
184	561505	4190800	5.88E-04	5.84E-04	3.64E-05
185	561515.7	4190786	5.96E-04	5.91E-04	3.69E-05

186	561521	4190778	5.93E-04	5.89E-04	3.67E-05
187	561531.8	4190764	5.71E-04	5.67E-04	3.54E-05
188	561537.1	4190757	5.54E-04	5.50E-04	3.43E-05
189	561542.5	4190749	5.35E-04	5.31E-04	3.31E-05
190	561553.2	4190735	4.93E-04	4.90E-04	3.05E-05
191	561567.5	4190727	4.75E-04	4.72E-04	2.94E-05
192	561576.4	4190725	4.77E-04	4.74E-04	2.95E-05
193	561585.3	4190724	4.78E-04	4.75E-04	2.96E-05
194	561603.1	4190722	4.81E-04	4.78E-04	2.98E-05
195	561612	4190720	4.83E-04	4.80E-04	2.99E-05
196	561629.9	4190718	4.94E-04	4.90E-04	3.06E-05
197	561497.4	4190816	5.85E-04	5.81E-04	3.62E-05
198	561495.2	4190825	5.86E-04	5.82E-04	3.63E-05
199	561493	4190834	5.84E-04	5.80E-04	3.62E-05
200	561490.8	4190843	5.80E-04	5.76E-04	3.59E-05
201	561488.6	4190852	5.72E-04	5.68E-04	3.54E-05
202	561486.4	4190861	5.61E-04	5.57E-04	3.47E-05
203	561484.2	4190870	5.46E-04	5.42E-04	3.38E-05
204	561482	4190879	5.29E-04	5.25E-04	3.27E-05
205	561479.8	4190888	5.10E-04	5.06E-04	3.16E-05
206	561477.5	4190897	4.90E-04	4.87E-04	3.03E-05
207	561475.3	4190906	4.69E-04	4.66E-04	2.91E-05
208	561473.1	4190915	4.49E-04	4.46E-04	2.78E-05
209	561470.9	4190924	4.29E-04	4.26E-04	2.65E-05
210	561516.5	4190769	5.46E-04	5.42E-04	3.38E-05
211	561527.1	4190755	5.23E-04	5.20E-04	3.24E-05
212	561537.7	4190741	4.90E-04	4.87E-04	3.04E-05
213	561548.2	4190726	4.54E-04	4.51E-04	2.81E-05
214	561562.3	4190718	4.38E-04	4.35E-04	2.71E-05
215	561579.9	4190716	4.41E-04	4.38E-04	2.73E-05
216	561597.5	4190713	4.42E-04	4.39E-04	2.74E-05
217	561615.1	4190711	4.44E-04	4.41E-04	2.75E-05
218	561632.7	4190708	4.55E-04	4.52E-04	2.82E-05
219	561468	4190895	4.49E-04	4.46E-04	2.78E-05
220	561465.8	4190904	4.32E-04	4.29E-04	2.67E-05
221	561463.6	4190913	4.14E-04	4.11E-04	2.56E-05
222	561461.4	4190922	3.96E-04	3.93E-04	2.45E-05
223	561538	4190725	4.36E-04	4.33E-04	2.70E-05
224	561557.2	4190710	4.06E-04	4.03E-04	2.51E-05
225	561574.6	4190707	4.08E-04	4.05E-04	2.53E-05
226	561592	4190705	4.08E-04	4.05E-04	2.53E-05
227	561609.4	4190702	4.09E-04	4.06E-04	2.53E-05
228	561626.8	4190700	4.14E-04	4.11E-04	2.57E-05
229	561552.1	4190701	3.76E-04	3.74E-04	2.33E-05
230	561569.3	4190699	3.79E-04	3.76E-04	2.35E-05
231	561586.6	4190696	3.79E-04	3.76E-04	2.35E-05
232	561603.8	4190694	3.79E-04	3.76E-04	2.35E-05

233	561621.1	4190692	3.81E-04	3.79E-04	2.36E-05
234	561638.3	4190689	3.90E-04	3.88E-04	2.42E-05
235	561547.6	4190693	3.51E-04	3.48E-04	2.17E-05
236	561556.8	4190691	3.52E-04	3.50E-04	2.18E-05
237	561565.9	4190690	3.53E-04	3.51E-04	2.19E-05
238	561575.1	4190689	3.53E-04	3.51E-04	2.19E-05
239	561584.2	4190688	3.53E-04	3.50E-04	2.18E-05
240	561593.4	4190686	3.53E-04	3.50E-04	2.18E-05
241	561602.6	4190685	3.53E-04	3.50E-04	2.18E-05
242	561611.7	4190684	3.53E-04	3.51E-04	2.19E-05
243	561620.9	4190682	3.55E-04	3.52E-04	2.20E-05
244	561630.1	4190681	3.58E-04	3.55E-04	2.22E-05
245	561639.2	4190680	3.63E-04	3.60E-04	2.24E-05
246	561551.5	4190683	3.29E-04	3.27E-04	2.04E-05
247	561560.6	4190682	3.30E-04	3.27E-04	2.04E-05
248	561569.6	4190680	3.30E-04	3.27E-04	2.04E-05
249	561578.7	4190679	3.30E-04	3.27E-04	2.04E-05
250	561587.7	4190678	3.30E-04	3.27E-04	2.04E-05
251	561596.8	4190677	3.30E-04	3.28E-04	2.04E-05
252	561605.8	4190675	3.30E-04	3.28E-04	2.04E-05
253	561614.9	4190674	3.30E-04	3.28E-04	2.05E-05
254	561623.9	4190673	3.31E-04	3.29E-04	2.05E-05
255	561633	4190672	3.35E-04	3.32E-04	2.07E-05
256	561642.1	4190670	3.39E-04	3.36E-04	2.10E-05
257	561555.3	4190673	3.08E-04	3.06E-04	1.91E-05
258	561564.2	4190672	3.08E-04	3.06E-04	1.91E-05
259	561573.2	4190671	3.08E-04	3.06E-04	1.91E-05
260	561582.1	4190669	3.09E-04	3.07E-04	1.91E-05
261	561591.1	4190668	3.09E-04	3.07E-04	1.92E-05
262	561600.1	4190667	3.09E-04	3.07E-04	1.92E-05
263	561609	4190666	3.09E-04	3.07E-04	1.91E-05
264	561618	4190664	3.09E-04	3.07E-04	1.92E-05
265	561626.9	4190663	3.11E-04	3.09E-04	1.92E-05
266	561635.9	4190662	3.14E-04	3.11E-04	1.94E-05
267	561644.9	4190661	3.17E-04	3.15E-04	1.96E-05
268	561567.7	4190662	2.89E-04	2.87E-04	1.79E-05
269	561585.5	4190660	2.90E-04	2.88E-04	1.80E-05
270	561603.2	4190657	2.91E-04	2.89E-04	1.80E-05
271	561621	4190655	2.91E-04	2.89E-04	1.80E-05
272	561638.7	4190652	2.95E-04	2.93E-04	1.83E-05
273	561562.3	4190654	2.71E-04	2.69E-04	1.68E-05
274	561579.9	4190651	2.72E-04	2.70E-04	1.69E-05
275	561597.5	4190649	2.74E-04	2.72E-04	1.69E-05
276	561615.2	4190647	2.74E-04	2.72E-04	1.70E-05
277	561632.8	4190644	2.76E-04	2.74E-04	1.71E-05
278	561650.4	4190642	2.80E-04	2.78E-04	1.73E-05
279	561574.5	4190643	2.56E-04	2.54E-04	1.59E-05

280	561591.9	4190641	2.58E-04	2.56E-04	1.60E-05
281	561609.4	4190638	2.59E-04	2.57E-04	1.60E-05
282	561626.9	4190636	2.60E-04	2.59E-04	1.61E-05
283	561644.3	4190633	2.62E-04	2.60E-04	1.62E-05
284	561572.2	4190634	2.42E-04	2.40E-04	1.50E-05
285	561581.3	4190633	2.42E-04	2.41E-04	1.50E-05
286	561599.6	4190630	2.44E-04	2.42E-04	1.51E-05
287	561608.7	4190629	2.44E-04	2.43E-04	1.51E-05
288	561617.9	4190628	2.46E-04	2.44E-04	1.52E-05
289	561627	4190627	2.47E-04	2.45E-04	1.53E-05
290	561636.1	4190625	2.47E-04	2.45E-04	1.53E-05
291	561645.3	4190624	2.47E-04	2.46E-04	1.53E-05
292	561654.4	4190623	2.49E-04	2.47E-04	1.54E-05
293	561575.7	4190625	2.29E-04	2.27E-04	1.42E-05
294	561584.7	4190623	2.29E-04	2.28E-04	1.42E-05
295	561593.8	4190622	2.30E-04	2.28E-04	1.42E-05
296	561602.8	4190621	2.31E-04	2.29E-04	1.43E-05
297	561611.9	4190620	2.31E-04	2.30E-04	1.43E-05
298	561620.9	4190618	2.33E-04	2.31E-04	1.44E-05
299	561630	4190617	2.33E-04	2.32E-04	1.44E-05
300	561639	4190616	2.34E-04	2.32E-04	1.45E-05
301	561648.1	4190614	2.35E-04	2.33E-04	1.45E-05
302	561657.2	4190613	2.37E-04	2.35E-04	1.46E-05
303	561579.1	4190615	2.17E-04	2.15E-04	1.34E-05
304	561588	4190614	2.17E-04	2.16E-04	1.34E-05
305	561597	4190612	2.18E-04	2.16E-04	1.35E-05
306	561606	4190611	2.18E-04	2.17E-04	1.35E-05
307	561615	4190610	2.20E-04	2.18E-04	1.36E-05
308	561624	4190609	2.21E-04	2.19E-04	1.37E-05
309	561632.9	4190607	2.21E-04	2.20E-04	1.37E-05
310	561641.9	4190606	2.22E-04	2.20E-04	1.37E-05
311	561650.9	4190605	2.23E-04	2.21E-04	1.38E-05
312	561659.9	4190604	2.25E-04	2.24E-04	1.39E-05
313	561582.4	4190605	2.06E-04	2.04E-04	1.27E-05
314	561600.2	4190603	2.07E-04	2.05E-04	1.28E-05
315	561609.1	4190602	2.07E-04	2.06E-04	1.28E-05
316	561626.9	4190599	2.10E-04	2.08E-04	1.30E-05
317	561635.9	4190598	2.10E-04	2.09E-04	1.30E-05
318	561653.7	4190595	2.12E-04	2.11E-04	1.31E-05
319	561662.6	4190594	2.15E-04	2.13E-04	1.33E-05
320	561585.6	4190596	1.95E-04	1.94E-04	1.21E-05
321	561603.3	4190593	1.96E-04	1.95E-04	1.22E-05
322	561621	4190591	1.98E-04	1.97E-04	1.23E-05
323	561638.7	4190588	2.00E-04	1.98E-04	1.24E-05
324	561656.4	4190586	2.03E-04	2.01E-04	1.25E-05
325	561584.2	4190587	1.86E-04	1.85E-04	1.15E-05
326	561593.4	4190585	1.86E-04	1.85E-04	1.15E-05

327	561602.5	4190584	1.87E-04	1.85E-04	1.16E-05
328	561611.7	4190583	1.87E-04	1.86E-04	1.16E-05
329	561620.9	4190582	1.88E-04	1.87E-04	1.16E-05
330	561630.1	4190580	1.89E-04	1.88E-04	1.17E-05
331	561639.3	4190579	1.90E-04	1.89E-04	1.18E-05
332	561648.5	4190578	1.91E-04	1.90E-04	1.18E-05
333	561657.6	4190576	1.93E-04	1.92E-04	1.20E-05
334	561666.8	4190575	1.95E-04	1.94E-04	1.21E-05
335	561587.5	4190577	1.77E-04	1.76E-04	1.10E-05
336	561596.6	4190576	1.78E-04	1.76E-04	1.10E-05
337	561605.7	4190575	1.78E-04	1.77E-04	1.10E-05
338	561614.9	4190573	1.78E-04	1.77E-04	1.10E-05
339	561624	4190572	1.79E-04	1.78E-04	1.11E-05
340	561633.1	4190571	1.80E-04	1.79E-04	1.11E-05
341	561642.2	4190569	1.81E-04	1.80E-04	1.12E-05
342	561651.3	4190568	1.83E-04	1.82E-04	1.13E-05
343	561660.4	4190567	1.85E-04	1.84E-04	1.14E-05
344	561669.6	4190566	1.87E-04	1.86E-04	1.16E-05
345	561590.8	4190567	1.69E-04	1.68E-04	1.05E-05
346	561599.8	4190566	1.69E-04	1.68E-04	1.05E-05
347	561608.9	4190565	1.70E-04	1.68E-04	1.05E-05
348	561617.9	4190564	1.70E-04	1.69E-04	1.05E-05
349	561627	4190562	1.71E-04	1.70E-04	1.06E-05
350	561636	4190561	1.72E-04	1.71E-04	1.07E-05
351	561645.1	4190560	1.74E-04	1.72E-04	1.07E-05
352	561654.2	4190559	1.75E-04	1.74E-04	1.08E-05
353	561663.2	4190557	1.77E-04	1.76E-04	1.09E-05
354	561672.3	4190556	1.79E-04	1.77E-04	1.11E-05
355	561585	4190559	1.62E-04	1.60E-04	1.00E-05
356	561594	4190558	1.62E-04	1.61E-04	1.00E-05
357	561603	4190557	1.62E-04	1.61E-04	1.00E-05
358	561612	4190555	1.62E-04	1.61E-04	1.00E-05
359	561621	4190554	1.63E-04	1.62E-04	1.01E-05
360	561630	4190553	1.64E-04	1.63E-04	1.01E-05
361	561639	4190552	1.65E-04	1.64E-04	1.02E-05
362	561648	4190550	1.66E-04	1.65E-04	1.03E-05
363	561657	4190549	1.68E-04	1.67E-04	1.04E-05
364	561666	4190548	1.69E-04	1.68E-04	1.05E-05
365	561674.9	4190547	1.71E-04	1.70E-04	1.06E-05
366	561597.2	4190548	1.55E-04	1.53E-04	9.57E-06
367	561606.1	4190547	1.55E-04	1.54E-04	9.59E-06
368	561615	4190546	1.56E-04	1.55E-04	9.63E-06
369	561624	4190545	1.56E-04	1.55E-04	9.68E-06
370	561632.9	4190543	1.57E-04	1.56E-04	9.74E-06
371	561641.9	4190542	1.58E-04	1.57E-04	9.80E-06
372	561650.8	4190541	1.59E-04	1.58E-04	9.87E-06
373	561659.7	4190540	1.61E-04	1.60E-04	9.96E-06

374	561668.7	4190538	1.62E-04	1.61E-04	1.01E-05
375	561677.6	4190537	1.64E-04	1.63E-04	1.01E-05
376	561592.7	4190964	1.95E-03	1.94E-03	1.21E-04
377	561602.1	4190967	2.23E-03	2.21E-03	1.38E-04
378	561611.4	4190969	2.51E-03	2.49E-03	1.55E-04
379	561620.7	4190972	2.77E-03	2.75E-03	1.71E-04
380	561630.1	4190974	2.95E-03	2.93E-03	1.83E-04
381	561639.4	4190977	3.08E-03	3.06E-03	1.91E-04
382	561648.8	4190979	3.18E-03	3.15E-03	1.96E-04
383	561658.1	4190982	3.26E-03	3.24E-03	2.02E-04
384	561667.5	4190984	3.42E-03	3.39E-03	2.11E-04
385	561599.5	4190976	1.70E-03	1.69E-03	1.05E-04
386	561608.9	4190979	1.85E-03	1.84E-03	1.15E-04
387	561618.2	4190981	2.00E-03	1.98E-03	1.24E-04
388	561627.6	4190984	2.11E-03	2.10E-03	1.31E-04
389	561636.9	4190986	2.20E-03	2.18E-03	1.36E-04
390	561646.3	4190989	2.28E-03	2.26E-03	1.41E-04
391	561655.6	4190991	2.37E-03	2.36E-03	1.47E-04
392	561665	4190994	2.52E-03	2.50E-03	1.55E-04
393	561597	4190986	1.34E-03	1.33E-03	8.28E-05
394	561606.4	4190988	1.43E-03	1.42E-03	8.86E-05
395	561615.7	4190991	1.52E-03	1.51E-03	9.39E-05
396	561625.1	4190993	1.60E-03	1.58E-03	9.86E-05
397	561634.4	4190996	1.66E-03	1.65E-03	1.02E-04
398	561643.7	4190998	1.72E-03	1.71E-03	1.06E-04
399	561653.1	4191001	1.80E-03	1.78E-03	1.11E-04
400	561662.4	4191003	1.90E-03	1.89E-03	1.17E-04
401	561560.3	4190968	1.03E-03	1.03E-03	6.40E-05
402	561594.5	4190995	1.09E-03	1.08E-03	6.73E-05
403	561603.8	4190998	1.15E-03	1.14E-03	7.11E-05
404	561613.2	4191000	1.21E-03	1.20E-03	7.46E-05
405	561622.5	4191003	1.26E-03	1.25E-03	7.79E-05
406	561631.9	4191005	1.31E-03	1.30E-03	8.07E-05
407	561641.2	4191008	1.35E-03	1.34E-03	8.36E-05
408	561650.6	4191010	1.41E-03	1.40E-03	8.68E-05
409	561659.9	4191013	1.47E-03	1.46E-03	9.07E-05
410	561551.5	4190971	8.84E-04	8.78E-04	5.47E-05
411	561550.2	4190962	9.41E-04	9.34E-04	5.82E-05
412	561548.8	4190952	9.92E-04	9.85E-04	6.14E-05
413	561592	4191005	9.08E-04	9.01E-04	5.62E-05
414	561601.3	4191007	9.50E-04	9.43E-04	5.87E-05
415	561610.7	4191010	9.90E-04	9.83E-04	6.12E-05
416	561620	4191012	1.03E-03	1.02E-03	6.35E-05
417	561629.4	4191015	1.06E-03	1.05E-03	6.56E-05
418	561638.7	4191017	1.10E-03	1.09E-03	6.76E-05
419	561648.1	4191020	1.13E-03	1.12E-03	6.98E-05
420	561657.4	4191022	1.17E-03	1.16E-03	7.22E-05

421	561543.1	4190976	7.56E-04	7.51E-04	4.68E-05
422	561541.8	4190967	8.00E-04	7.94E-04	4.95E-05
423	561539.2	4190950	8.76E-04	8.70E-04	5.42E-05
424	561589.4	4191014	7.72E-04	7.67E-04	4.77E-05
425	561598.8	4191017	8.01E-04	7.96E-04	4.95E-05
426	561608.1	4191019	8.30E-04	8.24E-04	5.13E-05
427	561617.5	4191022	8.57E-04	8.51E-04	5.29E-05
428	561626.8	4191024	8.82E-04	8.76E-04	5.45E-05
429	561636.2	4191027	9.06E-04	9.00E-04	5.59E-05
430	561645.5	4191029	9.30E-04	9.24E-04	5.74E-05
431	561654.9	4191032	9.54E-04	9.48E-04	5.89E-05
432	561542.9	4190995	6.36E-04	6.31E-04	3.93E-05
433	561534.7	4190981	6.56E-04	6.51E-04	4.06E-05
434	561532.1	4190964	7.23E-04	7.18E-04	4.48E-05
435	561541.1	4191005	5.70E-04	5.66E-04	3.53E-05
436	561526.3	4190987	5.74E-04	5.70E-04	3.55E-05
437	561523.8	4190970	6.26E-04	6.22E-04	3.88E-05
438	561521.2	4190953	6.70E-04	6.65E-04	4.15E-05
439	561549.6	4191023	5.16E-04	5.12E-04	3.19E-05
440	561542	4191017	5.14E-04	5.10E-04	3.18E-05
441	561534.3	4191012	5.08E-04	5.05E-04	3.15E-05
442	561526.7	4191006	4.99E-04	4.96E-04	3.09E-05
443	561517.6	4190991	5.12E-04	5.08E-04	3.17E-05
444	561516.2	4190981	5.36E-04	5.32E-04	3.31E-05
445	561514.8	4190972	5.58E-04	5.54E-04	3.45E-05
446	561513.4	4190962	5.78E-04	5.74E-04	3.58E-05
447	561512	4190953	5.96E-04	5.91E-04	3.69E-05
448	561510.6	4190943	6.12E-04	6.07E-04	3.79E-05
449	561572.5	4191041	5.00E-04	4.97E-04	3.09E-05
450	561581.9	4191043	5.12E-04	5.09E-04	3.17E-05
451	561591.2	4191045	5.23E-04	5.19E-04	3.23E-05
452	561600.6	4191048	5.34E-04	5.30E-04	3.30E-05
453	561609.9	4191050	5.44E-04	5.41E-04	3.36E-05
454	561619.3	4191053	5.54E-04	5.50E-04	3.42E-05
455	561628.6	4191055	5.62E-04	5.58E-04	3.47E-05
456	561638	4191058	5.69E-04	5.65E-04	3.51E-05
457	561647.3	4191060	5.74E-04	5.70E-04	3.54E-05
458	561540.3	4191028	4.63E-04	4.60E-04	2.86E-05
459	561532.9	4191022	4.61E-04	4.57E-04	2.85E-05
460	561525.4	4191016	4.56E-04	4.52E-04	2.82E-05
461	561518	4191011	4.48E-04	4.44E-04	2.77E-05
462	561509.2	4190996	4.57E-04	4.54E-04	2.83E-05
463	561507.8	4190987	4.76E-04	4.73E-04	2.95E-05
464	561506.5	4190978	4.94E-04	4.90E-04	3.06E-05
465	561505.1	4190968	5.10E-04	5.06E-04	3.15E-05
466	561503.7	4190959	5.24E-04	5.20E-04	3.24E-05
467	561502.4	4190950	5.38E-04	5.34E-04	3.33E-05

468	561501	4190941	5.52E-04	5.48E-04	3.41E-05
469	561570	4191050	4.45E-04	4.42E-04	2.75E-05
470	561579.4	4191053	4.55E-04	4.51E-04	2.81E-05
471	561588.7	4191055	4.63E-04	4.60E-04	2.86E-05
472	561598.1	4191057	4.71E-04	4.67E-04	2.91E-05
473	561607.4	4191060	4.78E-04	4.75E-04	2.95E-05
474	561616.8	4191062	4.85E-04	4.81E-04	2.99E-05
475	561626.1	4191065	4.90E-04	4.87E-04	3.03E-05
476	561635.4	4191067	4.94E-04	4.91E-04	3.05E-05
477	561644.8	4191070	4.97E-04	4.93E-04	3.07E-05
478	561538.4	4191038	4.19E-04	4.16E-04	2.59E-05
479	561523.9	4191027	4.16E-04	4.13E-04	2.57E-05
480	561516.6	4191021	4.11E-04	4.08E-04	2.54E-05
481	561509.4	4191016	4.05E-04	4.02E-04	2.50E-05
482	561500.8	4191001	4.12E-04	4.09E-04	2.55E-05
483	561499.4	4190992	4.28E-04	4.25E-04	2.65E-05
484	561498.1	4190983	4.43E-04	4.40E-04	2.74E-05
485	561496.8	4190974	4.57E-04	4.54E-04	2.83E-05
486	561495.4	4190965	4.70E-04	4.67E-04	2.91E-05
487	561494.1	4190956	4.82E-04	4.78E-04	2.98E-05
488	561492.7	4190947	4.93E-04	4.90E-04	3.05E-05
489	561491.4	4190938	5.03E-04	5.00E-04	3.11E-05
490	561567.5	4191060	3.99E-04	3.96E-04	2.47E-05
491	561576.8	4191062	4.06E-04	4.03E-04	2.51E-05
492	561586.2	4191065	4.12E-04	4.09E-04	2.55E-05
493	561595.5	4191067	4.18E-04	4.15E-04	2.58E-05
494	561604.9	4191069	4.23E-04	4.20E-04	2.61E-05
495	561614.2	4191072	4.28E-04	4.25E-04	2.64E-05
496	561623.6	4191074	4.32E-04	4.28E-04	2.66E-05
497	561632.9	4191077	4.34E-04	4.31E-04	2.68E-05
498	561642.3	4191079	4.35E-04	4.32E-04	2.68E-05
499	561536.4	4191048	3.80E-04	3.77E-04	2.35E-05
500	561522.2	4191037	3.80E-04	3.77E-04	2.35E-05
501	561515.1	4191031	3.78E-04	3.75E-04	2.34E-05
502	561500.8	4191021	3.67E-04	3.65E-04	2.27E-05
503	561492.3	4191006	3.74E-04	3.71E-04	2.31E-05
504	561489.7	4190989	4.00E-04	3.97E-04	2.48E-05
505	561488.4	4190980	4.12E-04	4.10E-04	2.55E-05
506	561485.8	4190962	4.35E-04	4.32E-04	2.69E-05
507	561484.4	4190953	4.45E-04	4.42E-04	2.75E-05
508	561481.8	4190936	4.61E-04	4.58E-04	2.85E-05
509	561574.3	4191072	3.65E-04	3.62E-04	2.25E-05
510	561583.7	4191074	3.69E-04	3.67E-04	2.28E-05
511	561593	4191077	3.74E-04	3.71E-04	2.31E-05
512	561602.4	4191079	3.77E-04	3.74E-04	2.33E-05
513	561611.7	4191081	3.80E-04	3.77E-04	2.35E-05
514	561621.1	4191084	3.82E-04	3.79E-04	2.36E-05

515	561630.4	4191086	3.83E-04	3.80E-04	2.36E-05
516	561639.8	4191089	3.83E-04	3.81E-04	2.37E-05
517	561527.3	4191052	3.48E-04	3.45E-04	2.15E-05
518	561513.3	4191041	3.47E-04	3.45E-04	2.15E-05
519	561499.2	4191031	3.41E-04	3.38E-04	2.11E-05
520	561483.9	4191012	3.40E-04	3.38E-04	2.11E-05
521	561481.3	4190994	3.64E-04	3.61E-04	2.25E-05
522	561478.7	4190977	3.85E-04	3.82E-04	2.38E-05
523	561476.1	4190959	4.04E-04	4.01E-04	2.50E-05
524	561473.5	4190942	4.18E-04	4.15E-04	2.59E-05
525	561571.8	4191081	3.29E-04	3.27E-04	2.03E-05
526	561581.2	4191084	3.33E-04	3.30E-04	2.06E-05
527	561590.5	4191086	3.35E-04	3.33E-04	2.07E-05
528	561599.8	4191089	3.38E-04	3.35E-04	2.09E-05
529	561609.2	4191091	3.39E-04	3.37E-04	2.10E-05
530	561618.5	4191093	3.41E-04	3.38E-04	2.10E-05
531	561627.9	4191096	3.41E-04	3.38E-04	2.10E-05
532	561637.2	4191098	3.41E-04	3.38E-04	2.10E-05
533	561529.7	4191065	3.17E-04	3.15E-04	1.96E-05
534	561522.1	4191060	3.19E-04	3.17E-04	1.97E-05
535	561514.5	4191054	3.20E-04	3.18E-04	1.98E-05
536	561507	4191048	3.19E-04	3.17E-04	1.97E-05
537	561499.4	4191042	3.17E-04	3.15E-04	1.96E-05
538	561491.9	4191037	3.13E-04	3.10E-04	1.93E-05
539	561484.3	4191031	3.07E-04	3.05E-04	1.90E-05
540	561475.3	4191016	3.12E-04	3.10E-04	1.93E-05
541	561473.9	4191007	3.24E-04	3.21E-04	2.00E-05
542	561472.5	4190997	3.34E-04	3.32E-04	2.07E-05
543	561471.1	4190988	3.45E-04	3.42E-04	2.13E-05
544	561469.7	4190978	3.55E-04	3.52E-04	2.19E-05
545	561468.3	4190969	3.64E-04	3.61E-04	2.25E-05
546	561467	4190960	3.72E-04	3.70E-04	2.30E-05
547	561465.6	4190950	3.79E-04	3.77E-04	2.35E-05
548	561464.2	4190941	3.85E-04	3.83E-04	2.39E-05
549	561462.8	4190932	3.91E-04	3.88E-04	2.42E-05
550	561559.9	4191088	2.96E-04	2.94E-04	1.83E-05
551	561569.3	4191091	2.99E-04	2.97E-04	1.85E-05
552	561578.6	4191093	3.01E-04	2.99E-04	1.86E-05
553	561588	4191096	3.03E-04	3.01E-04	1.87E-05
554	561597.3	4191098	3.04E-04	3.02E-04	1.88E-05
555	561606.7	4191101	3.05E-04	3.03E-04	1.88E-05
556	561616	4191103	3.05E-04	3.03E-04	1.89E-05
557	561625.4	4191105	3.05E-04	3.03E-04	1.88E-05
558	561634.7	4191108	3.05E-04	3.02E-04	1.88E-05
559	561527.7	4191075	2.91E-04	2.89E-04	1.80E-05
560	561520.3	4191070	2.94E-04	2.92E-04	1.82E-05
561	561512.8	4191064	2.95E-04	2.93E-04	1.82E-05

562	561505.4	4191058	2.95E-04	2.93E-04	1.83E-05
563	561498	4191053	2.94E-04	2.92E-04	1.82E-05
564	561490.6	4191047	2.91E-04	2.89E-04	1.80E-05
565	561483.1	4191042	2.87E-04	2.85E-04	1.78E-05
566	561475.7	4191036	2.83E-04	2.81E-04	1.75E-05
567	561466.9	4191021	2.88E-04	2.86E-04	1.78E-05
568	561465.5	4191012	2.98E-04	2.96E-04	1.84E-05
569	561464.1	4191003	3.07E-04	3.05E-04	1.90E-05
570	561462.8	4190993	3.16E-04	3.14E-04	1.95E-05
571	561461.4	4190984	3.24E-04	3.22E-04	2.01E-05
572	561460	4190975	3.32E-04	3.30E-04	2.05E-05
573	561458.7	4190966	3.40E-04	3.37E-04	2.10E-05
574	561457.3	4190957	3.46E-04	3.44E-04	2.14E-05
575	561455.9	4190947	3.52E-04	3.50E-04	2.18E-05
576	561454.5	4190938	3.58E-04	3.55E-04	2.21E-05
577	561453.2	4190929	3.63E-04	3.60E-04	2.24E-05
578	561557.4	4191098	2.71E-04	2.69E-04	1.67E-05
579	561566.8	4191100	2.73E-04	2.71E-04	1.68E-05
580	561576.1	4191103	2.74E-04	2.72E-04	1.69E-05
581	561585.5	4191105	2.75E-04	2.73E-04	1.70E-05
582	561594.8	4191108	2.75E-04	2.73E-04	1.70E-05
583	561604.2	4191110	2.76E-04	2.74E-04	1.70E-05
584	561613.5	4191112	2.76E-04	2.74E-04	1.70E-05
585	561622.8	4191115	2.75E-04	2.73E-04	1.70E-05
586	561632.2	4191117	2.74E-04	2.72E-04	1.69E-05
587	561525.6	4191085	2.68E-04	2.66E-04	1.66E-05
588	561518.3	4191080	2.71E-04	2.69E-04	1.67E-05
589	561511	4191074	2.72E-04	2.71E-04	1.68E-05
590	561503.7	4191068	2.73E-04	2.71E-04	1.69E-05
591	561496.4	4191063	2.73E-04	2.71E-04	1.69E-05
592	561489.1	4191057	2.72E-04	2.70E-04	1.68E-05
593	561481.7	4191052	2.69E-04	2.67E-04	1.67E-05
594	561474.4	4191046	2.65E-04	2.63E-04	1.64E-05
595	561467.1	4191041	2.62E-04	2.60E-04	1.62E-05
596	561458.4	4191026	2.67E-04	2.65E-04	1.65E-05
597	561457.1	4191017	2.76E-04	2.74E-04	1.71E-05
598	561455.7	4191008	2.84E-04	2.82E-04	1.75E-05
599	561454.4	4190999	2.91E-04	2.89E-04	1.80E-05
600	561453	4190990	2.98E-04	2.96E-04	1.84E-05
601	561451.7	4190981	3.05E-04	3.03E-04	1.89E-05
602	561450.3	4190972	3.11E-04	3.09E-04	1.93E-05
603	561449	4190963	3.17E-04	3.15E-04	1.96E-05
604	561447.6	4190954	3.23E-04	3.21E-04	2.00E-05
605	561446.3	4190945	3.28E-04	3.26E-04	2.03E-05
606	561554.9	4191107	2.48E-04	2.47E-04	1.53E-05
607	561564.2	4191110	2.50E-04	2.48E-04	1.54E-05
608	561573.6	4191112	2.50E-04	2.49E-04	1.55E-05

609	561582.9	4191115	2.51E-04	2.49E-04	1.55E-05
610	561592.3	4191117	2.51E-04	2.49E-04	1.55E-05
611	561601.6	4191120	2.51E-04	2.49E-04	1.55E-05
612	561611	4191122	2.50E-04	2.49E-04	1.55E-05
613	561620.3	4191124	2.50E-04	2.48E-04	1.54E-05
614	561629.7	4191127	2.49E-04	2.47E-04	1.53E-05
615	561523.5	4191095	2.47E-04	2.45E-04	1.53E-05
616	561509.1	4191084	2.52E-04	2.50E-04	1.56E-05
617	561501.9	4191079	2.54E-04	2.52E-04	1.57E-05
618	561494.6	4191073	2.54E-04	2.53E-04	1.57E-05
619	561487.4	4191068	2.54E-04	2.52E-04	1.57E-05
620	561473	4191057	2.50E-04	2.48E-04	1.55E-05
621	561465.8	4191051	2.47E-04	2.45E-04	1.53E-05
622	561458.6	4191046	2.44E-04	2.42E-04	1.51E-05
623	561450	4191031	2.48E-04	2.47E-04	1.54E-05
624	561448.7	4191022	2.56E-04	2.54E-04	1.58E-05
625	561447.3	4191014	2.63E-04	2.61E-04	1.63E-05
626	561446	4191005	2.69E-04	2.68E-04	1.67E-05
627	561444.7	4190996	2.75E-04	2.73E-04	1.70E-05
628	561442	4190978	2.87E-04	2.85E-04	1.77E-05
629	561440.7	4190969	2.92E-04	2.90E-04	1.81E-05
630	561439.3	4190960	2.98E-04	2.96E-04	1.84E-05
631	561552.4	4191117	2.29E-04	2.27E-04	1.41E-05
632	561561.7	4191119	2.29E-04	2.28E-04	1.42E-05
633	561571.1	4191122	2.30E-04	2.28E-04	1.42E-05
634	561580.4	4191124	2.30E-04	2.28E-04	1.42E-05
635	561589.8	4191127	2.29E-04	2.28E-04	1.42E-05
636	561599.1	4191129	2.29E-04	2.27E-04	1.41E-05
637	561608.5	4191132	2.28E-04	2.27E-04	1.41E-05
638	561617.8	4191134	2.27E-04	2.26E-04	1.40E-05
639	561627.2	4191136	2.26E-04	2.25E-04	1.40E-05
640	561526.9	4191109	2.26E-04	2.24E-04	1.40E-05
641	561519.3	4191103	2.29E-04	2.28E-04	1.42E-05
642	561511.6	4191097	2.32E-04	2.31E-04	1.44E-05
643	561504	4191092	2.35E-04	2.33E-04	1.45E-05
644	561496.4	4191086	2.37E-04	2.35E-04	1.46E-05
645	561488.7	4191080	2.38E-04	2.36E-04	1.47E-05
646	561481.1	4191074	2.38E-04	2.36E-04	1.47E-05
647	561473.4	4191068	2.36E-04	2.35E-04	1.46E-05
648	561465.8	4191063	2.34E-04	2.32E-04	1.45E-05
649	561458.2	4191057	2.31E-04	2.30E-04	1.43E-05
650	561450.5	4191051	2.28E-04	2.26E-04	1.41E-05
651	561441.5	4191036	2.32E-04	2.30E-04	1.44E-05
652	561440.1	4191026	2.39E-04	2.37E-04	1.48E-05
653	561438.6	4191017	2.46E-04	2.44E-04	1.52E-05
654	561437.2	4191007	2.52E-04	2.50E-04	1.56E-05
655	561435.8	4190998	2.58E-04	2.56E-04	1.59E-05

656	561434.4	4190989	2.63E-04	2.61E-04	1.63E-05
657	561433	4190979	2.68E-04	2.67E-04	1.66E-05
658	561549.9	4191126	2.11E-04	2.10E-04	1.30E-05
659	561559.2	4191129	2.12E-04	2.10E-04	1.31E-05
660	561568.5	4191131	2.12E-04	2.10E-04	1.31E-05
661	561577.9	4191134	2.11E-04	2.10E-04	1.30E-05
662	561587.2	4191136	2.11E-04	2.09E-04	1.30E-05
663	561596.6	4191139	2.10E-04	2.08E-04	1.30E-05
664	561605.9	4191141	2.09E-04	2.08E-04	1.29E-05
665	561615.3	4191144	2.08E-04	2.07E-04	1.29E-05
666	561624.6	4191146	2.07E-04	2.05E-04	1.28E-05
667	561517.2	4191113	2.13E-04	2.11E-04	1.31E-05
668	561509.7	4191107	2.16E-04	2.14E-04	1.33E-05
669	561502.2	4191102	2.18E-04	2.17E-04	1.35E-05
670	561494.6	4191096	2.20E-04	2.19E-04	1.36E-05
671	561487.1	4191090	2.22E-04	2.20E-04	1.37E-05
672	561479.6	4191085	2.23E-04	2.21E-04	1.38E-05
673	561472	4191079	2.22E-04	2.21E-04	1.38E-05
674	561464.5	4191073	2.21E-04	2.19E-04	1.37E-05
675	561457	4191067	2.19E-04	2.17E-04	1.35E-05
676	561449.5	4191062	2.16E-04	2.15E-04	1.34E-05
677	561441.9	4191056	2.13E-04	2.12E-04	1.32E-05
678	561433	4191041	2.17E-04	2.15E-04	1.34E-05
679	561431.6	4191032	2.23E-04	2.21E-04	1.38E-05
680	561430.2	4191022	2.29E-04	2.27E-04	1.42E-05
681	561428.8	4191013	2.35E-04	2.33E-04	1.45E-05
682	561427.5	4191004	2.40E-04	2.38E-04	1.48E-05
683	561426.1	4190994	2.45E-04	2.43E-04	1.51E-05
684	561424.7	4190985	2.49E-04	2.48E-04	1.54E-05
685	561547.3	4191136	1.96E-04	1.94E-04	1.21E-05
686	561556.7	4191138	1.96E-04	1.94E-04	1.21E-05
687	561566	4191141	1.95E-04	1.94E-04	1.21E-05
688	561575.4	4191143	1.95E-04	1.94E-04	1.20E-05
689	561584.7	4191146	1.94E-04	1.93E-04	1.20E-05
690	561594.1	4191148	1.93E-04	1.92E-04	1.19E-05
691	561603.4	4191151	1.92E-04	1.91E-04	1.19E-05
692	561612.8	4191153	1.91E-04	1.90E-04	1.18E-05
693	561622.1	4191156	1.90E-04	1.89E-04	1.17E-05
694	561515.1	4191123	1.98E-04	1.96E-04	1.22E-05
695	561507.7	4191117	2.01E-04	1.99E-04	1.24E-05
696	561500.2	4191112	2.03E-04	2.02E-04	1.26E-05
697	561492.8	4191106	2.06E-04	2.04E-04	1.27E-05
698	561485.4	4191100	2.07E-04	2.06E-04	1.28E-05
699	561477.9	4191095	2.08E-04	2.07E-04	1.29E-05
700	561470.5	4191089	2.09E-04	2.07E-04	1.29E-05
701	561463.1	4191083	2.08E-04	2.07E-04	1.29E-05
702	561455.7	4191078	2.07E-04	2.05E-04	1.28E-05

703	561448.2	4191072	2.05E-04	2.03E-04	1.27E-05
704	561440.8	4191067	2.03E-04	2.01E-04	1.25E-05
705	561433.4	4191061	2.00E-04	1.99E-04	1.24E-05
706	561424.6	4191046	2.03E-04	2.01E-04	1.25E-05
707	561423.2	4191037	2.08E-04	2.07E-04	1.29E-05
708	561421.8	4191028	2.14E-04	2.12E-04	1.32E-05
709	561420.5	4191019	2.19E-04	2.17E-04	1.35E-05
710	561419.1	4191009	2.24E-04	2.22E-04	1.38E-05
711	561417.7	4191000	2.28E-04	2.27E-04	1.41E-05
712	561416.3	4190991	2.33E-04	2.31E-04	1.44E-05
713	561415	4190982	2.37E-04	2.35E-04	1.47E-05
714	561544.8	4191145	1.82E-04	1.80E-04	1.12E-05
715	561554.2	4191148	1.81E-04	1.80E-04	1.12E-05
716	561563.5	4191150	1.81E-04	1.80E-04	1.12E-05
717	561572.9	4191153	1.80E-04	1.79E-04	1.11E-05
718	561582.2	4191155	1.80E-04	1.78E-04	1.11E-05
719	561591.5	4191158	1.79E-04	1.77E-04	1.10E-05
720	561600.9	4191160	1.78E-04	1.76E-04	1.10E-05
721	561610.2	4191163	1.76E-04	1.75E-04	1.09E-05
722	561619.6	4191165	1.75E-04	1.74E-04	1.08E-05
723	561512.9	4191133	1.84E-04	1.83E-04	1.14E-05
724	561505.6	4191127	1.87E-04	1.86E-04	1.16E-05
725	561498.2	4191121	1.90E-04	1.88E-04	1.17E-05
726	561490.9	4191116	1.92E-04	1.91E-04	1.19E-05
727	561483.6	4191110	1.94E-04	1.93E-04	1.20E-05
728	561476.2	4191105	1.95E-04	1.94E-04	1.21E-05
729	561468.9	4191099	1.96E-04	1.95E-04	1.21E-05
730	561461.5	4191094	1.96E-04	1.94E-04	1.21E-05
731	561454.2	4191088	1.95E-04	1.94E-04	1.21E-05
732	561446.8	4191083	1.94E-04	1.92E-04	1.20E-05
733	561439.5	4191077	1.92E-04	1.91E-04	1.19E-05
734	561432.2	4191072	1.90E-04	1.89E-04	1.18E-05
735	561424.8	4191066	1.88E-04	1.87E-04	1.16E-05
736	561416.1	4191051	1.90E-04	1.89E-04	1.18E-05
737	561414.8	4191042	1.95E-04	1.94E-04	1.21E-05
738	561413.4	4191033	2.00E-04	1.99E-04	1.24E-05
739	561412.1	4191024	2.05E-04	2.03E-04	1.27E-05
740	561410.7	4191015	2.09E-04	2.08E-04	1.29E-05
741	561409.3	4191006	2.13E-04	2.12E-04	1.32E-05
742	561408	4190997	2.17E-04	2.16E-04	1.35E-05
743	561542.3	4191155	1.69E-04	1.68E-04	1.04E-05
744	561551.6	4191157	1.69E-04	1.67E-04	1.04E-05
745	561561	4191160	1.68E-04	1.67E-04	1.04E-05
746	561570.3	4191162	1.67E-04	1.66E-04	1.03E-05
747	561579.7	4191165	1.67E-04	1.65E-04	1.03E-05
748	561589	4191167	1.65E-04	1.64E-04	1.02E-05
749	561598.4	4191170	1.64E-04	1.63E-04	1.01E-05

750	561607.7	4191172	1.63E-04	1.62E-04	1.01E-05
751	561617.1	4191175	1.62E-04	1.61E-04	9.99E-06
752	561516.7	4191147	1.69E-04	1.68E-04	1.05E-05
753	561509	4191141	1.73E-04	1.71E-04	1.07E-05
754	561501.3	4191135	1.76E-04	1.74E-04	1.08E-05
755	561493.6	4191129	1.78E-04	1.77E-04	1.10E-05
756	561478.2	4191118	1.83E-04	1.81E-04	1.13E-05
757	561470.5	4191112	1.84E-04	1.83E-04	1.14E-05
758	561462.9	4191106	1.84E-04	1.83E-04	1.14E-05
759	561455.2	4191100	1.84E-04	1.83E-04	1.14E-05
760	561447.5	4191095	1.83E-04	1.82E-04	1.13E-05
761	561439.8	4191089	1.82E-04	1.81E-04	1.13E-05
762	561432.1	4191083	1.81E-04	1.80E-04	1.12E-05
763	561424.4	4191077	1.79E-04	1.78E-04	1.11E-05
764	561416.7	4191071	1.77E-04	1.76E-04	1.09E-05
765	561407.6	4191056	1.80E-04	1.78E-04	1.11E-05
766	561406.2	4191046	1.84E-04	1.83E-04	1.14E-05
767	561404.8	4191037	1.89E-04	1.88E-04	1.17E-05
768	561403.3	4191027	1.93E-04	1.92E-04	1.20E-05
769	561401.9	4191018	1.98E-04	1.96E-04	1.22E-05
770	561539.8	4191164	1.58E-04	1.57E-04	9.74E-06
771	561549.1	4191167	1.57E-04	1.56E-04	9.71E-06
772	561558.5	4191169	1.57E-04	1.56E-04	9.67E-06
773	561567.8	4191172	1.56E-04	1.55E-04	9.62E-06
774	561577.2	4191174	1.55E-04	1.54E-04	9.56E-06
775	561586.5	4191177	1.54E-04	1.53E-04	9.49E-06
776	561595.9	4191179	1.53E-04	1.51E-04	9.42E-06
777	561605.2	4191182	1.51E-04	1.50E-04	9.35E-06
778	561506.9	4191151	1.61E-04	1.60E-04	9.97E-06
779	561499.3	4191145	1.64E-04	1.63E-04	1.02E-05
780	561491.7	4191139	1.67E-04	1.66E-04	1.03E-05
781	561484.1	4191134	1.69E-04	1.68E-04	1.05E-05
782	561476.5	4191128	1.71E-04	1.70E-04	1.06E-05
783	561468.9	4191122	1.73E-04	1.72E-04	1.07E-05
784	561461.3	4191116	1.74E-04	1.72E-04	1.07E-05
785	561453.7	4191111	1.74E-04	1.73E-04	1.07E-05
786	561446.1	4191105	1.73E-04	1.72E-04	1.07E-05
787	561438.5	4191099	1.73E-04	1.72E-04	1.07E-05
788	561430.9	4191093	1.72E-04	1.71E-04	1.06E-05
789	561423.3	4191088	1.71E-04	1.70E-04	1.06E-05
790	561415.7	4191082	1.69E-04	1.68E-04	1.05E-05
791	561408.1	4191076	1.67E-04	1.66E-04	1.03E-05
792	561397.7	4191052	1.74E-04	1.73E-04	1.08E-05
793	561396.3	4191042	1.78E-04	1.77E-04	1.10E-05
794	561537.2	4191174	1.47E-04	1.46E-04	9.11E-06
795	561546.6	4191176	1.47E-04	1.46E-04	9.07E-06
796	561555.9	4191179	1.46E-04	1.45E-04	9.03E-06

797	561565.3	4191181	1.45E-04	1.44E-04	8.98E-06
798	561574.6	4191184	1.44E-04	1.43E-04	8.92E-06
799	561584	4191186	1.43E-04	1.42E-04	8.85E-06
800	561593.3	4191189	1.42E-04	1.41E-04	8.77E-06
801	561602.7	4191191	1.41E-04	1.40E-04	8.70E-06
802	561504.7	4191161	1.51E-04	1.50E-04	9.34E-06
803	561497.2	4191155	1.54E-04	1.53E-04	9.52E-06
804	561489.7	4191149	1.57E-04	1.56E-04	9.68E-06
805	561482.2	4191144	1.59E-04	1.58E-04	9.83E-06
806	561474.7	4191138	1.61E-04	1.60E-04	9.96E-06
807	561467.2	4191132	1.63E-04	1.62E-04	1.01E-05
808	561459.7	4191127	1.64E-04	1.63E-04	1.01E-05
809	561452.1	4191121	1.64E-04	1.63E-04	1.02E-05
810	561444.6	4191115	1.64E-04	1.63E-04	1.02E-05
811	561437.1	4191110	1.64E-04	1.63E-04	1.01E-05
812	561429.6	4191104	1.64E-04	1.63E-04	1.01E-05
813	561422.1	4191098	1.63E-04	1.62E-04	1.01E-05
814	561414.6	4191093	1.62E-04	1.61E-04	1.00E-05
815	561407.1	4191087	1.60E-04	1.59E-04	9.90E-06
816	561517.3	4191182	1.36E-04	1.35E-04	8.40E-06
817	561502.5	4191170	1.42E-04	1.41E-04	8.77E-06
818	561495.1	4191165	1.45E-04	1.44E-04	8.94E-06
819	561487.6	4191159	1.47E-04	1.46E-04	9.10E-06
820	561480.2	4191154	1.50E-04	1.49E-04	9.24E-06
821	561472.8	4191148	1.52E-04	1.51E-04	9.37E-06
822	561465.3	4191142	1.53E-04	1.52E-04	9.48E-06
823	561457.9	4191137	1.55E-04	1.54E-04	9.57E-06
824	561450.5	4191131	1.56E-04	1.55E-04	9.63E-06
825	561443.1	4191125	1.56E-04	1.55E-04	9.65E-06
826	561435.6	4191120	1.56E-04	1.55E-04	9.65E-06
827	561428.2	4191114	1.56E-04	1.55E-04	9.63E-06
828	561420.8	4191109	1.55E-04	1.54E-04	9.60E-06
829	561413.3	4191103	1.55E-04	1.53E-04	9.56E-06
830	561405.9	4191097	1.53E-04	1.52E-04	9.48E-06
831	561398.5	4191092	1.52E-04	1.51E-04	9.39E-06
832	561522.3	4191197	1.25E-04	1.24E-04	7.72E-06
833	561515	4191191	1.28E-04	1.27E-04	7.90E-06
834	561507.6	4191186	1.31E-04	1.30E-04	8.07E-06
835	561500.3	4191180	1.33E-04	1.32E-04	8.24E-06
836	561492.9	4191175	1.36E-04	1.35E-04	8.41E-06
837	561485.5	4191169	1.39E-04	1.38E-04	8.56E-06
838	561478.2	4191163	1.41E-04	1.40E-04	8.70E-06
839	561470.8	4191158	1.43E-04	1.42E-04	8.83E-06
840	561463.5	4191152	1.45E-04	1.44E-04	8.94E-06
841	561456.1	4191147	1.46E-04	1.45E-04	9.03E-06
842	561448.7	4191141	1.47E-04	1.46E-04	9.11E-06
843	561441.4	4191136	1.48E-04	1.47E-04	9.16E-06

844	561434	4191130	1.48E-04	1.47E-04	9.17E-06
845	561426.7	4191124	1.48E-04	1.47E-04	9.16E-06
846	561419.3	4191119	1.48E-04	1.47E-04	9.14E-06
847	561412	4191113	1.47E-04	1.46E-04	9.11E-06
848	561404.6	4191108	1.47E-04	1.46E-04	9.07E-06
849	561397.2	4191102	1.45E-04	1.44E-04	9.00E-06
850	561529.7	4191202	1.22E-04	1.21E-04	7.53E-06
851	561539	4191205	1.21E-04	1.20E-04	7.49E-06
852	561548.4	4191207	1.21E-04	1.20E-04	7.44E-06
853	561557.7	4191210	1.20E-04	1.19E-04	7.39E-06
854	561567.1	4191212	1.19E-04	1.18E-04	7.33E-06
855	561576.4	4191215	1.18E-04	1.17E-04	7.26E-06
856	561585.8	4191217	1.17E-04	1.16E-04	7.20E-06
857	561595.1	4191220	1.15E-04	1.15E-04	7.13E-06
858	561604.5	4191222	1.14E-04	1.14E-04	7.07E-06
859	561519.5	4191206	1.18E-04	1.17E-04	7.28E-06
860	561511.9	4191200	1.21E-04	1.20E-04	7.45E-06
861	561504.2	4191195	1.23E-04	1.23E-04	7.62E-06
862	561496.6	4191189	1.26E-04	1.25E-04	7.79E-06
863	561489	4191183	1.29E-04	1.28E-04	7.96E-06
864	561481.3	4191177	1.31E-04	1.30E-04	8.11E-06
865	561473.7	4191171	1.33E-04	1.33E-04	8.25E-06
866	561466	4191166	1.36E-04	1.35E-04	8.37E-06
867	561458.4	4191160	1.37E-04	1.36E-04	8.48E-06
868	561450.8	4191154	1.39E-04	1.38E-04	8.58E-06
869	561435.5	4191143	1.41E-04	1.40E-04	8.70E-06
870	561427.8	4191137	1.41E-04	1.40E-04	8.71E-06
871	561420.2	4191131	1.41E-04	1.40E-04	8.71E-06
872	561412.5	4191125	1.41E-04	1.40E-04	8.69E-06
873	561404.9	4191119	1.40E-04	1.39E-04	8.66E-06
874	561397.3	4191114	1.39E-04	1.38E-04	8.62E-06
875	561527.2	4191212	1.15E-04	1.14E-04	7.09E-06
876	561536.5	4191214	1.14E-04	1.13E-04	7.06E-06
877	561545.9	4191217	1.13E-04	1.13E-04	7.01E-06
878	561555.2	4191219	1.13E-04	1.12E-04	6.95E-06
879	561564.6	4191222	1.12E-04	1.11E-04	6.89E-06
880	561573.9	4191224	1.11E-04	1.10E-04	6.83E-06
881	561583.2	4191227	1.10E-04	1.09E-04	6.77E-06
882	561592.6	4191229	1.09E-04	1.08E-04	6.70E-06
883	561601.9	4191232	1.08E-04	1.07E-04	6.64E-06
884	561517.1	4191216	1.11E-04	1.10E-04	6.86E-06
885	561509.5	4191210	1.14E-04	1.13E-04	7.03E-06
886	561502	4191204	1.16E-04	1.16E-04	7.19E-06
887	561494.4	4191198	1.19E-04	1.18E-04	7.35E-06
888	561486.8	4191193	1.21E-04	1.21E-04	7.51E-06
889	561479.3	4191187	1.24E-04	1.23E-04	7.65E-06
890	561471.7	4191181	1.26E-04	1.25E-04	7.79E-06

891	561464.1	4191176	1.28E-04	1.27E-04	7.91E-06
892	561456.6	4191170	1.30E-04	1.29E-04	8.02E-06
893	561449	4191164	1.31E-04	1.30E-04	8.12E-06
894	561441.4	4191158	1.33E-04	1.32E-04	8.20E-06
895	561433.9	4191153	1.33E-04	1.32E-04	8.25E-06
896	561426.3	4191147	1.34E-04	1.33E-04	8.28E-06
897	561418.7	4191141	1.34E-04	1.33E-04	8.29E-06
898	561411.2	4191136	1.34E-04	1.33E-04	8.28E-06
899	561403.6	4191130	1.34E-04	1.33E-04	8.27E-06
900	561396.1	4191124	1.33E-04	1.32E-04	8.24E-06
901	561388.5	4191118	1.33E-04	1.32E-04	8.20E-06
902	561524.6	4191221	1.08E-04	1.08E-04	6.69E-06
903	561534	4191224	1.08E-04	1.07E-04	6.66E-06
904	561543.3	4191226	1.07E-04	1.06E-04	6.61E-06
905	561552.7	4191229	1.06E-04	1.05E-04	6.55E-06
906	561562	4191231	1.05E-04	1.04E-04	6.50E-06
907	561571.4	4191234	1.04E-04	1.03E-04	6.44E-06
908	561580.7	4191236	1.03E-04	1.02E-04	6.38E-06
909	561590.1	4191239	1.02E-04	1.01E-04	6.31E-06
910	561599.4	4191241	1.01E-04	1.01E-04	6.25E-06
911	561514.6	4191225	1.05E-04	1.04E-04	6.48E-06
912	561507.1	4191220	1.07E-04	1.07E-04	6.64E-06
913	561499.6	4191214	1.10E-04	1.09E-04	6.79E-06
914	561492.1	4191208	1.12E-04	1.12E-04	6.94E-06
915	561484.7	4191203	1.15E-04	1.14E-04	7.09E-06
916	561477.2	4191197	1.17E-04	1.16E-04	7.23E-06
917	561469.7	4191191	1.19E-04	1.18E-04	7.36E-06
918	561462.2	4191186	1.21E-04	1.20E-04	7.48E-06
919	561454.7	4191180	1.23E-04	1.22E-04	7.59E-06
920	561447.2	4191174	1.24E-04	1.23E-04	7.69E-06
921	561439.7	4191169	1.26E-04	1.25E-04	7.77E-06
922	561432.2	4191163	1.27E-04	1.26E-04	7.83E-06
923	561424.7	4191157	1.27E-04	1.26E-04	7.87E-06
924	561417.2	4191152	1.28E-04	1.27E-04	7.90E-06
925	561409.7	4191146	1.28E-04	1.27E-04	7.90E-06
926	561402.2	4191140	1.28E-04	1.27E-04	7.90E-06
927	561394.7	4191135	1.27E-04	1.26E-04	7.88E-06
928	561387.2	4191129	1.27E-04	1.26E-04	7.85E-06
929	561522.1	4191231	1.02E-04	1.02E-04	6.33E-06
930	561531.5	4191233	1.02E-04	1.01E-04	6.29E-06
931	561540.8	4191236	1.01E-04	1.00E-04	6.24E-06
932	561550.2	4191238	1.00E-04	9.95E-05	6.19E-06
933	561559.5	4191241	9.93E-05	9.86E-05	6.13E-06
934	561568.9	4191243	9.84E-05	9.77E-05	6.08E-06
935	561578.2	4191246	9.74E-05	9.67E-05	6.02E-06
936	561587.6	4191248	9.65E-05	9.58E-05	5.96E-06
937	561596.9	4191251	9.55E-05	9.48E-05	5.90E-06

938	561512.2	4191235	9.93E-05	9.86E-05	6.13E-06
939	561504.7	4191229	1.02E-04	1.01E-04	6.28E-06
940	561497.3	4191224	1.04E-04	1.03E-04	6.43E-06
941	561489.9	4191218	1.06E-04	1.06E-04	6.57E-06
942	561482.5	4191212	1.09E-04	1.08E-04	6.71E-06
943	561475	4191207	1.11E-04	1.10E-04	6.84E-06
944	561467.6	4191201	1.13E-04	1.12E-04	6.97E-06
945	561460.2	4191195	1.15E-04	1.14E-04	7.08E-06
946	561452.7	4191190	1.16E-04	1.16E-04	7.19E-06
947	561445.3	4191184	1.18E-04	1.17E-04	7.29E-06
948	561437.9	4191179	1.19E-04	1.18E-04	7.37E-06
949	561430.5	4191173	1.20E-04	1.19E-04	7.44E-06
950	561423	4191167	1.21E-04	1.20E-04	7.49E-06
951	561415.6	4191162	1.22E-04	1.21E-04	7.52E-06
952	561408.2	4191156	1.22E-04	1.21E-04	7.54E-06
953	561400.7	4191151	1.22E-04	1.21E-04	7.55E-06
954	561393.3	4191145	1.22E-04	1.21E-04	7.54E-06
955	561385.9	4191139	1.22E-04	1.21E-04	7.52E-06
956	561519.6	4191240	9.69E-05	9.62E-05	5.99E-06
957	561528.9	4191243	9.63E-05	9.56E-05	5.95E-06
958	561538.3	4191245	9.56E-05	9.49E-05	5.90E-06
959	561547.6	4191248	9.48E-05	9.41E-05	5.85E-06
960	561557	4191250	9.39E-05	9.32E-05	5.80E-06
961	561566.3	4191253	9.30E-05	9.24E-05	5.75E-06
962	561575.7	4191255	9.21E-05	9.15E-05	5.69E-06
963	561585	4191258	9.12E-05	9.06E-05	5.63E-06
964	561594.4	4191260	9.03E-05	8.97E-05	5.58E-06
965	561509.4	4191244	9.42E-05	9.35E-05	5.82E-06
966	561501.7	4191238	9.65E-05	9.58E-05	5.96E-06
967	561494.1	4191232	9.88E-05	9.81E-05	6.11E-06
968	561486.4	4191227	1.01E-04	1.00E-04	6.25E-06
969	561478.7	4191221	1.03E-04	1.03E-04	6.38E-06
970	561471	4191215	1.05E-04	1.05E-04	6.51E-06
971	561463.3	4191209	1.07E-04	1.07E-04	6.64E-06
972	561455.7	4191203	1.09E-04	1.08E-04	6.75E-06
973	561448	4191198	1.11E-04	1.10E-04	6.86E-06
974	561440.3	4191192	1.12E-04	1.12E-04	6.95E-06
975	561425	4191180	1.15E-04	1.14E-04	7.10E-06
976	561417.3	4191174	1.16E-04	1.15E-04	7.16E-06
977	561409.6	4191169	1.16E-04	1.16E-04	7.19E-06
978	561401.9	4191163	1.17E-04	1.16E-04	7.21E-06
979	561394.3	4191157	1.17E-04	1.16E-04	7.22E-06
980	561386.6	4191151	1.17E-04	1.16E-04	7.21E-06
981	561378.9	4191145	1.17E-04	1.16E-04	7.21E-06
982	561517.1	4191250	9.19E-05	9.12E-05	5.68E-06
983	561526.4	4191252	9.13E-05	9.06E-05	5.64E-06
984	561535.8	4191255	9.06E-05	8.99E-05	5.60E-06

985	561545.1	4191257	8.98E-05	8.91E-05	5.55E-06
986	561554.5	4191260	8.90E-05	8.83E-05	5.50E-06
987	561563.8	4191262	8.81E-05	8.75E-05	5.44E-06
988	561573.2	4191265	8.73E-05	8.66E-05	5.39E-06
989	561582.5	4191267	8.64E-05	8.58E-05	5.34E-06
990	561591.9	4191270	8.55E-05	8.49E-05	5.28E-06
991	561507	4191254	8.94E-05	8.87E-05	5.52E-06
992	561499.3	4191248	9.16E-05	9.09E-05	5.66E-06
993	561491.7	4191242	9.37E-05	9.31E-05	5.79E-06
994	561484.1	4191236	9.59E-05	9.52E-05	5.92E-06
995	561476.5	4191231	9.80E-05	9.73E-05	6.05E-06
996	561468.9	4191225	1.00E-04	9.92E-05	6.18E-06
997	561461.3	4191219	1.02E-04	1.01E-04	6.29E-06
998	561453.7	4191213	1.04E-04	1.03E-04	6.41E-06
999	561446.1	4191208	1.05E-04	1.05E-04	6.51E-06
1000	561438.5	4191202	1.07E-04	1.06E-04	6.60E-06
1001	561430.9	4191196	1.08E-04	1.07E-04	6.69E-06
1002	561423.3	4191190	1.09E-04	1.09E-04	6.76E-06
1003	561415.7	4191185	1.10E-04	1.10E-04	6.82E-06
1004	561408.1	4191179	1.11E-04	1.10E-04	6.86E-06
1005	561400.4	4191173	1.11E-04	1.11E-04	6.89E-06
1006	561392.8	4191167	1.12E-04	1.11E-04	6.91E-06
1007	561385.2	4191162	1.12E-04	1.11E-04	6.91E-06
1008	561377.6	4191156	1.12E-04	1.11E-04	6.92E-06
1009	561514.6	4191259	8.72E-05	8.66E-05	5.39E-06
1010	561523.9	4191262	8.66E-05	8.60E-05	5.35E-06
1011	561533.3	4191264	8.60E-05	8.53E-05	5.31E-06
1012	561542.6	4191267	8.52E-05	8.46E-05	5.26E-06
1013	561552	4191269	8.44E-05	8.38E-05	5.21E-06
1014	561561.3	4191272	8.36E-05	8.30E-05	5.16E-06
1015	561570.6	4191274	8.28E-05	8.22E-05	5.11E-06
1016	561580	4191277	8.19E-05	8.14E-05	5.06E-06
1017	561589.3	4191279	8.11E-05	8.05E-05	5.01E-06
1018	561696.7	4190953	6.93E-03	6.88E-03	4.28E-04
1019	561699.2	4190945	6.99E-03	6.94E-03	4.32E-04
1020	561701.8	4190936	7.05E-03	7.00E-03	4.36E-04
1021	561704.4	4190927	7.12E-03	7.07E-03	4.41E-04
1022	561707	4190918	7.17E-03	7.12E-03	4.44E-04
1023	561709.6	4190909	7.19E-03	7.14E-03	4.45E-04
1024	561712.1	4190900	7.15E-03	7.10E-03	4.43E-04
1025	561714.7	4190891	7.04E-03	6.99E-03	4.36E-04
1026	561717.3	4190882	6.82E-03	6.77E-03	4.23E-04
1027	561719.9	4190873	6.44E-03	6.40E-03	3.99E-04
1028	561722.5	4190864	5.82E-03	5.78E-03	3.61E-04
1029	561706.1	4190956	6.50E-03	6.46E-03	4.01E-04
1030	561708.7	4190947	6.15E-03	6.10E-03	3.80E-04
1031	561711.3	4190938	5.99E-03	5.95E-03	3.70E-04

1032	561713.9	4190929	5.94E-03	5.90E-03	3.68E-04
1033	561716.4	4190921	5.94E-03	5.89E-03	3.67E-04
1034	561719	4190912	5.93E-03	5.88E-03	3.67E-04
1035	561721.6	4190903	5.88E-03	5.84E-03	3.64E-04
1036	561724.2	4190894	5.78E-03	5.74E-03	3.58E-04
1037	561726.8	4190885	5.60E-03	5.56E-03	3.47E-04
1038	561729.3	4190876	5.31E-03	5.28E-03	3.29E-04
1039	561731.9	4190867	4.89E-03	4.85E-03	3.03E-04
1040	561682	4191010	2.09E-03	2.07E-03	1.29E-04
1041	561713	4190968	7.00E-03	6.94E-03	4.30E-04
1042	561715.6	4190959	6.40E-03	6.36E-03	3.94E-04
1043	561718.2	4190950	5.68E-03	5.64E-03	3.50E-04
1044	561720.7	4190941	5.31E-03	5.27E-03	3.28E-04
1045	561723.3	4190932	5.14E-03	5.10E-03	3.18E-04
1046	561725.9	4190923	5.06E-03	5.02E-03	3.13E-04
1047	561728.5	4190914	5.01E-03	4.97E-03	3.10E-04
1048	561731.1	4190905	4.95E-03	4.92E-03	3.07E-04
1049	561733.6	4190897	4.86E-03	4.82E-03	3.01E-04
1050	561736.2	4190888	4.71E-03	4.67E-03	2.92E-04
1051	561738.8	4190879	4.49E-03	4.46E-03	2.78E-04
1052	561741.4	4190870	4.18E-03	4.15E-03	2.59E-04
1053	561686.9	4191018	1.73E-03	1.72E-03	1.07E-04
1054	561725	4190962	6.37E-03	6.33E-03	3.92E-04
1055	561727.6	4190953	5.41E-03	5.37E-03	3.34E-04
1056	561730.2	4190944	4.86E-03	4.83E-03	3.00E-04
1057	561732.8	4190935	4.58E-03	4.55E-03	2.83E-04
1058	561735.4	4190926	4.43E-03	4.40E-03	2.74E-04
1059	561737.9	4190917	4.34E-03	4.31E-03	2.69E-04
1060	561740.5	4190908	4.26E-03	4.23E-03	2.64E-04
1061	561743.1	4190899	4.17E-03	4.14E-03	2.58E-04
1062	561745.7	4190890	4.04E-03	4.01E-03	2.50E-04
1063	561748.3	4190881	3.87E-03	3.84E-03	2.40E-04
1064	561750.8	4190873	3.64E-03	3.61E-03	2.25E-04
1065	561690.2	4191027	1.41E-03	1.40E-03	8.67E-05
1066	561672.6	4191030	1.15E-03	1.14E-03	7.08E-05
1067	561734.5	4190964	6.32E-03	6.27E-03	3.89E-04
1068	561737.1	4190956	5.22E-03	5.18E-03	3.21E-04
1069	561739.6	4190947	4.55E-03	4.52E-03	2.81E-04
1070	561742.2	4190938	4.18E-03	4.15E-03	2.58E-04
1071	561752.6	4190902	3.65E-03	3.62E-03	2.26E-04
1072	561755.1	4190893	3.54E-03	3.51E-03	2.19E-04
1073	561757.7	4190884	3.39E-03	3.37E-03	2.10E-04
1074	561760.3	4190875	3.21E-03	3.19E-03	1.99E-04
1075	561695.3	4191036	1.18E-03	1.17E-03	7.27E-05
1076	561678.1	4191038	1.00E-03	9.93E-04	6.16E-05
1077	561743.9	4190967	6.20E-03	6.16E-03	3.81E-04
1078	561746.5	4190958	5.04E-03	5.00E-03	3.10E-04

1079	561749.1	4190949	4.30E-03	4.27E-03	2.65E-04
1080	561751.7	4190940	3.87E-03	3.85E-03	2.39E-04
1081	561762	4190905	3.25E-03	3.22E-03	2.01E-04
1082	561764.6	4190896	3.14E-03	3.12E-03	1.94E-04
1083	561767.2	4190887	3.02E-03	3.00E-03	1.87E-04
1084	561769.8	4190878	2.87E-03	2.85E-03	1.78E-04
1085	561700.4	4191044	9.92E-04	9.85E-04	6.11E-05
1086	561683.5	4191047	8.69E-04	8.62E-04	5.35E-05
1087	561753.4	4190970	6.00E-03	5.95E-03	3.68E-04
1088	561756	4190961	4.83E-03	4.79E-03	2.97E-04
1089	561758.6	4190952	4.07E-03	4.04E-03	2.51E-04
1090	561761.1	4190943	3.62E-03	3.59E-03	2.23E-04
1091	561771.5	4190908	2.92E-03	2.90E-03	1.81E-04
1092	561774	4190899	2.82E-03	2.80E-03	1.74E-04
1093	561776.6	4190890	2.71E-03	2.69E-03	1.68E-04
1094	561779.2	4190881	2.59E-03	2.57E-03	1.60E-04
1095	561762.8	4190973	5.67E-03	5.63E-03	3.48E-04
1096	561765.4	4190964	4.57E-03	4.54E-03	2.81E-04
1097	561768	4190955	3.83E-03	3.81E-03	2.36E-04
1098	561770.6	4190946	3.38E-03	3.36E-03	2.08E-04
1099	561780.9	4190910	2.65E-03	2.64E-03	1.64E-04
1100	561783.5	4190901	2.56E-03	2.54E-03	1.58E-04
1101	561786.1	4190892	2.46E-03	2.44E-03	1.52E-04
1102	561788.7	4190884	2.35E-03	2.34E-03	1.46E-04
1103	561677.5	4191066	6.00E-04	5.96E-04	3.70E-05
1104	561661.2	4191068	5.46E-04	5.42E-04	3.37E-05
1105	561714.3	4191070	6.14E-04	6.09E-04	3.78E-05
1106	561705.3	4191071	5.92E-04	5.87E-04	3.65E-05
1107	561696.3	4191072	5.69E-04	5.65E-04	3.51E-05
1108	561687.3	4191074	5.45E-04	5.42E-04	3.36E-05
1109	561678.3	4191075	5.22E-04	5.18E-04	3.22E-05
1110	561669.3	4191076	4.99E-04	4.95E-04	3.08E-05
1111	561660.3	4191077	4.77E-04	4.73E-04	2.94E-05
1112	561797.2	4190925	2.33E-03	2.32E-03	1.44E-04
1113	561799.8	4190916	2.23E-03	2.21E-03	1.38E-04
1114	561802.4	4190907	2.14E-03	2.12E-03	1.32E-04
1115	561805	4190898	2.06E-03	2.04E-03	1.27E-04
1116	561807.6	4190889	1.98E-03	1.96E-03	1.22E-04
1117	561777.9	4191015	2.93E-03	2.91E-03	1.80E-04
1118	561719.3	4191079	5.34E-04	5.30E-04	3.29E-05
1119	561701.7	4191081	5.02E-04	4.99E-04	3.10E-05
1120	561684	4191083	4.68E-04	4.64E-04	2.88E-05
1121	561666.3	4191085	4.33E-04	4.30E-04	2.67E-05
1122	561786	4190999	3.67E-03	3.65E-03	2.26E-04
1123	561796.4	4190963	2.90E-03	2.88E-03	1.78E-04
1124	561799	4190954	2.63E-03	2.61E-03	1.62E-04
1125	561801.5	4190945	2.43E-03	2.41E-03	1.49E-04

1126	561804.1	4190936	2.27E-03	2.26E-03	1.40E-04
1127	561806.7	4190927	2.15E-03	2.14E-03	1.33E-04
1128	561809.3	4190918	2.06E-03	2.04E-03	1.27E-04
1129	561811.9	4190910	1.98E-03	1.96E-03	1.22E-04
1130	561814.4	4190901	1.90E-03	1.89E-03	1.17E-04
1131	561817	4190892	1.83E-03	1.81E-03	1.13E-04
1132	561787.5	4191017	2.27E-03	2.26E-03	1.40E-04
1133	561776.6	4191031	1.64E-03	1.63E-03	1.01E-04
1134	561765.7	4191045	1.12E-03	1.12E-03	6.91E-05
1135	561724.3	4191087	4.69E-04	4.66E-04	2.89E-05
1136	561706.9	4191089	4.45E-04	4.42E-04	2.74E-05
1137	561689.5	4191092	4.20E-04	4.17E-04	2.59E-05
1138	561672.1	4191094	3.93E-04	3.90E-04	2.42E-05
1139	561654.7	4191096	3.66E-04	3.64E-04	2.26E-05
1140	561795.5	4191001	2.79E-03	2.77E-03	1.72E-04
1141	561805.8	4190966	2.56E-03	2.54E-03	1.57E-04
1142	561808.4	4190957	2.37E-03	2.36E-03	1.46E-04
1143	561811	4190948	2.22E-03	2.20E-03	1.37E-04
1144	561813.6	4190939	2.09E-03	2.08E-03	1.29E-04
1145	561816.2	4190930	1.99E-03	1.97E-03	1.23E-04
1146	561818.7	4190921	1.90E-03	1.89E-03	1.17E-04
1147	561821.3	4190912	1.83E-03	1.81E-03	1.13E-04
1148	561823.9	4190903	1.76E-03	1.75E-03	1.09E-04
1149	561826.5	4190894	1.69E-03	1.68E-03	1.05E-04
1150	561797	4191020	1.83E-03	1.82E-03	1.12E-04
1151	561786.3	4191033	1.42E-03	1.41E-03	8.75E-05
1152	561775.5	4191047	1.04E-03	1.03E-03	6.39E-05
1153	561764.7	4191061	7.70E-04	7.65E-04	4.74E-05
1154	561729.3	4191096	4.16E-04	4.13E-04	2.56E-05
1155	561712.1	4191098	3.97E-04	3.94E-04	2.45E-05
1156	561694.9	4191100	3.78E-04	3.75E-04	2.33E-05
1157	561677.7	4191102	3.57E-04	3.54E-04	2.20E-05
1158	561660.5	4191105	3.36E-04	3.33E-04	2.07E-05
1159	561805	4191004	2.21E-03	2.19E-03	1.36E-04
1160	561817.9	4190960	2.13E-03	2.11E-03	1.31E-04
1161	561820.4	4190951	2.02E-03	2.00E-03	1.24E-04
1162	561823	4190942	1.92E-03	1.90E-03	1.18E-04
1163	561825.6	4190933	1.83E-03	1.82E-03	1.13E-04
1164	561828.2	4190924	1.76E-03	1.75E-03	1.09E-04
1165	561830.8	4190915	1.69E-03	1.68E-03	1.05E-04
1166	561833.4	4190906	1.63E-03	1.62E-03	1.01E-04
1167	561835.9	4190897	1.57E-03	1.56E-03	9.72E-05
1168	561795.9	4191036	1.24E-03	1.23E-03	7.62E-05
1169	561785.3	4191049	9.51E-04	9.44E-04	5.85E-05
1170	561774.6	4191063	7.30E-04	7.25E-04	4.50E-05
1171	561734.2	4191104	3.71E-04	3.68E-04	2.29E-05
1172	561717.2	4191107	3.56E-04	3.53E-04	2.20E-05

1173	561700.2	4191109	3.41E-04	3.39E-04	2.11E-05
1174	561683.2	4191111	3.25E-04	3.23E-04	2.00E-05
1175	561666.2	4191113	3.08E-04	3.06E-04	1.90E-05
1176	561649.2	4191115	2.91E-04	2.89E-04	1.80E-05
1177	561814.4	4191007	1.81E-03	1.80E-03	1.11E-04
1178	561827.3	4190962	1.90E-03	1.88E-03	1.17E-04
1179	561829.9	4190953	1.82E-03	1.81E-03	1.12E-04
1180	561832.5	4190945	1.75E-03	1.74E-03	1.08E-04
1181	561835.1	4190936	1.69E-03	1.68E-03	1.04E-04
1182	561837.6	4190927	1.63E-03	1.62E-03	1.00E-04
1183	561840.2	4190918	1.57E-03	1.56E-03	9.70E-05
1184	561842.8	4190909	1.52E-03	1.51E-03	9.37E-05
1185	561845.4	4190900	1.47E-03	1.45E-03	9.05E-05
1186	561815.6	4191026	1.29E-03	1.28E-03	7.96E-05
1187	561809.9	4191033	1.19E-03	1.18E-03	7.30E-05
1188	561804.3	4191040	1.06E-03	1.06E-03	6.55E-05
1189	561798.6	4191047	9.44E-04	9.37E-04	5.81E-05
1190	561792.9	4191054	8.31E-04	8.25E-04	5.12E-05
1191	561787.3	4191062	7.31E-04	7.26E-04	4.50E-05
1192	561781.6	4191069	6.45E-04	6.41E-04	3.97E-05
1193	561764.6	4191090	4.57E-04	4.54E-04	2.82E-05
1194	561758.9	4191097	4.12E-04	4.09E-04	2.54E-05
1195	561729.4	4191114	3.27E-04	3.25E-04	2.02E-05
1196	561720.4	4191115	3.21E-04	3.18E-04	1.98E-05
1197	561711.3	4191116	3.14E-04	3.12E-04	1.94E-05
1198	561693.2	4191119	3.00E-04	2.98E-04	1.85E-05
1199	561684.1	4191120	2.93E-04	2.91E-04	1.81E-05
1200	561675	4191121	2.86E-04	2.83E-04	1.76E-05
1201	561665.9	4191122	2.78E-04	2.76E-04	1.72E-05
1202	561656.9	4191123	2.71E-04	2.69E-04	1.67E-05
1203	561647.8	4191125	2.63E-04	2.61E-04	1.63E-05
1204	561821.3	4191019	1.38E-03	1.37E-03	8.47E-05
1205	561823.9	4191010	1.52E-03	1.51E-03	9.36E-05
1206	561826.4	4191001	1.63E-03	1.62E-03	1.01E-04
1207	561829	4190992	1.70E-03	1.69E-03	1.05E-04
1208	561831.6	4190983	1.73E-03	1.72E-03	1.06E-04
1209	561834.2	4190974	1.72E-03	1.71E-03	1.06E-04
1210	561836.8	4190965	1.69E-03	1.68E-03	1.04E-04
1211	561839.4	4190956	1.65E-03	1.64E-03	1.01E-04
1212	561841.9	4190947	1.60E-03	1.59E-03	9.86E-05
1213	561844.5	4190938	1.55E-03	1.54E-03	9.56E-05
1214	561847.1	4190929	1.50E-03	1.49E-03	9.27E-05
1215	561849.7	4190921	1.46E-03	1.45E-03	8.99E-05
1216	561852.3	4190912	1.41E-03	1.40E-03	8.71E-05
1217	561854.8	4190903	1.37E-03	1.36E-03	8.44E-05
1218	561825.1	4191028	1.13E-03	1.12E-03	6.93E-05
1219	561819.6	4191035	1.05E-03	1.04E-03	6.43E-05

1220	561808.4	4191050	8.60E-04	8.53E-04	5.29E-05
1221	561802.8	4191057	7.68E-04	7.62E-04	4.73E-05
1222	561791.6	4191071	6.11E-04	6.07E-04	3.77E-05
1223	561774.8	4191092	4.44E-04	4.41E-04	2.74E-05
1224	561763.6	4191106	3.66E-04	3.63E-04	2.26E-05
1225	561716.6	4191125	2.86E-04	2.84E-04	1.77E-05
1226	561698.7	4191127	2.75E-04	2.73E-04	1.70E-05
1227	561689.8	4191128	2.69E-04	2.67E-04	1.66E-05
1228	561671.9	4191131	2.57E-04	2.55E-04	1.58E-05
1229	561654	4191133	2.45E-04	2.43E-04	1.51E-05
1230	561645	4191134	2.38E-04	2.37E-04	1.47E-05
1231	561833.3	4191012	1.31E-03	1.30E-03	8.04E-05
1232	561835.9	4191003	1.40E-03	1.39E-03	8.63E-05
1233	561838.5	4190995	1.47E-03	1.46E-03	9.04E-05
1234	561841.1	4190986	1.51E-03	1.49E-03	9.27E-05
1235	561843.6	4190977	1.52E-03	1.51E-03	9.34E-05
1236	561846.2	4190968	1.51E-03	1.50E-03	9.29E-05
1237	561848.8	4190959	1.49E-03	1.47E-03	9.15E-05
1238	561851.4	4190950	1.46E-03	1.44E-03	8.97E-05
1239	561854	4190941	1.42E-03	1.41E-03	8.77E-05
1240	561856.6	4190932	1.39E-03	1.38E-03	8.55E-05
1241	561859.1	4190923	1.35E-03	1.34E-03	8.33E-05
1242	561861.7	4190914	1.31E-03	1.30E-03	8.10E-05
1243	561864.3	4190905	1.27E-03	1.26E-03	7.87E-05
1244	561834.7	4191031	9.95E-04	9.88E-04	6.12E-05
1245	561823.6	4191045	8.61E-04	8.55E-04	5.30E-05
1246	561812.6	4191059	7.13E-04	7.07E-04	4.39E-05
1247	561801.5	4191073	5.78E-04	5.74E-04	3.56E-05
1248	561779.4	4191101	3.91E-04	3.88E-04	2.41E-05
1249	561768.3	4191115	3.28E-04	3.26E-04	2.02E-05
1250	561748.4	4191130	2.74E-04	2.72E-04	1.69E-05
1251	561713.1	4191135	2.57E-04	2.55E-04	1.59E-05
1252	561695.4	4191137	2.47E-04	2.46E-04	1.53E-05
1253	561677.7	4191139	2.37E-04	2.36E-04	1.46E-05
1254	561660	4191141	2.27E-04	2.25E-04	1.40E-05
1255	561642.3	4191144	2.17E-04	2.15E-04	1.34E-05
1256	561842.8	4191015	1.14E-03	1.13E-03	7.01E-05
1257	561845.4	4191006	1.22E-03	1.21E-03	7.50E-05
1258	561847.9	4190997	1.28E-03	1.27E-03	7.89E-05
1259	561850.5	4190988	1.32E-03	1.31E-03	8.14E-05
1260	561853.1	4190979	1.34E-03	1.33E-03	8.28E-05
1261	561855.7	4190971	1.35E-03	1.34E-03	8.31E-05
1262	561858.3	4190962	1.34E-03	1.33E-03	8.26E-05
1263	561860.8	4190953	1.32E-03	1.31E-03	8.16E-05
1264	561863.4	4190944	1.30E-03	1.29E-03	8.04E-05
1265	561866	4190935	1.28E-03	1.27E-03	7.89E-05
1266	561868.6	4190926	1.25E-03	1.24E-03	7.71E-05

1267	561871.2	4190917	1.22E-03	1.21E-03	7.53E-05
1268	561873.8	4190908	1.19E-03	1.18E-03	7.33E-05
1269	561844.2	4191034	8.88E-04	8.81E-04	5.47E-05
1270	561833.2	4191048	7.82E-04	7.76E-04	4.82E-05
1271	561822.3	4191061	6.62E-04	6.57E-04	4.07E-05
1272	561811.4	4191075	5.47E-04	5.43E-04	3.37E-05
1273	561789.5	4191103	3.79E-04	3.76E-04	2.33E-05
1274	561778.5	4191117	3.21E-04	3.18E-04	1.98E-05
1275	561767.6	4191131	2.74E-04	2.72E-04	1.69E-05
1276	561753.4	4191139	2.51E-04	2.49E-04	1.55E-05
1277	561718.4	4191143	2.37E-04	2.35E-04	1.46E-05
1278	561700.9	4191145	2.28E-04	2.27E-04	1.41E-05
1279	561683.4	4191148	2.20E-04	2.18E-04	1.36E-05
1280	561665.9	4191150	2.11E-04	2.10E-04	1.30E-05
1281	561648.4	4191152	2.02E-04	2.01E-04	1.25E-05
1282	561852.2	4191018	1.00E-03	9.98E-04	6.19E-05
1283	561854.8	4191009	1.07E-03	1.07E-03	6.61E-05
1284	561857.4	4191000	1.13E-03	1.12E-03	6.96E-05
1285	561860	4190991	1.17E-03	1.16E-03	7.21E-05
1286	561862.6	4190982	1.20E-03	1.19E-03	7.38E-05
1287	561865.1	4190973	1.21E-03	1.20E-03	7.46E-05
1288	561867.7	4190964	1.21E-03	1.20E-03	7.48E-05
1289	561870.3	4190955	1.21E-03	1.20E-03	7.44E-05
1290	561872.9	4190947	1.20E-03	1.19E-03	7.37E-05
1291	561875.5	4190938	1.18E-03	1.17E-03	7.27E-05
1292	561878	4190929	1.16E-03	1.15E-03	7.14E-05
1293	561880.6	4190920	1.13E-03	1.13E-03	7.00E-05
1294	561883.2	4190911	1.11E-03	1.10E-03	6.84E-05
1295	561853.7	4191036	8.00E-04	7.94E-04	4.93E-05
1296	561842.8	4191050	7.14E-04	7.09E-04	4.40E-05
1297	561832	4191064	6.15E-04	6.11E-04	3.79E-05
1298	561821.2	4191077	5.18E-04	5.14E-04	3.19E-05
1299	561799.5	4191105	3.66E-04	3.63E-04	2.25E-05
1300	561788.6	4191119	3.12E-04	3.10E-04	1.93E-05
1301	561777.8	4191132	2.69E-04	2.67E-04	1.66E-05
1302	561758.3	4191147	2.31E-04	2.29E-04	1.43E-05
1303	561741	4191149	2.25E-04	2.23E-04	1.39E-05
1304	561706.3	4191154	2.11E-04	2.10E-04	1.30E-05
1305	561688.9	4191156	2.04E-04	2.03E-04	1.26E-05
1306	561671.6	4191158	1.97E-04	1.95E-04	1.21E-05
1307	561654.3	4191161	1.89E-04	1.88E-04	1.17E-05
1308	561636.9	4191163	1.82E-04	1.81E-04	1.12E-05
1309	561861.7	4191021	8.97E-04	8.91E-04	5.53E-05
1310	561864.3	4191012	9.56E-04	9.49E-04	5.89E-05
1311	561866.9	4191003	1.01E-03	1.00E-03	6.20E-05
1312	561869.4	4190994	1.05E-03	1.04E-03	6.45E-05
1313	561872	4190985	1.08E-03	1.07E-03	6.63E-05

1314	561874.6	4190976	1.09E-03	1.09E-03	6.74E-05
1315	561877.2	4190967	1.10E-03	1.09E-03	6.80E-05
1316	561851.5	4191054	6.49E-04	6.44E-04	4.00E-05
1317	561845.8	4191061	6.05E-04	6.01E-04	3.73E-05
1318	561840.1	4191068	5.61E-04	5.57E-04	3.46E-05
1319	561834.4	4191075	5.17E-04	5.13E-04	3.18E-05
1320	561828.7	4191083	4.74E-04	4.71E-04	2.92E-05
1321	561823	4191090	4.34E-04	4.31E-04	2.68E-05
1322	561817.3	4191097	3.98E-04	3.95E-04	2.45E-05
1323	561811.6	4191104	3.65E-04	3.63E-04	2.25E-05
1324	561806	4191111	3.36E-04	3.34E-04	2.07E-05
1325	561800.3	4191119	3.11E-04	3.08E-04	1.92E-05
1326	561794.6	4191126	2.88E-04	2.86E-04	1.77E-05
1327	561788.9	4191133	2.67E-04	2.65E-04	1.65E-05
1328	561783.2	4191140	2.48E-04	2.46E-04	1.53E-05
1329	561777.5	4191147	2.31E-04	2.29E-04	1.42E-05
1330	561762.7	4191156	2.13E-04	2.11E-04	1.31E-05
1331	561753.6	4191157	2.10E-04	2.09E-04	1.30E-05
1332	561744.5	4191158	2.08E-04	2.06E-04	1.28E-05
1333	561735.4	4191159	2.04E-04	2.03E-04	1.26E-05
1334	561717.2	4191162	1.98E-04	1.97E-04	1.22E-05
1335	561708.1	4191163	1.95E-04	1.93E-04	1.20E-05
1336	561699	4191164	1.92E-04	1.90E-04	1.18E-05
1337	561689.9	4191165	1.88E-04	1.87E-04	1.16E-05
1338	561680.8	4191166	1.85E-04	1.84E-04	1.14E-05
1339	561671.7	4191168	1.81E-04	1.80E-04	1.12E-05
1340	561662.6	4191169	1.78E-04	1.77E-04	1.10E-05
1341	561653.5	4191170	1.75E-04	1.73E-04	1.08E-05
1342	561644.4	4191171	1.71E-04	1.70E-04	1.06E-05
1343	561635.3	4191172	1.68E-04	1.67E-04	1.04E-05
1344	561872.4	4191042	6.62E-04	6.57E-04	4.08E-05
1345	561844.2	4191078	4.88E-04	4.84E-04	3.00E-05
1346	561838.6	4191085	4.51E-04	4.47E-04	2.78E-05
1347	561833	4191092	4.16E-04	4.13E-04	2.56E-05
1348	561821.7	4191106	3.53E-04	3.51E-04	2.18E-05
1349	561810.4	4191120	3.02E-04	3.00E-04	1.86E-05
1350	561799.2	4191135	2.62E-04	2.60E-04	1.61E-05
1351	561787.9	4191149	2.27E-04	2.26E-04	1.40E-05
1352	561767.7	4191164	1.97E-04	1.96E-04	1.22E-05
1353	561758.6	4191166	1.95E-04	1.94E-04	1.20E-05
1354	561749.6	4191167	1.93E-04	1.91E-04	1.19E-05
1355	561740.6	4191168	1.90E-04	1.88E-04	1.17E-05
1356	561731.6	4191169	1.87E-04	1.86E-04	1.16E-05
1357	561713.6	4191171	1.82E-04	1.80E-04	1.12E-05
1358	561704.6	4191172	1.79E-04	1.77E-04	1.10E-05
1359	561695.6	4191174	1.76E-04	1.74E-04	1.09E-05
1360	561686.6	4191175	1.73E-04	1.72E-04	1.07E-05

1361	561677.6	4191176	1.70E-04	1.69E-04	1.05E-05
1362	561668.6	4191177	1.67E-04	1.66E-04	1.03E-05
1363	561659.6	4191178	1.64E-04	1.63E-04	1.01E-05
1364	561650.6	4191179	1.61E-04	1.60E-04	9.94E-06
1365	561641.6	4191181	1.58E-04	1.57E-04	9.77E-06
1366	561632.6	4191182	1.56E-04	1.54E-04	9.61E-06
1367	561880.6	4191026	7.35E-04	7.30E-04	4.53E-05
1368	561883.2	4191017	7.80E-04	7.75E-04	4.81E-05
1369	561885.8	4191008	8.21E-04	8.15E-04	5.06E-05
1370	561888.3	4190999	8.56E-04	8.50E-04	5.27E-05
1371	561890.9	4190990	8.84E-04	8.77E-04	5.45E-05
1372	561893.5	4190982	9.05E-04	8.98E-04	5.58E-05
1373	561896.1	4190973	9.19E-04	9.13E-04	5.67E-05
1374	561898.7	4190964	9.28E-04	9.21E-04	5.72E-05
1375	561901.2	4190955	9.31E-04	9.24E-04	5.74E-05
1376	561903.8	4190946	9.29E-04	9.22E-04	5.73E-05
1377	561906.4	4190937	9.23E-04	9.16E-04	5.69E-05
1378	561909	4190928	9.14E-04	9.07E-04	5.64E-05
1379	561911.6	4190919	9.02E-04	8.95E-04	5.57E-05
1380	561881.9	4191045	6.08E-04	6.04E-04	3.75E-05
1381	561870.7	4191059	5.55E-04	5.51E-04	3.42E-05
1382	561865.2	4191066	5.25E-04	5.21E-04	3.23E-05
1383	561842.9	4191094	3.97E-04	3.94E-04	2.45E-05
1384	561831.7	4191108	3.41E-04	3.39E-04	2.10E-05
1385	561820.5	4191122	2.94E-04	2.92E-04	1.81E-05
1386	561815	4191129	2.74E-04	2.72E-04	1.69E-05
1387	561803.8	4191144	2.39E-04	2.37E-04	1.47E-05
1388	561792.7	4191158	2.09E-04	2.08E-04	1.29E-05
1389	561772.6	4191173	1.83E-04	1.82E-04	1.13E-05
1390	561754.7	4191175	1.79E-04	1.78E-04	1.11E-05
1391	561736.9	4191178	1.74E-04	1.73E-04	1.08E-05
1392	561710.1	4191181	1.67E-04	1.66E-04	1.03E-05
1393	561692.3	4191183	1.62E-04	1.61E-04	1.00E-05
1394	561683.4	4191184	1.59E-04	1.58E-04	9.84E-06
1395	561665.5	4191187	1.54E-04	1.53E-04	9.52E-06
1396	561647.7	4191189	1.49E-04	1.48E-04	9.21E-06
1397	561629.9	4191191	1.44E-04	1.43E-04	8.92E-06
1398	561890.1	4191029	6.72E-04	6.67E-04	4.14E-05
1399	561892.6	4191020	7.12E-04	7.07E-04	4.39E-05
1400	561895.2	4191011	7.49E-04	7.43E-04	4.61E-05
1401	561897.8	4191002	7.80E-04	7.75E-04	4.81E-05
1402	561900.4	4190993	8.07E-04	8.01E-04	4.97E-05
1403	561903	4190984	8.28E-04	8.22E-04	5.10E-05
1404	561905.5	4190975	8.43E-04	8.37E-04	5.20E-05
1405	561908.1	4190966	8.54E-04	8.48E-04	5.26E-05
1406	561910.7	4190958	8.59E-04	8.53E-04	5.30E-05
1407	561913.3	4190949	8.60E-04	8.54E-04	5.31E-05

1408	561915.9	4190940	8.58E-04	8.52E-04	5.29E-05
1409	561918.4	4190931	8.52E-04	8.46E-04	5.26E-05
1410	561921	4190922	8.43E-04	8.37E-04	5.21E-05
1411	561891.4	4191047	5.61E-04	5.57E-04	3.46E-05
1412	561880.3	4191061	5.15E-04	5.12E-04	3.18E-05
1413	561869.3	4191075	4.62E-04	4.59E-04	2.85E-05
1414	561847.2	4191103	3.54E-04	3.51E-04	2.18E-05
1415	561836.1	4191117	3.06E-04	3.04E-04	1.89E-05
1416	561825.1	4191131	2.66E-04	2.64E-04	1.64E-05
1417	561814	4191145	2.33E-04	2.32E-04	1.44E-05
1418	561802.9	4191159	2.06E-04	2.04E-04	1.27E-05
1419	561791.9	4191173	1.82E-04	1.81E-04	1.13E-05
1420	561777.5	4191181	1.71E-04	1.70E-04	1.05E-05
1421	561759.8	4191184	1.67E-04	1.66E-04	1.03E-05
1422	561742.1	4191186	1.63E-04	1.62E-04	1.01E-05
1423	561706.8	4191191	1.54E-04	1.53E-04	9.52E-06
1424	561689.1	4191193	1.50E-04	1.49E-04	9.25E-06
1425	561671.4	4191195	1.45E-04	1.44E-04	8.97E-06
1426	561653.7	4191197	1.41E-04	1.40E-04	8.69E-06
1427	561636	4191200	1.37E-04	1.36E-04	8.43E-06
1428	561899.5	4191032	6.18E-04	6.14E-04	3.81E-05
1429	561902.1	4191023	6.54E-04	6.49E-04	4.03E-05
1430	561904.7	4191014	6.86E-04	6.81E-04	4.23E-05
1431	561907.3	4191005	7.15E-04	7.10E-04	4.41E-05
1432	561909.8	4190996	7.40E-04	7.35E-04	4.56E-05
1433	561912.4	4190987	7.61E-04	7.55E-04	4.69E-05
1434	561915	4190978	7.76E-04	7.71E-04	4.79E-05
1435	561917.6	4190969	7.88E-04	7.82E-04	4.86E-05
1436	561920.2	4190960	7.95E-04	7.89E-04	4.90E-05
1437	561922.7	4190951	7.99E-04	7.93E-04	4.93E-05
1438	561925.3	4190942	7.98E-04	7.92E-04	4.93E-05
1439	561927.9	4190934	7.95E-04	7.89E-04	4.91E-05
1440	561930.5	4190925	7.89E-04	7.83E-04	4.87E-05
1441	561900.9	4191050	5.21E-04	5.17E-04	3.21E-05
1442	561889.9	4191064	4.80E-04	4.77E-04	2.96E-05
1443	561879	4191078	4.35E-04	4.31E-04	2.68E-05
1444	561868	4191092	3.87E-04	3.84E-04	2.38E-05
1445	561857	4191106	3.39E-04	3.37E-04	2.09E-05
1446	561846	4191120	2.96E-04	2.94E-04	1.83E-05
1447	561835.1	4191133	2.59E-04	2.57E-04	1.60E-05
1448	561824.1	4191147	2.28E-04	2.26E-04	1.40E-05
1449	561813.1	4191161	2.02E-04	2.00E-04	1.24E-05
1450	561802.2	4191175	1.80E-04	1.78E-04	1.11E-05
1451	561782.4	4191190	1.60E-04	1.58E-04	9.85E-06
1452	561764.9	4191192	1.56E-04	1.55E-04	9.65E-06
1453	561747.3	4191195	1.53E-04	1.52E-04	9.43E-06
1454	561729.8	4191197	1.49E-04	1.48E-04	9.20E-06

1455	561694.7	4191201	1.41E-04	1.40E-04	8.71E-06
1456	561677.2	4191204	1.37E-04	1.36E-04	8.46E-06
1457	561659.6	4191206	1.33E-04	1.32E-04	8.21E-06
1458	561642.1	4191208	1.29E-04	1.28E-04	7.98E-06
1459	561909	4191034	5.71E-04	5.67E-04	3.52E-05
1460	561911.5	4191025	6.03E-04	5.98E-04	3.71E-05
1461	561914.1	4191016	6.32E-04	6.27E-04	3.90E-05
1462	561916.7	4191008	6.58E-04	6.54E-04	4.06E-05
1463	561919.3	4190999	6.82E-04	6.77E-04	4.20E-05
1464	561921.9	4190990	7.01E-04	6.96E-04	4.32E-05
1465	561924.5	4190981	7.17E-04	7.12E-04	4.42E-05
1466	561927	4190972	7.29E-04	7.23E-04	4.49E-05
1467	561929.6	4190963	7.37E-04	7.31E-04	4.54E-05
1468	561932.2	4190954	7.42E-04	7.36E-04	4.57E-05
1469	561934.8	4190945	7.43E-04	7.38E-04	4.59E-05
1470	561937.4	4190936	7.42E-04	7.37E-04	4.58E-05
1471	561939.9	4190927	7.38E-04	7.33E-04	4.56E-05
1472	561910.1	4191053	4.84E-04	4.81E-04	2.99E-05
1473	561904.4	4191060	4.66E-04	4.63E-04	2.88E-05
1474	561898.7	4191068	4.47E-04	4.43E-04	2.75E-05
1475	561893	4191075	4.26E-04	4.23E-04	2.62E-05
1476	561887.3	4191082	4.04E-04	4.01E-04	2.49E-05
1477	561881.6	4191089	3.82E-04	3.79E-04	2.36E-05
1478	561875.9	4191096	3.60E-04	3.57E-04	2.22E-05
1479	561870.2	4191104	3.38E-04	3.36E-04	2.08E-05
1480	561864.5	4191111	3.17E-04	3.14E-04	1.95E-05
1481	561858.8	4191118	2.96E-04	2.94E-04	1.83E-05
1482	561853.1	4191125	2.77E-04	2.75E-04	1.71E-05
1483	561847.4	4191133	2.59E-04	2.57E-04	1.60E-05
1484	561841.7	4191140	2.42E-04	2.40E-04	1.49E-05
1485	561836	4191147	2.27E-04	2.25E-04	1.40E-05
1486	561830.3	4191154	2.13E-04	2.11E-04	1.31E-05
1487	561824.6	4191161	2.00E-04	1.99E-04	1.23E-05
1488	561818.9	4191169	1.88E-04	1.87E-04	1.16E-05
1489	561813.2	4191176	1.78E-04	1.76E-04	1.10E-05
1490	561807.5	4191183	1.68E-04	1.67E-04	1.04E-05
1491	561801.8	4191190	1.59E-04	1.58E-04	9.81E-06
1492	561786.9	4191199	1.49E-04	1.48E-04	9.22E-06
1493	561777.8	4191200	1.48E-04	1.47E-04	9.13E-06
1494	561768.7	4191201	1.46E-04	1.45E-04	9.04E-06
1495	561759.6	4191202	1.45E-04	1.44E-04	8.94E-06
1496	561750.4	4191203	1.43E-04	1.42E-04	8.83E-06
1497	561741.3	4191205	1.41E-04	1.40E-04	8.72E-06
1498	561732.2	4191206	1.39E-04	1.38E-04	8.61E-06
1499	561723.1	4191207	1.38E-04	1.37E-04	8.50E-06
1500	561704.8	4191209	1.34E-04	1.33E-04	8.26E-06
1501	561695.7	4191210	1.32E-04	1.31E-04	8.15E-06

1502	561686.6	4191212	1.30E-04	1.29E-04	8.03E-06
1503	561677.4	4191213	1.28E-04	1.27E-04	7.92E-06
1504	561668.3	4191214	1.26E-04	1.25E-04	7.80E-06
1505	561659.2	4191215	1.25E-04	1.24E-04	7.69E-06
1506	561622.7	4191220	1.18E-04	1.17E-04	7.27E-06
1507	561613.6	4191221	1.16E-04	1.15E-04	7.17E-06
1508	561915.8	4191046	5.00E-04	4.97E-04	3.09E-05
1509	561918.4	4191037	5.30E-04	5.26E-04	3.27E-05
1510	561921	4191028	5.58E-04	5.54E-04	3.44E-05
1511	561923.6	4191019	5.85E-04	5.80E-04	3.60E-05
1512	561926.2	4191010	6.08E-04	6.04E-04	3.75E-05
1513	561928.7	4191001	6.30E-04	6.25E-04	3.88E-05
1514	561931.3	4190992	6.48E-04	6.43E-04	4.00E-05
1515	561933.9	4190984	6.63E-04	6.58E-04	4.09E-05
1516	561936.5	4190975	6.75E-04	6.70E-04	4.16E-05
1517	561939.1	4190966	6.84E-04	6.79E-04	4.22E-05
1518	561941.7	4190957	6.90E-04	6.85E-04	4.26E-05
1519	561944.2	4190948	6.93E-04	6.88E-04	4.28E-05
1520	561946.8	4190939	6.93E-04	6.88E-04	4.28E-05
1521	561949.4	4190930	6.91E-04	6.86E-04	4.27E-05
1522	561919.6	4191056	4.53E-04	4.50E-04	2.79E-05
1523	561914	4191063	4.37E-04	4.34E-04	2.70E-05
1524	561908.3	4191070	4.20E-04	4.17E-04	2.59E-05
1525	561902.7	4191077	4.01E-04	3.98E-04	2.47E-05
1526	561897	4191084	3.82E-04	3.79E-04	2.36E-05
1527	561885.7	4191099	3.43E-04	3.40E-04	2.11E-05
1528	561880.1	4191106	3.23E-04	3.21E-04	1.99E-05
1529	561874.4	4191113	3.04E-04	3.02E-04	1.88E-05
1530	561868.7	4191120	2.86E-04	2.84E-04	1.76E-05
1531	561863.1	4191127	2.68E-04	2.66E-04	1.65E-05
1532	561857.4	4191135	2.51E-04	2.50E-04	1.55E-05
1533	561851.8	4191142	2.36E-04	2.34E-04	1.46E-05
1534	561840.5	4191156	2.08E-04	2.07E-04	1.28E-05
1535	561834.8	4191163	1.96E-04	1.94E-04	1.21E-05
1536	561829.2	4191170	1.85E-04	1.83E-04	1.14E-05
1537	561823.5	4191177	1.75E-04	1.73E-04	1.08E-05
1538	561812.2	4191192	1.57E-04	1.55E-04	9.67E-06
1539	561791.9	4191207	1.40E-04	1.39E-04	8.65E-06
1540	561782.8	4191208	1.39E-04	1.38E-04	8.58E-06
1541	561773.8	4191210	1.38E-04	1.37E-04	8.49E-06
1542	561764.7	4191211	1.36E-04	1.35E-04	8.41E-06
1543	561755.7	4191212	1.35E-04	1.34E-04	8.31E-06
1544	561746.6	4191213	1.33E-04	1.32E-04	8.22E-06
1545	561737.6	4191214	1.31E-04	1.31E-04	8.12E-06
1546	561728.6	4191215	1.30E-04	1.29E-04	8.01E-06
1547	561719.5	4191217	1.28E-04	1.27E-04	7.91E-06
1548	561701.4	4191219	1.25E-04	1.24E-04	7.70E-06

1549	561692.4	4191220	1.23E-04	1.22E-04	7.59E-06
1550	561683.3	4191221	1.21E-04	1.20E-04	7.49E-06
1551	561647.2	4191226	1.15E-04	1.14E-04	7.09E-06
1552	561638.1	4191227	1.13E-04	1.13E-04	7.00E-06
1553	561629.1	4191228	1.12E-04	1.11E-04	6.91E-06
1554	561620	4191229	1.10E-04	1.10E-04	6.82E-06
1555	561611	4191230	1.09E-04	1.08E-04	6.73E-06
1556	561925.3	4191049	4.67E-04	4.64E-04	2.88E-05
1557	561927.9	4191040	4.93E-04	4.90E-04	3.04E-05
1558	561930.5	4191031	5.18E-04	5.14E-04	3.20E-05
1559	561933	4191022	5.42E-04	5.38E-04	3.34E-05
1560	561935.6	4191013	5.64E-04	5.60E-04	3.48E-05
1561	561938.2	4191004	5.83E-04	5.79E-04	3.60E-05
1562	561940.8	4190995	6.01E-04	5.96E-04	3.70E-05
1563	561943.4	4190986	6.15E-04	6.11E-04	3.79E-05
1564	561945.9	4190977	6.27E-04	6.23E-04	3.87E-05
1565	561948.5	4190968	6.36E-04	6.32E-04	3.93E-05
1566	561951.1	4190960	6.43E-04	6.38E-04	3.97E-05
1567	561953.7	4190951	6.47E-04	6.42E-04	3.99E-05
1568	561956.3	4190942	6.49E-04	6.44E-04	4.00E-05
1569	561958.9	4190933	6.48E-04	6.44E-04	4.00E-05
1570	561929.1	4191059	4.24E-04	4.21E-04	2.62E-05
1571	561917.9	4191073	3.95E-04	3.93E-04	2.44E-05
1572	561906.7	4191087	3.62E-04	3.59E-04	2.23E-05
1573	561895.5	4191101	3.27E-04	3.24E-04	2.01E-05
1574	561889.9	4191108	3.09E-04	3.07E-04	1.91E-05
1575	561878.7	4191122	2.75E-04	2.73E-04	1.70E-05
1576	561873	4191129	2.59E-04	2.57E-04	1.60E-05
1577	561861.8	4191144	2.30E-04	2.28E-04	1.42E-05
1578	561850.6	4191158	2.04E-04	2.02E-04	1.26E-05
1579	561845	4191165	1.92E-04	1.91E-04	1.19E-05
1580	561833.8	4191179	1.71E-04	1.70E-04	1.06E-05
1581	561828.2	4191186	1.62E-04	1.61E-04	1.00E-05
1582	561817	4191200	1.46E-04	1.45E-04	9.04E-06
1583	561796.8	4191216	1.32E-04	1.31E-04	8.13E-06
1584	561787.8	4191217	1.31E-04	1.30E-04	8.08E-06
1585	561778.8	4191218	1.30E-04	1.29E-04	8.00E-06
1586	561769.9	4191219	1.28E-04	1.27E-04	7.92E-06
1587	561760.9	4191220	1.27E-04	1.26E-04	7.84E-06
1588	561751.9	4191222	1.26E-04	1.25E-04	7.76E-06
1589	561743	4191223	1.24E-04	1.23E-04	7.67E-06
1590	561725	4191225	1.21E-04	1.20E-04	7.48E-06
1591	561716	4191226	1.19E-04	1.19E-04	7.38E-06
1592	561671.2	4191232	1.12E-04	1.11E-04	6.92E-06
1593	561662.2	4191233	1.11E-04	1.10E-04	6.83E-06
1594	561653.2	4191234	1.09E-04	1.08E-04	6.74E-06
1595	561644.3	4191235	1.08E-04	1.07E-04	6.66E-06

1596	561635.3	4191237	1.06E-04	1.06E-04	6.57E-06
1597	561626.3	4191238	1.05E-04	1.04E-04	6.49E-06
1598	561608.4	4191240	1.03E-04	1.02E-04	6.33E-06
1599	561937.3	4191042	4.60E-04	4.57E-04	2.84E-05
1600	561939.9	4191034	4.83E-04	4.79E-04	2.98E-05
1601	561942.5	4191025	5.04E-04	5.00E-04	3.11E-05
1602	561945.1	4191016	5.24E-04	5.20E-04	3.23E-05
1603	561947.7	4191007	5.42E-04	5.38E-04	3.34E-05
1604	561950.2	4190998	5.58E-04	5.54E-04	3.44E-05
1605	561952.8	4190989	5.72E-04	5.68E-04	3.53E-05
1606	561955.4	4190980	5.84E-04	5.80E-04	3.60E-05
1607	561958	4190971	5.93E-04	5.89E-04	3.66E-05
1608	561960.6	4190962	6.00E-04	5.96E-04	3.70E-05
1609	561963.1	4190953	6.05E-04	6.01E-04	3.73E-05
1610	561965.7	4190944	6.08E-04	6.04E-04	3.75E-05
1611	561968.3	4190936	6.09E-04	6.04E-04	3.76E-05
1612	561938.6	4191061	3.98E-04	3.96E-04	2.46E-05
1613	561927.5	4191075	3.73E-04	3.70E-04	2.30E-05
1614	561916.4	4191089	3.44E-04	3.41E-04	2.12E-05
1615	561910.8	4191096	3.28E-04	3.26E-04	2.02E-05
1616	561899.7	4191110	2.96E-04	2.94E-04	1.83E-05
1617	561888.5	4191125	2.65E-04	2.63E-04	1.64E-05
1618	561877.4	4191139	2.37E-04	2.35E-04	1.46E-05
1619	561866.3	4191153	2.11E-04	2.09E-04	1.30E-05
1620	561855.1	4191167	1.88E-04	1.87E-04	1.16E-05
1621	561844	4191181	1.68E-04	1.67E-04	1.04E-05
1622	561832.9	4191195	1.52E-04	1.50E-04	9.36E-06
1623	561821.7	4191209	1.37E-04	1.36E-04	8.49E-06
1624	561801.7	4191224	1.24E-04	1.23E-04	7.66E-06
1625	561792.8	4191225	1.23E-04	1.22E-04	7.61E-06
1626	561775	4191228	1.21E-04	1.20E-04	7.48E-06
1627	561766.1	4191229	1.20E-04	1.19E-04	7.41E-06
1628	561748.3	4191231	1.17E-04	1.17E-04	7.25E-06
1629	561694.8	4191238	1.09E-04	1.08E-04	6.74E-06
1630	561677	4191240	1.06E-04	1.06E-04	6.57E-06
1631	561668.1	4191241	1.05E-04	1.04E-04	6.49E-06
1632	561650.3	4191244	1.03E-04	1.02E-04	6.34E-06
1633	561632.5	4191246	1.00E-04	9.95E-05	6.19E-06
1634	561614.7	4191248	9.78E-05	9.71E-05	6.04E-06
1635	561946.8	4191045	4.31E-04	4.27E-04	2.66E-05
1636	561949.4	4191036	4.51E-04	4.48E-04	2.78E-05
1637	561951.9	4191027	4.71E-04	4.67E-04	2.90E-05
1638	561954.5	4191018	4.89E-04	4.85E-04	3.01E-05
1639	561957.1	4191010	5.06E-04	5.02E-04	3.12E-05
1640	561959.7	4191001	5.21E-04	5.17E-04	3.21E-05
1641	561962.3	4190992	5.34E-04	5.30E-04	3.29E-05
1642	561964.9	4190983	5.45E-04	5.41E-04	3.36E-05

1643	561967.4	4190974	5.54E-04	5.50E-04	3.42E-05
1644	561970	4190965	5.62E-04	5.58E-04	3.47E-05
1645	561972.6	4190956	5.67E-04	5.63E-04	3.50E-05
1646	561975.2	4190947	5.70E-04	5.66E-04	3.52E-05
1647	561977.8	4190938	5.72E-04	5.68E-04	3.53E-05
1648	561948.1	4191064	3.75E-04	3.72E-04	2.31E-05
1649	561937.1	4191078	3.52E-04	3.50E-04	2.17E-05
1650	561926	4191092	3.27E-04	3.24E-04	2.01E-05
1651	561915	4191106	2.98E-04	2.96E-04	1.84E-05
1652	561903.9	4191120	2.70E-04	2.68E-04	1.66E-05
1653	561892.8	4191134	2.42E-04	2.40E-04	1.49E-05
1654	561881.8	4191148	2.17E-04	2.15E-04	1.34E-05
1655	561870.7	4191162	1.94E-04	1.93E-04	1.20E-05
1656	561859.7	4191176	1.74E-04	1.73E-04	1.08E-05
1657	561848.6	4191190	1.57E-04	1.56E-04	9.69E-06
1658	561837.6	4191204	1.42E-04	1.41E-04	8.77E-06
1659	561826.5	4191218	1.29E-04	1.28E-04	7.99E-06
1660	561806.6	4191233	1.17E-04	1.16E-04	7.23E-06
1661	561788.9	4191235	1.16E-04	1.15E-04	7.14E-06
1662	561771.2	4191237	1.14E-04	1.13E-04	7.01E-06
1663	561718.2	4191244	1.06E-04	1.06E-04	6.56E-06
1664	561700.5	4191247	1.04E-04	1.03E-04	6.41E-06
1665	561682.8	4191249	1.01E-04	1.01E-04	6.26E-06
1666	561665.1	4191251	9.89E-05	9.82E-05	6.11E-06
1667	561647.4	4191253	9.66E-05	9.59E-05	5.97E-06
1668	561629.8	4191256	9.45E-05	9.38E-05	5.83E-06
1669	561612.1	4191258	9.23E-05	9.17E-05	5.70E-06
1670	561956.2	4191048	4.04E-04	4.01E-04	2.49E-05
1671	561958.8	4191039	4.23E-04	4.20E-04	2.61E-05
1672	561961.4	4191030	4.41E-04	4.38E-04	2.72E-05
1673	561964	4191021	4.57E-04	4.54E-04	2.82E-05
1674	561966.6	4191012	4.73E-04	4.69E-04	2.92E-05
1675	561969.1	4191003	4.87E-04	4.83E-04	3.00E-05
1676	561971.7	4190995	4.99E-04	4.96E-04	3.08E-05
1677	561974.3	4190986	5.10E-04	5.06E-04	3.15E-05
1678	561976.9	4190977	5.19E-04	5.15E-04	3.20E-05
1679	561979.5	4190968	5.26E-04	5.23E-04	3.25E-05
1680	561982.1	4190959	5.32E-04	5.28E-04	3.28E-05
1681	561984.6	4190950	5.36E-04	5.32E-04	3.31E-05
1682	561987.2	4190941	5.39E-04	5.35E-04	3.32E-05
1683	561957.4	4191067	3.54E-04	3.51E-04	2.18E-05
1684	561951.7	4191074	3.43E-04	3.41E-04	2.12E-05
1685	561946	4191081	3.32E-04	3.30E-04	2.05E-05
1686	561940.3	4191089	3.20E-04	3.18E-04	1.98E-05
1687	561934.5	4191096	3.08E-04	3.06E-04	1.90E-05
1688	561928.8	4191103	2.95E-04	2.93E-04	1.82E-05
1689	561923.1	4191110	2.82E-04	2.80E-04	1.74E-05

1690	561917.4	4191117	2.68E-04	2.66E-04	1.66E-05
1691	561911.7	4191125	2.55E-04	2.53E-04	1.57E-05
1692	561906	4191132	2.42E-04	2.40E-04	1.49E-05
1693	561900.3	4191139	2.29E-04	2.27E-04	1.41E-05
1694	561894.6	4191146	2.16E-04	2.15E-04	1.34E-05
1695	561888.8	4191154	2.05E-04	2.03E-04	1.26E-05
1696	561883.1	4191161	1.94E-04	1.92E-04	1.20E-05
1697	561877.4	4191168	1.83E-04	1.82E-04	1.13E-05
1698	561871.7	4191175	1.74E-04	1.73E-04	1.07E-05
1699	561866	4191182	1.65E-04	1.64E-04	1.02E-05
1700	561860.3	4191190	1.56E-04	1.55E-04	9.65E-06
1701	561854.6	4191197	1.48E-04	1.47E-04	9.17E-06
1702	561848.9	4191204	1.41E-04	1.40E-04	8.72E-06
1703	561843.1	4191211	1.34E-04	1.33E-04	8.30E-06
1704	561837.4	4191219	1.28E-04	1.27E-04	7.92E-06
1705	561831.7	4191226	1.22E-04	1.22E-04	7.56E-06
1706	561826	4191233	1.17E-04	1.16E-04	7.22E-06
1707	561811.2	4191241	1.11E-04	1.10E-04	6.84E-06
1708	561802	4191243	1.10E-04	1.09E-04	6.79E-06
1709	561738.1	4191251	1.03E-04	1.02E-04	6.36E-06
1710	561728.9	4191252	1.02E-04	1.01E-04	6.29E-06
1711	561719.8	4191253	1.01E-04	9.99E-05	6.21E-06
1712	561710.6	4191254	9.94E-05	9.87E-05	6.14E-06
1713	561701.5	4191256	9.82E-05	9.75E-05	6.06E-06
1714	561692.4	4191257	9.70E-05	9.63E-05	5.99E-06
1715	561683.2	4191258	9.59E-05	9.52E-05	5.92E-06
1716	561674.1	4191259	9.47E-05	9.40E-05	5.85E-06
1717	561665	4191260	9.36E-05	9.29E-05	5.78E-06
1718	561655.8	4191261	9.25E-05	9.18E-05	5.71E-06
1719	561646.7	4191263	9.14E-05	9.08E-05	5.65E-06
1720	561637.5	4191264	9.04E-05	8.97E-05	5.58E-06
1721	561628.4	4191265	8.94E-05	8.87E-05	5.52E-06
1722	561619.3	4191266	8.84E-05	8.77E-05	5.46E-06
1723	561610.1	4191267	8.74E-05	8.67E-05	5.40E-06
1724	561601	4191269	8.64E-05	8.58E-05	5.34E-06
1725	561963.1	4191060	3.63E-04	3.61E-04	2.24E-05
1726	561965.7	4191051	3.81E-04	3.78E-04	2.35E-05
1727	561968.3	4191042	3.98E-04	3.95E-04	2.45E-05
1728	561970.9	4191033	4.14E-04	4.11E-04	2.55E-05
1729	561973.4	4191024	4.29E-04	4.26E-04	2.65E-05
1730	561976	4191015	4.43E-04	4.40E-04	2.73E-05
1731	561978.6	4191006	4.56E-04	4.53E-04	2.81E-05
1732	561981.2	4190997	4.68E-04	4.64E-04	2.89E-05
1733	561983.8	4190988	4.78E-04	4.75E-04	2.95E-05
1734	561986.3	4190979	4.87E-04	4.84E-04	3.01E-05
1735	561988.9	4190971	4.95E-04	4.91E-04	3.05E-05
1736	561991.5	4190962	5.01E-04	4.97E-04	3.09E-05

1737	561994.1	4190953	5.05E-04	5.02E-04	3.12E-05
1738	561996.7	4190944	5.08E-04	5.04E-04	3.14E-05
1739	561966.9	4191070	3.35E-04	3.32E-04	2.07E-05
1740	561961.2	4191077	3.25E-04	3.23E-04	2.01E-05
1741	561955.6	4191084	3.15E-04	3.13E-04	1.94E-05
1742	561949.9	4191091	3.04E-04	3.02E-04	1.88E-05
1743	561944.2	4191098	2.93E-04	2.91E-04	1.81E-05
1744	561938.5	4191105	2.82E-04	2.80E-04	1.74E-05
1745	561932.9	4191113	2.70E-04	2.68E-04	1.66E-05
1746	561927.2	4191120	2.58E-04	2.56E-04	1.59E-05
1747	561921.5	4191127	2.46E-04	2.44E-04	1.52E-05
1748	561910.2	4191141	2.22E-04	2.20E-04	1.37E-05
1749	561904.5	4191148	2.10E-04	2.09E-04	1.30E-05
1750	561893.2	4191163	1.89E-04	1.88E-04	1.17E-05
1751	561887.5	4191170	1.79E-04	1.78E-04	1.11E-05
1752	561881.8	4191177	1.70E-04	1.69E-04	1.05E-05
1753	561870.5	4191191	1.54E-04	1.52E-04	9.48E-06
1754	561864.8	4191199	1.46E-04	1.45E-04	9.02E-06
1755	561859.2	4191206	1.39E-04	1.38E-04	8.58E-06
1756	561853.5	4191213	1.33E-04	1.32E-04	8.18E-06
1757	561847.8	4191220	1.26E-04	1.26E-04	7.81E-06
1758	561842.1	4191227	1.21E-04	1.20E-04	7.46E-06
1759	561836.5	4191235	1.16E-04	1.15E-04	7.14E-06
1760	561830.8	4191242	1.11E-04	1.10E-04	6.83E-06
1761	561816.1	4191250	1.05E-04	1.04E-04	6.49E-06
1762	561761.7	4191257	1.00E-04	9.94E-05	6.18E-06
1763	561752.6	4191258	9.91E-05	9.84E-05	6.12E-06
1764	561743.5	4191259	9.81E-05	9.74E-05	6.06E-06
1765	561734.4	4191261	9.70E-05	9.63E-05	5.99E-06
1766	561725.4	4191262	9.59E-05	9.52E-05	5.92E-06
1767	561716.3	4191263	9.47E-05	9.41E-05	5.85E-06
1768	561707.2	4191264	9.36E-05	9.30E-05	5.78E-06
1769	561698.2	4191265	9.26E-05	9.19E-05	5.72E-06
1770	561689.1	4191266	9.15E-05	9.08E-05	5.65E-06
1771	561680	4191268	9.04E-05	8.98E-05	5.59E-06
1772	561671	4191269	8.94E-05	8.88E-05	5.52E-06
1773	561661.9	4191270	8.84E-05	8.78E-05	5.46E-06
1774	561652.8	4191271	8.74E-05	8.68E-05	5.40E-06
1775	561643.8	4191272	8.64E-05	8.58E-05	5.34E-06
1776	561634.7	4191273	8.54E-05	8.48E-05	5.28E-06
1777	561625.6	4191275	8.45E-05	8.39E-05	5.22E-06
1778	561616.5	4191276	8.36E-05	8.30E-05	5.16E-06
1779	561607.5	4191277	8.27E-05	8.21E-05	5.11E-06
1780	561598.4	4191278	8.19E-05	8.13E-05	5.06E-06
1781	561972.6	4191062	3.44E-04	3.41E-04	2.12E-05
1782	561975.1	4191053	3.60E-04	3.57E-04	2.22E-05
1783	561977.7	4191045	3.75E-04	3.73E-04	2.31E-05

1784	561980.3	4191036	3.90E-04	3.87E-04	2.41E-05
1785	561982.9	4191027	4.04E-04	4.01E-04	2.49E-05
1786	561985.5	4191018	4.16E-04	4.13E-04	2.57E-05
1787	561988.1	4191009	4.29E-04	4.26E-04	2.65E-05
1788	561990.6	4191000	4.40E-04	4.37E-04	2.71E-05
1789	561993.2	4190991	4.50E-04	4.47E-04	2.78E-05
1790	561995.8	4190982	4.59E-04	4.55E-04	2.83E-05
1791	561998.4	4190973	4.66E-04	4.63E-04	2.88E-05
1792	562001	4190964	4.72E-04	4.69E-04	2.91E-05
1793	562003.5	4190955	4.77E-04	4.73E-04	2.94E-05
1794	562006.1	4190947	4.80E-04	4.76E-04	2.96E-05
1795	561699.7	4190837	4.68E-03	4.65E-03	2.90E-04
1796	561690.9	4190835	4.67E-03	4.63E-03	2.89E-04
1797	561682	4190833	4.54E-03	4.51E-03	2.82E-04
1798	561673.2	4190830	4.28E-03	4.25E-03	2.65E-04
1799	561664.3	4190828	3.93E-03	3.90E-03	2.44E-04
1800	561655.5	4190826	3.51E-03	3.49E-03	2.18E-04
1801	561646.6	4190823	3.09E-03	3.06E-03	1.91E-04
1802	561637.8	4190821	2.67E-03	2.65E-03	1.66E-04
1803	561702.3	4190828	3.55E-03	3.53E-03	2.20E-04
1804	561693.4	4190826	3.50E-03	3.48E-03	2.17E-04
1805	561684.6	4190823	3.38E-03	3.36E-03	2.10E-04
1806	561675.7	4190821	3.19E-03	3.16E-03	1.98E-04
1807	561666.9	4190819	2.94E-03	2.92E-03	1.82E-04
1808	561658	4190816	2.66E-03	2.64E-03	1.65E-04
1809	561649.2	4190814	2.38E-03	2.36E-03	1.48E-04
1810	561640.3	4190812	2.12E-03	2.11E-03	1.32E-04
1811	561631.5	4190809	1.89E-03	1.88E-03	1.17E-04
1812	561731.8	4190835	3.19E-03	3.17E-03	1.98E-04
1813	561738.7	4190847	3.55E-03	3.53E-03	2.20E-04
1814	561704.8	4190818	2.79E-03	2.77E-03	1.73E-04
1815	561695.9	4190816	2.72E-03	2.70E-03	1.69E-04
1816	561687.1	4190814	2.62E-03	2.60E-03	1.62E-04
1817	561678.2	4190811	2.47E-03	2.45E-03	1.53E-04
1818	561669.4	4190809	2.29E-03	2.27E-03	1.42E-04
1819	561660.5	4190807	2.10E-03	2.08E-03	1.30E-04
1820	561651.7	4190804	1.91E-03	1.89E-03	1.18E-04
1821	561642.8	4190802	1.73E-03	1.72E-03	1.07E-04
1822	561734.3	4190825	2.65E-03	2.63E-03	1.64E-04
1823	561747.3	4190842	2.99E-03	2.97E-03	1.85E-04
1824	561707.3	4190809	2.25E-03	2.23E-03	1.39E-04
1825	561698.4	4190807	2.18E-03	2.17E-03	1.35E-04
1826	561689.6	4190804	2.09E-03	2.08E-03	1.30E-04
1827	561680.7	4190802	1.98E-03	1.97E-03	1.23E-04
1828	561671.9	4190800	1.85E-03	1.83E-03	1.15E-04
1829	561663	4190797	1.71E-03	1.70E-03	1.06E-04
1830	561654.2	4190795	1.57E-03	1.56E-03	9.74E-05

1831	561645.3	4190793	1.44E-03	1.43E-03	8.95E-05
1832	561636.5	4190790	1.32E-03	1.31E-03	8.20E-05
1833	561736.8	4190816	2.22E-03	2.20E-03	1.37E-04
1834	561748.9	4190825	2.34E-03	2.32E-03	1.45E-04
1835	561755.9	4190837	2.57E-03	2.55E-03	1.59E-04
1836	561757.6	4190853	2.93E-03	2.91E-03	1.82E-04
1837	561709.8	4190799	1.85E-03	1.84E-03	1.15E-04
1838	561701	4190797	1.80E-03	1.78E-03	1.11E-04
1839	561692.1	4190795	1.72E-03	1.71E-03	1.07E-04
1840	561683.3	4190792	1.63E-03	1.62E-03	1.01E-04
1841	561674.4	4190790	1.53E-03	1.52E-03	9.50E-05
1842	561665.6	4190788	1.43E-03	1.42E-03	8.85E-05
1843	561656.7	4190785	1.33E-03	1.32E-03	8.22E-05
1844	561647.9	4190783	1.23E-03	1.22E-03	7.61E-05
1845	561639	4190781	1.14E-03	1.13E-03	7.04E-05
1846	561742.4	4190809	1.91E-03	1.90E-03	1.19E-04
1847	561756.5	4190819	2.05E-03	2.03E-03	1.27E-04
1848	561764.6	4190834	2.27E-03	2.25E-03	1.40E-04
1849	561766.6	4190851	2.61E-03	2.59E-03	1.62E-04
1850	561712.3	4190790	1.56E-03	1.55E-03	9.66E-05
1851	561703.5	4190788	1.51E-03	1.50E-03	9.35E-05
1852	561694.6	4190785	1.45E-03	1.44E-03	8.97E-05
1853	561685.8	4190783	1.38E-03	1.37E-03	8.53E-05
1854	561676.9	4190781	1.30E-03	1.29E-03	8.05E-05
1855	561668.1	4190778	1.22E-03	1.21E-03	7.55E-05
1856	561659.2	4190776	1.14E-03	1.13E-03	7.06E-05
1857	561650.4	4190774	1.06E-03	1.05E-03	6.58E-05
1858	561744.4	4190799	1.64E-03	1.63E-03	1.01E-04
1859	561758.3	4190809	1.77E-03	1.76E-03	1.10E-04
1860	561773.1	4190829	2.00E-03	1.98E-03	1.24E-04
1861	561775.1	4190846	2.29E-03	2.27E-03	1.42E-04
1862	561714.9	4190780	1.33E-03	1.32E-03	8.26E-05
1863	561706	4190778	1.29E-03	1.28E-03	7.99E-05
1864	561697.1	4190776	1.24E-03	1.23E-03	7.67E-05
1865	561688.3	4190773	1.18E-03	1.17E-03	7.32E-05
1866	561679.4	4190771	1.12E-03	1.11E-03	6.94E-05
1867	561670.6	4190769	1.06E-03	1.05E-03	6.54E-05
1868	561661.7	4190766	9.92E-04	9.85E-04	6.15E-05
1869	561652.9	4190764	9.31E-04	9.24E-04	5.77E-05
1870	561644	4190762	8.73E-04	8.67E-04	5.41E-05
1871	561746.6	4190789	1.42E-03	1.41E-03	8.77E-05
1872	561760.2	4190799	1.54E-03	1.53E-03	9.56E-05
1873	561773.9	4190810	1.63E-03	1.62E-03	1.01E-04
1874	561781.7	4190824	1.78E-03	1.77E-03	1.10E-04
1875	561783.7	4190841	2.02E-03	2.01E-03	1.25E-04
1876	561785.7	4190858	2.21E-03	2.20E-03	1.37E-04
1877	561717.4	4190771	1.16E-03	1.15E-03	7.16E-05

1878	561708.5	4190769	1.12E-03	1.11E-03	6.93E-05
1879	561699.7	4190766	1.08E-03	1.07E-03	6.66E-05
1880	561690.8	4190764	1.03E-03	1.02E-03	6.37E-05
1881	561682	4190762	9.78E-04	9.72E-04	6.06E-05
1882	561673.1	4190759	9.26E-04	9.20E-04	5.74E-05
1883	561664.3	4190757	8.74E-04	8.68E-04	5.42E-05
1884	561655.4	4190754	8.24E-04	8.18E-04	5.10E-05
1885	561748.9	4190779	1.24E-03	1.23E-03	7.65E-05
1886	561762.3	4190790	1.35E-03	1.34E-03	8.38E-05
1887	561775.8	4190800	1.44E-03	1.43E-03	8.92E-05
1888	561790.2	4190819	1.60E-03	1.59E-03	9.89E-05
1889	561792.2	4190836	1.81E-03	1.79E-03	1.12E-04
1890	561794.2	4190853	1.98E-03	1.97E-03	1.23E-04
1891	561719.9	4190761	1.01E-03	1.01E-03	6.28E-05
1892	561711	4190759	9.81E-04	9.75E-04	6.08E-05
1893	561702.2	4190757	9.45E-04	9.38E-04	5.85E-05
1894	561693.3	4190754	9.06E-04	8.99E-04	5.61E-05
1895	561684.5	4190752	8.64E-04	8.58E-04	5.35E-05
1896	561675.6	4190750	8.21E-04	8.16E-04	5.09E-05
1897	561666.8	4190747	7.78E-04	7.73E-04	4.82E-05
1898	561657.9	4190745	7.36E-04	7.31E-04	4.56E-05
1899	561649.1	4190743	6.96E-04	6.91E-04	4.31E-05
1900	561751.2	4190770	1.09E-03	1.08E-03	6.74E-05
1901	561764.5	4190780	1.19E-03	1.18E-03	7.39E-05
1902	561777.8	4190790	1.28E-03	1.27E-03	7.92E-05
1903	561791.1	4190800	1.33E-03	1.33E-03	8.27E-05
1904	561798.8	4190814	1.44E-03	1.43E-03	8.94E-05
1905	561800.7	4190831	1.63E-03	1.61E-03	1.01E-04
1906	561722.4	4190752	8.99E-04	8.92E-04	5.57E-05
1907	561713.6	4190750	8.70E-04	8.64E-04	5.39E-05
1908	561704.7	4190747	8.39E-04	8.33E-04	5.20E-05
1909	561695.8	4190745	8.06E-04	8.00E-04	4.99E-05
1910	561687	4190742	7.71E-04	7.65E-04	4.77E-05
1911	561678.1	4190740	7.35E-04	7.30E-04	4.55E-05
1912	561669.3	4190738	6.98E-04	6.94E-04	4.33E-05
1913	561660.4	4190735	6.63E-04	6.58E-04	4.11E-05
1914	561753.6	4190760	9.66E-04	9.59E-04	5.98E-05
1915	561766.8	4190770	1.06E-03	1.05E-03	6.56E-05
1916	561780	4190780	1.14E-03	1.13E-03	7.06E-05
1917	561793.2	4190790	1.20E-03	1.19E-03	7.43E-05
1918	561807.3	4190809	1.31E-03	1.31E-03	8.14E-05
1919	561724.9	4190742	8.03E-04	7.97E-04	4.97E-05
1920	561716.1	4190740	7.78E-04	7.73E-04	4.82E-05
1921	561707.2	4190738	7.51E-04	7.46E-04	4.65E-05
1922	561698.4	4190735	7.23E-04	7.18E-04	4.48E-05
1923	561689.5	4190733	6.93E-04	6.88E-04	4.29E-05
1924	561680.7	4190731	6.62E-04	6.58E-04	4.10E-05

1925	561671.8	4190728	6.31E-04	6.27E-04	3.91E-05
1926	561663	4190726	6.01E-04	5.97E-04	3.72E-05
1927	561654.1	4190724	5.72E-04	5.68E-04	3.54E-05
1928	561750.6	4190746	8.30E-04	8.24E-04	5.14E-05
1929	561757.7	4190752	8.75E-04	8.69E-04	5.42E-05
1930	561764.9	4190757	9.20E-04	9.14E-04	5.70E-05
1931	561779.2	4190768	1.00E-03	9.97E-04	6.22E-05
1932	561786.3	4190774	1.04E-03	1.03E-03	6.45E-05
1933	561793.5	4190779	1.07E-03	1.07E-03	6.65E-05
1934	561800.6	4190785	1.10E-03	1.09E-03	6.81E-05
1935	561807.8	4190790	1.12E-03	1.11E-03	6.93E-05
1936	561820.2	4190841	1.49E-03	1.48E-03	9.23E-05
1937	561821.2	4190850	1.55E-03	1.53E-03	9.57E-05
1938	561823.3	4190868	1.63E-03	1.62E-03	1.01E-04
1939	561824.4	4190877	1.66E-03	1.64E-03	1.02E-04
1940	561736.3	4190735	7.43E-04	7.38E-04	4.60E-05
1941	561727.4	4190733	7.23E-04	7.18E-04	4.48E-05
1942	561718.6	4190730	7.01E-04	6.96E-04	4.34E-05
1943	561709.7	4190728	6.78E-04	6.73E-04	4.20E-05
1944	561700.9	4190726	6.53E-04	6.48E-04	4.04E-05
1945	561692	4190723	6.27E-04	6.23E-04	3.88E-05
1946	561683.2	4190721	6.01E-04	5.97E-04	3.72E-05
1947	561674.3	4190719	5.74E-04	5.70E-04	3.56E-05
1948	561665.5	4190716	5.48E-04	5.44E-04	3.39E-05
1949	561656.6	4190714	5.23E-04	5.19E-04	3.24E-05
1950	561760	4190742	7.87E-04	7.82E-04	4.88E-05
1951	561774.1	4190753	8.65E-04	8.58E-04	5.35E-05
1952	561788.2	4190764	9.36E-04	9.29E-04	5.80E-05
1953	561802.3	4190775	9.94E-04	9.87E-04	6.16E-05
1954	561816.4	4190786	1.03E-03	1.03E-03	6.40E-05
1955	561827.6	4190826	1.30E-03	1.29E-03	8.07E-05
1956	561829.7	4190844	1.41E-03	1.40E-03	8.73E-05
1957	561830.8	4190853	1.45E-03	1.44E-03	9.00E-05
1958	561832.8	4190871	1.52E-03	1.51E-03	9.40E-05
1959	561730	4190723	6.55E-04	6.51E-04	4.06E-05
1960	561721.1	4190721	6.36E-04	6.31E-04	3.94E-05
1961	561712.3	4190719	6.15E-04	6.11E-04	3.81E-05
1962	561703.4	4190716	5.94E-04	5.89E-04	3.68E-05
1963	561694.5	4190714	5.71E-04	5.67E-04	3.54E-05
1964	561685.7	4190712	5.48E-04	5.44E-04	3.39E-05
1965	561676.8	4190709	5.25E-04	5.21E-04	3.25E-05
1966	561668	4190707	5.01E-04	4.98E-04	3.10E-05
1967	561748.3	4190722	6.46E-04	6.42E-04	4.00E-05
1968	561762.3	4190732	7.13E-04	7.08E-04	4.41E-05
1969	561776.2	4190743	7.80E-04	7.75E-04	4.83E-05
1970	561790.2	4190754	8.45E-04	8.39E-04	5.23E-05
1971	561804.1	4190765	9.01E-04	8.95E-04	5.58E-05

1972	561818.1	4190775	9.43E-04	9.36E-04	5.84E-05
1973	561833.1	4190795	1.03E-03	1.02E-03	6.35E-05
1974	561834.1	4190804	1.08E-03	1.08E-03	6.71E-05
1975	561836.2	4190821	1.20E-03	1.19E-03	7.40E-05
1976	561838.2	4190839	1.29E-03	1.28E-03	8.00E-05
1977	561840.3	4190856	1.37E-03	1.36E-03	8.47E-05
1978	561842.3	4190874	1.42E-03	1.41E-03	8.79E-05
1979	561732.5	4190714	5.97E-04	5.93E-04	3.70E-05
1980	561723.6	4190711	5.80E-04	5.76E-04	3.59E-05
1981	561714.8	4190709	5.62E-04	5.58E-04	3.48E-05
1982	561705.9	4190707	5.43E-04	5.39E-04	3.36E-05
1983	561697.1	4190704	5.23E-04	5.19E-04	3.24E-05
1984	561688.2	4190702	5.02E-04	4.99E-04	3.11E-05
1985	561679.4	4190700	4.81E-04	4.78E-04	2.98E-05
1986	561670.5	4190697	4.60E-04	4.57E-04	2.85E-05
1987	561661.7	4190695	4.40E-04	4.37E-04	2.72E-05
1988	561750.8	4190712	5.90E-04	5.86E-04	3.66E-05
1989	561764.6	4190723	6.49E-04	6.44E-04	4.02E-05
1990	561778.4	4190733	7.08E-04	7.03E-04	4.39E-05
1991	561792.2	4190744	7.66E-04	7.61E-04	4.75E-05
1992	561806.1	4190755	8.19E-04	8.13E-04	5.07E-05
1993	561819.9	4190765	8.61E-04	8.55E-04	5.33E-05
1994	561841.6	4190790	9.51E-04	9.44E-04	5.89E-05
1995	561843.7	4190807	1.05E-03	1.05E-03	6.52E-05
1996	561845.7	4190825	1.15E-03	1.14E-03	7.11E-05
1997	561847.7	4190842	1.23E-03	1.22E-03	7.60E-05
1998	561849.8	4190859	1.29E-03	1.28E-03	7.98E-05
1999	561851.8	4190877	1.33E-03	1.32E-03	8.24E-05
2000	561735	4190704	5.47E-04	5.43E-04	3.39E-05
2001	561726.1	4190702	5.32E-04	5.28E-04	3.29E-05
2002	561717.3	4190700	5.16E-04	5.12E-04	3.19E-05
2003	561708.4	4190697	4.98E-04	4.95E-04	3.09E-05
2004	561699.6	4190695	4.80E-04	4.77E-04	2.98E-05
2005	561690.7	4190693	4.62E-04	4.59E-04	2.86E-05
2006	561681.9	4190690	4.44E-04	4.41E-04	2.75E-05
2007	561673	4190688	4.25E-04	4.22E-04	2.63E-05
2008	561753.2	4190702	5.42E-04	5.38E-04	3.36E-05
2009	561766.9	4190713	5.93E-04	5.89E-04	3.67E-05
2010	561780.6	4190724	6.46E-04	6.41E-04	4.00E-05
2011	561794.3	4190734	6.98E-04	6.93E-04	4.32E-05
2012	561808.1	4190745	7.47E-04	7.41E-04	4.62E-05
2013	561821.8	4190755	7.87E-04	7.82E-04	4.88E-05
2014	561850.2	4190785	8.85E-04	8.79E-04	5.48E-05
2015	561852.2	4190802	9.76E-04	9.69E-04	6.04E-05
2016	561854.2	4190819	1.06E-03	1.05E-03	6.57E-05
2017	561856.2	4190837	1.14E-03	1.13E-03	7.02E-05
2018	561858.3	4190854	1.19E-03	1.19E-03	7.38E-05

2019	561860.3	4190871	1.24E-03	1.23E-03	7.64E-05
2020	561737.5	4190695	5.04E-04	5.00E-04	3.12E-05
2021	561728.7	4190692	4.90E-04	4.86E-04	3.03E-05
2022	561719.8	4190690	4.75E-04	4.72E-04	2.94E-05
2023	561711	4190688	4.60E-04	4.57E-04	2.85E-05
2024	561702.1	4190685	4.44E-04	4.41E-04	2.75E-05
2025	561693.2	4190683	4.27E-04	4.24E-04	2.65E-05
2026	561684.4	4190681	4.11E-04	4.08E-04	2.55E-05
2027	561675.5	4190678	3.95E-04	3.92E-04	2.44E-05
2028	561666.7	4190676	3.78E-04	3.75E-04	2.34E-05
2029	561755.7	4190693	5.00E-04	4.96E-04	3.09E-05
2030	561769.3	4190703	5.45E-04	5.41E-04	3.37E-05
2031	561782.9	4190714	5.92E-04	5.88E-04	3.67E-05
2032	561796.5	4190724	6.39E-04	6.34E-04	3.96E-05
2033	561810.1	4190735	6.83E-04	6.78E-04	4.23E-05
2034	561823.7	4190745	7.22E-04	7.17E-04	4.47E-05
2035	561851	4190766	7.77E-04	7.72E-04	4.81E-05
2036	561858.8	4190780	8.26E-04	8.20E-04	5.11E-05
2037	561860.8	4190797	9.07E-04	9.01E-04	5.62E-05
2038	561862.8	4190814	9.84E-04	9.77E-04	6.09E-05
2039	561864.8	4190831	1.05E-03	1.04E-03	6.51E-05
2040	561866.8	4190848	1.11E-03	1.10E-03	6.85E-05
2041	561868.8	4190865	1.15E-03	1.14E-03	7.09E-05
2042	561870.8	4190883	1.17E-03	1.17E-03	7.25E-05
2043	561740	4190685	4.65E-04	4.62E-04	2.88E-05
2044	561731.2	4190683	4.53E-04	4.50E-04	2.80E-05
2045	561722.3	4190681	4.40E-04	4.37E-04	2.72E-05
2046	561713.5	4190678	4.26E-04	4.23E-04	2.64E-05
2047	561704.6	4190676	4.12E-04	4.09E-04	2.55E-05
2048	561695.8	4190674	3.97E-04	3.94E-04	2.46E-05
2049	561686.9	4190671	3.83E-04	3.80E-04	2.37E-05
2050	561678.1	4190669	3.68E-04	3.65E-04	2.28E-05
2051	561669.2	4190666	3.53E-04	3.50E-04	2.18E-05
2052	561758.6	4190684	4.64E-04	4.60E-04	2.87E-05
2053	561765.8	4190689	4.85E-04	4.81E-04	3.00E-05
2054	561772.9	4190695	5.06E-04	5.03E-04	3.14E-05
2055	561780.1	4190700	5.29E-04	5.25E-04	3.27E-05
2056	561787.3	4190706	5.51E-04	5.47E-04	3.41E-05
2057	561794.5	4190711	5.74E-04	5.70E-04	3.55E-05
2058	561801.7	4190717	5.96E-04	5.92E-04	3.69E-05
2059	561808.9	4190722	6.17E-04	6.13E-04	3.82E-05
2060	561823.2	4190733	6.57E-04	6.53E-04	4.07E-05
2061	561830.4	4190739	6.75E-04	6.71E-04	4.18E-05
2062	561844.8	4190750	7.07E-04	7.02E-04	4.37E-05
2063	561852	4190756	7.19E-04	7.14E-04	4.45E-05
2064	561859.1	4190761	7.29E-04	7.24E-04	4.51E-05
2065	561867.4	4190776	7.75E-04	7.69E-04	4.80E-05

2066	561868.4	4190785	8.14E-04	8.08E-04	5.04E-05
2067	561869.5	4190794	8.53E-04	8.47E-04	5.28E-05
2068	561870.5	4190803	8.90E-04	8.84E-04	5.51E-05
2069	561871.6	4190812	9.26E-04	9.19E-04	5.73E-05
2070	561872.7	4190821	9.59E-04	9.52E-04	5.93E-05
2071	561873.7	4190830	9.90E-04	9.82E-04	6.12E-05
2072	561874.8	4190839	1.02E-03	1.01E-03	6.29E-05
2073	561875.8	4190848	1.04E-03	1.03E-03	6.44E-05
2074	561876.9	4190857	1.06E-03	1.05E-03	6.56E-05
2075	561877.9	4190866	1.08E-03	1.07E-03	6.66E-05
2076	561879	4190875	1.09E-03	1.08E-03	6.74E-05
2077	561880	4190884	1.10E-03	1.09E-03	6.80E-05
2078	561881.1	4190893	1.11E-03	1.10E-03	6.83E-05
2079	561751.4	4190678	4.42E-04	4.39E-04	2.74E-05
2080	561742.5	4190676	4.32E-04	4.29E-04	2.67E-05
2081	561733.7	4190673	4.20E-04	4.17E-04	2.60E-05
2082	561724.8	4190671	4.08E-04	4.05E-04	2.53E-05
2083	561716	4190669	3.96E-04	3.93E-04	2.45E-05
2084	561707.1	4190666	3.83E-04	3.80E-04	2.37E-05
2085	561698.3	4190664	3.70E-04	3.67E-04	2.29E-05
2086	561689.4	4190662	3.57E-04	3.54E-04	2.21E-05
2087	561680.6	4190659	3.44E-04	3.41E-04	2.13E-05
2088	561671.7	4190657	3.30E-04	3.28E-04	2.04E-05
2089	561761	4190674	4.31E-04	4.27E-04	2.67E-05
2090	561768.1	4190680	4.50E-04	4.47E-04	2.78E-05
2091	561775.3	4190685	4.69E-04	4.65E-04	2.90E-05
2092	561782.4	4190690	4.89E-04	4.85E-04	3.03E-05
2093	561789.5	4190696	5.09E-04	5.05E-04	3.15E-05
2094	561796.6	4190701	5.29E-04	5.25E-04	3.27E-05
2095	561803.7	4190707	5.49E-04	5.45E-04	3.40E-05
2096	561818	4190718	5.87E-04	5.83E-04	3.63E-05
2097	561825.1	4190723	6.05E-04	6.01E-04	3.75E-05
2098	561832.2	4190729	6.22E-04	6.18E-04	3.85E-05
2099	561839.3	4190734	6.38E-04	6.34E-04	3.95E-05
2100	561846.4	4190740	6.53E-04	6.48E-04	4.04E-05
2101	561853.5	4190745	6.66E-04	6.61E-04	4.12E-05
2102	561867.8	4190756	6.85E-04	6.81E-04	4.24E-05
2103	561875.9	4190771	7.27E-04	7.22E-04	4.50E-05
2104	561877	4190780	7.62E-04	7.56E-04	4.71E-05
2105	561878	4190789	7.96E-04	7.91E-04	4.93E-05
2106	561880.1	4190807	8.62E-04	8.56E-04	5.34E-05
2107	561881.2	4190815	8.93E-04	8.87E-04	5.52E-05
2108	561883.3	4190833	9.47E-04	9.40E-04	5.85E-05
2109	561884.3	4190842	9.69E-04	9.62E-04	5.99E-05
2110	561885.3	4190851	9.89E-04	9.82E-04	6.11E-05
2111	561887.4	4190869	1.02E-03	1.01E-03	6.29E-05
2112	561888.5	4190878	1.03E-03	1.02E-03	6.35E-05

2113	561890.6	4190896	1.04E-03	1.03E-03	6.41E-05
2114	561753.9	4190669	4.11E-04	4.09E-04	2.55E-05
2115	561745.1	4190666	4.02E-04	3.99E-04	2.49E-05
2116	561736.2	4190664	3.91E-04	3.88E-04	2.42E-05
2117	561727.4	4190662	3.80E-04	3.78E-04	2.36E-05
2118	561718.5	4190659	3.69E-04	3.67E-04	2.29E-05
2119	561709.7	4190657	3.58E-04	3.55E-04	2.21E-05
2120	561700.8	4190654	3.46E-04	3.43E-04	2.14E-05
2121	561691.9	4190652	3.34E-04	3.32E-04	2.07E-05
2122	561683.1	4190650	3.22E-04	3.20E-04	1.99E-05
2123	561674.2	4190647	3.10E-04	3.07E-04	1.92E-05
2124	561763.5	4190664	4.01E-04	3.98E-04	2.48E-05
2125	561777.6	4190675	4.36E-04	4.33E-04	2.70E-05
2126	561791.7	4190686	4.71E-04	4.68E-04	2.92E-05
2127	561805.8	4190697	5.07E-04	5.04E-04	3.14E-05
2128	561819.9	4190708	5.42E-04	5.38E-04	3.36E-05
2129	561834.1	4190719	5.75E-04	5.71E-04	3.56E-05
2130	561848.2	4190730	6.05E-04	6.00E-04	3.74E-05
2131	561862.3	4190741	6.29E-04	6.24E-04	3.89E-05
2132	561876.4	4190752	6.46E-04	6.41E-04	4.00E-05
2133	561884.5	4190766	6.83E-04	6.78E-04	4.23E-05
2134	561885.5	4190775	7.15E-04	7.10E-04	4.42E-05
2135	561887.6	4190792	7.76E-04	7.71E-04	4.80E-05
2136	561889.7	4190810	8.34E-04	8.28E-04	5.16E-05
2137	561891.8	4190828	8.83E-04	8.77E-04	5.46E-05
2138	561892.8	4190837	9.05E-04	8.98E-04	5.59E-05
2139	561894.9	4190854	9.39E-04	9.32E-04	5.80E-05
2140	561896.9	4190872	9.61E-04	9.55E-04	5.94E-05
2141	561898	4190881	9.69E-04	9.62E-04	5.98E-05
2142	561900	4190899	9.73E-04	9.66E-04	6.01E-05
2143	561747.6	4190657	3.75E-04	3.72E-04	2.32E-05
2144	561738.7	4190654	3.65E-04	3.63E-04	2.26E-05
2145	561729.9	4190652	3.55E-04	3.53E-04	2.20E-05
2146	561721	4190650	3.45E-04	3.43E-04	2.14E-05
2147	561712.2	4190647	3.35E-04	3.32E-04	2.07E-05
2148	561703.3	4190645	3.24E-04	3.22E-04	2.01E-05
2149	561694.5	4190643	3.13E-04	3.11E-04	1.94E-05
2150	561685.6	4190640	3.02E-04	3.00E-04	1.87E-05
2151	561765.9	4190655	3.75E-04	3.72E-04	2.32E-05
2152	561780	4190666	4.06E-04	4.04E-04	2.52E-05
2153	561794	4190677	4.38E-04	4.35E-04	2.71E-05
2154	561808	4190687	4.70E-04	4.67E-04	2.91E-05
2155	561822	4190698	5.02E-04	4.98E-04	3.11E-05
2156	561836	4190709	5.33E-04	5.29E-04	3.30E-05
2157	561850	4190720	5.61E-04	5.57E-04	3.47E-05
2158	561864	4190731	5.85E-04	5.81E-04	3.62E-05
2159	561878	4190741	6.03E-04	5.99E-04	3.73E-05

2160	561893.1	4190761	6.43E-04	6.39E-04	3.98E-05
2161	561895.1	4190779	7.00E-04	6.95E-04	4.33E-05
2162	561897.2	4190796	7.55E-04	7.50E-04	4.67E-05
2163	561898.2	4190805	7.81E-04	7.75E-04	4.83E-05
2164	561900.3	4190822	8.27E-04	8.21E-04	5.11E-05
2165	561902.3	4190840	8.64E-04	8.58E-04	5.34E-05
2166	561904.4	4190858	8.91E-04	8.85E-04	5.51E-05
2167	561905.4	4190866	9.01E-04	8.95E-04	5.57E-05
2168	561907.5	4190884	9.13E-04	9.07E-04	5.64E-05
2169	561909.5	4190902	9.14E-04	9.08E-04	5.65E-05
2170	561750.1	4190647	3.51E-04	3.48E-04	2.17E-05
2171	561741.2	4190645	3.42E-04	3.40E-04	2.12E-05
2172	561732.4	4190642	3.33E-04	3.31E-04	2.06E-05
2173	561723.5	4190640	3.24E-04	3.21E-04	2.00E-05
2174	561714.7	4190638	3.14E-04	3.12E-04	1.95E-05
2175	561705.8	4190635	3.04E-04	3.02E-04	1.88E-05
2176	561697	4190633	2.94E-04	2.92E-04	1.82E-05
2177	561688.1	4190631	2.84E-04	2.82E-04	1.76E-05
2178	561679.3	4190628	2.74E-04	2.72E-04	1.70E-05
2179	561768.4	4190645	3.51E-04	3.49E-04	2.17E-05
2180	561782.3	4190656	3.80E-04	3.77E-04	2.35E-05
2181	561796.2	4190667	4.09E-04	4.06E-04	2.53E-05
2182	561810.2	4190678	4.38E-04	4.35E-04	2.71E-05
2183	561824.1	4190688	4.66E-04	4.63E-04	2.89E-05
2184	561838	4190699	4.95E-04	4.91E-04	3.06E-05
2185	561851.9	4190710	5.21E-04	5.18E-04	3.23E-05
2186	561865.8	4190720	5.45E-04	5.41E-04	3.37E-05
2187	561879.7	4190731	5.63E-04	5.59E-04	3.49E-05
2188	561893.6	4190742	5.77E-04	5.73E-04	3.57E-05
2189	561901.6	4190756	6.08E-04	6.03E-04	3.76E-05
2190	561903.7	4190774	6.60E-04	6.55E-04	4.08E-05
2191	561905.7	4190791	7.09E-04	7.04E-04	4.39E-05
2192	561907.7	4190808	7.55E-04	7.50E-04	4.67E-05
2193	561909.8	4190826	7.94E-04	7.89E-04	4.91E-05
2194	561911.8	4190843	8.25E-04	8.19E-04	5.10E-05
2195	561913.9	4190861	8.46E-04	8.40E-04	5.23E-05
2196	561915.9	4190878	8.59E-04	8.53E-04	5.31E-05
2197	561918	4190896	8.62E-04	8.56E-04	5.32E-05
2198	561752.6	4190638	3.29E-04	3.27E-04	2.04E-05
2199	561743.8	4190635	3.21E-04	3.19E-04	1.99E-05
2200	561734.9	4190633	3.13E-04	3.11E-04	1.94E-05
2201	561726.1	4190631	3.04E-04	3.02E-04	1.88E-05
2202	561717.2	4190628	2.96E-04	2.94E-04	1.83E-05
2203	561708.4	4190626	2.87E-04	2.85E-04	1.77E-05
2204	561699.5	4190624	2.77E-04	2.76E-04	1.72E-05
2205	561690.6	4190621	2.68E-04	2.67E-04	1.66E-05
2206	561681.8	4190619	2.60E-04	2.58E-04	1.61E-05

2207	561770.9	4190636	3.30E-04	3.27E-04	2.04E-05
2208	561784.7	4190646	3.56E-04	3.53E-04	2.20E-05
2209	561798.5	4190657	3.82E-04	3.79E-04	2.36E-05
2210	561812.4	4190668	4.09E-04	4.06E-04	2.53E-05
2211	561826.2	4190678	4.35E-04	4.32E-04	2.69E-05
2212	561840	4190689	4.61E-04	4.57E-04	2.85E-05
2213	561853.8	4190700	4.86E-04	4.82E-04	3.01E-05
2214	561867.7	4190710	5.08E-04	5.04E-04	3.14E-05
2215	561881.5	4190721	5.27E-04	5.23E-04	3.26E-05
2216	561895.3	4190732	5.41E-04	5.38E-04	3.35E-05
2217	561910.2	4190751	5.75E-04	5.71E-04	3.56E-05
2218	561912.2	4190768	6.22E-04	6.18E-04	3.85E-05
2219	561914.2	4190786	6.68E-04	6.63E-04	4.13E-05
2220	561916.3	4190803	7.10E-04	7.05E-04	4.39E-05
2221	561918.3	4190821	7.47E-04	7.41E-04	4.62E-05
2222	561920.3	4190838	7.76E-04	7.71E-04	4.80E-05
2223	561922.4	4190855	7.96E-04	7.91E-04	4.92E-05
2224	561924.4	4190873	8.09E-04	8.03E-04	5.00E-05
2225	561926.4	4190890	8.13E-04	8.07E-04	5.02E-05
2226	561928.5	4190907	8.07E-04	8.01E-04	4.98E-05
2227	561755.1	4190628	3.10E-04	3.08E-04	1.92E-05
2228	561746.3	4190626	3.02E-04	3.00E-04	1.87E-05
2229	561737.4	4190623	2.95E-04	2.93E-04	1.82E-05
2230	561728.6	4190621	2.87E-04	2.85E-04	1.77E-05
2231	561719.7	4190619	2.79E-04	2.77E-04	1.73E-05
2232	561710.9	4190616	2.71E-04	2.69E-04	1.67E-05
2233	561702	4190614	2.62E-04	2.60E-04	1.62E-05
2234	561693.2	4190612	2.54E-04	2.52E-04	1.57E-05
2235	561684.3	4190609	2.46E-04	2.44E-04	1.52E-05
2236	561773.7	4190627	3.11E-04	3.09E-04	1.92E-05
2237	561780.9	4190632	3.23E-04	3.21E-04	2.00E-05
2238	561788.1	4190638	3.36E-04	3.34E-04	2.08E-05
2239	561795.3	4190643	3.48E-04	3.46E-04	2.16E-05
2240	561802.5	4190649	3.61E-04	3.58E-04	2.23E-05
2241	561809.7	4190654	3.74E-04	3.71E-04	2.31E-05
2242	561816.9	4190660	3.87E-04	3.84E-04	2.39E-05
2243	561824.1	4190665	3.99E-04	3.96E-04	2.47E-05
2244	561831.3	4190671	4.12E-04	4.09E-04	2.55E-05
2245	561838.5	4190677	4.24E-04	4.21E-04	2.63E-05
2246	561845.7	4190682	4.36E-04	4.33E-04	2.70E-05
2247	561852.9	4190688	4.48E-04	4.45E-04	2.78E-05
2248	561860.1	4190693	4.60E-04	4.57E-04	2.85E-05
2249	561867.3	4190699	4.71E-04	4.68E-04	2.92E-05
2250	561874.5	4190704	4.82E-04	4.78E-04	2.98E-05
2251	561881.7	4190710	4.91E-04	4.88E-04	3.04E-05
2252	561888.9	4190715	5.00E-04	4.96E-04	3.09E-05
2253	561896.1	4190721	5.07E-04	5.04E-04	3.14E-05

2254	561903.3	4190727	5.14E-04	5.10E-04	3.18E-05
2255	561910.5	4190732	5.19E-04	5.16E-04	3.21E-05
2256	561918.8	4190747	5.46E-04	5.42E-04	3.38E-05
2257	561919.8	4190756	5.69E-04	5.65E-04	3.52E-05
2258	561920.9	4190765	5.92E-04	5.87E-04	3.66E-05
2259	561922	4190774	6.14E-04	6.09E-04	3.80E-05
2260	561923	4190783	6.35E-04	6.31E-04	3.93E-05
2261	561924.1	4190792	6.56E-04	6.51E-04	4.06E-05
2262	561925.1	4190801	6.75E-04	6.70E-04	4.18E-05
2263	561926.2	4190810	6.93E-04	6.88E-04	4.29E-05
2264	561927.2	4190819	7.10E-04	7.04E-04	4.39E-05
2265	561928.3	4190828	7.24E-04	7.19E-04	4.48E-05
2266	561929.4	4190837	7.37E-04	7.32E-04	4.56E-05
2267	561930.4	4190846	7.47E-04	7.42E-04	4.62E-05
2268	561931.5	4190855	7.55E-04	7.50E-04	4.67E-05
2269	561932.5	4190864	7.61E-04	7.56E-04	4.71E-05
2270	561933.6	4190873	7.66E-04	7.60E-04	4.73E-05
2271	561934.7	4190882	7.68E-04	7.62E-04	4.74E-05
2272	561935.7	4190891	7.68E-04	7.62E-04	4.74E-05
2273	561936.8	4190900	7.64E-04	7.59E-04	4.72E-05
2274	561937.8	4190909	7.58E-04	7.53E-04	4.68E-05
2275	561766.5	4190621	2.99E-04	2.96E-04	1.85E-05
2276	561757.6	4190619	2.92E-04	2.90E-04	1.81E-05
2277	561748.8	4190616	2.85E-04	2.83E-04	1.76E-05
2278	561739.9	4190614	2.78E-04	2.76E-04	1.72E-05
2279	561731.1	4190612	2.71E-04	2.69E-04	1.68E-05
2280	561722.2	4190609	2.63E-04	2.61E-04	1.63E-05
2281	561713.4	4190607	2.56E-04	2.54E-04	1.58E-05
2282	561704.5	4190605	2.48E-04	2.47E-04	1.54E-05
2283	561695.7	4190602	2.41E-04	2.39E-04	1.49E-05
2284	561686.8	4190600	2.34E-04	2.32E-04	1.45E-05
2285	561776.2	4190617	2.93E-04	2.91E-04	1.81E-05
2286	561783.3	4190622	3.05E-04	3.02E-04	1.89E-05
2287	561790.5	4190628	3.16E-04	3.14E-04	1.96E-05
2288	561797.6	4190633	3.27E-04	3.25E-04	2.03E-05
2289	561804.8	4190639	3.39E-04	3.36E-04	2.10E-05
2290	561811.9	4190645	3.51E-04	3.48E-04	2.17E-05
2291	561819.1	4190650	3.62E-04	3.60E-04	2.24E-05
2292	561826.2	4190656	3.74E-04	3.72E-04	2.32E-05
2293	561833.4	4190661	3.86E-04	3.83E-04	2.39E-05
2294	561840.5	4190667	3.97E-04	3.94E-04	2.46E-05
2295	561847.6	4190672	4.09E-04	4.06E-04	2.53E-05
2296	561854.8	4190678	4.20E-04	4.17E-04	2.60E-05
2297	561861.9	4190683	4.30E-04	4.27E-04	2.66E-05
2298	561869.1	4190689	4.41E-04	4.38E-04	2.73E-05
2299	561876.2	4190694	4.51E-04	4.47E-04	2.79E-05
2300	561883.4	4190700	4.60E-04	4.57E-04	2.85E-05

2301	561890.5	4190705	4.68E-04	4.65E-04	2.90E-05
2302	561897.7	4190711	4.76E-04	4.73E-04	2.95E-05
2303	561904.8	4190716	4.83E-04	4.80E-04	2.99E-05
2304	561912	4190722	4.89E-04	4.86E-04	3.03E-05
2305	561919.1	4190727	4.94E-04	4.90E-04	3.06E-05
2306	561927.3	4190742	5.18E-04	5.15E-04	3.21E-05
2307	561928.4	4190751	5.39E-04	5.35E-04	3.34E-05
2308	561929.4	4190760	5.60E-04	5.56E-04	3.46E-05
2309	561930.5	4190769	5.80E-04	5.76E-04	3.59E-05
2310	561932.6	4190787	6.19E-04	6.14E-04	3.83E-05
2311	561933.6	4190796	6.37E-04	6.32E-04	3.94E-05
2312	561934.7	4190805	6.53E-04	6.49E-04	4.04E-05
2313	561935.7	4190813	6.69E-04	6.64E-04	4.14E-05
2314	561936.8	4190822	6.83E-04	6.78E-04	4.22E-05
2315	561937.8	4190831	6.95E-04	6.90E-04	4.30E-05
2316	561938.9	4190840	7.05E-04	7.00E-04	4.36E-05
2317	561941	4190858	7.20E-04	7.14E-04	4.45E-05
2318	561942	4190867	7.24E-04	7.19E-04	4.47E-05
2319	561943.1	4190876	7.26E-04	7.21E-04	4.49E-05
2320	561944.1	4190885	7.27E-04	7.21E-04	4.49E-05
2321	561945.2	4190894	7.25E-04	7.19E-04	4.48E-05
2322	561946.2	4190903	7.20E-04	7.15E-04	4.45E-05
2323	561947.3	4190912	7.13E-04	7.08E-04	4.40E-05
2324	561769	4190611	2.82E-04	2.80E-04	1.75E-05
2325	561760.2	4190609	2.76E-04	2.74E-04	1.71E-05
2326	561751.3	4190607	2.69E-04	2.67E-04	1.67E-05
2327	561742.5	4190604	2.63E-04	2.61E-04	1.63E-05
2328	561733.6	4190602	2.56E-04	2.54E-04	1.59E-05
2329	561724.8	4190600	2.49E-04	2.47E-04	1.54E-05
2330	561715.9	4190597	2.42E-04	2.41E-04	1.50E-05
2331	561707.1	4190595	2.35E-04	2.34E-04	1.46E-05
2332	561698.2	4190593	2.29E-04	2.27E-04	1.42E-05
2333	561689.3	4190590	2.22E-04	2.20E-04	1.37E-05
2334	561778.6	4190607	2.77E-04	2.75E-04	1.71E-05
2335	561792.8	4190618	2.98E-04	2.96E-04	1.84E-05
2336	561799.9	4190624	3.08E-04	3.06E-04	1.91E-05
2337	561814.1	4190635	3.30E-04	3.27E-04	2.04E-05
2338	561821.2	4190640	3.41E-04	3.38E-04	2.11E-05
2339	561835.4	4190651	3.62E-04	3.60E-04	2.24E-05
2340	561842.5	4190657	3.73E-04	3.70E-04	2.31E-05
2341	561856.7	4190668	3.94E-04	3.91E-04	2.44E-05
2342	561870.9	4190679	4.13E-04	4.10E-04	2.56E-05
2343	561878	4190684	4.22E-04	4.19E-04	2.61E-05
2344	561892.2	4190695	4.40E-04	4.36E-04	2.72E-05
2345	561899.3	4190701	4.47E-04	4.44E-04	2.77E-05
2346	561913.6	4190711	4.61E-04	4.58E-04	2.85E-05
2347	561927.8	4190722	4.70E-04	4.67E-04	2.91E-05

2348	561935.9	4190737	4.93E-04	4.89E-04	3.05E-05
2349	561936.9	4190746	5.12E-04	5.08E-04	3.17E-05
2350	561938	4190755	5.31E-04	5.27E-04	3.28E-05
2351	561940.1	4190772	5.68E-04	5.63E-04	3.51E-05
2352	561942.2	4190790	6.02E-04	5.97E-04	3.72E-05
2353	561943.2	4190799	6.17E-04	6.13E-04	3.82E-05
2354	561945.3	4190817	6.45E-04	6.40E-04	3.99E-05
2355	561946.3	4190826	6.56E-04	6.51E-04	4.06E-05
2356	561948.4	4190844	6.74E-04	6.69E-04	4.17E-05
2357	561949.5	4190853	6.81E-04	6.76E-04	4.21E-05
2358	561951.5	4190870	6.88E-04	6.83E-04	4.25E-05
2359	561953.6	4190888	6.88E-04	6.83E-04	4.25E-05
2360	561954.7	4190897	6.84E-04	6.79E-04	4.22E-05
2361	561956.8	4190915	6.70E-04	6.66E-04	4.14E-05
2362	561771.5	4190602	2.67E-04	2.65E-04	1.65E-05
2363	561762.7	4190600	2.61E-04	2.59E-04	1.62E-05
2364	561753.8	4190597	2.55E-04	2.53E-04	1.58E-05
2365	561745	4190595	2.49E-04	2.47E-04	1.54E-05
2366	561736.1	4190593	2.43E-04	2.41E-04	1.50E-05
2367	561727.3	4190590	2.36E-04	2.35E-04	1.46E-05
2368	561718.4	4190588	2.30E-04	2.28E-04	1.42E-05
2369	561709.6	4190586	2.24E-04	2.22E-04	1.38E-05
2370	561700.7	4190583	2.17E-04	2.16E-04	1.35E-05
2371	561691.9	4190581	2.11E-04	2.10E-04	1.31E-05
2372	561781.1	4190598	2.62E-04	2.60E-04	1.62E-05
2373	561795.2	4190609	2.81E-04	2.79E-04	1.74E-05
2374	561809.3	4190620	3.01E-04	2.99E-04	1.86E-05
2375	561823.4	4190631	3.21E-04	3.18E-04	1.99E-05
2376	561837.6	4190641	3.41E-04	3.38E-04	2.11E-05
2377	561851.7	4190652	3.60E-04	3.58E-04	2.23E-05
2378	561865.8	4190663	3.79E-04	3.77E-04	2.35E-05
2379	561879.9	4190674	3.97E-04	3.94E-04	2.46E-05
2380	561894	4190685	4.13E-04	4.10E-04	2.56E-05
2381	561908.1	4190696	4.28E-04	4.25E-04	2.65E-05
2382	561922.3	4190707	4.40E-04	4.37E-04	2.72E-05
2383	561936.4	4190718	4.49E-04	4.45E-04	2.78E-05
2384	561944.5	4190732	4.69E-04	4.66E-04	2.90E-05
2385	561946.5	4190750	5.04E-04	5.00E-04	3.12E-05
2386	561948.6	4190767	5.38E-04	5.34E-04	3.33E-05
2387	561949.6	4190776	5.54E-04	5.50E-04	3.43E-05
2388	561951.7	4190794	5.84E-04	5.80E-04	3.61E-05
2389	561953.8	4190812	6.10E-04	6.05E-04	3.77E-05
2390	561954.8	4190820	6.21E-04	6.16E-04	3.84E-05
2391	561956.9	4190838	6.38E-04	6.34E-04	3.94E-05
2392	561959	4190856	6.49E-04	6.45E-04	4.01E-05
2393	561960	4190865	6.52E-04	6.48E-04	4.03E-05
2394	561962.1	4190882	6.53E-04	6.48E-04	4.03E-05

2395	561964.2	4190900	6.46E-04	6.41E-04	3.99E-05
2396	561966.2	4190918	6.31E-04	6.27E-04	3.90E-05
2397	561765.2	4190590	2.47E-04	2.46E-04	1.53E-05
2398	561756.3	4190588	2.42E-04	2.40E-04	1.50E-05
2399	561747.5	4190585	2.36E-04	2.34E-04	1.46E-05
2400	561738.6	4190583	2.30E-04	2.29E-04	1.43E-05
2401	561729.8	4190581	2.24E-04	2.23E-04	1.39E-05
2402	561720.9	4190578	2.19E-04	2.17E-04	1.35E-05
2403	561712.1	4190576	2.13E-04	2.11E-04	1.32E-05
2404	561703.2	4190574	2.07E-04	2.05E-04	1.28E-05
2405	561694.4	4190571	2.01E-04	2.00E-04	1.25E-05
2406	561783.6	4190588	2.49E-04	2.47E-04	1.54E-05
2407	561797.6	4190599	2.66E-04	2.64E-04	1.65E-05
2408	561811.6	4190610	2.84E-04	2.82E-04	1.76E-05
2409	561825.7	4190621	3.03E-04	3.01E-04	1.87E-05
2410	561839.7	4190632	3.21E-04	3.19E-04	1.99E-05
2411	561853.7	4190642	3.39E-04	3.37E-04	2.10E-05
2412	561867.8	4190653	3.57E-04	3.54E-04	2.21E-05
2413	561881.8	4190664	3.73E-04	3.71E-04	2.31E-05
2414	561895.9	4190675	3.89E-04	3.86E-04	2.41E-05
2415	561909.9	4190686	4.03E-04	4.00E-04	2.50E-05
2416	561923.9	4190697	4.15E-04	4.13E-04	2.57E-05
2417	561938	4190707	4.25E-04	4.22E-04	2.63E-05
2418	561953	4190727	4.47E-04	4.44E-04	2.77E-05
2419	561955.1	4190745	4.79E-04	4.76E-04	2.97E-05
2420	561957.1	4190762	5.11E-04	5.07E-04	3.16E-05
2421	561959.2	4190780	5.40E-04	5.36E-04	3.34E-05
2422	561960.2	4190789	5.53E-04	5.49E-04	3.42E-05
2423	561962.3	4190806	5.77E-04	5.73E-04	3.57E-05
2424	561964.4	4190824	5.97E-04	5.93E-04	3.69E-05
2425	561965.4	4190833	6.05E-04	6.00E-04	3.74E-05
2426	561967.5	4190850	6.16E-04	6.11E-04	3.81E-05
2427	561969.5	4190868	6.21E-04	6.16E-04	3.84E-05
2428	561970.5	4190877	6.21E-04	6.16E-04	3.84E-05
2429	561972.6	4190894	6.16E-04	6.11E-04	3.80E-05
2430	561974.7	4190912	6.03E-04	5.99E-04	3.73E-05
2431	561767.7	4190581	2.35E-04	2.33E-04	1.45E-05
2432	561758.9	4190578	2.30E-04	2.28E-04	1.42E-05
2433	561750	4190576	2.24E-04	2.23E-04	1.39E-05
2434	561741.2	4190574	2.19E-04	2.17E-04	1.36E-05
2435	561732.3	4190571	2.14E-04	2.12E-04	1.32E-05
2436	561723.5	4190569	2.08E-04	2.07E-04	1.29E-05
2437	561714.6	4190566	2.03E-04	2.01E-04	1.25E-05
2438	561705.8	4190564	1.97E-04	1.96E-04	1.22E-05
2439	561696.9	4190562	1.92E-04	1.91E-04	1.19E-05
2440	561786.1	4190579	2.36E-04	2.35E-04	1.46E-05
2441	561800	4190590	2.52E-04	2.51E-04	1.56E-05

2442	561814	4190600	2.69E-04	2.67E-04	1.67E-05
2443	561827.9	4190611	2.86E-04	2.84E-04	1.77E-05
2444	561841.9	4190622	3.03E-04	3.01E-04	1.88E-05
2445	561855.9	4190633	3.20E-04	3.18E-04	1.98E-05
2446	561869.8	4190643	3.36E-04	3.34E-04	2.08E-05
2447	561883.8	4190654	3.52E-04	3.50E-04	2.18E-05
2448	561897.7	4190665	3.67E-04	3.64E-04	2.27E-05
2449	561911.7	4190676	3.81E-04	3.78E-04	2.36E-05
2450	561925.7	4190686	3.93E-04	3.90E-04	2.43E-05
2451	561939.6	4190697	4.02E-04	3.99E-04	2.49E-05
2452	561953.6	4190708	4.09E-04	4.06E-04	2.53E-05
2453	561961.6	4190722	4.27E-04	4.24E-04	2.64E-05
2454	561963.6	4190740	4.57E-04	4.54E-04	2.83E-05
2455	561965.7	4190757	4.86E-04	4.82E-04	3.00E-05
2456	561967.7	4190775	5.13E-04	5.09E-04	3.17E-05
2457	561969.8	4190792	5.37E-04	5.33E-04	3.32E-05
2458	561971.8	4190810	5.58E-04	5.54E-04	3.45E-05
2459	561973.9	4190827	5.74E-04	5.70E-04	3.55E-05
2460	561975.9	4190845	5.85E-04	5.81E-04	3.61E-05
2461	561978	4190862	5.90E-04	5.86E-04	3.65E-05
2462	561980	4190880	5.90E-04	5.86E-04	3.64E-05
2463	561982.1	4190897	5.83E-04	5.79E-04	3.60E-05
2464	561984.1	4190915	5.70E-04	5.66E-04	3.52E-05
2465	561770.2	4190571	2.23E-04	2.22E-04	1.38E-05
2466	561761.4	4190569	2.19E-04	2.17E-04	1.35E-05
2467	561752.5	4190566	2.14E-04	2.12E-04	1.32E-05
2468	561743.7	4190564	2.09E-04	2.07E-04	1.29E-05
2469	561734.8	4190562	2.03E-04	2.02E-04	1.26E-05
2470	561726	4190559	1.98E-04	1.97E-04	1.23E-05
2471	561717.1	4190557	1.93E-04	1.92E-04	1.20E-05
2472	561708.3	4190555	1.88E-04	1.87E-04	1.17E-05
2473	561699.4	4190552	1.83E-04	1.82E-04	1.13E-05
2474	561788.8	4190569	2.25E-04	2.23E-04	1.39E-05
2475	561796	4190575	2.33E-04	2.31E-04	1.44E-05
2476	561803.2	4190581	2.41E-04	2.39E-04	1.49E-05
2477	561810.4	4190586	2.49E-04	2.47E-04	1.54E-05
2478	561817.7	4190592	2.57E-04	2.55E-04	1.59E-05
2479	561824.9	4190597	2.65E-04	2.63E-04	1.64E-05
2480	561832.1	4190603	2.73E-04	2.71E-04	1.69E-05
2481	561839.3	4190608	2.81E-04	2.79E-04	1.74E-05
2482	561846.5	4190614	2.90E-04	2.87E-04	1.79E-05
2483	561853.7	4190619	2.98E-04	2.96E-04	1.84E-05
2484	561860.9	4190625	3.06E-04	3.04E-04	1.89E-05
2485	561868.1	4190631	3.14E-04	3.11E-04	1.94E-05
2486	561882.6	4190642	3.29E-04	3.27E-04	2.04E-05
2487	561889.8	4190647	3.36E-04	3.34E-04	2.08E-05
2488	561897	4190653	3.44E-04	3.41E-04	2.13E-05

2489	561904.2	4190658	3.51E-04	3.49E-04	2.17E-05
2490	561911.4	4190664	3.58E-04	3.55E-04	2.21E-05
2491	561918.6	4190670	3.64E-04	3.62E-04	2.25E-05
2492	561925.8	4190675	3.70E-04	3.68E-04	2.29E-05
2493	561933.1	4190681	3.76E-04	3.73E-04	2.32E-05
2494	561940.3	4190686	3.80E-04	3.78E-04	2.35E-05
2495	561947.5	4190692	3.85E-04	3.82E-04	2.38E-05
2496	561954.7	4190697	3.89E-04	3.86E-04	2.40E-05
2497	561961.9	4190703	3.92E-04	3.89E-04	2.42E-05
2498	561970.2	4190718	4.09E-04	4.06E-04	2.53E-05
2499	561971.2	4190727	4.23E-04	4.20E-04	2.62E-05
2500	561972.3	4190736	4.37E-04	4.34E-04	2.71E-05
2501	561973.4	4190745	4.52E-04	4.48E-04	2.79E-05
2502	561974.4	4190754	4.65E-04	4.62E-04	2.88E-05
2503	561975.5	4190763	4.78E-04	4.75E-04	2.96E-05
2504	561976.5	4190772	4.91E-04	4.87E-04	3.04E-05
2505	561977.6	4190781	5.03E-04	4.99E-04	3.11E-05
2506	561978.7	4190790	5.14E-04	5.10E-04	3.18E-05
2507	561979.7	4190799	5.24E-04	5.20E-04	3.24E-05
2508	561980.8	4190808	5.33E-04	5.29E-04	3.30E-05
2509	561981.8	4190817	5.41E-04	5.38E-04	3.35E-05
2510	561982.9	4190826	5.48E-04	5.44E-04	3.39E-05
2511	561984	4190835	5.54E-04	5.50E-04	3.42E-05
2512	561985	4190844	5.58E-04	5.54E-04	3.45E-05
2513	561986.1	4190853	5.61E-04	5.57E-04	3.47E-05
2514	561987.1	4190862	5.63E-04	5.59E-04	3.48E-05
2515	561988.2	4190871	5.63E-04	5.59E-04	3.48E-05
2516	561989.3	4190880	5.61E-04	5.57E-04	3.47E-05
2517	561990.3	4190889	5.58E-04	5.54E-04	3.45E-05
2518	561991.4	4190899	5.54E-04	5.50E-04	3.42E-05
2519	561992.4	4190908	5.47E-04	5.44E-04	3.38E-05
2520	561993.5	4190917	5.40E-04	5.36E-04	3.33E-05
2521	561994.6	4190926	5.31E-04	5.27E-04	3.28E-05
2522	561995.6	4190935	5.20E-04	5.16E-04	3.21E-05
2523	561781.6	4190564	2.17E-04	2.16E-04	1.34E-05
2524	561772.7	4190562	2.13E-04	2.11E-04	1.32E-05
2525	561763.9	4190559	2.08E-04	2.07E-04	1.29E-05
2526	561755	4190557	2.04E-04	2.02E-04	1.26E-05
2527	561746.2	4190554	1.99E-04	1.97E-04	1.23E-05
2528	561737.3	4190552	1.94E-04	1.93E-04	1.20E-05
2529	561728.5	4190550	1.89E-04	1.88E-04	1.17E-05
2530	561719.6	4190547	1.85E-04	1.83E-04	1.14E-05
2531	561710.8	4190545	1.80E-04	1.79E-04	1.11E-05
2532	561701.9	4190543	1.75E-04	1.74E-04	1.09E-05
2533	561791.3	4190560	2.14E-04	2.13E-04	1.33E-05
2534	561798.5	4190565	2.22E-04	2.20E-04	1.37E-05
2535	561805.6	4190571	2.29E-04	2.27E-04	1.42E-05

2536	561812.8	4190576	2.36E-04	2.35E-04	1.46E-05
2537	561820	4190582	2.44E-04	2.42E-04	1.51E-05
2538	561827.1	4190588	2.52E-04	2.50E-04	1.56E-05
2539	561834.3	4190593	2.59E-04	2.57E-04	1.60E-05
2540	561841.5	4190599	2.67E-04	2.65E-04	1.65E-05
2541	561848.6	4190604	2.74E-04	2.72E-04	1.70E-05
2542	561855.8	4190610	2.82E-04	2.80E-04	1.74E-05
2543	561863	4190615	2.89E-04	2.87E-04	1.79E-05
2544	561870.1	4190621	2.97E-04	2.95E-04	1.84E-05
2545	561877.3	4190626	3.04E-04	3.02E-04	1.88E-05
2546	561884.5	4190632	3.11E-04	3.09E-04	1.92E-05
2547	561891.7	4190637	3.18E-04	3.16E-04	1.97E-05
2548	561898.8	4190643	3.25E-04	3.23E-04	2.01E-05
2549	561906	4190648	3.32E-04	3.29E-04	2.05E-05
2550	561913.2	4190654	3.38E-04	3.36E-04	2.09E-05
2551	561920.3	4190659	3.45E-04	3.42E-04	2.13E-05
2552	561927.5	4190665	3.50E-04	3.48E-04	2.17E-05
2553	561934.7	4190670	3.56E-04	3.53E-04	2.20E-05
2554	561941.8	4190676	3.61E-04	3.58E-04	2.23E-05
2555	561949	4190682	3.65E-04	3.62E-04	2.26E-05
2556	561956.2	4190687	3.69E-04	3.66E-04	2.28E-05
2557	561963.3	4190693	3.73E-04	3.70E-04	2.30E-05
2558	561970.5	4190698	3.75E-04	3.73E-04	2.32E-05
2559	561978.7	4190713	3.91E-04	3.88E-04	2.42E-05
2560	561979.8	4190722	4.05E-04	4.02E-04	2.50E-05
2561	561980.8	4190731	4.18E-04	4.15E-04	2.59E-05
2562	561981.9	4190740	4.31E-04	4.28E-04	2.67E-05
2563	561983	4190749	4.44E-04	4.41E-04	2.75E-05
2564	561984	4190758	4.56E-04	4.53E-04	2.82E-05
2565	561985.1	4190767	4.67E-04	4.64E-04	2.89E-05
2566	561986.1	4190776	4.78E-04	4.75E-04	2.96E-05
2567	561988.2	4190794	4.99E-04	4.95E-04	3.08E-05
2568	561989.3	4190803	5.07E-04	5.04E-04	3.14E-05
2569	561990.3	4190812	5.15E-04	5.12E-04	3.19E-05
2570	561991.4	4190821	5.22E-04	5.18E-04	3.23E-05
2571	561992.4	4190830	5.28E-04	5.24E-04	3.26E-05
2572	561993.5	4190839	5.32E-04	5.28E-04	3.29E-05
2573	561994.5	4190848	5.35E-04	5.31E-04	3.31E-05
2574	561995.6	4190857	5.37E-04	5.33E-04	3.32E-05
2575	561996.6	4190866	5.37E-04	5.34E-04	3.32E-05
2576	561997.7	4190875	5.37E-04	5.33E-04	3.32E-05
2577	561998.8	4190884	5.34E-04	5.30E-04	3.30E-05
2578	561999.8	4190893	5.31E-04	5.27E-04	3.28E-05
2579	562000.9	4190902	5.25E-04	5.22E-04	3.24E-05
2580	562001.9	4190911	5.19E-04	5.15E-04	3.20E-05
2581	562003	4190920	5.11E-04	5.07E-04	3.16E-05
2582	562004	4190929	5.02E-04	4.98E-04	3.10E-05

2583	562005.1	4190938	4.91E-04	4.88E-04	3.03E-05
2584	561784.1	4190554	2.07E-04	2.06E-04	1.28E-05
2585	561775.3	4190552	2.03E-04	2.02E-04	1.26E-05
2586	561766.4	4190550	1.99E-04	1.97E-04	1.23E-05
2587	561757.6	4190547	1.94E-04	1.93E-04	1.20E-05
2588	561748.7	4190545	1.90E-04	1.89E-04	1.18E-05
2589	561739.9	4190543	1.85E-04	1.84E-04	1.15E-05
2590	561731	4190540	1.81E-04	1.80E-04	1.12E-05
2591	561722.2	4190538	1.76E-04	1.75E-04	1.09E-05
2592	561713.3	4190536	1.72E-04	1.71E-04	1.07E-05
2593	561704.5	4190533	1.68E-04	1.67E-04	1.04E-05

*	X	Y	E Block	W Block	Total
	561593	4190840	0.000703	0.009287	0.00999
	561590.8	4190849	0.000744	0.009906	0.01065
	561588.6	4190858	0.000785	0.01038	0.011165
	561586.4	4190867	0.000823	0.0107	0.011523
	561584.2	4190876	0.000855	0.01076	0.011615
	561582	4190885	0.000881	0.01067	0.011551
	561579.8	4190894	0.0009	0.01043	0.01133
	561577.6	4190903	0.00091	0.01003	0.01094
	561575.4	4190912	0.000911	0.009487	0.010398
	561573.2	4190921	0.000902	0.008791	0.009693
	561571	4190930	0.000884	0.007964	0.008848
	561568.7	4190939	0.000858	0.007055	0.007913
	561566.5	4190948	0.000827	0.006146	0.006973
	561599.3	4190810	0.000568	0.006528	0.007096
	561583.5	4190837	0.000661	0.007709	0.00837
	561581.2	4190846	0.000696	0.008136	0.008832
	561579	4190855	0.000729	0.008456	0.009185
	561576.8	4190864	0.00076	0.008665	0.009425
	561574.6	4190873	0.000785	0.008702	0.009487
	561572.4	4190882	0.000804	0.008608	0.009412
	561570.2	4190891	0.000817	0.008397	0.009214
	561568	4190900	0.000822	0.00807	0.008892
	561565.8	4190910	0.00082	0.007632	0.008452
	561563.6	4190919	0.00081	0.007094	0.007904
	561561.4	4190928	0.000793	0.00648	0.007273
	561559.2	4190937	0.00077	0.005831	0.006601
	561557	4190946	0.000743	0.005192	0.005935
	561589.7	4190808	0.000543	0.005727	0.00627
	561606.3	4190794	0.000511	0.00537	0.005881
	561573.9	4190835	0.000621	0.006532	0.007153
	561571.7	4190844	0.00065	0.006831	0.007481
	561569.5	4190853	0.000678	0.00705	0.007728
	561567.3	4190862	0.000702	0.007182	0.007884
	561565.1	4190871	0.000722	0.0072	0.007922
	561562.9	4190880	0.000736	0.007096	0.007832
	561560.7	4190889	0.000743	0.006894	0.007637
	561558.4	4190898	0.000745	0.006614	0.007359
	561556.2	4190907	0.000741	0.006264	0.007005
	561554	4190916	0.000731	0.005851	0.006582
	561551.8	4190925	0.000715	0.005398	0.006113
	561549.6	4190934	0.000696	0.004925	0.005621
	561547.4	4190943	0.000672	0.004458	0.00513
	561577.4	4190809	0.000527	0.005178	0.005705

561582.9	4190802	0.000509	0.004972	0.005481
561588.3	4190794	0.000489	0.004706	0.005195
561602.8	4190786	0.000474	0.00458	0.005054
561611.8	4190784	0.000477	0.004742	0.005219
561564.3	4190833	0.000584	0.005624	0.006208
561562.1	4190842	0.000608	0.005827	0.006435
561559.9	4190851	0.00063	0.005958	0.006588
561557.7	4190860	0.000649	0.006016	0.006665
561555.5	4190869	0.000663	0.005995	0.006658
561553.3	4190878	0.000673	0.005893	0.006566
561551.1	4190887	0.000678	0.005728	0.006406
561548.9	4190896	0.000677	0.005506	0.006183
561546.7	4190905	0.000673	0.005234	0.005907
561544.5	4190914	0.000663	0.004919	0.005582
561542.3	4190923	0.000649	0.004579	0.005228
561540.1	4190932	0.000632	0.004225	0.004857
561537.9	4190941	0.000612	0.003875	0.004487
561572.8	4190800	0.000488	0.004479	0.004967
561583.4	4190786	0.000454	0.004071	0.004525
561597.5	4190777	0.00044	0.003937	0.004377
561615.1	4190775	0.000445	0.004165	0.00461
561554.8	4190830	0.000548	0.004877	0.005425
561552.6	4190839	0.000568	0.005007	0.005575
561550.4	4190848	0.000585	0.005081	0.005666
561548.2	4190857	0.000599	0.005098	0.005697
561545.9	4190866	0.000609	0.005055	0.005664
561543.7	4190875	0.000616	0.004967	0.005583
561541.5	4190884	0.000619	0.004833	0.005452
561539.3	4190893	0.000618	0.004657	0.005275
561537.1	4190902	0.000613	0.004443	0.005056
561534.9	4190911	0.000604	0.004201	0.004805
561532.7	4190920	0.000591	0.003938	0.004529
561530.5	4190930	0.000576	0.003662	0.004238
561528.3	4190939	0.000558	0.003383	0.003941
561563	4190798	0.000467	0.004047	0.004514
561573.3	4190784	0.000438	0.003754	0.004192
561592.3	4190769	0.000409	0.003435	0.003844
561609.6	4190766	0.000414	0.003607	0.004021
561545.2	4190828	0.000514	0.004275	0.004789
561543	4190837	0.00053	0.004356	0.004886
561540.8	4190846	0.000544	0.004391	0.004935
561538.6	4190855	0.000554	0.004381	0.004935
561536.4	4190864	0.000561	0.004324	0.004885
561534.2	4190873	0.000566	0.004242	0.004808
561532	4190882	0.000568	0.00414	0.004708
561529.8	4190891	0.000567	0.004003	0.00457
561527.6	4190900	0.000561	0.003832	0.004393

561525.4	4190909	0.000553	0.003634	0.004187
561523.1	4190918	0.000541	0.003419	0.00396
561520.9	4190927	0.000526	0.003195	0.003721
561518.7	4190936	0.00051	0.002971	0.003481
561553.2	4190796	0.000446	0.003676	0.004122
561563.4	4190782	0.000422	0.003458	0.00388
561573.6	4190769	0.000395	0.003163	0.003558
561587.1	4190760	0.000383	0.003043	0.003426
561604.1	4190758	0.000387	0.003159	0.003546
561535.6	4190826	0.000484	0.003783	0.004267
561533.4	4190835	0.000496	0.003829	0.004325
561531.2	4190844	0.000507	0.003847	0.004354
561529	4190853	0.000515	0.003832	0.004347
561526.8	4190862	0.000521	0.003789	0.00431
561524.6	4190871	0.000525	0.003721	0.004246
561522.4	4190880	0.000526	0.003626	0.004152
561520.2	4190889	0.000523	0.003501	0.004024
561518	4190898	0.000517	0.003352	0.003869
561515.8	4190907	0.000508	0.003184	0.003692
561513.6	4190916	0.000497	0.003003	0.0035
561511.4	4190925	0.000483	0.002818	0.003301
561509.2	4190934	0.000468	0.002633	0.003101
561533.3	4190808	0.00044	0.003366	0.003806
561543.4	4190794	0.000427	0.003351	0.003778
561553.5	4190780	0.000407	0.003205	0.003612
561563.6	4190767	0.000383	0.002968	0.003351
561582	4190752	0.000359	0.002723	0.003082
561598.8	4190750	0.000361	0.002792	0.003153
561615.5	4190747	0.000365	0.002904	0.003269
561526.1	4190823	0.000456	0.003383	0.003839
561523.9	4190832	0.000466	0.003414	0.00388
561521.7	4190841	0.000475	0.00342	0.003895
561519.5	4190850	0.000482	0.003404	0.003886
561517.3	4190859	0.000486	0.003363	0.003849
561515.1	4190868	0.000489	0.003299	0.003788
561512.8	4190877	0.000488	0.003208	0.003696
561510.6	4190886	0.000484	0.003094	0.003578
561508.4	4190895	0.000478	0.002962	0.00344
561506.2	4190904	0.000469	0.002817	0.003286
561504	4190913	0.000458	0.002664	0.003122
561501.8	4190922	0.000445	0.00251	0.002955
561499.6	4190931	0.000432	0.00236	0.002792
561523.7	4190805	0.000418	0.00305	0.003468
561533.7	4190792	0.000408	0.003068	0.003476
561543.7	4190778	0.000392	0.002973	0.003365
561553.6	4190765	0.000371	0.002788	0.003159
561563.6	4190751	0.000349	0.002563	0.002912

561576.9	4190744	0.000338	0.002461	0.002799
561593.5	4190741	0.000339	0.002492	0.002831
561610.1	4190739	0.000341	0.002568	0.002909
561516.5	4190821	0.00043	0.003046	0.003476
561514.3	4190830	0.000438	0.003062	0.0035
561512.1	4190839	0.000445	0.003059	0.003504
561509.9	4190848	0.000451	0.003042	0.003493
561507.7	4190857	0.000455	0.003005	0.00346
561505.5	4190866	0.000456	0.002949	0.003405
561503.3	4190875	0.000454	0.002863	0.003317
561501.1	4190884	0.00045	0.002758	0.003208
561498.9	4190893	0.000443	0.002641	0.003084
561496.7	4190902	0.000435	0.002518	0.002953
561494.5	4190911	0.000425	0.002389	0.002814
561492.3	4190920	0.000413	0.002261	0.002674
561490.1	4190929	0.000401	0.002136	0.002537
561514.6	4190802	0.000396	0.00278	0.003176
561520.1	4190795	0.000393	0.002806	0.003199
561525.5	4190788	0.000388	0.002808	0.003196
561530.9	4190780	0.000381	0.002786	0.003167
561536.4	4190773	0.000373	0.002731	0.003104
561541.8	4190766	0.000363	0.002649	0.003012
561547.3	4190758	0.000352	0.002553	0.002905
561552.7	4190751	0.000341	0.002448	0.002789
561558.1	4190744	0.00033	0.002337	0.002667
561572.6	4190735	0.00032	0.002243	0.002563
561581.7	4190734	0.00032	0.002256	0.002576
561590.7	4190732	0.00032	0.002266	0.002586
561599.8	4190731	0.00032	0.002285	0.002605
561608.8	4190730	0.00032	0.002309	0.002629
561617.9	4190729	0.00032	0.002333	0.002653
561626.9	4190727	0.00032	0.002366	0.002686
561509.2	4190810	0.000398	0.002731	0.003129
561507	4190819	0.000406	0.002757	0.003163
561504.8	4190828	0.000413	0.002764	0.003177
561502.6	4190837	0.000418	0.002752	0.00317
561500.3	4190846	0.000423	0.002735	0.003158
561498.1	4190855	0.000426	0.002698	0.003124
561495.9	4190864	0.000426	0.002642	0.003068
561493.7	4190873	0.000423	0.002565	0.002988
561491.5	4190882	0.000419	0.002473	0.002892
561489.3	4190891	0.000412	0.002372	0.002784
561487.1	4190900	0.000404	0.002266	0.00267
561484.9	4190909	0.000395	0.002157	0.002552
561482.7	4190918	0.000385	0.002048	0.002433
561480.5	4190927	0.000373	0.001942	0.002315
561505	4190800	0.000377	0.00254	0.002917

561515.7	4190786	0.000371	0.002583	0.002954
561521	4190778	0.000366	0.002573	0.002939
561531.8	4190764	0.00035	0.002481	0.002831
561537.1	4190757	0.000341	0.002405	0.002746
561542.5	4190749	0.000331	0.002319	0.00265
561553.2	4190735	0.000312	0.002133	0.002445
561567.5	4190727	0.000302	0.002053	0.002355
561576.4	4190725	0.000303	0.002063	0.002366
561585.3	4190724	0.000302	0.002069	0.002371
561603.1	4190722	0.000302	0.002085	0.002387
561612	4190720	0.000301	0.002096	0.002397
561629.9	4190718	0.0003	0.002147	0.002447
561497.4	4190816	0.000385	0.002515	0.0029
561495.2	4190825	0.00039	0.002517	0.002907
561493	4190834	0.000395	0.002502	0.002897
561490.8	4190843	0.000398	0.002477	0.002875
561488.6	4190852	0.000399	0.002437	0.002836
561486.4	4190861	0.000398	0.002382	0.00278
561484.2	4190870	0.000396	0.002312	0.002708
561482	4190879	0.000391	0.002232	0.002623
561479.8	4190888	0.000385	0.002144	0.002529
561477.5	4190897	0.000377	0.002052	0.002429
561475.3	4190906	0.000369	0.001959	0.002328
561473.1	4190915	0.000359	0.001866	0.002225
561470.9	4190924	0.000349	0.001776	0.002125
561516.5	4190769	0.000345	0.002361	0.002706
561527.1	4190755	0.00033	0.002265	0.002595
561537.7	4190741	0.000313	0.002119	0.002432
561548.2	4190726	0.000295	0.001956	0.002251
561562.3	4190718	0.000287	0.001887	0.002174
561579.9	4190716	0.000287	0.001899	0.002186
561597.5	4190713	0.000285	0.001905	0.00219
561615.1	4190711	0.000284	0.001918	0.002202
561632.7	4190708	0.000284	0.001973	0.002257
561468	4190895	0.000353	0.001874	0.002227
561465.8	4190904	0.000346	0.001794	0.00214
561463.6	4190913	0.000337	0.001715	0.002052
561461.4	4190922	0.000328	0.001637	0.001965
561538	4190725	0.000288	0.001876	0.002164
561557.2	4190710	0.000272	0.001739	0.002011
561574.6	4190707	0.000272	0.001751	0.002023
561592	4190705	0.000271	0.001754	0.002025
561609.4	4190702	0.000269	0.00176	0.002029
561626.8	4190700	0.000268	0.001787	0.002055
561552.1	4190701	0.000258	0.001608	0.001866
561569.3	4190699	0.000259	0.001621	0.00188
561586.6	4190696	0.000258	0.001621	0.001879

561603.8	4190694	0.000256	0.001624	0.00188
561621.1	4190692	0.000254	0.001636	0.00189
561638.3	4190689	0.000254	0.001682	0.001936
561547.6	4190693	0.000246	0.001494	0.00174
561556.8	4190691	0.000246	0.001502	0.001748
561565.9	4190690	0.000246	0.001506	0.001752
561575.1	4190689	0.000246	0.001505	0.001751
561584.2	4190688	0.000245	0.001504	0.001749
561593.4	4190686	0.000244	0.001504	0.001748
561602.6	4190685	0.000243	0.001506	0.001749
561611.7	4190684	0.000242	0.00151	0.001752
561620.9	4190682	0.000241	0.001517	0.001758
561630.1	4190681	0.000241	0.001534	0.001775
561639.2	4190680	0.000241	0.001556	0.001797
561551.5	4190683	0.000234	0.001396	0.00163
561560.6	4190682	0.000234	0.0014	0.001634
561569.6	4190680	0.000234	0.0014	0.001634
561578.7	4190679	0.000234	0.0014	0.001634
561587.7	4190678	0.000233	0.001402	0.001635
561596.8	4190677	0.000232	0.001404	0.001636
561605.8	4190675	0.000231	0.001405	0.001636
561614.9	4190674	0.00023	0.001408	0.001638
561623.9	4190673	0.000229	0.001413	0.001642
561633	4190672	0.000229	0.00143	0.001659
561642.1	4190670	0.000229	0.001449	0.001678
561555.3	4190673	0.000223	0.001304	0.001527
561564.2	4190672	0.000223	0.001304	0.001527
561573.2	4190671	0.000223	0.001306	0.001529
561582.1	4190669	0.000222	0.001308	0.00153
561591.1	4190668	0.000222	0.001312	0.001534
561600.1	4190667	0.000221	0.001313	0.001534
561609	4190666	0.00022	0.001313	0.001533
561618	4190664	0.000219	0.001315	0.001534
561626.9	4190663	0.000219	0.001322	0.001541
561635.9	4190662	0.000218	0.001337	0.001555
561644.9	4190661	0.000218	0.001353	0.001571
561567.7	4190662	0.000212	0.001218	0.00143
561585.5	4190660	0.000212	0.001227	0.001439
561603.2	4190657	0.000211	0.00123	0.001441
561621	4190655	0.000209	0.001232	0.001441
561638.7	4190652	0.000208	0.001254	0.001462
561562.3	4190654	0.000203	0.001139	0.001342
561579.9	4190651	0.000203	0.001147	0.00135
561597.5	4190649	0.000202	0.001155	0.001357
561615.2	4190647	0.000201	0.001158	0.001359
561632.8	4190644	0.000199	0.001171	0.00137
561650.4	4190642	0.000199	0.001188	0.001387

561574.5	4190643	0.000194	0.001076	0.00127
561591.9	4190641	0.000194	0.001085	0.001279
561609.4	4190638	0.000193	0.001089	0.001282
561626.9	4190636	0.000191	0.001099	0.00129
561644.3	4190633	0.00019	0.001109	0.001299
561572.2	4190634	0.000186	0.001013	0.001199
561581.3	4190633	0.000186	0.001016	0.001202
561599.6	4190630	0.000185	0.001024	0.001209
561608.7	4190629	0.000185	0.001028	0.001213
561617.9	4190628	0.000184	0.001033	0.001217
561627	4190627	0.000184	0.001039	0.001223
561636.1	4190625	0.000183	0.001041	0.001224
561645.3	4190624	0.000182	0.001045	0.001227
561654.4	4190623	0.000181	0.001051	0.001232
561575.7	4190625	0.000178	0.000957	0.001134
561584.7	4190623	0.000178	0.00096	0.001137
561593.8	4190622	0.000177	0.000963	0.001141
561602.8	4190621	0.000177	0.000966	0.001143
561611.9	4190620	0.000177	0.000971	0.001148
561620.9	4190618	0.000176	0.000977	0.001153
561630	4190617	0.000176	0.000981	0.001156
561639	4190616	0.000175	0.000984	0.001159
561648.1	4190614	0.000174	0.000988	0.001163
561657.2	4190613	0.000174	0.000998	0.001173
561579.1	4190615	0.00017	0.000904	0.001075
561588	4190614	0.00017	0.000907	0.001077
561597	4190612	0.00017	0.00091	0.00108
561606	4190611	0.000169	0.000914	0.001083
561615	4190610	0.000169	0.000919	0.001088
561624	4190609	0.000169	0.000925	0.001094
561632.9	4190607	0.000168	0.000928	0.001096
561641.9	4190606	0.000168	0.000932	0.0011
561650.9	4190605	0.000167	0.000937	0.001104
561659.9	4190604	0.000168	0.000949	0.001117
561582.4	4190605	0.000163	0.000856	0.001019
561600.2	4190603	0.000163	0.000861	0.001024
561609.1	4190602	0.000162	0.000866	0.001029
561626.9	4190599	0.000162	0.000877	0.001039
561635.9	4190598	0.000162	0.00088	0.001042
561653.7	4190595	0.000161	0.000891	0.001052
561662.6	4190594	0.000162	0.000903	0.001065
561585.6	4190596	0.000156	0.000812	0.000968
561603.3	4190593	0.000156	0.000817	0.000973
561621	4190591	0.000156	0.000827	0.000983
561638.7	4190588	0.000155	0.000835	0.00099
561656.4	4190586	0.000155	0.000849	0.001004
561584.2	4190587	0.000151	0.000771	0.000922

561593.4	4190585	0.00015	0.000773	0.000923
561602.5	4190584	0.00015	0.000775	0.000925
561611.7	4190583	0.00015	0.000779	0.000928
561620.9	4190582	0.000149	0.000783	0.000932
561630.1	4190580	0.000149	0.000787	0.000937
561639.3	4190579	0.000149	0.000793	0.000942
561648.5	4190578	0.000149	0.0008	0.000949
561657.6	4190576	0.000149	0.000809	0.000958
561666.8	4190575	0.00015	0.000819	0.000969
561587.5	4190577	0.000145	0.000734	0.000879
561596.6	4190576	0.000144	0.000736	0.00088
561605.7	4190575	0.000144	0.000738	0.000882
561614.9	4190573	0.000144	0.00074	0.000884
561624	4190572	0.000143	0.000744	0.000887
561633.1	4190571	0.000143	0.000749	0.000893
561642.2	4190569	0.000143	0.000756	0.000899
561651.3	4190568	0.000144	0.000764	0.000907
561660.4	4190567	0.000144	0.000773	0.000917
561669.6	4190566	0.000145	0.000782	0.000927
561590.8	4190567	0.000139	0.0007	0.00084
561599.8	4190566	0.000139	0.000701	0.00084
561608.9	4190565	0.000138	0.000703	0.000841
561617.9	4190564	0.000138	0.000705	0.000843
561627	4190562	0.000138	0.00071	0.000848
561636	4190561	0.000138	0.000716	0.000854
561645.1	4190560	0.000138	0.000723	0.000861
561654.2	4190559	0.000139	0.00073	0.000868
561663.2	4190557	0.000139	0.000738	0.000877
561672.3	4190556	0.000139	0.000747	0.000886
561585	4190559	0.000134	0.000667	0.000801
561594	4190558	0.000134	0.000668	0.000802
561603	4190557	0.000134	0.000669	0.000803
561612	4190555	0.000133	0.000672	0.000805
561621	4190554	0.000133	0.000675	0.000808
561630	4190553	0.000133	0.00068	0.000813
561639	4190552	0.000133	0.000685	0.000819
561648	4190550	0.000133	0.000691	0.000825
561657	4190549	0.000134	0.000698	0.000832
561666	4190548	0.000134	0.000706	0.00084
561674.9	4190547	0.000134	0.000714	0.000848
561597.2	4190548	0.000129	0.000637	0.000766
561606.1	4190547	0.000129	0.00064	0.000769
561615	4190546	0.000129	0.000643	0.000772
561624	4190545	0.000129	0.000647	0.000776
561632.9	4190543	0.000129	0.000652	0.00078
561641.9	4190542	0.000129	0.000656	0.000785
561650.8	4190541	0.000129	0.000662	0.000791

561659.7	4190540	0.000129	0.000669	0.000798
561668.7	4190538	0.000129	0.000676	0.000805
561677.6	4190537	0.00013	0.000683	0.000813
561592.7	4190964	0.001136	0.008544	0.00968
561602.1	4190967	0.001306	0.009739	0.011045
561611.4	4190969	0.001521	0.01091	0.012431
561620.7	4190972	0.001801	0.01193	0.013731
561630.1	4190974	0.002169	0.01248	0.014649
561639.4	4190977	0.002675	0.0126	0.015275
561648.8	4190979	0.003404	0.01234	0.015744
561658.1	4190982	0.004514	0.01166	0.016174
561667.5	4190984	0.006254	0.0107	0.016954
561599.5	4190976	0.001217	0.007204	0.008421
561608.9	4190979	0.001409	0.007787	0.009196
561618.2	4190981	0.001654	0.008243	0.009897
561627.6	4190984	0.001972	0.008496	0.010468
561636.9	4190986	0.002396	0.008512	0.010908
561646.3	4190989	0.002985	0.008319	0.011304
561655.6	4190991	0.003833	0.00794	0.011773
561665	4190994	0.005069	0.007426	0.012495
561597	4190986	0.001128	0.005504	0.006632
561606.4	4190988	0.001295	0.005806	0.007101
561615.7	4190991	0.001504	0.006025	0.007529
561625.1	4190993	0.001772	0.006137	0.007909
561634.4	4190996	0.002113	0.006106	0.008219
561643.7	4190998	0.002564	0.00597	0.008534
561653.1	4191001	0.003167	0.005742	0.008909
561662.4	4191003	0.003965	0.005452	0.009417
561560.3	4190968	0.000738	0.004387	0.005125
561594.5	4190995	0.001041	0.004353	0.005394
561603.8	4190998	0.001185	0.004518	0.005703
561613.2	4191000	0.001361	0.004624	0.005985
561622.5	4191003	0.00158	0.004666	0.006246
561631.9	4191005	0.001848	0.004626	0.006474
561641.2	4191008	0.002184	0.004525	0.006709
561650.6	4191010	0.002598	0.004377	0.006975
561659.9	4191013	0.003095	0.0042	0.007295
561551.5	4190971	0.000663	0.003719	0.004382
561550.2	4190962	0.000669	0.003995	0.004664
561548.8	4190952	0.000672	0.004245	0.004917
561592	4191005	0.00096	0.003542	0.004502
561601.3	4191007	0.001081	0.003629	0.00471
561610.7	4191010	0.001228	0.003679	0.004907
561620	4191012	0.001404	0.003689	0.005093
561629.4	4191015	0.001612	0.00365	0.005262
561638.7	4191017	0.001857	0.003573	0.00543
561648.1	4191020	0.00214	0.003472	0.005612

561657.4	4191022	0.002453	0.003353	0.005806
561543.1	4190976	0.000598	0.00315	0.003748
561541.8	4190967	0.000604	0.003361	0.003965
561539.2	4190950	0.000611	0.003733	0.004344
561589.4	4191014	0.000883	0.002945	0.003828
561598.8	4191017	0.000985	0.002988	0.003973
561608.1	4191019	0.001106	0.003009	0.004115
561617.5	4191022	0.001246	0.003002	0.004248
561626.8	4191024	0.001406	0.002969	0.004375
561636.2	4191027	0.001584	0.002909	0.004493
561645.5	4191029	0.001778	0.002835	0.004613
561654.9	4191032	0.001981	0.002751	0.004732
561542.9	4190995	0.000564	0.002588	0.003152
561534.7	4190981	0.000541	0.002711	0.003252
561532.1	4190964	0.000552	0.003033	0.003585
561541.1	4191005	0.000536	0.002289	0.002825
561526.3	4190987	0.000491	0.002357	0.002848
561523.8	4190970	0.000501	0.002605	0.003106
561521.2	4190953	0.000507	0.002813	0.00332
561549.6	4191023	0.000546	0.002011	0.002557
561542	4191017	0.000519	0.00203	0.002549
561534.3	4191012	0.000492	0.002029	0.002521
561526.7	4191006	0.000467	0.002008	0.002475
561517.6	4190991	0.000448	0.002089	0.002537
561516.2	4190981	0.000453	0.002203	0.002656
561514.8	4190972	0.000458	0.002308	0.002766
561513.4	4190962	0.000461	0.002403	0.002864
561512	4190953	0.000464	0.002488	0.002952
561510.6	4190943	0.000466	0.002566	0.003032
561572.5	4191041	0.000633	0.001847	0.00248
561581.9	4191043	0.000686	0.001854	0.00254
561591.2	4191045	0.000743	0.001851	0.002594
561600.6	4191048	0.000807	0.001841	0.002648
561609.9	4191050	0.000875	0.001825	0.0027
561619.3	4191053	0.000946	0.001801	0.002747
561628.6	4191055	0.001016	0.001771	0.002787
561638	4191058	0.001084	0.001736	0.00282
561647.3	4191060	0.001146	0.001699	0.002845
561540.3	4191028	0.000492	0.001804	0.002296
561532.9	4191022	0.000469	0.001815	0.002284
561525.4	4191016	0.000447	0.001812	0.002259
561518	4191011	0.000426	0.001793	0.002219
561509.2	4190996	0.000411	0.001856	0.002267
561507.8	4190987	0.000415	0.001946	0.002361
561506.5	4190978	0.000419	0.00203	0.002449
561505.1	4190968	0.000422	0.002105	0.002527
561503.7	4190959	0.000424	0.002172	0.002596

561502.4	4190950	0.000427	0.002241	0.002668
561501	4190941	0.00043	0.002305	0.002735
561570	4191050	0.000585	0.001623	0.002208
561579.4	4191053	0.00063	0.001625	0.002255
561588.7	4191055	0.000677	0.001618	0.002295
561598.1	4191057	0.000728	0.001606	0.002334
561607.4	4191060	0.000781	0.00159	0.002371
561616.8	4191062	0.000835	0.001569	0.002404
561626.1	4191065	0.000888	0.001544	0.002432
561635.4	4191067	0.000936	0.001515	0.002451
561644.8	4191070	0.000979	0.001485	0.002464
561538.4	4191038	0.000466	0.00161	0.002076
561523.9	4191027	0.000427	0.001634	0.002061
561516.6	4191021	0.000409	0.00163	0.002039
561509.4	4191016	0.000391	0.001615	0.002006
561500.8	4191001	0.000378	0.001664	0.002042
561499.4	4190992	0.000382	0.001739	0.002121
561498.1	4190983	0.000385	0.00181	0.002195
561496.8	4190974	0.000389	0.001876	0.002265
561495.4	4190965	0.000392	0.001938	0.00233
561494.1	4190956	0.000395	0.001994	0.002389
561492.7	4190947	0.000398	0.002048	0.002446
561491.4	4190938	0.0004	0.002096	0.002496
561567.5	4191060	0.000541	0.001437	0.001978
561576.8	4191062	0.000578	0.001435	0.002013
561586.2	4191065	0.000617	0.001427	0.002044
561595.5	4191067	0.000658	0.001415	0.002073
561604.9	4191069	0.0007	0.001399	0.002099
561614.2	4191072	0.000741	0.001381	0.002122
561623.6	4191074	0.00078	0.00136	0.00214
561632.9	4191077	0.000815	0.001336	0.002151
561642.3	4191079	0.000844	0.001311	0.002155
561536.4	4191048	0.00044	0.001444	0.001884
561522.2	4191037	0.000407	0.001478	0.001885
561515.1	4191031	0.000391	0.001481	0.001872
561500.8	4191021	0.00036	0.001462	0.001822
561492.3	4191006	0.000349	0.001503	0.001852
561489.7	4190989	0.000356	0.001628	0.001984
561488.4	4190980	0.000359	0.001686	0.002045
561485.8	4190962	0.000366	0.001791	0.002157
561484.4	4190953	0.000369	0.001837	0.002206
561481.8	4190936	0.000372	0.001912	0.002284
561574.3	4191072	0.00053	0.001277	0.001807
561583.7	4191074	0.000563	0.001269	0.001832
561593	4191077	0.000596	0.001257	0.001853
561602.4	4191079	0.000628	0.001242	0.00187
561611.7	4191081	0.000659	0.001225	0.001884

561621.1	4191084	0.000688	0.001207	0.001895
561630.4	4191086	0.000713	0.001187	0.0019
561639.8	4191089	0.000734	0.001167	0.001901
561527.3	4191052	0.000401	0.001324	0.001725
561513.3	4191041	0.000373	0.001349	0.001722
561499.2	4191031	0.000346	0.001343	0.001689
561483.9	4191012	0.000323	0.001365	0.001688
561481.3	4190994	0.00033	0.001473	0.001803
561478.7	4190977	0.000336	0.001571	0.001907
561476.1	4190959	0.000343	0.001659	0.002002
561473.5	4190942	0.000347	0.001725	0.002072
561571.8	4191081	0.000487	0.001145	0.001632
561581.2	4191084	0.000514	0.001136	0.00165
561590.5	4191086	0.00054	0.001124	0.001664
561599.8	4191089	0.000565	0.00111	0.001675
561609.2	4191091	0.000589	0.001095	0.001684
561618.5	4191093	0.00061	0.001079	0.001689
561627.9	4191096	0.000628	0.001062	0.00169
561637.2	4191098	0.000643	0.001046	0.001689
561529.7	4191065	0.000387	0.001186	0.001573
561522.1	4191060	0.000374	0.001209	0.001583
561514.5	4191054	0.000361	0.001226	0.001587
561507	4191048	0.000348	0.001235	0.001583
561499.4	4191042	0.000335	0.001236	0.001571
561491.9	4191037	0.000321	0.001229	0.00155
561484.3	4191031	0.000309	0.001215	0.001524
561475.3	4191016	0.0003	0.001249	0.001549
561473.9	4191007	0.000304	0.001301	0.001605
561472.5	4190997	0.000307	0.001351	0.001658
561471.1	4190988	0.000311	0.001399	0.00171
561469.7	4190978	0.000314	0.001444	0.001758
561468.3	4190969	0.000317	0.001486	0.001803
561467	4190960	0.00032	0.001525	0.001845
561465.6	4190950	0.000323	0.001558	0.001881
561464.2	4190941	0.000325	0.001586	0.001911
561462.8	4190932	0.000326	0.001612	0.001938
561559.9	4191088	0.000428	0.00104	0.001468
561569.3	4191091	0.000449	0.001033	0.001482
561578.6	4191093	0.00047	0.001024	0.001494
561588	4191096	0.00049	0.001011	0.001501
561597.3	4191098	0.00051	0.000998	0.001508
561606.7	4191101	0.000528	0.000985	0.001512
561616	4191103	0.000544	0.000971	0.001515
561625.4	4191105	0.000557	0.000957	0.001514
561634.7	4191108	0.000567	0.000943	0.001511
561527.7	4191075	0.000365	0.001078	0.001443
561520.3	4191070	0.000355	0.001101	0.001456

561512.8	4191064	0.000344	0.001119	0.001463
561505.4	4191058	0.000332	0.001131	0.001463
561498	4191053	0.000321	0.001137	0.001458
561490.6	4191047	0.000309	0.001135	0.001444
561483.1	4191042	0.000298	0.001127	0.001425
561475.7	4191036	0.000286	0.001115	0.001401
561466.9	4191021	0.00028	0.001148	0.001428
561465.5	4191012	0.000283	0.001194	0.001477
561464.1	4191003	0.000286	0.001237	0.001523
561462.8	4190993	0.000289	0.001277	0.001566
561461.4	4190984	0.000292	0.001315	0.001607
561460	4190975	0.000295	0.001351	0.001646
561458.7	4190966	0.000298	0.001385	0.001683
561457.3	4190957	0.000301	0.001417	0.001718
561455.9	4190947	0.000303	0.001444	0.001747
561454.5	4190938	0.000305	0.001469	0.001774
561453.2	4190929	0.000307	0.001492	0.001799
561557.4	4191098	0.000397	0.000945	0.001342
561566.8	4191100	0.000414	0.000938	0.001351
561576.1	4191103	0.000431	0.000928	0.001358
561585.5	4191105	0.000446	0.000916	0.001362
561594.8	4191108	0.000461	0.000904	0.001365
561604.2	4191110	0.000475	0.000892	0.001367
561613.5	4191112	0.000487	0.00088	0.001367
561622.8	4191115	0.000497	0.000868	0.001365
561632.2	4191117	0.000504	0.000856	0.001361
561525.6	4191085	0.000345	0.000983	0.001328
561518.3	4191080	0.000336	0.001006	0.001342
561511	4191074	0.000327	0.001024	0.001351
561503.7	4191068	0.000317	0.001038	0.001355
561496.4	4191063	0.000308	0.001048	0.001356
561489.1	4191057	0.000297	0.001051	0.001348
561481.7	4191052	0.000287	0.001048	0.001335
561474.4	4191046	0.000276	0.001039	0.001315
561467.1	4191041	0.000268	0.001031	0.001299
561458.4	4191026	0.000262	0.001062	0.001324
561457.1	4191017	0.000265	0.001101	0.001366
561455.7	4191008	0.000268	0.001138	0.001406
561454.4	4190999	0.00027	0.001172	0.001442
561453	4190990	0.000273	0.001204	0.001477
561451.7	4190981	0.000275	0.001235	0.00151
561450.3	4190972	0.000278	0.001265	0.001543
561449	4190963	0.000281	0.001293	0.001574
561447.6	4190954	0.000283	0.001319	0.001602
561446.3	4190945	0.000285	0.001343	0.001628
561554.9	4191107	0.000368	0.000863	0.001231
561564.2	4191110	0.000382	0.000856	0.001238

561573.6	4191112	0.000396	0.000846	0.001242
561582.9	4191115	0.000408	0.000835	0.001243
561592.3	4191117	0.00042	0.000824	0.001243
561601.6	4191120	0.00043	0.000813	0.001243
561611	4191122	0.000439	0.000802	0.001242
561620.3	4191124	0.000446	0.000792	0.001238
561629.7	4191127	0.000451	0.000781	0.001232
561523.5	4191095	0.000325	0.0009	0.001225
561509.1	4191084	0.00031	0.00094	0.00125
561501.9	4191079	0.000302	0.000955	0.001258
561494.6	4191073	0.000294	0.000967	0.001262
561487.4	4191068	0.000286	0.000975	0.00126
561473	4191057	0.000268	0.000973	0.001241
561465.8	4191051	0.000259	0.000967	0.001226
561458.6	4191046	0.000251	0.000959	0.001209
561450	4191031	0.000246	0.000985	0.001231
561448.7	4191022	0.000249	0.00102	0.001269
561447.3	4191014	0.000251	0.001053	0.001304
561446	4191005	0.000254	0.001082	0.001336
561444.7	4190996	0.000256	0.00111	0.001366
561442	4190978	0.00026	0.001162	0.001422
561440.7	4190969	0.000263	0.001187	0.00145
561439.3	4190960	0.000265	0.001211	0.001476
561552.4	4191117	0.000342	0.000792	0.001134
561561.7	4191119	0.000354	0.000784	0.001138
561571.1	4191122	0.000364	0.000775	0.001139
561580.4	4191124	0.000374	0.000765	0.001139
561589.8	4191127	0.000383	0.000754	0.001138
561599.1	4191129	0.000391	0.000744	0.001136
561608.5	4191132	0.000398	0.000735	0.001133
561617.8	4191134	0.000403	0.000725	0.001128
561627.2	4191136	0.000406	0.000716	0.001122
561526.9	4191109	0.00031	0.00081	0.00112
561519.3	4191103	0.000305	0.000833	0.001138
561511.6	4191097	0.000299	0.000854	0.001152
561504	4191092	0.000292	0.000872	0.001164
561496.4	4191086	0.000285	0.000888	0.001173
561488.7	4191080	0.000277	0.000901	0.001178
561481.1	4191074	0.00027	0.000909	0.001178
561473.4	4191068	0.000261	0.000911	0.001172
561465.8	4191063	0.000252	0.000908	0.001161
561458.2	4191057	0.000244	0.000903	0.001147
561450.5	4191051	0.000236	0.000895	0.001131
561441.5	4191036	0.000232	0.000919	0.001151
561440.1	4191026	0.000234	0.000951	0.001186
561438.6	4191017	0.000237	0.000983	0.001219
561437.2	4191007	0.000239	0.00101	0.001249

561435.8	4190998	0.000241	0.001036	0.001277
561434.4	4190989	0.000243	0.001061	0.001304
561433	4190979	0.000246	0.001085	0.001331
561549.9	4191126	0.000318	0.000729	0.001047
561559.2	4191129	0.000328	0.000721	0.001049
561568.5	4191131	0.000336	0.000713	0.001049
561577.9	4191134	0.000344	0.000704	0.001048
561587.2	4191136	0.000351	0.000694	0.001045
561596.6	4191139	0.000357	0.000685	0.001041
561605.9	4191141	0.000361	0.000676	0.001037
561615.3	4191144	0.000365	0.000668	0.001032
561624.6	4191146	0.000366	0.000659	0.001026
561517.2	4191113	0.000287	0.000767	0.001055
561509.7	4191107	0.000283	0.000787	0.00107
561502.2	4191102	0.000277	0.000805	0.001082
561494.6	4191096	0.000271	0.000821	0.001093
561487.1	4191090	0.000265	0.000834	0.0011
561479.6	4191085	0.000259	0.000845	0.001103
561472	4191079	0.000252	0.000851	0.001103
561464.5	4191073	0.000244	0.000851	0.001095
561457	4191067	0.000237	0.000848	0.001085
561449.5	4191062	0.000229	0.000843	0.001072
561441.9	4191056	0.000222	0.000836	0.001058
561433	4191041	0.000218	0.000856	0.001074
561431.6	4191032	0.00022	0.000885	0.001105
561430.2	4191022	0.000223	0.000912	0.001135
561428.8	4191013	0.000225	0.000938	0.001163
561427.5	4191004	0.000227	0.000962	0.001189
561426.1	4190994	0.000229	0.000984	0.001213
561424.7	4190985	0.000231	0.001006	0.001237
561547.3	4191136	0.000296	0.000673	0.00097
561556.7	4191138	0.000304	0.000666	0.00097
561566	4191141	0.000311	0.000658	0.000969
561575.4	4191143	0.000317	0.00065	0.000967
561584.7	4191146	0.000322	0.000641	0.000963
561594.1	4191148	0.000326	0.000632	0.000958
561603.4	4191151	0.00033	0.000624	0.000954
561612.8	4191153	0.000332	0.000617	0.000948
561622.1	4191156	0.000333	0.000609	0.000942
561515.1	4191123	0.000271	0.000709	0.00098
561507.7	4191117	0.000267	0.000728	0.000995
561500.2	4191112	0.000263	0.000745	0.001008
561492.8	4191106	0.000259	0.000761	0.001019
561485.4	4191100	0.000253	0.000774	0.001028
561477.9	4191095	0.000248	0.000785	0.001033
561470.5	4191089	0.000242	0.000793	0.001035
561463.1	4191083	0.000235	0.000796	0.001031

561455.7	4191078	0.000229	0.000796	0.001025
561448.2	4191072	0.000222	0.000793	0.001015
561440.8	4191067	0.000216	0.000789	0.001004
561433.4	4191061	0.000209	0.000782	0.000992
561424.6	4191046	0.000206	0.0008	0.001005
561423.2	4191037	0.000208	0.000825	0.001033
561421.8	4191028	0.00021	0.00085	0.001059
561420.5	4191019	0.000212	0.000873	0.001085
561419.1	4191009	0.000214	0.000895	0.001109
561417.7	4191000	0.000216	0.000916	0.001132
561416.3	4190991	0.000218	0.000935	0.001153
561415	4190982	0.00022	0.000954	0.001174
561544.8	4191145	0.000276	0.000624	0.0009
561554.2	4191148	0.000282	0.000617	0.0009
561563.5	4191150	0.000288	0.00061	0.000898
561572.9	4191153	0.000293	0.000602	0.000895
561582.2	4191155	0.000297	0.000594	0.00089
561591.5	4191158	0.0003	0.000586	0.000885
561600.9	4191160	0.000302	0.000578	0.00088
561610.2	4191163	0.000303	0.000571	0.000875
561619.6	4191165	0.000303	0.000565	0.000868
561512.9	4191133	0.000256	0.000658	0.000913
561505.6	4191127	0.000253	0.000675	0.000928
561498.2	4191121	0.00025	0.000691	0.000941
561490.9	4191116	0.000246	0.000707	0.000953
561483.6	4191110	0.000242	0.00072	0.000962
561476.2	4191105	0.000237	0.000731	0.000969
561468.9	4191099	0.000232	0.000739	0.000971
561461.5	4191094	0.000226	0.000744	0.00097
561454.2	4191088	0.000221	0.000746	0.000967
561446.8	4191083	0.000215	0.000746	0.00096
561439.5	4191077	0.000209	0.000743	0.000952
561432.2	4191072	0.000203	0.00074	0.000943
561424.8	4191066	0.000198	0.000734	0.000931
561416.1	4191051	0.000194	0.000749	0.000943
561414.8	4191042	0.000196	0.000772	0.000968
561413.4	4191033	0.000198	0.000794	0.000992
561412.1	4191024	0.0002	0.000815	0.001015
561410.7	4191015	0.000202	0.000835	0.001037
561409.3	4191006	0.000204	0.000854	0.001058
561408	4190997	0.000206	0.000873	0.001078
561542.3	4191155	0.000258	0.00058	0.000838
561551.6	4191157	0.000263	0.000574	0.000836
561561	4191160	0.000267	0.000567	0.000834
561570.3	4191162	0.000271	0.000559	0.00083
561579.7	4191165	0.000274	0.000552	0.000826
561589	4191167	0.000276	0.000544	0.00082

561598.4	4191170	0.000277	0.000538	0.000815
561607.7	4191172	0.000278	0.000531	0.000809
561617.1	4191175	0.000278	0.000525	0.000803
561516.7	4191147	0.000242	0.000597	0.000839
561509	4191141	0.000241	0.000615	0.000856
561501.3	4191135	0.000239	0.000632	0.000871
561493.6	4191129	0.000236	0.000648	0.000884
561478.2	4191118	0.000229	0.000676	0.000905
561470.5	4191112	0.000225	0.000687	0.000912
561462.9	4191106	0.00022	0.000694	0.000913
561455.2	4191100	0.000214	0.000699	0.000913
561447.5	4191095	0.000209	0.000701	0.000909
561439.8	4191089	0.000203	0.000701	0.000904
561432.1	4191083	0.000198	0.0007	0.000898
561424.4	4191077	0.000192	0.000696	0.000888
561416.7	4191071	0.000187	0.00069	0.000878
561407.6	4191056	0.000184	0.000706	0.00089
561406.2	4191046	0.000186	0.000728	0.000914
561404.8	4191037	0.000188	0.000749	0.000937
561403.3	4191027	0.00019	0.000769	0.000959
561401.9	4191018	0.000192	0.000788	0.000979
561539.8	4191164	0.000241	0.000541	0.000782
561549.1	4191167	0.000245	0.000535	0.00078
561558.5	4191169	0.000249	0.000528	0.000777
561567.8	4191172	0.000251	0.000521	0.000773
561577.2	4191174	0.000254	0.000514	0.000768
561586.5	4191177	0.000255	0.000508	0.000762
561595.9	4191179	0.000255	0.000501	0.000757
561605.2	4191182	0.000256	0.000495	0.000751
561506.9	4191151	0.000227	0.000573	0.0008
561499.3	4191145	0.000226	0.000589	0.000815
561491.7	4191139	0.000224	0.000604	0.000828
561484.1	4191134	0.000222	0.000618	0.00084
561476.5	4191128	0.000219	0.000631	0.00085
561468.9	4191122	0.000215	0.000642	0.000857
561461.3	4191116	0.000211	0.00065	0.000861
561453.7	4191111	0.000206	0.000656	0.000862
561446.1	4191105	0.000201	0.000658	0.000859
561438.5	4191099	0.000197	0.000661	0.000857
561430.9	4191093	0.000192	0.000662	0.000854
561423.3	4191088	0.000187	0.00066	0.000847
561415.7	4191082	0.000182	0.000657	0.000839
561408.1	4191076	0.000177	0.000651	0.000829
561397.7	4191052	0.000177	0.000685	0.000862
561396.3	4191042	0.000178	0.000704	0.000883
561537.2	4191174	0.000226	0.000505	0.000731
561546.6	4191176	0.000229	0.0005	0.000728

561555.9	4191179	0.000232	0.000493	0.000725
561565.3	4191181	0.000234	0.000487	0.000721
561574.6	4191184	0.000235	0.000481	0.000716
561584	4191186	0.000236	0.000475	0.00071
561593.3	4191189	0.000236	0.000468	0.000705
561602.7	4191191	0.000236	0.000463	0.000699
561504.7	4191161	0.000215	0.000535	0.000749
561497.2	4191155	0.000214	0.00055	0.000764
561489.7	4191149	0.000213	0.000564	0.000777
561482.2	4191144	0.000211	0.000578	0.000789
561474.7	4191138	0.000209	0.00059	0.000799
561467.2	4191132	0.000206	0.000601	0.000807
561459.7	4191127	0.000203	0.00061	0.000813
561452.1	4191121	0.000199	0.000617	0.000815
561444.6	4191115	0.000194	0.000621	0.000815
561437.1	4191110	0.00019	0.000624	0.000814
561429.6	4191104	0.000186	0.000626	0.000812
561422.1	4191098	0.000182	0.000626	0.000808
561414.6	4191093	0.000177	0.000624	0.000802
561407.1	4191087	0.000173	0.000621	0.000794
561517.3	4191182	0.000202	0.000473	0.000674
561502.5	4191170	0.000203	0.000501	0.000703
561495.1	4191165	0.000203	0.000515	0.000717
561487.6	4191159	0.000202	0.000528	0.00073
561480.2	4191154	0.000201	0.000541	0.000742
561472.8	4191148	0.000199	0.000553	0.000752
561465.3	4191142	0.000197	0.000564	0.00076
561457.9	4191137	0.000194	0.000573	0.000768
561450.5	4191131	0.000191	0.000581	0.000772
561443.1	4191125	0.000188	0.000586	0.000774
561435.6	4191120	0.000184	0.00059	0.000774
561428.2	4191114	0.00018	0.000592	0.000772
561420.8	4191109	0.000176	0.000594	0.00077
561413.3	4191103	0.000172	0.000594	0.000766
561405.9	4191097	0.000168	0.000592	0.00076
561398.5	4191092	0.000164	0.000589	0.000753
561522.3	4191197	0.000188	0.000431	0.000619
561515	4191191	0.00019	0.000444	0.000634
561507.6	4191186	0.000191	0.000457	0.000648
561500.3	4191180	0.000192	0.00047	0.000661
561492.9	4191175	0.000192	0.000483	0.000675
561485.5	4191169	0.000192	0.000495	0.000687
561478.2	4191163	0.000191	0.000507	0.000698
561470.8	4191158	0.00019	0.000519	0.000708
561463.5	4191152	0.000188	0.000529	0.000717
561456.1	4191147	0.000186	0.000539	0.000725
561448.7	4191141	0.000184	0.000547	0.000731

561441.4	4191136	0.000181	0.000554	0.000735
561434	4191130	0.000178	0.000558	0.000735
561426.7	4191124	0.000174	0.00056	0.000735
561419.3	4191119	0.000171	0.000562	0.000733
561412	4191113	0.000167	0.000564	0.000731
561404.6	4191108	0.000164	0.000563	0.000727
561397.2	4191102	0.00016	0.000561	0.000721
561529.7	4191202	0.000186	0.000418	0.000605
561539	4191205	0.000188	0.000413	0.000601
561548.4	4191207	0.000189	0.000408	0.000598
561557.7	4191210	0.00019	0.000403	0.000593
561567.1	4191212	0.00019	0.000398	0.000588
561576.4	4191215	0.00019	0.000393	0.000583
561585.8	4191217	0.00019	0.000388	0.000578
561595.1	4191220	0.000189	0.000384	0.000572
561604.5	4191222	0.000187	0.00038	0.000567
561519.5	4191206	0.000178	0.000406	0.000584
561511.9	4191200	0.000179	0.000419	0.000598
561504.2	4191195	0.000181	0.000431	0.000612
561496.6	4191189	0.000181	0.000444	0.000625
561489	4191183	0.000182	0.000457	0.000639
561481.3	4191177	0.000182	0.000469	0.000651
561473.7	4191171	0.000181	0.000481	0.000662
561466	4191166	0.00018	0.000492	0.000672
561458.4	4191160	0.000179	0.000502	0.000681
561450.8	4191154	0.000177	0.000511	0.000688
561435.5	4191143	0.000173	0.000525	0.000697
561427.8	4191137	0.00017	0.000529	0.000699
561420.2	4191131	0.000166	0.000532	0.000698
561412.5	4191125	0.000163	0.000534	0.000697
561404.9	4191119	0.00016	0.000535	0.000695
561397.3	4191114	0.000156	0.000535	0.000691
561527.2	4191212	0.000175	0.000394	0.000569
561536.5	4191214	0.000177	0.00039	0.000566
561545.9	4191217	0.000178	0.000385	0.000562
561555.2	4191219	0.000178	0.00038	0.000558
561564.6	4191222	0.000178	0.000375	0.000553
561573.9	4191224	0.000178	0.000371	0.000548
561583.2	4191227	0.000177	0.000366	0.000543
561592.6	4191229	0.000176	0.000362	0.000538
561601.9	4191232	0.000175	0.000358	0.000533
561517.1	4191216	0.000167	0.000383	0.000551
561509.5	4191210	0.000169	0.000395	0.000564
561502	4191204	0.000171	0.000406	0.000577
561494.4	4191198	0.000172	0.000418	0.00059
561486.8	4191193	0.000173	0.00043	0.000602
561479.3	4191187	0.000173	0.000441	0.000614

561471.7	4191181	0.000173	0.000452	0.000625
561464.1	4191176	0.000172	0.000463	0.000635
561456.6	4191170	0.000171	0.000472	0.000644
561449	4191164	0.00017	0.000481	0.000651
561441.4	4191158	0.000168	0.000489	0.000657
561433.9	4191153	0.000166	0.000496	0.000662
561426.3	4191147	0.000163	0.000501	0.000664
561418.7	4191141	0.000161	0.000504	0.000665
561411.2	4191136	0.000158	0.000506	0.000664
561403.6	4191130	0.000155	0.000508	0.000663
561396.1	4191124	0.000152	0.000509	0.000661
561388.5	4191118	0.000149	0.000509	0.000657
561524.6	4191221	0.000165	0.000372	0.000537
561534	4191224	0.000166	0.000368	0.000534
561543.3	4191226	0.000167	0.000364	0.00053
561552.7	4191229	0.000167	0.000359	0.000526
561562	4191231	0.000167	0.000355	0.000522
561571.4	4191234	0.000166	0.00035	0.000517
561580.7	4191236	0.000166	0.000346	0.000512
561590.1	4191239	0.000165	0.000342	0.000507
561599.4	4191241	0.000163	0.000339	0.000502
561514.6	4191225	0.000158	0.000362	0.00052
561507.1	4191220	0.00016	0.000373	0.000533
561499.6	4191214	0.000162	0.000384	0.000545
561492.1	4191208	0.000163	0.000395	0.000557
561484.7	4191203	0.000164	0.000405	0.000569
561477.2	4191197	0.000164	0.000416	0.00058
561469.7	4191191	0.000164	0.000426	0.000591
561462.2	4191186	0.000164	0.000436	0.0006
561454.7	4191180	0.000164	0.000446	0.000609
561447.2	4191174	0.000163	0.000454	0.000617
561439.7	4191169	0.000161	0.000462	0.000623
561432.2	4191163	0.00016	0.000469	0.000628
561424.7	4191157	0.000158	0.000474	0.000631
561417.2	4191152	0.000155	0.000478	0.000633
561409.7	4191146	0.000153	0.000481	0.000634
561402.2	4191140	0.00015	0.000483	0.000633
561394.7	4191135	0.000147	0.000484	0.000632
561387.2	4191129	0.000144	0.000485	0.000629
561522.1	4191231	0.000156	0.000352	0.000508
561531.5	4191233	0.000157	0.000348	0.000505
561540.8	4191236	0.000157	0.000344	0.000501
561550.2	4191238	0.000157	0.00034	0.000497
561559.5	4191241	0.000157	0.000336	0.000492
561568.9	4191243	0.000156	0.000332	0.000488
561578.2	4191246	0.000155	0.000328	0.000483
561587.6	4191248	0.000154	0.000324	0.000478

561596.9	4191251	0.000153	0.000321	0.000474
561512.2	4191235	0.000149	0.000343	0.000492
561504.7	4191229	0.000151	0.000353	0.000504
561497.3	4191224	0.000153	0.000363	0.000516
561489.9	4191218	0.000154	0.000373	0.000527
561482.5	4191212	0.000155	0.000383	0.000538
561475	4191207	0.000156	0.000393	0.000549
561467.6	4191201	0.000157	0.000403	0.000559
561460.2	4191195	0.000157	0.000412	0.000568
561452.7	4191190	0.000156	0.000421	0.000577
561445.3	4191184	0.000156	0.000429	0.000585
561437.9	4191179	0.000155	0.000437	0.000591
561430.5	4191173	0.000153	0.000443	0.000597
561423	4191167	0.000152	0.000449	0.000601
561415.6	4191162	0.00015	0.000454	0.000604
561408.2	4191156	0.000148	0.000457	0.000605
561400.7	4191151	0.000145	0.00046	0.000605
561393.3	4191145	0.000143	0.000462	0.000605
561385.9	4191139	0.00014	0.000463	0.000603
561519.6	4191240	0.000147	0.000333	0.000481
561528.9	4191243	0.000148	0.00033	0.000478
561538.3	4191245	0.000148	0.000326	0.000474
561547.6	4191248	0.000148	0.000322	0.00047
561557	4191250	0.000148	0.000318	0.000466
561566.3	4191253	0.000147	0.000315	0.000461
561575.7	4191255	0.000146	0.000311	0.000457
561585	4191258	0.000145	0.000308	0.000452
561594.4	4191260	0.000144	0.000304	0.000448
561509.4	4191244	0.000141	0.000326	0.000467
561501.7	4191238	0.000143	0.000335	0.000478
561494.1	4191232	0.000145	0.000345	0.00049
561486.4	4191227	0.000147	0.000355	0.000501
561478.7	4191221	0.000148	0.000364	0.000512
561471	4191215	0.000149	0.000374	0.000523
561463.3	4191209	0.000149	0.000383	0.000532
561455.7	4191203	0.000149	0.000392	0.000542
561448	4191198	0.000149	0.000401	0.00055
561440.3	4191192	0.000149	0.000409	0.000558
561425	4191180	0.000147	0.000423	0.00057
561417.3	4191174	0.000145	0.000429	0.000574
561409.6	4191169	0.000144	0.000433	0.000577
561401.9	4191163	0.000142	0.000437	0.000578
561394.3	4191157	0.000139	0.00044	0.000579
561386.6	4191151	0.000137	0.000441	0.000579
561378.9	4191145	0.000135	0.000443	0.000578
561517.1	4191250	0.000139	0.000316	0.000456
561526.4	4191252	0.00014	0.000313	0.000453

561535.8	4191255	0.00014	0.00031	0.000449
561545.1	4191257	0.00014	0.000306	0.000445
561554.5	4191260	0.000139	0.000302	0.000441
561563.8	4191262	0.000138	0.000299	0.000437
561573.2	4191265	0.000137	0.000295	0.000433
561582.5	4191267	0.000136	0.000292	0.000428
561591.9	4191270	0.000135	0.000289	0.000424
561507	4191254	0.000134	0.000309	0.000443
561499.3	4191248	0.000136	0.000318	0.000454
561491.7	4191242	0.000138	0.000327	0.000465
561484.1	4191236	0.000139	0.000336	0.000475
561476.5	4191231	0.000141	0.000345	0.000486
561468.9	4191225	0.000142	0.000354	0.000496
561461.3	4191219	0.000142	0.000363	0.000505
561453.7	4191213	0.000143	0.000371	0.000514
561446.1	4191208	0.000143	0.00038	0.000522
561438.5	4191202	0.000142	0.000387	0.00053
561430.9	4191196	0.000142	0.000395	0.000537
561423.3	4191190	0.000141	0.000401	0.000542
561415.7	4191185	0.00014	0.000407	0.000547
561408.1	4191179	0.000139	0.000412	0.000551
561400.4	4191173	0.000137	0.000416	0.000553
561392.8	4191167	0.000135	0.000419	0.000554
561385.2	4191162	0.000133	0.000421	0.000554
561377.6	4191156	0.000131	0.000424	0.000555
561514.6	4191259	0.000132	0.000301	0.000432
561523.9	4191262	0.000132	0.000297	0.000429
561533.3	4191264	0.000132	0.000294	0.000426
561542.6	4191267	0.000132	0.000291	0.000422
561552	4191269	0.000131	0.000287	0.000419
561561.3	4191272	0.000131	0.000284	0.000415
561570.6	4191274	0.00013	0.000281	0.00041
561580	4191277	0.000129	0.000278	0.000406
561589.3	4191279	0.000127	0.000275	0.000402
561696.7	4190953	0.01024	0.02411	0.03435
561699.2	4190945	0.007722	0.02693	0.034652
561701.8	4190936	0.005872	0.02909	0.034962
561704.4	4190927	0.00459	0.0307	0.03529
561707	4190918	0.00369	0.03187	0.03556
561709.6	4190909	0.00303	0.03262	0.03565
561712.1	4190900	0.002531	0.03293	0.035461
561714.7	4190891	0.002148	0.03275	0.034898
561717.3	4190882	0.001848	0.03197	0.033818
561719.9	4190873	0.001609	0.03033	0.031939
561722.5	4190864	0.001415	0.02746	0.028875
561706.1	4190956	0.01376	0.0185	0.03226
561708.7	4190947	0.009644	0.02083	0.030474

561711.3	4190938	0.006987	0.0227	0.029687
561713.9	4190929	0.00529	0.02416	0.02945
561716.4	4190921	0.004163	0.02526	0.029423
561719	4190912	0.00337	0.02601	0.02938
561721.6	4190903	0.002788	0.02637	0.029158
561724.2	4190894	0.002346	0.02632	0.028666
561726.8	4190885	0.002004	0.02577	0.027774
561729.3	4190876	0.001734	0.02461	0.026344
561731.9	4190867	0.001516	0.02271	0.024226
561682	4191010	0.005745	0.004607	0.010352
561713	4190968	0.0222	0.0125	0.0347
561715.6	4190959	0.01714	0.01462	0.03176
561718.2	4190950	0.01165	0.01652	0.02817
561720.7	4190941	0.008191	0.01812	0.026311
561723.3	4190932	0.006055	0.01941	0.025465
561725.9	4190923	0.00467	0.02041	0.02508
561728.5	4190914	0.003725	0.02111	0.024835
561731.1	4190905	0.003049	0.02149	0.024539
561733.6	4190897	0.002546	0.02153	0.024076
561736.2	4190888	0.00216	0.02118	0.02334
561738.8	4190879	0.001858	0.02038	0.022238
561741.4	4190870	0.001618	0.01911	0.020728
561686.9	4191018	0.004836	0.00375	0.008586
561725	4190962	0.01969	0.01192	0.03161
561727.6	4190953	0.0134	0.01344	0.02684
561730.2	4190944	0.009332	0.01478	0.024112
561732.8	4190935	0.006811	0.0159	0.022711
561735.4	4190926	0.005183	0.01678	0.021963
561737.9	4190917	0.004089	0.01743	0.021519
561740.5	4190908	0.003315	0.01781	0.021125
561743.1	4190899	0.002747	0.01791	0.020657
561745.7	4190890	0.002319	0.01772	0.020039
561748.3	4190881	0.001989	0.01719	0.019179
561750.8	4190873	0.001726	0.01631	0.018036
561690.2	4191027	0.003873	0.003113	0.006986
561672.6	4191030	0.002749	0.002946	0.005695
561734.5	4190964	0.0214	0.009947	0.031347
561737.1	4190956	0.0147	0.01118	0.02588
561739.6	4190947	0.01027	0.01229	0.02256
561742.2	4190938	0.00748	0.01325	0.02073
561752.6	4190902	0.002956	0.01513	0.018086
561755.1	4190893	0.002484	0.01504	0.017524
561757.7	4190884	0.002121	0.0147	0.016821
561760.3	4190875	0.001834	0.0141	0.015934
561695.3	4191036	0.003206	0.002645	0.005851
561678.1	4191038	0.002435	0.002523	0.004958
561743.9	4190967	0.02231	0.008459	0.030769

561746.5	4190958	0.01552	0.009459	0.024979
561749.1	4190949	0.01094	0.01038	0.02132
561751.7	4190940	0.00801	0.0112	0.01921
561762	4190905	0.00315	0.01294	0.01609
561764.6	4190896	0.002639	0.01293	0.015569
561767.2	4190887	0.002245	0.01271	0.014955
561769.8	4190878	0.001936	0.0123	0.014236
561700.4	4191044	0.002643	0.002278	0.004921
561683.5	4191047	0.002119	0.002189	0.004308
561753.4	4190970	0.02243	0.007306	0.029736
561756	4190961	0.01583	0.008126	0.023956
561758.6	4190952	0.0113	0.008898	0.020198
561761.1	4190943	0.00835	0.009591	0.017941
561771.5	4190908	0.003314	0.01118	0.014494
561774	4190899	0.002772	0.01121	0.013982
561776.6	4190890	0.002354	0.01109	0.013444
561779.2	4190881	0.002026	0.01081	0.012836
561762.8	4190973	0.02174	0.006388	0.028128
561765.4	4190964	0.0156	0.007069	0.022669
561768	4190955	0.0113	0.007716	0.019016
561770.6	4190946	0.008458	0.008306	0.016764
561780.9	4190910	0.003429	0.009731	0.01316
561783.5	4190901	0.00287	0.009799	0.012669
561786.1	4190892	0.002439	0.009742	0.012181
561788.7	4190884	0.002101	0.009563	0.011664
561677.5	4191066	0.001345	0.001632	0.002977
561661.2	4191068	0.001149	0.00156	0.002709
561714.3	4191070	0.001492	0.00155	0.003042
561705.3	4191071	0.001405	0.00153	0.002935
561696.3	4191072	0.001316	0.001507	0.002823
561687.3	4191074	0.001227	0.001478	0.002705
561678.3	4191075	0.001142	0.001446	0.002588
561669.3	4191076	0.001061	0.001413	0.002474
561660.3	4191077	0.000984	0.001379	0.002363
561797.2	4190925	0.00422	0.007351	0.011571
561799.8	4190916	0.003521	0.007534	0.011055
561802.4	4190907	0.002975	0.007636	0.010611
561805	4190898	0.002544	0.007657	0.010201
561807.6	4190889	0.002201	0.007602	0.009803
561777.9	4191015	0.01143	0.003096	0.014526
561719.3	4191079	0.001259	0.00139	0.002649
561701.7	4191081	0.001136	0.001354	0.00249
561684	4191083	0.001012	0.001306	0.002318
561666.3	4191085	0.000894	0.001252	0.002146
561786	4190999	0.01453	0.003695	0.018225
561796.4	4190963	0.009093	0.005293	0.014386
561799	4190954	0.007382	0.005662	0.013044

561801.5	4190945	0.006033	0.005996	0.012029
561804.1	4190936	0.00498	0.006285	0.011265
561806.7	4190927	0.004155	0.006524	0.010679
561809.3	4190918	0.003503	0.0067	0.010203
561811.9	4190910	0.002983	0.00681	0.009793
561814.4	4190901	0.002565	0.006853	0.009418
561817	4190892	0.002226	0.006829	0.009055
561787.5	4191017	0.008421	0.002856	0.011277
561776.6	4191031	0.005677	0.00247	0.008147
561765.7	4191045	0.003474	0.002099	0.005573
561724.3	4191087	0.001072	0.001255	0.002327
561706.9	4191089	0.000984	0.001223	0.002207
561689.5	4191092	0.000895	0.001186	0.002081
561672.1	4191094	0.000807	0.001141	0.001948
561654.7	4191096	0.000723	0.001094	0.001817
561795.5	4191001	0.01048	0.003369	0.013849
561805.8	4190966	0.007938	0.004742	0.01268
561808.4	4190957	0.006704	0.005064	0.011768
561811	4190948	0.005639	0.005358	0.010997
561813.6	4190939	0.004755	0.005617	0.010372
561816.2	4190930	0.004031	0.005831	0.009862
561818.7	4190921	0.00344	0.005996	0.009436
561821.3	4190912	0.002957	0.006108	0.009065
561823.9	4190903	0.00256	0.006163	0.008723
561826.5	4190894	0.002233	0.006162	0.008395
561797	4191020	0.006434	0.002644	0.009078
561786.3	4191033	0.004742	0.002312	0.007054
561775.5	4191047	0.003156	0.001993	0.005149
561764.7	4191061	0.00212	0.001701	0.003821
561729.3	4191096	0.000922	0.001139	0.002061
561712.1	4191098	0.000856	0.001111	0.001967
561694.9	4191100	0.000792	0.001082	0.001874
561677.7	4191102	0.000725	0.001045	0.00177
561660.5	4191105	0.000661	0.001005	0.001666
561805	4191004	0.007861	0.003089	0.01095
561817.9	4190960	0.005981	0.004561	0.010542
561820.4	4190951	0.005178	0.00482	0.009998
561823	4190942	0.004466	0.005048	0.009514
561825.6	4190933	0.003853	0.005242	0.009095
561828.2	4190924	0.003333	0.005395	0.008728
561830.8	4190915	0.002896	0.005504	0.0084
561833.4	4190906	0.002528	0.005567	0.008095
561835.9	4190897	0.00222	0.005583	0.007803
561795.9	4191036	0.003978	0.002168	0.006146
561785.3	4191049	0.002828	0.001888	0.004716
561774.6	4191063	0.001989	0.001631	0.00362
561734.2	4191104	0.000801	0.001039	0.00184

561717.2	4191107	0.00075	0.001015	0.001765
561700.2	4191109	0.000702	0.000992	0.001693
561683.2	4191111	0.000651	0.00096	0.001611
561666.2	4191113	0.000602	0.000926	0.001528
561649.2	4191115	0.000553	0.000891	0.001444
561814.4	4191007	0.006123	0.002849	0.008972
561827.3	4190962	0.005276	0.004131	0.009407
561829.9	4190953	0.004691	0.004358	0.009049
561832.5	4190945	0.004137	0.004562	0.008699
561835.1	4190936	0.003634	0.004736	0.00837
561837.6	4190927	0.003191	0.004878	0.008069
561840.2	4190918	0.002805	0.004984	0.007789
561842.8	4190909	0.002473	0.005051	0.007524
561845.4	4190900	0.002187	0.005078	0.007265
561815.6	4191026	0.004131	0.002285	0.006416
561809.9	4191033	0.003735	0.002147	0.005882
561804.3	4191040	0.003273	0.002008	0.005281
561798.6	4191047	0.002809	0.001874	0.004683
561792.9	4191054	0.002378	0.001744	0.004122
561787.3	4191062	0.002007	0.001619	0.003626
561781.6	4191069	0.001698	0.001502	0.0032
561764.6	4191090	0.00107	0.001196	0.002266
561758.9	4191097	0.000932	0.00111	0.002042
561729.4	4191114	0.00068	0.000942	0.001622
561720.4	4191115	0.000659	0.000931	0.00159
561711.3	4191116	0.000638	0.00092	0.001558
561693.2	4191119	0.000596	0.000893	0.001489
561684.1	4191120	0.000575	0.000878	0.001452
561675	4191121	0.000554	0.000862	0.001416
561665.9	4191122	0.000533	0.000846	0.001379
561656.9	4191123	0.000513	0.00083	0.001343
561647.8	4191125	0.000492	0.000813	0.001306
561821.3	4191019	0.004409	0.002421	0.00683
561823.9	4191010	0.004912	0.002638	0.00755
561826.4	4191001	0.005243	0.002863	0.008106
561829	4190992	0.005358	0.003092	0.00845
561831.6	4190983	0.005258	0.003321	0.008579
561834.2	4190974	0.004994	0.003545	0.008539
561836.8	4190965	0.004626	0.003759	0.008385
561839.4	4190956	0.004211	0.003957	0.008168
561841.9	4190947	0.003791	0.004138	0.007929
561844.5	4190938	0.00339	0.004297	0.007687
561847.1	4190929	0.003022	0.004429	0.007451
561849.7	4190921	0.00269	0.004531	0.007221
561852.3	4190912	0.002395	0.004599	0.006994
561854.8	4190903	0.002137	0.004635	0.006772
561825.1	4191028	0.003448	0.00214	0.005588

561819.6	4191035	0.003167	0.002019	0.005186
561808.4	4191050	0.002487	0.001777	0.004264
561802.8	4191057	0.002149	0.00166	0.003809
561791.6	4191071	0.001589	0.001443	0.003032
561774.8	4191092	0.001038	0.001166	0.002204
561763.6	4191106	0.000803	0.001012	0.001815
561716.6	4191125	0.00057	0.00085	0.00142
561698.7	4191127	0.000536	0.000826	0.001362
561689.8	4191128	0.00052	0.000813	0.001333
561671.9	4191131	0.000487	0.000786	0.001273
561654	4191133	0.000455	0.000758	0.001213
561645	4191134	0.000438	0.000744	0.001182
561833.3	4191012	0.004034	0.002451	0.006485
561835.9	4191003	0.004306	0.002647	0.006953
561838.5	4190995	0.004437	0.002847	0.007284
561841.1	4190986	0.004421	0.003047	0.007468
561843.6	4190977	0.004279	0.003243	0.007522
561846.2	4190968	0.004046	0.003431	0.007477
561848.8	4190959	0.003758	0.003607	0.007365
561851.4	4190950	0.003448	0.003769	0.007217
561854	4190941	0.003136	0.003915	0.007051
561856.6	4190932	0.002837	0.004038	0.006875
561859.1	4190923	0.002557	0.004136	0.006693
561861.7	4190914	0.002302	0.004204	0.006506
561864.3	4190905	0.002071	0.004244	0.006315
561834.7	4191031	0.002926	0.002009	0.004935
561823.6	4191045	0.002476	0.001795	0.004271
561812.6	4191059	0.00195	0.001584	0.003534
561801.5	4191073	0.001481	0.001385	0.002866
561779.4	4191101	0.000882	0.001058	0.00194
561768.3	4191115	0.0007	0.000928	0.001628
561748.4	4191130	0.000551	0.00081	0.001361
561713.1	4191135	0.000498	0.000777	0.001275
561695.4	4191137	0.000471	0.000756	0.001226
561677.7	4191139	0.000444	0.000732	0.001176
561660	4191141	0.000419	0.000707	0.001126
561642.3	4191144	0.000393	0.000683	0.001075
561842.8	4191015	0.003368	0.002279	0.005647
561845.4	4191006	0.003593	0.002453	0.006046
561847.9	4190997	0.003724	0.00263	0.006354
561850.5	4190988	0.003752	0.002806	0.006558
561853.1	4190979	0.003686	0.002979	0.006665
561855.7	4190971	0.003543	0.003145	0.006688
561858.3	4190962	0.003347	0.003302	0.006649
561860.8	4190953	0.003121	0.003447	0.006568
561863.4	4190944	0.002884	0.00358	0.006464
561866	4190935	0.002644	0.003694	0.006338

561868.6	4190926	0.002413	0.003787	0.0062
561871.2	4190917	0.002194	0.003852	0.006046
561873.8	4190908	0.001993	0.003895	0.005888
561844.2	4191034	0.002516	0.001888	0.004404
561833.2	4191048	0.002179	0.0017	0.003879
561822.3	4191061	0.001769	0.001511	0.00328
561811.4	4191075	0.001383	0.001332	0.002715
561789.5	4191103	0.000849	0.001028	0.001877
561778.5	4191117	0.000683	0.000908	0.001591
561767.6	4191131	0.000557	0.000803	0.00136
561753.4	4191139	0.000494	0.000751	0.001245
561718.4	4191143	0.00045	0.000723	0.001173
561700.9	4191145	0.000428	0.000704	0.001132
561683.4	4191148	0.000406	0.000684	0.00109
561665.9	4191150	0.000385	0.000662	0.001047
561648.4	4191152	0.000364	0.00064	0.001004
561852.2	4191018	0.002858	0.002126	0.004984
561854.8	4191009	0.003045	0.00228	0.005325
561857.4	4191000	0.003167	0.002437	0.005604
561860	4190991	0.003216	0.002593	0.005809
561862.6	4190982	0.003194	0.002747	0.005941
561865.1	4190973	0.003112	0.002896	0.006008
561867.7	4190964	0.002982	0.003037	0.006019
561870.3	4190955	0.00282	0.003167	0.005987
561872.9	4190947	0.002641	0.003287	0.005928
561875.5	4190938	0.002452	0.003391	0.005843
561878	4190929	0.002263	0.003476	0.005739
561880.6	4190920	0.00208	0.003541	0.005621
561883.2	4190911	0.001906	0.003585	0.005491
561853.7	4191036	0.002189	0.001778	0.003967
561842.8	4191050	0.00193	0.001612	0.003542
561832	4191064	0.001608	0.001443	0.003051
561821.2	4191077	0.001289	0.001281	0.00257
561799.5	4191105	0.000815	0.000999	0.001813
561788.6	4191119	0.000663	0.000886	0.001549
561777.8	4191132	0.000546	0.000788	0.001335
561758.3	4191147	0.000446	0.000699	0.001145
561741	4191149	0.000428	0.000688	0.001116
561706.3	4191154	0.00039	0.000658	0.001047
561688.9	4191156	0.000372	0.00064	0.001012
561671.6	4191158	0.000355	0.00062	0.000975
561654.3	4191161	0.000337	0.0006	0.000938
561636.9	4191163	0.00032	0.000582	0.000902
561861.7	4191021	0.002461	0.001989	0.00445
561864.3	4191012	0.002615	0.002126	0.004741
561866.9	4191003	0.002727	0.002267	0.004994
561869.4	4190994	0.002787	0.002407	0.005194

561872	4190985	0.002792	0.002546	0.005338
561874.6	4190976	0.002749	0.002679	0.005428
561877.2	4190967	0.002664	0.002805	0.005469
561851.5	4191054	0.0017	0.001517	0.003217
561845.8	4191061	0.001565	0.001437	0.003002
561840.1	4191068	0.001424	0.001357	0.002781
561834.4	4191075	0.001284	0.001278	0.002562
561828.7	4191083	0.001149	0.001202	0.002351
561823	4191090	0.001025	0.001129	0.002154
561817.3	4191097	0.000914	0.00106	0.001974
561811.6	4191104	0.000816	0.000995	0.001811
561806	4191111	0.000732	0.000935	0.001667
561800.3	4191119	0.00066	0.00088	0.00154
561794.6	4191126	0.000598	0.000828	0.001426
561788.9	4191133	0.000543	0.000781	0.001323
561783.2	4191140	0.000493	0.000736	0.001229
561777.5	4191147	0.00045	0.000694	0.001144
561762.7	4191156	0.000404	0.000652	0.001056
561753.6	4191157	0.000397	0.000647	0.001043
561744.5	4191158	0.000388	0.000641	0.001029
561735.4	4191159	0.000379	0.000635	0.001014
561717.2	4191162	0.000362	0.00062	0.000982
561708.1	4191163	0.000354	0.000613	0.000966
561699	4191164	0.000345	0.000604	0.00095
561689.9	4191165	0.000338	0.000596	0.000933
561680.8	4191166	0.00033	0.000587	0.000917
561671.7	4191168	0.000322	0.000577	0.000899
561662.6	4191169	0.000315	0.000568	0.000882
561653.5	4191170	0.000307	0.000558	0.000865
561644.4	4191171	0.0003	0.00055	0.000849
561635.3	4191172	0.000293	0.000541	0.000834
561872.4	4191042	0.001702	0.001582	0.003284
561844.2	4191078	0.00119	0.001228	0.002418
561838.6	4191085	0.001076	0.001159	0.002235
561833	4191092	0.000969	0.001092	0.002061
561821.7	4191106	0.000783	0.000968	0.001751
561810.4	4191120	0.00064	0.000859	0.001499
561799.2	4191135	0.000531	0.000766	0.001297
561787.9	4191149	0.000443	0.000684	0.001127
561767.7	4191164	0.000368	0.000609	0.000977
561758.6	4191166	0.000362	0.000605	0.000967
561749.6	4191167	0.000355	0.0006	0.000955
561740.6	4191168	0.000347	0.000594	0.000941
561731.6	4191169	0.00034	0.000588	0.000928
561713.6	4191171	0.000325	0.000575	0.0009
561704.6	4191172	0.000318	0.000568	0.000886
561695.6	4191174	0.000311	0.00056	0.000872

561686.6	4191175	0.000305	0.000552	0.000857
561677.6	4191176	0.000298	0.000544	0.000843
561668.6	4191177	0.000292	0.000536	0.000828
561659.6	4191178	0.000286	0.000527	0.000813
561650.6	4191179	0.00028	0.000519	0.000799
561641.6	4191181	0.000274	0.000511	0.000785
561632.6	4191182	0.000268	0.000504	0.000772
561880.6	4191026	0.00189	0.001757	0.003647
561883.2	4191017	0.002002	0.001869	0.003871
561885.8	4191008	0.00209	0.001982	0.004072
561888.3	4190999	0.002149	0.002095	0.004244
561890.9	4190990	0.002176	0.002206	0.004382
561893.5	4190982	0.002173	0.002314	0.004487
561896.1	4190973	0.002142	0.002417	0.004559
561898.7	4190964	0.002087	0.002513	0.0046
561901.2	4190955	0.002013	0.002601	0.004614
561903.8	4190946	0.001926	0.002679	0.004605
561906.4	4190937	0.001829	0.002747	0.004576
561909	4190928	0.001727	0.002804	0.004531
561911.6	4190919	0.001623	0.002848	0.004471
561881.9	4191045	0.001519	0.001497	0.003016
561870.7	4191059	0.001379	0.001373	0.002752
561865.2	4191066	0.001293	0.001309	0.002602
561842.9	4191094	0.000915	0.001056	0.001971
561831.7	4191108	0.00075	0.000941	0.001691
561820.5	4191122	0.000618	0.000839	0.001457
561815	4191129	0.000564	0.000793	0.001357
561803.8	4191144	0.000474	0.000711	0.001185
561792.7	4191158	0.0004	0.000637	0.001038
561772.6	4191173	0.000337	0.000571	0.000908
561754.7	4191175	0.000325	0.000563	0.000888
561736.9	4191178	0.000312	0.000553	0.000865
561710.1	4191181	0.000294	0.000535	0.000828
561692.3	4191183	0.000282	0.000521	0.000803
561683.4	4191184	0.000277	0.000514	0.000791
561665.5	4191187	0.000266	0.000499	0.000765
561647.7	4191189	0.000256	0.000484	0.00074
561629.9	4191191	0.000246	0.000471	0.000716
561890.1	4191029	0.001678	0.001656	0.003334
561892.6	4191020	0.001774	0.001757	0.003531
561895.2	4191011	0.001852	0.00186	0.003712
561897.8	4191002	0.001908	0.001962	0.00387
561900.4	4190993	0.001939	0.002063	0.004002
561903	4190984	0.001946	0.00216	0.004106
561905.5	4190975	0.00193	0.002253	0.004183
561908.1	4190966	0.001893	0.00234	0.004233
561910.7	4190958	0.00184	0.00242	0.00426

561913.3	4190949	0.001774	0.002493	0.004267
561915.9	4190940	0.001698	0.002556	0.004254
561918.4	4190931	0.001616	0.002609	0.004225
561921	4190922	0.00153	0.002652	0.004182
561891.4	4191047	0.001364	0.001419	0.002783
561880.3	4191061	0.001249	0.001307	0.002556
561869.3	4191075	0.001102	0.001191	0.002293
561847.2	4191103	0.000787	0.000966	0.001753
561836.1	4191117	0.000654	0.000864	0.001518
561825.1	4191131	0.000546	0.000774	0.00132
561814	4191145	0.000461	0.000696	0.001157
561802.9	4191159	0.000393	0.000627	0.001021
561791.9	4191173	0.000338	0.000567	0.000905
561777.5	4191181	0.00031	0.000537	0.000847
561759.8	4191184	0.000299	0.000529	0.000829
561742.1	4191186	0.000288	0.00052	0.000808
561706.8	4191191	0.000267	0.000498	0.000765
561689.1	4191193	0.000257	0.000486	0.000743
561671.4	4191195	0.000248	0.000472	0.00072
561653.7	4191197	0.000239	0.000459	0.000698
561636	4191200	0.000231	0.000447	0.000677
561899.5	4191032	0.001501	0.001564	0.003065
561902.1	4191023	0.001585	0.001656	0.003241
561904.7	4191014	0.001653	0.001749	0.003402
561907.3	4191005	0.001705	0.001842	0.003547
561909.8	4190996	0.001737	0.001933	0.00367
561912.4	4190987	0.00175	0.002021	0.003771
561915	4190978	0.001745	0.002106	0.003851
561917.6	4190969	0.001722	0.002185	0.003907
561920.2	4190960	0.001684	0.002259	0.003943
561922.7	4190951	0.001635	0.002325	0.00396
561925.3	4190942	0.001575	0.002383	0.003958
561927.9	4190934	0.001508	0.002433	0.003941
561930.5	4190925	0.001438	0.002473	0.003911
561900.9	4191050	0.001235	0.001348	0.002583
561889.9	4191064	0.001136	0.001245	0.002381
561879	4191078	0.001014	0.001141	0.002155
561868	4191092	0.00088	0.001037	0.001917
561857	4191106	0.000747	0.000936	0.001683
561846	4191120	0.000627	0.000841	0.001468
561835.1	4191133	0.000527	0.000756	0.001283
561824.1	4191147	0.000448	0.000681	0.001129
561813.1	4191161	0.000384	0.000616	0.001
561802.2	4191175	0.000332	0.000559	0.000891
561782.4	4191190	0.000286	0.000506	0.000791
561764.9	4191192	0.000277	0.000499	0.000775
561747.3	4191195	0.000267	0.000491	0.000757

561729.8	4191197	0.000257	0.000481	0.000739
561694.7	4191201	0.000239	0.00046	0.000699
561677.2	4191204	0.000231	0.000448	0.000679
561659.6	4191206	0.000224	0.000436	0.000659
561642.1	4191208	0.000216	0.000424	0.000641
561909	4191034	0.001352	0.00148	0.002832
561911.5	4191025	0.001424	0.001564	0.002988
561914.1	4191016	0.001485	0.001649	0.003134
561916.7	4191008	0.001533	0.001733	0.003266
561919.3	4190999	0.001565	0.001815	0.00338
561921.9	4190990	0.001582	0.001896	0.003478
561924.5	4190981	0.001583	0.001972	0.003555
561927	4190972	0.001569	0.002044	0.003613
561929.6	4190963	0.001543	0.002111	0.003654
561932.2	4190954	0.001506	0.002172	0.003678
561934.8	4190945	0.00146	0.002226	0.003686
561937.4	4190936	0.001407	0.002272	0.003679
561939.9	4190927	0.001349	0.002311	0.00366
561910.1	4191053	0.001122	0.00128	0.002402
561904.4	4191060	0.001081	0.001232	0.002313
561898.7	4191068	0.001033	0.001182	0.002215
561893	4191075	0.00098	0.001131	0.002111
561887.3	4191082	0.000923	0.001081	0.002004
561881.6	4191089	0.000863	0.001031	0.001894
561875.9	4191096	0.000803	0.000982	0.001785
561870.2	4191104	0.000743	0.000934	0.001676
561864.5	4191111	0.000684	0.000886	0.001571
561858.8	4191118	0.000628	0.00084	0.001469
561853.1	4191125	0.000576	0.000796	0.001372
561847.4	4191133	0.000528	0.000754	0.001282
561841.7	4191140	0.000485	0.000715	0.0012
561836	4191147	0.000446	0.000677	0.001123
561830.3	4191154	0.000412	0.000643	0.001054
561824.6	4191161	0.000381	0.000611	0.000992
561818.9	4191169	0.000353	0.000581	0.000934
561813.2	4191176	0.000329	0.000553	0.000881
561807.5	4191183	0.000306	0.000527	0.000833
561801.8	4191190	0.000286	0.000502	0.000788
561786.9	4191199	0.000264	0.000477	0.000741
561777.8	4191200	0.00026	0.000474	0.000733
561768.7	4191201	0.000256	0.00047	0.000726
561759.6	4191202	0.000251	0.000466	0.000718
561750.4	4191203	0.000247	0.000463	0.000709
561741.3	4191205	0.000242	0.000458	0.000701
561732.2	4191206	0.000238	0.000454	0.000692
561723.1	4191207	0.000233	0.000449	0.000682
561704.8	4191209	0.000225	0.000439	0.000664

561695.7	4191210	0.000221	0.000433	0.000654
561686.6	4191212	0.000218	0.000428	0.000645
561677.4	4191213	0.000214	0.000422	0.000636
561668.3	4191214	0.000211	0.000416	0.000627
561659.2	4191215	0.000207	0.00041	0.000617
561622.7	4191220	0.000194	0.00039	0.000584
561613.6	4191221	0.000191	0.000385	0.000576
561915.8	4191046	0.001155	0.001327	0.002482
561918.4	4191037	0.001225	0.001403	0.002628
561921	4191028	0.001288	0.00148	0.002768
561923.6	4191019	0.001342	0.001557	0.002899
561926.2	4191010	0.001384	0.001633	0.003017
561928.7	4191001	0.001415	0.001707	0.003122
561931.3	4190992	0.001433	0.00178	0.003213
561933.9	4190984	0.001439	0.001849	0.003288
561936.5	4190975	0.001432	0.001915	0.003347
561939.1	4190966	0.001415	0.001977	0.003392
561941.7	4190957	0.001388	0.002033	0.003421
561944.2	4190948	0.001353	0.002083	0.003436
561946.8	4190939	0.001311	0.002127	0.003438
561949.4	4190930	0.001264	0.002164	0.003428
561919.6	4191056	0.001026	0.00122	0.002246
561914	4191063	0.000992	0.001176	0.002168
561908.3	4191070	0.000951	0.001131	0.002082
561902.7	4191077	0.000906	0.001085	0.001991
561897	4191084	0.000856	0.001038	0.001894
561885.7	4191099	0.000753	0.000947	0.0017
561880.1	4191106	0.000701	0.000902	0.001603
561874.4	4191113	0.000649	0.000859	0.001508
561868.7	4191120	0.0006	0.000817	0.001417
561863.1	4191127	0.000554	0.000776	0.00133
561857.4	4191135	0.00051	0.000737	0.001247
561851.8	4191142	0.00047	0.000699	0.001169
561840.5	4191156	0.000401	0.000631	0.001032
561834.8	4191163	0.000372	0.0006	0.000971
561829.2	4191170	0.000346	0.000571	0.000916
561823.5	4191177	0.000322	0.000544	0.000866
561812.2	4191192	0.000281	0.000495	0.000776
561791.9	4191207	0.000244	0.00045	0.000695
561782.8	4191208	0.000241	0.000448	0.000689
561773.8	4191210	0.000238	0.000445	0.000682
561764.7	4191211	0.000234	0.000441	0.000675
561755.7	4191212	0.00023	0.000438	0.000668
561746.6	4191213	0.000226	0.000434	0.00066
561737.6	4191214	0.000222	0.00043	0.000652
561728.6	4191215	0.000218	0.000426	0.000643
561719.5	4191217	0.000214	0.000421	0.000635

561701.4	4191219	0.000207	0.000411	0.000618
561692.4	4191220	0.000204	0.000406	0.00061
561683.3	4191221	0.0002	0.000401	0.000602
561647.2	4191226	0.000189	0.000381	0.00057
561638.1	4191227	0.000186	0.000376	0.000562
561629.1	4191228	0.000183	0.000371	0.000555
561620	4191229	0.000181	0.000367	0.000548
561611	4191230	0.000178	0.000363	0.00054
561925.3	4191049	0.001054	0.001262	0.002316
561927.9	4191040	0.001114	0.001331	0.002445
561930.5	4191031	0.001169	0.001401	0.00257
561933	4191022	0.001216	0.001471	0.002687
561935.6	4191013	0.001255	0.00154	0.002795
561938.2	4191004	0.001285	0.001608	0.002893
561940.8	4190995	0.001304	0.001674	0.002978
561943.4	4190986	0.001313	0.001738	0.003051
561945.9	4190977	0.001311	0.001798	0.003109
561948.5	4190968	0.001301	0.001855	0.003156
561951.1	4190960	0.001281	0.001907	0.003188
561953.7	4190951	0.001255	0.001954	0.003209
561956.3	4190942	0.001222	0.001995	0.003217
561958.9	4190933	0.001184	0.00203	0.003214
561929.1	4191059	0.000942	0.001163	0.002105
561917.9	4191073	0.000878	0.001083	0.001961
561906.7	4191087	0.000797	0.000998	0.001796
561895.5	4191101	0.000707	0.000913	0.00162
561889.9	4191108	0.000661	0.000872	0.001533
561878.7	4191122	0.000573	0.000793	0.001365
561873	4191129	0.000531	0.000755	0.001286
561861.8	4191144	0.000455	0.000684	0.001139
561850.6	4191158	0.000391	0.000619	0.00101
561845	4191165	0.000363	0.000589	0.000952
561833.8	4191179	0.000315	0.000535	0.00085
561828.2	4191186	0.000295	0.000511	0.000805
561817	4191200	0.000259	0.000467	0.000726
561796.8	4191216	0.000227	0.000426	0.000653
561787.8	4191217	0.000225	0.000424	0.000649
561778.8	4191218	0.000221	0.000421	0.000643
561769.9	4191219	0.000218	0.000418	0.000636
561760.9	4191220	0.000215	0.000415	0.00063
561751.9	4191222	0.000211	0.000412	0.000623
561743	4191223	0.000208	0.000408	0.000616
561725	4191225	0.000201	0.0004	0.0006
561716	4191226	0.000197	0.000395	0.000593
561671.2	4191232	0.000183	0.000373	0.000555
561662.2	4191233	0.00018	0.000368	0.000548
561653.2	4191234	0.000178	0.000363	0.000541

561644.3	4191235	0.000176	0.000359	0.000535
561635.3	4191237	0.000173	0.000355	0.000528
561626.3	4191238	0.000171	0.000351	0.000522
561608.4	4191240	0.000166	0.000343	0.000508
561937.3	4191042	0.001018	0.001264	0.002282
561939.9	4191034	0.001066	0.001328	0.002394
561942.5	4191025	0.001108	0.001392	0.0025
561945.1	4191016	0.001144	0.001455	0.002599
561947.7	4191007	0.001171	0.001518	0.002689
561950.2	4190998	0.001191	0.001578	0.002769
561952.8	4190989	0.001201	0.001637	0.002838
561955.4	4190980	0.001204	0.001692	0.002896
561958	4190971	0.001198	0.001744	0.002942
561960.6	4190962	0.001185	0.001792	0.002977
561963.1	4190953	0.001165	0.001836	0.003001
561965.7	4190944	0.00114	0.001875	0.003015
561968.3	4190936	0.001109	0.001908	0.003017
561938.6	4191061	0.000867	0.001109	0.001976
561927.5	4191075	0.000813	0.001037	0.00185
561916.4	4191089	0.000744	0.00096	0.001705
561910.8	4191096	0.000706	0.000921	0.001627
561899.7	4191110	0.000625	0.000843	0.001469
561888.5	4191125	0.000546	0.000769	0.001315
561877.4	4191139	0.000473	0.0007	0.001173
561866.3	4191153	0.000409	0.000636	0.001045
561855.1	4191167	0.000354	0.000578	0.000933
561844	4191181	0.000309	0.000526	0.000835
561832.9	4191195	0.000271	0.000481	0.000752
561821.7	4191209	0.00024	0.000441	0.000682
561801.7	4191224	0.000212	0.000404	0.000615
561792.8	4191225	0.000209	0.000402	0.000611
561775	4191228	0.000204	0.000397	0.000601
561766.1	4191229	0.000201	0.000394	0.000595
561748.3	4191231	0.000195	0.000388	0.000582
561694.8	4191238	0.000177	0.000364	0.000541
561677	4191240	0.000172	0.000356	0.000528
561668.1	4191241	0.00017	0.000352	0.000521
561650.3	4191244	0.000166	0.000343	0.000509
561632.5	4191246	0.000162	0.000335	0.000497
561614.7	4191248	0.000157	0.000328	0.000485
561946.8	4191045	0.000933	0.001202	0.002135
561949.4	4191036	0.000976	0.00126	0.002236
561951.9	4191027	0.001014	0.001319	0.002333
561954.5	4191018	0.001046	0.001378	0.002424
561957.1	4191010	0.001072	0.001435	0.002507
561959.7	4191001	0.001091	0.001491	0.002582
561962.3	4190992	0.001103	0.001544	0.002647

561964.9	4190983	0.001108	0.001595	0.002703
561967.4	4190974	0.001106	0.001643	0.002749
561970	4190965	0.001097	0.001688	0.002785
561972.6	4190956	0.001083	0.001729	0.002812
561975.2	4190947	0.001063	0.001765	0.002828
561977.8	4190938	0.001039	0.001797	0.002836
561948.1	4191064	0.000801	0.001059	0.00186
561937.1	4191078	0.000754	0.000993	0.001747
561926	4191092	0.000695	0.000924	0.001619
561915	4191106	0.000628	0.000852	0.00148
561903.9	4191120	0.000556	0.000781	0.001337
561892.8	4191134	0.000487	0.000713	0.0012
561881.8	4191148	0.000424	0.000651	0.001075
561870.7	4191162	0.00037	0.000594	0.000963
561859.7	4191176	0.000323	0.000542	0.000865
561848.6	4191190	0.000283	0.000495	0.000778
561837.6	4191204	0.000251	0.000454	0.000705
561826.5	4191218	0.000224	0.000418	0.000641
561806.6	4191233	0.000198	0.000383	0.000581
561788.9	4191235	0.000194	0.00038	0.000573
561771.2	4191237	0.000189	0.000375	0.000563
561718.2	4191244	0.000172	0.000355	0.000527
561700.5	4191247	0.000167	0.000348	0.000515
561682.8	4191249	0.000162	0.00034	0.000502
561665.1	4191251	0.000158	0.000332	0.00049
561647.4	4191253	0.000155	0.000325	0.000479
561629.8	4191256	0.000151	0.000317	0.000468
561612.1	4191258	0.000147	0.000311	0.000458
561956.2	4191048	0.00086	0.001145	0.002005
561958.8	4191039	0.000898	0.001199	0.002097
561961.4	4191030	0.000932	0.001253	0.002185
561964	4191021	0.000961	0.001306	0.002267
561966.6	4191012	0.000985	0.001359	0.002344
561969.1	4191003	0.001004	0.00141	0.002414
561971.7	4190995	0.001016	0.001459	0.002475
561974.3	4190986	0.001023	0.001507	0.00253
561976.9	4190977	0.001023	0.001551	0.002574
561979.5	4190968	0.001018	0.001593	0.002611
561982.1	4190959	0.001008	0.001631	0.002639
561984.6	4190950	0.000993	0.001665	0.002658
561987.2	4190941	0.000975	0.001696	0.002671
561957.4	4191067	0.000742	0.001012	0.001754
561951.7	4191074	0.000722	0.000981	0.001702
561946	4191081	0.000699	0.000949	0.001647
561940.3	4191089	0.000673	0.000916	0.001589
561934.5	4191096	0.000645	0.000882	0.001527
561928.8	4191103	0.000615	0.000848	0.001463

561923.1	4191110	0.000583	0.000814	0.001398
561917.4	4191117	0.000551	0.00078	0.001331
561911.7	4191125	0.000518	0.000746	0.001264
561906	4191132	0.000485	0.000713	0.001198
561900.3	4191139	0.000453	0.000681	0.001134
561894.6	4191146	0.000423	0.00065	0.001073
561888.8	4191154	0.000395	0.00062	0.001015
561883.1	4191161	0.000369	0.000592	0.000961
561877.4	4191168	0.000344	0.000565	0.00091
561871.7	4191175	0.000322	0.00054	0.000862
561866	4191182	0.000301	0.000516	0.000817
561860.3	4191190	0.000282	0.000493	0.000775
561854.6	4191197	0.000265	0.000471	0.000736
561848.9	4191204	0.000249	0.000451	0.0007
561843.1	4191211	0.000235	0.000432	0.000667
561837.4	4191219	0.000222	0.000415	0.000636
561831.7	4191226	0.000209	0.000398	0.000607
561826	4191233	0.000198	0.000382	0.00058
561811.2	4191241	0.000185	0.000365	0.00055
561802	4191243	0.000183	0.000362	0.000546
561738.1	4191251	0.000166	0.000345	0.000511
561728.9	4191252	0.000164	0.000341	0.000505
561719.8	4191253	0.000161	0.000338	0.000499
561710.6	4191254	0.000159	0.000334	0.000493
561701.5	4191256	0.000156	0.000331	0.000487
561692.4	4191257	0.000154	0.000327	0.000481
561683.2	4191258	0.000152	0.000323	0.000475
561674.1	4191259	0.00015	0.000319	0.00047
561665	4191260	0.000149	0.000316	0.000464
561655.8	4191261	0.000147	0.000312	0.000459
561646.7	4191263	0.000145	0.000308	0.000453
561637.5	4191264	0.000144	0.000305	0.000448
561628.4	4191265	0.000142	0.000301	0.000443
561619.3	4191266	0.00014	0.000298	0.000438
561610.1	4191267	0.000138	0.000295	0.000433
561601	4191269	0.000137	0.000292	0.000429
561963.1	4191060	0.000759	0.001042	0.001801
561965.7	4191051	0.000796	0.001093	0.001889
561968.3	4191042	0.00083	0.001143	0.001973
561970.9	4191033	0.00086	0.001192	0.002052
561973.4	4191024	0.000887	0.001241	0.002128
561976	4191015	0.000908	0.001289	0.002197
561978.6	4191006	0.000926	0.001336	0.002262
561981.2	4190997	0.000939	0.001382	0.002321
561983.8	4190988	0.000946	0.001425	0.002371
561986.3	4190979	0.000949	0.001467	0.002416
561988.9	4190971	0.000947	0.001506	0.002453

561991.5	4190962	0.000941	0.001542	0.002483
561994.1	4190953	0.00093	0.001575	0.002505
561996.7	4190944	0.000915	0.001604	0.002519
561966.9	4191070	0.000691	0.00097	0.001661
561961.2	4191077	0.000673	0.000941	0.001614
561955.6	4191084	0.000652	0.000911	0.001563
561949.9	4191091	0.000629	0.00088	0.00151
561944.2	4191098	0.000605	0.000849	0.001454
561938.5	4191105	0.000579	0.000818	0.001397
561932.9	4191113	0.000551	0.000787	0.001338
561927.2	4191120	0.000523	0.000756	0.001278
561921.5	4191127	0.000494	0.000725	0.001218
561910.2	4191141	0.000436	0.000664	0.0011
561904.5	4191148	0.000408	0.000634	0.001043
561893.2	4191163	0.000357	0.000579	0.000937
561887.5	4191170	0.000335	0.000554	0.000889
561881.8	4191177	0.000314	0.00053	0.000843
561870.5	4191191	0.000276	0.000485	0.000761
561864.8	4191199	0.00026	0.000464	0.000724
561859.2	4191206	0.000245	0.000445	0.00069
561853.5	4191213	0.000231	0.000426	0.000657
561847.8	4191220	0.000218	0.000409	0.000627
561842.1	4191227	0.000206	0.000393	0.000599
561836.5	4191235	0.000196	0.000378	0.000573
561830.8	4191242	0.000185	0.000363	0.000548
561816.1	4191250	0.000174	0.000347	0.000521
561761.7	4191257	0.000162	0.000335	0.000496
561752.6	4191258	0.00016	0.000332	0.000492
561743.5	4191259	0.000157	0.000329	0.000486
561734.4	4191261	0.000155	0.000326	0.000481
561725.4	4191262	0.000152	0.000323	0.000475
561716.3	4191263	0.00015	0.00032	0.00047
561707.2	4191264	0.000148	0.000316	0.000464
561698.2	4191265	0.000146	0.000313	0.000459
561689.1	4191266	0.000144	0.00031	0.000454
561680	4191268	0.000142	0.000306	0.000448
561671	4191269	0.000141	0.000303	0.000443
561661.9	4191270	0.000139	0.000299	0.000438
561652.8	4191271	0.000138	0.000296	0.000433
561643.8	4191272	0.000136	0.000292	0.000429
561634.7	4191273	0.000135	0.000289	0.000424
561625.6	4191275	0.000133	0.000286	0.000419
561616.5	4191276	0.000132	0.000283	0.000415
561607.5	4191277	0.00013	0.00028	0.00041
561598.4	4191278	0.000129	0.000277	0.000406
561972.6	4191062	0.000706	0.000998	0.001704
561975.1	4191053	0.000739	0.001044	0.001783

561977.7	4191045	0.00077	0.001091	0.001861
561980.3	4191036	0.000797	0.001136	0.001933
561982.9	4191027	0.000821	0.001181	0.002002
561985.5	4191018	0.000841	0.001225	0.002066
561988.1	4191009	0.000858	0.001269	0.002127
561990.6	4191000	0.00087	0.001311	0.002181
561993.2	4190991	0.000879	0.001352	0.002231
561995.8	4190982	0.000883	0.001391	0.002274
561998.4	4190973	0.000883	0.001427	0.00231
562001	4190964	0.000879	0.001461	0.00234
562003.5	4190955	0.000872	0.001492	0.002364
562006.1	4190947	0.00086	0.00152	0.00238
561699.7	4190837	0.000924	0.02229	0.023214
561690.9	4190835	0.000879	0.02226	0.023139
561682	4190833	0.000839	0.02168	0.022519
561673.2	4190830	0.000803	0.02042	0.021223
561664.3	4190828	0.000769	0.01872	0.019489
561655.5	4190826	0.000739	0.01667	0.017409
561646.6	4190823	0.000711	0.01459	0.015301
561637.8	4190821	0.000685	0.01257	0.013255
561702.3	4190828	0.000834	0.01678	0.017614
561693.4	4190826	0.000796	0.01656	0.017356
561684.6	4190823	0.000761	0.01601	0.016771
561675.7	4190821	0.00073	0.01507	0.0158
561666.9	4190819	0.000701	0.01387	0.014571
561658	4190816	0.000675	0.0125	0.013175
561649.2	4190814	0.000651	0.01115	0.011801
561640.3	4190812	0.000629	0.009901	0.01053
561631.5	4190809	0.000608	0.00876	0.009368
561731.8	4190835	0.00098	0.01485	0.01583
561738.7	4190847	0.001163	0.01644	0.017603
561704.8	4190818	0.000757	0.01306	0.013817
561695.9	4190816	0.000724	0.01277	0.013494
561687.1	4190814	0.000694	0.01228	0.012974
561678.2	4190811	0.000666	0.01157	0.012236
561669.4	4190809	0.000641	0.01071	0.011351
561660.5	4190807	0.000619	0.009778	0.010397
561651.7	4190804	0.000598	0.008852	0.00945
561642.8	4190802	0.000579	0.008006	0.008585
561734.3	4190825	0.000883	0.01223	0.013113
561747.3	4190842	0.001115	0.01371	0.014825
561707.3	4190809	0.000691	0.01045	0.011141
561698.4	4190807	0.000661	0.01017	0.010831
561689.6	4190804	0.000635	0.009745	0.01038
561680.7	4190802	0.000611	0.009207	0.009818
561671.9	4190800	0.000589	0.008572	0.009161
561663	4190797	0.000569	0.007903	0.008472

561654.2	4190795	0.000551	0.00724	0.007791
561645.3	4190793	0.000534	0.006625	0.007159
561636.5	4190790	0.000518	0.006047	0.006565
561736.8	4190816	0.0008	0.01018	0.01098
561748.9	4190825	0.000912	0.01069	0.011602
561755.9	4190837	0.001071	0.01166	0.012731
561757.6	4190853	0.001306	0.01323	0.014536
561709.8	4190799	0.000633	0.008558	0.009191
561701	4190797	0.000607	0.008299	0.008906
561692.1	4190795	0.000584	0.007952	0.008536
561683.3	4190792	0.000563	0.007538	0.008101
561674.4	4190790	0.000543	0.007056	0.007599
561665.6	4190788	0.000526	0.006558	0.007084
561656.7	4190785	0.000509	0.006065	0.006574
561647.9	4190783	0.000494	0.005596	0.00609
561639	4190781	0.00048	0.005153	0.005633
561742.4	4190809	0.000751	0.008741	0.009492
561756.5	4190819	0.000872	0.009271	0.010143
561764.6	4190834	0.001043	0.0102	0.011243
561766.6	4190851	0.001308	0.01164	0.012948
561712.3	4190790	0.000583	0.007149	0.007732
561703.5	4190788	0.00056	0.006921	0.007481
561694.6	4190785	0.000539	0.006636	0.007175
561685.8	4190783	0.00052	0.006306	0.006826
561676.9	4190781	0.000503	0.005937	0.00644
561668.1	4190778	0.000487	0.005554	0.006041
561659.2	4190776	0.000472	0.005174	0.005646
561650.4	4190774	0.000459	0.004808	0.005267
561744.4	4190799	0.000684	0.007435	0.008119
561758.3	4190809	0.000786	0.008005	0.008791
561773.1	4190829	0.000997	0.008904	0.009901
561775.1	4190846	0.001233	0.0101	0.011333
561714.9	4190780	0.000539	0.006073	0.006612
561706	4190778	0.000518	0.005877	0.006395
561697.1	4190776	0.000499	0.00564	0.006139
561688.3	4190773	0.000482	0.005374	0.005856
561679.4	4190771	0.000467	0.005084	0.005551
561670.6	4190769	0.000452	0.00478	0.005232
561661.7	4190766	0.000439	0.004479	0.004918
561652.9	4190764	0.000427	0.004187	0.004614
561644	4190762	0.000416	0.00391	0.004326
561746.6	4190789	0.000626	0.006391	0.007017
561760.2	4190799	0.000714	0.00694	0.007654
561773.9	4190810	0.000814	0.007249	0.008063
561781.7	4190824	0.000954	0.00786	0.008814
561783.7	4190841	0.001164	0.00887	0.010034
561785.7	4190858	0.001449	0.00953	0.010979

561717.4	4190771	0.0005	0.005232	0.005732
561708.5	4190769	0.000481	0.005063	0.005544
561699.7	4190766	0.000464	0.004867	0.005331
561690.8	4190764	0.000449	0.004649	0.005098
561682	4190762	0.000435	0.004416	0.004851
561673.1	4190759	0.000422	0.00417	0.004592
561664.3	4190757	0.00041	0.003925	0.004335
561655.4	4190754	0.000399	0.003687	0.004086
561748.9	4190779	0.000577	0.005548	0.006125
561762.3	4190790	0.000653	0.006052	0.006705
561775.8	4190800	0.000739	0.006399	0.007138
561790.2	4190819	0.000911	0.007004	0.007915
561792.2	4190836	0.0011	0.007859	0.008959
561794.2	4190853	0.001351	0.008466	0.009817
561719.9	4190761	0.000465	0.004562	0.005027
561711	4190759	0.000448	0.004417	0.004865
561702.2	4190757	0.000433	0.004252	0.004685
561693.3	4190754	0.000419	0.004071	0.00449
561684.5	4190752	0.000406	0.00388	0.004286
561675.6	4190750	0.000394	0.003678	0.004072
561666.8	4190747	0.000383	0.003475	0.003858
561657.9	4190745	0.000374	0.003277	0.003651
561649.1	4190743	0.000364	0.003087	0.003451
561751.2	4190770	0.000533	0.00486	0.005393
561764.5	4190780	0.0006	0.005313	0.005913
561777.8	4190790	0.000675	0.005663	0.006338
561791.1	4190800	0.000757	0.005861	0.006618
561798.8	4190814	0.000871	0.00629	0.007161
561800.7	4190831	0.001041	0.007021	0.008062
561722.4	4190752	0.000434	0.00402	0.004454
561713.6	4190750	0.000419	0.003895	0.004314
561704.7	4190747	0.000405	0.003755	0.00416
561695.8	4190745	0.000392	0.003602	0.003994
561687	4190742	0.00038	0.003441	0.003821
561678.1	4190740	0.000369	0.003273	0.003642
561669.3	4190738	0.000359	0.003103	0.003462
561660.4	4190735	0.00035	0.002937	0.003287
561753.6	4190760	0.000495	0.004294	0.004789
561766.8	4190770	0.000553	0.004694	0.005247
561780	4190780	0.000619	0.005029	0.005648
561793.2	4190790	0.000691	0.005257	0.005948
561807.3	4190809	0.000832	0.005687	0.006519
561724.9	4190742	0.000406	0.003574	0.00398
561716.1	4190740	0.000392	0.003466	0.003858
561707.2	4190738	0.000379	0.003345	0.003724
561698.4	4190735	0.000368	0.003215	0.003583
561689.5	4190733	0.000357	0.003079	0.003436

561680.7	4190731	0.000347	0.002937	0.003284
561671.8	4190728	0.000338	0.002792	0.00313
561663	4190726	0.00033	0.002651	0.002981
561654.1	4190724	0.000322	0.002514	0.002836
561750.6	4190746	0.000441	0.003674	0.004115
561757.7	4190752	0.000467	0.003872	0.004339
561764.9	4190757	0.000495	0.004066	0.004561
561779.2	4190768	0.000557	0.004421	0.004978
561786.3	4190774	0.000591	0.004571	0.005162
561793.5	4190779	0.000625	0.004696	0.005321
561800.6	4190785	0.000662	0.004792	0.005454
561807.8	4190790	0.000698	0.004854	0.005552
561820.2	4190841	0.001154	0.006239	0.007393
561821.2	4190850	0.001277	0.006387	0.007664
561823.3	4190868	0.001581	0.006492	0.008073
561824.4	4190877	0.001768	0.006443	0.008211
561736.3	4190735	0.000395	0.003288	0.003683
561727.4	4190733	0.000381	0.003203	0.003584
561718.6	4190730	0.000368	0.003108	0.003476
561709.7	4190728	0.000357	0.003003	0.00336
561700.9	4190726	0.000346	0.002891	0.003237
561692	4190723	0.000336	0.002774	0.00311
561683.2	4190721	0.000327	0.002654	0.002981
561674.3	4190719	0.000318	0.002529	0.002847
561665.5	4190716	0.000311	0.002407	0.002718
561656.6	4190714	0.000303	0.002287	0.00259
561760	4190742	0.000436	0.003468	0.003904
561774.1	4190753	0.000487	0.003799	0.004286
561788.2	4190764	0.000544	0.004096	0.00464
561802.3	4190775	0.000607	0.004323	0.00493
561816.4	4190786	0.000671	0.004451	0.005122
561827.6	4190826	0.000984	0.005481	0.006465
561829.7	4190844	0.001185	0.00581	0.006995
561830.8	4190853	0.001307	0.005903	0.00721
561832.8	4190871	0.001604	0.00593	0.007534
561730	4190723	0.000358	0.00289	0.003248
561721.1	4190721	0.000347	0.002806	0.003153
561712.3	4190719	0.000336	0.002715	0.003051
561703.4	4190716	0.000326	0.002617	0.002943
561694.5	4190714	0.000317	0.002515	0.002832
561685.7	4190712	0.000308	0.002409	0.002717
561676.8	4190709	0.0003	0.002301	0.002601
561668	4190707	0.000293	0.002192	0.002485
561748.3	4190722	0.000367	0.002837	0.003204
561762.3	4190732	0.000408	0.003127	0.003535
561776.2	4190743	0.000453	0.003416	0.003869
561790.2	4190754	0.000504	0.003686	0.00419

561804.1	4190765	0.000559	0.003908	0.004467
561818.1	4190775	0.000616	0.004057	0.004673
561833.1	4190795	0.000728	0.004359	0.005087
561834.1	4190804	0.000787	0.00459	0.005377
561836.2	4190821	0.000927	0.005003	0.00593
561838.2	4190839	0.001104	0.005308	0.006412
561840.3	4190856	0.001331	0.005458	0.006789
561842.3	4190874	0.001619	0.005432	0.007051
561732.5	4190714	0.000338	0.002623	0.002961
561723.6	4190711	0.000327	0.002549	0.002876
561714.8	4190709	0.000317	0.002468	0.002785
561705.9	4190707	0.000308	0.002382	0.00269
561697.1	4190704	0.000299	0.002292	0.002591
561688.2	4190702	0.000291	0.002199	0.00249
561679.4	4190700	0.000284	0.002103	0.002387
561670.5	4190697	0.000277	0.002006	0.002283
561661.7	4190695	0.00027	0.001911	0.002181
561750.8	4190712	0.000346	0.002581	0.002927
561764.6	4190723	0.000382	0.002835	0.003217
561778.4	4190733	0.000423	0.003088	0.003511
561792.2	4190744	0.000468	0.003332	0.0038
561806.1	4190755	0.000517	0.003542	0.004059
561819.9	4190765	0.000568	0.0037	0.004268
561841.6	4190790	0.000696	0.00402	0.004716
561843.7	4190807	0.000809	0.004414	0.005223
561845.7	4190825	0.00095	0.004743	0.005693
561847.7	4190842	0.001126	0.004965	0.006091
561849.8	4190859	0.001347	0.00505	0.006397
561851.8	4190877	0.001622	0.004986	0.006608
561735	4190704	0.000319	0.002394	0.002713
561726.1	4190702	0.000309	0.002327	0.002636
561717.3	4190700	0.0003	0.002256	0.002556
561708.4	4190697	0.000291	0.00218	0.002471
561699.6	4190695	0.000283	0.002099	0.002382
561690.7	4190693	0.000276	0.002016	0.002292
561681.9	4190690	0.000269	0.001932	0.002201
561673	4190688	0.000262	0.001845	0.002107
561753.2	4190702	0.000326	0.002361	0.002687
561766.9	4190713	0.000359	0.002583	0.002942
561780.6	4190724	0.000396	0.002807	0.003203
561794.3	4190734	0.000437	0.003025	0.003462
561808.1	4190745	0.00048	0.003221	0.003701
561821.8	4190755	0.000525	0.003379	0.003904
561850.2	4190785	0.000666	0.003721	0.004387
561852.2	4190802	0.000769	0.00407	0.004839
561854.2	4190819	0.000895	0.004367	0.005262
561856.2	4190837	0.001051	0.004577	0.005628

561858.3	4190854	0.001244	0.004675	0.005919
561860.3	4190871	0.001479	0.004647	0.006126
561737.5	4190695	0.000302	0.002195	0.002497
561728.7	4190692	0.000293	0.002135	0.002428
561719.8	4190690	0.000284	0.002072	0.002356
561711	4190688	0.000276	0.002004	0.00228
561702.1	4190685	0.000268	0.001932	0.0022
561693.2	4190683	0.000261	0.001858	0.002119
561684.4	4190681	0.000255	0.001784	0.002039
561675.5	4190678	0.000249	0.001707	0.001956
561666.7	4190676	0.000243	0.001631	0.001874
561755.7	4190693	0.000309	0.002168	0.002477
561769.3	4190703	0.000338	0.002364	0.002702
561782.9	4190714	0.000372	0.002563	0.002935
561796.5	4190724	0.000408	0.002759	0.003167
561810.1	4190735	0.000447	0.002939	0.003386
561823.7	4190745	0.000488	0.003092	0.00358
561851	4190766	0.000575	0.003279	0.003854
561858.8	4190780	0.000638	0.003457	0.004095
561860.8	4190797	0.000731	0.003767	0.004498
561862.8	4190814	0.000845	0.004035	0.00488
561864.8	4190831	0.000984	0.004232	0.005216
561866.8	4190848	0.001152	0.004336	0.005488
561868.8	4190865	0.001355	0.004334	0.005689
561870.8	4190883	0.001592	0.004226	0.005818
561740	4190685	0.000286	0.002021	0.002307
561731.2	4190683	0.000277	0.001967	0.002244
561722.3	4190681	0.00027	0.00191	0.00218
561713.5	4190678	0.000262	0.00185	0.002112
561704.6	4190676	0.000255	0.001786	0.002041
561695.8	4190674	0.000249	0.00172	0.001969
561686.9	4190671	0.000243	0.001654	0.001897
561678.1	4190669	0.000237	0.001586	0.001823
561669.2	4190666	0.000231	0.001518	0.001749
561758.6	4190684	0.000293	0.002006	0.002299
561765.8	4190689	0.000307	0.002097	0.002404
561772.9	4190695	0.000322	0.002189	0.002511
561780.1	4190700	0.000338	0.002284	0.002622
561787.3	4190706	0.000355	0.002379	0.002734
561794.5	4190711	0.000372	0.002473	0.002845
561801.7	4190717	0.000391	0.002564	0.002955
561808.9	4190722	0.000409	0.002651	0.00306
561823.2	4190733	0.000448	0.002811	0.003259
561830.4	4190739	0.000468	0.00288	0.003348
561844.8	4190750	0.000509	0.002994	0.003503
561852	4190756	0.00053	0.003034	0.003564
561859.1	4190761	0.000552	0.003061	0.003613

561867.4	4190776	0.000613	0.003229	0.003842
561868.4	4190785	0.000656	0.00338	0.004036
561869.5	4190794	0.000704	0.003522	0.004226
561870.5	4190803	0.000758	0.003655	0.004413
561871.6	4190812	0.000816	0.003773	0.004589
561872.7	4190821	0.000881	0.003874	0.004755
561873.7	4190830	0.000952	0.003954	0.004906
561874.8	4190839	0.001031	0.004011	0.005042
561875.8	4190848	0.001117	0.004043	0.00516
561876.9	4190857	0.001212	0.00405	0.005262
561877.9	4190866	0.001314	0.00403	0.005344
561879	4190875	0.001424	0.003985	0.005409
561880	4190884	0.001541	0.003916	0.005457
561881.1	4190893	0.001662	0.003824	0.005486
561751.4	4190678	0.00028	0.001913	0.002193
561742.5	4190676	0.000271	0.001868	0.002139
561733.7	4190673	0.000264	0.00182	0.002084
561724.8	4190671	0.000256	0.001768	0.002024
561716	4190669	0.000249	0.001714	0.001963
561707.1	4190666	0.000243	0.001657	0.0019
561698.3	4190664	0.000237	0.001598	0.001835
561689.4	4190662	0.000231	0.001539	0.00177
561680.6	4190659	0.000226	0.001479	0.001705
561671.7	4190657	0.00022	0.001417	0.001637
561761	4190674	0.000278	0.001857	0.002135
561768.1	4190680	0.000291	0.001939	0.00223
561775.3	4190685	0.000304	0.00202	0.002324
561782.4	4190690	0.000319	0.002104	0.002423
561789.5	4190696	0.000334	0.002189	0.002523
561796.6	4190701	0.00035	0.002273	0.002623
561803.7	4190707	0.000367	0.002355	0.002722
561818	4190718	0.0004	0.00251	0.00291
561825.1	4190723	0.000418	0.002582	0.003
561832.2	4190729	0.000436	0.002649	0.003085
561839.3	4190734	0.000455	0.00271	0.003165
561846.4	4190740	0.000474	0.002764	0.003238
561853.5	4190745	0.000493	0.002809	0.003302
561867.8	4190756	0.000531	0.002867	0.003398
561875.9	4190771	0.000586	0.003016	0.003602
561877	4190780	0.000626	0.003151	0.003777
561878	4190789	0.00067	0.003279	0.003949
561880.1	4190807	0.00077	0.003506	0.004276
561881.2	4190815	0.000828	0.003599	0.004427
561883.3	4190833	0.000961	0.003732	0.004693
561884.3	4190842	0.001037	0.003768	0.004805
561885.3	4190851	0.001119	0.003783	0.004902
561887.4	4190869	0.001302	0.003745	0.005047

561888.5	4190878	0.001402	0.003693	0.005095
561890.6	4190896	0.00161	0.003533	0.005143
561753.9	4190669	0.000266	0.001774	0.00204
561745.1	4190666	0.000258	0.001733	0.001991
561736.2	4190664	0.000251	0.001689	0.00194
561727.4	4190662	0.000244	0.001642	0.001886
561718.5	4190659	0.000237	0.001593	0.00183
561709.7	4190657	0.000231	0.001542	0.001773
561700.8	4190654	0.000226	0.001489	0.001715
561691.9	4190652	0.00022	0.001435	0.001655
561683.1	4190650	0.000215	0.001381	0.001596
561674.2	4190647	0.00021	0.001325	0.001535
561763.5	4190664	0.000264	0.001724	0.001988
561777.6	4190675	0.000288	0.001873	0.002161
561791.7	4190686	0.000315	0.002021	0.002336
561805.8	4190697	0.000345	0.002171	0.002516
561819.9	4190708	0.000376	0.002312	0.002688
561834.1	4190719	0.000408	0.002442	0.00285
561848.2	4190730	0.000442	0.002556	0.002998
561862.3	4190741	0.000477	0.002641	0.003118
561876.4	4190752	0.000511	0.002691	0.003202
561884.5	4190766	0.000562	0.002825	0.003387
561885.5	4190775	0.000598	0.002945	0.003543
561887.6	4190792	0.000681	0.003168	0.003849
561889.7	4190810	0.000781	0.003353	0.004134
561891.8	4190828	0.000899	0.003481	0.00438
561892.8	4190837	0.000966	0.003519	0.004485
561894.9	4190854	0.001115	0.00354	0.004655
561896.9	4190872	0.001283	0.003484	0.004767
561898	4190881	0.001372	0.00343	0.004802
561900	4190899	0.001553	0.003274	0.004827
561747.6	4190657	0.000246	0.001613	0.001859
561738.7	4190654	0.000239	0.001573	0.001812
561729.9	4190652	0.000232	0.00153	0.001762
561721	4190650	0.000226	0.001485	0.001711
561712.2	4190647	0.000221	0.001439	0.00166
561703.3	4190645	0.000215	0.001391	0.001606
561694.5	4190643	0.00021	0.001342	0.001552
561685.6	4190640	0.000206	0.001293	0.001499
561765.9	4190655	0.000251	0.001606	0.001857
561780	4190666	0.000274	0.001741	0.002015
561794	4190677	0.000298	0.001874	0.002172
561808	4190687	0.000325	0.002008	0.002333
561822	4190698	0.000353	0.002136	0.002489
561836	4190709	0.000383	0.002258	0.002641
561850	4190720	0.000414	0.002367	0.002781
561864	4190731	0.000445	0.002455	0.0029

561878	4190741	0.000476	0.002514	0.00299
561893.1	4190761	0.000538	0.002652	0.00319
561895.1	4190779	0.000608	0.002865	0.003473
561897.2	4190796	0.000691	0.003053	0.003744
561898.2	4190805	0.000737	0.003133	0.00387
561900.3	4190822	0.000843	0.003255	0.004098
561902.3	4190840	0.000966	0.003319	0.004285
561904.4	4190858	0.001105	0.003315	0.00442
561905.4	4190866	0.00118	0.003288	0.004468
561907.5	4190884	0.001337	0.003192	0.004529
561909.5	4190902	0.00149	0.003042	0.004532
561750.1	4190647	0.000234	0.001505	0.001739
561741.2	4190645	0.000228	0.001468	0.001696
561732.4	4190642	0.000222	0.001429	0.001651
561723.5	4190640	0.000216	0.001389	0.001605
561714.7	4190638	0.000211	0.001347	0.001558
561705.8	4190635	0.000206	0.001303	0.001509
561697	4190633	0.000201	0.001258	0.001459
561688.1	4190631	0.000196	0.001213	0.001409
561679.3	4190628	0.000192	0.001168	0.00136
561768.4	4190645	0.000239	0.001501	0.00174
561782.3	4190656	0.00026	0.001623	0.001883
561796.2	4190667	0.000283	0.001743	0.002026
561810.2	4190678	0.000307	0.001863	0.00217
561824.1	4190688	0.000333	0.00198	0.002313
561838	4190699	0.00036	0.002093	0.002453
561851.9	4190710	0.000388	0.002196	0.002584
561865.8	4190720	0.000417	0.002284	0.002701
561879.7	4190731	0.000445	0.002348	0.002793
561893.6	4190742	0.000474	0.002387	0.002861
561901.6	4190756	0.000517	0.002496	0.003013
561903.7	4190774	0.000581	0.002689	0.00327
561905.7	4190791	0.000656	0.002861	0.003517
561907.7	4190808	0.000744	0.002999	0.003743
561909.8	4190826	0.000846	0.003092	0.003938
561911.8	4190843	0.000963	0.003129	0.004092
561913.9	4190861	0.00109	0.003106	0.004196
561915.9	4190878	0.001227	0.003031	0.004258
561918	4190896	0.001363	0.002911	0.004274
561752.6	4190638	0.000224	0.001409	0.001633
561743.8	4190635	0.000218	0.001375	0.001593
561734.9	4190633	0.000212	0.001339	0.001551
561726.1	4190631	0.000207	0.001302	0.001509
561717.2	4190628	0.000202	0.001264	0.001466
561708.4	4190626	0.000197	0.001224	0.001421
561699.5	4190624	0.000192	0.001183	0.001375
561690.6	4190621	0.000188	0.001143	0.001331

561681.8	4190619	0.000184	0.001103	0.001287
561770.9	4190636	0.000228	0.001406	0.001634
561784.7	4190646	0.000248	0.001516	0.001764
561798.5	4190657	0.000268	0.001625	0.001893
561812.4	4190668	0.000291	0.001735	0.002026
561826.2	4190678	0.000314	0.001842	0.002156
561840	4190689	0.000339	0.001945	0.002284
561853.8	4190700	0.000365	0.002042	0.002407
561867.7	4190710	0.000391	0.002128	0.002519
561881.5	4190721	0.000417	0.002195	0.002612
561895.3	4190732	0.000443	0.002241	0.002684
561910.2	4190751	0.000496	0.002355	0.002851
561912.2	4190768	0.000555	0.002531	0.003086
561914.2	4190786	0.000624	0.002688	0.003312
561916.3	4190803	0.000704	0.002817	0.003521
561918.3	4190821	0.000796	0.002906	0.003702
561920.3	4190838	0.000899	0.002949	0.003848
561922.4	4190855	0.001012	0.002937	0.003949
561924.4	4190873	0.001131	0.002878	0.004009
561926.4	4190890	0.001251	0.002781	0.004032
561928.5	4190907	0.001357	0.002642	0.003999
561755.1	4190628	0.000214	0.001322	0.001536
561746.3	4190626	0.000208	0.00129	0.001498
561737.4	4190623	0.000203	0.001258	0.001461
561728.6	4190621	0.000198	0.001224	0.001422
561719.7	4190619	0.000193	0.001189	0.001382
561710.9	4190616	0.000189	0.001153	0.001342
561702	4190614	0.000185	0.001116	0.001301
561693.2	4190612	0.000181	0.001079	0.00126
561684.3	4190609	0.000177	0.001043	0.00122
561773.7	4190627	0.000219	0.001322	0.001541
561780.9	4190632	0.000228	0.001375	0.001603
561788.1	4190638	0.000237	0.001428	0.001665
561795.3	4190643	0.000247	0.00148	0.001727
561802.5	4190649	0.000257	0.001531	0.001788
561809.7	4190654	0.000268	0.001584	0.001852
561816.9	4190660	0.00028	0.001637	0.001917
561824.1	4190665	0.000291	0.001688	0.001979
561831.3	4190671	0.000303	0.001739	0.002042
561838.5	4190677	0.000315	0.001789	0.002104
561845.7	4190682	0.000327	0.001837	0.002164
561852.9	4190688	0.000339	0.001884	0.002223
561860.1	4190693	0.000352	0.00193	0.002282
561867.3	4190699	0.000364	0.001972	0.002336
561874.5	4190704	0.000377	0.002011	0.002388
561881.7	4190710	0.000389	0.002045	0.002434
561888.9	4190715	0.000402	0.002076	0.002478

561896.1	4190721	0.000414	0.002101	0.002515
561903.3	4190727	0.000427	0.002121	0.002548
561910.5	4190732	0.00044	0.002135	0.002575
561918.8	4190747	0.000478	0.00223	0.002708
561919.8	4190756	0.000506	0.002315	0.002821
561920.9	4190765	0.000535	0.002397	0.002932
561922	4190774	0.000568	0.002475	0.003043
561923	4190783	0.000602	0.002547	0.003149
561924.1	4190792	0.00064	0.002611	0.003251
561925.1	4190801	0.00068	0.002667	0.003347
561926.2	4190810	0.000723	0.002714	0.003437
561927.2	4190819	0.000768	0.00275	0.003518
561928.3	4190828	0.000817	0.002774	0.003591
561929.4	4190837	0.000868	0.002786	0.003654
561930.4	4190846	0.000921	0.002785	0.003706
561931.5	4190855	0.000975	0.002771	0.003746
561932.5	4190864	0.00103	0.002745	0.003775
561933.6	4190873	0.001086	0.002711	0.003797
561934.7	4190882	0.001141	0.002666	0.003807
561935.7	4190891	0.001194	0.002612	0.003806
561936.8	4190900	0.001243	0.002548	0.003791
561937.8	4190909	0.001285	0.002475	0.00376
561766.5	4190621	0.00021	0.00127	0.00148
561757.6	4190619	0.000205	0.001243	0.001448
561748.8	4190616	0.000199	0.001214	0.001413
561739.9	4190614	0.000194	0.001184	0.001378
561731.1	4190612	0.00019	0.001152	0.001342
561722.2	4190609	0.000185	0.00112	0.001305
561713.4	4190607	0.000181	0.001087	0.001268
561704.5	4190605	0.000177	0.001054	0.001231
561695.7	4190602	0.000173	0.001021	0.001194
561686.8	4190600	0.00017	0.000988	0.001158
561776.2	4190617	0.000209	0.001244	0.001453
561783.3	4190622	0.000218	0.001292	0.00151
561790.5	4190628	0.000226	0.00134	0.001566
561797.6	4190633	0.000235	0.001387	0.001622
561804.8	4190639	0.000245	0.001435	0.00168
561811.9	4190645	0.000255	0.001483	0.001738
561819.1	4190650	0.000265	0.001531	0.001796
561826.2	4190656	0.000276	0.001579	0.001855
561833.4	4190661	0.000287	0.001626	0.001913
561840.5	4190667	0.000298	0.001672	0.00197
561847.6	4190672	0.000309	0.001716	0.002025
561854.8	4190678	0.00032	0.00176	0.00208
561861.9	4190683	0.000332	0.001802	0.002134
561869.1	4190689	0.000343	0.001842	0.002185
561876.2	4190694	0.000355	0.001879	0.002234

561883.4	4190700	0.000366	0.001914	0.00228
561890.5	4190705	0.000378	0.001944	0.002322
561897.7	4190711	0.000389	0.001971	0.00236
561904.8	4190716	0.000401	0.001994	0.002395
561912	4190722	0.000413	0.002012	0.002425
561919.1	4190727	0.000424	0.002025	0.002449
561927.3	4190742	0.000459	0.002111	0.00257
561928.4	4190751	0.000485	0.002189	0.002674
561929.4	4190760	0.000512	0.002264	0.002776
561930.5	4190769	0.000542	0.002335	0.002877
561932.6	4190787	0.000607	0.002461	0.003068
561933.6	4190796	0.000643	0.002513	0.003156
561934.7	4190805	0.000682	0.002557	0.003239
561935.7	4190813	0.000723	0.002593	0.003316
561936.8	4190822	0.000767	0.002618	0.003385
561937.8	4190831	0.000812	0.002633	0.003445
561938.9	4190840	0.00086	0.002636	0.003496
561941	4190858	0.000957	0.00261	0.003567
561942	4190867	0.001006	0.002582	0.003588
561943.1	4190876	0.001055	0.002546	0.003601
561944.1	4190885	0.001102	0.0025	0.003602
561945.2	4190894	0.001146	0.002446	0.003592
561946.2	4190903	0.001185	0.002385	0.00357
561947.3	4190912	0.001219	0.002316	0.003535
561769	4190611	0.000201	0.001197	0.001398
561760.2	4190609	0.000196	0.001171	0.001367
561751.3	4190607	0.000191	0.001144	0.001335
561742.5	4190604	0.000186	0.001116	0.001302
561733.6	4190602	0.000182	0.001087	0.001269
561724.8	4190600	0.000178	0.001058	0.001236
561715.9	4190597	0.000174	0.001028	0.001202
561707.1	4190595	0.00017	0.000997	0.001167
561698.2	4190593	0.000167	0.000967	0.001134
561689.3	4190590	0.000163	0.000937	0.001101
561778.6	4190607	0.0002	0.001173	0.001373
561792.8	4190618	0.000216	0.001261	0.001477
561799.9	4190624	0.000225	0.001304	0.001529
561814.1	4190635	0.000243	0.001392	0.001635
561821.2	4190640	0.000252	0.001436	0.001688
561835.4	4190651	0.000272	0.001523	0.001795
561842.5	4190657	0.000283	0.001566	0.001849
561856.7	4190668	0.000304	0.001648	0.001952
561870.9	4190679	0.000324	0.001724	0.002048
561878	4190684	0.000335	0.001759	0.002094
561892.2	4190695	0.000356	0.001823	0.002179
561899.3	4190701	0.000367	0.001851	0.002218
561913.6	4190711	0.000388	0.001896	0.002284

561927.8	4190722	0.00041	0.001923	0.002333
561935.9	4190737	0.000442	0.002001	0.002443
561936.9	4190746	0.000465	0.002072	0.002537
561938	4190755	0.00049	0.002141	0.002631
561940.1	4190772	0.000546	0.002267	0.002813
561942.2	4190790	0.00061	0.002372	0.002982
561943.2	4190799	0.000645	0.002414	0.003059
561945.3	4190817	0.000722	0.002474	0.003196
561946.3	4190826	0.000762	0.002491	0.003253
561948.4	4190844	0.000848	0.002495	0.003343
561949.5	4190853	0.000892	0.002483	0.003375
561951.5	4190870	0.00098	0.002432	0.003412
561953.6	4190888	0.001061	0.002348	0.003409
561954.7	4190897	0.001097	0.002295	0.003392
561956.8	4190915	0.001153	0.002171	0.003324
561771.5	4190602	0.000193	0.00113	0.001323
561762.7	4190600	0.000188	0.001106	0.001294
561753.8	4190597	0.000183	0.001081	0.001264
561745	4190595	0.000179	0.001055	0.001234
561736.1	4190593	0.000175	0.001028	0.001203
561727.3	4190590	0.000171	0.001001	0.001172
561718.4	4190588	0.000167	0.000973	0.00114
561709.6	4190586	0.000164	0.000945	0.001109
561700.7	4190583	0.00016	0.000917	0.001078
561691.9	4190581	0.000157	0.00089	0.001047
561781.1	4190598	0.000192	0.001108	0.0013
561795.2	4190609	0.000207	0.001188	0.001395
561809.3	4190620	0.000223	0.001269	0.001492
561823.4	4190631	0.00024	0.00135	0.00159
561837.6	4190641	0.000259	0.00143	0.001689
561851.7	4190652	0.000278	0.001508	0.001786
561865.8	4190663	0.000298	0.001582	0.00188
561879.9	4190674	0.000317	0.001651	0.001968
561894	4190685	0.000336	0.001712	0.002048
561908.1	4190696	0.000356	0.001765	0.002121
561922.3	4190707	0.000376	0.001805	0.002181
561936.4	4190718	0.000395	0.001829	0.002224
561944.5	4190732	0.000425	0.0019	0.002325
561946.5	4190750	0.00047	0.002029	0.002499
561948.6	4190767	0.000521	0.002145	0.002666
561949.6	4190776	0.00055	0.002197	0.002747
561951.7	4190794	0.000612	0.002283	0.002895
561953.8	4190812	0.000681	0.002342	0.003023
561954.8	4190820	0.000717	0.002359	0.003076
561956.9	4190838	0.000795	0.002369	0.003164
561959	4190856	0.000874	0.002346	0.00322
561960	4190865	0.000913	0.002322	0.003235

561962.1	4190882	0.000986	0.002252	0.003238
561964.2	4190900	0.001047	0.002156	0.003203
561966.2	4190918	0.00109	0.00204	0.00313
561765.2	4190590	0.00018	0.001046	0.001226
561756.3	4190588	0.000176	0.001023	0.001199
561747.5	4190585	0.000172	0.000999	0.001171
561738.6	4190583	0.000168	0.000974	0.001142
561729.8	4190581	0.000164	0.000949	0.001113
561720.9	4190578	0.000161	0.000923	0.001084
561712.1	4190576	0.000157	0.000897	0.001055
561703.2	4190574	0.000154	0.000872	0.001026
561694.4	4190571	0.000151	0.000847	0.000998
561783.6	4190588	0.000184	0.001049	0.001233
561797.6	4190599	0.000198	0.001122	0.00132
561811.6	4190610	0.000213	0.001197	0.00141
561825.7	4190621	0.000229	0.001271	0.0015
561839.7	4190632	0.000246	0.001345	0.001591
561853.7	4190642	0.000264	0.001418	0.001682
561867.8	4190653	0.000283	0.001487	0.00177
561881.8	4190664	0.000301	0.001551	0.001852
561895.9	4190675	0.000318	0.00161	0.001928
561909.9	4190686	0.000337	0.001662	0.001999
561923.9	4190697	0.000355	0.001705	0.00206
561938	4190707	0.000373	0.001733	0.002106
561953	4190727	0.000409	0.001807	0.002216
561955.1	4190745	0.000451	0.001926	0.002377
561957.1	4190762	0.000498	0.002033	0.002531
561959.2	4190780	0.000552	0.002125	0.002677
561960.2	4190789	0.000581	0.002162	0.002743
561962.3	4190806	0.000643	0.002219	0.002862
561964.4	4190824	0.000711	0.002248	0.002959
561965.4	4190833	0.000746	0.002252	0.002998
561967.5	4190850	0.000817	0.002236	0.003053
561969.5	4190868	0.000886	0.002192	0.003078
561970.5	4190877	0.000919	0.00216	0.003079
561972.6	4190894	0.000975	0.002078	0.003053
561974.7	4190912	0.001016	0.001976	0.002992
561767.7	4190581	0.000173	0.000992	0.001165
561758.9	4190578	0.000169	0.00097	0.001139
561750	4190576	0.000165	0.000947	0.001113
561741.2	4190574	0.000162	0.000924	0.001086
561732.3	4190571	0.000158	0.000901	0.001059
561723.5	4190569	0.000155	0.000877	0.001031
561714.6	4190566	0.000152	0.000853	0.001004
561705.8	4190564	0.000149	0.000829	0.000978
561696.9	4190562	0.000146	0.000806	0.000952
561786.1	4190579	0.000177	0.000995	0.001171

561800	4190590	0.00019	0.001062	0.001252
561814	4190600	0.000204	0.001131	0.001335
561827.9	4190611	0.000219	0.0012	0.001419
561841.9	4190622	0.000235	0.001268	0.001503
561855.9	4190633	0.000252	0.001335	0.001587
561869.8	4190643	0.000268	0.0014	0.001668
561883.8	4190654	0.000285	0.00146	0.001745
561897.7	4190665	0.000302	0.001517	0.001819
561911.7	4190676	0.000319	0.001568	0.001887
561925.7	4190686	0.000336	0.00161	0.001946
561939.6	4190697	0.000352	0.001642	0.001994
561953.6	4190708	0.000368	0.001661	0.002029
561961.6	4190722	0.000394	0.001722	0.002116
561963.6	4190740	0.000433	0.001832	0.002265
561965.7	4190757	0.000477	0.001931	0.002408
561967.7	4190775	0.000526	0.002016	0.002542
561969.8	4190792	0.00058	0.002082	0.002662
561971.8	4190810	0.000639	0.002125	0.002764
561973.9	4190827	0.000702	0.002142	0.002844
561975.9	4190845	0.000767	0.002133	0.0029
561978	4190862	0.000829	0.002098	0.002927
561980	4190880	0.000886	0.002039	0.002925
561982.1	4190897	0.000932	0.001958	0.00289
561984.1	4190915	0.000963	0.001862	0.002825
561770.2	4190571	0.000167	0.000941	0.001108
561761.4	4190569	0.000163	0.000921	0.001084
561752.5	4190566	0.000159	0.0009	0.001059
561743.7	4190564	0.000156	0.000878	0.001034
561734.8	4190562	0.000152	0.000856	0.001009
561726	4190559	0.000149	0.000834	0.000983
561717.1	4190557	0.000146	0.000812	0.000958
561708.3	4190555	0.000143	0.00079	0.000933
561699.4	4190552	0.000141	0.000768	0.000909
561788.8	4190569	0.00017	0.000946	0.001116
561796	4190575	0.000176	0.000978	0.001154
561803.2	4190581	0.000183	0.00101	0.001193
561810.4	4190586	0.000189	0.001044	0.001233
561817.7	4190592	0.000197	0.001077	0.001274
561824.9	4190597	0.000204	0.00111	0.001314
561832.1	4190603	0.000211	0.001143	0.001354
561839.3	4190608	0.000219	0.001176	0.001395
561846.5	4190614	0.000227	0.001209	0.001436
561853.7	4190619	0.000235	0.001241	0.001476
561860.9	4190625	0.000243	0.001273	0.001516
561868.1	4190631	0.000251	0.001304	0.001555
561882.6	4190642	0.000268	0.001364	0.001632
561889.8	4190647	0.000276	0.001393	0.001669

561897	4190653	0.000284	0.001421	0.001705
561904.2	4190658	0.000292	0.001448	0.00174
561911.4	4190664	0.000301	0.001473	0.001774
561918.6	4190670	0.000309	0.001497	0.001806
561925.8	4190675	0.000317	0.001519	0.001836
561933.1	4190681	0.000325	0.001537	0.001862
561940.3	4190686	0.000332	0.001554	0.001886
561947.5	4190692	0.00034	0.001567	0.001907
561954.7	4190697	0.000348	0.001578	0.001926
561961.9	4190703	0.000356	0.001586	0.001942
561970.2	4190718	0.000381	0.001645	0.002026
561971.2	4190727	0.000399	0.001699	0.002098
561972.3	4190736	0.000419	0.00175	0.002169
561973.4	4190745	0.000439	0.0018	0.002239
561974.4	4190754	0.000461	0.001846	0.002307
561975.5	4190763	0.000484	0.001888	0.002372
561976.5	4190772	0.000508	0.001925	0.002433
561977.6	4190781	0.000534	0.001958	0.002492
561978.7	4190790	0.00056	0.001987	0.002547
561979.7	4190799	0.000588	0.00201	0.002598
561980.8	4190808	0.000617	0.002027	0.002644
561981.8	4190817	0.000647	0.002037	0.002684
561982.9	4190826	0.000677	0.002041	0.002718
561984	4190835	0.000708	0.002039	0.002747
561985	4190844	0.000738	0.002031	0.002769
561986.1	4190853	0.000767	0.002016	0.002783
561987.1	4190862	0.000796	0.001995	0.002791
561988.2	4190871	0.000822	0.001969	0.002791
561989.3	4190880	0.000847	0.001937	0.002784
561990.3	4190889	0.000868	0.0019	0.002768
561991.4	4190899	0.000887	0.001859	0.002746
561992.4	4190908	0.000901	0.001813	0.002714
561993.5	4190917	0.000912	0.001765	0.002677
561994.6	4190926	0.000917	0.001713	0.00263
561995.6	4190935	0.000919	0.00166	0.002579
561781.6	4190564	0.000164	0.000913	0.001077
561772.7	4190562	0.000161	0.000895	0.001055
561763.9	4190559	0.000157	0.000876	0.001033
561755	4190557	0.000153	0.000856	0.00101
561746.2	4190554	0.00015	0.000836	0.000986
561737.3	4190552	0.000147	0.000815	0.000962
561728.5	4190550	0.000144	0.000795	0.000938
561719.6	4190547	0.000141	0.000774	0.000915
561710.8	4190545	0.000138	0.000754	0.000892
561701.9	4190543	0.000136	0.000733	0.000869
561791.3	4190560	0.000164	0.000899	0.001063
561798.5	4190565	0.00017	0.000929	0.001099

561805.6	4190571	0.000176	0.000959	0.001135
561812.8	4190576	0.000182	0.00099	0.001172
561820	4190582	0.000188	0.001021	0.001209
561827.1	4190588	0.000195	0.001052	0.001247
561834.3	4190593	0.000202	0.001083	0.001285
561841.5	4190599	0.000209	0.001113	0.001322
561848.6	4190604	0.000217	0.001143	0.00136
561855.8	4190610	0.000224	0.001173	0.001397
561863	4190615	0.000232	0.001203	0.001435
561870.1	4190621	0.000239	0.001231	0.00147
561877.3	4190626	0.000247	0.001259	0.001506
561884.5	4190632	0.000255	0.001287	0.001542
561891.7	4190637	0.000262	0.001314	0.001576
561898.8	4190643	0.00027	0.001341	0.001611
561906	4190648	0.000278	0.001367	0.001645
561913.2	4190654	0.000286	0.001392	0.001678
561920.3	4190659	0.000293	0.001415	0.001708
561927.5	4190665	0.000301	0.001436	0.001737
561934.7	4190670	0.000308	0.001456	0.001764
561941.8	4190676	0.000315	0.001473	0.001788
561949	4190682	0.000323	0.001487	0.00181
561956.2	4190687	0.00033	0.0015	0.00183
561963.3	4190693	0.000337	0.00151	0.001847
561970.5	4190698	0.000344	0.001517	0.001861
561978.7	4190713	0.000368	0.001572	0.00194
561979.8	4190722	0.000385	0.001621	0.002006
561980.8	4190731	0.000403	0.001669	0.002072
561981.9	4190740	0.000422	0.001715	0.002137
561983	4190749	0.000442	0.001758	0.0022
561984	4190758	0.000463	0.001797	0.00226
561985.1	4190767	0.000485	0.001832	0.002317
561986.1	4190776	0.000509	0.001863	0.002372
561988.2	4190794	0.000559	0.001913	0.002472
561989.3	4190803	0.000585	0.001931	0.002516
561990.3	4190812	0.000612	0.001942	0.002554
561991.4	4190821	0.00064	0.001948	0.002588
561992.4	4190830	0.000667	0.001948	0.002615
561993.5	4190839	0.000695	0.001943	0.002638
561994.5	4190848	0.000722	0.001932	0.002654
561995.6	4190857	0.000748	0.001915	0.002663
561996.6	4190866	0.000772	0.001893	0.002665
561997.7	4190875	0.000795	0.001866	0.002661
561998.8	4190884	0.000815	0.001834	0.002649
561999.8	4190893	0.000832	0.001798	0.00263
562000.9	4190902	0.000847	0.001759	0.002606
562001.9	4190911	0.000857	0.001716	0.002573
562003	4190920	0.000864	0.00167	0.002534

562004	4190929	0.000867	0.001622	0.002489
562005.1	4190938	0.000866	0.001571	0.002437
561784.1	4190554	0.000158	0.000869	0.001027
561775.3	4190552	0.000155	0.000852	0.001007
561766.4	4190550	0.000151	0.000834	0.000985
561757.6	4190547	0.000148	0.000816	0.000963
561748.7	4190545	0.000145	0.000797	0.000941
561739.9	4190543	0.000142	0.000778	0.000919
561731	4190540	0.000139	0.000758	0.000897
561722.2	4190538	0.000136	0.000739	0.000875
561713.3	4190536	0.000134	0.00072	0.000853
561704.5	4190533	0.000131	0.000701	0.000832

APPENDIX C

NOISE MODEL DATA

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TABLE Existing-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from University to Addison Street
NOTES: - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11870 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	70.0	150.4

TABLE Existing-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from Addison Street to Allston Way
NOTES: - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11230 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	67.5	144.9

TABLE Existing-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from Allston Way to Bancroft Way
NOTES: - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10740 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.04

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	65.5	140.7

TABLE Existing-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: University from 6th Street to 5th Street
NOTES: - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27510 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	99.3	209.0	447.8

TABLE Existing-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Allston Way from 5th Street to 6th Street
NOTES: - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3750 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES		
DAY	EVENING	NIGHT
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AUTOS		
75.51	12.57	9.34
M-TRUCKS		
1.56	0.09	0.19
H-TRUCKS		
0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
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0.0	0.0	0.0	70.0

TABLE Existing-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Allston Way from 5th Street to 4th Street
NOTES: - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2790 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	57.5

TABLE Existing-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Allston Way to Addison Street
NOTES: - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2780 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19

H-TRUCKS
0.64 0.02 0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	57.4

TABLE Existing-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Allston Way to Bancroft St
NOTES: - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2200 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Way from 5th Street to 6th Street
NOTES: - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3660 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	68.8

TABLE Existing-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Way from 5th Street to 4th Street
NOTES: - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3410 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.05

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	65.7

TABLE Existing-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Wat from 4th to RR right of way
NOTES: - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 790 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT

AUTOS
75.51 12.57 9.34
M-TRUCKS
1.56 0.09 0.19
H-TRUCKS
0.64 0.02 0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.70

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fourth Street from Bancroft Way to Channing Way
NOTES: - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2380 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	51.8

TABLE Existing-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fourth Street from Bancroft Way to Allston Way
NOTES: - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3140 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES		
DAY	EVENING	NIGHT
AUTOS		
75.51	12.57	9.34
M-TRUCKS		
1.56	0.09	0.19
H-TRUCKS		
0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.69

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	62.2

TABLE Existing-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Bancroft Way to Channing Way
NOTES: - Existing

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1950 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing With Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from University to Addison Street
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12770 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.79

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	73.5	157.9

TABLE Existing With Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from Addison Street to Allston Way
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12130 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	71.0	152.5

TABLE Existing With Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from Allston Way to Bancroft Way
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10950 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	66.4	142.5

TABLE Existing With Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: University from 6th Street to 5th Street
NOTES: - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28710 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	102.0	214.9	460.7

TABLE Existing With Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Allston Way from 5th Street to 6th Street
NOTES: - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4440 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	78.2

TABLE Existing With Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Allston Way from 5th Street to 4th Street
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2790 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19

H-TRUCKS
0.64 0.02 0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	57.5

TABLE Existing With Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Allston Way to Addison Street
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2780 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	57.4

TABLE Existing With Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Allston Way to Bancroft St
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2890 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	58.9

TABLE Existing With Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Way from 5th Street to 6th Street
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4180 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	75.2

TABLE Existing With Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Way from 5th Street to 4th Street
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3680 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT

AUTOS
75.51 12.57 9.34
M-TRUCKS
1.56 0.09 0.19
H-TRUCKS
0.64 0.02 0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	69.1

TABLE Existing With Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Wat from 4th to RR right of way
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1140 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing With Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fourth Street from Bancroft Way to Channing Way
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2380 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	51.8

TABLE Existing With Project-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fourth Street from Bancroft Way to Allston Way
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3220 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	63.3

TABLE Existing With Project-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Bancroft Way to Channing Way
NOTES: - Existing With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1950 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Near-Term-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from University to Addison Street
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13580 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.05

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	76.5	164.5

TABLE Near-Term-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from Addison Street to Allston Way
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13240 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES		
DAY	EVENING	NIGHT
AUTOS		
75.51	12.57	9.34
M-TRUCKS		
1.56	0.09	0.19
H-TRUCKS		
0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	75.3	161.7

TABLE Near-Term-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from Allston Way to Bancroft Way
NOTES: - Near-Term

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12750 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	73.4	157.7

TABLE Near-Term-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: University from 6th Street to 5th Street
NOTES: - Near-Term

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30240 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	105.4	222.4	476.9

TABLE Near-Term-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Allston Way from 5th Street to 6th Street
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3750 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19

H-TRUCKS
0.64 0.02 0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	70.0

TABLE Near-Term-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Allston Way from 5th Street to 4th Street
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2790 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	57.5

TABLE Near-Term-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Allston Way to Addison Street
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2840 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	58.2

TABLE Near-Term-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Allston Way to Bancroft St
NOTES: - Near-Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2260 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Near-Term-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Way from 5th Street to 6th Street
NOTES: - Near-Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4890 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT

AUTOS
75.51 12.57 9.34
M-TRUCKS
1.56 0.09 0.19
H-TRUCKS
0.64 0.02 0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	83.4

TABLE Near-Term-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Way from 5th Street to 4th Street
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3700 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	69.3

TABLE Near-Term-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Wat from 4th to RR right of way
NOTES: - Near-Term

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2520 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES		
DAY	EVENING	NIGHT
AUTOS		
75.51	12.57	9.34
M-TRUCKS		
1.56	0.09	0.19
H-TRUCKS		
0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	53.8

TABLE Near-Term-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fourth Street from Bancroft Way to Channing Way
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2380 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	51.8

TABLE Near-Term-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fourth Street from Bancroft Way to Allston Way
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3700 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	69.3

TABLE Near-Term-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Bancroft Way to Channing Way
NOTES: - Near-Term

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1950 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Near-Term With Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from University to Addison Street
NOTES: - Near-Term With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14480 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES		
DAY	EVENING	NIGHT
AUTOS		
75.51	12.57	9.34
M-TRUCKS		
1.56	0.09	0.19
H-TRUCKS		
0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	79.9	171.6

TABLE Near-Term With Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from Addison Street to Allston Way
NOTES: - Near-Term With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14140 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	78.6	168.9

TABLE Near-Term With Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Sixth Street from Allston Way to Bancroft Way
NOTES: - Near-Term With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12960 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.85

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	74.2	159.4

TABLE Near-Term With Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: University from 6th Street to 5th Street
NOTES: - Near-Term With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31440 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19

H-TRUCKS
0.64 0.02 0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	108.0	228.2	489.4

TABLE Near-Term With Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Allston Way from 5th Street to 6th Street
NOTES: - Near-Term With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4440 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	78.2

TABLE Near-Term With Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Allston Way from 5th Street to 4th Street
NOTES: - Near-Term With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2790 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	57.5

TABLE Near-Term With Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Allston Way to Addison Street
NOTES: - Near-Term With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2840 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	58.2

TABLE Near-Term With Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Allston Way to Bancroft St
NOTES: - Near-Term With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2950 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT

AUTOS
75.51 12.57 9.34
M-TRUCKS
1.56 0.09 0.19
H-TRUCKS
0.64 0.02 0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	59.7

TABLE Near-Term With Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Way from 5th Street to 6th Street
NOTES: - Near-Term With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5410 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.06

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	89.2

TABLE Near-Term With Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Way from 5th Street to 4th Street
NOTES: - Near-Term With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3780 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES			
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	70.3

TABLE Near-Term With Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Bancroft Wat from 4th to RR right of way
NOTES: - Near-Term With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2870 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	58.6

TABLE Near-Term With Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fourth Street from Bancroft Way to Channing Way
NOTES: - Near-Term With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2380 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	51.8

TABLE Near-Term With Project-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fourth Street from Bancroft Way to Allston Way
NOTES: - Near-Term With Project

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3780 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	70.3

TABLE Near-Term With Project-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/20/2021
ROADWAY SEGMENT: Fifth Street from Bancroft Way to Channing Way
NOTES: - Near-Term With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1950 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0