

AGENDA
DES MOINES CITY COUNCIL
REGULAR MEETING

City Council Chambers
21630 11th Avenue S, Suite C
Des Moines, Washington
Thursday, July 9, 2026 - 6:00 PM

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

PROCLAMATIONS

Item 1. **Parks and Recreation Month Proclamation**
Motion: "I move to approve the proclamation recognizing July as Parks and Recreation Month."

CORRESPONDENCE NOT PREVIOUSLY RECEIVED BY COUNCIL

COMMENTS FROM THE PUBLIC

REGIONAL COMMITTEE REPORT

CITY MANAGER REPORT/PRESENTATIONS/BRIEFINGS

Item 1. **Update from South King Fire Chief Ryan Woodey** - 10 Minutes
Staff Presentation:
Katherine Caffrey, City Manager

Item 2. **2027/2028 Budget Calendar Overview** - 15 Minutes
Staff Presentation:
Jeff Friend, Finance Director

CONSENT AGENDA

Item 1. **Approval of Vouchers**
Motion: "I move to approve the payment vouchers through June 24th, 2026 and payroll transfers through June 18th, 2026 in the attached list and further described as follows:"

EFT Vendor Payments	# 13791 - # 13845	$ 767,664.50
Wires	# 3361 - # 3369	$ 2,468,771.64
Accounts Payable Checks	# 167549 - # 167586	$ 181,390.58
Voided Checks	# 167269	($ 1,218.00)
Payroll Checks	# 20074 - # 20075	$ 5,374.90
Payroll Advice	# 17910 - # 18063	$ 521,867.56

Total Checks and Wires for A/P & Payroll:	$ 3,943.851.18

Item 2. **Approval of Minutes**
Motion: "I move to approve the minutes from the June 04, 2026 Committee of the Whole and Study Session meetings, as well as the June 11, 2026 and June 25, 2026 City Council Regular Meetings.

Item 3. **Speed Camera Ordinance - Second Reading**
Motion: "I move to pass Draft Ordinance No. 26-049, authorizing additional automated traffic safety camera locations in the City of Des Moines."

Item 4. **Citizens Advisory Board Appointment**
Motion: “I move to confirm Dan Wahlstrom to the Citizens Advisory Board as the Woodmont representative, effective immediately with an expiration date of June 30, 2029.”

Item 5. **2026 Lodging Tax Advisory Committee Spending Recommendations**
Motion: “I move to approve the recommendations as submitted by the Lodging Tax Advisory Committee for the expenditure of Lodging Tax funds.”

Item 6. **NFC Northwest Telecommunications Franchise Agreement - Second Reading**
Motion: "I move to pass Draft Ordinance No. 26-055 granting a telecommunications Franchise to NFC Northwest, LLC."

Item 7. **24th Ave Suspension PSE Settlement Agreements**
Motion: "I move to ratify and approve the settlement agreements with PSE for the 24th Ave Improvements Project suspensions."

NEW BUSINESS

Item 1. **Establishment of Ad Hoc City Council Budget Engagement Committee** - 20 Minutes
Staff Presentation:
Katherine Caffrey, City Manager

Motion: "I move that the City Council establish an Ad Hoc Budget Engagement Committee for the purpose of advising on the City's public engagement approach during the biennial budget process, and that Councilmembers _____ and _____ and _____ be appointed to serve on this committee. The committee shall dissolve upon adoption of the 2027/2028 Budget."

Item 2. **Sustainable Airport Master Plan (SAMP) Update** - 20 Minutes
Staff Presentation:

Rebecca Deming, Community Development Director

Item 3. **New Agenda Items for Consideration** - 10 Minutes

COUNCILMEMBER REPORTS
(4 minutes per Councilmember) - 30 minutes

PRESIDING OFFICER'S REPORT

EXECUTIVE SESSION
Property Acquisition RCW 42.30.110(1)(b) - 75 Minutes

NEXT MEETING DATE
July 30, 2026 City Council Workshop

ADJOURNMENT

Members of the public who wish to provide comment during the meeting via Zoom must register in advance. To register, please email cityclerk@desmoineswa.gov by 12:00 p.m. (noon) on the Wednesday before the meeting.

City Council meeting can be viewed live on the City's website, Comcast Channel 21/321, on the City's YouTube channel or via Zoom.

Projected Future Agenda Items

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **Parks and Recreation Month Proclamation**

ATTACHMENTS:
1. Parks and Recreation Month Proclamation

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Administration

DATE SUBMITTED:
June 29, 2026

CLEARANCES:
City Clerk

Purpose and Recommendation

The purpose of this agenda item is to recognize July as Parks and Recreation Month.

Suggested Motion:

Motion: "I move to approve the proclamation recognizing July as Parks and Recreation Month."

Background

Parks and Recreation Month is recognized nationally each July to celebrate the positive impact parks, recreation opportunities, public spaces, and community facilities have on the health and well-being of our community. The attached proclamation recognizes these contributions and acknowledges the employees, volunteers, instructors, coaches, sponsors, and community partners who help make them possible.

PROCLAMATION

WHEREAS, parks, recreation programs, trails, beaches, open spaces, and public facilities enhance the quality of life for residents and visitors by providing places to play, connect, learn, and enjoy the outdoors; and

WHEREAS, the City of Des Moines is committed to providing welcoming parks, recreation opportunities, public spaces, and community events that promote health, well-being, inclusion, and a strong sense of belonging; and

WHEREAS, parks and recreation bring people together by creating opportunities for families, friends, neighbors, and visitors to gather, build relationships, and enjoy shared experiences; and

WHEREAS, the dedicated employees who care for our parks, beaches, trails, and public facilities, and those who plan and deliver recreation programs, community events, and enrichment opportunities, together with volunteers, instructors, coaches, sponsors, and community partners, help create safe, welcoming, and meaningful experiences for people of all ages throughout the year; and

WHEREAS, the 2026 Parks and Recreation Month theme, "The Power Of," recognizes the power of parks and recreation to connect people, inspire play, foster belonging, improve well-being, and build stronger, more resilient communities; and

WHEREAS, the month of July provides an opportunity to celebrate the many ways parks and recreation enrich the lives of those who live, work, and visit the City of Des Moines;

NOW, THEREFORE, I, Yoshiko Grace Matsui, Mayor of the City of Des Moines, Washington, on behalf of the Des Moines City Council, do hereby proclaim July 2026 as Parks and Recreation Month in the City of Des Moines and encourage all residents to celebrate "The Power Of" parks and recreation by exploring our parks, participating in recreation programs, attending community events, volunteering, and recognizing the individuals and organizations whose dedication helps make Des Moines a vibrant and welcoming community.

SIGNED this day 9th day of July, 2026

_____

Yoshiko Grace Matsui, Mayor

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **Update from South King Fire Chief Ryan Woodey** – 10 Minutes

ATTACHMENTS:

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Administration

DATE SUBMITTED:
June 29, 2026

CLEARANCES:

Purpose and Recommendation

The purpose of this presentation is for South King Fire Chief Woodey to provide the Council with an update on the District.

Discussion

Chief Ryan Woodey was appointed to serve as Fire Chief by the South King Fire Board of Commissioners on January 5th, 2026. Locally rooted, Chief Woodey grew up in Federal Way.

Chief Woodey's fire service career began in 2002 as a volunteer firefighter with Graham Fire & Rescue. For twenty years, he served as a career firefighter with Graham, advancing through the ranks from firefighter to battalion chief. In pursuit of a higher calling, Chief Woodey accepted a position as Deputy Fire Chief with the Kirkland Fire Department in 2023. He served with Kirkland Fire until his appointment as Fire Chief with South King Fire. Chief Woodey will provide the Council with an update on his work with the District.

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **2027/2028 Budget Calendar Overview** – 15 Minutes

ATTACHMENTS:
1. 2027/2028 Budget Calendar Overview PowerPoint

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Administration

DATE SUBMITTED:
June 26, 2026

CLEARANCES:
Finance

Purpose and Recommendation

The purpose of this presentation is to update the City Council on the upcoming schedule of the 2027/2028 budget process.

Background

The City Council adopted biennial budgeting on March 28, 2024. The 2027–2028 budget will be the City's second biennial budget, building on the framework established during the inaugural biennium.

Discussion

Following the 2022 launch of the City's new financial management system and the 2024 transition to biennial budgeting, staff have continued refining the process — improving efficiency, expanding decision-maker information, and increasing transparency.



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2027-2028 Budget Calendar Overview

July



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July Budget Activities

- **Projects in process**
  - Capital Improvements Plan
  - Indirect Cost Allocation
  - Interfund Assessments
    - Equipment Replacement Fund
    - Computer Maintenance
    - Computer Replacement
    - Facility Maintenance

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July Budget Activities

- **Department Meetings With City Manager**
  - July 28-30
    - All departments covered

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Technological Advancement



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Budget Tools

Position Control - Before

52 - 2 (Inactive)

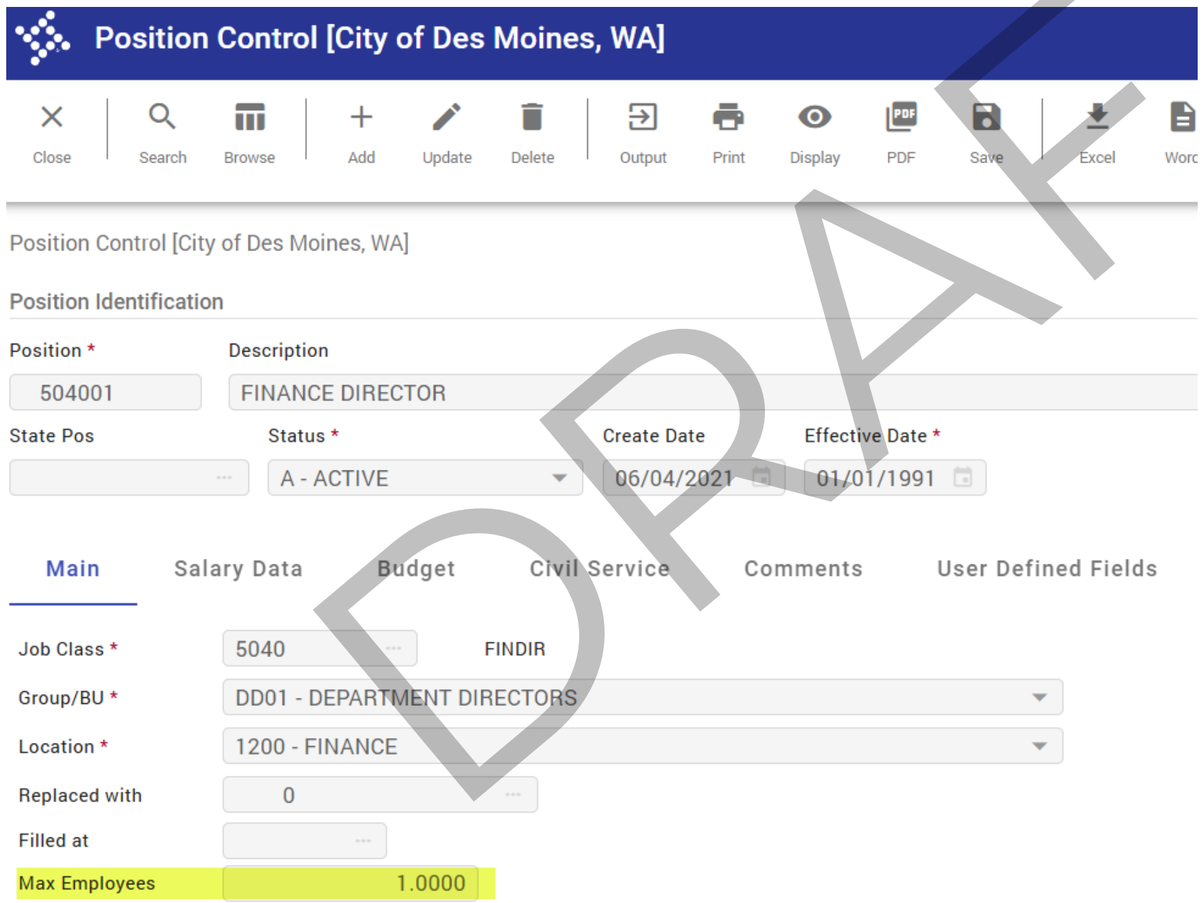
no detective 203003

TOTAL STAFF	Name		29-Aug Notes	Hire Status	
	CSO 2				
1	Tonya Seaberry	1	202002		
2	Korey Batterman	2	2020-01		
	Detectives 6 (8 old)				
3	Casey Emily	1	203006		
4	Fred Gendereau	2	203002	Retires Jan 1 23 ??	
5	Jay West	3	203004		
6	Kevin Montgomery	4	203005		
7	Chad Stillwagon	5	203001		
8	Johnny Tyler ATF	6	203007		
	Patrol 16+2st crime+2 ARPA=20				
9	Doug Weable	1	204009		
10	Dave Sheilds	2	204008		
11	Nate Chevallier	3	204014		
12	Patricia Minkler	4	204015		
13	Courtney Duncan	5	204007		
14	Jeffrey Dotson	6	204010		
15	Brian Flynn	7	204005		
16	Robert Bonjukian	8	Filled 10-5-22	Ochart to Sgt	204012 (VACANT)
17	Eric Morris	9	204020		
18	Robert Raimond	10	204011		
19	Mark Hake	11	204013		

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Budget Tools

Position Control - Now

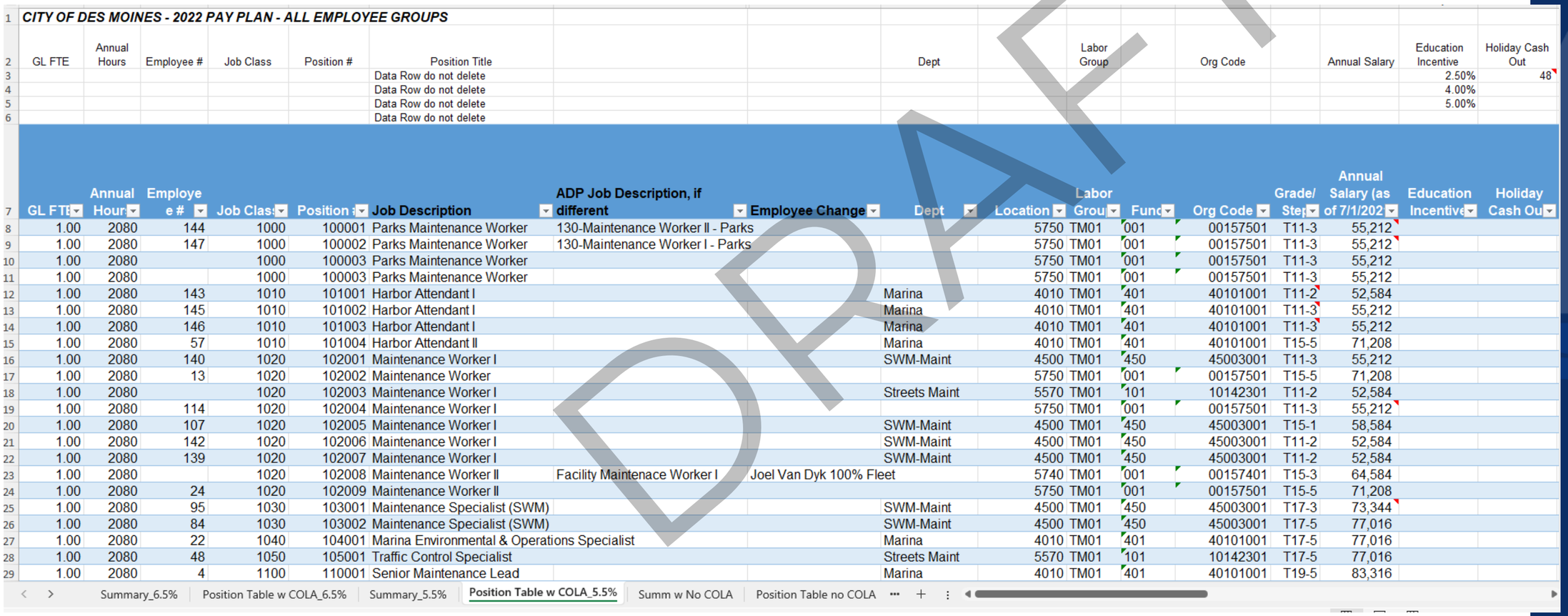


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Budget Tools

Salary and Benefits - Before



CITY OF DES MOINES - 2022 PAY PLAN - ALL EMPLOYEE GROUPS

GL FTE	Annual Hours	Employee #	Job Class	Position #	Position Title			Dept		Labor Group		Org Code		Annual Salary	Education Incentive	Holiday Cash Out
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					Data Row do not delete										4.00%	
					Data Row do not delete										5.00%	
					Data Row do not delete											

GL FTE	Annual Hours	Employee #	Job Class	Position #	Job Description	ADP Job Description, if different	Employee Change	Dept	Location	Labor Group	Fund	Org Code	Grade/ Step	Annual Salary (as of 7/1/202	Education Incentive	Holiday Cash Out
1.00	2080	144	1000	100001	Parks Maintenance Worker	130-Maintenance Worker II - Parks			5750	TM01	001	00157501	T11-3	55,212		
1.00	2080	147	1000	100002	Parks Maintenance Worker	130-Maintenance Worker I - Parks			5750	TM01	001	00157501	T11-3	55,212		
1.00	2080		1000	100003	Parks Maintenance Worker				5750	TM01	001	00157501	T11-3	55,212		
1.00	2080		1000	100003	Parks Maintenance Worker				5750	TM01	001	00157501	T11-3	55,212		
1.00	2080	143	1010	101001	Harbor Attendant I			Marina	4010	TM01	401	40101001	T11-2	52,584		
1.00	2080	145	1010	101002	Harbor Attendant I			Marina	4010	TM01	401	40101001	T11-3	55,212		
1.00	2080	146	1010	101003	Harbor Attendant I			Marina	4010	TM01	401	40101001	T11-3	55,212		
1.00	2080	57	1010	101004	Harbor Attendant II			Marina	4010	TM01	401	40101001	T15-5	71,208		
1.00	2080	140	1020	102001	Maintenance Worker I			SWM-Maint	4500	TM01	450	45003001	T11-3	55,212		
1.00	2080	13	1020	102002	Maintenance Worker				5750	TM01	001	00157501	T15-5	71,208		
1.00	2080		1020	102003	Maintenance Worker I			Streets Maint	5570	TM01	101	10142301	T11-2	52,584		
1.00	2080	114	1020	102004	Maintenance Worker I				5750	TM01	001	00157501	T11-3	55,212		
1.00	2080	107	1020	102005	Maintenance Worker I			SWM-Maint	4500	TM01	450	45003001	T15-1	58,584		
1.00	2080	142	1020	102006	Maintenance Worker I			SWM-Maint	4500	TM01	450	45003001	T11-2	52,584		
1.00	2080	139	1020	102007	Maintenance Worker I			SWM-Maint	4500	TM01	450	45003001	T11-2	52,584		
1.00	2080		1020	102008	Maintenance Worker II	Facility Maintenace Worker I	Joel Van Dyk 100% Fleet		5740	TM01	001	00157401	T15-3	64,584		
1.00	2080	24	1020	102009	Maintenance Worker II				5750	TM01	001	00157501	T15-5	71,208		
1.00	2080	95	1030	103001	Maintenance Specialist (SWM)			SWM-Maint	4500	TM01	450	45003001	T17-3	73,344		
1.00	2080	84	1030	103002	Maintenance Specialist (SWM)			SWM-Maint	4500	TM01	450	45003001	T17-5	77,016		
1.00	2080	22	1040	104001	Marina Environmental & Operations Specialist			Marina	4010	TM01	401	40101001	T17-5	77,016		
1.00	2080	48	1050	105001	Traffic Control Specialist			Streets Maint	5570	TM01	101	10142301	T17-5	77,016		
1.00	2080	4	1100	110001	Senior Maintenance Lead			Marina	4010	TM01	401	40101001	T19-5	83,316		

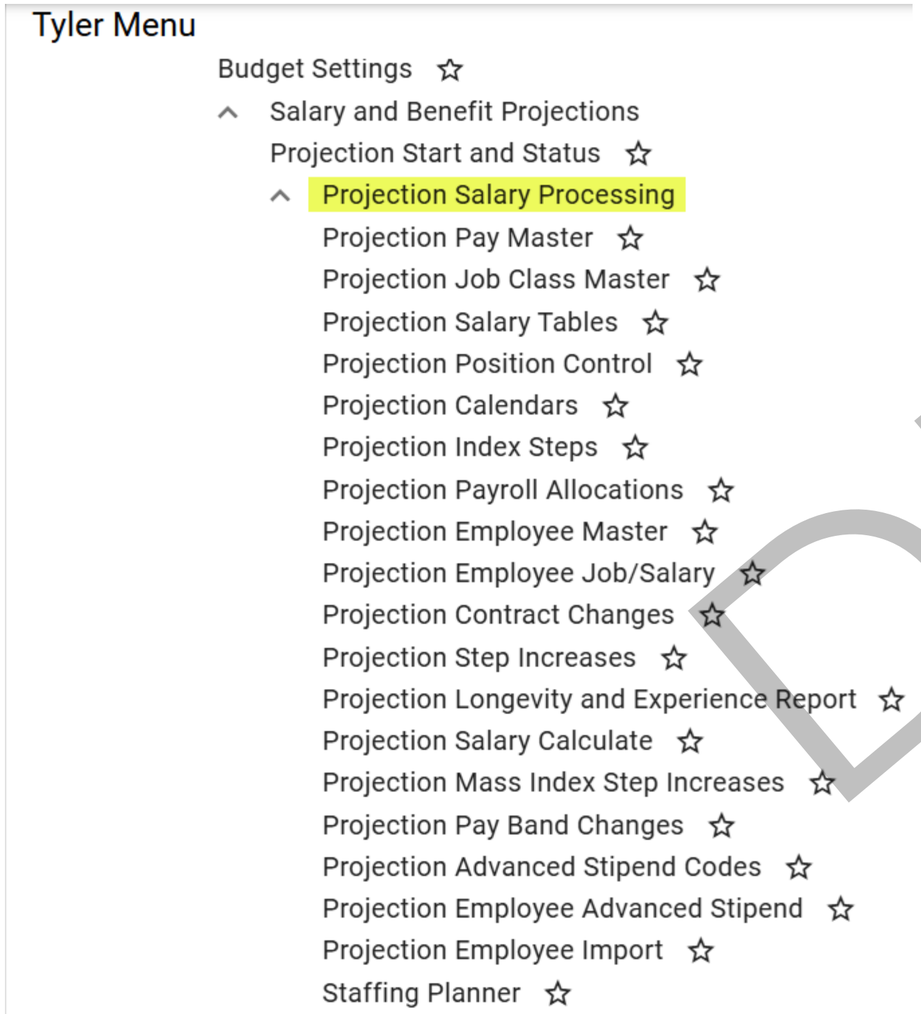
Summary_6.5% | Position Table w COLA_6.5% | Summary_5.5% | Position Table w COLA_5.5% | Summ w No COLA | Position Table no COLA

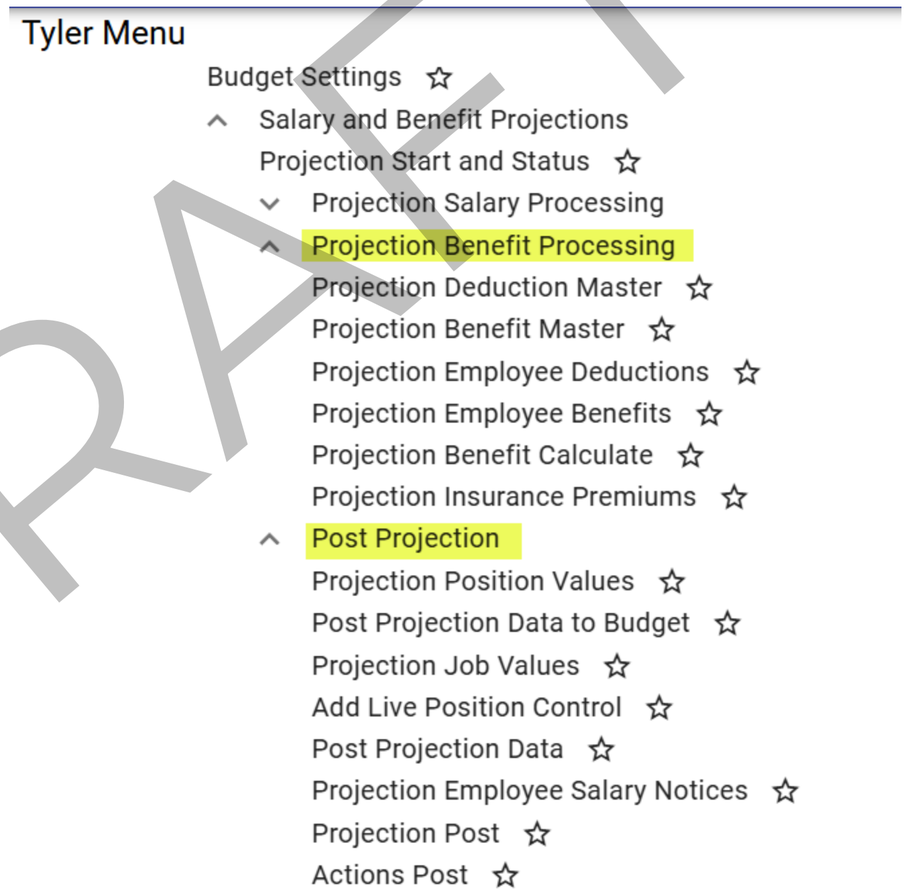
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Budget Tools

Salary and Benefits - Now





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Budget Tools

Budget Submissions- Before

2023 Program Budget				Updated 06/2022
Name	**Program Type**	**Date(s)**	**Program Detail**	**Projected Budget**
Utility Box Wrap	Public Art		Yearly Beautification Program wrapping defaced utility boxes and promoting graffiti prevention in the City- 5 Boxes per year	$ 30,000.00
Artist Sculpture Replacements	Public Art		Commission sculpture pieces that rotate through the City each year. Eight Artists are paid a yearly $500 stipend for their work on display	$ 4,000.00
Summer Concerts	Event		Eight week concert series at the Des Moines Beach Park Meadow. Event is free to the public and includes a beer garden, food trucks, and night market	$ 45,000.00
Theater in the Parks	Event		Live summer theater performances brought by Seattle Shakespeare and Burien Actors Theater. Performances located in the Beach Park and at Wooten Park	$ 5,200.00
Arts and Culture Grants/Sponsorships	Grant/Sponsorship		Review new event/art critera	$ 6,000.00
Squid a Rama	Event		Partnership with/at the Highline Colleges MaST Center. DM Student Squid Art Competition, Live Squid Release, Squid Dissection	$ 2,100.00
Uncover Des Moines	Public Art		The UnCover Des Moines program will be a combination of an already existing sculpture walk produced by the City of Des Moines, and a book cover walk that the library created last summer. The Des Moines branch librarians will select books inspired by several of the sculptures around the City of Des Moines and create posters of the book covers. The book posters will have QR codes that link to the catalog allowing patrons to check the item out and explain the program. The posters will then be displayed by the sculptures.	$500.00
Marekting			Video and photo content creation and execution of content to website to promote commission events	$15,000.00
			Total	$107,800.00

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IT Operations

- Maintenance agreements general across the board vendor increases (4% forecast) 16,000
- Increase in the number of computers and accessories needing replacement. 10,000
- Cloud phone system 37,000
- Rate increase in KC I-Net 2,000
- ESRI User Conference rate increase 1,000

New GIS requests for 2023

- GeoEvent Viewer 6,055
  - Will allow us to connect our GIS with real-time data streams.
- 5 additional GIS Portal licenses 2,800
  - PD crime mapping display stations.
- 4 additional ArcGIS Online licenses 2,325
  - Bldg/Plan/SWM online web maps.
- Drone 5,000
  - The drone will assist in field operations such as inspections and other types of field activity requiring visual inspection.
- Spillman GIS Integration 14,000
  - Will automate address updating and standardize records addressing.

Other Systems

- Activity Center reader board upgrade 2,500
  - Upgrade sign so it can be programmed from the Cloud instead of ties to one pc. (Amount included in Small T&E increase above)

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Budget Tools

Budget Submissions- Now

A Live Look at the 2027/2028 Budget Workbooks

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Budget Tools

New Tools

- Budget Enhancement Request Form
- Budget Office Hours
- Department Update Form

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August

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August Budget Activities

The focus in August shifts from preparation to decision-making.

Key Events

- **Council Study Session** - August 6
- **Capital Improvements Plan**
    - **Committee of the Whole** – August 6
    - **Council Presentations** – August 13 and 27
- **Budget Town Hall-** August 18 (tentative) at Activity Center
- **Citizen's Advisory Board** – August 26

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September



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September Budget Activities

September is the refinement month. Staff incorporates Council's direction, updates budget recommendations, and prepares the preliminary budget.

Key Events

- **Budget message is drafted**
- **Council Budget Workshop-** Sept 12 (TBD)
- **Finance assembles the budget book for Council review.**

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October



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October Budget Activities

October introduces the proposed budget.

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Key Events

- **Budget Book submitted to City Clerk** – October 1
- **Councilmembers can schedule meetings with the City Manager and Finance Director to discuss budget**
- **Budget Presentation to Citizen's Advisory Board** – October 28
- **Public Hearings/First Readings** – October 29
    - **2027 Property Tax Levy**
    - **2026 Budget Amendments**
    - **2027/2028 Biennial Budget**

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October Budget Activities

A Budget Book on October 1st – a first!

Council used to receive this report on October 1.

City of Des Moines, WA

NEXT YEAR / CURRENT YEAR BUDGET ANALYSIS

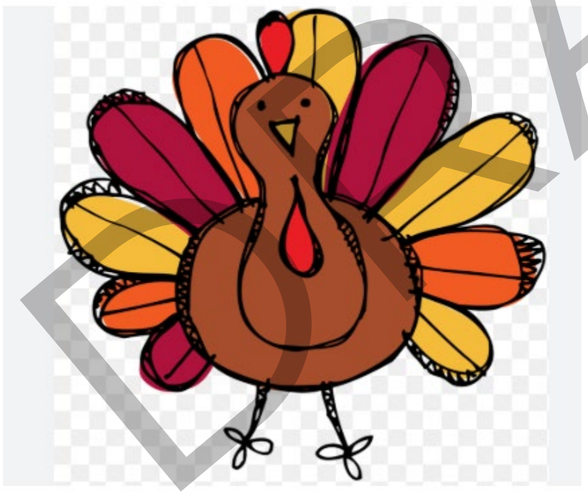
PROJECTION: 20242 2024 Preliminary Budget Draft FOR PERIOD 13

ACCOUNTS FOR: GENERAL FUND		2022 ACTUAL	2023 ORIG BUD	2023 REVISED BUD	2023 ACTUAL	2023 PROJECTION	2024 Department Request	PCT CHANGE
00110001 CITY COUNCIL PUBLICATIONS								
00110001 510000	SALARIES &	43,850.00	74,000.00	.00	5,550.00	.00	.00	.0%
00110001 520000	PERSONNEL	.00	5,800.00	.00	.00	.00	.00	.0%
00110001 520100	BENEFITS -	2,719.68	.00	.00	424.61	.00	.00	.0%
00110001 520200	BENEFITS -	109.12	.00	.00	27.19	.00	.00	.0%
00110001 520600	BENEFITS -	72.08	.00	.00	13.91	.00	.00	.0%
00110001 531000	SUPPLIES	1,846.80	1,550.00	.00	11.00	.00	550.00	.0%
00110001 541000	PROFESSION	.00	.00	.00	2,100.00	.00	.00	.0%
00110001 541401	PROF SERV-	.00	.00	8,000.00	.00	.00	.00	.0%
00110001 541460	OFFICIAL P	.00	.00	2,000.00	1,106.52	.00	.00	.0%
00110001 542000	COMMUNICAT	.00	.00	1,500.00	1,178.38	.00	.00	.0%
00110001 543000	MEALS & TR	.00	600.00	.00	.00	.00	540.00	.0%
00110001 549000	MISC SVCS	255.00	500.00	.00	889.01	.00	450.00	.0%
00110001 549220	DUES, SCHO	807.00	400.00	.00	265.00	.00	360.00	.0%
00110001 549905	I/F INSURA	1,484.00	1,779.00	.00	.00	.00	2,923.15	.0%
TOTAL CITY COUNCIL PUBLICATI		51,143.68	84,629.00	11,500.00	11,565.62	.00	4,823.15	-58.1%
00110002 CITY COUNCIL LEGISLATIVE								
00110002 510000	SALARIES &	.00	.00	74,000.00	28,350.00	.00	74,000.00	.0%
00110002 520000	PERSONNEL	.00	.00	5,800.00	.00	.00	.00	.0%
00110002 520100	BENEFITS -	.00	.00	.00	2,168.86	.00	5,661.00	.0%
00110002 520200	BENEFITS -	.00	.00	.00	102.78	.00	162.00	.0%
00110002 520600	BENEFITS -	.00	.00	.00	70.96	.00	185.00	.0%
00110002 531000	SUPPLIES	.00	.00	1,550.00	1,037.36	.00	.00	.0%
00110002 541000	PROFESSION	.00	.00	.00	19,273.93	.00	.00	.0%
00110002 541401	PROF SERV-	1,485.62	8,000.00	.00	376.00	.00	8,000.00	.0%
00110002 541460	OFFICIAL P	1,396.39	2,000.00	.00	124.88	.00	1,800.00	.0%
00110002 542000	COMMUNICAT	3,585.31	1,500.00	.00	884.10	.00	1,350.00	.0%
00110002 543000	MEALS & TR	.00	.00	600.00	3,590.66	.00	.00	.0%
00110002 549000	MISC SVCS	.00	.00	500.00	475.17	.00	.00	.0%
00110002 549220	DUES, SCHO	.00	.00	400.00	660.00	.00	.00	.0%
00110002 549905	I/F INSURA	.00	.00	1,779.00	1,779.00	.00	.00	.0%

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November



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November Budget Activities

November concludes the budget process. Council conducts the second reading, considers any final changes, and adopts the City's budget.

Key Events

- **Public Hearings/First Readings** – November 12
  - **2027 Property Tax Levy**
  - **2026 Budget Amendments**
  - **2027/2028 Biennial Budget**

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City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **Approval of Vouchers**

ATTACHMENTS:
1. Vouchers

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Finance

DATE SUBMITTED:
June 29, 2026

CLEARANCES:
City Clerk
Finance

Purpose and Recommendation
Voucher transfers and expense reimbursement claims have been audited and certified by the auditing office in compliance with RCW 42.24.080 and RCW 42.24.090.

Suggested Motion:

Motion: "I move to approve the payment vouchers through June 24th, 2026 and payroll transfers through June 18th, 2026 in the attached list and further described as follows:"

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Total Checks and Wires for A/P & Payroll:	$ 3,943.851.18

Background
City Council review and approval of voucher reports is a key internal control that promotes transparency, accountability, and public trust in the City's financial operations. By examining vouchers after expenditures have occurred, the Council provides independent oversight to confirm that payments were properly authorized, supported by appropriate documentation, and made in accordance with the adopted budget, City policies, and applicable laws. This review helps ensure public funds are used for their intended purposes, strengthens fiscal discipline, and reinforces the separation of duties between staff who process payments and the elected officials responsible for safeguarding taxpayer resources.

Discussion
The vouchers below have been reviewed and certified by individual departments and the City of Des Moines Auditing Officer.

Financial Impact
As described above.

Recommendation
Approval of vouchers.

Des Moines
WATERLAND CITY

Voucher Certification Approval
July 9, 2026
Auditing Officer Certification

Voucher transfers and expense reimbursement claims have been audited and certified by the auditing office in compliance with RCW 42.24.080 and RCW 42.24.090. A listing of these claims has been provided to the City Council.

On July 9, 2026 the Des Moines City Council unanimously approved for payment the vouchers through June 24, 2026 and payroll transfers through June 18, 2026 as detailed in the attached list.

The vouchers below have been reviewed and certified by individual departments and the City of Des Moines Auditing Officer:

Eric Mandelas

Eric Mandelas, Acting Auditing Officer

		# From	# To	Amounts
Claims Vouchers:				
EFT's		13791	13845	767,664.50
Wires		3361	3369	2,468,771.64
Checks		167549	167586	181,390.58
Voided AP Checks		167269		(1,218.00)
Total Vouchers paid				**3,416,608.72**
Payroll Vouchers				
Payroll Checks	6/18/2026	20074	20075	5,374.90
Payroll Advice		17910	18063	521,867.56
Total Paychecks & Direct Deposits				**527,242.46**

Total checks and wires for A/P & Payroll	**3,943,851.18**

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **Approval of Minutes**

ATTACHMENTS:
1. June 04, 2026 City Council Meeting Minutes
2. June 11, 2026 City Council Meeting Minutes
3. June 25, 2026 City Council Meeting Minutes

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:

DATE SUBMITTED:
June 26, 2026

CLEARANCES:

Purpose and Recommendation
The purpose of this agenda item is for the City Council to review the minutes from the June 04, 2026 Committee of the Whole and Study Session meetings, as well as the June 11, 2026 and June 25, 2026 City Council Regular Meetings.

Suggested Motion:

Motion: "I move to approve the minutes from the June 04, 2026 Committee of the Whole and Study Session meetings, as well as the June 11, 2026 and June 25, 2026 City Council Regular Meetings.

Background
The City Clerk's Office has prepared action-format meeting minutes for the City Council's consideration.

Alternatives
The City Council may make corrections to errors and approve the meeting minutes as amended.

Recommendation
Staff recommends the City Council approve the meeting minutes as presented.

MINUTES
DES MOINES CITY COUNCIL
STUDY SESSION
City Council Chambers
21630 11th Avenue S, Suite C
Des Moines, Washington
Thursday, June 4, 2026 - 5:00 PM

CITY COUNCIL COMMITTEE OF THE WHOLE
5:00 p.m. - 5:50 p.m.

CALL TO ORDER

Mayor Yoshiko Grace Matsui called the meeting to order at 5:00 PM.

ROLL CALL

Council Present:
Mayor Yoshiko Grace Matsui, Deputy Mayor Gene Achziger, Councilmember Pierre Blosse, Councilmember Robyn Desimone, Councilmember JC Harris, and Councilmember Jeremy Nutting.

Council Absent:
Councilmember Harry Steinmetz.

Direction/Action
Motion made by Councilmember Jeremy Nutting to excuse Councilmember Harry Steinmetz, seconded by Councilmember Robyn Desimone.
Motion Passed 6-0.

Staff Present:
Assistant City Manager Adrienne Johnson-Newton; City Attorney Tim George; Police Chief Ted Boe; Director of Administrative Services Bonnie Wilkins; Community Development Director Rebecca Deming; Public Works Director Mike Slevin; IT Manager Chris Pauk; and City Clerk Taria Keane.

COMMITTEE OF THE WHOLE ITEMS

Item 1. **Sustainable Airport Master Plan (SAMP) Update**

- Community Development Director Rebecca Deming provided a PowerPoint presentation and update on the Sustainable Airport Master Plan (SAMP).

Item 2. **First Quarter 2026 Police Operations Update**

- Police Chief Ted Boe provided a PowerPoint presentation and update on First Quarter 2026 Police Operations.

CITY COUNCIL STUDY SESSION

6:00 p.m. - 10:00 p.m.

CALL TO ORDER

Mayor Yoshiko Grace Matsui called the meeting to order at 6:00 PM.

PLEDGE OF ALLEGIANCE

The flag salute was led by Deputy Mayor Gene Achziger.

ROLL CALL

Council Present:
Mayor Yoshiko Grace Matsui, Deputy Mayor Gene Achziger, Councilmember Pierre Blosse, Councilmember Robyn Desimone, Councilmember JC Harris, and Councilmember Jeremy Nutting.

Council Absent:
Councilmember Harry Steinmetz.

Direction/Action
Motion made by Councilmember Jeremy Nutting to excuse Councilmember Harry Steinmetz, seconded by Deputy Mayor Gene Achziger.
Motion Passed 6-0.

Staff Present:
Assistant City Manager Adrienne Johnson-Newton; City Attorney Tim George; Director of Administrative Services Bonnie Wilkins; Harbormaster Scott Wilkins; Works Director Mike Slevin; Civil Engineer Alex Johnson; IT Manager Chris Pauk; and City Clerk Taria Keane.

COMMENTS FROM THE PUBLIC

Comments from the public must be limited to the items of business on the Study Session Agenda. Please sign in prior to the meeting and limit your comments to three (3) minutes.

DISCUSSION ITEMS

Item 1. **Infrastructure Project and Funding Discussion**

- Psomas Senior Urban Designer Paul Fuesel and Senior Landscape Architect/Urban Designer Phuong Nguyen gave Council a PowerPoint presentation on the Municipal Infrastructure Project and Funding.

NEXT MEETING DATE

June 11, 2026 City Council Regular Meeting

ADJOURNMENT

Direction/Action
Motion made by Councilmember Jeremy Nutting to adjourn, seconded by Deputy Mayor Gene Achziger.
Motion Passed 6-0.

The meeting adjourned at 7:32 p.m.

MINUTES
DES MOINES CITY COUNCIL
REGULAR MEETING

City Council Chambers
21630 11th Avenue S, Suite C
Des Moines, Washington
Thursday, June 11, 2026 - 6:00 PM

CALL TO ORDER

Mayor Yoshiko Grace Matsui called the meeting to order at 6:00 PM.

PLEDGE OF ALLEGIANCE

The flag salute was led by Councilmember Harry Steinmetz.

ROLL CALL

Council Present:
Mayor Yoshiko Grace Matsui, Deputy Mayor Gene Achziger, Councilmember Pierre Blosse, Councilmember Robyn Desimone, Councilmember JC Harris, Councilmember Jeremy Nutting, and Councilmember Harry Steinmetz.

Staff Present:
City Manager Katherine Caffrey; Assistant City Manager Adrienne Johnson-Newton; City Attorney Tim George; Police Chief Ted Boe; Director of Administrative Services Bonnie Wilkins; Harbormaster Scott Wilkins; Finance Director Jeff Friend; Assistant City Attorney Matthew Hutchins; Community Development Director Rebecca Deming; Public Works Director Mike Slevin; IT Manager Chris Pauk; and City Clerk Taria Keane.

CORRESPONDENCE NOT PREVIOUSLY RECEIVED BY COUNCIL

- There was no additional correspondence beyond the emails already received by the Council.

COMMENTS FROM THE PUBLIC

- Steve Shamblin, Des Moines Pride
- Christie, Flock

- Judy Grande, Flock
- Steve Edmiston, Port of Seattle SAMP (Sustainable Airport Master Plan)

REGIONAL COMMITTEE REPORT

- There were no Regional Committee Reports.

PROCLAMATION (Pulled from the Consent Agenda)

Item 4: **LGBTQIA+ Pride Month Proclamation**
Motion: "I move to approve the proclamation recognizing June as LGBTQIA+ Pride Month."

Direction/Action
Motion made by Councilmember Jeremy Nutting to approve the proclamation recognizing June as LGBTQIA+ Pride Month, seconded by Councilmember Harry Steinmetz.
Motion Passed 7-0.

Mayor Yoshiko Grace Matsui read the LGBTQIA+ Pride Month Proclamation into the record.

CITY MANAGER REPORT/PRESENTATIONS/BRIEFINGS

Item 1. **2027 South King Housing and Homelessness Partners (SKHHP) Work Plan and Budget Presentation** - 15 Minutes
Presentation by: SKHHP Program Manager Dorsol Plants

- SKHHP Program Manager Dorsol Plants gave Council a PowerPoint presentation regarding the 2027 South King Housing and Homelessness Partners Work Plan and Budget.

Item 2. **Port of Seattle Presentation** - 40 Minutes
Presentation by: Port of Seattle Local Government Relations Manager Dave Kaplan

- Port of Seattle Local Government Relations Manager Dave Kaplan gave Council a PowerPoint presentation regarding Port of Seattle activities and initiatives.

Item 3. **2026 4th of July Event Update** - 10 Minutes
Staff Presentation by: Assistant City Manager Adrienne Johnson-Newton

- Assistant City Manager Adrienne Johnson-Newton gave Council a PowerPoint presentation on the 2026 4th of July Event.

CONSENT AGENDA

Item 1. **Approval of Vouchers**
Motion: "I move to approve the payment vouchers through May 28, 2026 and payroll transfers through May 20, 2026 in the attached list and further described as follows:"

EFT Vendor Payments	#13640 - #13719	$ 1,742,501.15
Wires	#3339 - #3345	$ 428,098.47
Accounts Payable Checks	#167503 - #167540	$ 457,230.15
Payroll Checks - 5/20/2026	#20070 - #20071	$ 6,404.89
Payroll Advice - 5/20/2026	#17591 - #17746	$ 503,485.41

Total Checks and Wires for A/P & Payroll: $ 3,137,720.07

Item 2. **Approval of Minutes**
Motion: "I move to approve the minutes from the May 7, 2026 Committee of the Whole and Study Session meetings, as well as the May 14, 2026 and May 21, 2026 City Council Regular Meetings."

Item 3. **Juneteenth Proclamation**
Motion: “I move to approve the proclamation recognizing June 19th, 2026, as a day to celebrate Juneteenth.”

Item 5. **2027 South King County Housing and Homelessness Partners (SKHHP) Work Plan and Budget**
Motion: "I move to pass Draft Resolution No. 26-040, approving the 2027 South King Housing and Homelessness Partners Budget and the 2027 Work Plan."

Item 6. **Residential Conversions Ordinance - 2nd Reading**
Motion: "I move to adopt Draft Ordinance No. 26-035 adopting the Residential Conversions Ordinance."

Item 7. **2026 Lodging Tax Advisory Committee Spending Recommendations**
Motion: “I move to approve the recommendations as submitted by the Lodging Tax Advisory Committee for the expenditure of Lodging Tax funds.”

Item 8. **North Hill Elementary Walkway Improvements Project Condemnation - 2nd Reading**
Motion: "I move to pass Draft Ordinance No. 26-045 directing the City Attorney to prosecute an eminent domain action in King County Superior Court in a manner provided by law to condemn, take, damage and appropriate real property."

Direction/Action
Motion made by Councilmember Jeremy Nutting to approve the Consent Agenda as read, seconded by Councilmember Harry Steinmetz.

Councilmember JC Harris pulled Consent Agenda Item #5.

The remainder of the Consent Agenda passed 7-0.

Motion made by Councilmember Jeremy Nutting to pass Draft Resolution No. 26-040, approving the 2027 South King Housing and Homelessness Partners Budget and the 2027 Work Plan, seconded by Councilmember Harry Steinmetz.
Motion Passed 6-1.

For: Deputy Mayor Gene Achziger, Councilmember Pierre Blosse, Councilmember Robyn Desimone, Mayor Yoshiko Grace Matsui, Councilmember Jeremy Nutting, and Councilmember Harry Steinmetz

Against: Councilmember JC Harris

Mayor Yoshiko Grace Matsui read the Juneteenth Proclamation into the record.

UNFINISHED BUSINESS

Item 1. **Review and Confirmation of the Strategic Priorities for Adoption**
Staff Presentation by: City Manager Katherine Caffrey

- City Manager Katherine Caffrey gave Council a PowerPoint presentation on the Review and Confirmation of the Strategic Priorities for Adoption.

Direction/Action
Motion made by Councilmember Jeremy Nutting to direct staff to incorporate any final feedback provided this evening and place the Strategic Plan, Charting Our Course, on the June 25, 2026 Consent Agenda for Council consideration and adoption, seconded by Councilmember Harry Steinmetz.
Motion Passed 7-0.

NEW BUSINESS

Item 1. **New Agenda Items for Consideration** - 10 Minutes

- There were no new agenda items for consideration.

COUNCILMEMBER REPORTS

(4 minutes per Councilmember) - 30 minutes

COUNCILMEMBER HARRY STEINMETZ

- No Report

COUNCILMEMBER JC HARRIS

- Thanked Dave Kaplan
- Tour of North Burien

COUNCILMEMBER ROBYN DESIMONE

- No Report

COUNCILMEMBER JEREMY NUTTING

- Men's Mental Health Awareness Month

COUNCILMEMBER PIERRE BLOSSE

- World Cup Event at Des Moines Theater

DEPUTY MAYOR GENE ACHZIGER

- Strategic Plan
- Ribbon Cutting and Dedication of the New Redondo Pier

PRESIDING OFFICER'S REPORT

- State of the County
- Farmers Market Opening Day
- Ribbon Cutting at the Des Moines Marina L-M-N Dock
- Seattle Times opinion piece regarding airport operation and a potential joint response from the Mayors of Des Moines, SeaTac, and Burien

NEXT MEETING DATE

June 25, 2026 City Council Regular Meeting

ADJOURNMENT

Direction/Action
Motion made by Councilmember Harry Steinmetz to adjourn, seconded by Councilmember Jeremy Nutting.
Motion Passed 7-0.

The meeting adjourned at 7:42 p.m.

MINUTES
DES MOINES CITY COUNCIL
REGULAR MEETING

City Council Chambers
21630 11th Avenue S, Suite C
Des Moines, Washington
Thursday, June 25, 2026 - 6:00 PM

CALL TO ORDER

Mayor Yoshiko Grace Matsui called the meeting to order at 6:00 PM.

PLEDGE OF ALLEGIANCE

The flag salute was led by Councilmember JC Harris.

ROLL CALL

Council Present:
Mayor Yoshiko Grace Matsui, Deputy Mayor Gene Achziger, Councilmember Pierre Blosse, Councilmember Robyn Desimone, Councilmember JC Harris, Councilmember Jeremy Nutting, and Councilmember Harry Steinmetz.

Staff Present:
City Manager Katherine Caffrey; Assistant City Manager Adrienne Johnson-Newton; City Attorney Tim George; Police Chief Ted Boe; Assistant Police Chief Cory Stanton; Sergeant Eddie Ochart; Sergeant Eric Morris; Sergeant Nate Chevallier; Police Officer Frank Rios; Patrol Officer Colton Reyes; Patrol Officer Tuan Huynh; Patrol Officer Andy Martinez Deluna; Finance Director Jeff Friend; Judge Lisa Leone; Assistant City Attorney Matthew Hutchins; Community Development Director Rebecca Deming; Civil Engineer Jeron Griffin; IT Manager Chris Pauk; Communications and Community Programs Analyst Alexandra Reyes; and City Clerk Taria Keane.

CORRESPONDENCE NOT PREVIOUSLY RECEIVED BY COUNCIL

- There was no additional correspondence beyond the emails already received by Council.

COMMENTS FROM THE PUBLIC

- Pam Cooper - Flock
- Melissa Falcetti - Flock
- Anet Fox - Flock
- Rus Rigley - Shark in the Park
- Christie - Flock
- Chris DelaRosa - Flock
- Cara Haney - Flock
- Kay Thomas - Flock
- Kristin Frerichs - Flock
- Judy Grande - Flock
- Kay Vann - Community

REGIONAL COMMITTEE REPORT

- Councilmember JC Harris provided an update on the Regional Transit Committee meeting held on June 17, 2026.
- Councilmember Pierre Blosse provided update on the King County Board of Heath meeting which was held on June 18, 2026.

CITY MANAGER REPORT/PRESENTATIONS/BRIEFINGS

Item 1. **Recognition of Sergeant Eddie Ochart for 25 Years of Service**

- Police Chief Ted Boe recognized Sergeant Eddie Ochart for 25 years of service with the Des Moines Police Department.

Item 2. **2025 4th Quarter Financial Report**

- Finance Director Jeff Friend gave Council a PowerPoint presentation on the 2025 4th Quarter Financial Report.

Item 3. **2026 1st Quarter Financial Report**

- Finance Director Jeff Friend gave Council a PowerPoint presentation on the 2026 1st Quarter Financial Report.

Item 4. **Strategic Plan Implementation Update: Economic Vitality**

- City Manager Katherine Caffrey along with Community Development Director Rebecca Deming gave Council a PowerPoint presentation update on the Strategic Plan Implementation.

Item 5. **Proposed Letter to Port of Seattle Commissioners**

- Council discussed the proposed letter to the Port of Seattle Commissioners.

CONSENT AGENDA

Item 1. **Approval of Vouchers**
"I move to approve the payment vouchers through June 10, 2026, and payroll transfers through June 5, 2026, in the attached list and further described as follows:"

EFT Vendor Payments	#13720 - #13790	$ 1,468,346.03
Wires	#3346 - #3360	$ 1,336,931.55
Accounts Payable Checks	#167541 - #167548	$ 111,654.24
Voided Checks	#167298	($ 70.14)
Payroll Checks	#20072 - #20073	$ 1,278.58
Payroll Advice	#17747 - #17909	$ 522,947.07
	Total Checks and Wires for A/P & Payroll:	$ 3,441,457.47

Item 2. **NFC Northwest Telecommunications Franchise Agreement - First Reading**
Motion: "I move to pass Draft Ordinance No. 26-055 regarding a telecommunications Franchise Agreement with NFC Northwest, LLC, to a second reading on July 9, 2026."

Item 3. **2026 Stormwater CMP Replacement Project**
Motion: “I move to approve the Public Works Contract with Insituform Technologies for the 2026 Stormwater CMP Replacement Project, in the amount of $256,385.00, authorize a project construction contingency in the amount of $25,000.00, and further authorize the City Manager to sign said Contract substantially in the form as submitted.”

Item 4. **WSDOT SR 509 Right-of-Way Transfer**
Motion: “I move to accept the Quitclaim Deed from the Washington State Department of Transportation, transferring approximately 1.87 acres of land to the City at no cost to be used exclusively for roadway purposes and further authorize the City Manager to sign the Quitclaim Deed on behalf of the City of Des Moines.”

Item 5. **Approval of the City's Strategic Plan**
Motion: "I move to approve the City's Strategic Plan Charting Our Course to guide the City's priorities and goals."

Item 6. **Lodging Tax Advisory Committee Appointment**
Motion: “I move to confirm the Mayoral appointment of Richard Spicer to the Lodging Tax Advisory Committee effective immediately.”

Direction/Action
Motion made by Councilmember Jeremy Nutting to approve the Consent Agenda as read, seconded by Councilmember Harry Steinmetz.
Motion Passed 7-0.

UNFINISHED BUSINESS

Item 1. **Speed Camera Ordinance - First Reading**

- Assistant City Attorney Matthew Hutchins gave Council a PowerPoint presentation regarding the Speed Camera Ordinance.

Direction/Action
Motion made by Councilmember Jeremy Nutting to pass Draft Ordinance No. 26-049 to a second reading on the next available regular Council meeting agenda, seconded by Councilmember Harry Steinmetz.
Motion Passed 7-0.

NEW BUSINESS

Item 1. **New Agenda Items for Consideration** - 10 Minutes

- Councilmember Pierre Blosse requested that Community Enrichment staff provide Council with an update regarding the discontinuation of the After School Program. – Council supported.

COUNCILMEMBER REPORTS
(4 minutes per Councilmember) - 30 minutes

- Councilmember JC Harris
  - SeaTac Community's Plan - Airport Mitigation Program
- Councilmember Robyn Desimone
  - Men in Black Birthday Bash
- Councilmember Jeremy Nutting
  - No Report
- Councilmember Pierre Blosse
  - USA vs Australia World Cup Watch Party at the Des Moines Theater
  - Soccer Clinic

- Men in Black Birthday Bash

- Councilmember Harry Steinmetz
  - Comments were not captured because the microphone was not activated.

- Deputy Mayor Gene Achziger
  - Stars, Stripes, and Sunshine — 4th of July Event

PRESIDING OFFICER'S REPORT

- Soccer Clinic
- Stars, Stripes, and Sunshine – 4th of July Event
- WSDOT Community Input on Low-Income Toll Discount Program
- Community Organizations

EXECUTIVE SESSION

NEXT MEETING DATE

July 09, 2026 City Council Regular Meeting

ADJOURNMENT

Direction/Action
Motion made by Councilmember Jeremy Nutting to adjourn, seconded by Councilmember Harry Steinmetz.
Motion Passed 7-0.

The meeting adjourned at 8:30 p.m.

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **Speed Camera Ordinance - Second Reading**

ATTACHMENTS:
1. Draft Ordinance No. 26-049
2. Traffic Safety Camera Study

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Legal

DATE SUBMITTED:
June 16, 2026

CLEARANCES:
Police
Public Works
City Clerk

Purpose and Recommendation

The purpose of this item is to provide a second reading for Draft Ordinance No. 26-049 which would authorize additional automated traffic safety camera enforcement in school walk zones and at locations experiencing higher crash risks due to excessive vehicle speeds.

Suggested Motion:

Motion: "I move to pass Draft Ordinance No. 26-049, authorizing additional automated traffic safety camera locations in the City of Des Moines."

Background

According to the Washington State Strategic Highway Safety Plan, "There is a limit to the rate at which the visual system and brain can process information, and this ability is reduced as traveling speed increases. The higher the speed, the less information can be processed over the distance traveled. This effectively narrows the field of vision that the brain can process. As a result, a driver's ability to respond to visual inputs is reduced (e.g., the driver is less likely to recognize when another road user or other object enters their field of vision). This, along with negatively affecting the ability of other drivers and active transportation users to react, increases the likelihood of a crash."

The plan says further that, "[T]he energy transferred in a roadway crash increases exponentially by the speed a driver travels, making it the primary factor in the amount of

force in a crash. This is particularly concerning when a crash involves an active transportation user, because the force is applied directly to the human rather than to a vehicle designed to direct force away from its passengers."

In 2005 session, the State Legislature authorized local jurisdictions to use automated traffic safety cameras to enforce certain traffic violations that were felt to be particular threats to public safety. The law contained safeguards to protect privacy interests, address due process concerns, and to prevent automated traffic safety cameras from being deployed arbitrarily or primarily as a revenue generator. The violations that could be detected by automatic traffic safety cameras at that time were limited to school zone speed violations, red light violations at the intersection of two arterials, and railroad crossing violations.

In 2011, the Des Moines City Council enacted Ordinance No. 1512, authorizing the use of automated traffic safety cameras to detect speeding violations in school zones. Cameras were initially installed in front of Woodmont Elementary, followed by Midway Elementary and Pacific Middle School. After seeing success in reducing speeds in these school zones, the City Council enacted Ordinance no. 1647, which authorized the use of automated traffic safety cameras to detect red light violations at arterial intersections. Following a traffic safety study, three intersections were identified as particular risks for collisions due to red light running: Marine View Drive and S 216th St., SR 99 and S 216th St., and SR 99 and Kent-Des Moines Road. Following installation of cameras at those locations, there was a substantial drop in red light running violations, particularly at the Kent-Des Moines Road and SR 99 location.

Building on the success of automated traffic safety camera programs in decreasing traffic violations, the State Legislature enacted Engrossed Substitute Senate Bill 5974 in the 2022 session, which added to the permissible locations where the cameras can be used. Among the new applications are speed violations in a school walk area as defined by RCW 28A.160.160, hospital speed zones, and public park speed zones. Cities are also permitted to deploy one camera per 10,000 population to detect ordinary speed violations. The City expanded the traffic safety camera program in 2024, becoming the first jurisdiction in the State to use traffic safety cameras to detect speed violations in a park zone, issuing violations to drivers speeding past Wooten Park and the Redondo Boardwalk.

Despite the success in reducing speed violations in the City, speeding remains a serious traffic safety issue. There are opportunities for additional traffic safety camera locations under current law to address the highest priority areas. New camera locations must be authorized by the City Council after preparing an analysis of the locations where automated traffic safety cameras are proposed. The analysis must include equity considerations including the impact of the camera placement on livability, accessibility, economics, education, and environmental health. The analysis must also show a demonstrated need for traffic cameras based on one or more of the following in the vicinity of the proposed camera location: Travel by vulnerable road users, evidence of vehicles speeding, rates of collision, reports showing near collisions, and anticipated or

actual ineffectiveness or infeasibility of other mitigation measures.

Draft Ordinance No. 26-049 was introduced for first reading on June 25, 2026. The Council passed the draft ordinance to a second reading on the consent agenda at this regular City Council meeting.

Discussion

At the Council's direction, staff engaged with the City's traffic safety camera vendor to conduct speed studies to determine whether there were locations in the City that would be suitable for additional camera deployments. There are locations in the City that would qualify as school zones, park zones, and school walk zones where cameras would be permitted if there is a demonstrated need for them and equitable factors are considered in the placement. Based on the City's population, the City would be entitled to three additional camera deployments at any location where the Council determines there is a need based on the statutory factors.

Following the completion of the speed study, staff identified locations that were shown to have either a high proportion of drivers exceeding the speed limit by at least five miles per hour or a large volume of speeders, or both, to subject to further study. Staff evaluated these locations to determine the impact of the camera placement on livability, accessibility, economics, education, and environmental health.

The locations all fall into a similar profile. The overwhelming majority of drivers passing through the locations were not residents of the area near the location, but were people from other locations using the neighborhood as a pass-through to get to somewhere else outside the City. The nearby residents largely do not contribute to the noise, pollution, and safety issues caused by excessive speed at the locations, but they overwhelmingly bear the impact. The arterials passing through the location act as barriers from schools, transit stops, employment, and shopping for residents, and reducing speeds at the locations will increase livability, accessibility, and health

Based on these studies, staff is proposing that the Council authorize speed cameras at the following locations:

- Pacific Highway South between South 226th Street and Kent-Des Moines Road (northbound)
- 24th Avenue South between South 208th Street and South 216th Street (both directions)
- Kent-Des Moines Road between 16th Avenue South and 24th Avenue South (both directions)

The first two locations can be accomplished using the City's three population-based cameras. Staff believes that cameras can be placed at Kent-Des Moines road location upon confirmation that the location qualifies as a school walk zone.

In addition, the cameras already in use at Woodmont Elementary School could be used

to detect ordinary speed violations at the location during hours of the day when the school zone is not active. This location also falls under the definition of a school walk zone. The speed study showed that there is a need for enforcement in off-school hours, and the equity analysis is substantially the same as for the other locations. This kind of dual use has been successfully implemented in other cities such as Paulsbo and Bothell, and Verra states they are prepared to implement it in Des Moines if the Council wishes.

The draft ordinance would expand the permitted uses of automated safety cameras to include regular speed violations in school walk zones and at locations where the City Council has found to experience higher crash risks due to excessive vehicle speeds. The draft ordinance also includes a finding that the three locations set out above do meet that definition and that equitable factors weigh towards camera enforcement at the chosen locations. Expanded use of the Woodmont school zone cameras to include regular speed violation during off-school hours would also be authorized.

If the Council adopts the draft ordinance, staff will execute a contract amendment and Notice to Proceed with Verra Mobility to include the new locations. Verra, the City, and the utilities will coordinate to install the new camera locations. Once Verra and the Court are ready to issue and process citations, there will be a 30 day test and warning period before the new locations begin enforcement.

Alternatives

The Council may:
1. Pass the Draft Ordinance as presented
2. Pass the Draft Ordinance with changes
3. Decline to pass the Draft Ordinance

Financial Impact

After deducting expenses for operation and administration of the camera system, staff anticipates significant revenue from the new camera locations, which are restricted to transportation improvement projects to increase safety. History indicates that revenue will decrease significantly over time as the cameras affect driver behavior. The cost for installing the new camera locations will be paid by the City's vendor.

Recommendation

Staff recommends enacting the Draft Ordinance as presented

CITY COUNCIL'S FIRST DRAFT

DRAFT ORDINANCE NO. 26-049

AN ORDINANCE OF THE CITY OF DES MOINES, WASHINGTON relating to automated traffic camera enforcement, amending DMMC 10.36.020, 10.36.030, and 10.36.070, and adding a new section to DMMC chapter 10.36.

WHEREAS, pursuant to chapter 10.04 DMMC, the City adopted by reference the State's Model Traffic Ordinance which authorizes issuance of citations for various violations, including exceeding the posted speed limit, speeding in a school zone, and failing to stop for a red light, and

WHEREAS, in 2005, the Legislature adopted Engrossed Substitute Senate Bill 5060, enacting RCW 46.63.170 which authorizes the use of automated traffic safety cameras to detect certain traffic infractions, including speeding in school zones and red light violations upon passage of a local ordinance authorizing the use of said automated cameras, and

WHEREAS, in 2012 the City Council adopted Ordinance 1512, authorizing the use of automated traffic safety cameras to detect speeding in school zones, codified at DMMC chapter 10.36, and

WHEREAS, in 2016 the City Council adopted Ordinance 1647, authorizing the use of automated traffic safety cameras to detect red light running infractions, codified at DMMC chapter 10.40, and

WHEREAS, in the 2022 session, the Legislature amended RCW 46.63.170 to expand the purposes and locations where automatic safety cameras may be deployed to detect traffic infractions, including the detection of speeding in "public park safety zones", as defined by the statute, and

WHEREAS, in 2023 the City Council adopted Ordinance 1769, amending chapter 10.36 DMMC and authorizing the use of automated traffic safety cameras to detect speeding violations in public park speed zones, and

WHEREAS, in 2024, the City Council adopted Ordinances 1789 and 1794 to bring the City's automated traffic safety camera program into compliance with updates to State law imposed by the Legislature, and

WHEREAS, the recent changes by the Legislature allow cities to authorize the installation of one automatic traffic safety camera per 10,000 population to detect basic speed violations in locations deemed by the local legislative authority to experience higher crash risks due to excessive vehicle speeds, and

WHEREAS, the City conducted speed studies in 2025 to determine whether there were locations in Des Moines that experience higher crash risks due to excessive vehicle speeds, and

WHEREAS, in February 2026, the City of Des Moines adopted a Local Road Safety Plan (LRSP) providing a comprehensive analysis of crash patterns and risk factors across the City's transportation network and recommending locations where there is a demonstrated need for traffic cameras, and

WHEREAS, the LRSP recommended locations where there is a demonstrated need for traffic cameras based on one or more of the following in the vicinity of the proposed camera location: travel by vulnerable road users, evidence of vehicles speeding, rates of collision, reports showing near collisions, and anticipated or actual ineffectiveness or infeasibility of other mitigation measures, and

WHEREAS, on May 14, 2026, the City of Des Moines enacted Resolution no. 1497, adopting a Vision Zero target to eliminate all fatal and serious injury crashes that occur on the City transportation system, and

WHEREAS, in June 2026, the City of Des Moines completed an analysis of the camera locations proposed by the LRSP, studying equity considerations including the impact of the camera placement on livability, accessibility, economics, education, and environmental health, and

WHEREAS, on June 25, 2026, the City of Des Moines adopted a Comprehensive Safety Action Plan (CSAP) designed to help the City achieve its Vision Zero goal, and

WHEREAS, the City Council has considered impact of potential camera placements on livability, accessibility, economics, education, and environmental health, and

WHEREAS, the City Council finds that locations identified in the LRSP through analysis of City's speed study and equity considerations of the impact of camera placement are suitable for placement of new traffic enforcement cameras in order to reduce speeds and promote public safety, and

WHEREAS, the City Council finds that the adoption of this Ordinance is necessary and proper to protect public safety and welfare; now therefore,

THE CITY COUNCIL OF THE CITY OF DES MOINES ORDAINS AS FOLLOWS:

Sec. 1. DMMC 10.36.020 and section 1(2) of Ordinance No. 1512 as amended by section 2 of Ordinance No. 1769 as amended by section 1 of 1794 are each amended to read as follows:

Authorized Use.

(1) Consistent with the authority granted in chapter 46.63 RCW, City law enforcement officers, ~~and~~ persons commissioned by the Chief of Police, and other persons authorized by law to review infractions detected through the use of an automated traffic safety camera are authorized to use automated speed enforcement cameras and related automated systems only to detect and record the image of school speed zone violations, ~~or violations of the~~ speed ~~limit~~violations committed in a public park speed zone, speed violations committed in a school walk zone, or speed violations in locations identified in section 4 of this ordinance.

(2) Use of automated speed enforcement cameras is limited to taking pictures of the vehicle and vehicle license plate only, and only while an infraction is occurring. Pictures may not reveal the face of the driver or of passengers in the vehicle.

(3) Each location where an automated speed enforcement camera is used shall be clearly identified by the City Traffic Engineer with the posting of signage placed in a manner that clearly indicates to a driver that the driver is entering a zone where traffic laws are enforced by an automated camera.

(4) Notwithstanding any other provision of law, all photographs, microphotographs and electronic images prepared under

this chapter, and as provided in ~~Section 2, Chapter 307, Laws of 2024~~RCW 46.63.220, are not open to the public and may not be used in a court in a pending action or proceeding unless the action or proceeding relates to a violation under this section. No photograph, microphotograph or electronic image may be used for any purpose other than enforcement of violations under this section nor retained longer than necessary to enforce this section.

Sec. 2. DMMC 10.36.030 and section 1(3) of Ordinance No. 1512 are each amended to read as follows:

Notice of infraction.

(1) A notice of infraction based on evidence detected through the use of an automated speed enforcement camera shall be mailed to the registered owner of the vehicle within 14 days of the violation, or to the renter of a vehicle within 14 days of establishing the renter's name and address under subsection (3)(a) of this section. A law enforcement officer or other person authorized by law to review infractions detected through the use of an automated traffic safety camera shall authorize the issuance of the notice of infraction, which shall include with it a certificate or facsimile thereof, based upon the inspection of photographs, microphotographs, or electronic images produced by an automated traffic safety camera, citing the infraction and stating the facts supporting the notice of infraction. This certificate or facsimile shall be prima facie evidence of the facts contained in it and shall be admissible in a proceeding charging a violation under this chapter. The photographs, microphotographs, or electronic images evidencing the violation must be available for inspection and admission into evidence in a proceeding to adjudicate the liability for the infraction. A person receiving a notice of infraction based on evidence detected by an automated speed enforcement camera may respond to the notice by mail.

(2) The registered owner of a vehicle is responsible for a notice of infraction detected through use of an automated speed enforcement camera unless the registered owner overcomes the presumption stated in this chapter, or, in the case of a rental car business, satisfies the conditions under subsection (3) of this section. If appropriate under the circumstances, a renter identified under subsection (3)(a) of this section is responsible for such an infraction.

(3) If the registered owner of a vehicle responsible for a notice of infraction detected through use of an automated speed enforcement camera is a rental car business, the chief of police or his designee shall, before such a notice of infraction is issued, provide a written notice to the rental car business that a notice of infraction may be issued to the rental car business if the rental car business does not, within 18 days of receiving the written notice, provide to the Des Moines police department by return mail:

(a) A statement under oath stating the name and known mailing address of the individual driving or renting the vehicle when the infraction occurred; or

(b) A statement under oath that the business is unable to determine who was driving or renting the vehicle at the time the infraction occurred because the vehicle was stolen at the time of the infraction. A statement provided under this subsection must be accompanied by a copy of a filed police report regarding the vehicle theft.

Timely mailing of this statement to the Des Moines police department relieves a rental car business of any liability under this chapter for the notice of infraction. In lieu of identifying the vehicle operator, the rental car business may pay the applicable penalty.

Sec. 3. DMMC 10.36.070 and section 1(7) of Ordinance No. 1512 as amended by section 4 of Ordinance No. 1769 as amended by section 1 of Ordinance No. 1789 as amended by section 2 of 1794 are each amended to read as follows:

Penalty.

(1) The maximum penalty for infractions detected within a school zone under authority of, and committed pursuant to, the provisions of this chapter shall be the lesser of the monetary penalty for a violation of RCW 46.61.440 as provided under RCW 46.63.110 for the applicable miles per hour exceeding the speed limit, including all applicable statutory assessments, or $290.00.

(2) The maximum penalty for infractions detected outside of a school zone under authority of, and committed pursuant to, the provisions of this chapter shall be $145.00.

(3) Revenue from fines assessed under authority of this chapter detected at camera locations in use prior to the effective date of this ordinance shall be used solely for traffic safety purposes or as otherwise provided by state law. For purposes of this section, the term "traffic safety purposes" may include, but is not limited to, the following:

(a) Personnel costs for employees or contractors who are involved in automated speed enforcement planning and implementation, including professional services such as traffic engineering services;

(b) Personnel costs for employees or contractors who are involved in automated speed enforcement, court hearings, fine collection or other processing, including expert witness fees;

(c) Costs associated with training of employees or contractors involved with the automated speed enforcement program;

(d) Purchase and/or maintenance of equipment, including signage, related to the automated speed enforcement program;

(e) Costs associated with traffic safety projects in the transportation capital fund unrelated to the automated speed enforcement program.

(f) The purposes established in subsection (4)(a) of this section.

(4) Except as provided in subsection (3) of this section, revenue from fines assessed under authority of this chapter shall be used solely for:

(a) Subject to the requirements of ~~Section 2, Chapter 307, Laws of 2024~~RCW 46.63.220, traffic safety

activities related to construction and preservation projects and maintenance and operations purposes including, but not included to, projects designed to implement the complete streets approach as defined in RCW 47.04.010, changes in physical infrastructure to reduce speeds through road design, and changes to improve safety for active transportation users, including improvements to access and safety for road users with mobility, sight, or other disabilities.

(b) The cost to administer, install, operate, and maintain the automatic traffic safety cameras, including the cost of the infractions.

(5) Beginning four years after an automatic traffic safety camera authorized under this chapter is initially placed and in use after the effective date of this ordinance, when required by ~~Section 2, Chapter 307, Laws of 2024~~RCW 46.63.220, 25 percent of the noninterest money received for infractions issued under this chapter for exceeding the speed limit in excess of the cost to administer, install, operate, and maintain the automated traffic safety cameras, including the cost of processing infractions, shall be deposited in the Cooper Jones active transportation safety account created in RCW 46.68.480.

NEW SECTION. Sec. 4. A new section is added to chapter 10.36 DMMC to read as follows:

Locations experiencing higher crash risks due to excessive vehicle speeds.

The City Council finds that the following locations experience higher crash risks due to excessive vehicle speeds and authorize the use of automated traffic safety cameras to detect speeding violations at these locations:

(1) Pacific Highway South between South 226th Street and Kent-Des Moines Road

(2) 24th Avenue South between South 208th Street and South 216th Street

(3) Kent-Des Moines Road between 16th Avenue South and 24th Avenue South

NEW SECTION. Sec. 5. A new section is added to chapter 10.36 DMMC to read as follows:

Detecting speeding violations in school walk zones when school zone not in effect.

The City Council authorizes automated traffic safety cameras placed in a location to detect speeding in a school zone to be used to detect speed limit violations of RCW 46.61.400 during hours when the school zone is not in effect at the following location:

(1) Woodmont Elementary School

Sec. 6. Severability - Construction.

(1) If a section, subsection, paragraph, sentence, clause, or phrase of this Ordinance is declared unconstitutional or invalid for any reason by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance.

(2) If the provisions of this Ordinance are found to be inconsistent with other provisions of the Des Moines Municipal Code, this Ordinance is deemed to control.

Sec. 7. Effective date. This ordinance shall take effect and be in full force five (5) days after its passage, approval, and publication in accordance with law.

PASSED BY the City Council of the City of Des Moines this ___ day of _____, 2026 and signed in authentication thereof this ___ day of _____, 2026.

_____
M A Y O R

APPROVED AS TO FORM:

_____
City Attorney

ATTEST:

_____
City Clerk

Published:

City of Des Moines

Automated Traffic Safety Camera Program Study and Overview

Purpose

This document provides the basis for the City Council to establish prioritized locations for general speed enforcement with the expansion of the City's automated traffic safety camera program in accordance with state requirements.

In 2024, Washington State Legislature Bill 2384 was passed that updated RCW's related to automated traffic safety cameras. The changes removed the limitations for agencies like the City of Des Moines from only using automated traffic safety cameras in school zones, railroad crossings, and signalized intersections. The revised state regulations continue to allow agencies to operate automated traffic safety cameras to enforce speed limits in hospital speed zones, public park speed zones, school speed zones, school walk zones, roadway work zones, and state highways that are classified as City streets per RCW 47.24 (such as Pacific High Way South/SR99). There are no limits to how many speed enforcement cameras agencies may operate in these areas.

The state regulations revised by House Bill 2384 now allows agencies to utilize automated traffic safety cameras to enforce speeds at other locations deemed by the City Council to experience higher crash risks due to excessive vehicle speeds.

The City plans to expand the traffic camera safety program to place up to 3 additional speed enforcement cameras at locations that are not school or park speed zones (General Locations), that meet the criteria established in RCW 46.63.250 and with analysis required per RCW 46.63.220:

RCW 46.63.250(3): "...The local legislative authority may authorize the use of one additional automated traffic safety camera per 10,000 population to detect speed violations in locations deemed by the local legislative authority to experience higher crash risks due to excessive vehicle speeds..." (Speed and Crash Requirement)

RCW 46.63.220: "The local legislative authority must prepare an analysis of the locations within the jurisdiction where automated traffic safety cameras are proposed to be located before adding traffic safety cameras to a new location or relocating any existing camera to a new location within the jurisdiction. The analysis must include equity considerations including the impact of the camera placement on livability, accessibility, economics, education, and environmental health when identifying where to locate an automated traffic safety camera. The analysis must also show a demonstrated need for traffic cameras based on one or more of the following in the vicinity of the proposed camera location:

Travel by vulnerable road users, evidence of vehicles speeding, rates of collision, reports showing near collisions, and anticipated or actual ineffectiveness or infeasibility of other mitigation measures." (Equity and Alternatives Analysis Requirement)

Des Moines's 2026 population is estimated to be just over 33,000 and therefore, the City of Des Moines may operate up to 3 automated traffic safety cameras to enforce speeds at general locations.

Background

The City of Des Moines's current automated traffic safety program is intended to reduce speeding in school zones and park zones to improve overall safety for pedestrians and other multi-modal users. The need for the program was identified in 2012 when the City Council adopted Ordinance 1512, authorizing the use of automated traffic safety cameras to detect speeding in school zones. The program expanded in 2023 when the City Council adopted Ordinance 1769 authorizing the use of automated traffic safety cameras to detect speeding violations in public park zones. Following installations of cameras, there has been a substantial drop in violations at all locations

In 2026, the City Council established a target zero vision and goal. The vision is to eventually have no serious injury and fatal crashes on the City's transportation system by 2044. The Vision Zero target directs staff to apply the Safe Systems Approach as a comprehensive and holistic model to achieve this goal. Automated traffic safety cameras are a proven safety countermeasure that is effective in affecting driver behavior to slow down and therefore reduce the likelihood of serious injury and fatal crashes.

Site Selection Approach

The following steps were taken to select locations prioritized for automated speed enforcement:

1) Initial Site Selection and Evaluation
2) Detailed Speed Studies
3) Crash to Speed Correlation Evaluation
4) Equity and Alternatives Analysis
5) Selected Sites

Initial Site Selection and Evaluation

The City's Traffic Engineering staff of the Public Works Department and the Police Department worked together to identify 7 study locations to be considered. The initial locations were identified based on crash history, speeding complaints, recommendations from the Local Road Safety Plan, and previously conducted speed studies. The initial locations were evaluated and considered for further study based on evaluation criteria included the posted speed limit, number of lanes, average daily traffic volume, and the roadway classification. Table 1 below lists the proposed locations selected to be included in the speed studies performed by the City's automated traffic safety camera vendor, Verra Mobility.

Table 1: Initial Evaluation and Outcome

Location	Direction	Posted Speed (mph)	# of Lanes	Classification
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	NB	40	2	Principal Arterial
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	SB	40	2	Principal Arterial
S 216th St between 14th Ave S and 20th Ave S	EB	35	1	Minor Arterial
S 216th St between 14th Ave S and 20th Ave S	WB	35	1	Minor Arterial
16th Ave S between S 262nd Pl and S 268th St	NB	35	1	Principal Arterial
16th Ave S between S 262nd Pl and S 268th St	SB	35	1	Principal Arterial
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	NB	35	1	Principal Arterial
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	SB	35	1	Principal Arterial
24th Ave S between S 208th St and S 216th St	NB	35	2	Neighborhood Collector
24th Ave S between S 208th St and S 216th St	SB	35	2	Neighborhood Collector
S 240th St between 20th Ave S and 26th Pl S	EB	35	1	Minor Arterial
S 240th St between 20th Ave S and 26th Pl S	WB	35	1	Minor Arterial
Marine View Dr S between S 232nd St and S 240th St	NB	35	1	Collector Arterial
Marine View Dr S between S 232nd St and S 240th St	SB	35	1	Collector Arterial

Speed Analysis Study

From May 5th to May 8th, 2025, the City's automated traffic safety camera vendor conducted detailed speed studies at the 7 preliminary locations identified for further study in Table 2. The study data was processed to indicate the total volume of vehicles and the percentage of vehicles that were exceeding the speed limit at given thresholds at each location. In summary, the results showed significant variation in the rates of vehicles that were significantly exceeding the posted speed limit, ranging from 42% to 4%.

The highest rates of non-compliance occurred on Pacific Highway S NB (11%), S 216th St EB and WB (12% and 15%), Kent Des Moines Rd S NB & SB (26% and 27%), 24th Ave S NB and SB (42% and 28%), and S 240th St EB & WB (24% and 24%). To prioritize locations that had the highest rates of significant speeding, locations with the lowest rates of significant speeding were not selected to move forward. Locations selected for further evaluation are shown in green on Table 3 below.

Table 3: Speed Studies Summary

Location	Direction	Total Vehicle Volume	Vehicles at Posted Speed + 5
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	NB	55166	11%
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	SB	39524	6%
S 216th St between 14th Ave S and 20th Ave S	EB	13308	12%
S 216th St between 14th Ave S and 20th Ave S	WB	13902	15%
16th Ave S between S 262nd Pl and S 268th St	NB	24685	6%
16th Ave S between S 262nd Pl and S 268th St	SB	22323	5%
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	NB	15787	26%
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	SB	16942	27%
24th Ave S between S 208th St and S 216th St	NB	15214	42%
24th Ave S between S 208th St and S 216th St	SB	16754	28%
S 240th St between 20th Ave S and 26th Pl S	EB	13075	24%
S 240th St between 20th Ave S and 26th Pl S	WB	10607	24%
Marine View Dr S between S 232nd St and S 240th St	NB	13754	4%
Marine View Dr S between S 232nd St and S 240th St	SB	17555	6%

Speed and Crash Requirement

The Draft Comprehensive Safety Action Plan (CSAP) identifies High Injury Network throughout the City where most of the crashes causing serious injuries and fatalities have occurred for all roadway users. The majority of all serious injuries and fatalities Crashes occurred on the 5 identified corridors concerned. For each location, the draft CSAP identifies the prominent circumstances involved with the serious injuries and fatalities crashes. The most common identified circumstances include speeding, impaired driving/DUI, failure to yield the right-of-way, and distracted driving. For all corridors, the Draft CSAP identifies automated safety cameras as a countermeasure to be considered for improving driver behavior, reducing speeds, and lessening the likelihood of serious injuries and fatalities crashes. General speed enforcement with automated traffic safety cameras at locations on these identified corridors would meet the Speed and Crash Requirement. Locations not located on the High Injury Network may still meet the Speed and Crash Requirement but would require additional analysis to substantiate that the criteria has been met.

Five Locations on High Injury Network were prioritized to move forward into the Equity and Alternatives Analysis and are shown in green on Table 4. The two locations that would require additional analysis to evaluate crash history and speed correlation were not selected to move forward into the equity and alternatives analysis with this current program expansion but may be considered with future program expansion(s).

Table 4: Locations on High Injury Network

Location	Direction	On High Injury Network?	Next Step
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	NB	Yes	Equity and Alternatives Analysis
S 216th St between 14th Ave S and 20th Ave S	EB	No	Additional analysis would be needed to evaluate crash history
S 216th St between 14th Ave S and 20th Ave S	WB	No	Additional analysis would be needed to evaluate crash history
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	NB	Yes	Equity and Alternatives Analysis
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	SB	Yes	Equity and Alternatives Analysis
24th Ave S between S 208th St and S 216th St	NB	Yes	Equity and Alternatives Analysis
24th Ave S between S 208th St and S 216th St	SB	Yes	Equity and Alternatives Analysis
S 240th St between 20th Ave S and 26th Pl S	EB	No	Additional analysis would be needed to evaluate crash history
S 240th St between 20th Ave S and 26th Pl S	WB	No	Additional analysis would be needed to evaluate crash history

Equity and Alternatives Analysis Requirement

Equity considerations include evaluation of the impact of camera placement on livability, accessibility, economics, education, and environmental health. The analysis also evaluates whether other mitigation measures besides traffic cameras have been effective and whether new or additional measures would be feasible and likely to be effective in reducing crashes caused by speeding.

Camera enforcement can have a positive effect on the livability, accessibility, economics, education, and environmental health of the areas in which they are placed. Camera enforcement encourages drivers to obey posted speed limits which creates a safer environment for other vehicles, pedestrians, and cyclists. The reduction of high speeds that are the result of camera enforcement make it more comfortable and therefore more likely that people will be more willing to walk, bike, and use transit which has a positive effect on accessibility, economics and environmental health. Those who receive infractions also benefit from the program as the infraction and associated fee encourage and educate them to learn to slow down which reduces the likelihood that they will be seriously injured or killed in a crash or cause others to be seriously injured or killed.

Since camera placement has a positive impact on the area in which they are placed the potential placement locations were evaluated from an income demographics standpoint. This evaluation helps ensure that locations selected for placement are not underserving or overserving any particular income demographic. The City's goal is to balance the automated enforcement, so that the distribution of income demographics served by the cameras reflects the distribution of income demographics in the

City. Table 5 summarizes the overall income demographics of the listed locations. This information was collected using https://statisticalatlas.com/.

Table 5: Income Demographics

Location	Direction	Median Household Income	Comparison of Des Moines Median Income	Note
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	NB	$42,129	70%	Location is 30% lower than median income
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	NB	$42,129 North of KDM $54,874 South of KDM	70% North 92% South	Location is 8-30% lower than median income
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	SB	$42,129 North of KDM $54,874 South of KDM	70% North 92% South	Location is 8-30% lower than median income
24th Ave S between S 208th St and S 216th St	NB	$64,271	107%	Location is 7% higher than median income
24th Ave S between S 208th St and S 216th St	SB	$64,271	107%	Location is 7% higher than median income

1. Per Statistical Atlas
2. Median income in Des Moines is $59,900

The income demographic information shown on Table 5 suggests that placement of automated traffic safety cameras in one or more of the locations would not weigh more heavily on, or provide more benefit to, income demographics significantly below or above the median household income in Des Moines. People living in these areas are more likely to rely on active transportation and transit services (where available) and are therefore more likely to be out walking or biking on and along the roadways. It follows that increasing driver compliance with posted speed limits on roads in, and along, these areas will increase safety and comfort to the people who rely on walking, biking, and transit.

In some cases, placement of camera enforcement in one location may cause traffic to divert and potentially speed in another location. In those situations, the area being served by the enforcement would benefit but it could be at the detriment of another location. The short list of study locations from Tables 4 and 5 were evaluated to determine if diversion of traffic on to other corridors would be likely to occur and what the potential impacts and mitigation for the diversion could be. The results are summarized in Table 6 below.

Table 6: Traffic Diversion Evaluation

Location	Direction	Diversion Potential	Potential impact of diverted drivers on community and potential mitigation
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	NB	Diversion not expected	N/A
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	NB	Some diversion may occur	Some diversion may occur on South 240th Street but no appreciable impact is anticipated. Currently 240th Street is under construction for safety improvements between 16th Ave and 20th Ave.
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	SB	Some diversion may occur	Some diversion may occur on South 240th Street but no appreciable impact is anticipated. Currently 240th Street is under construction for safety improvements between 16th Ave and 20th Ave.
24th Ave S between S 208th St and S 216th St	NB	Some diversion may occur	Some diversion may occur on Pacific Hwy but no appreciable impact is expected

24th Ave S between S 208th St and S 216th St	SB	Some diversion may occur	Some diversion may occur on Pacific Hwy but no appreciable impact is expected

In addition to evaluation of equity criteria, the analysis also looks at potential alternatives to camera enforcement. For each location, the study identifies what measures have already been taken to reduce speeding and lower the risk of serious injury and fatal crashes caused by speeding. The study also considers what other measures could be taken and the feasibility and anticipated effectiveness of those measures. The alternatives analysis information is shown on Table 7.

Table 7: Alternatives to Camera Enforcement

Location	**Direction**	**Already Implemented Measures**	**Potential Other Measures**		
			Additional Traditional Speed Enforcement	**Physical Traffic Calming**	**Other Potential Mitigation**
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	NB	Traditional enforcement, signage, street lights, sidewalks, median/centerline hardening	High traffic volumes and low numbers of infractions issued w/traditional enforcement has only minor positive impacts to general driver behavior.	No other feasible measures due to high volumes and need to serve freight and transit.	No potential mitigation that hasn't already been implemented.
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	NB	Traditional enforcement	High traffic volumes and low numbers of infractions issued w/traditional enforcement has only minor positive impacts to general driver behavior.	No other feasible measures due to high volumes and need to serve freight and transit.	Additional street lighting, pedestrian facilities, and radar feedback signage
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	SB	Traditional enforcement	High traffic volumes and low numbers of infractions issued w/traditional enforcement has only minor positive impacts to general driver behavior.	No other feasible measures due to high volumes and need to serve freight and transit.	Additional street lighting, pedestrian facilities, and radar feedback signage
24th Ave S between S 208th St and S 216th St	NB	Traditional enforcement, signage, street lights, sidewalks, median/centerline hardening, radar feedback signage, rapid rectangular flashing beacon	High traffic volumes and low numbers of infractions issued w/traditional enforcement has only minor positive impacts to general driver behavior.	No other feasible measures due to high volumes and need to serve freight and transit.	No potential mitigation that hasn't already been implemented

		(RRFB) mid-block crossing			
24th Ave S between S 208th St and S 216th St	SB	Traditional enforcement, signage, street lights, sidewalks, median/centerline hardening, radar feedback signage, rapid rectangular flashing beacon (RRFB) mid-block crossing	High traffic volumes and low numbers of infractions issued w/traditional enforcement has only minor positive impacts to general driver behavior.	No other feasible measures due to high volumes and need to serve freight and transit.	No potential mitigation that hasn't already been implemented

Selected Locations

The final selection of locations was based on consideration of all data and criteria as summarized on Table 8. Sites proposed for implementation in 2026 are shown in the table.

Table 8: Final Selection for initial Program Expansion

Location	Direction	Selected for Initial Program?	Reasons Selected or Not Selected
Pacific Hwy S between S 226th St and Kent Des Moines Rd S	NB	Yes	Meet all legislative criteria and supports City safety goal – Recommended for general purpose camera location
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	NB	Yes	Meet all legislative criteria and supports City safety goal – Recommended for school walk zone location
Kent Des Moines Rd S between 20th Ave S and 24th Ave S	SB	Yes	Meet all legislative criteria and supports City safety goal – Recommended for school walk zone location
24th Ave S between S 208th St and S 216th St	NB	Yes	Meet all legislative criteria and supports City safety goal – Recommended for general purpose camera location
24th Ave S between S 208th St and S 216th St	SB	Yes	Meet all legislative criteria and supports City safety goal – Recommended for general purpose camera location

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **Citizens Advisory Board Appointment**

ATTACHMENTS:
1. Dan Wahlstrom Application

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Administration

DATE SUBMITTED:
June 22, 2026

CLEARANCES:

Purpose and Recommendation

The purpose of this agenda item is to recommend that the Council approve the Mayor's appointment to the open Woodmont neighborhood seat on the Citizens Advisory Board.

Suggested Motion:

Motion: "I move to confirm Dan Wahlstrom to the Citizens Advisory Board as the Woodmont representative, effective immediately with an expiration date of June 30, 2029."

Background

The Des Moines City Council created the Citizens Advisory Board to allow citizens, neighborhoods and businesses to engage as broadly as possible in the discussion and resolution of issues and concerns that directly affect them. The City Council feels that the Citizens Advisory Committee will improve communication with and participate in local government on the part of residents, neighborhoods, businesses and property owners in the City of Des Moines and create a more robust discussion of issues and matters facing the City, ultimately resulting in better decisions and solutions to problems.

Discussion

Under DMMC 4.24.040(1), members of appointive committees are appointed by the Mayor and must be confirmed by a majority of the City Council. If the Council confirms the Mayoral appointments, this would just leave the Business and Pacific Ridge neighborhood seats as yet unfilled. Staff will continue to compile submitted applications for the open seat for the Mayor's review, appointment, and Council vote on

confirmation.

Alternatives
Council may choose not to confirm the Mayor's appointments and request alternative candidates.

Financial Impact
There is no anticipated financial impact if these Citizens Advisory Board appointments are confirmed.

CITY OF DES MOINES
APPLICATION FOR CITIZENS ADVISORY BOARD

21630 11th Avenue South
Des Moines, WA 98198
Please email to: cityclerk@desmoineswa.gov

Received_____

Please Check

- ☐ Business
- ☐ Central Des Moines
- ☐ Marina District
- ☐ North Central
- ☐ Pacific Ridge
- ☐ Redondo
- ☐ South Des Moines
- ☒ Woodmont
- ☐ Zenith
- ☐ At Large

NAME: Dan Wahlstrom
ADDRESS: [redacted]
CITY/ZIP: _____
PHONE: Home [redacted] Work _____
LENGTH OF RESIDENCE AT THE ABOVE ADDRESS 5
REGISTERED VOTER? Yes
E-MAIL ADDRESS: [redacted]

EMPLOYMENT SUMMARY LAST FIVE YEARS: Employed as an engineering consultant with Kocer Consulting and Engineering
I help small manufacturing businesses in western Washington improve their processes and system to be more efficient, cost effiective improve quality or reduce waste.

Are you related to anyone presently employed by the City or a member of a City Board?
No If yes, explain:

Do you currently have an owning interest in either real property (other than your primary residence or a business) in the Des Moines planning area? No if so, please describe: _____

IN ORDER FOR THE APPOINTING AUTHORITY TO FULLY EVALUATE YOUR QUALIFICATIONS FOR THIS POSITION, PLEASE ANSWER THE FOLLOWING QUESTIONS USING A SEPARATE PAPER IF NECESSARY.

1. Why do you wish to serve in this capacity and what can you contribute? _____
I can contribute proven leadership, expert process development, as well as soft people skills. I can provide insight from my time as a Board Member on the Woodmont Country Club neighborhood organization and current Commodore for the Des Moines Yacht Club. I graduated from Mount Rainier High School and grew up in the North Hill area.

2. What problems, programs or improvements are you most interest in? _____
Interests are in the areas of marina redevelopment, traffic safety along Marine View Drive, citizen safety along Hwy 99, airport development and noise reduction, shoreline protection, commercial development in downtown and the marina and community engagement

3. Please list any Des Moines elective/appointive offices you have run/applied for previously: _____
Appiled for an advisory board position several years ago

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **2026 Lodging Tax Advisory Committee Spending Recommendations**

ATTACHMENTS:
1. Waterland Festival & Parade

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Administration

DATE SUBMITTED:
June 24, 2026

CLEARANCES:
City Clerk

Purpose and Recommendation

The purpose of this agenda item is for the City Council to consider and approve the Lodging Tax Advisory Committee's (LTAC) recommendations for expenditures of Lodging Tax funds collected by the City. The following motion will appear on the Consent Calendar:

Suggested Motion:

Motion: "I move to approve the recommendations as submitted by the Lodging Tax Advisory Committee for the expenditure of Lodging Tax funds."

Background

The City charges a .8% special excise tax on the sale of or charge made for overnight lodging stays. The Des Moines Lodging Tax Advisory Committee is responsible for reviewing applications for lodging tax funds and making recommendations to the City Council regarding the distribution of those funds. Lodging taxes are only eligible to be used for limited purposes pursuant to state law. Revised Code of Washington (RCW) 67.28.1815 limits the use of lodging tax funds as follows:

All revenue from taxes imposed under this chapter shall be credited to a special fund in the treasury of the municipality imposing such tax and used solely for the purpose of paying all or any part of the cost of tourism promotion, acquisition of tourism-related facilities, or operation of tourism-related facilities.

Only the following entities are eligible to apply for direct lodging tax funding:

1. Cities, towns, and counties of Washington State;
2. Convention and Visitors Bureaus;
3. Public Facilities Districts; and
4. Non-Profits organized as either a 501(c)(3) or 501(c)(6).

Requests to use lodging tax funds – including requests by the City itself – are submitted to the City. The lodging tax advisory committee reviews the applications for funding and then forwards a list of candidates to the City Council for final action. As part of the application process, a requestor must provide to the City estimates on how the lodging tax funds will result in an increase in the number of people traveling for business or pleasure on a trip.

After a recommendation is made by the Committee, the City Council can either:

1. Agree and fund the request.
2. Seek a modified funding amount. This requires notice to the Committee and a chance to respond.
3. Deny the funding request.

The Council cannot award funds to a request that is not recommended for funding by the Committee.

Discussion

The City currently has $44,082 in unspent lodging tax funds. One additional application for funding has been received this year and is summarized below:

1. Application from Des Moines Waterland Festival and Parade to support tourism marketing and visitor engagement costs for a community festival block party Summer 2026. Total application request = $7,500.

The Lodging Tax Committee reviewed and discussed these applications at their meeting on June 24, 2026 and unanimously approved the applications to be fully funded. At this time, the Committees recommendation is being forwarded to the City Council for review and approval.

The application for lodging tax funds is attached as required by state law.

Alternatives

The City Council could elect to spend the Lodging Taxes in a different manner. If the funds are not spent in the exact manner that is recommended by the Lodging Tax Advisory Committee, there are specific conditions that must be met prior to expenditure, including allowing 45 days for the Committee to review the Council's recommendations and to respond.

Financial Impact
The expenditure of these funds is limited by state law. There is no negative financial impact from spending them as they cannot be used for general funds purposes.

Recommendation
Approve the motion as written.

2026 Application for Des Moines Lodging Tax Funds

Amount of Lodging Tax Requested: $__7,500_____

Organization/Agency Name: Des Moines Waterland Festival & Parade			
Federal Tax ID Number: 41-3826436			
Event or Activity Name (if applicable): 2026 Waterland Parade & Block Party			
Contact Name and Title: Kristin Steinmetz			
Mailing Address: 917 S 258th Pl	City: Des Moines	State: WA	Zip: 98198
Phone: 206-293-0576	Email Address: steinmetz5@comcast.net		
XX Non-Profit ☐ For-Profit ☐ Public Agency			

CERTIFICATION

I am an authorized agent of the organization/agency applying for funding. I understand that:

- I am proposing a tourism-related service. If awarded, my organization intends to enter into a Municipal Services Contract with the City.
- The City of Des Moines will only reimburse those costs actually incurred by my organization/agency and only after the service is rendered, paid for if provided by a third party, and a signed Request for Reimbursement form (or other form acceptable to the City) has been submitted to the City, including copies of invoices and payment documentation.
- Funds must be expended within the calendar year.
- Reporting requirements meeting state guidelines outlined in this application must be submitted with final request for reimbursement.

Signature: \s\ *Kristin Steinmetz*	Date: 06-04-2026

Application Overview

Provide us with an overview of your request:

Attach:

1. Description and itemized budget showing how you intend to use the amount requested from the City of Des Moines (income and expenses).
2. If your agency is a non-profit a copy of your agency's current non-profit corporate registration with the Washington Secretary of State.
3. A copy of your organization's business plan (please limit to not more than two pages) and annual budget.
4. Brochures or other information about your event/activity/facility, in particular items showing recent tourism promotion efforts. (Optional)

This proposal and all documents filed with the City are public records. The City may choose to post on its website copies of the proposals and attached documents.

Tell us who you expect to attract:

The State of Washington requires an estimate for the following questions below:

As a direct result of your proposed tourism-related service, provide an estimate of:		What method was used to determine attendance in previous years?
a. **Overall Attendance** Enter the total number of people predicted to attend this activity, and select the method used to determine the attendance.	Predicted: 5,000	☐ Direct Count ☐ Indirect Count ☐ Representative Survey ☐ Informal Survey XX Structured Estimate
b. **Attendance, 50+ Miles** Enter the number of people who traveled greater than 50 miles predicted to attend this activity, and select the method used to determine the attendance.	Predicted: 1,000	☐ Direct Count ☐ Indirect Count ☐ Representative Survey ☐ Informal Survey XX Structured Estimate
c. **Attendance, Out of State, Out of Country** Enter the number of people from outside the state and country predicted to attend this activity, and select the method used to determine the attendance.	Predicted: unknown	☐ Direct Count ☐ Indirect Count ☐ Representative Survey ☐ Informal Survey ☐ Structured Estimate
d. **Attendance, Paid for Overnight Lodging** Enter the number of predicted to attend this activity and pay for overnight lodging, and select the method used to determine the attendance.	Predicted: unknown	☐ Direct Count ☐ Indirect Count ☐ Representative Survey ☐ Informal Survey ☐ Structured Estimate
e. **Attendance, Did Not Pay for Overnight Lodging** Enter the number of predicted to attend this activity without paying for overnight lodging, and select the method used to determine the attendance.	Predicted: 5,,000	☐ Direct Count ☐ Indirect Count ☐ Representative Survey ☐ Informal Survey XX Structured Estimate

Methods

Direct Count: Actual count of visitors using methods such as paid admissions or registrations, clicker counts at entry points, vehicle counts or number of chairs filled. A direct count may also include information collected directly from businesses, such as hotels, restaurants or tour guides, likely to be affected by an event.

Indirect Count: Estimate based on information related to the number of visitors such as raffle tickets sold, redeemed discount certificates, brochures handed out, police requirements for crowd control or visual estimates.

Representative Survey: Information collected directly from individual visitors/participants. A representative survey is a highly structured data collection tool, based on a defined random sample of participants, and the results can be reliably projected to the entire population attending an event and includes margin of error and confidence level.

Informal Survey: Information collected directly from individual visitors or participants in a non-random manner that is not representative of all visitors or participants. Informal survey results cannot be projected to the entire visitor population and provide a limited indicator of attendance because not all participants had an equal chance of being included in the survey.

Structured Estimate: Estimate produced by computing known information related to the event or location. For example, one jurisdiction estimated attendance by dividing the square footage of the event area by the international building code allowance for persons (3 square feet).

Actual data will be required with your final reimbursement.

Application Submittal

Submit a PDF or one original signed copy to:

City of Des Moines Lodging Tax Advisory Committee
c/o Ed Armijo
21630 11th Ave S., Suite A
Des Moines, WA 98198
Email: EArmijo@desmoineswa.gov

You must complete and sign the cover sheet with this packet

- ⇨ **You may use the Supplemental Form or type the questions and answers on separate sheets of paper.**
- ⇨ **Please number each page in your packet, except for the optional brochures/information.**

General Information

City of Des Moines Lodging Tax Fund Overview

The City's Lodging Tax Fund is the primary source of City funding for activities, operations, and expenditures designed to increase tourism. In any given year, the City may maintain a reserve in the Fund, and will assess on an annual basis how much of the fund to appropriate in a given year.

The Des Moines City Council has created a Lodging Tax Advisory Committee to conduct an annual process to solicit and recommend Lodging Tax funded services for City Council consideration.

HIGH PRIORITY will be given to tourism activities that:

- Have a demonstrated potential or high potential from the Committee's perspective to result in overnight stays by tourists in lodging establishments within the City of Des Moines.
- Promote Des Moines and/or events, activities, and places in the City to potential tourists from outside King County.
- Have demonstrated or high potential from the Committee's perspective to result in documented economic benefit to Des Moines.
- Have a demonstrated history or success in Des Moines, or are proposed by a group with a demonstrated history or high potential of success with similar activities.
- Minimize duplication of services where appropriate and encourage cooperative marketing and/or includes an element of cooperation or partnership.
- Provide, maintain, operate or enhance City-owned tourism facilities or infrastructure.

State Law Excerpts

RCW 67.28.1816 – Use of Lodging Tax Fund.
Lodging tax revenue under this chapter may be used, directly by any municipality or indirectly through a convention and visitors bureau or destination marketing organization for:

a. Tourism marketing;
b. The marketing and operations of special events and festivals designed to attract tourists;
c. Supporting the operations and capital expenditures of tourism-related facilities owned or operated by a municipality or a public facilities district created under chapters 35.57 and 36.100 RCW; or
d. Supporting the operations of tourism-related facilities owned or operated by nonprofit organizations described under 26 U.S.C. Sec. 501(c)(3) and 26 U.S.C. Sec. 501(c)(6) or the internal revenue code of 1986, as amended.

RCW 67.28.080 – Definitions.

- "Municipality" means any county, city or town of the state of Washington.
- "Operation" includes, but is not limited to, operation, management, and marketing.

- "Person" means the federal government or any agency thereof, the state or any agency, subdivision, taxing district or municipal corporation thereof other than county, city or town, any private corporation, partnership, association, or individual.
- "Tourism" means economic activity resulting from tourists, which may include sales of overnight lodging, meals, tours, gifts, or souvenirs.
- "Tourism promotion" means activities and expenditures designed to increase tourism, including but not limited to advertising, publicizing, or otherwise distributing information for the purpose of attracting and welcoming tourists; developing strategies to expand tourism; operating tourism promotion agencies; and funding marketing of special events and festivals designed to attract tourists.
- "Tourism-related facility" means real or tangible personal property with a usable life of three or more years, or constructed with volunteer labor, and used to support tourism, performing arts, or to accommodate tourist activities.
- "Tourist" means a person who travels from a place of residence to a different town, city, county, state, or country, for purposes of business, pleasure, recreation, education, arts, heritage, or culture.

Our Mission Statement: To celebrate and strengthen community pride by organizing safe, family-friendly annual parade event that brings together children, families, schools, and community organizations. Our mission is to create joyful, inclusive experiences that foster connection, highlight local spirit, and promote a sense of belonging for all who live, work and play in Des Moines, Washington.

Our Purpose:
The organization is a tax-exempt 501(c)(3) nonprofit dedicated exclusively to planning, funding, and executing the annual Waterland Festival & Parade in Des Moines, Washington. The Waterland Festival & Parade is a safe, community celebration that promotes togetherness and civic pride.

Our Primary Objective:
To ensure long-term sustainability, safety, and quality of the Waterland Festival & Parade through strong community partnerships, diversified funding, and commitment to community engagement.

Below is our budgeted expenses. All income is generated through sponsorships, community donations and grants. We intend to use the Lodging Tax dollars to support the Block Party to include the Grandstand-Stage ($2,000), DJ ($1,000), picnic tables ($2,000), Banners ($2,000), Entertainment ($500).

EXPENSES		
Parade Operations		
	Bank Fees	$250.00
	Insurance	$2,000.00
	Safety Measures	$1,000.00
	Supplies	$1,500.00
	Port a Potty	$1,000.00
Marketing		
	Printing	$1,500.00
	Banners	$2,000.00
	Web Page	$500.00
	Swag	$1,000.00

Sponsorship		
	Supplies	$125.00
	Printing	$125.00
Participant Committee		
	Supplies	$500.00
	Fees	$2,500.00
VIP / Grandstand Committee		
	Stage	$2,000.00
	Food / Beverage	$1,000.00
Block Party		
	DJ	$1,000.00
	Picnic Tables	$2,000.00
	Entertainment	$500.00
	Total	$20,500.00

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **NFC Northwest Telecommunications Franchise Agreement - Second Reading**

ATTACHMENTS:
1. Draft Ordinance No. 26-055 Franchise Agreement
2. Des Moines Build Plan
3. NFC Northwest Company info

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Legal

DATE SUBMITTED:
June 29, 2026

CLEARANCES:
Public Works
City Clerk

Purpose and Recommendation

The purpose of this agenda item is for the City Council to conduct a second reading and approve a telecommunications Franchise Agreement with NFC Northwest, LLC for the installation of fiber optic facilities in City right-of-way.

Suggested Motion:

Motion: "I move to pass Draft Ordinance No. 26-055 granting a telecommunications Franchise to NFC Northwest, LLC."

Background

A franchise agreement authorizes an entity to make use of the city streets for the purpose of carrying on the business in which it is generally engaged, that is, of furnishing service to members of the public. The grant of a franchise is a special privilege that allows particular individuals to profit from the use of the city streets in a manner not generally available to the public as a common right. The legislature has granted authority to cities to grant a nonexclusive franchise. RCW 35A.47.040. Once granted, a franchise is a contract which is binding on both the grantor and the grantee.

NFC Northwest submitted a telecommunications franchise application in May 2026, seeking to deploy fiber optic cables and equipment in City right-of-way to provide voice and data service to businesses and residential customers. A first reading of this ordinance was held on June 25, 2026.

The City has a standard telecommunications franchise template that was used as the basis for this agreement.

Over the last two years, the City has approved several telecommunications franchise agreements with different providers, including Ezee Fiber, Hyper Fiber and Forged Fiber. This influx of private companies providing fiber service to residential customers was in response to a demand from Des Moines residents for more competition and options from internet providers. These franchise agreements have resulted in lower prices and enhanced service options for many of our residents. Although this has been a long-term positive, some short-term impacts have arisen during the construction phases of fiber installation, including right-of-way disruptions. Although some construction impacts are unavoidable, the City has learned from the challenges of initial deployments and is now working more cohesively with fiber providers to insure adequate notice to neighbors and to limit disturbances. Additionally, the City is utilizing third party consultants to assist with the increased workload (costs paid by telecom providers) to further reduce negative impacts from short-term construction and installation.

Discussion

The key terms of the franchise agreements are detailed below. The terms of the agreements are consistent with the approved telecommunications franchises previously issued by the City.

1. Franchise Term: The term of the Franchise is for 10 years. After 5 years, if either party identifies a specific issue that needs to be addressed, the parties are required to meet to negotiate. This language requires the parties to discuss such issues in good faith at the half-way mark of the 10 year term. The term will extend another 10 years unless either party notifies the other in writing 180 days before the end of the Agreement.

2. Relocation: NFC Northwest is solely responsible for relocation costs unless state law requires otherwise. RCW 35.99.060 applies specifically to telecommunications franchises and requires cities to share in some relocation costs for specific instances where a city requires relocation for a private party's benefit or if a city requires relocation twice within a 5 year period.

3. Right of Way Management, Planning, and Operations: The Franchise reflects current City practice. NFC Northwest is required to follow City permitting processes prior to installation of facilities or any work in the right-of-way.

4. Indemnification and Insurance: The Agreement provides that NFC Northwest will indemnify the City for actions of the company or their agents. NFC Northwest is required to maintain $5,000,000 in automobile and general liability insurance coverage. This coverage exceeds any reasonably expected liability that could occur from this Agreement.

5. Franchise Fee: NFC Northwest will pay the City a one-time franchise fee of $5,000.

This flat fee is consistent with RCW 35.21.860 which requires that a franchise fee be limited to the actual administrative expenses incurred by the City in the negotiation of the franchise. This amount will reimburse the City for the staff costs of the negotiations over the last several months.

6. Taxes: Under DMMC 3.68.060(3) the City imposes a 6% tax on telephone businesses. To the extent that revenue is received from the installation of these facilities, the City will receive 6%.

7. Abandonment: The Franchise requires that NFC Northwest remove any facilities that have been abandoned in the right of way at their own expense. The City has the option to allow them to be abandoned in place or removed.

8. Vacation: The proposed language is an accurate reflection of current practice and does not restrict the City's authority to vacate a right of way. The Agreement requires the City to notify NFC Northwest of a vacation so that they can obtain an easement if one is needed.

9. Collaboration on City projects: This Agreement expressly calls out RCW 35.99.070 which requires a service provider that is operating in public right-of-way to provide the City with additional duct or conduit for the City's purposes. The City would receive this benefit at cost under the Franchise Agreement.

10. Additional Terms: The majority of the remainder of the Agreement is boilerplate legal language. All language and terms have been thoroughly reviewed and negotiated and the City's interests are protected throughout these Agreements.

Alternatives

1. Pass the Draft Ordinance as presented.
2. Pass with amendments. Amendments would need to be reviewed and approved by the Applicant.
3. Do not pass the Draft Ordinance and provide a legal rationale.

Financial Impact

The City will receive an initial $5,000 to cover the City's costs of the negotiation of this Franchise Agreement. Additionally, the City will receive all permitting costs for work to be conducted and any additional staffing time that is spent administering this Agreement can be billed to NFC Northwest.

Finally, the City will receive 6% utility tax on the telephone business conducted by NFC Northwest.

Recommendation

Pass the Draft Ordinance as written.

DRAFT ORDINANCE NO. 26-055

AN ORDINANCE OF THE CITY OF DES MOINES granting a non-exclusive Franchise to construct, install, operate, maintain, repair, or remove telecommunications facilities within the public ways of the City of Des Moines ("City") to NFC Northwest, LLC ("Grantee"). Grantee's telecommunications facilities shall not include antennas and support structures specifically for attaching antennas that are used for personal wireless communications services. The City and Grantee are sometimes hereinafter collectively referred to individually as a "party" and collectively as the "parties."

WHEREAS, NFC Northwest, LLC is a competitive telecommunications company providing telecommunication services, including voice, internet and data services, which desires to occupy the City of Des Moines rights-of-ways to install, construct, operate, and maintain its telecommunications facilities and network for the purpose of providing services to its customers at locations within the City, and

WHEREAS, the Grantee has represented to the City that it provides internet access services or acts as a service provider as such term is defined in RCW Section 35.99.010, and

WHEREAS, Grantee has applied to the City for a non-exclusive telecommunications service franchise to enter, occupy, and use public ways to construct, install, operate, maintain, and repair telecommunications facilities to offer and provide telecommunications service for hire, sale, or resale in the City, and

WHEREAS, the City is authorized by applicable law to grant one or more nonexclusive franchises within the boundaries of the City, and

WHEREAS, the 1934 Communications Act, as amended relating to telecommunications providers recognizes and provides local government authority to manage the public rights-of-way and to require fair and reasonable compensation on a competitively neutral and nondiscriminatory basis, and

WHEREAS, a franchise does not include, and is not a substitute for any other permit, agreement, or other authorization required by the City, including without limitation, permits

required in connection with construction activities in public ways which must be administratively approved by the City after review of specific plans, and

WHEREAS, Grantee shall be responsible for its actual costs in using, occupying and repairing public ways, and

WHEREAS, the City and Grantee desire to effectuate good coordination of the use of the rights-of-way, and

WHEREAS, the City Council finds that the franchise terms and conditions contained in this Ordinance are in the public interest; now therefore,

THE CITY COUNCIL OF THE CITY OF DES MOINES ORDAINS AS FOLLOWS:

Sec. 1. Definitions.

(1) **Use of words and phrases.** For the purposes of this Franchise, the following terms, phrases, words, and their derivations will have the meanings given herein. When not inconsistent with the context, words used in the present tense include the future, words in the plural include the singular, and words in the singular include the plural. Words not defined will have the meaning ascribed to those words in the Des Moines City Code (DMMC), or in the Federal Communications Act of 1934 as amended, unless inconsistent herewith. The headings contained in this Franchise are to facilitate reference only, do not form a part of this Franchise, and shall not in any way affect the construction or interpretation hereof. The words "shall," "will," and "must" are mandatory, and the word "may" is permissive or directory.

(2) "Abandonment" means the disconnection by the Grantee of specific Facilities from the telecommunications system.

(3) "Affiliate" means any Person who owns or controls, is owned by or controlled by, or is under common ownership or control with Grantee.

(4) "Cable Act" means the Cable Communications Policy Act of 1984 as amended and as may be amended from time to time during the term of this Franchise (47 U.S.C. § 521 et seq., as amended).

(5) "Cable service" means the one-way transmission to subscribers of video programming or other programming service and subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service.

(6) "City Council" means the governing body of the City.

(7) "Communications" means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.

(8) "Communications applications fees and charges" includes fees and charges connected to right-of-way management, construction permit, permit design fee, building permit, encroachment permit, inspections and pavement restoration.

(9) "Communications service" means the offering of communications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.

(10) "Communications system" or "system" means only those facilities necessary for Grantee to provide Communications services.

(11) "Conduit" means optical cable housing, jackets, or casing, and pipes, tubes, or tiles used for receiving and protecting wires, lines, cables, and communication and signal lines.

(12) "Costs" means costs, expenses, and other financial obligations of any kind whatsoever.

(13) "Dark fiber" means properly functioning optical cable which is not used or available for use by Grantee or the general public, but may be made available for use under lease to third parties.

(14) "Effective date" means five days following the publication of this Franchise or a summary thereof occurs in an official newspaper of the City as provided by law.

(15) "Emergency" means a condition of immediate and imminent danger to the health, safety, and welfare of property or persons located within the City including, without limitation, damage to persons or property from natural consequences, such as storms, earthquakes, riots or wars.

(16) "Facilities" means, collectively, any and all telecommunications transmission systems and appurtenances owned by Grantee, now and in the future, in the Franchise Area, including, but not limited to, wire, radio, optical cable, electromagnetic or other similar types of equipment and related appurtenances in any way comprising part of the System.

(17) "FCC or Federal Communications Commission" means the agency as presently constituted by the United States Congress or any successor agency with jurisdiction over telecommunications service matters.

(18) "Fiber optic" means a transmission medium of optical fiber cable, along with all associated optronics and equipment, capable of carrying telecommunication service by means of electric light-wave impulses.

(19) "Franchise area" means the area within the jurisdictional boundaries of the City, including any annexed areas, to be served by Grantee as specified in this Franchise.

(20) "Gross Revenues" means all gross revenues received by Grantee or its affiliates from the provision of intrastate telephone business activities in the City of Des Moines, as described in Utility Tax below.

(21) "Incremental costs" means the actual and necessary costs incurred which exceed costs which would have otherwise been incurred.

(22) "Optical cable" means wires, lines, cables and communication and signal lines used to convey communications by fiber optics.

(23) "Open Video System" means a facility consisting of a set of transmission paths and associated signal generation, reception and control equipment that is designed to provide Cable Service which includes video programming and which is provided to multiple subscribers within a community, provided that the Federal Communications Commission has certified that such system complies with 47 CFR 76.1500 et seq.

(24) "Person" means any individual, firm, partnership, association, joint stock company, trust, corporation, company, governmental entity.

(25) "Public ways or rights-of-way" includes the surface, the air space above the surface, and the area below the surface of any public street, highway, parkway, circle, lane, alley, sidewalk, boulevard, drive, bridge, tunnel, easement or similar property in which the City holds any property interest or exercises any rights of management or control and which, consistent with the purposes for which it was acquired or dedicated, may be used for the installation, repair, and maintenance of a Telecommunication System. No reference in this Franchise to a public right-of-way shall be deemed to be a representation or guarantee by the City that its interests or other rights in such property are sufficient to permit its use for the installation, repair, and maintenance of a Telecommunication System, and the Grantee shall be deemed to gain only those rights which the City has the undisputed right and power to give. For this Franchise, public ways and rights-of-way are limited to the areas above the ordinary high water mark of Puget Sound.

(26) "Route map" means a geographic representation of the Grantee's Telecommunication System as it exists within the public right-of-way and within private easements in the Franchise area.

(27) "Subscriber" means any Person who or which purchases, leases, rents, obtains or subscribes to Telecommunications Service provided by Grantee by means of or in connection with the Grantee's Telecommunications System.

(28) "Telecommunications" means the transmission, between or among points specified by the user, of information of the user's

choosing, without change in the form or content of the information as sent and received.

(29) "Telecommunications applications fees and charges" includes fees and charges connected to right-of-way management, construction permit, permit design fee, building permit, encroachment permit, inspections and pavement restoration.

(30) "Telecommunications service" means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used. Telecommunications service shall also include offering Internet access, private line service, front- and back-haul transport and/or leasing dark fiber directly to the public or third parties.

(31) "Telecommunications system" or "system" means only those facilities necessary for Grantee to provide Telecommunications service.

(32) "Underground facilities" means facilities located under the surface of the ground, other than underground foundations or supports for overhead facilities.

(33) "Utility poles" means poles, and crossarms, devices, and attachments directly affixed to such poles which are used for the transmission and distribution of electrical energy, signals, or other methods of communication.

(34) "Wireless Communications Facilities" means the site, wireless communications support structures, antennas, accessory equipment structures, and appurtenances used to transmit, receive, distribute, provide or offer personal wireless communications services. Wireless communications facilities include, but are not limited to antennas, poles, towers, cables, wires, conduits, ducts, pedestals, vaults, buildings, and electronic switching equipment.

Sec. 2. Franchise - Grant of authority.

(1) **Use of public rights-of-way.** There is hereby granted to Grantee the right and privilege, to have, acquire, construct, reconstruct, upgrade, repair, maintain, use, and operate in the

City a Telecommunications System, and to have, acquire, construct, reconstruct, repair, maintain, use, and operate in, over, under, and along the present and future Public rights-of-way of the City all necessary Facilities, including without limitation, desirable wires, cables, electronic conductors, underground conduits, vaults, and other structures and appurtenances necessary for the construction, maintenance, and operation of Grantee's Telecommunications system in the Franchise Area. Grantee or Affiliates shall not install or construct facilities within the City's Public Rights-of-Way which are not authorized by this Franchise or lawfully allowed by applicable local, state, or federal law.

(2) **Additional services/compensation.** By granting this Franchise, the City does not waive and specifically retains any right to regulate and receive compensation as allowed by law for services offered over the Telecommunication system which are not Telecommunication services. Upon request, Grantee shall inform City of any non-Telecommunication and/or Telecommunication services offered over the Telecommunication system of which Grantee or its Affiliates are aware. By accepting this Franchise, Grantee does not waive any right it has under law to challenge the City's requirement for authorization to provide non-Telecommunication Services.

(3) **Responsibility for costs.** Except as expressly provided otherwise, any act that Grantee is required to perform under this Franchise shall be performed at Grantee's cost. If Grantee fails to perform work that it is required to perform within the time provided for performance or a cure period, the City may perform the work and bill the Grantee for documented costs. The Grantee shall pay the amounts billed within thirty (30) days. The parties agree that any amounts paid pursuant to this Section are not Franchise fees and fall within one or more of the exceptions to the definition of Franchise fee under federal law. Nothing in this section is intended to affect in any way (by expansion or contraction) Grantee's rights under applicable law governing the ability to impose any costs, including but not limited to the rates charged.

(4) **Publication costs.** Any and all costs of publication related to this Franchise which may be required by law or action of City Council shall be borne by Grantee. Any

payments made by the City under this provision are to be reimbursed to the City within thirty (30) days of Grantee's receipt of the invoice.

(5) **Franchise non-exclusive.** The rights, privileges of any franchise granted pursuant to chapter 20.04 of the Des Moines Municipal Code (DMMC) shall be nonexclusive. This Franchise shall not be construed as any limitation upon the right of the City, through its proper officers, to grant to other persons or corporations, including itself, rights, privileges or authority the same as, similar to or different from the rights, privileges or authority herein set forth, in the same or other streets and public ways by Franchise, permit or otherwise. The City shall not authorize or permit any Person providing telecommunications services to enter into the Public rights-of-way in any part of the City on terms or conditions that, when viewed collectively, are generally more favorable or less burdensome to such Person than those applied to the Grantee pursuant to this Franchise.

(6) Nothing in this Franchise excuses Grantee of its obligation to identify its facilities and proposed facilities and their location or proposed location in the public ways and to obtain use and/or development authorization and permits from the City before entering, occupying, or using public ways to construct, install, operate, maintain, repair, or remove such facilities.

(7) Nothing in this Franchise excuses Grantee of its obligation to comply with applicable codes, rules, regulations, and standards subject to verification by the City of such compliance.

(8) Nothing in this Franchise shall be construed to limit taxing authority or other lawful authority to impose charges or fees, or to excuse Grantee of any obligation to pay lawfully imposed charges or fees. Notwithstanding any other provision of this Franchise, nothing in this Franchise is intended to alter, amend, modify or expand the taxes and fees that may lawfully be assessed on Franchisee's business activities under this Franchise under applicable law.

(9) Nothing in this Franchise grants authority to Grantee to impair or damage any City property, public way, other ways or other property, whether publicly or privately owned.

(10) Nothing in this Franchise shall be construed to create a duty upon the City to be responsible for construction of facilities or to modify public ways to accommodate Grantee's facilities.

(11) Nothing in this Franchise shall be construed to create, expand, or extend any liability of the City to any third party user of Grantee's facilities or to otherwise recognize or create third party beneficiaries to this Franchise.

(12) Nothing in this Franchise shall be construed to permit Grantee to unlawfully enter or construct improvements upon the property or premises of another.

(13) Nothing in this Franchise grants authority to Grantee to enter, occupy or use City property, nor to install or construct facilities within the City's Public rights-of-way which are not authorized by this Franchise or lawfully allowed by applicable local, state, or federal law.

(14) Nothing in this Franchise grants authority to Grantee to provide or offer cable service as cable service is defined in 47 U.S.C. § 522(6), Open Video System services. This Franchise does not relieve Grantee of any obligation it may have to obtain from the City separate authorization to provide Cable or Open Video System services, or relieve Grantee of its obligation to comply with any such authorizations that may be lawfully required.

(15) Grantee may use its facilities authorized by this Franchise to provide telecommunications service only as expressly provided in this Franchise.

Sec. 3. Term evaluation, and renewal.

(1) This Franchise shall run for a period of ten (10) years unless extended or terminated sooner as hereinafter provided. This Franchise shall commence after the effective date of this Franchise and in accordance with the written acceptance requirements herein.

(2) Should the Parties fail to formally renew this Franchise prior to the expiration of the ten (10) year renewal period, the Franchise shall automatically continue on a month to month period until renewed or either party gives written notice at least one hundred and eighty (180) days in advance of intent not to renew the Franchise.

(3) On the fifth (5th) anniversary of this Franchise, if either party identifies one or more specific issues that the party believes may require a reevaluation of one or more of the material terms of this Franchise, the Parties agree to discuss such issues diligently and in good faith. Notwithstanding the foregoing, either party may at any time during the term of this Franchise, request a clarification of a term, or seek an amendment to, this Franchise.

Sec. 4. Compliance with City, state, and federal laws.

(1) **Compliance with applicable laws.** Grantee shall at all times comply with all laws, rules, and regulations of the City, state and federal governments and any administrative agencies thereof which are applicable to all businesses in the City and/or all users of the Public rights-of-way. The express provisions of this Franchise constitute a valid and enforceable contract between the parties.

(2) **Other ordinances.** This Franchise and all rights and privileges granted hereunder are subject to, and the Grantee must exercise all rights in accordance with, applicable law, as amended over the Franchise term. However, this Franchise is a contract, subject only to the City's exercise of its police powers and applicable law, and in case of any conflict between the express terms of this Franchise and any ordinance enacted by the City, this Franchise shall govern, except where such ordinance would result in a competitor to Grantee having more favorable franchise

terms than Grantee in which case City will notify Grantee and offer Grantee the opportunity to amend this Franchise consistent with such terms. This Franchise does not confer rights or immunities upon the Grantee other than as expressly provided herein. The Grantee reserves the right to challenge provisions of any ordinance that conflicts with its contractual rights, and does not waive its right to challenge the lawfulness of a particular enactment, including on the grounds that a particular action is an unconstitutional impairment of contractual rights.

(3) **Police power of the City.** Construction, maintenance, and operation of Grantee's Telecommunication system and all property of Grantee subject to the provisions of this Franchise shall be subject to all lawful police powers, rules, and regulations of the City. The Grantee shall be subject to the police power of the City to adopt and enforce general ordinances necessary to protect the safety and welfare of the general public in relation to the rights granted in the Franchise area. The City reserves the right to use, occupy and enjoy any Public rights-of-way or other public places for any purpose, including without limitation, the construction of any water, sewer or storm drainage system, installation of traffic signal systems, intelligent transportation systems, street lights, trees, landscaping, bicycle paths and lanes, equestrian trails, sidewalks, other pedestrian amenities, other City services, or uses not limited to the enumerated items as listed herein, and other public street improvement projects. The City shall have the power at any time to order and require Grantee to remove or abate any pole, line, tower, wire, cable, guy, conduit, electric conductor, or any other structure or facility that is dangerous to life or property. In the event Grantee, after written notice, and the unencumbered ability to comply, fails or refuses to act within thirty (30) days of such written notice, City shall have the power to remove or abate the same at the expense of Grantee, all without compensation or liability for damages to Grantee except in instances when the damage is caused by negligence or willful misconduct of the City or its agents. Any conflict between the terms or conditions of this Franchise and any other present or future exercise of the City's police powers will be resolved in favor of the exercise of the City's police power.

(4) **Notification in the event of preemptive law.** Grantee shall use its best efforts to notify the City of any change in

law that materially affects Grantee's rights or obligations under this Franchise.

(5) **Amending franchise to conform to subsequent law.** The City reserves the right at any time to amend this Franchise to conform to any hereafter enacted, amended, or adopted federal or state statute or regulation relating to the public health, safety, and welfare, or a City Ordinance enacted pursuant to such federal or state statute or regulation, upon providing Grantee with thirty (30) days written notice of its action setting forth the full text of the amendment and identifying the statute, regulation, or ordinance requiring the amendment. Said amendment shall become automatically effective upon expiration of the notice period unless, before expiration of that period, the Grantee makes a written call for negotiations over the terms of the amendment. If the parties do not reach agreement as to the terms of the amendment within thirty (30) days of the call for negotiations, the City may enact the proposed amendment, by incorporating the Grantee's concerns to the maximum extent the City deems possible.

Sec. 5. Conditions of public rights-of-way occupancy.

(1) **Use permits and/or development authorization.** Grantee shall obtain use, right-of-way construction, and/or development authorization and required permits from the City and all other appropriate regulatory authorities prior to constructing or installing facilities or performing other work in the franchise area. Grantee shall provide the following information for all facilities that it proposes to construct or install:

(a) Engineering plans, specifications and a network map of the proposed facilities and their relation to existing facilities, in a format and media requested by the City in sufficient detail to identify:

(i) The location and route of the proposed facilities;

(ii) When requested by the City, the location of all overhead and underground public utility, communication, cable, water, sewer, drainage and other facilities in the public way along the proposed route, provided the information is readily observable or obtainable from the City;

(iii) When requested by the City, the location(s), if any, for interconnection with the communication facilities of others;

(iv) The specific trees, structures, improvements, facilities and obstructions, if any, that Grantee proposes to temporarily or permanently alter, remove or relocate.

(b) If Grantee is proposing to install overhead facilities, the Grantee shall provide evidence that the proposed overhead installation is in compliance with all applicable provisions of the Des Moines Municipal Code. The Grantee shall also provide evidence of Grantee's authorization to use each utility pole along the proposed route together with any conditions of use imposed by the pole owner(s) for each pole, and written acknowledgement by the Grantee that if the overhead facilities are subsequently relocated underground, the Grantee shall relocate underground at no cost to the City, except as otherwise provided in RCW Section 35.99.060.

(c) If Grantee is proposing to install underground facilities in existing ducts or conduits within the public ways, information in sufficient detail to identify:

(i) Evidence of ownership or authorization to use such ducts or conduits;

(ii) Conditions of use imposed by the owner(s) of the ducts or conduits;

(iii) If known to Grantee or reasonably ascertainable to Grantee, the total capacity of such ducts or conduits; and

(iv) If known to Grantee or reasonably ascertainable to Grantee, the amount of the total capacity within such ducts or conduits which will be occupied by Grantee's facilities.

(d) If Grantee is proposing to install underground facilities in new ducts or conduits within the public ways:

(i) The location proposed for new ducts or conduits;

(ii) The total capacity of such ducts or conduits; and

(iii) The initial listing of co-located facilities located within Grantee constructed or installed ducts or conduits.

(e) A preliminary construction schedule and completion date together with a traffic control plan in compliance with the Manual on Uniform Traffic Control Devices (MUTCD) for any construction.

(f) Information to establish that the applicant has obtained all other governmental approvals and permits to construct and operate the facilities.

(g) Such other documentation and information regarding the facilities requested by the City.

(h) The requirements of this section do not apply to installation of optical cable necessary to connect a customer of Grantee to a previously approved facility; provided that neither excavation nor trenching in the public right-of-way is required; that the optical cable does not cross a distance of more than eighty (80) feet from its point of connection to the approved facility and the point where it exits the public right-of-way; that the optical cable connection meets or exceeds all applicable technical standards required by law; that the optical cable connection is durable and installed in accordance with good engineering, construction, and installation practices and does not interfere with the public use of the public ways, or adversely affect public health, safety or welfare; that the optical cable connection is constructed and installed to conform to all applicable federal, state, local, and industry codes, rules, regulations, and standards; and that the optical cable connection does not damage or impair the City’s public way or property.

(i) The requirements of this section do not apply to repair or maintenance of a previously approved overhead facility; provided that the location and size of the previously

approved facility is not materially changed; that no additional new facilities are constructed or installed; that the repair or maintenance activities are conducted in accordance with good engineering, repair, and maintenance practices and do not interfere with the public use of the public ways, or adversely affect public health, safety, or welfare; that maintenance or repair activities conform to all federal, state, local, and industry codes, rules, regulations, and standards; and that the repair or maintenance activities comply with the City Code.

(2) **Construction and installation requirements.**

(a) Grantee's System shall be constructed and maintained in such manner as not to interfere with in-place sewers, water pipes or any other property of City, or with any other pipes, wires, conduits, pedestals, structures or other facilities that may have been placed in rights-of-way by, or under, City's authority.

(b) All facilities shall be constructed and installed in such manner and at such points so as not to inconvenience City or public use of the public ways or to adversely affect the public health, safety or welfare and in conformity with plans approved by the City, except in instances in which deviation may be allowed by the City.

(c) Interference with use of streets. When installing, locating, constructing or maintaining Facilities, the Grantee shall not interfere with the use of any street to any greater extent than is necessary, and shall leave the surface and subsurface of any such street in as good condition as it was prior to performance by the Grantee of such work, to the satisfaction of the City.

(d) The Grantee shall apply for, obtain, and comply with the terms of all permits required under Des Moines Municipal Code sections regulating construction and maintenance within the right-of-way for any work done upon Grantee Facilities. Grantee shall comply with all applicable City, State, and Federal codes, rules, regulations, and orders in undertaking such work, which shall be done in a thorough and proficient manner. Grantee shall have the sole responsibility for obtaining, at its own cost and expense, all permits, licenses, or other forms of approval or

authorization necessary to construct, operate, maintain or repair or expand the System, and to construct, maintain and repair any part thereof.

(e) The Telecommunications system constructed, maintained and operated by virtue of this Franchise, shall be so constructed, maintained and operated in accordance with all applicable engineering codes adopted or approved by the City, State of Washington, federal government and/or engineering profession and in accordance with any applicable Statutes of the State of Washington, rules and regulations of the applicable Washington regulatory authority, Ordinances of the City or of any other governmental regulatory commission, board or agency having jurisdiction over Grantee.

(f) The construction plans and Grantee's operations shall conform to all federal, state, local, and industry codes, rules, regulations, standards and laws. Grantee must cease work immediately if the City determines that Grantee is not in compliance with such codes, rules, regulations, or standards, and may not begin or resume work until the City determines that Grantee is in compliance. The City shall not be liable for any costs arising out of delays occurring as a result of such work stoppage.

(g) Neither approval of plans by the City nor any action or inaction by the City shall relieve Grantee of any duty, obligation, or responsibility for the competent design, construction, and installation of its facilities. Grantee is solely responsible for the supervision, condition, and quality of the work done, whether it is performed by itself or by its contractors or agents.

(h) Except as to emergency repairs, Grantee shall, prior to excavating within any street, alley or other public place, and installing any conduit, overhead cable or equipment therein, file with the City Manager or designee plans and specifications thereof showing the work to be done, the location and nature of the installation to be made, repaired or maintained, and a schedule showing the times of beginning and completion and shall secure a permit from the City before proceeding with any such work. The Grantee shall conform to all applicable requirements of the City Code, as it currently exists or as it may be amended.

(i) All construction and/or maintenance work as provided herein shall be performed in conformity with the plans and specifications filed with the City and with the permit or permits issued, except in instances in which deviation may be allowed thereafter in writing pursuant to an application by the Grantee.

(j) Excavation work requiring a permit from the City shall only commence upon the issuance of applicable permits by the City, which permits shall not be unreasonably withheld or delayed. However, in the event of an emergency requiring immediate action by Grantee for the protection of the Facilities, City property or other persons or property, Grantee may proceed without first obtaining the normally required permits. In such event Grantee must (1) take all necessary and prudent steps to protect, support, and keep safe from harm the Facilities, or any part thereof; City property; or other persons or property, and to protect the public welfare, health and safety; and (2) as soon as possible thereafter, must obtain the required permits and comply with any mitigation requirements or other conditions in the after-the-fact permit.

(k) In the event of an emergency, the Grantee may commence such repair and emergency response work as required under the circumstances, provided that the Grantee shall notify the City Manager or designee in writing as promptly as possible, before such repair or emergency work commences, or as soon thereafter as possible, if advance notice is not practical. The City may act, at any time, without prior written notice in the case of emergency, but shall notify the Grantee in writing as promptly as possible under the circumstances.

(l) Unless such condition or regulation is in conflict with a federal or state requirement, the City may condition the granting of any permit or other approval that is required under this Franchise, in any manner reasonably necessary for the safe use and management of the public right-of-way or the City's property including, by way of example and not limitation, maintaining proper distance from other utilities, protecting the continuity of pedestrian and vehicular traffic and rights-of-way improvements, private facilities and public safety.

(m) New facilities shall be constructed in accordance with the following terms and conditions:

(i) Facilities shall be installed within the Grantee's existing underground duct or conduit whenever excess capacity exists.

(ii) Overhead facilities shall be installed on pole attachments to existing utility poles only, and then only if space is available.

(iii) Whenever all existing telephone and electric utilities are located underground within public ways, the Grantee must also locate its facilities underground.

(iv) Whenever all new or existing telephone and electric utilities are located or relocated underground within public ways, the Grantee that currently occupies the same public ways shall concurrently relocate its Facilities underground at its own expense, except as otherwise provided in RCW Section 35.99.060.

(n) Display of right-of-way permit. The Grantee shall maintain a copy of the construction permit and approved plans at the construction site, which shall be displayed and made available for inspection by the City Manager or designee at all times when construction work is occurring.

(o) Construction schedule. The Grantee shall submit a written construction schedule to the City Manager or designee prior to commencing any work in or about the public ways in accordance with City regulations.

(p) Locator service compliance. The Grantee, before commencing any construction in the public ways, shall call for location in accordance with RCW 19.122.

(q) Placement. All facilities, and structures shall be located and placed in accordance with a valid permit so as to cause minimum interference with the rights and reasonable convenience of adjacent property owners. All facilities shall be maintained in a safe condition, and in good order and repair. Suitable barricades, flags, lights, flares, or other devices shall be used during construction activities at such times and places as

are reasonably required for the safety of the public. Any poles or other fixtures placed in any street by the Grantee shall be placed in such manner as not to interfere with the usual travel on such public way. Exact placement within the right-of-way shall be coordinated with the City and other utilities in order to provide for maintenance and future expansion, as well as, for the safety of the public. The City reserves the reasonable right as to final placement.

(r) Completion of construction. The Grantee shall promptly complete all construction activities so as to minimize disruption of the public ways and other public and private property. All construction work authorized by a permit within public ways, including restoration, must be completed within 90 calendar days of the date of issuance or at such other interval as the City may specify in writing upon issuance of the permit.

(s) Non-complying work. Upon order of the City Manager or designee, all work which does not comply with the provisions of this Franchise shall be brought into compliance with this Franchise.

(t) The City reserves the right to install, and permit to be installed, sewer, electric, phone, gas, water and other pipelines, cables, conduits and related appurtenances and to do, or permit to be done, any underground or overhead work in, across, along, over or under a public way or other public place occupied by Grantee. The City also reserves the right to construct new streets and public utilities and to alter the design of existing streets and public utilities. In performing such work, the City shall not be liable to Grantee for any damage, except in the event of the contributory negligence or willful misconduct of the City or its contractors, but nothing herein shall relieve any other person or entity from the responsibility for damages to Grantee's Facilities. The City will use its best efforts to provide Grantee with reasonable advance notice of plans by other persons to open the public ways.

(3) **Coordination of construction and installation activities.**

(a) Grantee shall coordinate its construction and installation activities and other work with the City and all other

users of the public ways, including utilities located within the franchise area.

(b) All construction or installation locations, activities and schedules shall be coordinated, as ordered by the City, to minimize public inconvenience, disruption or damages.

(c) At least forty-eight (48) hours prior to entering a public way to perform construction and installation activities or other work, Grantee shall give notice, at its cost, to owners and occupiers of property adjacent to such public ways indicating the nature and location of the work to be performed. Such notice shall be physically posted by door hanger. Grantee shall make a good faith effort to comply with the property owner or occupier's preferences, if any, on location or placement of underground facilities, consistent with sound engineering practices.

(d) The City shall give reasonable advance notice to Grantee of plans to open public ways for construction or installation of facilities; provided, however, the City shall not be liable for damages for failure to provide such notice, except in the event of the contributory negligence or willful misconduct of the City or its contractors. When such notice has been given, Grantee shall provide information requested by the City regarding Grantee's future plans for use of the public way to be opened. When notice has been given, Grantee may only construct or install facilities during such period that the City has opened the public way for construction or installation.

(4) **Relocation.** Grantee shall relocate its facilities as ordered by the City Manager or designee at no expense or liability to the City, except as otherwise provided in RCW Section 35.99.060, when there is construction, alteration, repair or improvement of a public way. Grantee shall complete the relocation by the date specified by the City. Grantee agrees to protect and save harmless the City from any customer or third-party claims for service interruption or other losses in connection with any such change or relocation. Grantee shall relocate its facilities at its own expense except where the Grantee had paid for the relocation costs of the same facilities at the request of the City within the past five (5) years, the Grantee's share of the cost of

relocation will be paid by the City if it requested the subsequent relocation or as otherwise provided in RCW Section 35.99.060.

(5) **Temporary removal, adjustment or alteration of facilities.**

(a) Grantee shall temporarily remove, adjust or alter the position of its facilities at its cost, except as otherwise provided in RCW Section 35.99.060, at the request of the City for public projects, events, or other public operations or purposes.

(b) Grantee shall locate the precise horizontal and vertical location of its underground facilities by excavating upon request of the City. If the City's request is in support of a City project, the Grantee shall complete this service within 14 days at no cost to the City, except as otherwise provided in RCW Section 35.99.060. If the City's request is in support of a third party's project, the Grantee shall be entitled to recover its cost from the project sponsor as set forth in RCW Section 35.99.060.

(c) If any person requests permission from the City to use a public way for the moving or removal of any building or other object, the City shall, prior to granting such permission, require such person or entity to make any necessary arrangements with Grantee for the temporary removal, adjustment or alteration of Grantee's facilities to accommodate the moving or removal of said building or other object. In such event, Grantee shall, at the cost of the person desiring to move or remove such building or other object, remove, adjust or alter the position of its facilities which may obstruct the moving or removal of such building or other object, provided that:

(i) The moving or removal of such building or other object which necessitates the temporary removal, adjustment or alteration of facilities shall be done at a reasonable time and in a reasonable manner so as to not unreasonably interfere with Grantee's business, consistent with the maintenance of proper service to Grantee's customers;

(ii) Where more than one route is available for the moving or removal of such building or other object, such building or other object shall be moved or removed along the route

which causes the least interference with the operations of Grantee, in the sole discretion of the City;

(iii) The person obtaining such permission from the City to move or remove such building or other object may be required to indemnify and save Grantee harmless from any and all claims and demands made against it on account of injury or damage to the person or property of another arising out of or in conjunction with the moving or removal of such building or other object, to the extent such injury or damage is caused by the negligence or willful misconduct of the person moving or removing such building or other object or the negligence or willful misconduct of the agents or employees of the person moving or removing such building or other object; and

(iv) Completion of notification requirements by a person who has obtained permission from the City to use a public way for the moving or removal of any building or other object shall be deemed to be notification by the City.

(d) The City may require Grantee to temporarily remove, adjust or alter the position of Grantee's facilities as the City may reasonably determine to be necessary at no cost to the City, except as otherwise provided in RCW Section 35.99.060, for work deemed needed by the City in the Rights-of-Way. The City shall not be liable to Grantee or any other party for any direct (except as a result of the negligence or willful misconduct of the City or its contractors), indirect, consequential, punitive, special or other damages suffered as a direct or indirect result of the City's actions.

(e) The temporary removal, adjustment or alteration of the position of Grantee's facilities shall not be considered relocation for any purpose whatsoever, except as otherwise provided in RCW Section 35.99.060.

(6) **Tree trimming.** The Grantee shall have the authority to trim trees or other natural growth on public property or which overhang streets, alleys, sidewalks and public ways of the City so as to prevent the branches of such trees from coming in contact with the Grantee’s wires, cables or other equipment that may be damaged due to continued contact. Grantee takes full responsibility for removing debris when the work is complete. All

trimming is to be done at the sole expense and responsibility of Grantee.

Trimming of trees and shrubbery within or overhanging the public ways to prevent contact with Grantee's Facilities shall be done in such a manner to cause the minimum amount of damage to trees and shrubs. If in the City's determination, trees are excessively damaged as a result of the work undertaken by or on behalf of Grantee, Grantee shall pay the City, within 30 days of submission of a statement by the City, the reasonable cost of any treatment required to preserve a tree or shrub or the cost for removal and replacement of the tree or shrub with landscaping of equal value or the value of the tree or shrub prior to the damage or removal, as determined by the City Manager or designee.

Any trimming or removal of trees or shrubs shall be done in full compliance with the City's Ordinances and all other laws or regulations of the City.

(7) **Underground installation.**

(a) The parties agree that this Franchise does not limit the City's authority under federal law, state law, or local ordinance, to require the undergrounding of utilities, provided such requirement is applied on a non-discriminatory basis as required under applicable state or federal law.

(b) Whenever the City requires the undergrounding of aerial utilities in the Franchise Area, the Grantee shall underground the Grantee Facilities in the manner specified by the City Manager or designee at no expense or liability to the City, except as otherwise provided in RCW Section 35.99.060. Where other utilities are present and involved in the undergrounding project, Grantee shall only be required to pay its fair share of common costs borne by all utilities, in addition to the costs specifically attributable to the undergrounding of Grantee Facilities. Common costs shall include necessary costs for common trench excavation, backfill, and restoration, and utility vaults. Fair share shall be determined in comparison to the total number and size of all other utility facilities being undergrounded.

(c) Grantee shall abide by chapter 19.122 RCW (Washington State's "Underground Utilities" statutes) and will

further comply with and adhere to local procedures, customs and practices relating to the one call locator service program.

(8) **Ducts and conduits.**

(a) If the Grantee is constructing underground conduit for its own use, the City may require the Grantee construct excess conduit, ducts, and related access structures in the public ways for the City, provided that the City enters into a contract with the Grantee consistent with RCW 80.36.150. The contract rates to be charged should recover the incremental costs of the Grantee, calculated as the difference between what the Grantee would have paid for the construction of its facilities and the additional cost only of construction of the City's excess conduit, ducts, and related access structures. If the City makes the additional conduit available to any other entity for the purposes of providing telecommunications service or cable service for hire, sale, or resale to the general public, the rates to be charged, as set forth in the contract with the Grantee shall recover at least the fully allocated costs of the Grantee. The Grantee shall state both contract rates in the contract. The City shall inform the Grantee of the use, and any change in use, of the requested conduit, ducts, and related access structures, if any, to determine the applicable rate to be paid by the City.

(b) The City shall not require that the additional conduit space be connected to the access structure and vaults of the Grantee.

(c) Except as expressly provided in this section, Grantee shall not charge the City for any costs, of any kind whatsoever, for facilities provided by Grantee in accordance with this section.

(d) The provisions of this section shall conform to the requirements of RCW 35.99.070.

(9) **Location of Grantee facilities.**

(a) From time to time, the City, or its representatives, may request identification of the specific location of Grantee System facilities installed in the City's rights of way during the term of this Franchise. The Grantee agrees to respond to such request within forty-eight (48) hours of the receipt of the request, excluding delays due to weather or other conditions. In the event that Grantee cannot locate such information within forty-eight (48) hours, Grantee shall notify the City. If Grantee fails to notify the City of its facilities locations within forty eight (48) hours, and damage is caused to Grantee's facilities as a direct result, the Grantee shall hold the City harmless from all liability, damage, cost or expense resulting from the City's actions in this regard unless such damage was caused by the negligence or willful misconduct of the City or its agents.

(b) Report of underground facilities. From time to time the City may require to design or construct right-of-way improvements in a specific area, the City or its designee may require the Grantee to submit a report of existing underground system facilities for a specific area of the City that will be impacted as a result of a planned right-of-way improvement. Within thirty (30) days after receipt by the Grantee of a request from the City or its designee, the Grantee shall submit a report of underground system facilities that shall comply with the following provisions:

(i) Certification by an engineer licensed in the State of Washington employed by the Grantee that the report accurately depicts the location of all system facilities, including drop service lines to individual subscribers, if any. The accuracy of this report shall be noted based upon the capability of the locating equipment used.

(ii) The accurate depth of the underground facility, as may be available based upon the capability of the locating device used. The accuracy of this information shall be noted.

(iii) Submittals shall be provided in hardcopy, and if available, electronically as an AutoCAD or ArcView file.

(iv) The City and Grantee recognize the importance of making best efforts to communicate during the planning and construction phases of right-of-way improvement projects. To that end, the City and Grantee agree to work cooperatively and to be reasonable and timely in requesting and providing necessary information. In the event the City reasonably determines that more precise information is needed for a specific aspect of a right-of-way project, the Grantee agrees to take the necessary steps to provide such precise information within thirty (30) days of receipt of request. If it is necessary for the Grantee to pot-hole or excavate and restore portions of the right-of-way to respond to the City's information request, the Grantee agrees to take such steps at its expense, , except as otherwise provided in RCW Section 35.99.060,and the City agrees to waive all permitting and inspection fees therefore.

(c) Within sixty (60) days of the effective date of this Franchise, Grantee shall provide the City with a current route map of the Telecommunication System located within the City. Upon City request, but no more often than once each year during the term of this Franchise, the Grantee shall provide the City with an updated route map showing the changes that have occurred in the Telecommunication System.

(d) Grantee agrees to obtain facilities location information from other users of the Public rights-of-way prior to Grantee's construction, reconstruction, maintenance, operations and repair of the Grantee's System facilities.

(10) **Removal and abandonment of facilities.** In the event that the use of any part of the Grantee's system is discontinued for any reason for a continuous period of twelve (12) months, or in the event such system equipment or facilities have been installed in any public ways or rights-of-way without complying with the requirements of this Franchise or other City ordinances, or the Franchise has been terminated or has expired, upon receiving ten (10) business days prior written demand from the City, the Grantee shall promptly remove, at its expense, such affected equipment or Facilities, other than any which the City may permit

to be abandoned in place, from the public ways of rights-of-way. Said removal shall be completed within one-hundred eighty (180) days from receipt of the City's written demand. In the event of such removal, the Grantee shall promptly restore the public ways or rights-of-way from which such property has been removed to a condition satisfactory to the City. Any affected equipment or facilities of the Grantee remaining in place one-hundred eighty-one (181) days after the termination or expiration of the Franchise, and upon written notice from the City, shall be considered permanently abandoned. The City may extend such time not to exceed an additional ninety (90) days with prior written request from the Grantee, and such request shall not be unreasonably withheld. Any equipment or facilities of the Grantee that the City allows to be abandoned in place shall be abandoned in such manner as the City shall prescribe. Upon permanent abandonment of the equipment or facilities of the Grantee in place, the equipment or Facilities shall become that of the City, and the Grantee shall submit to the City Clerk an instrument in writing, to be approved by the City Attorney, transferring to the City the ownership of such equipment or facilities. None of the foregoing affects or limits the Grantee’s rights to compensation for an involuntary abandonment of its equipment or facilities under state or federal law.

(11) **Safety and maintenance requirements.**

(a) All work authorized and required under this Franchise will be performed in a safe, thorough, and workmanlike manner.

(b) Grantee, in accordance with applicable federal, state, and local safety requirements shall, at all times, employ ordinary care and shall use commonly accepted methods and devices for preventing failures and accidents which are likely to cause damage, injury, or nuisance to occur. All facilities, wherever situated or located, shall at all times be kept in a good, safe, and suitable condition. If a violation of a safety code or other applicable regulation is found to exist by the City, the City may, after discussions with Grantee, establish a reasonable time for Grantee to make necessary repairs. If the repairs are not made within the established time frame, the City may make the repairs itself at the cost of the Grantee or have them made at the cost of Grantee.

(c) If Grantee fails to commence, pursue or complete any work required by law, this Franchise or any applicable permit to be done in any public way within the time prescribed and to the satisfaction of the City, the City may at its discretion cause the work to be done. Grantee shall pay to the City the reasonable costs of the work in an itemized report provided by the City to Grantee within 30 days after receipt of such report.

(d) Grantee, and any person acting on its behalf, shall provide a traffic control plan that conforms to the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). Said plan shall use suitable barricades, flags, flagmen, lights, flares, and other measures as required for the safety of all members of the general public during the performance of work, of any kind whatsoever, in public ways to prevent injury or damage to any person, vehicle, or property. Grantee shall implement and comply with its approved traffic control plan during execution of its work. The traffic control plan shall be developed and kept on site in Grantee's possession for all work impacting vehicular and pedestrian traffic. Traffic control plans may be modified as necessary by the Grantee to achieve effective and safe traffic control. All road closures requested by Grantee require a detour plan submitted at least 48 hours in advance and prior City approval unless there is an emergency.

(e) Grantee shall maintain its facilities in proper working order. Grantee shall restore its facilities to proper working order upon receipt of notice from the City that facilities are not in proper working order. The City may, after discussions with Grantee, establish a reasonable time for Grantee to restore its facilities to proper working order. If the facilities are not restored to proper working order within the established time frame, the City may restore the facilities to proper working order or have them restored at the cost of Grantee.

(f) The City shall have the right to inspect all construction and installation work performed by Grantee pursuant to this Franchise to the extent necessary to ensure compliance by Grantee. On an ongoing basis, Grantee shall certify to the City that Grantee's work is being performed and completed in a satisfactory manner.

(g) On notice from the City that any work is being performed contrary to the provisions herein, or in an unsafe or dangerous manner or in violation of the terms of any applicable permit, laws, regulations, ordinances or standards, the City may issue a stop work order and Grantee shall stop the work immediately. The City shall issue a stop work order in writing, unless given verbally in the case of an emergency, and provide the order to the individual doing work or post it on the work site. A copy of the order shall be sent to Grantee, and the order must indicate the nature of the alleged violation or unsafe condition and the conditions under which Grantee may resume work.

(12) **Removal of unauthorized facilities.** Within thirty (30) days following written notice from the City, Grantee shall, at its expense, remove unauthorized facilities and restore public rights-of-way and other property to as good a condition as existed prior to construction or installation of its facilities. Any plan for removal of said facilities must be approved by the City prior to such work. Facilities are unauthorized and subject to removal in the following circumstances:

(a) Upon expiration, termination, or cancellation of this Franchise;

(b) Upon abandonment of the facilities. Facilities shall be deemed abandoned if they are unused by Grantee as described in Section 5(10);

(c) If the facilities were constructed or installed prior to the effective date of this Franchise; unless such facilities were constructed or installed upon the condition of subsequent approval of this Franchise with the consent of the City; or unless Grantee acquired such facilities from a pre-existing user of the City's rights of way, and no notice of unauthorized facilities was received by the assignor from City prior to the date the facilities were acquired by Grantee.

(d) If the facilities were constructed, installed, operated, maintained, or repaired without the prior issuance of required use and/or development authorization and permits;

(e) If the facilities were constructed or installed or are operated, maintained or repaired in violation of the terms or conditions of this Franchise; or

(f) If the facilities are unauthorized for any reason whatsoever.

(13) **Restoration of public ways and other property.**

(a) Whenever necessary, after construction or maintaining any of Grantee's Facilities within the Rights-of-Way, the Grantee shall, without delay, and at Grantee's sole expense, except as otherwise provided in RCW Section 35.99.060, remove all debris and restore the surface and subsurface disturbed by Grantee as nearly as possible to as good or better condition as it was in before the work began. Grantee shall replace any property corner monuments, survey reference or equipment that were disturbed or destroyed during Grantee's work in the rights-of-way. Such restoration shall be done in a manner consistent with applicable codes and laws and to the City's satisfaction and specifications where applicable. Grantee agrees to pay all costs and expenditures required on the rights-of-way as a result of settling, subsidence, or any other need for repairs or maintenance resulting from excavations made by Grantee for necessary trench patch maintenance, for a period of ten years from the date such maintenance was performed, normal wear and tear excepted. Favorable weather conditions permitting, Grantee agrees to repair rights-of-way as a result of settling, subsidence, or other needed repairs or maintenance resulting from excavations made by the Grantee upon 30 days notice, unless there is an emergency, in which case such work shall be completed upon forty-eight (48) hours' notice excluding weekends and holidays. If Grantee fails to undertake such repairs as herein provided, the City may perform the repairs at Grantee's expense.

(b) Landscape restoration. All trees, landscaping and grounds removed, damaged or disturbed as a result of the construction, installation, maintenance, operation, repair or replacement of the Grantee's facilities, shall be replaced or restored, at the Grantee's expense to the condition existing prior to performance of the work, except as otherwise provided in RCW Section 35.99.06.

(14) **Poles, structures, and property owned by others.** If and when the Grantee is authorized to install communication facilities aerially in accordance with chapter 12.48 of the Des Moines Municipal Code (DMMC), Grantee must obtain written approval from the owners of utility poles, structures and property not owned by Grantee prior to attaching to or otherwise using such poles, structures or property, and provide proof of such approval to the

City. The City makes no representation and assumes no responsibility for the availability of utility poles, structures, and property owned by third parties for the installation of Grantee's facilities. The City shall not be liable for the unavailability of utility poles, structures, and property owned by the City or third parties for any reason whatsoever. The installation of facilities by Grantee on or in the poles, structures, or property owned by others shall be subject to and limited by the owner's authority to enter, occupy, and use public ways. In the event that the authority of the owner of poles, structures, or property to enter, occupy, and use the public ways either expires, terminates, or is cancelled, the authority of Grantee to construct, install, operate, maintain, and repair Grantee's facilities at such locations may be immediately cancelled at the sole option of the City. The City shall not be liable for the costs for removal of facilities arising from expiration, termination, or cancellation of any pole owner's authority to enter, occupy, or use public ways for any reason whatsoever.

Sec. 6. Indemnification and liability and assumption of risk.

(1) Indemnification / Hold Harmless. The Grantee shall defend, indemnify and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or in connection with activities or operations performed by the Grantee or on the Grantee’s behalf under this Franchise agreement, except for injuries and damages caused by the contributory negligence or willful misconduct of the City.

(2) The City shall give the Grantee written notice of any claim or of the commencement of any action, suit or other proceeding covered by this section. If a claim or action arises, the City or any other indemnified party shall then tender the defense of the claim to Grantee, which defense shall be at Grantee's expense. However, the failure of the City to provide such notice in writing to Grantee shall not relieve Grantee of its duties and obligations under this Section, provided that Grantee is given sufficient advance notice to perform its duties under this Section. It is further specifically and expressly understood that the indemnification provided herein constitutes the Grantee’s waiver

of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties.

(3) Should a court of competent jurisdiction determine that this Franchise is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Grantee and the City, its officers, officials, employees, and volunteers, the Grantee's liability hereunder shall be only to the extent of the Grantee's negligence. The provisions of this section shall survive the expiration or termination of this Agreement.

(4) **Damages and penalties.** By acceptance of this Franchise, Grantee specifically agrees that it will pay, all damages or penalties which the City, its officers, agents, employees, or contractors may legally be required to pay as a result of damages arising out of copyright infringements and all other damages arising out of Grantee’s or Grantee’s agents’ installation, maintenance, or operation of the telecommunications System, except as specifically referenced elsewhere in this Franchise, whether or not any act or omission complained of is authorized, allowed, or prohibited by this Franchise, subject to Section 635A of the Cable Act and applicable law.

(5) **Expenses.** If any action or proceeding is brought against the City or any of its officers, agents, or employees for claims for damages or penalties described in this Section, the Grantee, upon written notice from the City, shall assume the investigation of defense and fully control any resolution or compromise thereof, including the employment of counsel and the payment of all expenses including the reasonable value of any services rendered by any officers, agents, employees or contractors of the City which are not unreasonably duplicative of services provided by Grantee and its representatives. The City shall fully cooperate with the Grantee.

(6) **Separate counsel.** The City shall have the right to employ separate counsel in any action or proceeding and to participate in the investigation and defense thereof, and the Grantee shall pay the reasonable fees and expenses of such separate

counsel if representation of both the Grantee and the City by the same attorney would be inconsistent with accepted canons of professional ethics and if separate counsel is employed with the approval and consent of the Grantee, which shall not be unreasonably withheld.

(7) **Assumption of risk.** Grantee assumes the risk of damage to its facilities located in the City's public ways from activities conducted by third parties or the City, its elected officials, officers, employees, agents, or representatives, except in the event of the negligence or willful misconduct of any one or more of the above persons. Grantee releases and waives any and all claims against the City, its elected officials, officers, employees, agents, and representatives for damage to or destruction of the Grantee's facilities except to the extent any such damage or destruction is caused by or arises from the negligence or willful misconduct of the City. Grantee bears sole responsibility to insure its property.

Sec. 7. Insurance.

(1) Grantee shall procure and maintain for the duration of the Franchise, insurance against claims for injuries to Persons or damage to property which may arise from or in connection with this Franchise by the Grantee, their agents, representatives, employees or subcontractors.

(a) Amounts of Insurance. In accordance with applicable law, the Grantee shall maintain throughout the term of this Franchise the following insurance limits:

(i) Automobile Liability. Commercial automobile liability insurance policy in the amount of Five Million Dollars ($5,000,000) combined single limit each accident for bodily injury and property damage covering all owned, hired, and non-owned vehicles).

(ii) Commercial General Liability. A commercial general liability insurance policy issued by a company duly authorized to do business in the State of Washington insuring the Grantee with respect to the installation, maintenance, and operation of Grantee’s Telecommunication System in the amount of Five Million Dollars ($5,000,000) per occurrence for bodily injury

and property damage and Five Million Dollars ($5,000,000) general aggregate. The City shall be included as an additional insured as their interest may appear under this Agreement under Grantee's Commercial General Liability insurance policy.

(iii) Excess General Liability. Excess or Umbrella Liability coverage at limits of One Million Dollars ($1,000,000) per occurrence and annual aggregate providing coverage above the primary Commercial General, Commercial automobile liability and employer's liability insurance.

(iv) Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington. This requirement may be satisfied instead through the Grantee's primary Commercial General and Automobile Liability coverage, or any combination thereof.

(b) Other Insurance Provisions. The insurance policies are to contain the following provisions for Automobile Liability and Commercial General Liability insurance:

(i) The Grantee's insurance coverage shall be primary insurance as respect the City. Any Insurance, self-insurance, or insurance pool coverage maintained by the City shall be excess of the Grantee's insurance and shall not contribute with it.

(ii) Upon receipt of notice from its insurer(s), Grantee shall endeavor to provide Grantor with thirty (30) days prior written notice of cancellation of any coverage that isn't replaced.

(c) Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best rating of not less than A-: VII.

(d) Verification of Coverage. Upon acceptance of the Franchise, Grantee shall furnish the City with original certificates and blanket additional insured endorsement, evidencing the insurance requirements of the Grantee.

(e) Subcontractors. Grantee shall require any contractor or subcontractor to obtain and maintain substantially

the same insurance with substantially the same limits as required of Grantee.

(f) Self-Insurance. Grantee shall have the right to self-insure its property insurance coverage.

(2) Endorsements. Grantee agrees that with respect to the insurance requirements contained above, excluding Workers Compensation, all insurance certificates will contain the following required provisions:

(a) Include the City and its officers, employees, and elected representatives as an additional insured as their interest may appear under this Agreement.

(b) Shall be on an occurrence basis and shall be primary coverage of all losses resulting from Grantee's operations covered by the policies.

(3) **Insurance term.** The insurance required above shall be kept in full force and effect by Grantee during this Franchise and thereafter until after the removal of all poles, wires, cables, underground conduits, manholes, and other conductors and fixtures incident to the maintenance and operation of Grantee's Telecommunication System, should such removal be required by City Council or undertaken by Grantee.

(4) **Issuing companies.** Companies issuing the insurance policies shall have no recourse against the City for payment of any premiums or assessments which all are set at the sole risk of the Grantee.

(5) **No limit on liability.** Grantee's maintenance of insurance as required by this Franchise shall not be construed to limit the liability of Grantee to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy to which the City is otherwise entitled at law or in equity.

Sec. 8. Performance bond and security fund.

(1) **Amount.** The Grantee shall provide the City with a financial guarantee in the amount of One Hundred Thousand Dollars ($100,000) running for, or renewable for, the duration of the construction of Grantee's facilities in the City, in a form and substance acceptable to the City. This Franchise performance bond shall be separate and distinct from any other bond or deposit required.

(2) **Damages.** In the event Grantee shall fail to substantially comply with any one or more of the provisions of this Franchise, then there shall be recovered jointly and severally from the principal and any surety of such financial guarantee any damages suffered by City as a result thereof, including but not limited to staff time, material and equipment costs, compensation or indemnification of third parties, and the cost of removal or abandonment of facilities hereinabove described.

(a) Before any draws are made on the Franchise performance bond, the City Manager or designee shall give written notice to the Grantee:

(i) Describing the act, default or failure to be remedied, or the damages, cost or expenses which the City has incurred by reason of the Grantee's act or default;

(ii) Providing a reasonable opportunity for the Grantee to first remedy the existing or ongoing default or failure, if applicable, but in no event less than thirty (30) days;

(iii) Providing a reasonable opportunity for the Grantee to pay any moneys due the City, but in no event less than thirty (30) days, before the City draws on the Franchise performance bond, if applicable;

(iv) That the Grantee will be given an opportunity to review the act, default or failure described in the notice with the City Manager or designee.

(b) The Grantee shall replace the Franchise performance bond within thirty (30) days after written notice from

the City Manager or designee that there is a deficiency in the amount of the Franchise performance bond.

(3) **Security fund.** In addition to the performance bond, Grantee shall establish and maintain a security fund in the amount of twenty-five thousand dollars ($25,000), at its cost, with the City by depositing such monies, letters of credit, or other instruments in such form and amount acceptable to the City within 30 calendar days of the effective date of this Franchise. No sums may be withdrawn from the fund by Grantee without consent of the City. The security fund shall be maintained at the sole expense of Grantee so long as any of the Grantee's facilities occupy a public way.

(a) The fund shall serve as security for the performance of this Franchise, including any claims, costs, damages, judgments, awards, attorneys' fees or liability, of any kind whatsoever, the City pays or incurs, including civil penalties, because of any failure attributable to Grantee to comply with the provisions of this Franchise or the codes, ordinances, rules, regulations, standards, or permits of the City.

(b) Before any sums are withdrawn from the security fund, the City shall give written notice to Grantee:

(i) Describing the act, default or failure to be remedied, or the claims, costs, damages, judgments, awards, attorneys' fees or liability which the City has incurred or may pay by reason of Grantee's act or default;

(ii) Providing a reasonable opportunity for Grantee to first remedy the existing or ongoing default or failure, if applicable, but in no event less than thirty (30) days;

(iii) Providing a reasonable opportunity for Grantee to pay any monies due the City, but in no event less than thirty (30) days, before the City withdraws the amount thereof from the security fund, if applicable; and

(iv) Grantee will be given an opportunity to review the act, default or failure described in the notice with the City or his or her designee.

(c) Grantee shall replenish the security fund within thirty (30) days after written notice from the City that there is a deficiency in the amount of the fund.

(d) Insufficiency of the security fund shall not release or relieve Grantee of any obligation or financial responsibility.

Sec. 9. Taxes, charges, and fees.

(1) **Franchise fee.** RCW 35.21.860 currently prohibits a municipal franchise fee for permission to use the right of way to provide internet access services. Based on the representations of Grantee, it is the City's understanding that Grantee will use the right of way to provide internet access services. If this prohibition is removed or does not apply to future services, Grantee understands the City may assess a reasonable franchise fee in accordance with the City Code, so long as local, State or federal law does not otherwise prohibit such fee.

(2) **Utility tax.** The parties further understand that RCW 35.21.870 currently limits the rate of City tax upon telephone business activities to six percent (6%) of Gross Receipts, unless a higher rate is approved by vote of the people. The parties agree, however, that nothing in this Franchise shall limit or expand the City's power of taxation, as now or may hereafter exist. Grantee understands that some of its business activities in the City of Des Moines as identified herein may be taxable activities subject to the six percent (6%) gross receipts tax rate, as imposed under the City's telephone business tax, adopted in Des Moines Municipal Code Chapter 3.68, subject to such activities being deemed taxable under applicable state and federal laws. This provision does not limit the City's power to amend Des Moines Municipal Code Chapter 3.68 as may be permitted by law, including increases to the tax rate. Notwithstanding any other provision of this Franchise, nothing in this Franchise is intended to alter, amend, modify or expand the taxes and fees that may lawfully be assessed on Franchisee’s business activities under this Franchise under applicable law.

(3) **Permit and administrative fees.** Grantee shall also pay and be responsible for all charges and fees (authorized under applicable law) imposed to recover actual administrative expenses

incurred by the City that are directly related to receiving and approving this Franchise, any use and/or development authorizations which may be required, or any permit which may be required, to inspecting plans and construction, or to the preparation of a detailed statement. Regular application and processing charges and fees imposed by the City shall be deemed to be attributable to actual administrative expenses incurred by the City but shall not excuse Grantee from paying and being responsible for other actual administrative expenses incurred by the City.

(a) Grantee shall pay a franchise processing fee of $5,000 within 30 calendar days of the effective date of this Franchise.

(b) Grantee shall pay fees according to applicable sections of the City Code.

(4) Grantee shall pay and be responsible for taxes permitted by law.

(5) In addition to penalties and other remedies for which Grantee may be subjected, the City reserves the right to impose site-specific charges (authorized under applicable law) for placement of structures used to provide telecommunications services.

Sec. 10. Access to facilities and universal service.

(1) Grantee shall provide access to its facilities by hire, sale, or resale on a nondiscriminatory basis. Grantee shall make its telecommunications services available to any customer within its franchise area who shall request such service whenever feasible, without discrimination as to the terms, conditions, rates or charges for the Grantee's services; provided, however, that nothing in this section shall prohibit Grantee from making any reasonable classifications among differently situated customers.

(2) Grantee may provide Internet access to users of City property, at locations requested by the City, if it is practicable, upon Grantee’s then-current market rates for such service and pursuant to a separate services agreement. Grantee and the City may enter into a separate agreement or agreements regarding the

allocation of costs to construct, install, operate, maintain, repair, and remove facilities needed to provide such access; provided, however, that nothing herein shall require the City to accept construction or installation of facilities on City property.

Sec. 11. Acquisition of facilities. Upon Grantee's acquisition of any facilities in the public way, or upon any addition or annexation to the City of any area in which Grantee has facilities, such facilities shall immediately be subject to the terms of this Franchise without further action of the City or Grantee.

Sec. 12. Vacation of public ways. The City reserves the right to vacate any public way which is subject to rights, privileges, and authority granted by this Franchise. If Grantee has facilities in such public way, the City shall reserve an easement for Grantee, if requested by Grantee.

Sec. 13. Duty to provide information. Grantee's obligations under this section are in addition to those provided elsewhere in this Franchise. Within thirty (30) days of a written request from the City, Grantee shall furnish the City with all requested information sufficient to demonstrate:

(1) That Grantee has complied with all requirements of this Franchise;

(2) That taxes, fees, charges, or other costs owed or payable by Grantee have been properly collected and paid.

Sec. 14. Records.

(1) Grantee will manage all of its operations in accordance with a policy of keeping its documents and records open and accessible to the City. The City will have access to, and the right to inspect, any documents and records of Grantee and its affiliates that are reasonably necessary for the enforcement of this Franchise or to verify Grantee's compliance with terms or conditions of this Franchise. Grantee will not deny the City access to any of Grantee's records on the basis that Grantee's documents or records are under the control of any affiliate or a third party.

(2) All documents and records maintained by Grantee shall be made available for inspection by the City at reasonable times and intervals; provided, however, that nothing in this section shall be construed to require Grantee to violate state or federal law regarding subscriber privacy and/or the privacy of Grantee's Indefeasible Right of Use ("IRU") holders, lessees, or customers, nor shall this section be construed to require Grantee to disclose proprietary or confidential information without adequate safeguards for its confidential or proprietary nature.

(3) One copy of documents and records requested by the City will be furnished to the City at the cost of Grantee. If the requested documents and records are too voluminous or for security reasons cannot be copied or removed, then Grantee may request, in writing within thirty (30) days of the City's request, that the City inspect them at Grantee's local office. If any documents or records of Grantee are not kept in a local office and/or are not made available in copies to the City, and if the City determines that an examination of such documents or records is necessary or appropriate for the enforcement of this Franchise, or to verify Grantee's compliance with terms or conditions of this Franchise, then all reasonable travel and related costs incurred in making such examination shall be paid by Grantee.

(4) At the request of the city, Grantee shall provide the City with an annual report on the number of feet of right-of-way Grantee occupies in the City and the services Grantee is providing in the City. Grantee may request all or a portion of such information be protected from disclosure under the Washington Public Records Act (RCW 42.56).

Sec. 15. Assignment or transfer. Grantee's rights, privileges, and authority under this Franchise may not, directly or indirectly, be transferred, assigned or disposed of by sale, lease, merger, consolidation or other act of Grantee, by operation of law or otherwise, except as provided herein, or without the prior written consent of the City, which consent shall not be unreasonably withheld, conditioned, or delayed. Any transfer, assignment or disposal of Grantee's rights, privileges, and authority under this Franchise may be subject to reasonable conditions as may be prescribed by the City.

(1) No rights, privileges, or authority under this Franchise shall be assigned, transferred, or disposed of in any manner within twelve (12) months after the effective date of this Franchise.

(2) Absent extraordinary and unforeseeable circumstances, no Grantee facility, for which separate City permits for construction have been obtained, shall be assigned, transferred, or disposed of by Grantee before construction of the facility has been completed and restoration has been performed to the satisfaction of the City.

(3) Grantee and the proposed assignee or transferee shall provide and certify the following information to the City not less than one hundred and fifty (150) days prior to the proposed date of assignment, transfer, or disposal:

(a) Complete information setting forth the nature, terms and conditions of the proposed assignment, transfer, or disposal;

(b) Any other information reasonably required by the City; and

(c) A transfer application fee in an amount to be determined by the City to recover actual administrative costs directly related to receiving and approving the proposed assignment, transfer, or disposal.

(3) No assignment, transfer, or disposal may be made or shall be approved unless the assignee or transferee has the legal, technical, financial, and other requisite qualifications to operate, maintain, repair, and remove facilities constructed or installed pursuant to this Franchise and to comply with the terms and conditions of this Franchise.

(4) Any transfer, assignment, or disposal of rights, privileges, and authority under this Franchise may be conditioned on such transferee or assignee obtaining its own Franchise agreement with City.

(5) Notwithstanding anything to the contrary contained in this Franchise, any transaction which singularly or collectively

result in a change of fifty percent (50%) or more of the ownership or working control (regardless of the percentage) of the Grantee or affiliated entities having fifty percent (50%) or more of the ownership or actual working control (regardless of the percentage) of Grantee, or of control of the telecommunications capacity or bandwidth of Grantee, shall not be considered an assignment or transfer requiring City approval. Transactions between affiliated entities are exempt from City approval; provided that, Grantee shall promptly notify the City within a reasonable period of time after any change in, or transfer of, or acquisition by any other party of control of Grantee. Every change, transfer, or acquisition of control of Grantee shall cause a review of the proposed transfer. City approval shall not be required for mortgaging purposes or if said transfer is from Grantee to another person controlled by Grantee.

(6) All terms and conditions of this Franchise shall be binding upon all permitted successors and assigns of Grantee and all persons who obtain ownership or working control of any facility constructed or installed pursuant to this Franchise.

Sec. 16. Violations, noncompliance, and other grounds for termination or cancellation.

(1) This Franchise, and any right, privilege or authority of Grantee to enter, occupy or use public ways may be terminated or cancelled by the City for the following reasons:

(a) Violation of or noncompliance with any term or condition of this Franchise by Grantee;

(b) Violation of or noncompliance with the material terms of any use and/or development authorization or required permit by Grantee;

(c) Construction, installation, operation, maintenance, or repair of facilities on, in, under, over, across, or within any public way without Grantee first obtaining use and/or development authorization and required permits from the City and all other appropriate regulatory authorities;

(d) Unauthorized construction, installation, operation, maintenance, or repair of facilities on City property;

(e) Misrepresentation or lack of candor by or on behalf of Grantee in any application or written or oral statement upon which the City relies in making the decision to grant, review or amend any right, privilege or authority to Grantee;

(f) Abandonment of facilities;

(g) Failure of Grantee to pay taxes, fees, charges or costs when and as due, unless subject to a proper and timely legal protest; or

(h) Insolvency or bankruptcy of Grantee.

(2) In the event that the City believes that grounds exist for termination or cancellation of this Franchise or any right, privilege or authority of Grantee to enter, occupy or use public ways, Grantee shall be given written notice and a reasonable period of time, not less than thirty (30) days, to furnish evidence:

(a) That corrective action has been, or is being actively and expeditiously pursued, to remedy the violation, noncompliance, or other grounds for termination or cancellation;

(b) That rebuts the alleged violation, noncompliance, or other grounds for termination or cancellation; or

(c) That it would be in the public interest to impose some penalty or sanction less than termination or cancellation.

(3) In the event that Grantee fails to provide evidence reasonably satisfactory to the City as provided in subsection (2) of this section, the City shall refer the apparent violation, noncompliance, or other grounds for termination or cancellation to the City Council. The City Council shall provide the Grantee with notice and a reasonable opportunity to be heard concerning the matter.

(4) If the City Council determines that the violation, noncompliance, or other grounds above for termination or cancellation exist, then, Grantee shall, at the election of the

City Council, forfeit all rights, privileges and authority conferred under this Franchise or any use and/or development authorization or permit granted by the City, and this Franchise and any such use and/or development authorization or permit may be terminated or cancelled by the City Council. The City Council may elect, in lieu of the foregoing and without any prejudice to any of its other legal rights and remedies, to pursue other remedies, including obtaining an order compelling Grantee into compliance or to take corrective action, or to recover damages and costs incurred by the City by reason of Grantee's actions or omissions. The City Council shall utilize the following factors in analyzing the nature, circumstances, extent, and gravity of the actions or omissions of Grantee:

(a) Whether the misconduct was egregious;

(b) Whether substantial harm resulted;

(c) Whether the violation was intentional;

(d) Whether there is a history of prior violations of the same or other requirements;

(e) Whether there is a history of overall compliance; and

(f) Whether the violation was voluntarily disclosed, admitted or cured.

(5) The City Council's choice of remedy shall not excuse Grantee from compliance with any term or condition of this Franchise or the material terms of any use and/or development authorization or required permit. Grantee shall have a continuing duty to remedy any violation, noncompliance, or other grounds for termination or cancellation. Further, nothing herein shall be construed as limiting any remedies that the City may have, at law or in equity, or the Grantee may have at law or in equity, for enforcement of this Franchise and any use and/or development authorization or permit granted to Grantee.

Sec. 17. Notices.

(1) Any regular notice or information required or permitted to be given to the parties under this Franchise may be sent to the following addresses unless otherwise specified:

CITY:

City Manager
City of Des Moines
21630 11th Ave. S., Ave A
Des Moines, WA 98198

GRANTEE:

NFC Northwest, LLC
NFC Northwest, LLC
Attn.: Legal Department
135 Lake St S, Suite 155
Kirkland, WA 98033

with a copy (except for invoices) to:

E-mail: legal@ziply.com

(2) Grantee shall additionally provide a phone number and designated responsible officials to respond to emergencies. After being notified of an emergency, Grantee shall cooperate with the City and make its best efforts to immediately respond to minimize damage, protect the welfare, health and safety of the public and repair facilities to restore them to proper working order. Annually, on request of the City, Grantee will meet with City emergency response personnel to coordinate emergency management operations and, at least once a year, at the request of the City, actively participate in emergency preparations.

Sec. 18. Non-waiver. The failure of either party to exercise any rights or remedies under this Franchise or to insist upon compliance with any terms or conditions of this Franchise shall not be a waiver of any such rights, remedies, terms or conditions of this Franchise by the party and shall not prevent the party from demanding compliance with such terms or conditions at any future time or pursuing its rights or remedies.

Sec. 19. Eminent domain. This Franchise is subject to the power of eminent domain and the right of the City Council to repeal, amend or modify the Franchise in the interest of the public. In any proceeding under eminent domain, the Franchise itself shall have no value.

Sec. 20. Limitation of liability. Except as otherwise set forth in this Franchise, administration of this Franchise may not be construed to create the basis for any liability on the part of the City, its elected officials, officers, employees, agents, and representatives for any injury or damage; or by reason of any schedule or specification review, inspection, notice and order, permission, or other approval or consent by the City; for any action or inaction thereof authorized or done in connection with the implementation or enforcement of this Franchise by the City; or for the accuracy of plans submitted to the City.

Sec. 21. Damage to facilities. Except as otherwise set forth herein, unless caused by or arising out of the active sole negligence, gross negligence, or intentional conduct of the City, the City shall not be liable for any damage to or loss of any facilities as a result of or in connection with any public works, public improvements, construction, excavation, grading, filling, or work of any kind on, in, under, over, across, or within a public way done by or on behalf of the City.

Sec. 22. Resolution of disputes and governing law.

(1) **Alternative dispute resolution.** If a dispute arises from or relates to this Contract or the breach thereof and if the dispute cannot be resolved through direct discussions, the parties agree to endeavor first to settle the dispute in an amicable manner by mediation administered by a mediator under JAMS Alternative Dispute Resolution service rules or policies before resorting to arbitration. The mediator may be selected by agreement of the parties or through JAMS. Following mediation, or upon written contract of the parties to waive mediation, any unresolved controversy or claim arising from or relating to this Franchise or breach thereof shall be settled through arbitration which shall be conducted under JAMS rules or policies. The arbitrator may be selected by agreement of the parties or through JAMS. All fees and expenses for mediation or arbitration shall be borne by the parties equally. However, each party shall bear the expense of

its own counsel, experts, witnesses, and preparation and presentation of evidence.

(2) **Applicable law and jurisdiction.** This Franchise shall be governed by the laws of the State of Washington. Although the agreed to and designated primary dispute resolution method as set forth above, in the event any claim, dispute or action arising from or relating to this Franchise cannot be submitted to arbitration, then it shall be commenced exclusively in the King County Superior Court or the United States District Court, Western District of Washington as appropriate. In any claim or lawsuit for damages arising from the parties' performance of this Franchise, each party shall pay its own legal costs and attorneys' fees incurred in defending or bringing such claim or lawsuit, in addition to any other recovery or award provided by law; provided, however, nothing in this paragraph shall be construed to limit the City's right to indemnification under Section XVII of this Contract.

Sec. 23. Severability. If any section, sentence, clause or phrase of this Franchise or its application to any person or entity should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality will not affect the validity or constitutionality of any other section, sentence, clause or phrase of this Franchise or its application to any other person or entity.

Sec. 24. Miscellaneous.

(1) **Equal employment and nondiscrimination.** Throughout the term of this Franchise, Grantee will fully comply with all applicable equal employment and nondiscrimination provisions and requirements of federal, state, and local laws, and in particular, FCC rules and regulations relating thereto.

(2) **Local employment efforts.** Grantee will use reasonable efforts to utilize qualified local contractors, including minority business enterprises and woman business enterprises, whenever the Grantee employs contractors to perform work under this Franchise.

(3) **Descriptive headings.** The headings and titles of the sections and subsections of this Franchise are for reference

purposes only and do not affect the meaning or interpretation of the text herein.

(4) **Force majeure.** Grantee shall not be required to perform any covenant or obligation in this Franchise, or be liable in damages to the City, so long as the performance or non-performance of the covenant or obligation is delayed, caused or prevented by an act of God or force majeure. An "act of God" or "force majeure" is defined for purposes of this Franchise as strikes, lockouts, sit-downs, material or labor restrictions by any governmental authority, unusual transportation delays, riots, floods, washouts, explosions, earthquakes, fire, storms, weather (including inclement weather which prevents construction), acts of the public enemy, wars, terrorism, insurrections, and/or any other cause not reasonably within the control of Grantee.

(5) **No joint venture.** Nothing herein will be deemed to create a joint venture or principal-agent relationship between the parties, and neither party is authorized to, nor shall either party act toward third persons or the public in any manner that would indicate any such relationship with the other.

(6) **Actions of the City or Grantee.** In performing their respective obligations under this Franchise, the City and Grantee will act in a reasonable, expeditious, and timely manner. Whenever this Franchise sets forth a time for any act to be performed by Grantee, such time shall be deemed to be of the essence, and any failure of Grantee to perform within the allotted time may be considered a material breach of this Franchise, and sufficient grounds for the City to invoke any relevant remedy.

(7) **Counterparts.** This Franchise may be executed in one or more counterparts, and each originally executed duplicate counterpart of this Franchise shall be deemed to possess the full force and effect of the original.

(8) **Entire agreement.** This Franchise represents the entire understanding and agreement between the parties with respect to the subject matter and supersedes all prior oral and written negotiations between the parties.

(9) **Modification.** The parties may alter, amend or modify

the terms and conditions of this Franchise upon written agreement of both parties to such alteration, amendment or modification.

(10) **Rights granted.** This Franchise does not convey any right, title or interest in public ways, but shall be deemed only as authorization to enter, occupy, or use public ways for the limited purposes and terms stated in this Franchise. Further, this Franchise shall not be construed as any warranty of title.

(10) **Contractors and subcontractors.** Grantee's contractors and subcontractors must be licensed and bonded in accordance with the City's ordinances, rules, and regulations. Work by contractors and subcontractors is subject to the same restrictions, limitations and conditions as if the work were performed by Grantee.

Sec. 26. Publication. The City Clerk is authorized and directed to publish a summary hereof.

Sec. 27. Effective date. This Ordinance shall be in full force and effect five days from and after its passage, approval and publication as required by law, but if, and only if, the Grantee has endorsed this Ordinance and accepted the terms and conditions thereof.

PASSED BY the City Council of the City of Des Moines this day of , and signed in authentication thereof this day of , .

_____
M A Y O R

APPROVED AS TO FORM:

_____
City Attorney

ATTEST:

_____
City Clerk

Published:

ACCEPTANCE:

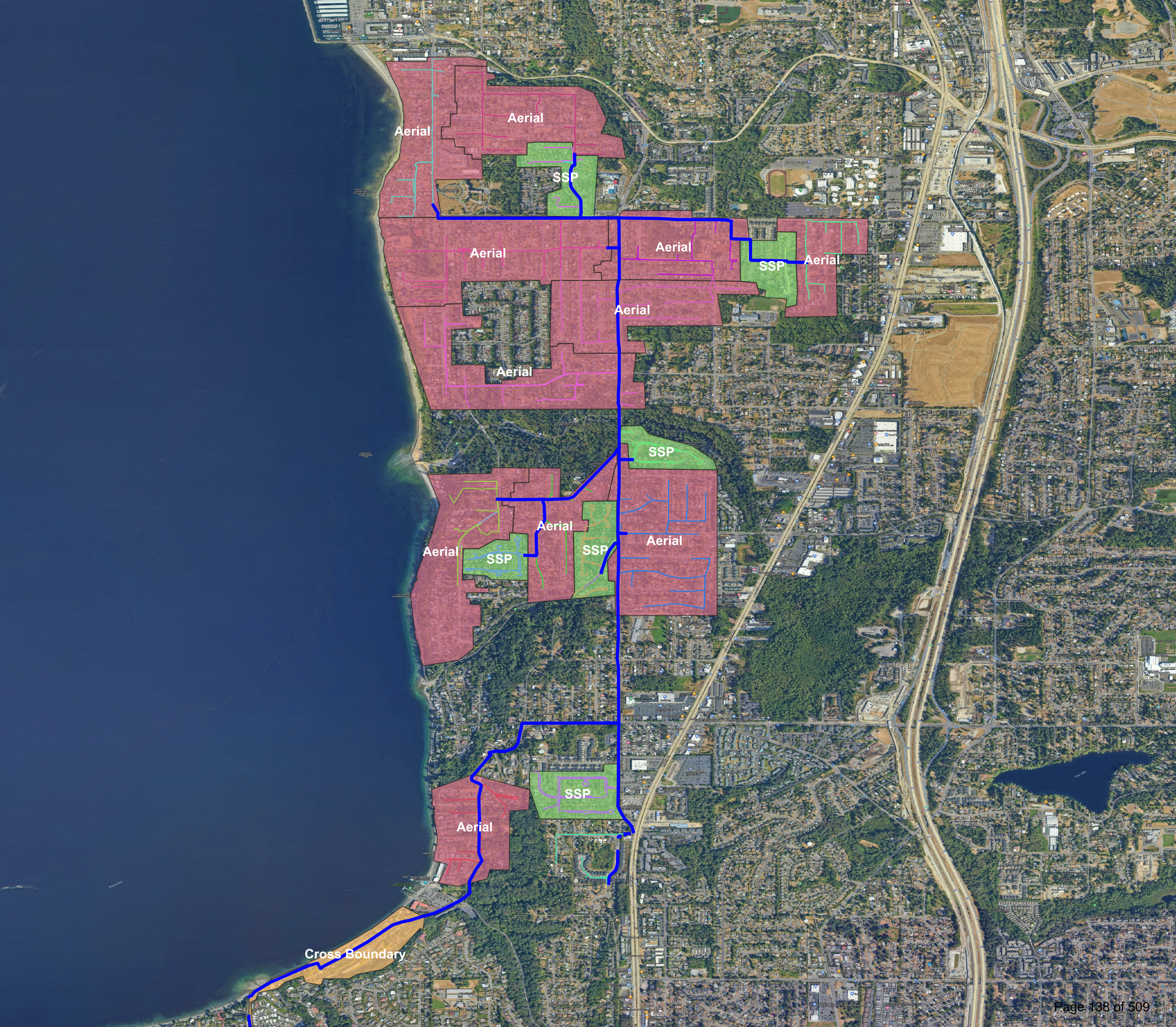
By accepting the Franchise, the Grantee: (1) acknowledges and accepts the City's legal right to issue and enforce the Franchise; (2) agrees that it will not oppose the City's intervening, to the extent that the City is legally entitled to do so, in any legal or regulatory proceeding affecting the Telecommunication System; (3) accepts and agrees to comply with each and every provision of this Franchise; and (4) agrees that the Franchise was granted pursuant to processes and procedures consistent with applicable law, and that it will not raise any claim to the contrary.

By: _____

Printed Name:_____

Date:_____

Title: _____


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Cross Boundary

Jessica Epley
135 Lake Street South, Suite 1000
Kirkland, WA 98033
(503) 431-0458
Jessica.epley@ziply.com

June 5th, 2026

Ziply Fiber has entered into an agreement under which NFC Northwest, LLC ("NFC Northwest") will fund construction and own fiber network assets in Des Moines, Washington.

NFC Northwest is a strategic partnership between BCE, Inc. (Ziply Fiber's ultimate parent company) and PSP Investments ("PSP"), one of Canada's largest pension fund investors. NFC Northwest is jointly owned by Ziply Fiber and PSP.

Ziply Fiber, LLC, as the certificated Incumbent Local Exchange Carrier (ILEC) in Washington, remains the entity responsible for providing regulated telecommunications services within its designated service areas.

All operational matters for building the fiber network in Des Moines will remain with Ziply Fiber. Under Ziply Fiber's agreement with NFC Northwest, Ziply Fiber will file for and coordinate all required permits. Ziply Fiber will manage all construction activities and serve as your point of contact for all activity under both the NFC Northwest franchise and the Ziply Fiber Pacific franchise. Ziply Fiber will manage all citizen comments and questions and will respond to any citizen inquiries. You will see no change in contact personnel as a result of this partial assignment. As Ziply Fiber retains all end user customer relationships, your citizens will see no change in their service provider and all customer matters will remain the responsibility of Ziply Fiber.

The 'last mile' of fiber is the most expensive part of bringing fiber to the home. NFC will be building the 'last mile' and be the wholesale provider to Ziply.

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **24th Ave Suspension PSE Settlement Agreements**

ATTACHMENTS:
1. Settlement Agreement #1
2. Settlement Agreement #2

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Legal

DATE SUBMITTED:
June 30, 2026

CLEARANCES:
City Clerk
Public Works

Purpose and Recommendation

The purpose of this item is to ratify and approve two settlement agreements between the City and Puget Sound Energy for the 24th Ave Improvements Project suspensions. The following motion will appear on the consent calendar:

Suggested Motion:

Motion: "I move to ratify and approve the settlement agreements with PSE for the 24th Ave Improvements Project suspensions."

Background

The City initiated the 24th Avenue S Improvements Project (Kent Des Moines Rd. to S 223rd St.) which required relocation of existing utilities in the right of way. During the project there were delays that were incurred resulting in an increased total cost for the construction.

Discussion

The City and PSE met to discuss the delays and the associated costs. The parties have agreed to the attached settlement agreements to resolve any outstanding issues related to costs on the project.

Alternatives

1. Ratify and approve the agreements as presented.

2. Ratify and approve the agreements with amendments. Any amendments would also need to be approved by PSE to be effective.
3. Do not ratify/approve the agreements. This would result in litigation.

Financial Impact
The agreements call for the one-time payment of a total of $876,600.15 from PSE to the City. Based on internal City numbers, this represents 89% of the increased costs on the project for utility-related delay issues.

Recommendation
Ratify and approve the Settlement Agreements as presented.

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SETTLEMENT AGREEMENT AND RELEASE

This Settlement Agreement and Release (the "Agreement") is made by and between PUGET SOUND ENERGY, INC. ("PSE") and the CITY OF DE MOINES ("Des Moines"). Collectively, PSE and Des Moines are referred to as the "Parties."

RECITALS

A. On or about January 2, 2024, Des Moines sent a letter to PSE titled *Facility relocation request – Notice of intent to seek damages and order to comply* (the "January 2nd Letter").

B. The January 2nd Letter alleged that PSE failed to timely relocate its utility transmission poles during construction of Segment 2 of the Des Moines 24th Avenue S Improvements Project (Kent Des Moines Rd. (SR 516 to S 223rd St.)) ("the Project") and that Des Moines would likely incur monetary damages that it would seek to recover from PSE.

C. On or about July 2, 2024, Des Moines approved Project Change Order #5 from its Prime Contractor SCI Infrastructure, LLC ("SCI") relating to a work suspension between March 1 to June 11, 2024 (Suspension #1) and PSE utility impacts prior to Suspension #1.

D. On or about August 29, 2024, Des Moines approved Project Change Order #6 with SCI for temporary roadway stabilization work.

E. On or about June 2, 2025, Des Moines approved deductive Project Change Order #12 with SCI for temporary roadway stabilization work and that reduced the amount that was included for this work in Change Order #6.

F. In accordance with Section 26(1) of the Parties' Franchise Agreement (Ordinance No. 1474), the Parties have met in a good faith effort to achieve a resolution of Change Order #5, Change Order #6, and Change Order #12.

G. Without admitting any liability and to avoid the further expenditure of time or cost of litigation or other proceedings, the Parties now desire to enter into a settlement to resolve fully and finally all of the disputes that exist or may exist between them arising from or relating to the Change Order #5, Change Order #6, and Change Order #12, which are attached hereto.

AGREEMENT

THEREFORE, in consideration of the mutual covenants expressed herein and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, PSE and Des Moines agree as follows:

1. Effective Date: The Effective Date of this Agreement shall be the last day on which any of the Parties execute this Agreement.

2. Settlement Payment: In consideration of the promises given in this Agreement, PSE shall pay to Des Moines the sum of two hundred thirty thousand dollars ($230,000.00)

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(the "Settlement Payment"), which shall constitute full and final payment for any claims or alleged costs associated with Change Order #5, Change Order #6, and Change Order #12. Within 30 days of the last to occur of (a) provision of a completed W-9 by Des Moines, and (b) the Effective Date of this Agreement, PSE shall make the Settlement Payment to Des Moines by check.

3. Release of Claims: In exchange for the consideration given in this Agreement, the sufficiency of which is hereby acknowledged, Des Moines, on behalf of itself as well as any and all divisions, predecessors, successors in interest, assigns, and each of their past, present and future employees, licensees, sublicensees, attorneys, insurers, successors, agents, contractors, and representatives, and all persons or entities acting by, through, under, or in concert with Des Moines; and PSE, on behalf of itself as well as any and all divisions, predecessors, successors in interest, assigns, and each of their past, present and future employees, licensees, sublicensees, attorneys, insurers, successors, agents, contractors, and representatives, and all persons or entities acting by, through, under, or in concert with PSE; hereby fully, irrevocably, and mutually release and forever discharge one another and their respective predecessor and successor companies, parent companies, subsidiaries, affiliated entities, owners, licensees, sublicensees, partners, joint venturers, divisions, alter egos, successors and assigns, and all related corporate and operating entities, and each of their respective past, present and future officers, directors, executives, representatives, employees, advisors, agents, attorneys, contractors, successors, predecessors, insurers, trustees, executors, heirs and assigns, from any and all actions, claims, complaints, charges, rights of action, demands, damages, costs, attorney's fees, debt, and liabilities of any kind and nature whatsoever, foreseen or unforeseen, known or unknown, that are based on, arise out of, or relate to claims that were asserted or could have been asserted as part of Change Order #5, Change Order #6, or Change Order #12, or that relate in any way to Change Order #5, Change Order #6, or Change Order #12, that Des Moines or PSE has, had, or may have as of the Effective Date.

   The Parties agree that the releases set forth in this section shall be and remain in effect in all respects as a complete and general release as to the matters released. This release does not extend to any obligations under this Agreement.

   The Parties agree that the releases set forth in this section do not resolve outstanding claims related to suspension #2. The Parties continue to meet pursuant to Section 26(1) of the Parties' Franchise Agreement to make a good faith effort to achieve a resolution of the dispute regarding suspension #2.

   Des Moines and PSE represent and warrant that they have not assigned or transferred, or purported to assign or transfer, any of the claims, liabilities, or other matters released by this Section.

4. No Admission of Liability: This Agreement is the result of a compromise, and it shall not at any time for any purpose be construed by the Parties, their attorneys, or by anyone else as an admission by any of the Parties of any liability and/or wrongdoing, or an

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admission that the amounts and/or methodology used to calculate Change Order #5, Change Order #6, and/or Change Order #12 were valid or proper. Moreover, this Agreement shall not be construed as an admission that PSE was or is liable for costs associated with relocation of its utilities or facilities, except as expressly provided for by contract or statutory requirement.

5. Knowing and Voluntary: Each Party represents that it has read and fully understands this Agreement, that it has been given a reasonable period of time to consider this Agreement and consult with legal counsel, that it has been given an opportunity to participate in the drafting of this Agreement and this Agreement shall not be interpreted for or against any Party as the drafter of the Agreement, that it is not executing this Agreement in reliance on any promises or representations other than those contained in the Agreement or under duress or undue influence, and that it is executing this Agreement voluntarily.

6. Severability: If any term or provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable or contrary to any applicable law or policy, such term or provision shall be effective to the maximum extent permitted by law and the same shall not affect any other term or provision of this Agreement, which shall otherwise remain in full force and effect.

7. Waiver: The failure of any party to demand strict performance of any provision of this Agreement shall not constitute a waiver of any provision, term, covenant, or condition of this Agreement or of the right to demand strict performance in the future.

8. Entire Agreement: This Agreement constitutes the entire agreement between the Parties concerning this subject matter between the Parties, and supersedes and replaces all prior negotiations, proposed agreements, and agreements, whether written or oral.

9. Confidentiality: The Parties agree that they will not publicly announce the contents of this Agreement without the prior written approval of the other party. To obtain approval of this settlement, action to approve this Agreement may be taken in open session at a Des Moines City Council meeting. The Parties agree that Des Moines may take such action and will not violate this provision in doing so.The Parties agree that they will not publicly announce the contents of this Agreement without the prior written approval of the other party. Notwithstanding the foregoing, if Des Moines receives a request under the Washington Public Records Act, RCW 42.56, for disclosure of this Agreement or its contents, Des Moines must promptly alert PSE to the request and give PSE ten (10) business days prior written notice before Des Moines produces this Agreement, but Des Moines need not obtain PSE's written approval prior to responding. If PSE objects to Des Moines responding to any Public Records Act request for this Agreement, that objection will not impact or bind Des Moines from complying with its statutory duties. Des Moines further agrees to limit the contents of any such disclosure to only those matters it deems to be required by law.

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10. Choice of Law: This Agreement shall be interpreted and enforced in accordance with the laws of the State of Washington, without giving effect to its conflict of law provisions.

11. Execution in Counterparts: This Agreement may be executed in multiple counterparts, each of which shall constitute an original, and all of which together shall comprise a single agreement. Facsimile signatures (including signatures in PDFs sent by electronic mail) will be deemed original signatures.

12. Additional Performances: Each Party agrees that it will execute and deliver such documents and instruments, and do such acts and things as reasonably may be required, for effecting and otherwise carrying out the purposes of the settlement covered and contemplated by this Agreement.

13. Authority to Execute: The Parties represent and warrant that any person executing this Agreement on their behalf in a representative capacity is fully authorized and empowered to do so.

14. Binding Effect: This Agreement shall be binding on and shall inure to the benefit of the Parties and their respective parent company, subsidiaries, affiliates, agents, representatives, successors, and assignees.

IN WITNESS THEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives and to be effective on the Effective Date.

Puget Sound Energy, Inc.

By: DocuSigned by: Michelle Vargo F7F082A7A8FA477... Date: 02/09/2026

Print: Michelle Vargo

Title: Senior Vice President Energy Operations

City of Des Moines

By: Signed by: katherine Caffrey 9956BABCF9B347D... Date: 02/04/2026

Print: Katherine Caffrey

Title: City Manager

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Change Order 5

Project Number: 23-003

Exeltech Project Number: **2326**

RECEIVED
JUN 26 2024

Project Name: City of Des Moines

24th Avenue South Improvement Project – Segment 2

Change Order Number: 5

Prime Contractor: SCI Infrastructure, LLC

☒ Ordered by the Engineer under the terms of Section 1-04.4 of the Standard Specification

☐ Change proposed by Contractor

SCI INFRASTRUCTURE, LLC

Endorsed by	Surety Consent (if required)
Contractor	Attorney on Fact
Date: 06-27-24	Date

Original Contract Amount	$ 7,019,272.55
Current Contract Amount	$ 7,015,342.59
Estimated Net Change This Order	$177,130.75
Estimated Contract Total After Change	**$7,192,473.34**
Original Contract Duration working days	260
Current Contract Duration	260
Additional Contract Days This Order	**5**
Proposed Contract Duration	**265**

☒ Approval Recommended ☐ Approved	☐ Approval Recommended ☒ Approved
Project Engineer	Khai Minh Le, P.E.
Date: 6-25-24	City of Des Moines – Project Manager
	Date: 7/2/24
☐ Approval Recommended ☐ Approved	Other Approval When Required
City of Des Moines – Public Works Director	Signature / Date
Date	

Docusign Envelope ID: C2F064B0-8A20-461B-9DBA-44BF1809540D

Change Order 5

All work, materials, and measurements shall be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.

This contract is revised as follows:

Description of Change

Per discussions at the preconstruction meeting on August 23, 2023, PSE and other overhead utility work, including pole removal was anticipated to be completed around November 1, 2023. The Contractor was advised to progress with the construction work with the PSE poles in place. The overhead utilities impacted construction of storm drainage and water main installation between November 1, 2024 and February 29, 2024. As of March 1, 2024 the existing PSE poles and overhead utilities east of 24th Avenue South remained in place. The Contractor was unable to continue with construction activities. The Contractor completed all work up to the point that work could no longer progress with existing power poles in place. The Contractor was ordered to suspend work operations on March 1, 2024 until the utility relocations are complete and the utility poles east of 24th Avenue SE were removed. Contractor was informed that power poles were removed and suspension of work would end on June 11, 2024. Contractor was directed to resume work by June 19, 2024.

1. Suspension of Work:

The Contractor was responsible for maintaining the traveled way for vehicles and pedestrians during the suspension. The cost of daily overhead, labor support, standby equipment and materials will be paid for as Suspension of Work for Utilities. Total period of suspension of work between March 1, 2024 and June 11, 2024 was 72 working days. The price for this work is summarized in the following table:

Home Office Overhead is included as calculated by the formula contract value $7,019,272.55 @ 3% = $210,578.18 divided by 260 working days = $809.91 per working day.

Work Item	Subtotal Cost	Markup*	Cost
Labor	$9,640.40	$2,699.31	$12,339.71
Equipment	$3,527.04	$ 599.60	$ 4,126.64
Materials	$6,097.36	$1,036.55	$ 7,133.91
Overhead	$17,818.02		$17,818.02
Total			$41,418.28
Working days per month			22
Cost per Working Day			**$ 1,882.65**
Total Working Days of Suspension			**72**
Total Cost of Suspension			**$135,550.80**

* Markups are negotiated. Negotiated rate lower than Force Account rate to account for profit, profit is not allowed as a cost during suspensions as shown in the Washington State Department of Transportation Standard Specifications Section 1-8.6.

2. Overhead Utility Impacts During Construction:

Overhead utility impacts was determined by reviewing progress schedules and IDRs. It was determined that the overhead utilities did impact construction and caused delays. A negotiated overhead utility delay impact was accepted.

- Between November 1 and November 27, 2023 the Storm Drain System in 24th Avenue South north of 224th Street was installed. The impact on overhead utilities added **2** additional days of effort.
- Between December 1, 2023 and January 31, 2024 was the period of Water Main installation. During this period several factors caused delays outside of the impacts from overhead utilities. It was determined that the overhead utility impacts resulted in **3** additional days.

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Total overhead utility impact on construction was **5** working days.

A negotiated daily rate of **$8,315.99** was established. Lump sum total amount for delay impacts, **5** days at **$8,315.99** = **$41,579.95**

Payment

Payment for this work is revised as follows:

Added Bid Items:

BI A94, "Suspension of Work for Utilities – CO 4", per day

The per working day price of $1,882.65 shall be full pay for all costs associated with operations during the period of suspension of work between March 1, 2024 and June 11, 2024.

BI A95, "Overhead Utility Delay Impacts – CO 5", per Lump Sum

The lump sum price of $41,579.95 shall be full compensation for equipment and labor as a result of overhead utility delays.

Time Statement

In accordance with Section 1-08.8 – Extensions of Time the Engineer has determined that 5 additional Working Days are justified for this change order. This adds the days as determined by overhead utility delay impacts.

CHANGE ORDER ACCOUNTING

There is no change to Change Order Accounting.

Any and all claims in any manner arising out of or pertaining to City Contract No. 23-003 have been satisfied in full and the City of Des Moines is released and discharged from any such claims or extra compensation in the future in any manner arising out of this change order. By signing this change order, the Contractor agrees there is no entitlement for additional compensation and extended office overhead for contract time that has been added to the contract under this change order, previous change orders, and a summer suspension.

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Change Order 6

Project Number: 23-003

Exeltech Project Number: **2326**

Project Name: City of Des Moines

24th Avenue South Improvement Project – Segment 2

Change Order Number: 6

Prime Contractor: SCI Infrastructure, LLC

☒ Ordered by the Engineer under the terms of Section 1-04.4 of the Standard Specification

☐ Change proposed by Contractor

Endorsed by STEVE RAUDENBUSH	Surety Consent (if required)
Contractor	Attorney on Fact
8/28/2024	
Date	Date

Original Contract Amount	$ 7,019,272.55
Current Contract Amount	$ 7,192,473.34
Estimated Net Change This Order	$113,834.16
Estimated Contract Total After Change	**$7,306,307.50**
Original Contract Duration working days	260
Current Contract Duration	265
Additional Contract Days This Order	**3**
Proposed Contract Duration	**268**

☒ Approval Recommended ☐ Approved	☒ Approval Recommended ☐ Approved
Project Engineer	City of Des Moines – Project Manager
8-28-24	8/29/24
Date	Date
☐ Approval Recommended ☒ Approved	Other Approval When Required
City of Des Moines – Public Works Director, P.E.	Signature / Date
Date	

Docusign Envelope ID: C2F064B0-8A20-461B-9DBA-44BF1809540D

Change Order 6

All work, materials, and measurements shall be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.

This contract is revised as follows:

Description of Change

On June 21, 2024 the City reported multiple utility conflicts between PSE power & gas facilities and the 24th Avenue South Improvements Project. As of August 27, 2024, the utility conflicts are still unresolved. Conflicts with PSE Gas and Power prevent the ability to grade and pave of the east half of 24th Avenue South, which is required to shift traffic and work on the west side of the roadway. Also, utilities are impacting the ability to construct walls along the east side of the roadway. As a result, the City will need to prepare the project for suspension of work while waiting for PSE to complete the required utility relocations. During the suspension of work period, the project will implement a temporary stabilization plan, which involve adding a temporary prelevel asphalt layer on 24th Avenue South to address public safety concerns and maintain access to the adjacent schools, churches, and other public facilities for the upcoming winter weather.

1. Paving:
ICON will perform temporary paving. Estimated quantity of paving is approximately 600 tons. ICON will place prelevel asphalt as needed to provide a smoother driving surface through the winter. Pavement will be 3/8" HMA PG 58H-22. Contractor and City will layout paving limits. ICON will sweep the roadway prior to and after paving. Tack coat and joint sealing will be included in price per ton for the prelevel asphalt.

ICON price per ton = $145
SCI Markup at 12% = $17.40
Prelevel Asphalt = $162.40/ton

Estimated cost 600 tons at $162.40/ton = $97,440.00

2. Paving Support, Utility Adjustments and Temporary Striping:
SCI will provide support during paving including traffic control, adjustment of utility castings to grade, and temporary striping. A lump sum amount was determined based on the following cost breakdown:

Work Item	Subtotal Cost	Markup*	Cost
Labor	$9,140.56	$2,650.76	$11,791.32
Equipment	$2,654.00	$ 557.34	$ 3,211.34
Materials	$1,150.00	$ 241.50	$ 1,391.50
Total			$16,394.16

Payment

Payment for this work is revised as follows:

Added Bid Items:

BI A96, "Prelevel Temporary Asphalt – CO 6", per ton
The per ton price of $162.40 shall be full pay for all equipment, materials, labor and markup for placement of temporary asphalt.

BI A97, "Temporary Paving Support – CO 6", per Lump Sum
The lump sum price of $16,394.16 shall be full compensation for equipment, labor and materials to support the temporary paving, utility adjustments and temporary striping.

Docusign Envelope ID: C2F064B0-8A20-461B-9DBA-44BF1809540D

Change Order 6

Time Statement

In accordance with Section 1-08.8 – Extensions of Time the Engineer has determined that 3 additional Working Days are justified for this change order.

CHANGE ORDER ACCOUNTING

There is no change to Change Order Accounting.

Any and all claims in any manner arising out of or pertaining to City Contract No. 23-003 have been satisfied in full and the City of Des Moines is released and discharged from any such claims or extra compensation in the future in any manner arising out of this change order. By signing this change order, the Contractor agrees there is no entitlement for additional compensation and extended office overhead for contract time that has been added to the contract under this change order, previous change orders, and a summer suspension.

Docusign Envelope ID: C2F064B0-8A20-461B-9DBA-44BF1809540D

Change Order 12

Project Number: 23-003

Exeltech Project Number: **2326**



Project Name: City of Des Moines

24th Avenue South Improvement Project – Segment 2

Change Order Number: 12

Prime Contractor: SCI Infrastructure, LLC

☒ Ordered by the Engineer under the terms of Section 1-04.4 of the Standard Specification

☐ Change proposed by Contractor

Endorsed by	Surety Consent (if required)
Contractor	Attorney on Fact
Date: 05-13-25	Date

Original Contract Amount	$ 7,019,272.55
Current Contract Amount	$ 7,828,144.21
Estimated Net Change This Order	-$62,071.00
Estimated Contract Total After Change	**$7,766,073.21**
Original Contract Duration working days	260
Current Contract Duration	313
Additional Contract Days This Order	**0**
Proposed Contract Duration	**313**

☒ Approval Recommended ☐ Approved	☑ Approval Recommended ☐ Approved
Project Engineer: Kim Eulert	City of Des Moines – Project Manager: Khai Le P.E.
Date: 5-13-2025	Date: 6/2/2025
☒ Approval Recommended ☒ Approved	Other Approval When Required
City of Des Moines – Public Works Director: M.P.S.	Signature / Date
Date: 02 JUN 2025	

Docusign Envelope ID: C2F064B0-8A20-461B-9DBA-44BF1809540D

Change Order 12

All work, materials, and measurements shall be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.

This contract is revised as follows:

Description of Change

Due to the City directed reduction of prelevel temporary asphalt limits, mobilization costs associated per ton of asphalt increased.

1. Paving:
ICON performed temporary paving on August 30, 2024. The actual paving quantity for prelevel temporary asphalt was 189.24 tons. Change Order No. 6 estimated the quantity of prelevel temporary paving would be 600 tons.

Prelevel Asphalt Change Order 06 Unit Cost = $162.40/ton
Estimated cost 600 tons at $162.40/ton = $97,440.00

Prelevel temporary asphalt placed on 8/30/24 was 189.24/ton = $30,732.58
Reduce Bid Item BI A96, "Prelevel Temporary Asphalt – CO 6", per ton from 600 tons to actual quantity of 189.24 tons placed.

The lump sum small quantity price mobilization costs accounting for reduced prelevel temporary asphalt limits is = $4,636.42

Total Cost for Pre level Temporary Asphalt 189.24 tons + mobilization price adjustment ($4,636.42) = $35,369.00

Payment

Payment for this work is revised as follows:

Added Bid Items:
BI A106, "Prelevel Temporary Asphalt Mobilization Price Adj – CO 12", per Lump Sum.
The lump sum price of **$4,636.42** shall be full compensation for all additional mobilization costs associated with Prelevel Temporary Asphalt.

The change in the current contract amount will be a deduction of **$62,071.00** ($97,440.00 - $35,369.00).

Time Statement

There will be no change in time under this change order.

CHANGE ORDER ACCOUNTING

There is no change to Change Order Accounting.

Any and all claims in any manner arising out of or pertaining to City Contract No. 23-003 have been satisfied in full and the City of Des Moines is released and discharged from any such claims or extra compensation in the future in any manner arising out of this change order. By signing this change order, the Contractor agrees there is no entitlement for additional compensation and extended office overhead for contract time that has been added to the contract under this change order, previous change orders, and a summer suspension.

SETTLEMENT AGREEMENT AND RELEASE (SUSPENSION #2)

This Settlement Agreement and Release (the "Agreement") is made by and between PUGET SOUND ENERGY, INC. ("PSE") and the CITY OF DES MOINES ("Des Moines"). Collectively, PSE and Des Moines are referred to as the "Parties."

RECITALS

A. Des Moines has initiated the 24th Avenue S Improvements Project (Kent Des Moines Rd. (SR 516 to S 223rd St.) ("the Project") which required the relocation of certain utility transmission poles owned by PSE.

B. The City and PSE had a dispute regarding relocation timelines (Suspension #1) that was ultimately resolved through a separate Settlement Agreement and Release. This agreement for Suspension #1 resolves Change Orders #5, #6, and #12 and is not contemplated in this Agreement.

C. In October of 2024, the City was required to suspend work on the project again (Suspension #2). Additional costs were incurred and change orders were required. These costs are encompassed in Change Orders 8, 9, 11 and 13 and related expenses.

D. In accordance with Section 26(1) of the Parties' Franchise Agreement (Ordinance No. 1474), the Parties have met in a good faith effort to achieve a resolution of these Change Orders.

E. Without admitting any liability and to avoid the further expenditure of time or cost of litigation or other proceedings, the Parties now desire to enter into a settlement to resolve fully and finally all of the disputes that exist or may exist between them arising from or relating to Suspension #2 and the remainder of the Project; specifically Change Orders 8, 9, 11 and 13 and related expenses.

AGREEMENT

THEREFORE, in consideration of the mutual covenants expressed herein and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, PSE and Des Moines agree as follows:

1. Effective Date: The Effective Date of this Agreement shall be the last day on which any of the Parties execute this Agreement.

2. Settlement Payment: In consideration of the promises given in this Agreement, PSE shall pay to Des Moines the sum of six hundred forty-six thousand six hundred dollars and fifteen cents ($646,600.15) (the "Settlement Payment"), which shall constitute full and final payment for any claims or alleged costs associated with Suspension #2 and the remainder of the Project. Within 30 days of the last to occur of (a) provision of a completed W-9 by Des Moines, and (b) the Effective Date of this Agreement, PSE shall make the Settlement Payment to Des Moines by check.

3. Release of Claims: In exchange for the consideration given in this Agreement, the sufficiency of which is hereby acknowledged, Des Moines, on behalf of itself as well as any and all divisions, predecessors, successors in interest, assigns, and each of their past, present and future employees, licensees, sublicensees, attorneys, insurers, successors, agents, contractors, and representatives, and all persons or entities acting by, through, under, or in concert with Des Moines; and PSE, on behalf of itself as well as any and all divisions, predecessors, successors in interest, assigns, and each of their past, present and future employees, licensees, sublicensees, attorneys, insurers, successors, agents, contractors, and representatives, and all persons or entities acting by, through, under, or in concert with PSE; hereby fully, irrevocably, and mutually release and forever discharge one another and their respective predecessor and successor companies, parent companies, subsidiaries, affiliated entities, owners, licensees, sublicensees, partners, joint venturers, divisions, alter egos, successors and assigns, and all related corporate and operating entities, and each of their respective past, present and future officers, directors, executives, representatives, employees, advisors, agents, attorneys, contractors, successors, predecessors, insurers, trustees, executors, heirs and assigns, from any and all actions, claims, complaints, charges, rights of action, demands, damages, costs, attorney's fees, debt, and liabilities of any kind and nature whatsoever, foreseen or unforeseen, known or unknown, that are based on, arise out of, or relate to claims that were asserted or could have been asserted as part of Change Orders 8, 9, 11 and 13 or that relate in any way to Change Orders 8, 9, 11 and 13 or the remainder of this Project, that Des Moines or PSE has, had, or may have as of the Effective Date.

   The Parties agree that the releases set forth in this section shall be and remain in effect in all respects as a complete and general release as to the matters released. This release does not extend to any obligations under this Agreement.

   Des Moines and PSE represent and warrant that they have not assigned or transferred, or purported to assign or transfer, any of the claims, liabilities, or other matters released by this Section.

4. No Admission of Liability: This Agreement is the result of a compromise, and it shall not at any time for any purpose be construed by the Parties, their attorneys, or by anyone else as an admission by any of the Parties of any liability and/or wrongdoing, or an admission that the amounts and/or methodology used to calculate Change Orders 8, 9, 11, 13 and/or other related expenses were valid or proper. Moreover, this Agreement shall not be construed as an admission that PSE was or is liable for costs associated with relocation of its utilities or facilities, except as expressly provided for by contract or statutory requirement.

5. Knowing and Voluntary: Each Party represents that it has read and fully understands this Agreement, that it has been given a reasonable period of time to consider this Agreement and consult with legal counsel, that it has been given an opportunity to participate in the drafting of this Agreement and this Agreement shall not be interpreted for or against any Party as the drafter of the Agreement, that it is not executing this

Agreement in reliance on any promises or representations other than those contained in the Agreement or under duress or undue influence, and that it is executing this Agreement voluntarily.

6. Severability: If any term or provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable or contrary to any applicable law or policy, such term or provision shall be effective to the maximum extent permitted by law and the same shall not affect any other term or provision of this Agreement, which shall otherwise remain in full force and effect.

7. Waiver: The failure of any party to demand strict performance of any provision of this Agreement shall not constitute a waiver of any provision, term, covenant, or condition of this Agreement or of the right to demand strict performance in the future.

8. Entire Agreement: This Agreement constitutes the entire agreement between the Parties concerning this subject matter between the Parties, and supersedes and replaces all prior negotiations, proposed agreements, and agreements, whether written or oral.

9. Confidentiality: Except as required to approve this Agreement, the Parties agree that they will not publicly announce the contents of this Agreement without the prior written approval of the other party. Notwithstanding the foregoing, if Des Moines receives a request under the Washington Public Records Act, RCW 42.56, for disclosure of this Agreement or its contents, Des Moines must promptly alert PSE to the request and give PSE ten (10) business days prior written notice before Des Moines produces this Agreement, but Des Moines need not obtain PSE's written approval prior to responding. If PSE objects to Des Moines responding to any Public Records Act request for this Agreement, that objection will not impact or bind Des Moines from complying with its statutory duties. Des Moines further agrees to limit the contents of any such disclosure to only those matters it deems to be required by law.

10. Choice of Law: This Agreement shall be interpreted and enforced in accordance with the laws of the State of Washington, without giving effect to its conflict of law provisions.

11. Execution in Counterparts: This Agreement may be executed in multiple counterparts, each of which shall constitute an original, and all of which together shall comprise a single agreement. Facsimile signatures (including signatures in PDFs sent by electronic mail) will be deemed original signatures.

12. Additional Performances: Each Party agrees that it will execute and deliver such documents and instruments, and do such acts and things as reasonably may be required, for effecting and otherwise carrying out the purposes of the settlement covered and contemplated by this Agreement.

13. Authority to Execute: The Parties represent and warrant that any person executing this Agreement on their behalf in a representative capacity is fully authorized and empowered to do so.

14. Binding Effect: This Agreement shall be binding on and shall inure to the benefit of the Parties and their respective parent company, subsidiaries, affiliates, agents, representatives, successors, and assignees.

IN WITNESS THEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives and to be effective on the Effective Date.

Puget Sound Energy, Inc.

By: _____ Date: _____

Print: _____

Title: _____

City of Des Moines

By: _____ Date: _____

Print: _____

Title: _____

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **Establishment of Ad Hoc City Council Budget Engagement Committee** – 20 Minutes

ATTACHMENTS:

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Administration

DATE SUBMITTED:
June 24, 2026

CLEARANCES:

Purpose and Recommendation
The purpose of this item is for the City Council to select members to serve on an ad hoc budget engagement committee.

Suggested Motion:

Motion: "I move that the City Council establish an Ad Hoc Budget Engagement Committee for the purpose of advising on the City's public engagement approach during the biennial budget process, and that Councilmembers _____ and _____ and _____ be appointed to serve on this committee. The committee shall dissolve upon adoption of the 2027/2028 Budget."

Background
Every two years, the City of Des Moines undertakes a biennial budget process that determines how public resources are invested and which community priorities are funded. Because the budget reflects the values and priorities of both the Council and the residents it serves, active and meaningful public engagement is essential to that process. To strengthen community participation, Mayor Grace Matsui has proposed the establishment of an ad hoc City Council committee comprised of up to three Councilmembers. The committee would be charged with advising on the City's public engagement strategy for the biennial budget process and serving as direct connectors between the Council and the community in gathering resident input on budget priorities.

City Council
AGENDA ITEM

BUSINESS OF THE CITY COUNCIL
City of Des Moines, WA

SUBJECT: **Sustainable Airport Master Plan (SAMP) Update** – 20 Minutes

ATTACHMENTS:
1. Airport Committee SAMP EIS Comments
2. SAMP Update PowerPoint

FOR AGENDA OF:
July 9, 2026

DEPT OF ORIGIN:
Community Development

DATE SUBMITTED:
June 29, 2026

CLEARANCES:
Community Development

Purpose and Recommendation

The purpose of this item is to provide an update regarding the SAMP Draft Environmental Impact Statement (EIS), including:

- Airport Committee response request/recommendation
- Status of the three City Interlocal Agreement (ILA) written response
- Joint City of Burien, Des Moines, and SeaTac Public Meeting

Background

On September 26, 2025, the Federal Aviation Administration (FAA) completed its National Environmental Policy Act review of the Port of Seattle's Sustainable Airport Master Plan (SAMP) Near-Term Projects. Based on that review, the FAA approved a Final Environmental Assessment and issued a Finding of No Significant Impact/Record of Decision (FONSI/ROD) for thirty-one proposed SAMP Near-Term Projects at Seattle-Tacoma International Airport. The proposed action would implement those thirty-one projects, including nineteen additional gates, a second terminal, cargo facilities, and other improvements designed to increase the airport's efficiency and access to accommodate future demand.

The Port of Seattle is now conducting a separate environmental review under the State Environmental Policy Act (SEPA). The Draft Environmental Impact Statement (EIS) was released on May 22, 2026, with a sixty-day comment period. The City is working with the cities of Burien and SeaTac to submit joint comments through a Council-approved Interlocal Agreement (ILA), and the City's citizen-led Airport Committee has separately drafted its own response for submission.

Discussion

In October 2024, the City Council voted to establish an ad hoc Airport Committee to advise the Council on airport-related issues. The Committee's purpose is to provide recommendations on matters including:

- Review of the SAMP timeline and the City's response to that process
- Formation of the ILA with airport partner cities and the scope of coordination with those partners
- Selection and contracting of a consultant to support related projects
- The City's role on the Seattle-Tacoma Airport Roundtable (StART) Committee
- Recommendations for the City's overall strategy with the Port of Seattle

The Airport Committee has drafted a proposed comment submission for the SEPA EIS, included with this agenda item, and is seeking Council approval to submit it. Separately, under the ILA with Burien and SeaTac, the three cities have retained a team of technical experts to draft joint comments on their behalf. Staff will provide an update on that response at the July 9 meeting. The comment period for the SEPA EIS closes July 21, 2026, at 4:00 p.m.

MEMORANDUM

TO: City Council

FROM: Airport Advisory Committee

CC: Katherine Caffrey, City Manager

Rebecca Deming, Community Development Director

RE: Eight (8) SAMP EIS Comment Submittals with Supporting Documents for Council Review and Possible Action

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The Airport Advisory Committee has been reviewing the SEPA DEIS document issued by the Port of Seattle as part of the permitting process for SEA's Sustainable Airport Master Plan (SAMP). One Committee member, Jeff Bogen, has authored six papers documenting what he has found to be errors or omissions in the SEPA document. Mr. Bogen retired from the Federal Aviation Agency where he was Manager of Operations Engineering for the Western U.S. with expertise in radar, navigation, communication, and automation systems. Previously, he spent 17 years as a research engineer at the National Center for Atmospheric Research. Over the span of his career, he became knowledgeable about many of the potential impacts addressed in the SEPA document and their proposed mitigations.

The Committee has reviewed the attached documents and recommends that the Council enter them into SEPA's record of comments with a supporting cover letter signed by the Mayor and Council Members and/or Airport Advisory Committee members. The following is a list and summary of the attachments:

1. **Health *Impacts Cumulative Effects Missing in SAMP EIS***

   This comment documents the additional environmental analysis needed and expected in the EIS. It also includes a list of 10 policy-relevant documents that should be included in the SAMP EIS.

2. ***Aircraft Seat Capacity Estimates and Fleet Upgauging***

   This is a technical comment on SAMP SEPA aircraft seat growth assumptions and the implications for operations, passenger enplanements, and related community noise effects.

3. ***Health Effects of Aviation Noise: EIS Deficiencies and Omissions***

   This comment identifies important recent health-effects studies that are absent from the EIS and asserts that the required SAMP EIS findings on cumulative noise effects have not been correctly assessed.

4. ***Aircraft Noise Cumulative Exposure Analysis***

This comment is a comprehensive event-based analysis of aircraft noise exposure at communities near SEA using direct measurements from the Port of Seattle's operational noise monitoring system. It demonstrates, using actual SEA aircraft noise data, that the 65 DNL metric does not properly represent actual health impacts for our surrounding airport communities

5. ***Noise Analysis Deficiency: Inadequate Metric and Health Impact Assessment***

This comment asserts that the SAMP DEIS noise analysis does not meet the requirements of WAC 197-11-794 and documents where it is legally insufficient.

6. ***Adequacy of the Sound Insulation Program (SIP) as Mitigation for SAMP Projected Noise Impacts***

This comment addresses significant gaps in the SAMP DEIS noise analysis and lists three concerns about the inadequacy of the SIP - specifically as they impact Des Moines area homes. It requests that the Port of Seattle address four specific items in the final EIS.

7. ***Port of Seattle Sound Implementation Program (SIP) Limitations***

This comment serves as a supplement to Comment No. 6 and provides direct evidence of SIP measurement methodology limitations in the *Harris Miller Miller & Hanson Inc. (HMMH) June 2026 Acoustical Testing Report*

8. ***HMMH Memo: Supplement to Comment No. 7***

This is a copy of a technical memorandum from HMMH, Inc. to the PORT documenting the *Acoustical Testing Results for SEA Replacement and Repair Program*.

9. ***Environmental Justice Issues and Proposed Mitigation Actions***

This comment addresses the Environmental Justice (EJ) analysis in Appendix K of the SAMP SEPA DEIS and its companion noise analysis in Appendix J. It presents strong empirical data clearly showing disproportionate adverse effects on minority or low-income communities due to the projected noise increase caused by aircraft fleet mix, capacity efficiencies, and other additional cumulative health impacts due to the SAMP.

SAMP EIS - Environmental Impact Statement Comment

Health Impacts Cumulative Effects Missing In SAMP EIS

Author: Jeff Bogen
Des Moines, WA Resident
Member of Des Moines Airport Advisory Committee
Date: 6/13/2026

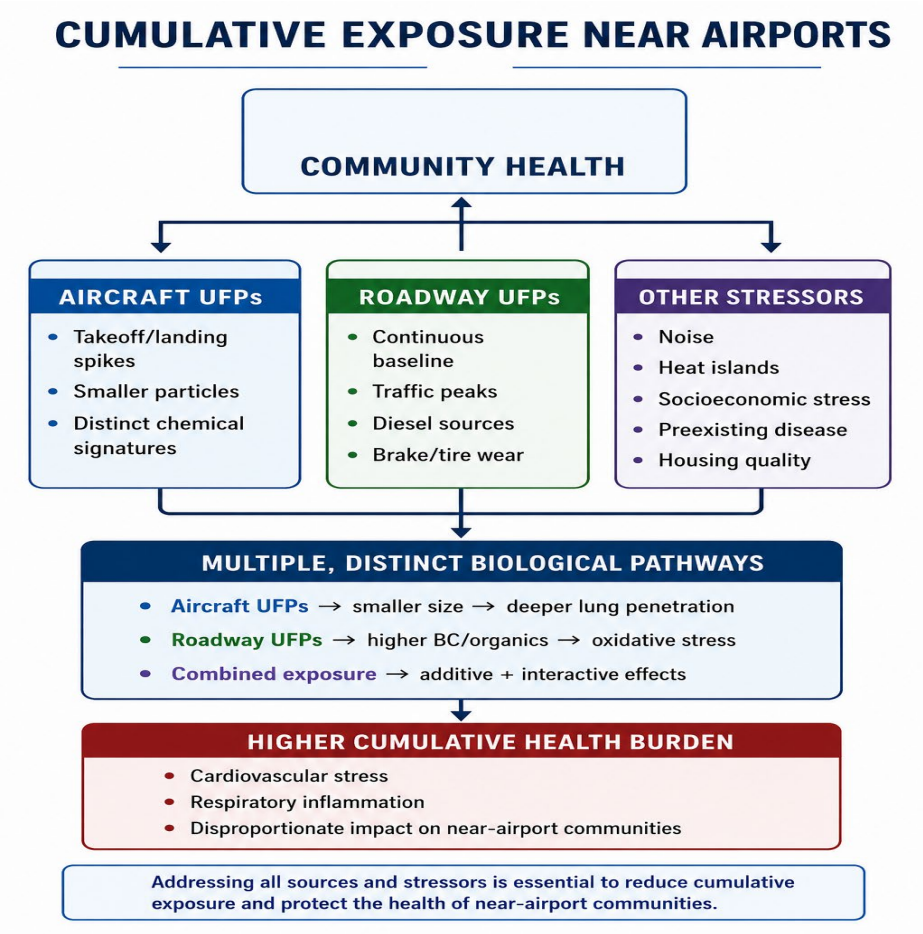
Complete Cumulative Effects Exposure Near SEA – Missing in SAMP EIS

Cumulative Effects, SAMP EIS, Section 5.4 does not include the fundamental environmental analysis needed and expected in a professional EIS. Cumulative impacts need to analyzed not just int terms of additional action alternatives for each SEPA element but also include the associated cumulative effects for the entire SAMP. While many of the baseline and individual additive environmental data is included in the report, there is no cumulative effect reviewed for these additive environmental stress factors.

Communities near SEA face a layered pollution burden from aircraft ultrafine particles (UFPs), roadway traffic emissions, and other environmental stressors. Scientific evidence shows that aircraft-related UFPs are distinct, additive, and biologically active in different ways than roadway UFPs. This makes cumulative exposure — not aviation alone — the correct and scientifically supported framework for assessing health risk.

What Cumulative Effects should be in the SEPA EIS

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SEA SAMP EIS Cumulative Effects should consider the following science which is well documented in the 10 peer reviewed studies which are included at the end of this paper.

1. Aircraft Takeoffs and Landings Create Intense UFP Spikes

- Aircraft operations generate sharp, short-duration UFP plumes with particle sizes in the smallest, most biologically reactive modes.
- Monitoring studies around major U.S. airports show aircraft UFP signatures detectable up to ~10 miles downwind, far beyond the 1 km range historically assumed. This is specifically documented for SEA in: Austin E, Xiang J, Gould T, et al. "Distinct Ultrafine Particle Profiles Associated with Aircraft and Roadway Traffic." Environmental Science & Technology. 2021;55(5):2847-2858.

- COVID-era reductions in air traffic produced large, immediate drops in UFP concentrations, confirming airports as major episodic sources.

2. Aircraft and Roadway UFPs Are Distinct and Additive

- Aircraft UFPs: smaller particles, different chemical signatures, deeper lung penetration.
- Roadway UFPs: higher black carbon and organic fractions, strong oxidative stress potential.
- Studies show these sources can be chemically and physically distinguished, meaning they do not "double count" each other.

3. Combined Exposure Activates Multiple Biological Pathways

- Toxicology literature shows smaller particles (aircraft) and carbon-rich particles (roadway) trigger different inflammatory responses.
- This supports a cumulative-risk model: multiple sources → multiple pathways → higher total burden.

4. Near-Airport Communities Face Multiple Stressors

Beyond UFPs, the SAMP also introduces these additional project related factors which should be cumulatively analyzed for total EIS health impacts

- Chronic noise exposure
- Heat-island amplification
- Higher traffic density
- Socioeconomic vulnerability
- Preexisting respiratory and cardiovascular conditions

These factors interact, amplifying health impacts.

Conclusion

Aircraft emissions add a distinct, biologically meaningful layer of exposure on top of roadway pollution, and the near airports experience at SEA due to SAMP will these additional cumulative exposures simultaneously. **A cumulative-risk framework analysis, is missing in SAMP EIS, and should be required for accurate public-health assessment and equitable policy.**

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10 POLICY-RELEVANT STUDIES Which Should Be Included In SAMP EIS

1. Hudda et al. (2014) – LAX Downwind Study

Why it matters: First major U.S. study showing aircraft UFP plumes detectable 10 km downwind.

Finding: Aircraft operations increased particle number concentrations 4–5× above background.

Cumulative relevance: Demonstrates that aviation adds a distinct, long-range UFP layer on top of roadway pollution.

2. Hudda & Fruin (2016) – Size-Resolved Aircraft UFPs

Why it matters: Provided the clearest evidence that aircraft UFPs have unique size signatures.

Finding: Aircraft emissions dominated the 10–20 nm size mode — smaller than roadway UFPs.

Cumulative relevance: Confirms aircraft UFPs are chemically and physically distinct, not redundant with traffic.

3. Durant et al. (2010) – Boston Logan Source Differentiation

Why it matters: Landmark study separating airport vs roadway UFP contributions.

Finding: Mean UFP levels tracked traffic, but peak spikes aligned with airport operations.

Cumulative relevance: Shows aviation is the episodic driver of high-intensity exposure events.

4. Zamore et al. (2014) – Spatial Variation Near Logan

Why it matters: Demonstrated that aviation UFPs can be mapped independently of roadway emissions.

Finding: Distinct spatial gradients for aircraft vs traffic UFPs.

Cumulative relevance: Confirms additive, not overlapping exposure sources.

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5. National Academies (2021) – Airport Air Quality Review

Why it matters: Highest-authority synthesis used by federal agencies.

Finding: Aircraft operations significantly influence local air quality; UFPs are a key gap in regulation.

Cumulative relevance: Establishes institutional recognition that aviation UFPs matter and are under-regulated.

6. Hudda et al. (2020) – COVID Natural Experiment

Why it matters: Real-world causal evidence.

Finding: When air traffic collapsed, UFP concentrations dropped ~60% during previously high-traffic hours.

Cumulative relevance: Confirms airports are a dominant, episodic UFP source independent of roadway traffic.

7. Austin et al. (2021) – Chemical Signature Differentiation

Why it matters: Modern source-apportionment using size distributions + black carbon.

Finding: Aircraft and roadway UFPs have separable chemical fingerprints.

Cumulative relevance: Supports the argument that combined exposure activates multiple biological pathways.

8. USC Keck School of Medicine – LAX Inflammation Study

Why it matters: Direct human health evidence near a major airport.

Finding: Aircraft-related UFPs triggered different inflammatory markers than roadway UFPs in adults with asthma.

Cumulative relevance: Shows exposures are biologically distinct, strengthening cumulative-risk framing.

9. HEI (2013) – Ultrafine Particle Health Effects Review

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Why it matters: Gold-standard toxicology synthesis used by EPA and WHO.

Finding: UFPs cause oxidative stress, cardiovascular strain, and systemic inflammation.

Cumulative relevance: Provides the mechanistic basis for why multiple UFP sources compound harm.

10. OEHHA (2017) – CalEnviroScreen Cumulative Impact Framework

Why it matters: The most widely used cumulative-risk methodology in the U.S.

Finding: Multiple environmental stressors + socioeconomic vulnerability = higher total health burden.

Cumulative relevance: Establishes the regulatory precedent for evaluating airport communities through a cumulative lens.

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Sustainable Airport Master Plan (SAMP) EIS Comment
Aircraft Seat Capacity Estimates and Fleet Upgauging

A Technical Comment of SAMP SEPA Seat Growth Assumptions and Their Implications for Operations, Passenger Throughput, and Community Noise Effects

Author: Jeff Bogen
Des Moines, WA Resident
Member of Des Moines Airport Advisory Committee
Date: 6/13/2026

Executive Summary

The Seattle-Tacoma International Airport Master Plan (SAMP) projects 56 million annual enplanements by 2032 while assuming average seats per departure grow at only 0.5 percent per year — from approximately 141 seats in 2023 to 148 seats by 2032. This analysis demonstrates that assumption is increasingly inconsistent with announced airline fleet strategies and, more critically, is arithmetically incompatible with the SAMP's own passenger target at any realistic load factor. Under the SAMP's 0.5 percent seat growth assumption, meeting the 56 million enplanement target would require approximately 880,000 total annual operations — more than 1.7 times the current updated infrastructure ceiling of approximately 517,000 operations documented in the Technical Appendix to the SEA Airport Capacity Analysis (Bogen, 2026). The only operationally viable path to 56 million enplanements within the airport's constrained operations ceiling is materially faster upgauging — making the moderate (2 percent) or high (3.5 percent) scenario not a stress case but a prerequisite for the plan's internal consistency.

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1. Background

The SAMP forecast incorporates a fleet mix assumption expressed as average seats per departure. This metric is the critical bridge between the passenger demand forecast and the operations count — and therefore between the SAMP's passenger targets and the physical throughput constraints of the airfield. This comment examines whether the seat growth rate assumed in the SAMP remains defensible in light of material airline fleet decisions made after the SAMP's baseline was established.

2. Airline Fleet Developments — Post-SAMP Baseline

Alaska Airlines — Structural Fleet Change

The SAMP correctly noted that Alaska Airlines lacked a substantial widebody fleet at the time of its analysis. That assessment has materially shifted since the baseline was set.

In January 2026, Alaska announced the largest fleet order in the airline's history: 105 Boeing 737-10 aircraft and five new Boeing 787 widebody jets, with its firm future 787 fleet growing to 17 aircraft. The Boeing 737-10 is the longest-range, highest-capacity variant in the 737 MAX family, with a typical two-class configuration of approximately 176–188 seats compared to 150–162 seats on the 737-800 that it replaces across Alaska's domestic network. That replacement cycle alone could contribute 15 to 20 additional seats per departure on domestic routes without the addition of a single widebody rotation — making even the moderate seat growth scenario conservative on a standalone basis.

Alaska is explicitly targeting at least 12 long-haul international destinations from Seattle with widebody aircraft by 2030 and has already launched daily nonstop service to Tokyo Narita — described by the airline as the beginning of "a new era of widebody international flying" from Seattle. Alaska has articulated a strategic goal of transforming Seattle into the West Coast's premier global gateway, noting that SEA is geographically the closest connection between the continental United States and Tokyo — approximately 7 percent closer than San Francisco and 13 percent closer than Los Angeles.

This represents a structural change in Alaska's fleet composition and strategic positioning at SEA, not a marginal or incremental adjustment.

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Delta Air Lines — Sustained Infrastructure Commitment at SEA

The SAMP acknowledged that Delta had capacity to upgauge its SEA operations. Delta's subsequent actions at the airport have been aggressive and long-term in character.

Delta has secured a long-term lease giving it priority access to 18 gates across Concourses A and B and has completed a new Delta One Lounge and a renovated Sky Club — representing a durable infrastructure commitment, not opportunistic capacity deployment. Delta is adding transatlantic service to Rome and Barcelona using Airbus A330-900 widebody aircraft, expanding its transatlantic portfolio at SEA to five destinations alongside existing Amsterdam, Paris, and London Heathrow service. Delta's broader "pivot to the Pacific" strategy includes year-round nonstop service between Seattle and Taipei, adding another long-haul widebody rotation to the SEA international portfolio.

In early 2026, Delta placed a major order for up to 60 Boeing 787-10 Dreamliner aircraft to support long-haul international growth and fleet modernization. An expanded widebody fleet at the system level increases the probability that additional widebody rotations will be assigned to high-yield markets such as SEA.

Technical Note — Aircraft Type Verification

The A330-900neo has a range of approximately 7,200 nautical miles (13,334 km), which comfortably covers both Rome (~5,100 nm from SEA) and Barcelona (~5,400 nm from SEA). The aircraft type cited is consistent with route requirements.

3. Updated Seat Capacity Scenarios

3.1 Revised Fleet Mix Basis

Using the updated SEA fleet mix trajectory described above, three seat growth scenarios can be constructed as alternatives to the SAMP's 0.5 percent baseline assumption. These scenarios reflect different rates of fleet evolution and are summarized in the table below.

Table 1. SAMP vs. Revised Seat Capacity Scenarios — Projected to 2032

Scenario	Seat Growth Rate	Est. Seats / Departure (2032)	Ops Required for 56M Enplanements (86% LF)	Assessment
SAMP Baseline	0.5% per year	~148	~880,000	Exceeds updated infrastructure ceiling (~517K ops) by ~1.7×; internally inconsistent with passenger target at any realistic load factor
Moderate	2.0% per year	~168	~774,000	Substantially reduces the operations gap; 56M enplanements more plausible at the constrained ceiling with concurrent gate and runway investment
High	3.5% per year	~187	~695,000	Best operational fit; supports 56M+ enplanements with greatest headroom under the infrastructure ceiling; consistent with full Alaska 787 hub buildout and continued Delta Pacific pivot

Operations Arithmetic

The formula applied throughout Table 1 is:

Required Total Operations = (Enplanements ÷ (Seats × Load Factor)) × 2

At 86% load factor and 148 seats: (56,000,000 ÷ (148×0.86)) × 2

≈ 880,000 total operations.

3.2 Scenario Interpretation

SAMP Baseline (0.5%): The SAMP's assumption yields only 7 additional seats per departure over nine years — from approximately 141 in 2023 to 148 by 2032. This rate of change is inconsistent with the announced fleet trajectories of the two dominant carriers at SEA. More significantly, it is arithmetically incompatible with the SAMP's own 56 million enplanement target at any realistic load factor, as demonstrated in Section 4 below.

Moderate Scenario (2.0%): A 2 percent annual seat growth rate reaches approximately 168 seats per departure by 2032 — a 27-seat gain that is broadly consistent with the combined effect of Alaska's 737-10 domestic fleet replacement and the addition of 10 to 12 widebody international routes. This scenario represents the most defensible central estimate given publicly announced airline commitments.

High Scenario (3.5%): A 3.5 percent annual growth rate would bring the average departure to approximately 187 seats — indicative of a fleet composition trending toward a mid-tier widebody-weighted hub. This is ambitious but not implausible if Alaska fully executes its 12-route international strategy and Delta continues its Pacific expansion with additional A350 and 787 widebody deployments.

One important distinction: average seats per departure can increase through two independent mechanisms — more widebody aircraft on international routes (high seat count, lower frequency) or larger narrowbodies on domestic routes (moderate seat count gain, high frequency). The 737-10 replacement cycle addresses the second mechanism and could contribute a meaningful seat-per-departure increase without any additional widebody operations. This makes even the moderate scenario potentially conservative.

4. The Operations Arithmetic — Where the SAMP Assumptions Break Down

SEA recorded 435,896 total operations in 2025 and accommodated approximately 52.72 million enplanements — placing the airport at roughly 97 percent of the current updated operations ceiling (approximately 449,000 operations, or the constrained peak achievable at current infrastructure levels when measured against the 2019 practical maximum of 450,487 operations).

Technical Note — Operations Ceiling Distinction

The 2019 actual peak of 450,487 operations represents the highest observed throughput at SEA under the pre-TBFM, pre-Reduced Diagonal Spacing operational environment. The Technical Appendix to the SEA Airport Capacity Analysis (Bogen, 2026) documents that TBFM deployment and Reduced Diagonal Spacing have increased the constrained infrastructure ceiling to approximately 517,000 annual operations under current operational procedures. References in this document to the "practical ceiling" reflect the 2019 historical peak as a conservative bound; the updated ceiling of ~517,000 is the more appropriate planning reference for forward-looking scenarios. Both figures materially exceed the ~880,000 operations the SAMP's baseline assumption would require, reinforcing rather than mitigating the fundamental inconsistency.

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The critical arithmetic is as follows. If SEA accommodates 56 million enplanements by 2032, at an industry-standard load factor of 86 percent and the SAMP's assumed 148 seats per departure, the required number of departures is approximately 440,000 — yielding approximately 880,000 total operations (arrivals plus departures). That figure is approximately 1.7 times the updated infrastructure ceiling of 517,000 annual operations. Even incorporating connecting passengers — who reduce the effective enplanements-per-departure ratio — the numbers remain irreconcilable at any load factor above approximately 47 percent, far below any realistic operational standard.

The SAMP cannot simultaneously maintain a conservative seat growth assumption of 0.5 percent per year and a 56 million enplanement target. These two parameters are arithmetically incompatible under the physical throughput constraints of the existing airfield. The only internally consistent resolution is faster upgauging — which means the moderate or high scenario is not a planning stress case but an operational prerequisite for the SAMP's own goals to be achievable.

Looking further ahead, how Seattle-Tacoma International Airport would accommodate 70 million or more enplanements in the years beyond 2032 — without infrastructure improvements that substantially expand runway throughput — remains an unresolved planning question that warrants direct treatment in the SAMP.

5. What Makes the 56 Million Enplanement Target Achievable

The SAMP near-term projects are specifically designed to accommodate 56 million enplanements and meet forecasted demand to 2032. The principal infrastructure investment — a second terminal with 19 new gates in approximately 575,000 square feet — addresses terminal throughput and gate capacity, not runway operations. More gates enable larger aircraft to be handled more efficiently and flexibly, which is an implicit operational endorsement of upgauging — but it is not a validation of the 0.5 percent seat growth assumption. Terminal expansion and fleet upgauging are complementary and mutually reinforcing; the SAMP's infrastructure investment implicitly assumes the latter while its modeling conservatively understates it.

The conclusion is that the SAMP's passenger target and its seat growth assumption are in tension. The only operationally viable path to 56 million enplanements within the airport's constrained operations ceiling is materially faster upgauging — which confirms that the moderate or high seat growth scenario is a planning prerequisite, not a sensitivity case.

6. Implications for Community Noise

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For aviation noise-affected communities surrounding Seattle-Tacoma International Airport, the fleet upgauging trajectory documented in this comment has significant practical implications that are not adequately addressed in the SAMP.

Larger aircraft — including the Boeing 737-10, Boeing 787, and Airbus A330-900 — produce greater absolute acoustic energy per operation than the smaller narrowbody and regional jet aircraft they replace. While the FAA's Day-Night Average Sound Level (DNL) metric averages noise exposure over a 24-hour period and applies a 10-decibel nighttime penalty, this metric does not fully capture the low-frequency noise components that are characteristic of larger turbofan engines and that have been associated with community annoyance and health effects at exposure levels below the 65 DNL threshold. Because DNL calculations weight and roll off low-frequency energy, an increase in widebody and high-capacity narrowbody operations may not produce a measurable change in the official 65 DNL contour — even as the actual low-frequency acoustic environment experienced by nearby residents deteriorates year over year.

This dynamic is well recognized by aviation noise researchers and public health organizations internationally, even if it is not yet reflected in U.S. regulatory standards. The absence of a regulatory threshold does not mean the absence of an impact.

This analysis should be explicitly acknowledged and transparently communicated in the SAMP, regardless of current regulatory requirements. The Port of Seattle has an opportunity to lead on this issue — to proactively advocate for the health and well-being of aircraft noise-affected surrounding communities rather than waiting for national noise and health regulations to address what is already a recognized and growing concern. The appropriate time for additional noise mitigation advocacy is now, not upon some future regulatory trigger.

7. Conclusions and Recommended SAMP Revisions

Based on the analysis above, the following revisions to the SAMP are recommended:

1. **Fleet Mix Assumption:** The SAMP should update its seat growth assumption from 0.5 percent per year to a range reflecting the moderate scenario (2.0 percent) as the central estimate, with the high scenario (3.5 percent) as an upper bound. This adjustment should be applied consistently across all passenger-to-operations translations in the SAMP and EIS.
2. **Internal Consistency Check:** The SAMP should demonstrate arithmetic consistency between its enplanement forecast, seat growth assumption, load factor assumption, and operations count in a single integrated table. The current baseline assumptions are not mutually consistent at the stated passenger target.

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3. **Operations Ceiling Reference:** The SAMP should reference the updated infrastructure-constrained operations ceiling of approximately 517,000 annual operations (reflecting TBFM deployment and Reduced Diagonal Spacing improvements) rather than the 2019 historical peak of 450,487 operations as the relevant planning bound.
4. **Noise Disclosure:** The SAMP and EIS should include a dedicated discussion of low-frequency noise impacts associated with fleet upgauging, acknowledging the limitations of the DNL 65 metric in capturing this dimension of community impact and identifying opportunities for the Port of Seattle to pursue proactive noise mitigation measures.

References and Data Sources

- Bogen, J. (2026). *Technical Appendix: SEA Airport Capacity Analysis.* Port of Seattle / Aviation Planning Division. May 28, 2026.
- FAA Airport Capacity Benchmark Report (2016). Federal Aviation Administration.
- FAA Terminal Area Forecast (TAF), 2024 Edition. Federal Aviation Administration.
- FAA Aviation System Performance Metrics (ASPM) Database, 2020–2026. Federal Aviation Administration.
- Bureau of Transportation Statistics, Form 41 T-100 Segment Data, 2020–2025.
- FAA Order 5090.3C: *Field Formulation of the NPIAS.* Federal Aviation Administration.
- Alaska Airlines. (2026, January). Fleet order announcement — 105 Boeing 737-10 and 787 widebody aircraft. Alaska Airlines Newsroom.
- Delta Air Lines. (2026). Long-term gate lease agreement, Delta One Lounge, and SEA route expansions. Delta Air Lines Corporate Communications.

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Sustainable Airport Master Plan (SAMP) EIS Comment

Aircraft Noise Cumulative Exposure Analysis

SAMP SEPA DEIS Public Comment Submission on SEA Airport Noise Cumulative Noise Analysis and Health Risk Effects Not Fully Captured

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Date: 6/13/2026

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Introduction/ Summary

This submission presents a comprehensive event-based analysis of aircraft noise exposure at communities near Seattle-Tacoma International Airport (SEA), using direct measurements from the Port of Seattle's operational noise monitoring system. The analysis demonstrates that aircraft noise at SEA occurs as frequent, closely spaced events with minimal recovery time between them—producing near-continuous exposure conditions at nearby community locations that are not captured or disclosed by the Day-Night Average Sound Level (DNL) metric used in the SAMP SEPA Draft Environmental Impact Statement (DEIS).

The analysis draws on two distinct, methodologically separate data sources, each used for what it uniquely establishes: (1) directly measured Sound Exposure Level (SEL) event records from five noise monitors spanning March 12 through April 9, 2026, providing an empirical baseline of current noise event frequency, inter-event respite, and nighttime exposure at each community location; and (2) the DEIS's own operational forecast (SEPA DEIS Appendix A, Table 6), which projects 475,655 total annual operations under the 2032 Proposed Action scenario — an increase of approximately 39,759 operations (+9.1%) above the current 2025 actual level of 435,896. Applying the DEIS's own 2032 operational projection to the directly measured 2026 event baselines reveals material increases in community noise exposure that the DEIS does not analyze, disclose, or mitigate.

Key findings

At the highest-density noise monitor (SEA18) in this analysis, current measured exposure already reaches approximately 529 noise events per day with a median gap between events of only 1.5 minutes; 91.2% of all intervals are below 5 minutes and extended quiet periods exceeding 10 minutes occur only 2.8% of the time. Applying the DEIS's 2032 Proposed Action operational forecast (+9.1% above current 2025 levels) to the measured baseline projects approximately 577 events per day at SEA18 by 2032 — an increase of approximately 48 per day. Nighttime events (22:00–07:00) at SEA18 average approximately 89 per night under current conditions; the 2032 Proposed Action scenario projects approximately 97. None of these metrics are analyzed anywhere in the DEIS.

This submission requests that the Port of Seattle supplement the DEIS to include event-based analysis of current and projected noise exposure at community monitor locations, consistent with SEPA's requirement for a reasonably thorough discussion of cumulative environmental impacts under WAC 197-11-330 and WAC 197-11-794.

SEPA Requirements and Identified Gaps in the DEIS Noise Analysis

Under WAC 197-11, SEPA requires a reasonably thorough discussion of environmental impacts and evaluation of cumulative effects over time. The SAMP SEPA DEIS defines cumulative impacts as incremental effects occurring over time, but evaluates aircraft noise exclusively through DNL averaging and spatial contours. WAC 197-11-794 further prohibits agencies from establishing automatic numerical thresholds for significance determinations; the DEIS implicitly does so by treating the DNL 65 dB contour boundary as the operative limit of significance analysis.

The SEPA DEIS does not evaluate any of the following dimensions of noise exposure, each of which is independently associated with documented health outcomes and each of which would be materially worsened under the DEIS's own 2032 operational projections:

- Aircraft noise event frequency (number of discrete noise events per day at community locations)
- Inter-event respite intervals (time between consecutive noise events)
- Temporal clustering of operations by hour of day
- Nighttime noise event counts and distribution (22:00–07:00)
- Projected change in any of these metrics under the DEIS's own 2032 operational scenarios

DNL averaging, by mathematical construction, compresses the temporal structure of noise exposure into a single annual average. It cannot reveal whether gaps between events provide meaningful recovery time, whether noise is concentrated in sleep hours, or whether

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cumulative exposure is driven by repetition rather than peak level. The peer-reviewed literature consistently finds that it is the number of noise events—not average sound level alone—that predicts the health outcomes of greatest concern for communities near airports.

Health and Community Impact Context

Environmental noise, including aircraft noise, is widely recognized as a public health stressor. The World Health Organization (2018) identifies environmental noise as a leading contributor to sleep disturbance, cardiovascular disease, hypertension, and cognitive impairment in children. Aircraft noise specifically disrupts sleep through repeated awakenings and fragmented sleep architecture, impairing physiological recovery even when individual events do not fully awaken the sleeper.

Critically for this analysis, research demonstrates that it is the number of noise events—not just the average noise level—that drives health impacts. Basner et al. (2023) found that higher numbers of aircraft noise events at night are associated with worsened vascular function and increased physiological stress markers. Neimann et al. (2013) and Baczalska et al. (2022) document cardiovascular effects at noise exposure levels and event frequencies consistent with those measured at the SEA community monitors analyzed in this submission. **WHO Lnight guidelines establish 40 dB as the threshold above which nighttime noise begins to cause adverse health effects—a level routinely exceeded at all five study monitors.**

Chronic exposure to repeated noise events activates stress response pathways, elevates blood pressure, and is associated with long-term cardiovascular risk. Continuous exposure without adequate inter-event recovery time prevents the body from completing normal physiological restoration, creating a burden that compounds over time. The near-continuous event exposure documented at the SEA community monitors falls directly within this physiological risk framework.

Methodology – Data Sources, Scope, and Analytical Approach

This analysis uses two methodologically distinct and independently valid data sources. They are applied to different questions and are not cross-compared in ways that would conflate their different measurement scopes.

Data Source 1: SEA Noise Monitor SEL Records (Measured Community Exposure)

Noise data were obtained from the Port of Seattle's operational noise monitoring system, which records a Sound Exposure Level (SEL) event for each aircraft overflight that exceeds the detection threshold at each sensor. The dataset spans March 12 through April 9, 2026 (33 days) and covers five community monitor locations: SEA12 (north side of airport) and SEA13, SEA17, SEA18, and SEA19 (south side).

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Each monitor record includes a timestamp and monitor location. A single aircraft operation typically registers at multiple monitors in rapid succession—for example, a Runway 16L departure may appear at SEA17, SEA18, and SEA19 within seconds of each other, each entry representing the noise energy experienced at that specific community location. These are not duplicates to be removed: each event represents a real disruption at a real place. The noise monitor dataset is therefore analyzed on a per-monitor basis, not aggregated into an airport operations count. The dataset contains approximately 63,100 individual event records across all five monitors over the 33-day period.

Analytical steps applied to this dataset include: calculation of inter-event intervals at each monitor (time in minutes between consecutive events); evaluation of the percentage of intervals falling below key thresholds (below 1, 2, and 5 minutes); identification of extended quiet periods exceeding 10 minutes; hourly aggregation to assess clustering by time of day; and nighttime analysis (22:00–07:00) to evaluate sleep-period exposure. **All results are presented per-monitor and represent directly observed conditions at community locations, not model outputs.**

Data Source 2: SAMP DEIS Appendix A Operational Forecasts (Growth Rate Basis)

The SAMP SEPA DEIS Appendix A (Forecast and Operational Assumptions, Table 6) establishes the following operational projections for the environmental review years. The current actual operation count at SEA is 435,896 for 2025 (FAA and Port of Seattle published data), below the pre-pandemic 2019 peak of 450,487. Under the DEIS: (1) No Action 2032, approximately 466,900 annual operations; and (2) Proposed Action 2032, approximately 475,655 annual operations — an increase of 8,755 operations above No Action (1.9%) and 39,759 above the current 2025 actual (+9.1%). The unconstrained demand forecast shown in Appendix A projects significantly higher operations (above 550,000 by 2037), reflecting demand the NTPs cannot fully accommodate.

The DEIS 2032 Proposed Action operational figure (475,655 annual operations) is the only DEIS element used in the projection analysis. The percentage growth from the current 2025 actual (435,896) to the 2032 Proposed Action figure (+9.1%) is applied to the measured per-monitor event baselines established from the SEL dataset. This comparison reflects what communities will actually experience: the difference between current measured conditions and the 2032 conditions projected under the Proposed Action. No attempt is made to compare or equate the monitor dataset's event counts with total airport operations. The five monitors are geographically selective noise receivers, and the DEIS operational figures and the measured monitor event baselines are kept strictly separate and applied only as described.

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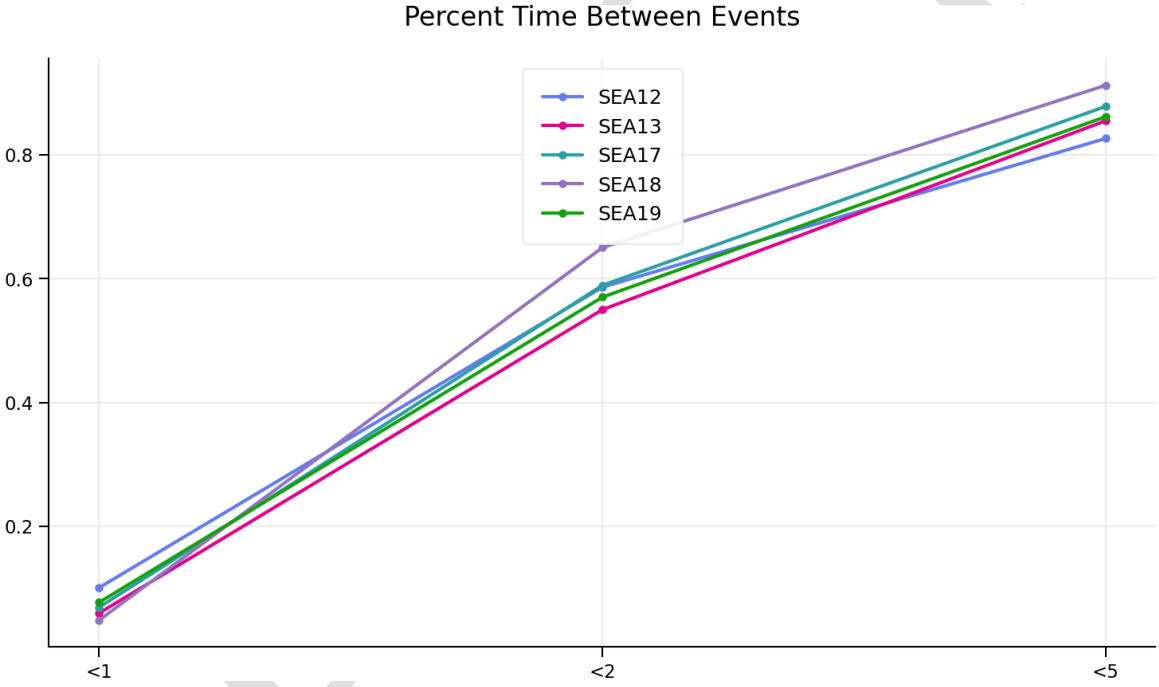
Measured Baseline Findings: Current Noise Exposure at Community Monitor Locations

The following findings are derived entirely from the directly measured SEL monitor dataset. They represent conditions at five community locations during the 33-day study period and serve as the empirical baseline for the 2032 projections in Section 6. The overall inter-monitor comparison (Figure 1) is followed by detailed per-monitor analysis.

Summary Finding: Near-Continuous Exposure Across All Monitors

Across all five monitors, the majority of inter-event intervals fall below 2 minutes, and extended quiet periods exceeding 10 minutes are rare. The southern monitors (SEA13, SEA17, SEA18, SEA19) record higher event densities than the northern monitor (SEA12), reflecting their proximity to the primary departure corridor. SEA18 records the highest event density of all monitors, with a median inter-event gap of only 1.5 minutes.

Figure 1 – Percent of Inter-Event Intervals by Duration (All Monitors)



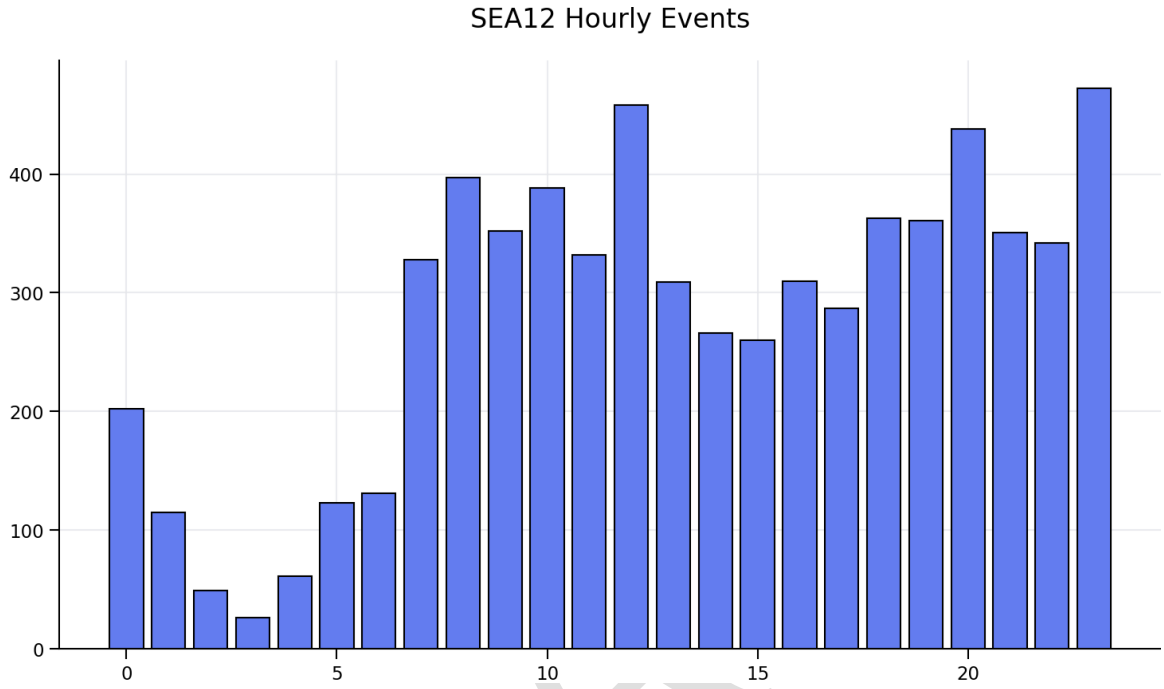
The majority of inter-event intervals across all monitors occur within short durations, confirming near-continuous exposure conditions. The southern monitors show higher concentrations of very short intervals, consistent with their position under primary departure tracks.

SEA12 Monitor Analysis (North Side)

SEA12 is located on the north side of SEA and primarily captures events on Runway 34R and mixed north-flow operations. During the study period, SEA12 recorded an average of approximately 204 noise events per day, with a median inter-event gap of 1.4 minutes. Approximately 58.6% of all intervals fell below 2 minutes. Extended quiet periods

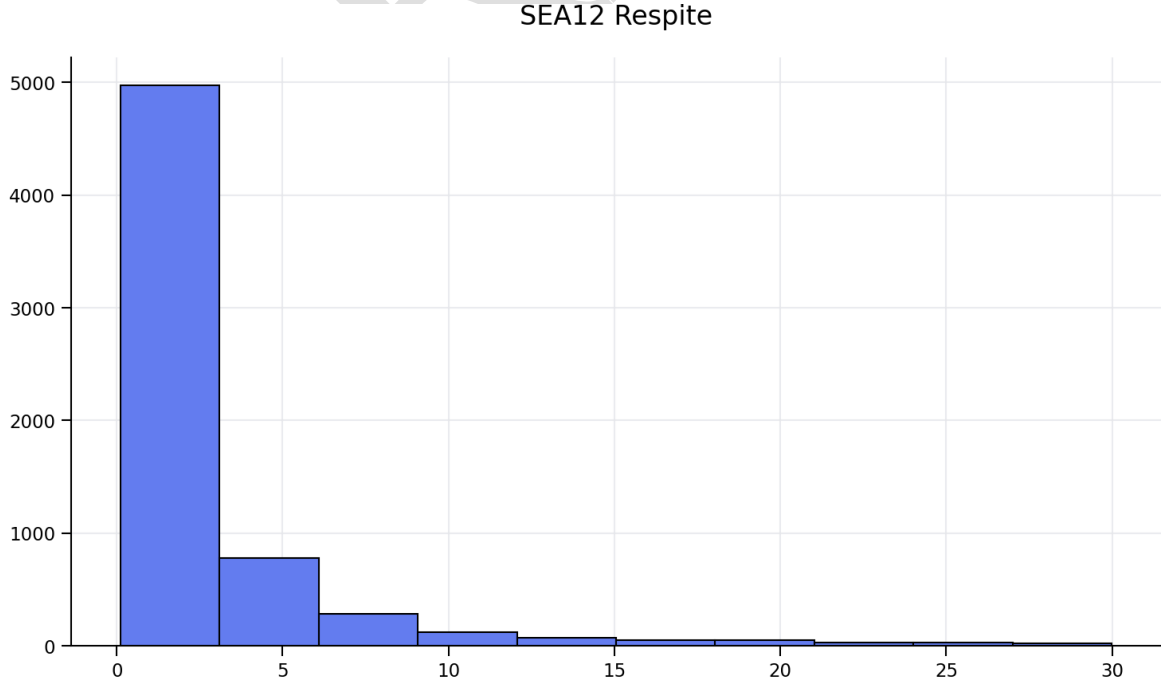
exceeding 10 minutes occurred 9.5% of the time—the highest rate of any monitor, but still representing only one extended respite opportunity roughly every 10 intervals. Nighttime events (22:00–07:00) averaged approximately 48 per night.

Figure 2 – SEA12 Hourly Event Distribution



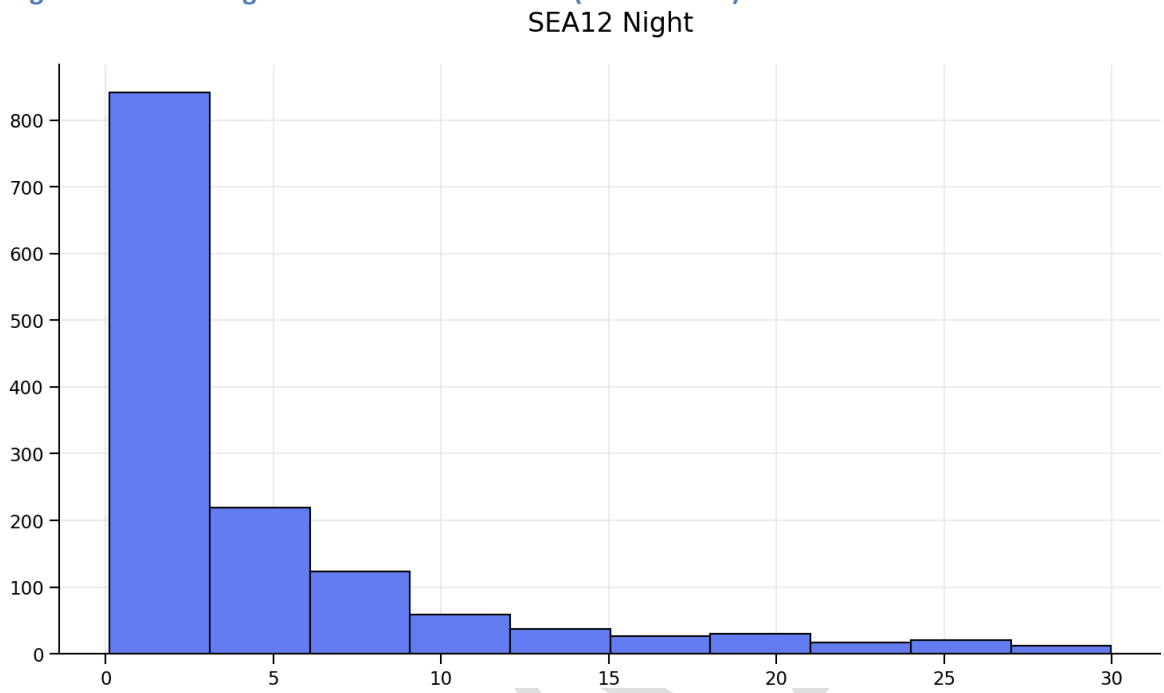
Hourly distribution shows temporal clustering of operations with peak periods in morning and evening hours corresponding to scheduled departure banks.

Figure 3 – SEA12 Inter-Event Respite Distribution



Respite distribution confirms that the majority of gaps between events are under 2 minutes, with limited recovery time available between noise exposures.

Figure 4 – SEA12 Nighttime Event Distribution (22:00–07:00)



Approximately 48 nighttime events per night at SEA12, with persistent exposure across all nighttime hours. The WHO Lnight threshold of 40 dB is routinely exceeded.

SEA13 Monitor Analysis (South Side – Arrival Corridor)

SEA13 is located on the south side of SEA and primarily records events from Runway 16R arrivals and some Runway 34R departure activity. During the study period, SEA13 recorded an average of approximately 390 noise events per day, with a median inter-event gap of 1.8 minutes—the longest median gap of any of the five monitors, reflecting its position primarily under the arrival stream rather than the higher-density departure corridor. Approximately 55.0% of intervals fell below 2 minutes; 85.5% below 5 minutes. Extended quiet periods exceeding 10 minutes occurred 4.8% of the time. Nighttime events averaged approximately 59 per night.

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Figure 5 – SEA13 Hourly Event Distribution

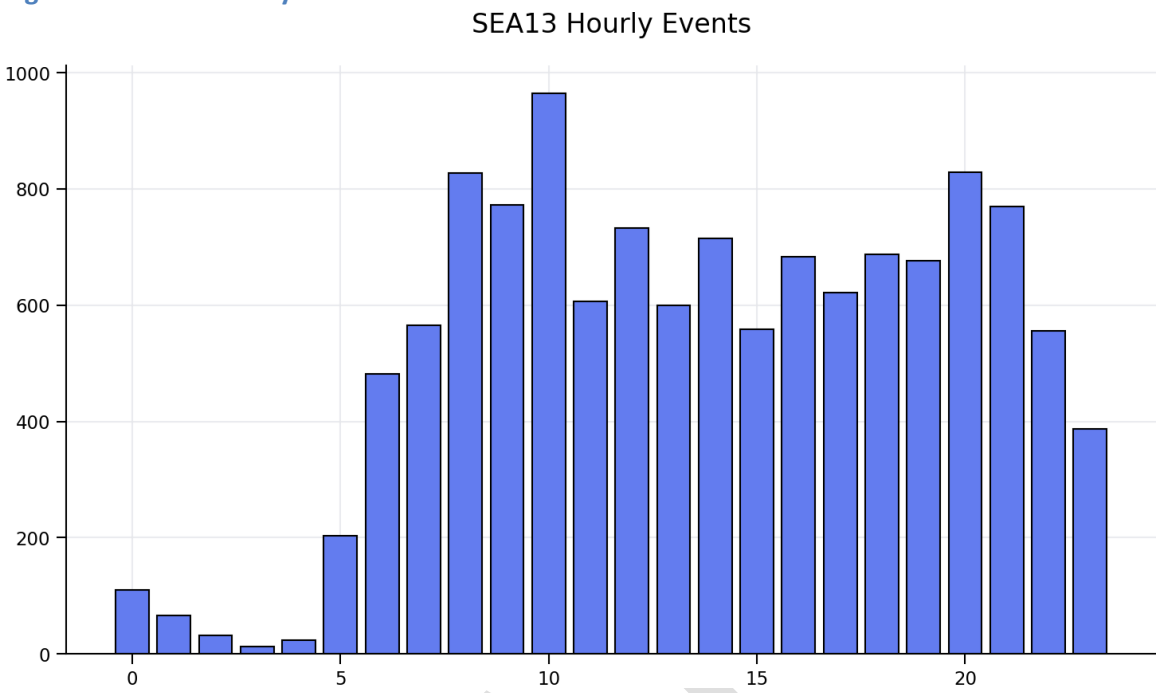


Figure 6 – SEA13 Inter-Event Respite Distribution

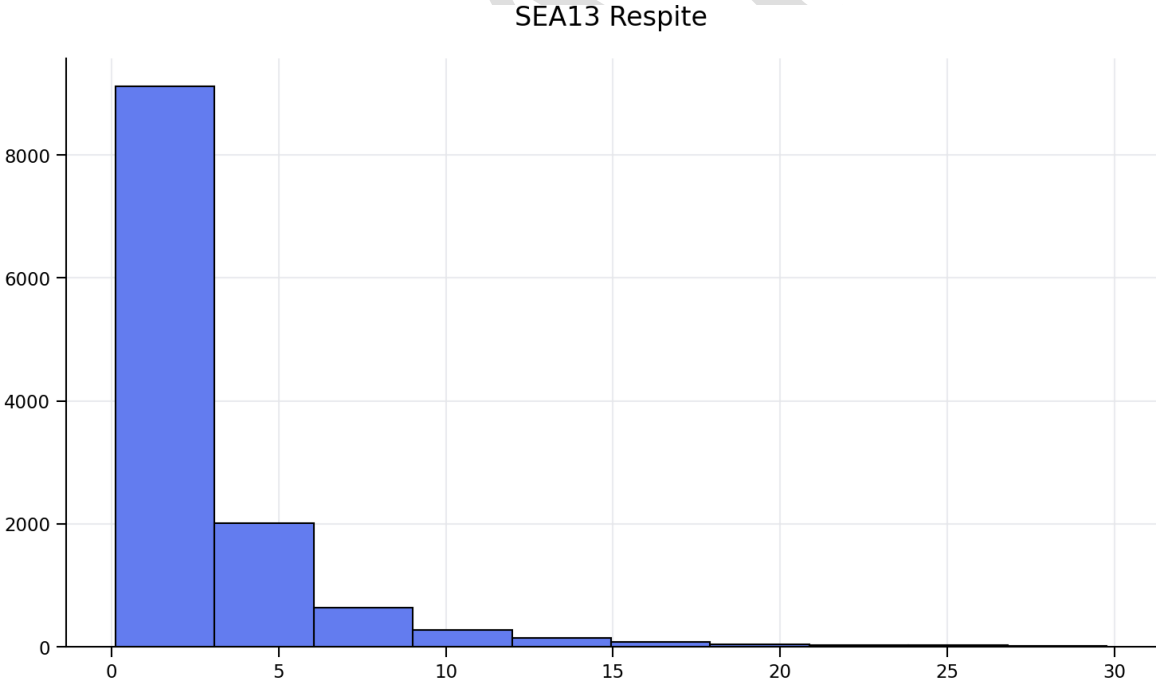
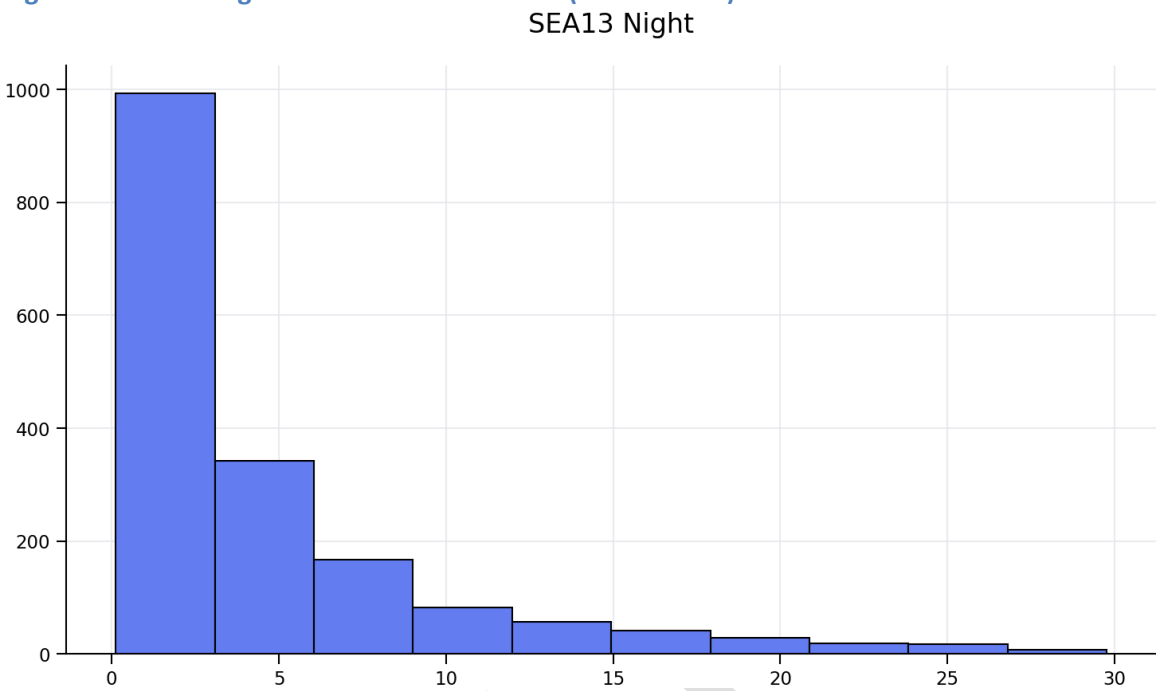


Figure 7 – SEA13 Nighttime Event Distribution (22:00–07:00)



SEA17 Monitor Analysis (South Side – Departure Corridor)

SEA17 primarily records events from Runway 16L departures and some Runway 34L arrivals. During the study period, SEA17 recorded an average of approximately 414 noise events per day, with a median inter-event gap of 1.6 minutes. Approximately 58.9% of intervals fell below 2 minutes; 87.8% below 5 minutes. Extended quiet periods exceeding 10 minutes occurred only 3.7% of the time. Nighttime events averaged approximately 57 per night.

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Figure 8 – SEA17 Hourly Event Distribution

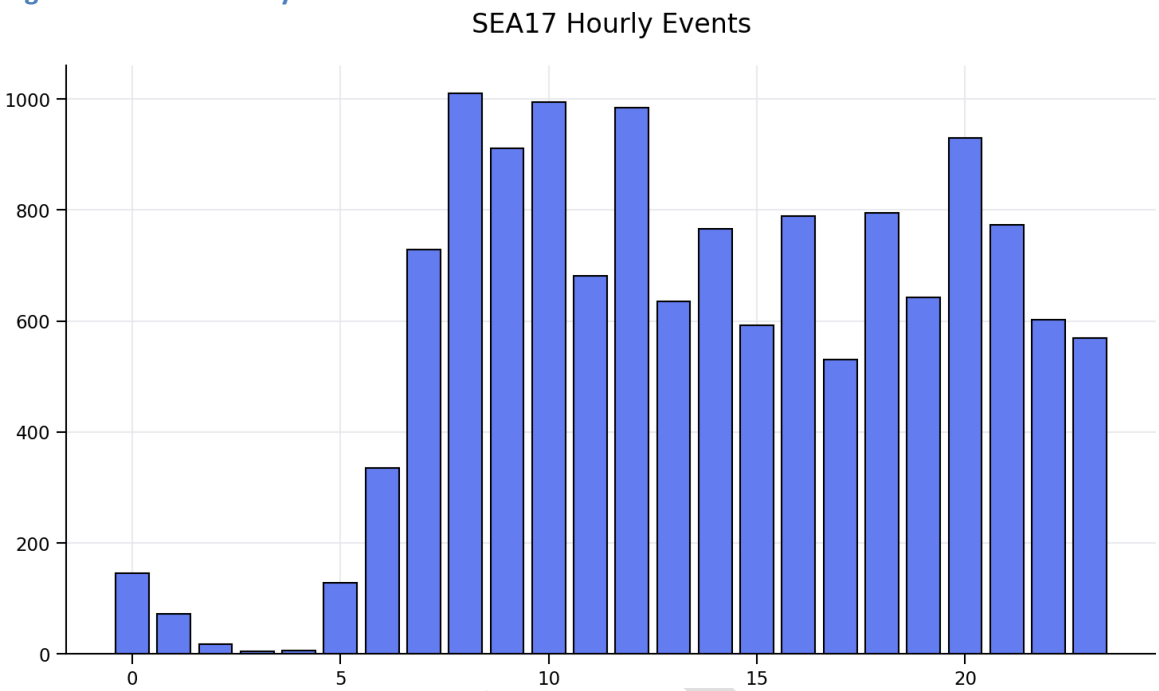


Figure 9 – SEA17 Inter-Event Respite Distribution

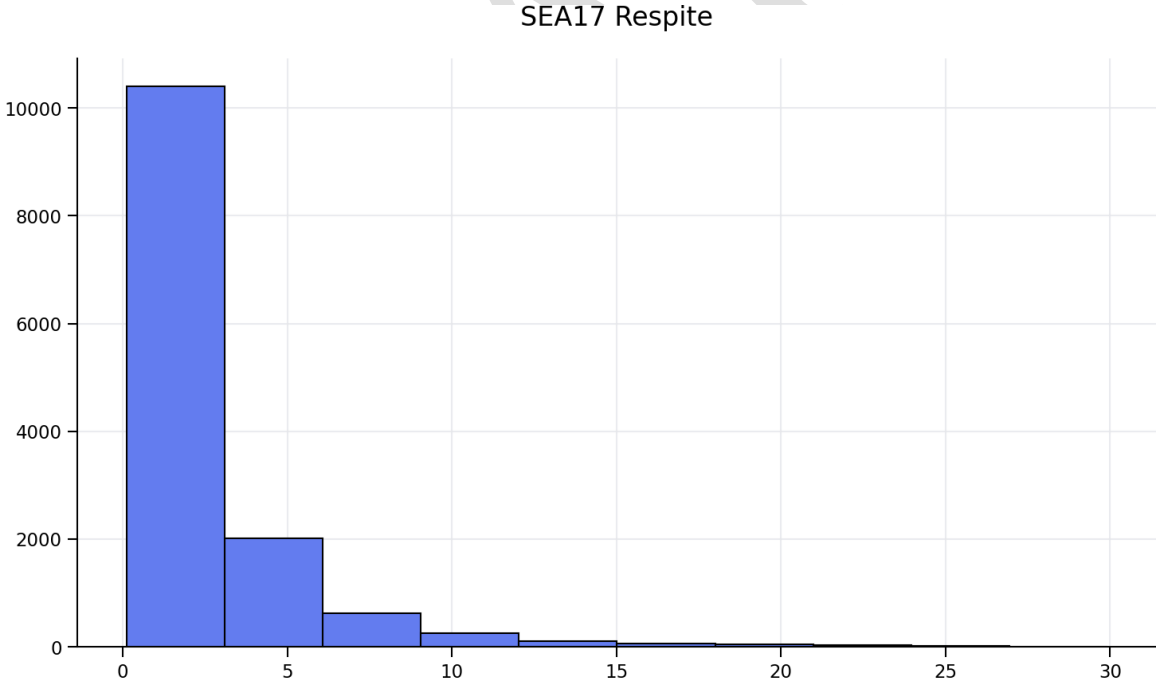
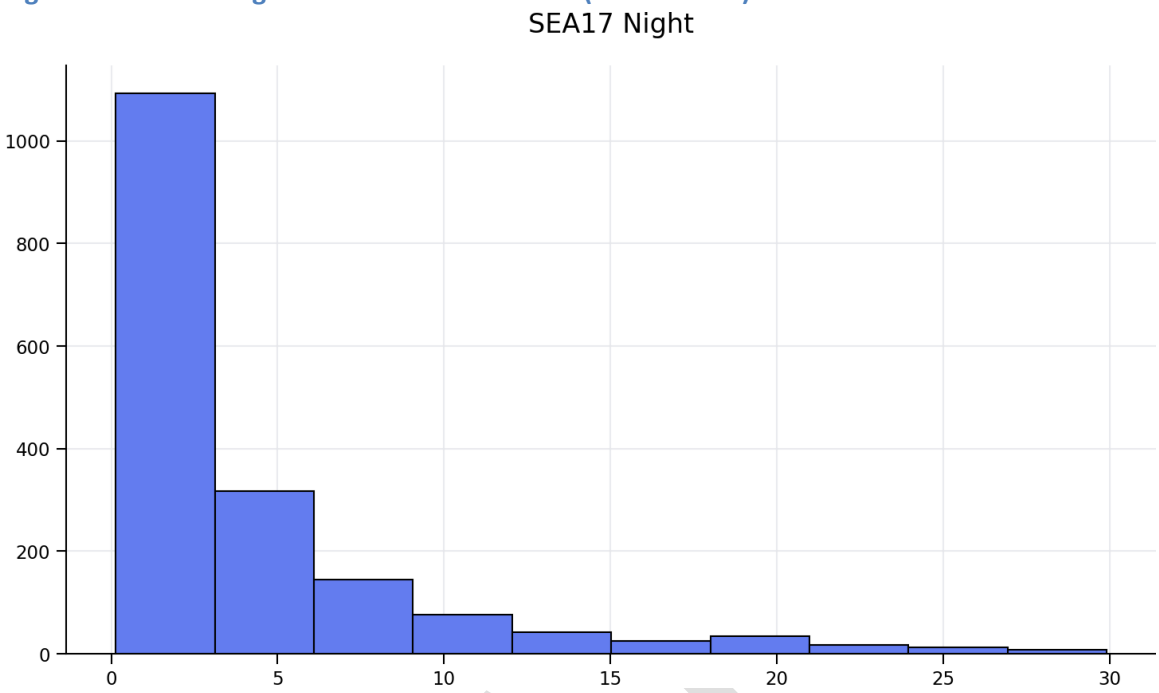


Figure 10 – SEA17 Nighttime Event Distribution (22:00–07:00)



SEA18 Monitor Analysis (South Side – Highest Density Monitor)

SEA18 records the highest noise event density of any monitor in the study. It primarily captures Runway 16L departures and Runway 34L arrivals. During the study period, SEA18 recorded an average of approximately 529 noise events per day—the highest of all five monitors. The median inter-event gap was 1.5 minutes. Approximately 65.0% of all intervals fell below 2 minutes and 91.2% fell below 5 minutes. Extended quiet periods exceeding 10 minutes occurred only 2.8% of the time, meaning at any randomly selected moment during operating hours, the probability of having 10 minutes of quiet is less than 3 in 100. Nighttime events averaged approximately 89 per night, also the highest of any monitor and a level associated with measurable cardiovascular effects in the peer-reviewed literature.

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Figure 11 – SEA18 Hourly Event Distribution

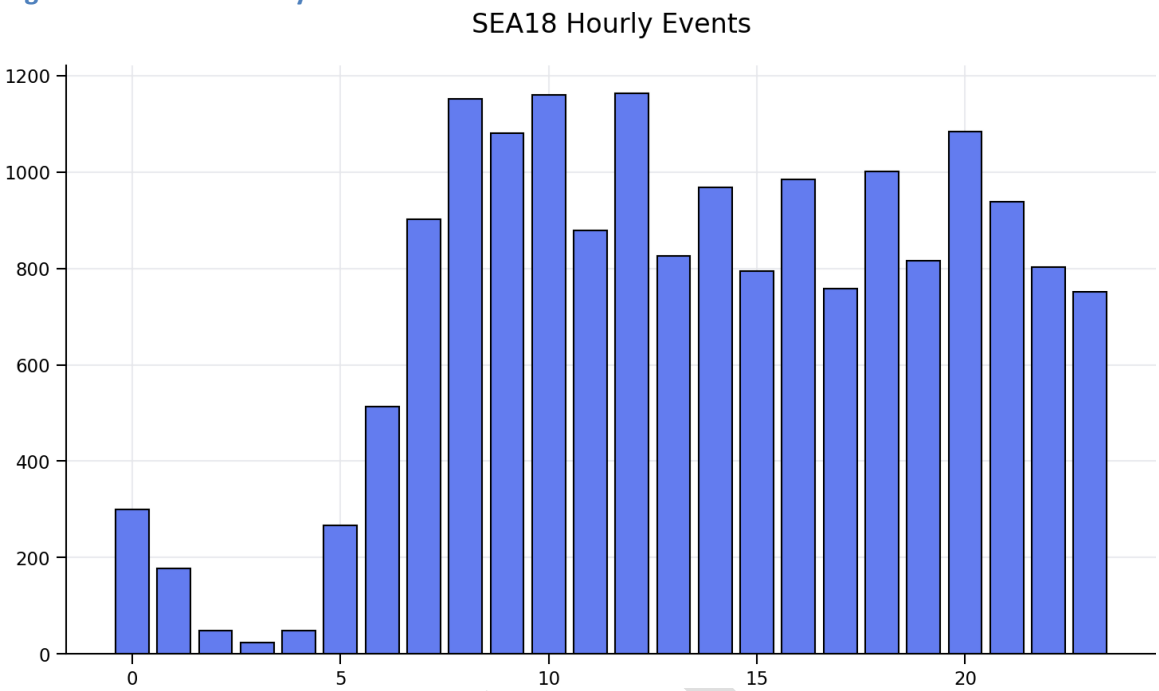


Figure 12 – SEA18 Inter-Event Respite Distribution

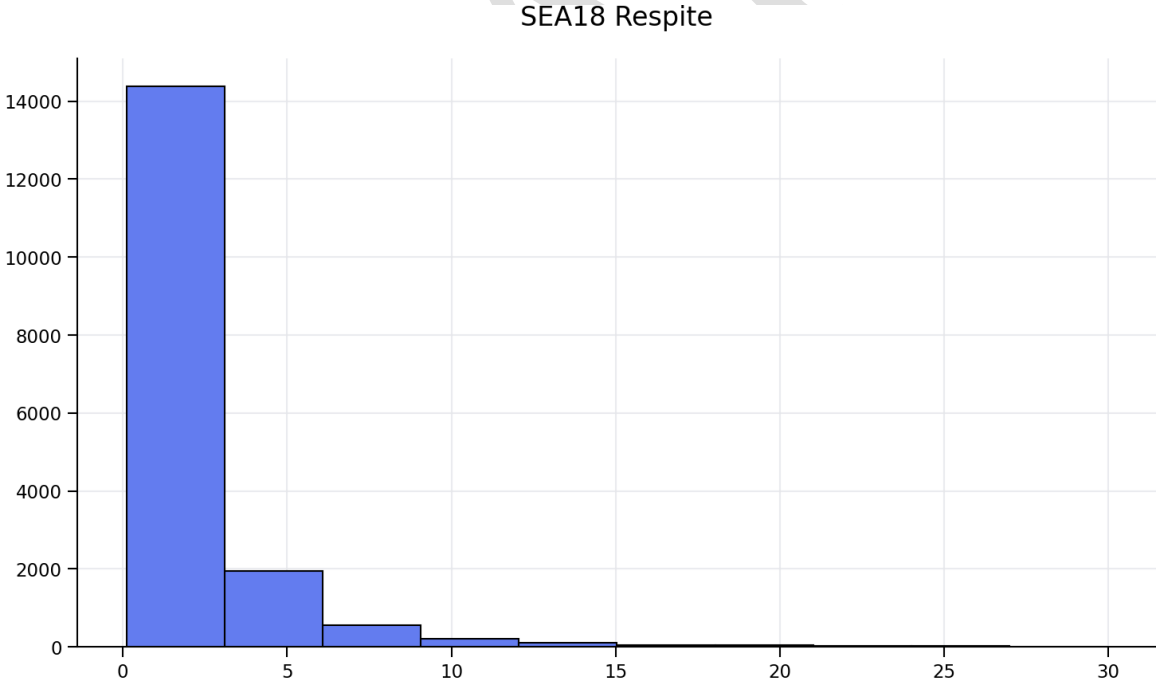
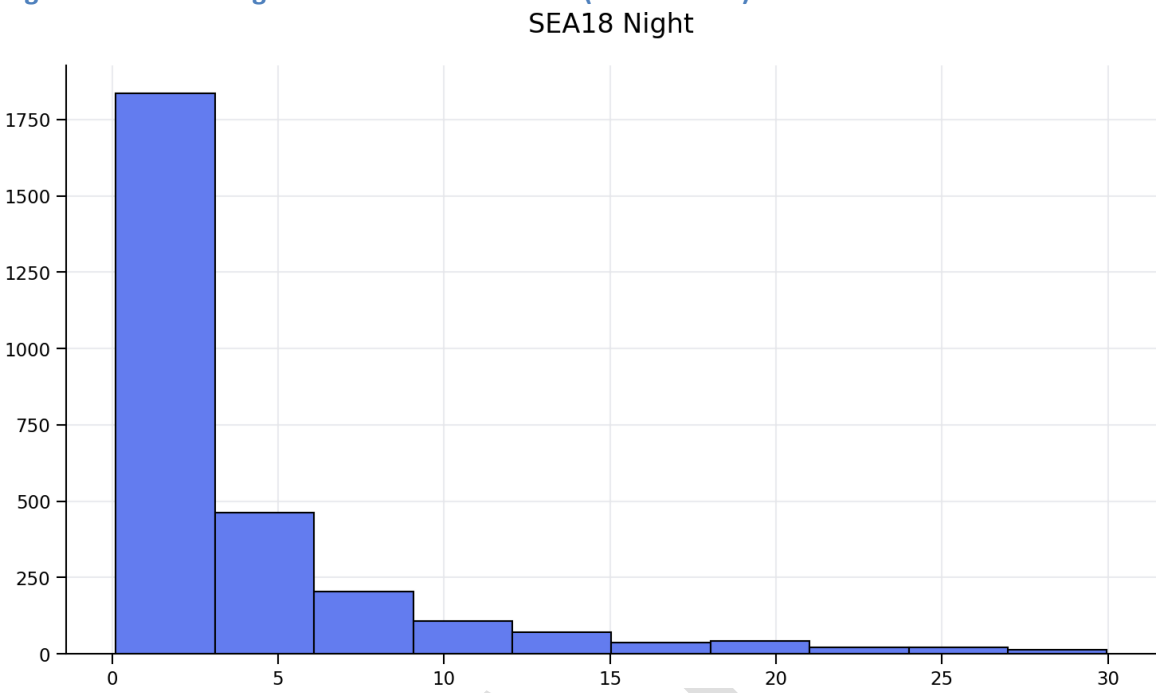


Figure 13 – SEA18 Nighttime Event Distribution (22:00–07:00)



SEA19 Monitor Analysis (South Side – Departure Corridor)

SEA19 primarily records Runway 16L departure activity on the south side. During the study period, SEA19 recorded an average of approximately 332 noise events per day, with a median inter-event gap of 1.5 minutes. Approximately 57.0% of intervals fell below 2 minutes; 86.2% below 5 minutes. Extended quiet periods exceeding 10 minutes occurred 5.8% of the time. Nighttime events averaged approximately 55 per night.

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Figure 14 – SEA19 Hourly Event Distribution

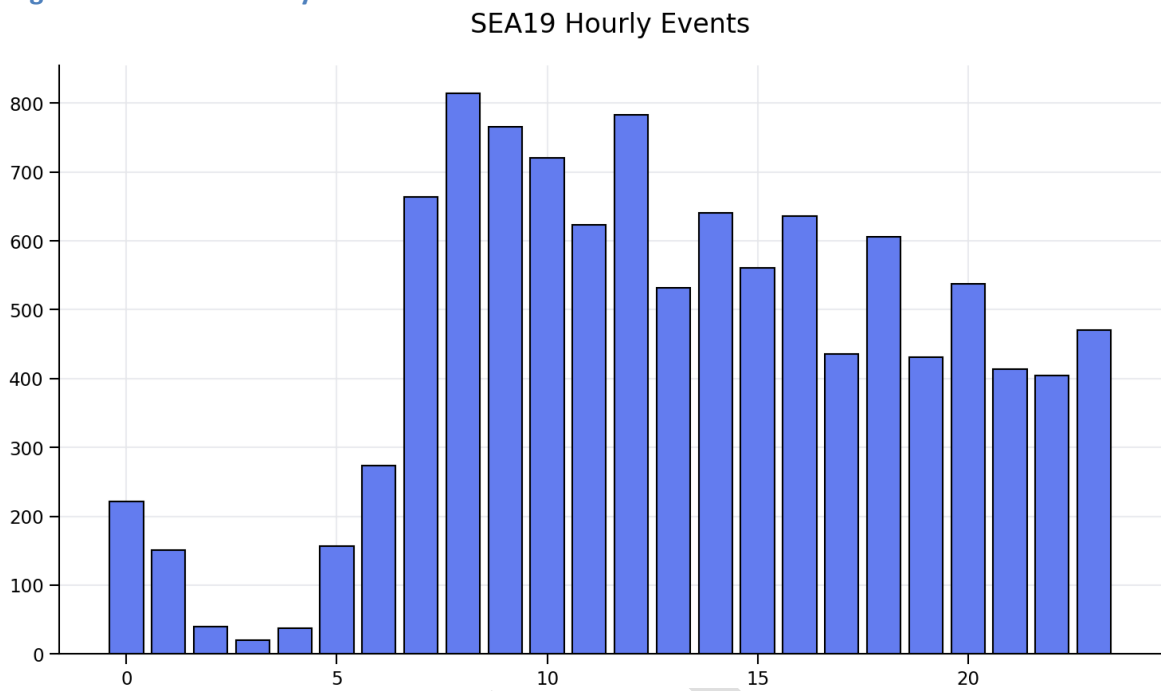


Figure 15 – SEA19 Inter-Event Respite Distribution

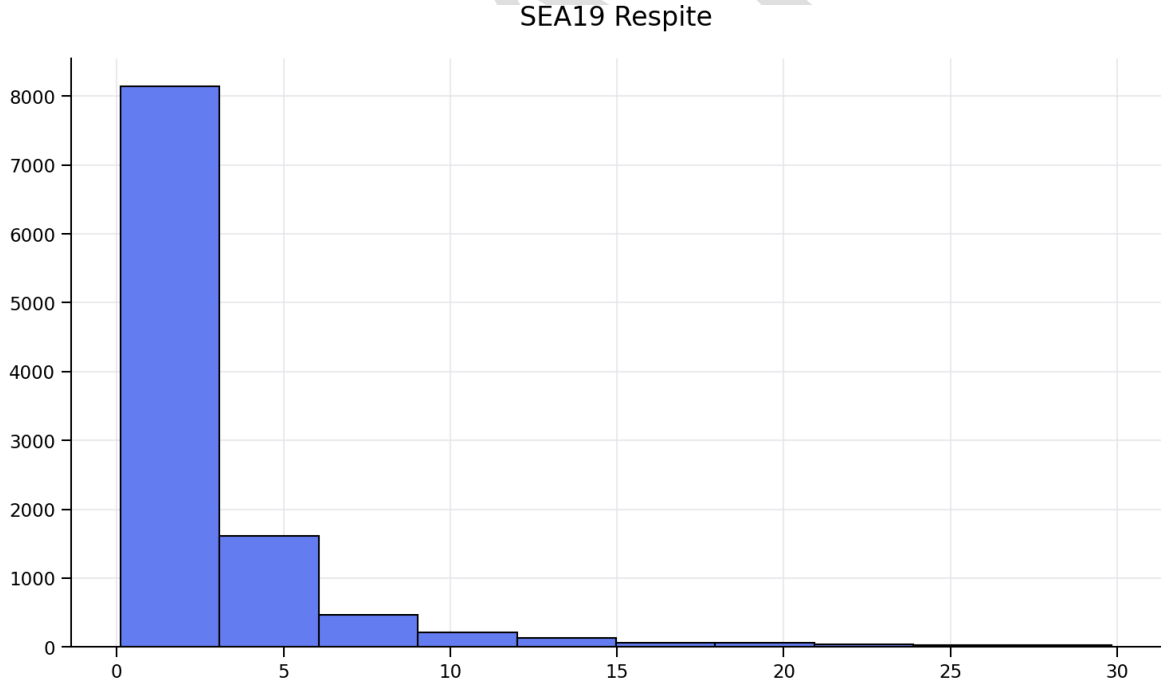
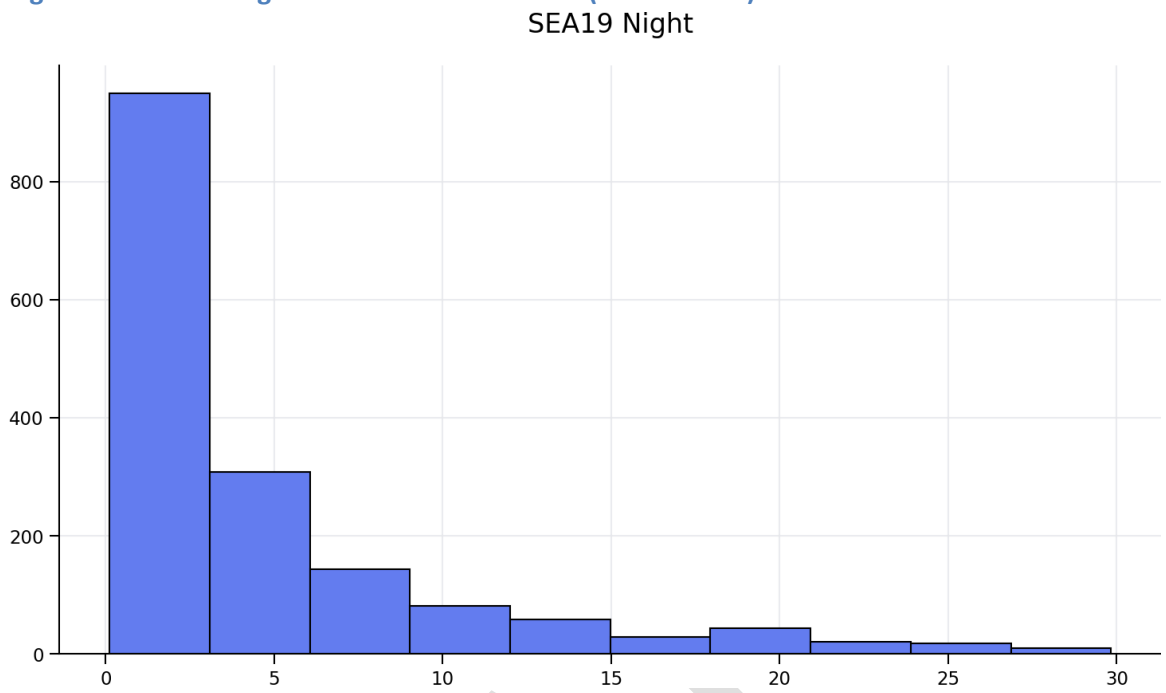


Figure 16 – SEA19 Nighttime Event Distribution (22:00–07:00)



2032 Noise Exposure Projections: DEIS Growth Rates Applied to Measured Baselines

As described in Section 4, the SAMP DEIS Appendix A Table 6 projects 475,655 total annual operations under the 2032 Proposed Action scenario. Current actual operations at SEA are 435,896 (2025, FAA/Port of Seattle data). The percentage growth from current to 2032 Proposed Action (+9.1%) is applied below to the directly measured per-monitor event baselines established in Section 5. The two data sources remain methodologically separate: the DEIS 2032 operational figure establishes the growth rate; the monitor records establish the baseline. No claim is made that the monitor dataset reproduces the total airport operations count.

Projected Daily Noise Events by Monitor

Table 1 presents the measured 2026 baseline event counts at each monitor alongside projections derived from the DEIS 2032 Proposed Action growth rate (+9.1% above 2025 actual). The 2032 Proposed Action scenario adds between 19 and 48 events per day depending on monitor location.

Table 1. Daily Noise Events by Monitor: Measured 2026 Baseline and DEIS 2032 Projections

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Monitor	Side	Measured 2026 (events/day)	2032 Proposed Action +9.1% (events/day)	Increase from 2025 baseline (events/day)	Increase (Constr / Unconstr)
SEA12	North	~204	~223	+19 vs 2025	+19
SEA13	South	~390	~426	+36 vs 2025	+36
SEA17	South	~414	~452	+38 vs 2025	+38
SEA18	**South**	**~529**	**~577**	**+48 vs 2025**	**+48**
SEA19	South	~332	~362	+30 vs 2025	+30

Growth rate (+9.1%) derived from SAMP DEIS Appendix A Table 6 (2032 Proposed Action: 475,655 ops) vs. current 2025 actual (435,896 ops, FAA/Port of Seattle). Baselines are directly measured monitor event counts, March 12–April 9, 2026. Monitor event counts are community noise exposure records, not total airport operation counts. SEA18 in bold as highest-density monitor.

Projected Nighttime Exposure by Monitor

Table 2 presents the measured nighttime event baselines (22:00–07:00) alongside 2032 projections using the same DEIS growth rates. SEA18 currently averages approximately 89 nighttime events per night—the highest of any monitor and a level associated in peer-reviewed literature with measurable cardiovascular and sleep disruption effects. The constrained 2032 scenario projects approximately 112 nighttime events per night at SEA18; the unconstrained scenario projects approximately 120.

Table 2. Nighttime Noise Events by Monitor (22:00–07:00): Measured 2026 Baseline and DEIS 2032 Projections

Monitor	Measured 2026 (events/night)	2032 Constrained (events/night)	2032 Unconstrained (events/night)
SEA12	~48	~52	+4
SEA13	~59	~64	+5
SEA17	~57	~62	+5
SEA18	**~89**	**~97**	**+8**

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Monitor	Measured 2026 (events/night)	2032 Constrained (events/night)	2032 Unconstrained (events/night)
SEA19	~55	~60	~64

Projected Compression of Inter-Event Respite

Increased operations necessarily compress the time between noise events. At SEA18, where the current measured median inter-event gap is already only 1.5 minutes, a proportional 9.1% increase in operations (from 2025 actual to 2032 Proposed Action) would reduce that median toward approximately 1.4 minutes. While this compression is smaller in absolute terms than earlier projections based on incorrect growth rates, the structural conclusion is robust: the current median gap is already well below the 3–5 minute physiological recovery threshold, and any further compression deepens an already critical deficit. The parallel operations mechanisms described in Section 7 would amplify this compression non-linearly beyond what proportional scaling captures.

Currently, extended quiet periods exceeding 10 minutes at SEA18 occur only 2.8% of the time. Under the 2032 constrained scenario, this already-rare respite window would be further compressed. Peer-reviewed literature (Basner et al. 2023, WHO 2018) identifies 3–5 minutes as a minimum recovery interval for meaningful physiological respite from noise-induced stress activation. **The current median gap of 1.5 minutes already falls well below this threshold; the 2032 projections would deepen that deficit at all five community monitor locations.**

SEPA Significance and Requested Supplemental Analysis

WAC 197-11-794 prohibits agencies from establishing automatic numerical thresholds for significance determinations. The DEIS implicitly treats the DNL 65 dB contour as such a threshold, analyzing noise impacts only within that boundary and treating everything outside it as non-significant by default. This approach does not satisfy WAC 197-11-330's requirement for a reasonably thorough discussion of probable significant adverse environmental impacts, because it excludes from analysis the dimensions of noise exposure—event frequency, respite, and nighttime event count—that the peer-reviewed literature most directly associates with health outcomes.

The DEIS's own Appendix A Table 6 projects 475,655 total operations under the 2032 Proposed Action scenario — a 9.1% increase above the current 2025 actual level of 435,896. DEIS's significance. **Applied to the directly measured baselines established in this submission, that growth projects increases of 19 to 48 additional noise events per day at community monitors, with 48 additional events per day at SEA18 alone. Those increases are not captured, analyzed, or disclosed anywhere in the analysis.**

This submission therefore requests that the Port of Seattle supplement the DEIS to include: **(1) a current baseline characterization of daily and nighttime event counts, inter-**

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event respite intervals, and temporal clustering at each operational noise monitor, using the Port's own SEL dataset; (2) a 2032 Proposed Action projection of those same event-based metrics using the DEIS's own operational forecast (Table 6, 475,655 annual operations); and (3) a substantive significance determination—not defaulting to the DNL 65 dB threshold—addressing whether the projected increase in event frequency and loss of respite constitutes a probable significant adverse environmental impact under WAC 197-11-330 and WAC 197-11-794.

Why the 2032 Projections Are Conservative: Parallel Operations and Non-Linear Exposure Growth

The proportional scaling method used in Section 6—applying the DEIS's +9.1% growth rate (from 2025 actual to 2032 Proposed Action) to the current measured event baselines—is methodologically defensible and conservative in the precise technical sense: it is more likely to understate future community noise exposure than to overstate it. **Three distinct mechanisms, each grounded in the measured data and in the stated design intent of the SAMP Near-Term Projects, explain why. The DEIS addresses none of them.**

Mechanism 1: Proportional Scaling Assumes Today's Sequential Operation Mix Persists

Proportional scaling is valid only if the ratio of parallel to sequential runway operations remains constant between the baseline and future periods. The SAMP NTPs are explicitly designed to change that ratio. The Port of Seattle has stated that the NTPs will "add as much new flight capacity as adding a new runway" without constructing one. The mechanism for that capacity gain is increased simultaneous multi-runway utilization—more operations conducted in parallel rather than in sequence. Taxiway geometry improvements, high-speed turnoff additions, and airfield efficiency projects included in the NTPs are specifically intended to reduce runway occupancy time and enable higher rates of simultaneous departure and arrival activity across the runway system.

When more operations occur in parallel rather than in sequence, the increase in community noise event rate is not proportional to the increase in total operations—it is amplified, because a second simultaneous departure stream produces events at a monitor that were previously temporally separated. Proportional scaling from a predominantly sequential baseline therefore systematically understates the event rate increase at community locations under a future regime of higher parallel utilization.

Mechanism 2: Runway 16C Is Currently Underutilized and Sits Under the Same Monitor Paths

The measured data reveals a particularly important structural feature of the current baseline: Runway 16C (the center runway) currently accounts for only 1.7% of all events recorded at SEA18 and a similar fraction across the study monitors. This is not because 16C generates quieter operations—it is because 16C is operationally underutilized under the

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current airfield configuration, which limits the frequency of simultaneous 16L and 16C departures due to taxiway geometry constraints that the SAMP NTPs are specifically designed to remove.

The SEA17 and SEA18 monitors sit under both the Runway 16L and Runway 16C departure flight paths. In the current measured dataset, 3-minute windows containing events from both 16L and 16C departures occur at SEA17 approximately 1.74% of the time and at SEA18 approximately 1.57% of the time—already rare but measurable instances of parallel operation. Post-NTP, if taxiway improvements enable routine simultaneous 16L and 16C departure banks during peak hours, the effect at SEA17 and SEA18 is not a proportional increase in events from a single departure stream: it is the activation of a second departure stream on a path those monitors already sit under. The event rate increase during those peak windows would be non-linear—potentially approaching double the current rate during the periods of highest community concern.

This is precisely the capacity mechanism the SAMP NTPs are designed to exploit, and it is precisely the impact pathway the DEIS does not analyze. **The DEIS projects more total operations without disclosing that the additional operational capacity is achieved through more simultaneous runway use at the monitors most heavily affected by existing noise exposure.**

Mechanism 3: Noise Envelopes Overlap—Sequential Events Already Merge Into Continuous Sound

A single aircraft departure produces an audible noise envelope of approximately 20 to 40 seconds at the distances represented by the community monitors analyzed in this submission. When two consecutive events are separated by less than that duration, the noise from the first aircraft has not ended before the noise from the second begins—the community experiences not two discrete events with a gap between them, but a single prolonged noise exposure. The analysis in this submission counts such occurrences as two events and measures the interval between them, but the physiological reality is unbroken noise.

The measured data at SEA18 documents this phenomenon in the current baseline: 117 events in the 33-day study period (0.7% of all events) occurred within 30 seconds of the preceding event, and 841 events (4.8%) occurred within 60 seconds. The minimum recorded gap between consecutive events at SEA18 was 7 seconds. At 90-second spacing—which encompasses approximately 49.7% of all events at SEA18—the noise envelopes of consecutive events are, at minimum, partially overlapping.

Proportional scaling increases the count of discrete events while implicitly maintaining the framework of events separated by gaps. Under higher parallel utilization, the proportion of events with overlapping noise envelopes increases disproportionately, because parallel operations are by definition time-compressed relative to sequential ones. **The community**

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impact is therefore worse than the projected event count implies: not only are there more events, but a higher fraction of those events produce no perceptible gap at all.

The Only Meaningful Respite Window Is the Early Pre-Dawn Hours—and It Is Directly Threatened

Analysis of the hourly distribution of inter-event gaps at SEA18 reveals that genuine respite—defined as median gaps materially exceeding the 3–5 minute physiological recovery threshold—occurs during only a narrow pre-dawn window. During all hours from 07:00 through 23:00, the median gap at SEA18 ranges from 1.3 to 1.7 minutes: there is no waking hour in which the community currently experiences meaningful recovery between events. The only hours with median gaps above the 3-minute threshold are 00:00 (3.6 min), 01:00 (6.6 min), 02:00 (16.2 min), 03:00 (49.2 min), and 04:00 (24.2 min). By 05:00, the median gap has fallen to 4.4 minutes as early morning departures begin, and by 06:00 it has collapsed to 2.4 minutes. By 07:00 it is 1.4 minutes—indistinguishable from the all-day average.

The physiological significance of this pattern cannot be overstated. The 02:00–04:00 window represents the only period in the 24-hour cycle during which residents near SEA18 have any realistic prospect of sustained sleep without noise interruption. That window is directly defined by the rate of early morning departures. Any increase in operations that advances or intensifies the early morning departure bank—including the kind of efficiency-driven early push that increased runway throughput capacity enables—directly attacks the one recovery window that currently exists.

The DEIS does not analyze the hourly distribution of operations under the 2032 scenarios. It does not disclose whether the early morning departure bank would expand. It does not evaluate the health significance of the pre-dawn respite window or assess whether projected growth would narrow or eliminate it. These are not peripheral concerns—they go to the core of whether the DEIS provides the reasonably thorough cumulative impact analysis that SEPA requires.

What the DEIS Is Required to Address

The three mechanisms described above each constitute an independent basis on which the proportional projections in this submission understate future community noise exposure. Together, they establish that the DEIS's noise analysis is conservative in the wrong direction—it omits the pathways through which the SAMP NTPs would produce the most significant community impact. Under WAC 197-11-330 and WAC 197-11-794, the Port of Seattle is required to analyze probable significant adverse environmental impacts and may not rely on automatic numerical thresholds to avoid doing so. **The following specific analytical gaps must be addressed in the Final EIS:**

- Disclosure of the projected change in parallel versus sequential runway utilization under the 2032 constrained and unconstrained scenarios, including the projected frequency of simultaneous Runway 16L and Runway 16C departure operations post-

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NTP, and the community noise event impact at monitors located under both departure paths.

- Analysis of the hourly distribution of operations under 2032 scenarios, specifically including the projected timing and intensity of early morning departure banks and their effect on the pre-dawn respite window (approximately 02:00–05:00) that currently provides the only sustained recovery opportunity at heavily impacted monitor locations.
- Evaluation of noise envelope overlap under projected parallel operation scenarios, and an assessment of whether increased simultaneity would convert currently-discrete events with measurable gaps into periods of effectively continuous noise exposure at community monitor locations.
- A significance determination under WAC 197-11-330 that addresses whether these non-linear, parallel-operation-driven noise exposure increases constitute probable significant adverse environmental impacts that cannot be dismissed by reference to the DNL 65 dB contour boundary.

Adequacy of the Sound Insulation Program as Mitigation: Three Concerns

The DEIS references the Part 150 Sound Insulation Program (SIP) as a mitigation measure for aircraft noise impacts on residential and other noise-sensitive land uses. This submission raises three concerns about whether that reference adequately characterizes mitigation adequacy under SEPA. Each concern is independent; together they suggest that the DEIS overstates the protective effect of the existing SIP relative to the impacts projected under the SAMP 2032 scenarios.

Concern 1: The Existing SIP Boundary Was Established in 2014 and Does Not Reflect SAMP Growth

The current SIP Noise Remedy Boundary was established under the 2014 Part 150 Study, using operational conditions that predate the SAMP planning horizon by a decade and predate the NTPs entirely. A new Part 150 Study was initiated in 2024 and is currently in progress, but the published schedule shows that the Noise Compatibility Program report and public comment period are not expected until Fall 2026/Winter 2027, FAA review will not conclude until 2027, and FAA acceptance of a new Record of Approval is realistically 2028 at the earliest. Actual insulation work under any expanded boundary would not begin until well after that.

This creates a material mitigation gap: the SAMP NTPs are designed to increase operations beginning in the near term, but the SIP boundary that defines which properties are eligible for noise mitigation will not be updated to reflect SAMP-driven impacts until at least 2028. Properties that fall outside the 2014 boundary but inside an expanded 2032 contour will experience increased noise exposure for years before any eligibility determination is made,

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and years more before any insulation work is completed. The DEIS does not disclose this gap, does not estimate the number of additional dwellings that would fall within an expanded contour under 2032 scenarios, and does not address what mitigation, if any, is available to those properties in the interim. This is a SEPA-relevant disclosure deficiency.

Concern 2: The Interior Noise Eligibility Test May Systematically Understate Low-Frequency Penetration

Under FAA AC 150/5000-9B and the Port's current SIP, a property's interior noise level is determined not by direct measurement of actual aircraft overflights, but by an indirect derivation: a calibrated loudspeaker is placed outside at 45 degrees to the facade, the outdoor-indoor noise reduction (NLR) is measured across frequency bands per ASTM E966, and that NLR value is mathematically combined with the modeled exterior DNL to produce a derived interior DNL. The derived interior DNL is then compared to the 45 dB eligibility threshold. If the derived value falls below 45 dB DNL, the property is ineligible for insulation regardless of what residents actually experience inside.

This methodology has a documented low-frequency accuracy limitation that is directly relevant to aircraft departures at SEA. Standard loudspeaker systems used for facade testing cannot reliably generate adequate sound pressure levels below approximately 100–125 Hz, and standard NLR measurement protocols typically exclude the 63 Hz octave band and below from the calculation. However, aircraft departures—particularly widebody jets at low altitude above south-side communities—carry substantial energy in the 50–125 Hz range, where fan harmonics, engine fundamentals, and jet noise dominate. Building envelopes, and particularly windows, provide significantly less attenuation at these low frequencies than at the mid-frequencies where loudspeaker testing is most accurate. Additionally, at very low frequencies, sound couples into building structures directly through ground vibration and pressure fluctuations—pathways the loudspeaker method does not test at all.

The practical consequence is that the derived interior DNL used to determine SIP eligibility may be lower than the actual interior noise level residents experience during aircraft overflight, particularly for low-frequency content. A property that tests just below 45 dB DNL on the loudspeaker-derived measure may in reality experience interior levels above that threshold once the full low-frequency aircraft spectrum is accounted for. The FAA's own PARTNER-funded Low Frequency Noise Study (Penn State/MIT, 2007) concluded that loudness algorithms should include frequency content below 50 Hz to accurately correlate with the perception of low-frequency aircraft noise, and that standard window transmission loss ratings are not well-suited to rattle-prone low-frequency applications. The SIP measurement protocol has not been updated to reflect these findings.

This concern is noted here in the context of the SAMP DEIS because the DEIS cites the SIP as noise mitigation. If the SIP eligibility test systematically excludes properties that experience material low-frequency aircraft noise intrusion, the mitigation the DEIS references is less comprehensive than represented. This submission recommends that the Final EIS either

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characterize this limitation or confirm that the new Part 150 NCP will address low-frequency measurement adequacy in its SIP design criteria.

Concern 3: Sound Insulation Addresses Average Level but Not Event Frequency or Respite

Even where the SIP functions as designed and achieves the target interior DNL of 45 dB, it addresses only one dimension of the noise exposure documented in this submission. Sound insulation reduces average interior noise level; it does not reduce the number of noise events, the frequency of interruptions to sleep or speech, or the loss of inter-event respite. A resident whose home has been insulated to 45 dB DNL still experiences the same number of discrete noise intrusions per day as an uninsulated neighbor—the events are quieter, but they are just as frequent and just as closely spaced.

The peer-reviewed literature cited in this submission—Basner et al. (2023), WHO (2018), Neimann et al. (2013)—establishes that it is the number and timing of noise events, not the average level, that most strongly predicts sleep disruption, cardiovascular stress response, and long-term health outcomes. Sound insulation does not address these pathways. At SEA18, where the current measured median inter-event gap is 1.5 minutes and nighttime events average 89 per night, insulation to 45 dB DNL reduces the amplitude of each intrusion but leaves intact the pattern of near-continuous interruption that drives the health outcomes of greatest concern. The DEIS presents the SIP as mitigation for noise impacts without acknowledging this fundamental limitation of what sound insulation can and cannot accomplish.

Conclusion

Aircraft noise exposure at the community monitor locations studied is characterized by frequent, closely spaced events with limited inter-event recovery time, resulting in near-continuous exposure conditions that are directly associated with documented adverse health outcomes. These conditions exist under current operations and would worsen materially under the DEIS's own projected growth scenarios.

The evidence presented in this submission rests on two independently valid foundations: directly measured noise events at community locations, which require no modeling assumptions; and the DEIS's own 2032 operational projection (475,655 annual operations under the Proposed Action, per DEIS Appendix A Table 6), which establishes the growth rate applied to those baselines. Neither foundation is in dispute. What is absent from the DEIS is any analysis connecting them—any evaluation of how the projected increase in operations translates into increased noise event frequency, reduced respite, or worsened nighttime exposure at the community level. Moreover, as demonstrated in Section 7, the proportional projections presented here are themselves conservative: the SAMP NTPs are designed to increase parallel runway utilization in ways that would amplify community noise exposure non-linearly, threaten the only meaningful pre-dawn respite window that currently exists, and activate a second departure stream at monitors already recording

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near-continuous exposure from a single stream. The DEIS addresses none of these mechanisms.

Because the SEPA DEIS relies exclusively on DNL averaging, it cannot capture or disclose these temporal dimensions of cumulative exposure. **SEPA's requirements for reasonably thorough environmental review and prohibition on automatic numerical significance thresholds require that this gap be addressed in the Final EIS.**

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Sustainable Airport Master Plan (SAMP) EIS Comment

Health Effects of Aviation Noise: EIS Deficiencies and Omissions

Author: Jeff Bogen
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Member of Des Moines Airport Advisory Committee
Date: 6/13/2026

Overview

The SAMP EIS contains two sections on Health Effects of Noise as well as a consult report from ME Eagan Consulting. The summary conclusion resulted in a No Significant Impact (NSI) based on SAMP projects exceeding the 1.5 dB threshold within the current FAA DNL 65 contours. While accurate in terms of FAA and EPA current regulations, **important recent health-effects studies are absent from this report**. Furthermore, **the required SAMP EIS findings on cumulative noise effects have not been correctly assessed**.

What is missing are the additive, cumulative health impacts of all health stressors combined. This should include not just current and proposed area project construction, but also traffic, aircraft noise, and socioeconomic factors. When these exposures are considered in an additive and interactive fashion, the result is a higher cumulative health burden. SAMP's overall cumulative effects **do constitute a significant health impact** when incorporating more recent, peer-reviewed research on the potential health effects of aviation noise exposure.

SAMP Health Impact Findings: Deficiencies

The SAMP EIS, and specifically the associated consultant's report, states that **"no studies indicate a causal cardiovascular problem"** and that **"results generally do not support a relationship between aviation noise and CVD."**

The science has advanced on several fronts simultaneously — epidemiological, mechanistic, and clinical. That advancement is precisely what should have been highlighted in the *Health Effects Sections* of the SAMP EIS and more thoroughly reviewed in the associated consultant's report. **Large, peer-reviewed studies that directly contradict SAMP's cardiovascular non-findings include the following.**

Key Omitted Studies

WHO Systematic Review Update (2022)

Environmental Noise and Effects on Sleep: *An Update to the WHO Systematic Review and Meta-Analysis. Environ Health Perspect, 2022 Jul;130(7).* This systematic review and meta-analysis,

updating the WHO evidence base through the most recent studies, concluded that transportation noise is negatively associated with self-reported sleep, with sleep-disturbance findings comparable to the original WHO review at low nighttime noise levels. This large, peer-reviewed study is not mentioned in the consultant's report.

Cardiac MRI Study — Aircraft Noise and Heart Structure (JACC, 2025)

Higher Aircraft Noise Exposure Is Linked to Worse Heart Structure and Function by Cardiovascular MRI. Journal of the American College of Cardiology, Volume 85, Number 5, 2025. This study found that higher aircraft noise exposure, especially at night, is associated with adverse cardiac remodeling in the form of concentric left ventricular hypertrophy and reduced left ventricular systolic function, independent of clinical and environmental confounders.

HYENA Project (Hypertension and Exposure to Noise near Airports, 2008)

One of the largest multi-country European epidemiological studies, the HYENA Project found associations between aircraft noise exposure and both heart disease and stroke in populations residing near airports. While older, this foundational international study and others with similar conclusions are notably absent from the SAMP EIS discussion of international evidence.

SAMP Health Effects: Misleading Information

The FICAN studies and associated noise-exposure curves widely cited in the SAMP EIS have been subjected to substantial methodological criticism since publication. Notably absent from the SAMP EIS is a 2013 peer-reviewed paper in the *Journal of the Acoustical Society of America* (J. Acoust. Soc. Am. 2013, Nov;134(5):3645–53) that concluded the FICAN approach was fundamentally flawed due to its reliance on interpolated data rather than actual noise-event data at high values of SEL.

For example, the SAMP EIS §§3.2 (Noise Disturbance) specifically highlights the following FICAN finding:

> *"…at an indoor SEL of 100 dB, the probability of awakenings would be expected to exceed 15 percent for a new noise source; yet for long-term noise sources, the probability of awakening is expected to be less than 10 percent."*

This result was **never actually measured in the study — it was extrapolated**. That the SAMP EIS would include and highlight a now-scientifically-questioned finding is misleading at best. An indoor SEL of 100 dB corresponds to approximately 83 dBA — comparable to a loud truck or motorcycle passing close by indoors. The claim that a noise event at that level would awaken fewer than 15% of sleeping people strains credibility.

The inclusion of this study in the SAMP EIS is a historical footnote at best. It demonstrates how poor-quality, extrapolated data can impede the critical updating of FAA regulations, and it **should not be used in the current EIS or propagated to the public**.

For instance, simply using the FAA's 65 DNL noise threshold for sound insulation abatement is not sufficient to reduce aircraft SEL noise to low health effect levels based on scientific, peer reviewed national and international studies and reviews. Furthermore, noise impacted communities outside of the 65 DNL contour boundary, particularly in near proximity of this

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boundary, have SEL noise values that routinely exceed 90 dBA - far above these provided studies' recommendations **The SAMP should comprehensively include this analysis and respectively, where needed, recommend the required additional noise mitigation to keep these affected SEA community members safe from increased cardiovascular risks.**

Conclusion

This comment presents sufficient evidence showing that sleep disturbance is an important causal intermediate between aviation noise exposure and increased cardiovascular risk. When combined with anticipated increases in traffic, air pollution, and the well-documented socioeconomic challenges of near-airport communities, the overall cumulative health effects are even more compelling.

Therefore, the SAMP EIS cumulative health effects analysis **imposes a significant health effect that must be accurately characterized and highlighted with appropriate mitigations provided in the final SAMP EIS**. The current treatment of health effects is factually incomplete, relies on outdated and methodologically criticized studies, and omits substantial peer-reviewed international evidence that directly contradicts its conclusions.

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Seattle-Area Metroplex (SAMP) EIS Comment

Noise Analysis Deficiency — Inadequate Metric and Health Impact Assessment

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Date: 6/13/2026

I. Summary of Objection

The SEPA Draft Environmental Impact Statement's noise analysis is legally insufficient under WAC 197-11-794. By importing the FAA's 1.5 dB/65 DNL significance threshold wholesale from the federal NEPA process, the Port has substituted a federal regulatory shorthand for Washington's own multi-factor significance standard — which the regulation explicitly prohibits. The result is that the DEIS fails to disclose, analyze, or mitigate impacts that are real, documentable, and directly tied to the Project's increase in aircraft operations.

By 2037, the Proposed Action will add approximately 35,000 annual aircraft operations above the No Action Alternative — roughly 96 additional flights per day. These additional events generate no fewer noise disruptions per resident; they simply average into a DNL figure that does not cross the federal threshold. WAC 197-11-794 requires this Port to assess magnitude, population affected, and reversibility of impacts — not merely whether a single federal metric moves 1.5 dB.

II. Legal Standard — WAC 197-11-794

WAC 197-11-794 establishes Washington's test for significance. It directs agencies to consider context and intensity, including:

- The magnitude of the impact
- The number of people or amount of environment affected
- The probability of the impact occurring
- Whether the effects are reversible or irreversible

Critically, WAC 197-11-794(3) states that agencies should not establish numerical thresholds below which impacts are never significant. Significance is a qualitative judgment made in light of all relevant factors — it is not a mechanical trigger.

The DEIS violates this standard by reasoning as follows: "Noise would not increase above levels that FAA considers significant." SEPA does not ask what the FAA considers significant. It asks what Washington's multi-factor analysis finds. The DEIS never conducts that analysis for

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the noise resource. Every factor in WAC 197-11-794 — magnitude, population, reversibility — is left unanswered because the analysis stops at the federal threshold.

III. The DNL Metric Cannot Answer Washington's Significance Test

The Day-Night Average Sound Level (DNL) is an annual energy average. It compresses the noise environment of an entire year into a single number by summing the acoustic energy of every flight, applying a 10 dB nighttime weighting penalty, and averaging. This mathematical operation has a known and documented consequence: because each new aircraft generation is quieter per event than the aircraft it replaces, total DNL can remain nearly flat even as the number of discrete overflight events increases substantially.

This is precisely what the DEIS documents without recognizing its significance. The DEIS forecasts that aircraft operations will increase by approximately 35,000 per year by 2037 under the Proposed Action relative to No Action. Residents in flight-path communities do not experience annual energy averages. **They experience individual overflights — each one a discrete disruption event capable of interrupting sleep, triggering cardiovascular stress response, and producing noise annoyance. None of these event-level impacts is captured by a comparison of two DNL values.**

The following metrics are better suited to answering WAC 197-11-794's intensity and magnitude factors:

Metric	Role in Health Analysis
DNL (Day-Night Average Level)	Compresses 365 days into one number; masks added overflight events if per-aircraft noise falls
SEL (Sound Exposure Level)	Single-event metric — captures energy of each overflight; directly predicts sleep disturbance; preferred in FAA National Sleep Study
LAS,max (Max instantaneous level in bedroom)	Primary outcome variable in FAA National Sleep Study; most direct predictor of physiologic awakening probability
N-above thresholds (N60, N65)	Count of events exceeding a set level per day/night; reveals operation-frequency impacts invisible to DNL
Lnight	WHO-preferred nighttime metric; WHO recommends < 40 dB Lnight; not analyzed in the DEIS

IV. Scientific Evidence the DEIS Fails to Address

The DEIS acknowledges in its own literature review that aircraft noise "can have impacts on levels of annoyance and sleep disturbance" and "marginal potential effects on hypertension." It then declines to quantify how many additional people will be affected by those impacts as a result of the Project, because the DNL metric cannot reveal event-

frequency effects. The following peer-reviewed literature — including studies commissioned or co-published by the FAA itself — establishes that individual-event and nighttime-average metrics show health impacts at levels the DEIS deems insignificant.

Study	Key Metric	Relevant Finding
FAA National Sleep Study — Basner et al. (2023)	LAS,max (individual event max level in bedroom)	Primary outcome is exposure-response function between LAS,max and physiologic awakening probability. FAA's own study uses a single-event metric — not DNL — to measure health outcomes. Data collected at 77 U.S. airports; final report expected 2025.
Philadelphia Pilot Study — Basner et al. (2019)	LAS,max / physiologic awakening	Significant exposure-response function ($p = 0.0136$) between maximum aircraft noise event level and awakening probability inferred from heart rate and body movement. Based on 2,375 recorded events.
Atlanta Pilot Study — Basner et al. (2020)	Lmax / self-reported and physiologic awakening	Self-reported awakenings and event-related physiologic awakenings both increased as a function of maximum aircraft noise level during sleep period.
WHO Environmental Noise Guidelines (2018)	Lnight / Lden	Strongly recommends Lnight < 40 dB for aircraft noise. Above this threshold, adverse health effects are documented. At 45 Lden, 10% of population is highly annoyed; at 55 Lden, 26.7%. These thresholds are far below the DEIS's 65 DNL standard.
Endothelial function study — Neimann et al. (2013), European Heart Journal	Leq / individual event count	60 aircraft noise events/night at average 60 dB(A) maximum caused statistically significant impairment of flow-mediated dilation ($p = 0.016$) — an early cardiovascular disease marker — corresponding to only 46.3 dB Leq. Effect occurs far below FAA's 65 DNL threshold.
Cardiovascular consequences review — Baczalska et al. (2022), Frontiers in Public Health	Lnight / Lden	Long-term aircraft noise linked to increased diastolic blood pressure, arterial stiffness, and impaired left ventricular diastolic function. Night noise area residents showed 2x higher insomnia prevalence vs. low-noise controls (33% vs. 16%, $p = 0.046$).

The Basner et al. (2023) FAA National Sleep Study is particularly significant. It is the FAA's own large-scale investigation, conducted specifically to update noise policy, and its primary outcome metric is LAS,max — the instantaneous maximum level of an individual aircraft event in the bedroom — not DNL. If the FAA acknowledges that LAS,max is the appropriate metric for evaluating sleep disturbance at the policy level, the Port of Seattle cannot rely on DNL alone and claim to have conducted a health-adequate analysis under Washington's broader SEPA standard.

The WHO's 40 dB Lnight threshold is similarly dispositive. The DEIS does not calculate Lnight for any receptor location in the study area. Communities in Des Moines, Burien, and SeaTac that experience nighttime aircraft operations are almost certainly exposed to Lnight levels substantially above 40 dB. The number of residents exposed above the WHO threshold — and how that number grows under the Proposed Action — is wholly absent from the noise analysis.

V. Required Supplemental Analysis — Final EIS

The SEPA comment record creates an obligation for the Port to either provide the following analysis in the Final EIS or explain in writing why each is not required. Failure to do so renders the Final EIS inadequate as a matter of law under Washington's "clearly erroneous" review standard. The Port is requested to provide:

#	Analysis Required	Specification
1	**SEL Event Counts (N60, N65)**	Number of overflight events per day exceeding 60 and 65 dB SEL at representative receptor locations in Des Moines, Burien, SeaTac, and Federal Way — for 2022 baseline, 2032 No Action, and 2032/2037 Proposed Action.
2	**Lnight Analysis**	Nighttime average noise levels at the same receptor locations, compared explicitly to the WHO's 40 dB Lnight adverse health effects threshold. Identify the number of residents exposed above that threshold under each alternative.
3	**LAS,max Distribution**	Distribution of individual aircraft event peak levels during nighttime hours (2200–0600), showing the number of events per night at various Lmax thresholds and how that count changes between No Action and Proposed Action by 2037.
4	**FAA National Sleep Study Integration**	Apply the FAA National Sleep Study's exposure-response function (Basner et al. 2023, final report) to the LAS,max distribution to estimate the additional number of sleep-disturbing events per resident per year attributable to the Proposed Action — or explain in writing why the FAA's own methodology is inadequate for Washington SEPA purposes.
5	**Quantified Health Impact Assessment**	Using WHO dose-effect relationships and the FAA pilot study exposure-response curves, quantify the additional population expected to experience sleep disturbance and cardiovascular risk. This must be addressed under WAC 197-11-794's 'number of people affected' and 'reversibility' factors — neither of which appears in the DEIS noise analysis.

VI. Conclusion

The SEPA DEIS noise analysis fails on its face to satisfy WAC 197-11-794 because it substitutes a federal numerical threshold for Washington's mandated multi-factor significance determination. The DNL metric, applied exclusively, cannot disclose the health impacts of 35,000 additional annual flight operations on communities that already bear a disproportionate noise burden. The peer-reviewed literature — including the FAA's own National Sleep Study — establishes that individual-event metrics (LAS,max, SEL, N-above) and nighttime-average metrics (Lnight) show documentable health effects at levels the DEIS treats as insignificant.

The Port must conduct the supplemental analysis described in Section V before finalizing the EIS. If it declines to do so, the Final SEAP EIS cannot be found adequate under Washington law.

Key Citations Referenced Above

Basner M, et al. (2023). Effects of Aircraft Noise on Sleep: FAA National Sleep Study Protocol. Int J Environ Res Public Health, 20(21):7024.

Basner M, et al. (2019). Aircraft Noise Effects on Sleep — Philadelphia Pilot Study. PMC6747483.

Baczalska et al. (2022). Cardiovascular Consequences of Aircraft Noise Exposure. Front Public Health, 10:1058423.

Neimann et al. (2013). Effect of nighttime aircraft noise on endothelial function. European Heart Journal, 34(45):3508.

WHO (2018). Environmental Noise Guidelines for the European Region. Copenhagen: WHO Regional Office for Europe.

WAC 197-11-794. Washington Administrative Code — Significance, context and intensity.

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Sustainable Airport Master Plan (SAMP) EIS Comment

Adequacy of the Sound Insulation Program as Mitigation for SAMP-Projected Noise Impacts

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6/14/2026
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Member of Des Moines Airport Advisory Committee

Introduction

This comment addresses significant gap in the SAMP DEIS noise analysis: the adequacy of the Sound Insulation Program (SIP) as characterized mitigation for aircraft noise impacts projected under the SAMP Near-Term Projects (NTPs).

The DEIS references the Part 150 SIP as a noise mitigation measure available to residents and noise-sensitive land uses within the 65 dB DNL noise contour. This comment raises three independent concerns about whether that characterization accurately represents the protective reach and effectiveness of the SIP relative to the noise impacts the SAMP NTPs will generate. Each concern is grounded in documented program structure, published FAA guidance, and peer-reviewed acoustic science. Together they establish that the DEIS overstates the mitigation the SIP provides — and that the Final EIS must address each of these limitations explicitly.

Concern 1: The DEIS Identifies 337 Newly Impacted Homes but Does Not Disclose the Full Depth of the Mitigation Gap They Face

The DEIS acknowledges that the 65 DNL noise contour will expand under the 2032 scenario, newly encompassing approximately 337 additional homes. This disclosure of the quantified impact is noted. However, the DEIS treats the existence of the SIP as adequate acknowledgment of mitigation without disclosing the multiple, compounding layers of delay and constraint that stand between those 337 homes and any actual noise relief. That omission is material.

Layer 1: The Part 150 ROA Establishing a New SIP Boundary Is Not Expected Until 2027 at the Earliest

The current SEA Sound Insulation Program operates under a Noise Remedy Boundary established in the 2014 Part 150 Study. A new Part 150 Study was initiated in 2024. The Port of Seattle's own published schedule for that study states that "study

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completion and FAA approval of the NCP" are targeted for 2027 (seapart150.com/faqs). The sequence leading to that target is:

1. Noise Exposure Map (NEM) public workshops completed fall 2025; NEM report submitted to FAA for acceptance summer 2026.
2. Noise Compatibility Program (NCP) analysis and recommendations screening through summer 2026.
3. NCP Report and Public Workshop/Hearing scheduled for fall 2026/winter 2027.
4. FAA's mandatory 180-day review of the submitted NCP, which under 49 U.S.C. § 47504 must conclude within 180 days of NCP submission. Given that the NCP Report is not scheduled for public hearing until fall 2026/winter 2027, FAA submission would realistically occur no earlier than early-to-mid 2027, placing the 180-day review period through late 2027 at minimum.
5. A Record of Approval (ROA) — the document that formally establishes the updated SIP boundary and makes newly impacted properties eligible — would follow FAA review, making late 2027 an optimistic target and 2028 a more realistic one depending on submission timing and FAA processing.

The SAMP NTPs are designed to increase operations beginning in the near term. The DEIS operational forecast projects a significant increase in annual operations under the 2032 constrained scenario relative to the 2022 base year, with that growth building incrementally as individual NTP projects are completed across the 2026–2032 construction period.

Layer 2 : Pre-ROA Acoustic Testing Can Document the Problem but Cannot Deliver Relief

The Port could theoretically fund acoustic surveys of the 337 potentially affected homes before the ROA is issued, using Port revenues rather than waiting for federal AIP eligibility. Some airports have undertaken voluntary pre-ROA testing as an early-outreach measure. However, per FAA AIP guidelines and Port of Seattle program rules, all homes must be located within the approved Noise Remedy Boundary before AIP-funded construction can proceed. AIP grants fund approximately 80% of SIP construction costs; Port revenues fund the remaining 20%. Pre-ROA testing funded entirely by the Port without an approved boundary is permissible, but it delivers documentation — not insulation. A homeowner whose interior acoustic survey confirms elevated noise levels cannot receive SIP construction work until the ROA establishes their eligibility. Early testing therefore does not close the mitigation gap; it merely measures it more precisely while residents continue to experience the impact.

Additionally, pre-ROA acoustic surveys themselves require significant funding and program staffing to administer at scale. The Port's SIP program is currently managing multiple concurrent obligations — completing the accelerated 2014-boundary program, processing condominium and apartment units, and administering the Sound Insulation Repair and Replacement Pilot Program (SIRRPP) — and has already demonstrated limited near-term construction capacity. The SIRRPP was authorized by Commission

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order on February 27, 2024, with $1.5 million for an assessment phase and $5 million reserved exclusively for construction repair and replacement, with a stated goal of beginning construction in 2025 (Port of Seattle Commission Order, February 27, 2024). The assessment phase was completed in December 2024 and the report was provided to the Commission in January 2025. However, as of June 2026, the Commission has not yet established eligibility criteria for the construction phase, no construction contracts have been awarded, and no homes have received repair or replacement work (Port of Seattle, portseattle.org/page/repair-and-replace-pilot-program). The $5 million reserved for construction remains unspent on construction. Federal funding authority for repair and replacement was included in Section 8801 of the FY2026 National Defense Authorization Act (P.L. 119-60), signed into law by President Trump on December 18, 2025, authorizing FAA grant funding for updates to existing sound insulation systems at SEA. However, FAA rulemaking is still required to implement that grant authority, making 2027 the earliest possible start for any federally funded repair work (P.L. 119-60, Section 8801 requires FAA to establish the program through rulemaking prior to grant implementation). Voluntary pre-ROA surveys of 337 additional homes would require resources and program capacity the current SIRRPP experience demonstrates have not yet been mobilized even for the already-authorized repair program.

Layer 3: Even After ROA, the 337 Homes Join the Back of a Substantial Existing Queue

Even assuming an ROA is issued in 2027 or 2028, the 337 newly eligible homes would not immediately receive insulation. They would join a construction queue that already includes:

1. Remaining single-family homes and condominium units under the existing 2014 boundary program, which the Port accelerated in 2020 with a target completion by 2026 but which has experienced delays.
2. Apartment complex units — more than 900 units across 18 complexes — authorized as part of the accelerated program, with a total project estimate of approximately $133 million and a current funding plan relying on approximately $80 million in federal AIP grants over seven years (Port of Seattle, August 2021 and July 2023 Commission authorizations).
3. A repair and replacement backlog for previously insulated homes where Port Package treatments have failed or degraded over time. The SIRRPP assessment (completed December 2024, reported to Commission January 2025) identified the scope of this problem, but as of June 2026 the Commission has not established eligibility criteria and no construction has begun. The $5 million reserved for SIRRPP construction remains unspent. Federal funding authority was enacted in P.L. 119-60 (FY2026 NDAA, December 18, 2025) but requires FAA rulemaking before implementation, with 2027 the earliest possible start. The repair backlog therefore competes with new construction for the same pipeline of program development, rulemaking, and construction resources.

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The 337 homes newly impacted by SAMP growth would be added to this queue after a boundary expansion, competing for the same AIP grant funding and Port construction resources. The DEIS does not disclose this queue, does not estimate where the 337 homes would fall within it, and does not acknowledge that the combination of ROA timeline and construction queue depth means the realistic gap between when those homes first experience SAMP-driven noise exposure and when they receive insulation is not five years — it is potentially a decade or more for many properties.

Layer 4: SAMP Construction Phasing Means the Noise Impact Itself Accumulates During the Gap Period

The SAMP NTPs are not constructed simultaneously. Individual projects are phased across the 2026–2032 period and beyond. This means the noise impact on the 337 homes builds incrementally during the same multi-year window in which the SIP remedy is still being developed. Properties that first experience noise increases from early NTP completions in 2026 or 2027 will do so without any SIP eligibility, without any interim mitigation, and potentially without any ROA for two or more additional years. The cumulative exposure experienced during that gap period is not recoverable — it represents years of health exposure that the DEIS characterizes as mitigated by a program that will not reach those homes for years after the exposure begins.

Layer 5: Homes Built in Des Moines After 2012 Are Simultaneously Unprotected by Building Code and Categorically Ineligible for Federal SIP Funding

The DEIS cites the SIP as mitigation for the 337 newly impacted homes without disclosing that a portion of those homes — specifically, homes built in Des Moines after 2012 — are categorically ineligible for federal AIP-funded sound insulation regardless of when the ROA is issued or how they perform on interior acoustic testing, and simultaneously were built without any noise attenuation requirements. This creates a unique double vulnerability that the DEIS does not acknowledge.

SIP eligibility under FAA AIP guidelines requires that a property be built prior to local building code enactment requiring noise-attenuating construction — specifically, before 1986 or 1987 depending on jurisdiction. The rationale is that post-code homes are presumed to have adequate attenuation already incorporated through code-compliant construction. Homes built after the applicable local code date are categorically ineligible for federal SIP construction funding, regardless of their actual interior noise levels or their position within the DNL 65 contour. By contrast, cities such as Burien (Chapter 15.12 BMC, adopted 2004) and SeaTac (Chapter 13.240 SMC, currently in force) have active aircraft noise attenuation building codes requiring STC-rated construction within airport noise zones. Post-code homes in those cities are ineligible for SIP for the expected reason — they were built to attenuating standards.

Des Moines presents a categorically different and more damaging situation. Des Moines originally adopted a sound attenuation building code in 2007 (Ordinance 1407) as a condition of participating in the original Port Package program. In 2012, the Des Moines City Council passed Ordinance 1539, which repealed the sound code in its entirety

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(DMMC 14.08.180 through 14.08.440), citing the development community's view that the code was economically unjustified and burdensome. As of January 2024, the City Council's Economic Development Committee was informed that plans to restore the sound code had been placed on indefinite hold due to higher-priority planning tasks and the need for an outside consultant (Des Moines City Council Economic Development Committee minutes, January 2024; desmoines.civicweb.net), and the code has not been reinstated since. When the Committee last addressed it the Council declined to fund even a preliminary sound consultant engagement to evaluate restoring the code, and it has not been reinstated. The consequence for homes built in Des Moines after 2012 is a compounding of two independent failures: they were constructed without any noise attenuation requirements, leaving them acoustically vulnerable to aircraft departures in ways that code-compliant homes in Burien and SeaTac are not; and they are categorically ineligible for federal AIP-funded SIP construction, because all post-1986 construction in Des Moines is ineligible under FAA eligibility rules (the Des Moines cut-off date is 1986, one year earlier than the 1987 cut-off applied in other area jurisdictions, as confirmed in Port of Seattle program documentation). There is no SIP remedy path for these properties — not now, and not after the ROA is issued.

Given the geography of the 2032 contour expansion — concentrated on the south side of the airport proximate to Des Moines — a portion of the 337 newly impacted homes are likely to be post-2012 Des Moines construction. The DEIS does not identify this, does not estimate how many of the 337 homes fall into this category, and does not identify any alternative mitigation available to them. The three-category eligibility structure within Des Moines is as follows:

1. **Pre-1986 homes in Des Moines:** Potentially eligible for SIP construction once a new ROA is issued and they pass interior acoustic testing. These represent the best case for SIP access, subject to all the timeline and queue constraints described in Concerns 1–4.
2. **1986–2012 homes in Des Moines:** Built during the period when Des Moines had an active sound attenuation code. These homes are categorically ineligible for federal SIP funding as post-code construction. Their actual acoustic performance may or may not be adequate — the code may have been met to varying degrees — but they have no SIP remedy path regardless of measured interior noise levels.
3. **Post-2012 homes in Des Moines:** Built after the sound code was rescinded, without any noise attenuation requirements, and categorically ineligible for federal SIP funding as post-1987 construction. These are simultaneously the most acoustically unprotected homes in the newly impacted area and the ones with no path to federal mitigation. For these properties, the DEIS's citation of the SIP as mitigation is entirely inapplicable.

The DEIS does not disclose what fraction of the 337 newly impacted homes are post-2012 Des Moines construction, does not acknowledge the 2012 code repeal and its SIP eligibility consequences, and does not identify any interim or alternative mitigation available to those homes. Under WAC 197-11-330, the Final EIS must characterize not

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only when mitigation will be available but to whom it applies. **Citing the SIP as mitigation for 337 homes without disclosing that a portion of those homes have no SIP eligibility path — due to a local decision to rescind building code protections that the FAA's eligibility structure assumes were in place — does not satisfy SEPA's disclosure requirements. The Final EIS must address this gap explicitly and identify what, if any, mitigation is available to post-2012 Des Moines homes that cannot access the SIP.**

Concern 2: The Interior Noise Eligibility Test Systematically Understates Low-Frequency Penetration from Departing Jet Aircraft

To qualify for sound insulation under the current SIP, a property must not only lie within the Noise Remedy Boundary — it must also pass an interior acoustic test demonstrating an existing interior noise level of 45 dB DNL or greater (with windows and doors closed). This test is the gating criterion: a property that tests below 45 dB DNL is ineligible for insulation regardless of what residents experience inside during actual aircraft overflight.

The interior noise level used for this determination is not measured directly from actual aircraft overflights. It is derived indirectly. Per FAA AC 150/5000-9B and the underlying Airport Cooperative Research Program (ACRP) Report 152 ("Evaluating Methods for Determining Interior Noise Levels Used in Airport Sound Insulation Programs," 2016) — both of which govern current SIP acoustic testing practice — a calibrated loudspeaker is placed outside the property and simultaneous interior and exterior sound pressure levels are measured in one-third octave bands from 50 Hz through 5 kHz (or octave bands from 63 Hz through 4 kHz). The resulting outdoor-indoor noise reduction (NLR) values are then A-weighted and mathematically combined with the modeled exterior DNL contour to produce an estimated interior DNL. That derived A-weighted DNL value is compared to the 45 dB threshold.

Three distinct limitations of this methodology are relevant to departing jet aircraft at SEA. They are of different character and must be sourced separately.

6. **A-weighting structurally suppresses low-frequency contributions in the eligibility metric.** The protocol correctly includes low-frequency octave bands in the raw measurement. The problem lies in what happens to those bands when A-weighting is applied in post-processing to derive the interior DNL. A-weighting, the frequency filter embedded in the DNL metric, applies attenuation of approximately −26 dB at 63 Hz and approximately −16 dB at 125 Hz relative to mid-frequencies. This means that even when a building envelope provides poor attenuation at these low frequencies — and building envelopes are well-documented to be significantly less effective below 250 Hz than at mid-frequencies — the A-weighted DNL calculation mathematically discounts that poor performance by 16 to 26 dB before arriving at the eligibility number. A home that leaks substantial low-frequency aircraft energy during departure events may still derive an interior DNL below 45 dB and be deemed ineligible for the SIP,

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because A-weighting renders the metric structurally insensitive to the frequency range where both the aircraft energy and the building's weakness are greatest.

This is not a feature of the loudspeaker measurement protocol — it is a structural property of A-weighted DNL as an eligibility metric for a noise source with significant low-frequency content. The peer-reviewed acoustic literature is explicit on this point. *Leventhall (2004, Noise & Health, 6:59–72)* states directly that "conventional methods of assessing annoyance, typically based on A-weighted equivalent level, are inadequate for low frequency noise and lead to incorrect decisions by regulatory authorities" and that "the A-weighted level underestimates the effects of low-frequency noises." The FAA's own *PARTNER-funded Low Frequency Noise Study (Hodgdon, Atchley, Bernhard; Penn State/MIT, 2007 — PARTNER-COE-2007-001)* reached a related conclusion: that C-weighted metrics (LCmax) correlated better than A-weighted metrics (LAmax) with subjective response to indoor aircraft noise when low-frequency content is significant, and that loudness algorithms for aviation noise assessment should include frequency content below 50 Hz. Neither ACRP Report 152 nor the FAA's loudspeaker equalization research (DOT/FAA/TC-18/15; DOT/FAA/TC-19/34) addresses this structural A-weighting limitation — those studies focus on measurement accuracy within the loudspeaker method as designed, not on the appropriateness of A-weighted DNL as the eligibility metric itself. The A-weighting problem predates and is independent of the loudspeaker measurement question.

1. **Loudspeaker spectral mismatch introduces additional error at low frequencies.** Separately from the A-weighting issue, the loudspeaker used in field testing must reproduce the spectral shape of actual aircraft departures accurately in order for the measured NLR to represent what the building does to real overflight noise. Matching the low-frequency content of a departing widebody jet — which carries substantial energy in the 50–125 Hz range from engine fan harmonics and jet mixing noise — requires careful spectral equalization of the loudspeaker source. ACRP Report 152 identifies spectral equalization as a key variable in loudspeaker testing accuracy. DOT/FAA/TC-18/15 ("Investigation of ASTM E966 Adjustment Factors") documents that the adjustment factors applied to loudspeaker-derived NLR values carry measurement uncertainty greatest at low frequencies. DOT/FAA/TC-19/34 ("Noise Level Reduction Measurement Method Equalization and Normalization") was published by the FAA specifically to address equalization and normalization accuracy concerns in SIP eligibility testing. Significantly, HMMH — the acoustical firm that developed the Port of Seattle's SIP Acoustical Testing Plan — simultaneously conducted the FAA's PEARS study on aircraft noise spectra selection for loudspeaker-based NLR, confirming that spectral matching is a recognized accuracy variable in the SEA program context.
2. **Structural coupling pathways are untested by the loudspeaker method.** At very low frequencies, sound energy does not enter buildings exclusively through the facade as airborne waves. It also couples into the building structure through ground vibration and pressure fluctuations — particularly from the high-thrust, low-altitude phase of departure that characterizes operations on Runways 16L and 16C at SEA. These structural coupling pathways bypass windows and walls

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> entirely. A loudspeaker placed outside the facade tests airborne transmission through facade elements only; it tests nothing about structurally transmitted low-frequency energy. Properties that experience significant low-frequency structural excitation from departing aircraft may therefore test below the 45 dB DNL eligibility threshold using the loudspeaker method even though actual interior noise levels during departure events materially exceed that threshold.

These three limitations operate through different mechanisms and are documented in different bodies of research. The A-weighting suppression issue is the largest in magnitude — a 16 to 26 dB systematic suppression of the frequency range most relevant to jet departure noise — and it is structural to the eligibility metric itself, not correctable by improving the loudspeaker measurement protocol. The loudspeaker spectral mismatch and structural coupling issues compound this underlying metric problem. **Together, they mean that the SIP eligibility test may systematically exclude properties that experience material aircraft noise intrusion at frequencies where both the source energy and the building's vulnerability are greatest.**

The DEIS cites the SIP as noise mitigation. The Final EIS should either characterize these limitations explicitly, or confirm that the new Part 150 NCP will address them — specifically, that the NCP will evaluate whether A-weighted DNL remains an appropriate eligibility metric for low-frequency-dominant departure noise at SEA, and that the updated SIP testing protocol will require loudspeaker spectral equalization matched to actual SEA departure spectra and assessment of structurally transmitted low-frequency energy.

Concern 3: Sound Insulation Addresses Average Noise Level but Does Not Reduce Event Frequency or Restore Respite

Even where the SIP functions exactly as designed — a property qualifies, insulation is installed, and the target interior DNL of 45 dB is achieved — the program addresses only one dimension of noise exposure. Sound insulation reduces the amplitude of noise events experienced inside the home. It does not reduce the number of those events, the frequency of interruptions to sleep or speech, or the loss of inter-event respite that characterizes exposure at heavily affected SEA community locations.

A resident whose home has been insulated to 45 dB DNL still experiences the same number of discrete noise intrusions per day as before insulation. If the pre-insulation condition includes 529 noise events per day with a median gap of 1.5 minutes between them — as directly measured at the SEA18 monitor during the March–April 2026 study period — the post-insulation condition retains all 529 events at reduced amplitude. The **events are quieter; they are not fewer, and they are not more widely spaced.**

This distinction is not a minor qualification. The peer-reviewed literature identifies event frequency and inter-event respite as the primary drivers of the health outcomes most associated with airport noise exposure — sleep disruption, cardiovascular stress response, and long-term hypertension risk. *Basner et al. (2023)* found that the number of nighttime noise events is the principal predictor of vascular

function impairment, independent of average level. *WHO (2018)* Lnight guidelines are premised on event counts during sleep hours, not average energy. Schmidt et al. (2013, European Heart Journal, 34:3508–3514) and *Baczalska et al. (2022)* document cardiovascular effects tied to event-level exposure patterns of the type documented at SEA community monitors. Sound insulation does not address any of these pathways. It reduces peak intrusion level; it does not restore the quiet intervals between events that the physiological literature identifies as necessary for recovery.

Analysis of actual recorded data over a one month period, 3/15/2026-4/14/2026, was done at noise monitor, SEA18 (*Bogen, SEPA Eis Comment Noise Cumulative Effect,6/14/2026*) The measured median gap between noise events is already only 1.5 minutes with extended quiet periods exceeding 10 minutes which occur only 2.8% of the time. Insulation to 45 dB DNL produces a home that is still subjected to near-continuous noise interruption — simply at lower amplitude. The SAMP DEIS Appendix A Table 6 projects 475,655 total operations under the 2032 Proposed Action scenario, a 9.1% increase above the 2025 actual level of 435,896 (FAA/Port of Seattle data). **Applying that growth rate to the actual measured SEA18 Monitor data baseline projects approximately 48 additional noise events per day by 2032, further compressing an already critically short respite window. No amount of sound insulation addresses that increase.**

The DEIS presents the SIP as mitigation for noise impacts without disclosing this fundamental limitation. Under WAC 197-11-330, mitigation must be described with sufficient specificity that the public and decision-makers can evaluate whether it actually addresses the impact at issue. A mitigation measure that reduces average noise level does not mitigate an impact defined by event frequency and loss of respite. **The Final EIS must acknowledge this distinction and identify what, if any, mitigation the SAMP proposes for the event-frequency and respite dimensions of noise exposure that the SIP cannot address.**

Summary of Requested Supplemental Analysis in the Final EIS

This submission requests that the Port of Seattle address the following in the SAMP SEPA Final EIS:

1. For the 337 homes the DEIS identifies as newly falling within the expanded 2032 DNL 65 dB contour, disclose all five layers of the mitigation gap documented in this comment: (a) the Part 150 ROA timeline, with reference to the Port's own published schedule projecting FAA NCP approval for 2027 and the sequencing constraints that make a realistic ROA date late 2027 to 2028 or later; (b) the limitation of pre-ROA acoustic testing as documentation only — not construction authorization — and the resource constraints that make even voluntary pre-ROA surveys uncertain given existing program obligations; (c) the existing SIP construction queue, including the apartment and condominium program, the repair and replacement backlog, and the realistic position of 337 newly eligible homes within that queue; (d) **the SAMP construction phasing that causes**

noise impacts on the 337 homes to accumulate incrementally beginning in the near term, years before any SIP remedy can reach them; and (e) the Des Moines building code eligibility gap — specifically, that homes built in Des Moines after 2012 are categorically ineligible for federal AIP-funded SIP construction under FAA eligibility rules and were simultaneously built without any noise attenuation requirements following the city's 2012 repeal of its sound attenuation building code, and that no interim or alternative mitigation has been identified for those homes. **The Final EIS must disclose what fraction of the 337 newly impacted homes are post-2012 Des Moines construction and identify what mitigation, if any, is available to them.**

2. Characterize the three independent low-frequency limitations of the SIP interior noise eligibility test documented in this comment: (a) the structural suppression of low-frequency contributions by A-weighting in the DNL metric (approximately −26 dB at 63 Hz, −16 dB at 125 Hz), which is a property of the eligibility metric itself and not correctable within the loudspeaker protocol, and which the peer-reviewed acoustic literature identifies as causing underestimation of low-frequency noise effects (Leventhall 2004; PARTNER-COE-2007-001); (b) loudspeaker spectral mismatch at low frequencies, recognized in ACRP Report 152 and DOT/FAA/TC-18/15 and DOT/FAA/TC-19/34 as a source of measurement uncertainty in SIP eligibility testing; and (c) the untested structural coupling pathway through which low-frequency departure energy enters buildings independently of facade airborne transmission. **Confirm that the new Part 150 NCP will evaluate whether A-weighted DNL remains an appropriate eligibility metric for the low-frequency-dominant departure noise environment at SEA, and will require loudspeaker spectral equalization matched to actual SEA departure spectra and assessment of structurally transmitted low-frequency energy.**
3. Acknowledge that sound insulation, even where fully effective, does not reduce noise event frequency, inter-event respite loss, or nighttime event counts — and identify what additional operational or land use measures, if any, the SAMP proposes to address the event-frequency dimensions of noise impact that insulation cannot mitigate.
4. **Confirm that the characterization of the SIP as noise mitigation in the DEIS is qualified by the above limitations**, and that the significance determination for noise impacts under WAC 197-11-330 and WAC 197-11-794 accounts for the mitigation gap, metric limitations, and scope constraints documented in this comment.

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Sustainable Airport Master Plan (SAMP) EIS Comment

Port of Seattle Sound Implementation Program (SIP) Limitations

Direct Evidence of SIP Measurement Methodology Limitations from HMMH June 2026 Acoustical Testing Report

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Member of Des Moines Airport Advisory Committee
Date: 6/13/2026

Source document: Harris Miller Miller & Hanson Inc. (HMMH), "Acoustical Testing Results for SEA Repair and Replacement Program," Technical Memorandum, Project No. 03-12150.001.004, June 5, 2026 Obtained Thu Port of Seattle's public records request

Related submission: SEA SEPA Comment — Adequacy of the Sound Insulation Program as Mitigation (submitted separately, *SIP _Adequacy_Copmment_V5, Bogen 2026*)

Introduction and Purpose

This supplemental comment is submitted to place into the SEPA DEIS comment record direct, primary-source evidence bearing on the limitations of the Sound Insulation Program (SIP) interior noise eligibility methodology, as described in a companion comment submitted separately (see above). The evidence consists of acoustical testing data produced by Harris Miller Miller & Hanson Inc. (HMMH) for the Port of Seattle's Sound Insulation Repair and Replacement Program (SIRRPP), dated June 5, 2026 — a document produced by the Port's own acoustical contractor, HMMH, conducting measurements in strict accordance with FAA Advisory Circular AC 150/5000-9B Chapter 8 and FAA Order 5100.38D Appendix R — the FAA-mandated protocol governing all AIP-funded SIP eligibility testing nationwide, with no Port-specific modifications — at 30 residential structures in the communities surrounding SEA whose residents have raised concerns about the adequacy of their existing sound insulation.

The SIRRPP was established specifically to respond to community complaints that previously-installed Port Package sound insulation has degraded or is no longer performing adequately. These are homes whose residents are actively reporting that aircraft noise is penetrating their living spaces. The critical question the SIRRPP acoustic testing was designed to answer is: do these homes qualify for repair or

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replacement funding under FAA eligibility rules? For 26 of the 30 homes tested — 86.7% — the answer was no. The Port publicly characterized this result as evidence that "all acoustically tested windows and doors were continuing to provide appropriate sound insulation." **This comment argues that characterization is wrong: the test used a measurement methodology that is structurally insensitive to the low-frequency aircraft noise these residents are actually experiencing, and the 86.7% denial rate reflects the limitations of the test, not the absence of a real problem.**

The companion comment argued, on theoretical and literature grounds, that the A-weighted DNL metric used to determine SIP eligibility structurally suppresses low-frequency contributions to the interior noise level, causing the eligibility test to underestimate actual interior noise exposure from departing jet aircraft at frequencies where building envelopes perform poorly. The HMMH June 2026 report provides empirical confirmation of that argument in the Port's own data. **This supplemental comment documents that confirm, quantifies its implications, and requests that the Final EIS acknowledge it.**

The HMMH June 2026 Acoustical Testing Report: What It Measured and How

The HMMH report presents pre-construction acoustical testing results for 30 residential structures in the SEA noise impact area, conducted in April 2026 as part of the Port's SIRRPP assessment phase. The testing was conducted in accordance with Chapter 8 of FAA AC 150/5000-9B using a Mackie SRM450 loudspeaker generating a pink noise test signal (equal energy in each octave band). Octave band sound pressure levels were measured simultaneously inside and outside each tested room at 125 Hz, 250 Hz, 500 Hz, 1000 Hz, and 2000 Hz. The outdoor-indoor noise reduction (OINR) was calculated by frequency band and then used to derive a Noise Level Reduction (NLR) figure by applying the Boeing 737-800 A-weighted aircraft noise spectrum per Section 8.5.10.1 of AC 150/5000-9B. The resulting NLR was subtracted from the assigned exterior DNL (70 dB, reflecting location within the 65–70 dB contour interval per the 2018 Forecast NEM) to produce an interior DNL for each room. A median interior DNL was then calculated across all habitable rooms in each structure and compared to the 45 dB eligibility threshold.

The test protocol, the aircraft spectrum used, and the eligibility threshold are all consistent with standard FAA-approved SIP methodology. The results therefore represent the methodology operating exactly as designed under current FAA guidance — making them directly relevant to the question of whether that methodology accurately captures the acoustic conditions these residents experience.

Overall Results: 26 of 30 Homes Denied Repair Funding Despite Resident-Reported Noise Problems

The 30 homes tested in April 2026 participated in the SIRRPP because their residents had come forward to report concerns about aircraft noise penetrating their homes —

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specifically, concerns that the sound insulation packages installed by the Port years ago were no longer performing adequately. The HMMH report's Table 1 presents the acoustic test results that determined which of those homes qualify for repair or replacement funding under current FAA policy. The aggregate results are as follows:

1. 26 of 30 structures (86.7%) tested below the 45 dB DNL median interior threshold and were denied eligibility for repair or replacement under current FAA policy — despite their residents having self-reported ongoing noise problems.
2. 4 of 30 structures (13.3%) tested at or above 45 dB DNL and qualified for repair or replacement: Krakow (45.0 dB, Burien), Hang & Cha (47.4 dB, Seattle), Norris (45.3 dB, Seattle), and Soden (48.6 dB, Des Moines).
3. The median interior DNL across all 30 structures was approximately 39.1 dB — nearly 6 dB below the 45 dB eligibility threshold.
4. 9 of the 26 denied homes scored in the 40–44.9 dB range — margins close enough to the threshold that the measurement methodology's known low-frequency limitations are directly material to their eligibility outcome.

The Port publicly characterizes the 86.7% denial rate as a positive finding: its program page states that the testing indicates "all acoustically tested windows and doors were continuing to provide appropriate sound insulation." This comment disputes that characterization. The test used a Boeing 737-800 A-weighted spectrum and an A-weighted DNL eligibility metric that together suppress the low-frequency aircraft noise these residents are experiencing by up to 16–26 dB at the frequencies where building envelopes are weakest. **The test is not showing that the homes are quiet — it is showing that the test cannot hear what the residents hear. The 86.7% denial rate is evidence of a measurement gap, not evidence that the insulation is working.**

HMMH itself notes in the report that "16 of the structures have one or more individual habitable rooms with interior DNL sound levels above 45 dB that could potentially benefit from repair or replacement of acoustical windows and doors" but that this is not current FAA policy. More than half of the denied homes have at least one room — a living room, kitchen, or office — where the test itself shows interior DNL exceeding the eligibility threshold. Those residents are being told their insulation is adequate while the FAA-mandated test protocol itself shows specific rooms in their homes testing above the very threshold used to define adequacy. The median-across-rooms methodology that averages those high-exposure rooms with quieter bedrooms is the mechanical reason they were denied; the low-frequency measurement gap is the reason the overall median is artificially low.

The Octave Band Data Directly Confirms the A-Weighting and Low-Frequency Problem

The HMMH report attachment provides full octave band measurement data for each tested room. The Schwartz Living Room at 20425 12th Ave S, SeaTac, is the first

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example in the attachment and illustrates the issue precisely. The measured noise reduction at each octave band, and the resulting interior noise levels, are as follows:

Table 1. Schwartz Living Room — Octave Band Noise Reduction and Interior Noise Level

Octave Band	Noise Reduction (dB)	Exterior Level (dBa)	Interior Level (dBa)	A-Weighting (dB)
125 Hz	**14.4**	**50.3**	**35.9**	**−16.1**
250 Hz	20.1	57.1	37.0	−8.6
500 Hz	22.1	65.1	43.0	−3.2
1000 Hz	25.9	66.6	40.7	0.0
2000 Hz	25.3	61.8	36.5	+1.2
Reported A-Weighted NLR (final eligibility figure)				**23.5 dB**

Source: HMMH Technical Memorandum, June 5, 2026, Attachment — Acoustical Measurement Data, Schwartz Living Room.

The data in Table 1 directly demonstrates the A-weighting problem described in the companion comment. At 125 Hz, the building's noise reduction is only 14.4 dB — approximately 11 dB less than at 1000 Hz (25.9 dB) and 11 dB less than at 2000 Hz (25.3 dB). This low-frequency attenuation deficit is a well-documented physical characteristic of typical residential construction: windows, doors, and wall assemblies are significantly less effective at blocking low-frequency sound than mid- and high-frequency sound.

However, because the Boeing 737-800 spectrum used in the NLR calculation assigns relatively low A-weighted energy to the 125 Hz band (50.3 dBa, compared to 66.6 dBa at 1000 Hz), and because A-weighting itself applies an additional −16 dB correction at 125 Hz relative to the 1000 Hz reference, the building's poor performance at 125 Hz contributes almost nothing to the final 23.5 dB NLR figure. The A-weighted NLR of 23.5 dB is driven almost entirely by the mid-frequency performance (22–26 dB NR at 500–2000 Hz) and is essentially blind to the 14.4 dB low-frequency weakness. If the building were tested with a spectrum that included more realistic low-frequency content — reflecting the actual departure spectrum of heavier aircraft that operate at SEA, including Boeing 777, 787, and 747 freighter operations — the NLR would be lower, and the derived interior DNL would be higher. Some homes that currently fail the 45 dB threshold might qualify; those that currently pass might qualify by a smaller margin.

This is not a deficiency in HMMH's testing — HMMH followed FAA AC 150/5000-9B exactly as prescribed. **The deficiency is structural to the FAA methodology itself: using a single-aircraft A-weighted spectrum (Boeing 737-800) as the basis for NLR calculation at a mixed-fleet airport systematically underrepresents the low-frequency content that heavier, noisier aircraft contribute to the actual departure noise environment.**

Twenty-Six Homes Denied Relief — Nine by Margins the Low-Frequency Gap Could Explain

Of the 26 homes denied repair or replacement funding, 9 scored in the 40–44.9 dB range — within the margin where the known A-weighting suppression of low-frequency attenuation deficits is directly relevant to the eligibility outcome. These are residents

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who came forward, participated in testing, and were told their insulation is adequate — by the thinnest of margins. These homes are listed in Table 2:

Table 2. Non-Qualifying Structures Scoring in the 40–44.9 dB Range

Resident	City	Median Interior DNL	Shortfall from 45 dB
Neuharth	Burien	44.8 dB	0.2 dB
Schwartz	SeaTac	44.3 dB	0.7 dB
Nguyen	Des Moines	43.4 dB	1.6 dB
Gerado	Des Moines	42.8 dB	2.2 dB
Fuchigami	Des Moines	41.8 dB	3.2 dB
Green	Burien	41.7 dB	3.3 dB
Byrd	Burien	41.7 dB	3.3 dB
Thom	SeaTac	41.2 dB	3.8 dB
Brogdon	Seattle	40.7 dB	4.3 dB

Source: HMMH Technical Memorandum, June 5, 2026, Table 1.

The Neuharth home in Burien was denied by only 0.2 dB. The Schwartz home in SeaTac was denied by 0.7 dB. Both are in communities directly under widebody departure corridors. If the NLR calculation for these homes used a spectrum with greater low-frequency content — reflecting the actual departure fleet at SEA rather than the 737-800 alone — the derived interior DNL would be higher, potentially crossing the 45 dB threshold and reversing the denial.

This comment does not assert that any specific home would definitively qualify under a corrected methodology. The point is narrower and more consequential: residents of these homes reported noise problems, submitted to testing, and were denied relief based on a metric that is structurally insensitive to the low-frequency noise they are experiencing. **The 9 near-threshold homes are the population for whom that insensitivity is most likely to have produced a wrong answer. They would be denied without remedy on the basis of a number the test cannot accurately measure.**

The Median-Across-Rooms Methodology Denies Relief to Homes With Qualifying Rooms

HMMH's report notes that 16 of 30 homes — more than half of those tested — have at least one habitable room with an interior DNL above 45 dB, yet were still denied funding because the whole-structure median fell below the threshold. The FAA AC 150/5000-9B median-across-rooms methodology averages high-exposure rooms with quieter bedrooms, and that average, not the residents' actual experience in their main living spaces, determines eligibility. The following rooms in denied homes tested above 45 dB interior DNL:

1. Schwartz (SeaTac, median 44.3 dB, denied by 0.7 dB): Dining/Kitchen 57.8 dB, Sitting Room 50.8 dB
2. Tua (Des Moines, median 38.6 dB): Sitting/Dining 51.6 dB, Kitchen 46.4 dB
3. Fuchigami (Des Moines, median 41.8 dB): Office 2 at 54.6 dB, Office 1 at 49.2 dB, Kitchen 1 at 45.7 dB, Sitting Room at 46.9 dB

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4. Hang & Cha (Seattle, qualified at 47.4 dB): Dining/Kitchen 52.8 dB, Bedroom 2 at 49.5 dB
5. Soden (Des Moines, qualified at 48.6 dB): Bedroom 3 at 52.5 dB, Sitting/Dining at 48.9 dB, Kitchen at 48.3 dB, Sitting Room 46.4 dB
6. Krakow (Burien, qualified at 45.0 dB): Sitting Room at 52.0 dB, Office at 49.0 dB, Living/Dining/Kitchen at 45.0 dB
7. Brogdon (Seattle, median 40.7 dB): Sitting/Kitchen at 50.8 dB, Bedroom 3 at 46.1 dB
8. Norris (Seattle, qualified at 45.3 dB): Living/Dining at 47.5 dB, Sitting Room at 48.4 dB
9. Berihun (SeaTac, median 36.0 dB): Sitting/Kitchen at 50.8 dB, Living/Dining at 48.5 dB, Office at 45.2 dB
10. Vidrio (Seattle, median 39.5 dB): Dining/Kitchen 49.4 dB, Living Room 48.3 dB
11. Green (Burien, median 41.7 dB): Dining/Kitchen 49.4 dB, Living Room 48.3 dB
12. Kawabata (Des Moines, median 38.6 dB): Office at 47.9 dB
13. Nguyen (Des Moines, median 43.4 dB, denied by 1.6 dB): Living Room at 47.3 dB
14. Neuharth (Burien, median 44.8 dB, denied by 0.2 dB): Living/Dining at 47.3 dB, Kitchen at 48.1 dB
15. Byrd (Burien, median 41.7 dB): Sitting Room at 48.9 dB
16. Thom (SeaTac, median 41.2 dB): Living/Kitchen at 49.4 dB

These are the rooms where residents actually live during the day — where they cook, eat, work, and spend their waking hours. The Schwartz dining/kitchen tested at 57.8 dB interior, approaching the exterior DNL assignment of 70 dB, meaning this room receives virtually no effective noise reduction from the building envelope. Yet that household was denied repair funding because the median across all rooms — including quieter bedrooms on the far side of the house — came in at 44.3 dB, 0.7 dB below the threshold. The resident reporting a noise problem in their kitchen is not wrong. The test is wrong about the kitchen being quiet enough.

The median-across-rooms methodology is embedded in FAA AC 150/5000-9B and is not within the Port's unilateral authority to change for AIP-funded work. However, the Final EIS should acknowledge that this methodology denies relief to residents based on a whole-structure average that does not represent the noise environment in the spaces where they actually live, and that the HMMH data documents this gap in 16 of the 30 homes assessed.

The 737-800 Test Spectrum Is Already Unrepresentative — and Will Be More So by 2032

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The NLR calculation in the HMMH report used the Boeing 737-800 as the representative aircraft type per Section 8.5.10.1 of FAA AC 150/5000-9B. The 737-800 is the dominant single aircraft type at SEA by operations count, and its use as the test standard is consistent with current FAA guidance. However, the SEA departure fleet includes a substantial and growing number of widebody aircraft whose acoustic signature differs fundamentally from the 737-800 at low frequencies, and the SAMP DEIS Appendix A Table 6 documents that this gap will widen materially by 2032. The choice of test spectrum is therefore not a static assumption — it is a policy decision with real eligibility consequences that grows more consequential as the fleet mix shifts toward high-thrust widebody operations.

Current and Forecast Widebody Operations at SEA: DEIS Table 6 Data

SAMP DEIS Appendix A Table 6 (Forecasts of Total Aircraft Operations by Aircraft Type, LeighFisher, September 2023) provides the official environmental review fleet distribution for SEA. The following figures are drawn directly from that table. Total widebody operations (domestic and international combined) grow substantially across the planning horizon:

Table A. Total Widebody Operations at SEA: DEIS Appendix A Table 6 Data

Year	Domestic WB Ops	International WB Ops	Total WB Ops	% of All Ops	WB Departures/Day
2022 (Historical)	4,400	11,667	16,067	4.0%	~22/day
2027 (Forecast)	7,642	18,568	26,210	5.6%	~36/day
2032 (Forecast)	10,869	20,946	31,815	6.2%	~44/day
2037 (Forecast)	16,756	24,427	41,183	7.4%	~56/day

Source: SAMP SEPA DEIS Appendix A, Table 6 (LeighFisher, September 2023). WB Departures/Day = total WB operations ÷ 2 ÷ 365.

Widebody departures at SEA grow from approximately 22 per day in 2022 to approximately 44 per day under the 2032 forecast — a doubling — while total operations grow only 28%. These widebody departures are not evenly distributed across runways or time of day. They are concentrated on Runway 16L (the primary long-haul departure runway) during morning and early afternoon departure banks, directly overflying the south-side communities where the HMMH-tested homes are located.

Key Widebody Aircraft: Acoustic Characteristics vs. the 737-800 Test Standard

The acoustic significance of this fleet mix shift depends on how much the widebody aircraft differ from the 737-800 in the frequency range where building attenuation is weakest. The relevant physical parameters are departure thrust and engine fan diameter, both of which govern low-frequency noise generation. Fan diameter determines blade-passage frequency: larger fans rotate at lower RPM, concentrating energy in the 63–125 Hz octave bands where building envelopes and windows provide the least attenuation and A-weighting suppresses the contribution most heavily.

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Table B. Key Widebody Aircraft at SEA: Acoustic Parameters vs. Boeing 737-800 Baseline

Aircraft	2022 Ops/yr	2032 Ops/yr	Departure Thrust	Fan Diameter	Thrust vs. 737-800
B737-800 (HMMH test standard)	**63,014**	**73,649**	**54,000 lb**	**61"**	**1.0x (baseline)**
A330-900neo (Dom+Int)	2,659	5,206	144,000 lb	112"	2.7x
A350-900 (Intl)*	566	1,318	168,000 lb	118"	3.1x
B787-8 (Dom+Int)	780	7,548	134,000 lb	111"	2.5x
B787-9 (Dom+Int)	2,404	6,190	138,000 lb	111"	2.6x
B787-10 (Dom+Int)	562	1,564	152,000 lb	111"	2.8x
A330-300 (Intl)	1,436	2,515	144,000 lb	112"	2.7x
B777-200/300ER (Intl)	2,208	2,409	190,000 lb	128"	3.5x
B747-8F (Cargo/Night)	597	615	266,000 lb	105"	4.9x

*Sources: Operations data from SAMP DEIS Appendix A Table 6. Thrust and fan diameter from manufacturer type certificate data and FAA AEDT database. *A350 figure is likely understated — see below.*

The A350 Undercount: Actual Fleet Transition Has Outpaced the DEIS Forecast

The DEIS Appendix A was prepared in September 2023. Since that date, Delta Air Lines has accelerated its A350-900 deployment at SEA in ways that are not reflected in the 2032 forecast of 1,318 A350 operations. As of March 28, 2026, Delta completed its transition of all continental transpacific routes to the A350-900, including Seattle–Tokyo Haneda, Seattle–Seoul Incheon, Seattle–Taipei Taoyuan, and Seattle–Shanghai (Simple Flying, April 2026; Ishrion Aviation). Delta is concurrently planning to open an A350 pilot base in Seattle in spring 2026, indicating continued and expanding A350 service from SEA (One Mile at a Time, June 2025). In January 2026, Delta ordered 31 additional widebody aircraft — 16 A330-900neo and 15 A350-900 — with deliveries beginning in 2029 (Airbus press release, January 28, 2026). The 1,318 annual A350 operations projected for 2032 in Table 6 is therefore a floor figure. Actual 2032 A350 operations at SEA are likely materially higher.

Alaska Airlines similarly accelerated its widebody program: in January 2026, Alaska ordered 105 Boeing 737-10 MAX aircraft and an additional five 787-10 Dreamliners, bringing its firm 787 order book to 17 aircraft, with five already operating transpacific routes from SEA including Seoul and Tokyo (Alaska Airlines press release, January 7, 2026). Alaska's 787 fleet at SEA will be substantially larger by 2032 than the Table 6 B787 figures reflect.

In both cases, the DEIS Appendix A fleet mix — the document underlying the DEIS's own environmental noise analysis — understates the widebody departure activity that communities south of SEA will actually experience by 2032. This understatement compounds the SIP testing problem: the eligible homes were assessed (or will be assessed) using a 737-800 spectrum that was already mismatched to the 2022 fleet, and will be more mismatched to the 2032 fleet than even the DEIS projects.

Quantified Impact: High-LF Widebody Departures per Day, Current vs. 2032

Based directly on DEIS Appendix A Table 6, the daily departure count of high-thrust, large-fan widebody aircraft at SEA grows as follows across the key aircraft types whose low-frequency acoustic signature materially exceeds the 737-800 test spectrum:

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Table C. Estimated Daily Departures of High-LF Widebody Aircraft at SEA (DEIS Table 6 Basis)

Aircraft Type	2022 Deps/Day	2032 Deps/Day	Change	Notes
A330-300	~2.0	~3.4	+1.4	Delta/foreign flag
A330-900neo	~3.6	~7.1	+3.5	Delta primary Pacific
A350-900	~0.8	~1.8	+1.0	DEIS floor; actual likely higher
B787-8 (D+I)	~1.1	~10.3	+9.2	Alaska + others; largest growth
B787-9 (D+I)	~3.3	~8.5	+5.2	Alaska + United + others
B787-10 (D+I)	~0.8	~2.1	+1.3	Alaska 12 aircraft on order
B777-200/300ER	~3.0	~3.3	+0.3	Retiring by 2037
B747-8F (cargo)	~0.8	~0.8	~0.0	Nighttime cargo ops
TOTAL HIGH-LF WIDEBODY	**~15/day**	**~37/day**	**+22/day**	**+147% increase 2022–2032**

Source: SAMP DEIS Appendix A Table 6. Departures/day = annual operations ÷ 2 (arrivals + departures) ÷ 365. B787-8 figure combines domestic and international operations.

The SIP eligibility test, using a fixed 737-800 spectrum, applied the same NLR calculation to all 30 tested homes regardless of their exposure to widebody operations. By 2032, approximately 37 high-LF widebody departures per day will be overflying the south-side communities where the HMMH-tested homes are located — more than double the 2022 rate — each producing low-frequency acoustic energy that the 737-800 spectrum does not represent and that A-weighting systematically discounts in the eligibility determination. The 9 homes that failed the interior test by margins of 0.2 to 4.3 dB are precisely the properties for which this growing mismatch between the test standard and the actual departure fleet is most consequential.

The DEIS does not acknowledge that the representative aircraft used in SIP eligibility testing was set against a pre-2023 fleet distribution, does not evaluate whether that choice remains appropriate for the 2032 operational environment, and does not assess the eligibility consequences for near-threshold homes as the widebody departure share approximately doubles. These are not speculative concerns — they flow directly from the DEIS's own Table 6 fleet distribution data combined with the Port's own HMMH acoustical testing results.

Requested Supplemental Disclosures in the Final EIS

This comment requests that the Port of Seattle address the following in the SAMP SEPA Final EIS, informed by the HMMH June 2026 acoustical testing results and the DEIS Appendix A Table 6 fleet distribution data:

1. **Acknowledge the SIRRPP acoustical testing results and their correct interpretation.** The Final EIS should acknowledge that the Port's own June 2026 SIRRPP acoustical testing of 30 residential structures — homes whose residents reported noise problems and came forward for assessment — found that 26 of 30 (86.7%) were denied eligibility for repair or replacement under the current FAA 45 dB DNL median interior threshold. The median interior DNL across all 30 structures was approximately 39.1 dB. The Port's public characterization of this result as indicating that the insulation is "continuing to provide appropriate sound insulation" should be qualified in the Final EIS: the result reflects the limits of an A-weighted DNL test that is structurally insensitive to the low-frequency aircraft

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noise these residents report experiencing, not a verified finding that the homes are acoustically adequate.

2. **Acknowledge the low-frequency attenuation deficit documented in the octave band data.** The HMMH attachment data shows that at 125 Hz, tested rooms achieved only 14.4 dB of noise reduction compared to 25–26 dB at mid-frequencies. The Final EIS should acknowledge that this 10–11 dB low-frequency attenuation deficit is structurally concealed by A-weighting in the eligibility metric, and that the 9 homes that failed by margins of 0.2 to 4.3 dB represent the population for whom this concealment is most likely to be outcome-determinative.
3. **Acknowledge that the median-across-rooms methodology denied relief to residents with qualifying rooms.** The Final EIS should acknowledge that 16 of the 30 homes denied repair funding contain at least one habitable room — living rooms, kitchens, and offices where residents spend the majority of waking hours — with an interior DNL above 45 dB. Those residents reported noise problems, were tested, and were denied relief because the methodology averages their loudest rooms with their quietest ones. The Port's test confirmed elevated noise in specific rooms while denying the remedy those rooms would independently qualify for under the same 45 dB standard.
4. **Evaluate the representative aircraft spectrum in light of the 2032 fleet mix.** The Final EIS and the new Part 150 NCP should evaluate whether the Boeing 737-800 A-weighted departure spectrum remains the appropriate representative aircraft for NLR calculation in the updated SIP, given that: (a) the DEIS's own Appendix A Table 6 projects widebody departure operations at SEA to increase from approximately 22 per day in 2022 to approximately 44 per day in 2032 — a doubling — as the A330neo, A350-900, and B787 family collectively increase from 16,067 to 31,815 annual operations; (b) these aircraft produce 2.5 to 3.5 times the departure thrust of the 737-800 and have fan diameters nearly twice as large, generating substantially more acoustic energy in the 63–125 Hz octave bands where building envelopes perform poorly and A-weighting applies its greatest suppression; and (c) actual 2032 widebody operations are likely higher than Table 6 projects, given Delta's acceleration of its A350 conversion to all Pacific routes (completed March 2026, ahead of the DEIS forecast schedule) and Alaska's January 2026 order for additional 787-10 aircraft. If the 737-800 spectrum is retained, the Final EIS should acknowledge that widebody departure events will produce interior low-frequency noise levels in near-threshold homes that the eligibility test does not capture.
5. **Connect the SIRRPP denial rate and fleet mix data to the 337 newly impacted homes.** The 30 homes in the HMMH report are homes within the existing 65 DNL contour whose residents sought relief and were denied by a test that cannot detect low-frequency noise. The 337 homes newly identified in the DEIS as falling within the expanded 2032 contour are a different population — homes not yet insulated — who will go through the same eligibility test for new insulation. If the FAA-mandated methodology, as implemented by the Port, produces a denial rate of 87% even among residents actively reporting noise problems, the Final EIS should address: (a) the likelihood that a substantial

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portion of the 337 newly impacted homes will similarly be denied eligibility when interior tested; (b) whether the Part 150 NCP will use a composite departure spectrum reflecting the actual 2032 fleet mix rather than the 737-800 alone when testing those homes; and (c) what mitigation is available to homes that are denied eligibility regardless of which spectrum is used — given that denial does not mean the home is quiet, only that the test could not confirm it was loud enough.

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TECHNICAL MEMORANDUM

To:	Julie Kinzie, Sr. Environmental Program Manager Sound Insulation
From:	Eric Cox, Principal Technical Analyst
Date:	June 5, 2026
Subject:	Acoustical Testing Results for SEA Repair and Replacement Program
Reference:	HMMH Project Number 03-12150.001.004

Harris Miller Miller & Hanson Inc. (HMMH) completed sound insulation measurements for the Seattle-Tacoma International Airport (SEA) Repair and Replacement Program (the Program), during April 2026 to determine the median interior Day-Night Average Sound Level (DNL) value for 30 residential structures, in accordance with Federal Aviation Administration (FAA) guidance as specified in Chapter 8 of Advisory Circular (AC) 150/5000-9B.[1]

Appendix R of FAA Order 5100.38D[2] (AIP Handbook) stipulates that the median interior DNL sound level must be 45 decibels (dB) or greater with windows closed for a structure to qualify for sound insulation treatments. The interior DNL sound levels are determined by subtracting the measured outdoor-indoor Noise Level Reduction (NLR) for each tested habitable room from the exterior DNL sound level for each residential property.

Sections 1 through 3 of this technical memorandum summarize the test procedures and analysis methods. Results are provided in Section 4 and detailed acoustical measurement data are provided in the attachment.

1. Exterior Sound Level

The process used to determine the exterior DNL for a residential property is outlined in Chapter 8 of FAA AC 150/5000-9B. A value of 70 dB is assigned to structures located within the 65 to 70 dB contour interval, as determined by the most recent FAA-approved Noise Exposure Map (NEM). Currently, the 2018 Forecast Condition NEM[3] is the most recently approved set of contours.

2. Noise Level Reduction

To determine the median interior DNL value for a residential structure, the NLR of all habitable rooms within the structure must be measured. HMMH conducted the acoustical testing using a Hottinger Brüel & Kjær (HBK) Model 2245 sound level meter with current calibration traceable to the U.S. National Institute of Standards and Technology (NIST) and conforming to American National Standards Institute (ANSI) Standard S1.4[4] and International Electrotechnical Commission (IEC) 61672[5] for Type 1 (precision) spectrum analyzers. Additional calibrations were carried out during each day of testing using a NIST-certified HBK Model 4231 calibrator.

[1] FAA Advisory Circular 150/5000-9B "Guidelines for Sound Insulation of Structures Exposed to Aircraft Noise", Chapter 8 "Acoustical Engineering and Testing", June 8, 2022, https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5000-9B-Sound-Insulation-2022.pdf

[2] FAA Order 5100.38D, Change 1 "Airport Improvement Program Handbook", Appendix R "Noise Compatibility Planning/Projects", February 26, 2019, https://www.faa.gov/airports/aip/aip_handbook/media/AIP-Handbook-Order-5100-38D-Chg1.pdf

[3] Seattle-Tacoma International Airport 14 CFR Part 150 "Noise Compatibility Study Update", October 2013

[4] American National Standards Institute, ANSI/ASA S1.4-2014 – Part 1 "American National Standard Electroacoustics – Sound Level Meters – Part 1: Specifications"

[5] International Electrotechnical Commission, IEC 61672-1:2013 "Electroacoustics – Sound Level Meters – Part 1: Specifications"

The noise source used for the measurements consisted of a Mackie SRM450 loudspeaker. The acoustical testing procedure conformed to industry best practices and followed the methodology outlined in Section 8.5 of FAA AC 150/5000-9B.

HMMH exposed each tested room to the exterior noise source (loudspeaker) and measured the resultant exterior and interior sound levels. The loudspeaker generated a test signal containing equal energy levels in each octave band (known as "pink noise") and was positioned outside each tested room so that uniform distribution of the amplified sound was achieved over the exterior room façade under evaluation. The outdoor and indoor octave band noise levels were then measured with a sound level meter/spectrum analyzer. Ambient sound levels were also collected to ensure a sufficient signal-to-noise ratio for valid testing results.

The Outdoor-Indoor Noise Reduction (OINR) was calculated for each tested room by subtracting the interior sound levels measured in each octave band from the corresponding exterior sound level measurements. The indoor sound level data collected with the exterior noise source operating were also adjusted to account for the ambient acoustical energy measured in each room with the noise source turned off. The outdoor sound level data were adjusted to account for the exterior ambient sound levels measured with the noise source turned off and to correct for the acoustic energy reflected from the exterior room façades with the noise source operating.

The NLR was then calculated for each tested room by applying the OINR data to the aircraft noise spectrum generated by a Boeing 737-800 aircraft, which was determined to be the representative aircraft type per the analysis procedure outlined in Section 8.5.10.1 of FAA AC 150/5000-9B.

3. Interior Sound Levels

The measured NLR values were subtracted from the exterior DNL sound level for each property to compute the interior DNL sound level for each tested room within a structure. A median interior DNL value was then calculated for the entire structure from the interior sound levels determined for each individual habitable room.

4. Acoustical Test Results

Table 1 summarizes the acoustical testing results for 30 residential structures. Overall, the measurements indicate that four structures have a median interior DNL sound level at or above 45 dB. Also, 16 of the structures have one or more individual habitable rooms with interior DNL sound levels above 45 dB that could potentially benefit from repair or replacement of acoustical windows and doors. Note that this is not the current FAA policy.

Table 1. Acoustical Testing Results for SEA Repair and Replacement Program

Resident	Address	Room	Measured Noise Level Reduction NLR (dB)	Day-Night Average Sound Level DNL (dB)		
				Exterior[1]	Interior[2]	Median Interior
Schwartz	20425 12th Ave S SeaTac	Living Room	23.5	70.0	46.5	**44.3**
		Sitting Room	19.2	70.0	50.8	
		Dining / Kitchen	12.2	70.0	57.8	
		Bedroom 1	28.4	70.0	41.6	
		Bedroom 2	27.9	70.0	42.1	
		Bedroom 3	29.4	70.0	40.6	
Fullwiler	21825 13th Ave S Des Moines	Living / Office	30.5	70.0	39.5	**38.6**
		Sitting Room	28.3	70.0	41.7	
		Kitchen	30.8	70.0	39.2	
		Bedroom 1	33.3	70.0	36.7	
		Bedroom 2	32.0	70.0	38.0	
		Bedroom 3	35.6	70.0	34.4	
Bradler	11051 14th Ave S Seattle	Living Room	29.1	70.0	40.9	**38.7**
		Dining / Sitting	31.7	70.0	38.3	
		Kitchen	24.5	70.0	45.5	
		Bedroom 1	30.9	70.0	39.1	
		Bedroom 2	32.4	70.0	37.6	
		Bedroom 3	35.0	70.0	35.0	
Soung	21810 14th Ave S Des Moines	Living Room	33.9	70.0	36.1	**37.5**
		Dining / Kitchen	28.0	70.0	42.0	
		Bedroom 1	33.4	70.0	36.6	
		Bedroom 2	32.5	70.0	37.5	
		Bedroom 3	28.8	70.0	41.2	
Fuchigami	23003 17th Ave S Des Moines	Living Room	27.6	70.0	42.4	**41.8**
		Sitting Room	23.1	70.0	46.9	
		Dining Room	28.7	70.0	41.3	
		Kitchen 1	24.3	70.0	45.7	
		Kitchen 2	28.2	70.0	41.8	
		Bedroom 1	29.5	70.0	40.5	
		Bedroom 2	32.9	70.0	37.1	
		Bedroom 3	30.0	70.0	40.0	
		Bedroom 4	29.2	70.0	40.8	
		Office 1	20.8	70.0	49.2	
		Office 2	15.4	70.0	54.6	
Aliaana	10636 18th Ave S Seattle	Living Room	33.7	70.0	36.3	**36.3**
		Sitting / Dining	25.7	70.0	44.3	
		Kitchen	33.6	70.0	36.4	
		Bedroom 1	34.7	70.0	35.3	
		Bedroom 2	35.7	70.0	34.3	
Vidrio	10625 19th Ave S Seattle	Living Room	32.5	70.0	37.5	**39.5**
		Dining Room	35.2	70.0	34.8	
		Kitchen	27.3	70.0	42.7	
		Bedroom 1	36.3	70.0	33.7	
		Bedroom 2	30.5	70.0	39.5	
		Office	28.1	70.0	41.9	
		Den	28.6	70.0	41.4	
Green	11218 20th Ave S Burien	Living Room	21.7	70.0	48.3	**41.7**
		Sitting Room	29.0	70.0	41.0	
		Dining / Kitchen	20.6	70.0	49.4	
		Bedroom 1	29.6	70.0	40.4	
		Bedroom 2	27.6	70.0	42.4	
		Office	39.3	70.0	30.7	

Table 1. Acoustical Testing Results for SEA Repair and Replacement Program

Resident	Address	Room	Measured Noise Level Reduction NLR (dB)	Day-Night Average Sound Level DNL (dB)		
				Exterior[1]	Interior[2]	Median Interior
Tua	23202 21st Ave S Des Moines	Living Room	31.4	70.0	38.6	**38.6**
		Sitting / Dining	18.4	70.0	51.6	
		Kitchen	23.6	70.0	46.4	
		Bedroom 1	32.2	70.0	37.8	
		Bedroom 2	28.9	70.0	41.1	
		Bedroom 3	37.7	70.0	32.3	
		Bedroom 4	31.9	70.0	38.1	
Krakow	12203 22nd Ave S Burien	Living / Dining / Kitchen	25.0	70.0	45.0	**45.0**
		Sitting Room	18.0	70.0	52.0	
		Bedroom 1	43.1	70.0	26.9	
		Bedroom 2	29.5	70.0	40.5	
		Office	21.0	70.0	49.0	
Carrillo	12205 23rd Ave S Burien	Living Room	27.7	70.0	42.3	**35.8**
		Dining Room	23.4	70.0	46.6	
		Kitchen	36.2	70.0	33.8	
		Bedroom 1	34.2	70.0	35.8	
		Bedroom 2	44.8	70.0	25.2	
Gerado	22920 23rd Pl S Des Moines	Living Room	24.5	70.0	45.5	**42.8**
		Sitting / Kitchen	27.0	70.0	43.0	
		Bedroom 1	27.2	70.0	42.8	
		Bedroom 2	34.2	70.0	35.8	
		Office	27.5	70.0	42.5	
Berihun	13820 24th Ave S SeaTac	Living Room	34.1	70.0	35.9	**36.0**
		Sitting / Kitchenette	32.4	70.0	37.6	
		Dining / Kitchen	34.5	70.0	35.5	
		Bedroom 1	34.3	70.0	35.7	
		Bedroom 2	32.7	70.0	37.3	
		Bedroom 3	33.9	70.0	36.1	
		Bedroom 4	35.9	70.0	34.1	
		Office	24.8	70.0	45.2	
Brogdon	10704 Country Club Ln Seattle	Living / Dining	21.5	70.0	48.5	**40.7**
		Family Room	32.0	70.0	38.0	
		Sitting / Kitchen	19.2	70.0	50.8	
		Bedroom 1	29.2	70.0	40.8	
		Bedroom 2	31.3	70.0	38.7	
		Bedroom 3	23.9	70.0	46.1	
		Bedroom 4	29.4	70.0	40.6	
		Office	34.2	70.0	35.8	
Podelka	11244 Glendale Way S Burien	Living Room	32.0	70.0	38.0	**37.2**
		Kitchen	30.6	70.0	39.4	
		Bedroom 1	33.7	70.0	36.3	
		Bedroom 2	33.8	70.0	36.2	
Hang & Cha	1614 S 106th St Seattle	Living Room	30.0	70.0	40.0	**47.4**
		Dining / Kitchen	17.2	70.0	52.8	
		Bedroom 1	24.6	70.0	45.4	
		Bedroom 2	20.5	70.0	49.5	
Qamar	1606 S 107th St Seattle	Living Room	30.8	70.0	39.2	**35.0**
		Kitchen	30.0	70.0	40.0	
		Bedroom 1	38.8	70.0	31.2	
		Bedroom 2	38.0	70.0	32.0	
		Bedroom 3	33.2	70.0	36.8	
		Office	36.9	70.0	33.1	

Table 1. Acoustical Testing Results for SEA Repair and Replacement Program

Resident	Address	Room	Measured Noise Level Reduction NLR (dB)	Day-Night Average Sound Level DNL (dB)		
				Exterior[1]	Interior[2]	Median Interior
Norris	1804 S 107th St Seattle	Living / Dining	22.5	70.0	47.5	**45.3**
		Sitting Room	21.6	70.0	48.4	
		Kitchen	25.6	70.0	44.4	
		Bedroom 1	24.7	70.0	45.3	
		Bedroom 2	24.8	70.0	45.2	
Johns	2038 S 108th St Seattle	Living Room	25.0	70.0	45.0	**39.3**
		Sitting Room	32.6	70.0	37.4	
		Dining Room	32.9	70.0	37.1	
		Kitchen	29.7	70.0	40.3	
		Bedroom 1	30.7	70.0	39.3	
		Bedroom 2	29.5	70.0	40.5	
		Bedroom 3	29.8	70.0	40.2	
		Bedroom 4	36.2	70.0	33.8	
		Bedroom 5	39.6	70.0	30.4	
Byrd	1405 S 134th St Burien	Living Room	28.3	70.0	41.7	**41.7**
		Sitting Room	21.1	70.0	48.9	
		Kitchen	29.9	70.0	40.1	
		Bedroom 1	32.8	70.0	37.2	
		Bedroom 2	26.4	70.0	43.6	
		Bedroom 3	27.4	70.0	42.6	
		Bedroom 4	29.0	70.0	41.0	
Thom	2620 S 148th St SeaTac	Living Room	30.2	70.0	39.8	**41.2**
		Dining Room	27.5	70.0	42.5	
		Kitchen	31.5	70.0	38.5	
		Bedroom 1	24.9	70.0	45.1	
		Bedroom 2	27.3	70.0	42.7	
		Bedroom 3	36.6	70.0	33.4	
McDowell	2560 S 152nd St Seatac	Living / Kitchen	20.6	70.0	49.4	**35.4**
		Bedroom 1	33.1	70.0	36.9	
		Bedroom 2	39.9	70.0	30.1	
		Bedroom 3	34.6	70.0	35.4	
		Office	45.1	70.0	24.9	
Neuharth	824 S 177th Pl Burien	Living / Dining	22.7	70.0	47.3	**44.8**
		Kitchen	21.9	70.0	48.1	
		Bedroom 1	31.0	70.0	39.0	
		Bedroom 2	25.0	70.0	45.0	
		Bedroom 3	29.7	70.0	40.3	
		Office	25.3	70.0	44.7	
Parker	825 S 177th Pl Burien	Living Room	32.4	70.0	37.6	**37.6**
		Dining Room	30.5	70.0	39.5	
		Kitchen	31.3	70.0	38.7	
		Bedroom 1	36.5	70.0	33.5	
		Bedroom 2	34.7	70.0	35.3	
		Bedroom 3	36.3	70.0	33.7	
		Office	30.7	70.0	39.3	
Wiseman	1045 S 197th St Des Moines	Living / Dining	26.9	70.0	43.1	**38.9**
		Sitting Room	27.7	70.0	42.3	
		Kitchen	31.1	70.0	38.9	
		Bedroom 1	32.7	70.0	37.3	
		Bedroom 2	31.7	70.0	38.3	
		Bedroom 3	33.1	70.0	36.9	
		Office	30.2	70.0	39.8	

Table 1. Acoustical Testing Results for SEA Repair and Replacement Program

Resident	Address	Room	Measured Noise Level Reduction NLR (dB)	Day-Night Average Sound Level DNL (dB)		
				Exterior[1]	Interior[2]	Median Interior
Keyes	2218 S 222nd St Des Moines	Living Room	27.4	70.0	42.6	**37.6**
		Dining / Kitchen	27.6	70.0	42.4	
		Bedroom 1	35.8	70.0	34.2	
		Bedroom 2	32.4	70.0	37.6	
		Bedroom 3	36.0	70.0	34.0	
Butler	2219 S 222nd St Des Moines	Living Room	32.6	70.0	37.4	**35.1**
		Sitting Room	33.0	70.0	37.0	
		Kitchen	35.6	70.0	34.4	
		Bedroom 1	35.6	70.0	34.4	
		Bedroom 2	34.9	70.0	35.1	
Soden	1819 S 232nd St Des Moines	Living Room	19.7	70.0	50.3	**48.6**
		Sitting / Dining	21.1	70.0	48.9	
		Kitchen	21.7	70.0	48.3	
		Bedroom 1	30.5	70.0	39.5	
		Bedroom 2	25.1	70.0	44.9	
		Bedroom 3	17.5	70.0	52.5	
Kawabata	2035 S 232nd St Des Moines	Living Room	31.0	70.0	39.0	**38.6**
		Sitting Room	23.6	70.0	46.4	
		Dining / Kitchen	31.9	70.0	38.1	
		Bedroom 1	35.4	70.0	34.6	
		Bedroom 2	36.9	70.0	33.1	
		Bedroom 3	36.3	70.0	33.7	
		Bedroom 4	30.8	70.0	39.2	
		Office	22.1	70.0	47.9	
Nguyen	23030 Thunderbird Dr S Des Moines	Living Room	22.7	70.0	47.3	**43.4**
		Dining Room	26.9	70.0	43.1	
		Kitchen	18.5	70.0	51.5	
		Bedroom 1	26.3	70.0	43.7	
		Bedroom 2	32.7	70.0	37.3	
		Bedroom 3	28.1	70.0	41.9	

Notes:

Rooms with Interior DNL of 45 dB and greater are indicated in red.

Structures with Interior DNL of 45 dB and greater are indicated in **bold red**.

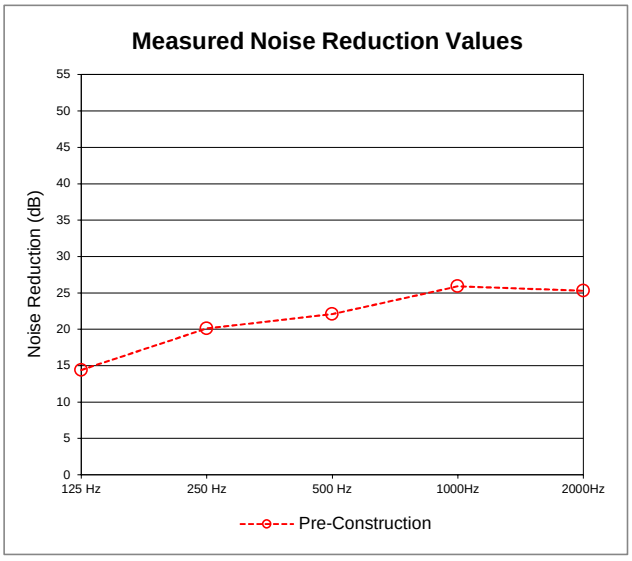
1) Exterior DNL assigned per FAA guidelines using 2018 Forecast NEM for SEA Program.

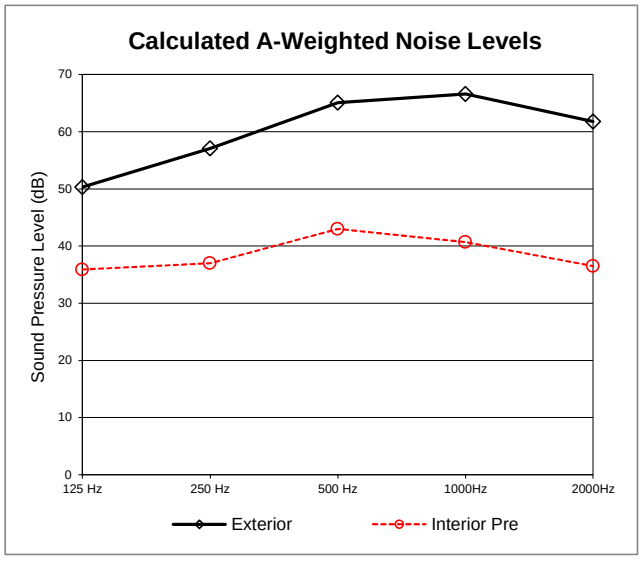
2) Interior DNL for each habitable room equals Exterior DNL minus measured room NLR.

Attachment – Acoustical Measurement Data

Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Schwartz	Tested Room:	Living Room Façade
Address:	20425 12th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	2 of 2

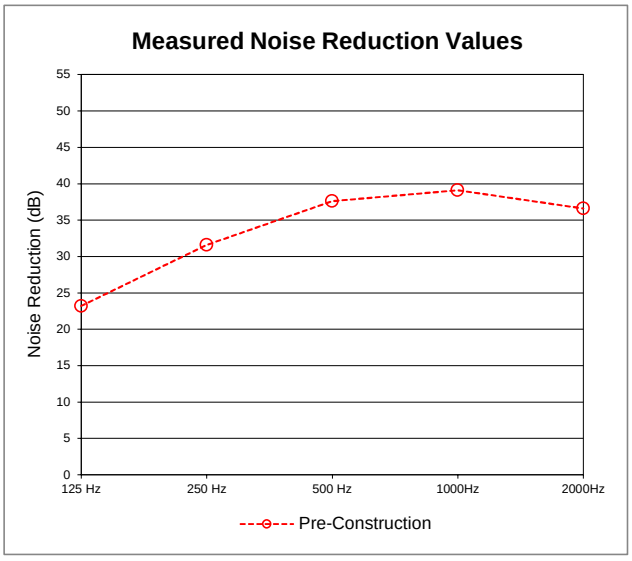
Pre-Construction Sound Pressure Levels (dB)						
May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.8	49.9	50.5	49.3	40.8	52.4
Exterior Measurement (flush)	91.0	89.7	89.2	87.3	84.6	92.4
Exterior Adjusted	85.0	83.7	83.2	81.3	78.6	86.4
Interior Background	45.5	30.0	28.9	29.9	30.0	36.5
Interior Measurement	70.6	63.6	61.1	55.4	53.3	63.5
Interior Adjusted	70.6	63.6	61.1	55.4	53.3	63.5
Noise Reduction	**14.4**	**20.1**	**22.1**	**25.9**	**25.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.9	37.0	43.0	40.7	36.5	46.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**23.5 dB**

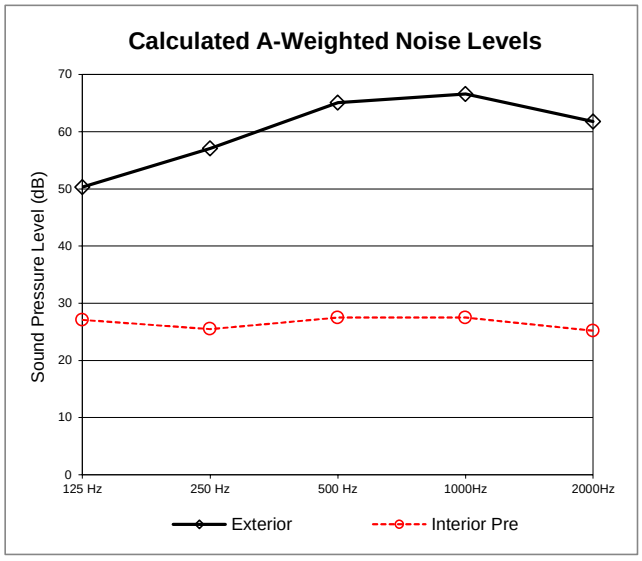




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Schwartz	Tested Room:	Sitting Room Façade 1
Address:	20425 12th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 2

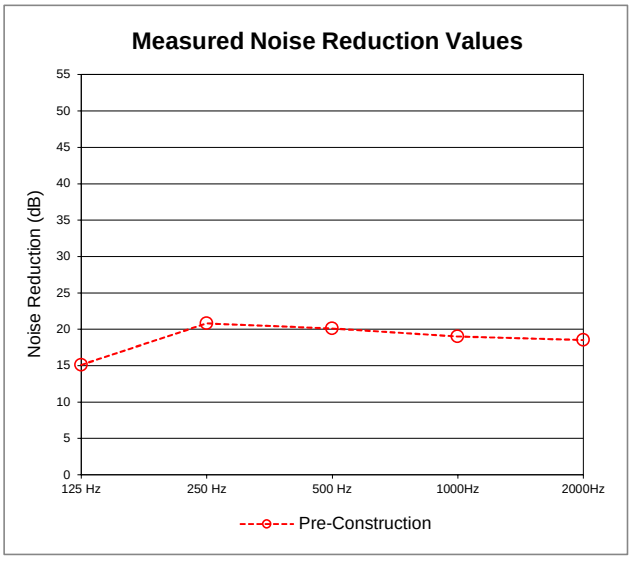
Pre-Construction Sound Pressure Levels (dB)						
May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	51.3	46.1	48.7	51.1	39.9	52.6
Exterior Measurement (flush)	89.8	87.7	90.9	87.5	81.9	92.4
Exterior Adjusted	83.8	81.7	84.9	81.5	75.9	86.4
Interior Background	39.1	29.6	30.9	28.9	24.7	34.0
Interior Measurement	60.6	50.1	47.4	42.6	39.4	51.1
Interior Adjusted	60.6	50.1	47.3	42.4	39.3	51.0
Noise Reduction	**23.2**	**31.6**	**37.6**	**39.1**	**36.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.1	25.5	27.5	27.5	25.2	33.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.3 dB**

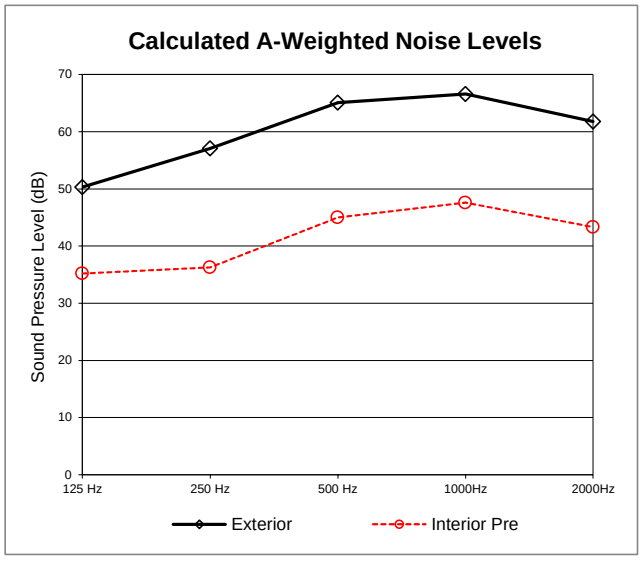




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Schwartz	Tested Room:	Sitting Room Façade 2
Address:	20425 12th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 2

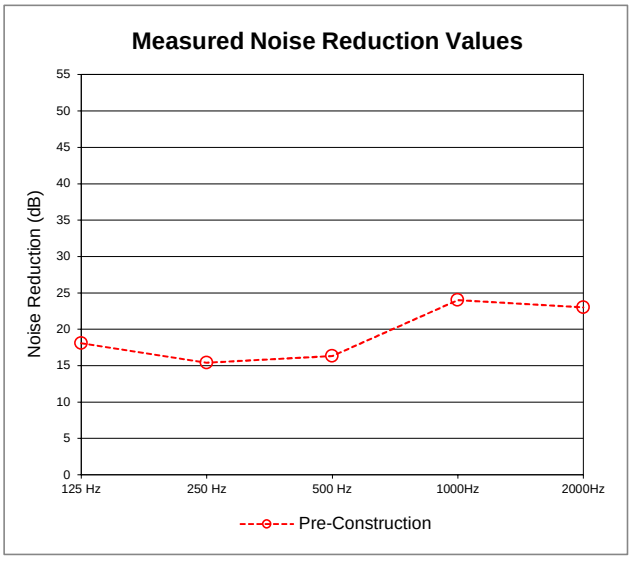
Pre-Construction Sound Pressure Levels (dB)						
May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	51.3	46.1	48.7	51.1	39.9	52.6
Exterior Measurement (flush)	97.3	97.1	98.8	94.9	91.5	100.9
Exterior Adjusted	91.3	91.1	92.8	88.9	85.5	94.9
Interior Background	39.1	29.6	30.9	28.9	24.7	34.0
Interior Measurement	76.2	70.3	72.7	69.9	67.0	75.0
Interior Adjusted	76.2	70.3	72.7	69.9	67.0	75.0
Noise Reduction	**15.1**	**20.8**	**20.1**	**19.0**	**18.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.2	36.3	45.0	47.6	43.3	50.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**19.3 dB**

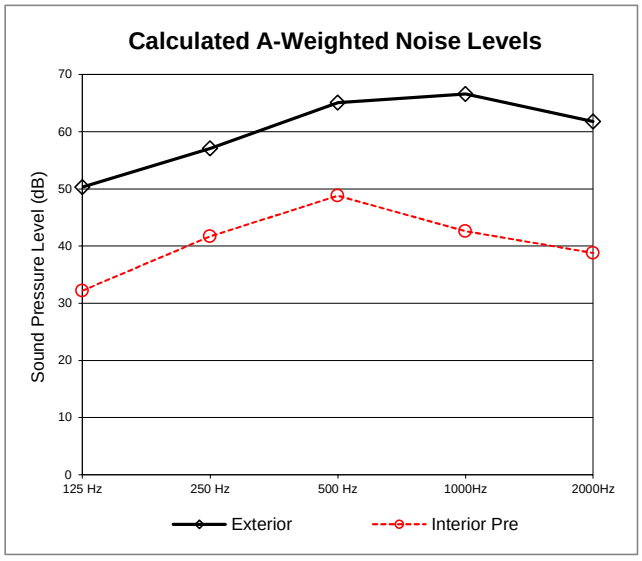




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Schwartz	Tested Room:	Dining / Kitchen Façade 1
Address:	20425 12th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	2 of 2

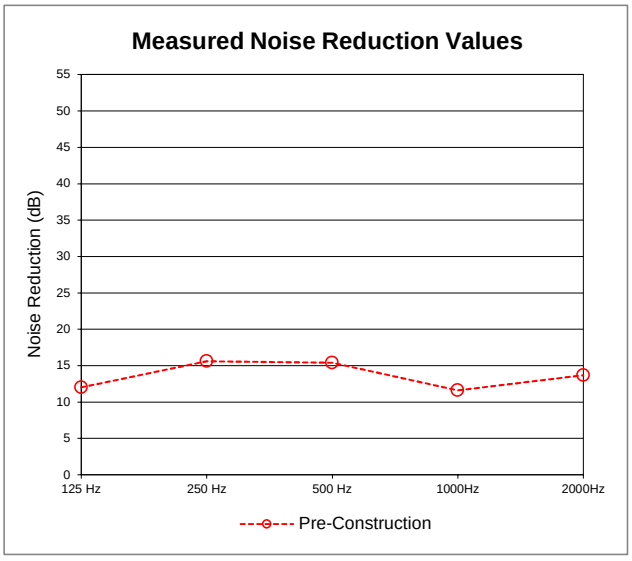
Pre-Construction Sound Pressure Levels (dB)						
May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	50.8	46.5	46.1	47.7	37.1	49.7
Exterior Measurement (flush)	98.0	98.1	98.3	92.1	87.8	98.9
Exterior Adjusted	92.0	92.1	92.3	86.1	81.8	92.9
Interior Background	40.6	31.7	32.4	32.9	29.9	37.3
Interior Measurement	73.9	76.7	76.0	62.1	58.8	74.3
Interior Adjusted	73.9	76.7	76.0	62.1	58.8	74.3
Noise Reduction	**18.1**	**15.4**	**16.3**	**24.0**	**23.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.2	41.7	48.8	42.6	38.8	50.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**19.3 dB**

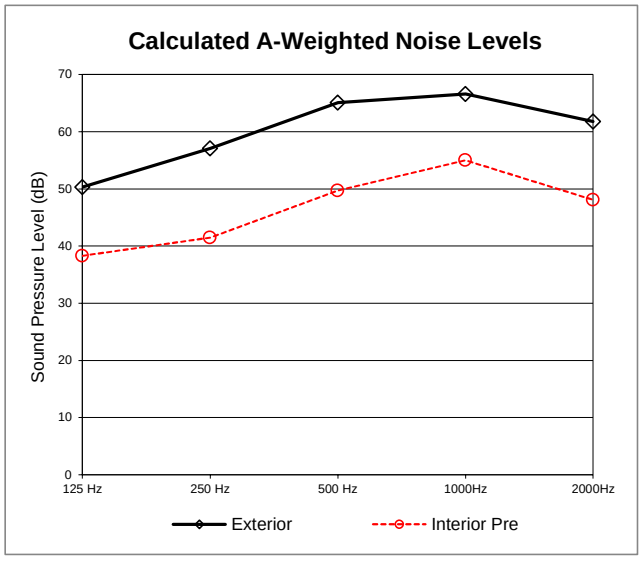




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Schwartz	Tested Room:	Dining / Kitchen Façade 2
Address:	20425 12th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)						
May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	50.8	46.5	46.1	47.7	37.1	49.7
Exterior Measurement (flush)	101.3	100.4	101.8	97.2	94.5	104.0
Exterior Adjusted	95.3	94.4	95.8	91.2	88.5	98.0
Interior Background	40.6	31.7	32.4	32.9	29.9	37.3
Interior Measurement	83.3	78.8	80.4	79.6	74.8	83.5
Interior Adjusted	83.3	78.8	80.4	79.6	74.8	83.5
Noise Reduction	**12.0**	**15.6**	**15.4**	**11.6**	**13.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	38.3	41.5	49.7	55.0	48.1	56.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**13.1 dB**

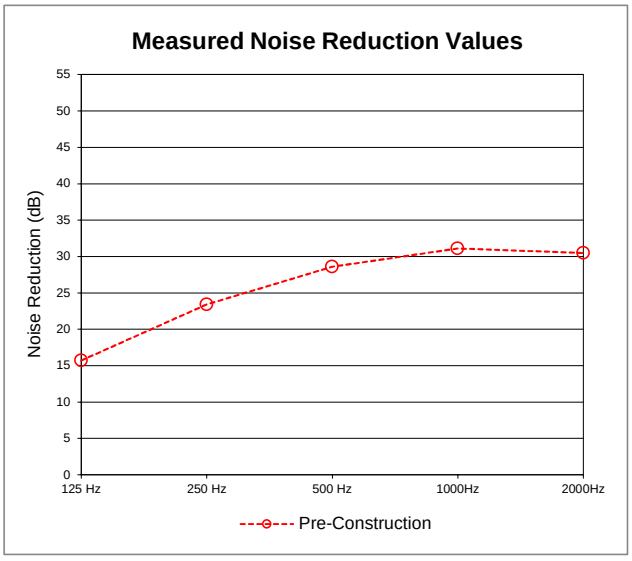


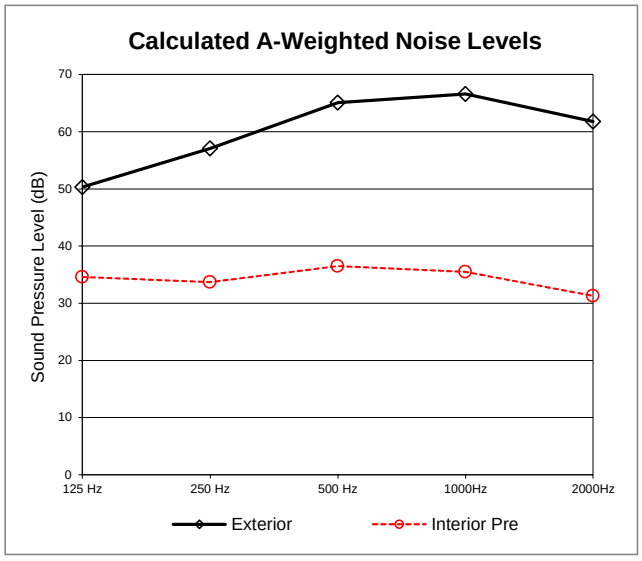


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Schwartz	Tested Room:	Bedroom 1 Façade
Address:	20425 12th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)

May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.8	49.9	50.5	49.3	40.8	52.4
Exterior Measurement (flush)	96.0	92.7	93.5	89.6	85.6	95.0
Exterior Adjusted	90.0	86.7	87.5	83.6	79.6	89.0
Interior Background	42.4	34.4	30.1	25.5	22.4	33.0
Interior Measurement	74.3	63.3	58.9	52.5	49.1	62.4
Interior Adjusted	74.3	63.3	58.9	52.5	49.1	62.4
Noise Reduction	**15.7**	**23.4**	**28.6**	**31.1**	**30.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.6	33.7	36.5	35.5	31.3	41.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.4 dB**

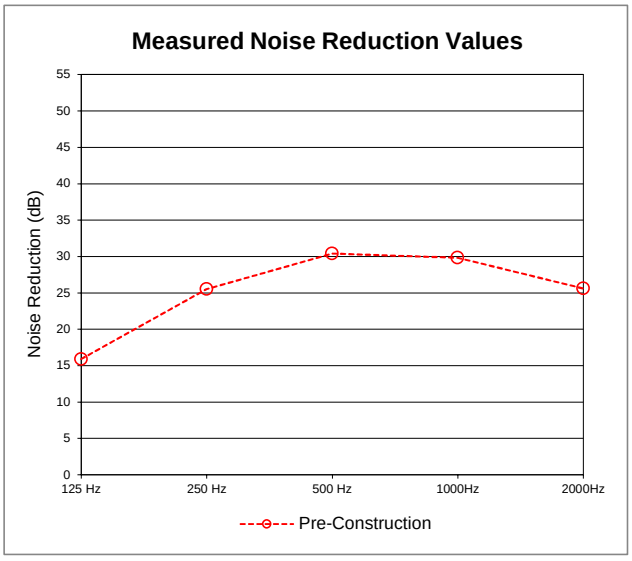


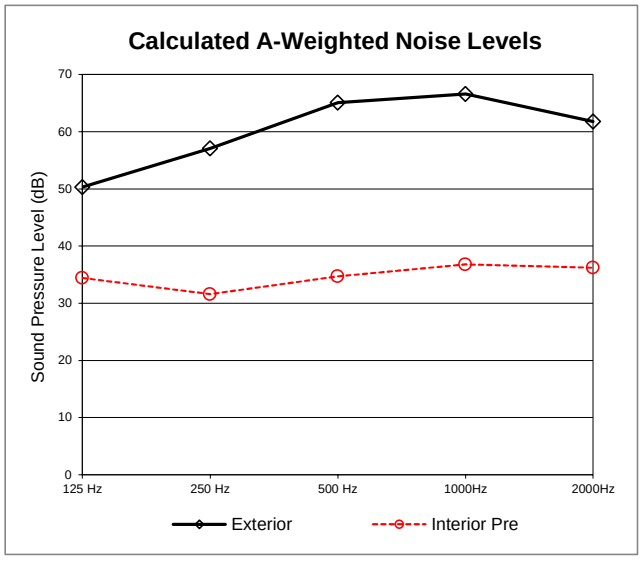


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Schwartz	Tested Room:	Bedroom 2 Façade
Address:	20425 12th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)

May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.2	40.4	39.1	41.1	33.8	44.1
Exterior Measurement (flush)	88.7	90.4	90.4	87.6	83.3	92.2
Exterior Adjusted	82.7	84.4	84.4	81.6	77.3	86.2
Interior Background	36.9	34.6	27.0	21.7	16.7	30.0
Interior Measurement	66.8	58.9	54.0	51.8	51.7	58.7
Interior Adjusted	66.8	58.9	54.0	51.8	51.7	58.7
Noise Reduction	**15.9**	**25.5**	**30.4**	**29.8**	**25.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.4	31.6	34.7	36.8	36.2	42.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**27.9 dB**

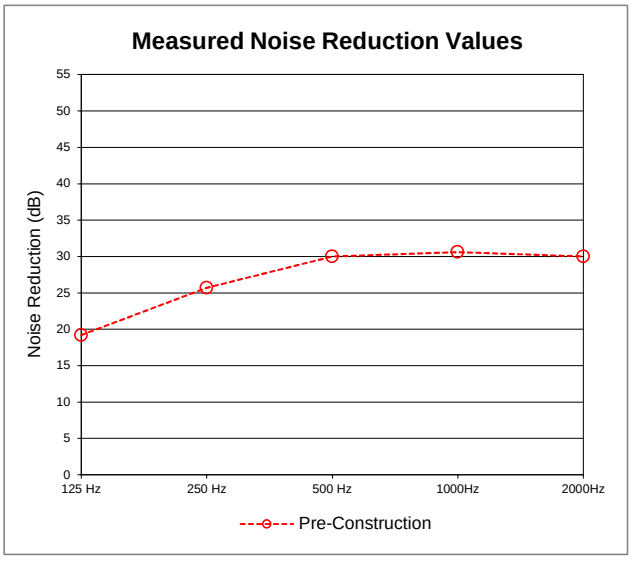


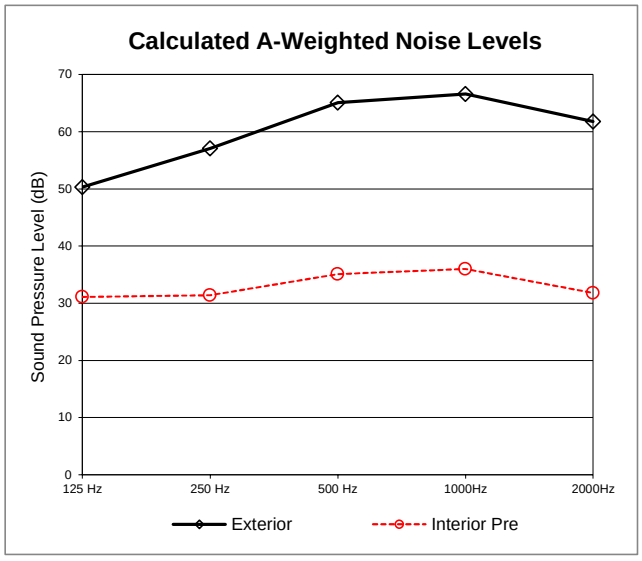


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Schwartz	Tested Room:	Bedroom 3 Façade
Address:	20425 12th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)

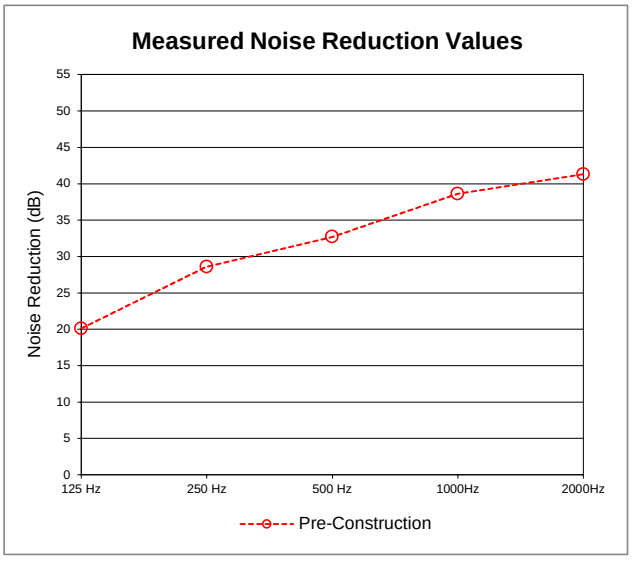
May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.2	40.4	39.1	41.1	33.8	44.1
Exterior Measurement (flush)	89.3	89.6	89.5	86.5	84.5	91.9
Exterior Adjusted	83.3	83.6	83.5	80.5	78.5	85.9
Interior Background	30.0	26.9	22.9	22.6	19.1	27.6
Interior Measurement	64.1	57.9	53.5	49.9	48.5	57.3
Interior Adjusted	64.1	57.9	53.5	49.9	48.5	57.3
Noise Reduction	**19.2**	**25.7**	**30.0**	**30.6**	**30.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.1	31.4	35.1	36.0	31.8	40.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.4 dB**

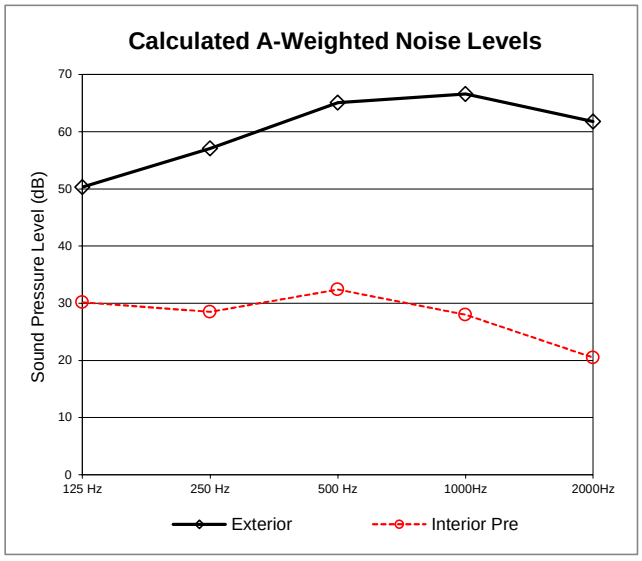




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Living / Office Façade 1
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

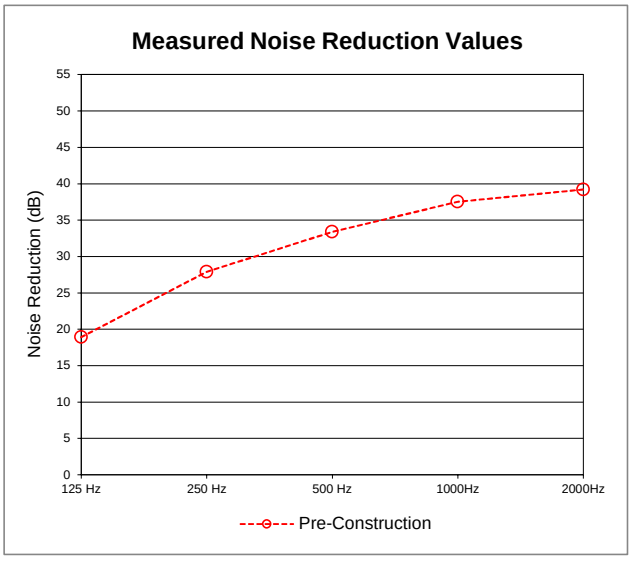
Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	47.4	40.3	43.6	40.1	42.0	48.0
Exterior Measurement (flush)	83.5	86.4	85.8	84.4	81.8	89.2
Exterior Adjusted	77.5	80.4	79.8	78.4	75.8	83.2
Interior Background	48.6	40.1	28.4	20.9	13.3	35.7
Interior Measurement	57.9	52.1	47.2	39.9	34.5	49.1
Interior Adjusted	57.4	51.8	47.1	39.8	34.5	48.9
Noise Reduction	**20.1**	**28.6**	**32.7**	**38.6**	**41.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.2	28.5	32.4	28.0	20.5	36.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.7 dB**

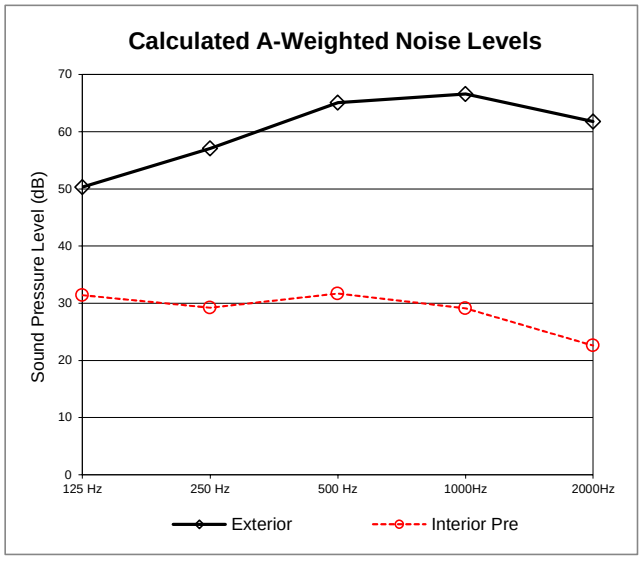




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Living / Office Façade 2
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

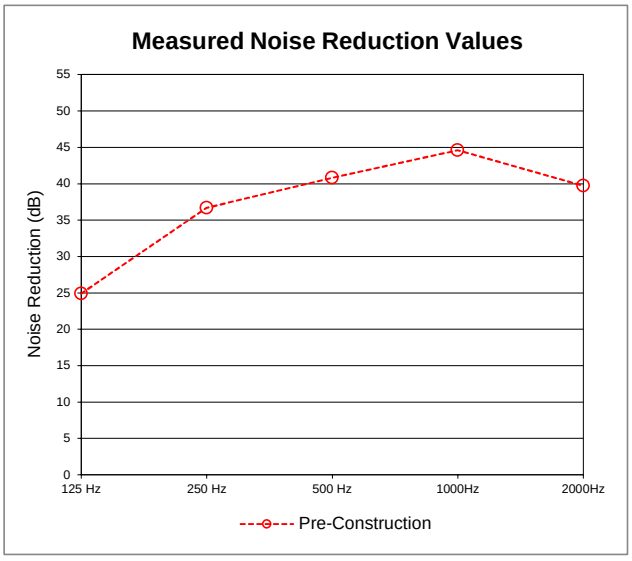
Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	47.4	40.3	43.6	40.1	42.0	48.0
Exterior Measurement (flush)	84.1	86.5	86.5	83.0	82.0	89.0
Exterior Adjusted	78.1	80.5	80.5	77.0	76.0	83.0
Interior Background	48.6	40.1	28.4	20.9	13.3	35.7
Interior Measurement	59.6	52.8	47.2	39.6	36.8	49.7
Interior Adjusted	59.2	52.6	47.1	39.5	36.8	49.5
Noise Reduction	**18.9**	**27.9**	**33.4**	**37.5**	**39.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.4	29.2	31.7	29.1	22.6	36.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.3 dB**

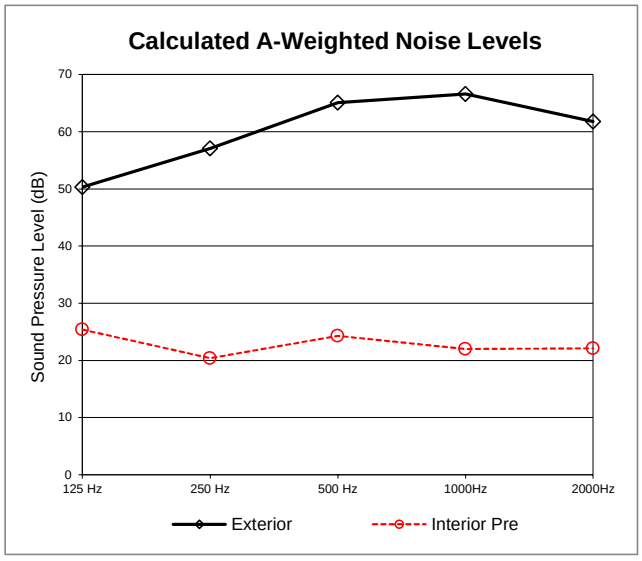




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Sitting Room Façade 1
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)							
April 27, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		60.4	56.5	51.2	47.5	37.2	53.2
Exterior Measurement	(flush)	89.2	85.5	83.4	83.6	76.4	86.9
Exterior Adjusted		83.2	79.5	77.4	77.6	70.4	80.9
Interior Background		43.2	35.1	28.9	27.2	28.0	36.1
Interior Measurement		58.4	43.5	37.3	34.0	32.0	44.6
Interior Adjusted		58.3	42.8	36.6	33.0	30.7	43.9
Noise Reduction		**24.9**	**36.7**	**40.8**	**44.6**	**39.7**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		25.4	20.4	24.3	22.0	22.1	30.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**39.8 dB**

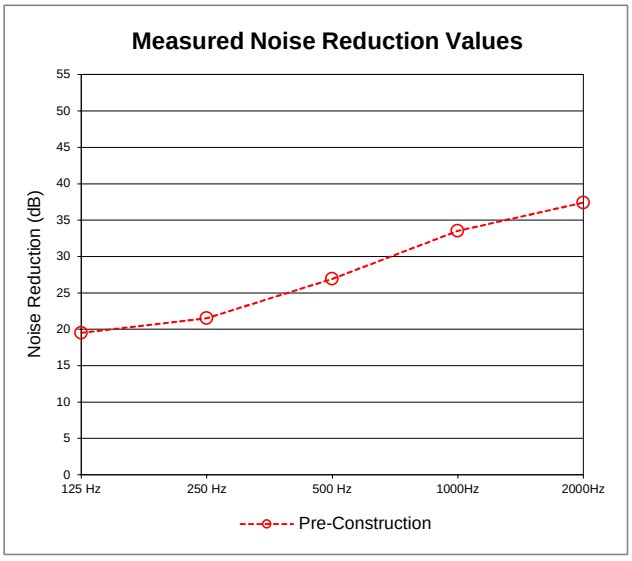


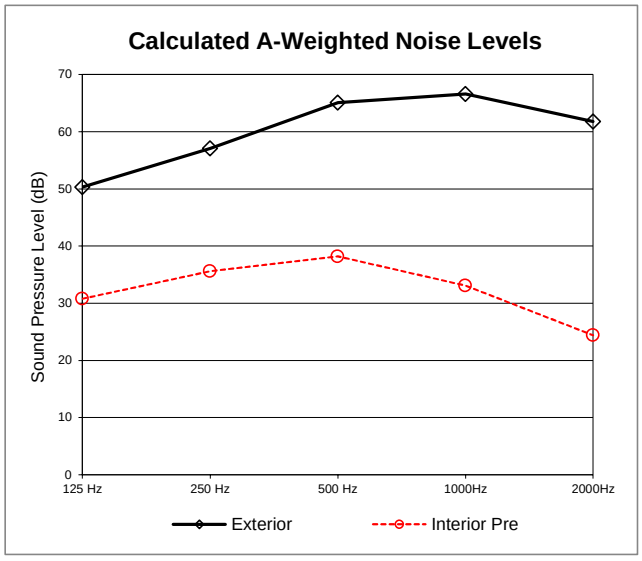


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Sitting Room Façade 2
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

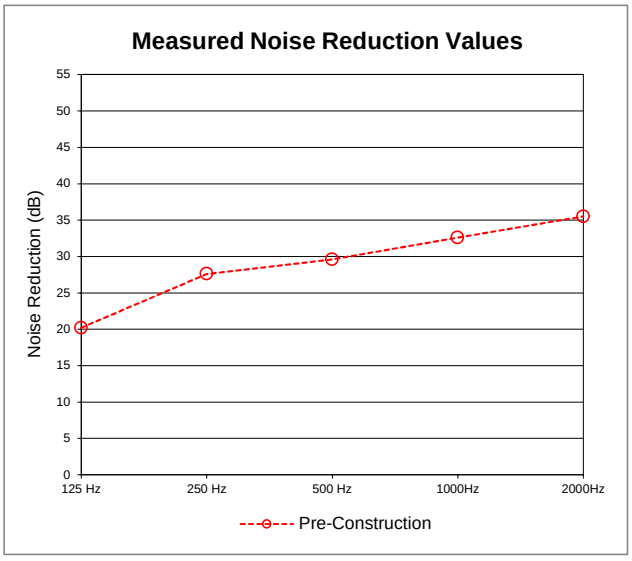
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	60.4	56.5	51.2	47.5	37.2	53.2
Exterior Measurement (flush)	86.2	83.7	86.8	84.1	80.8	89.8
Exterior Adjusted	80.2	77.7	80.8	78.1	74.8	83.8
Interior Background	43.2	35.1	28.9	27.2	28.0	36.1
Interior Measurement	60.8	56.2	53.9	44.7	37.9	54.0
Interior Adjusted	60.7	56.2	53.9	44.6	37.4	53.9
Noise Reduction	**19.5**	**21.5**	**26.9**	**33.5**	**37.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.8	35.6	38.2	33.1	24.4	41.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.6 dB**

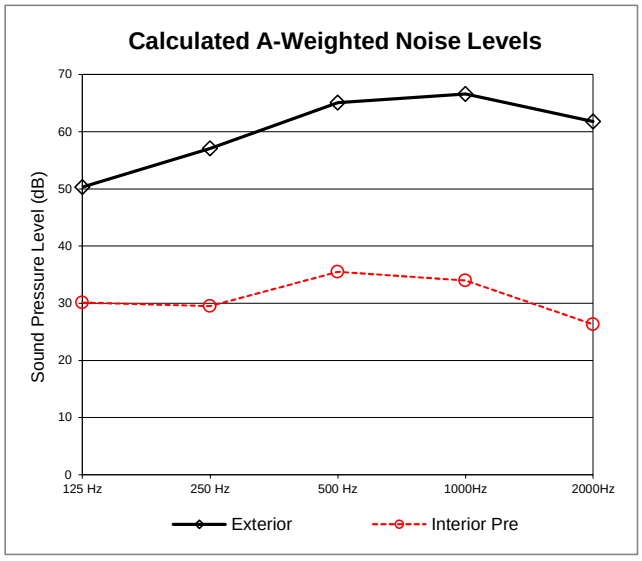




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Kitchen Façade
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

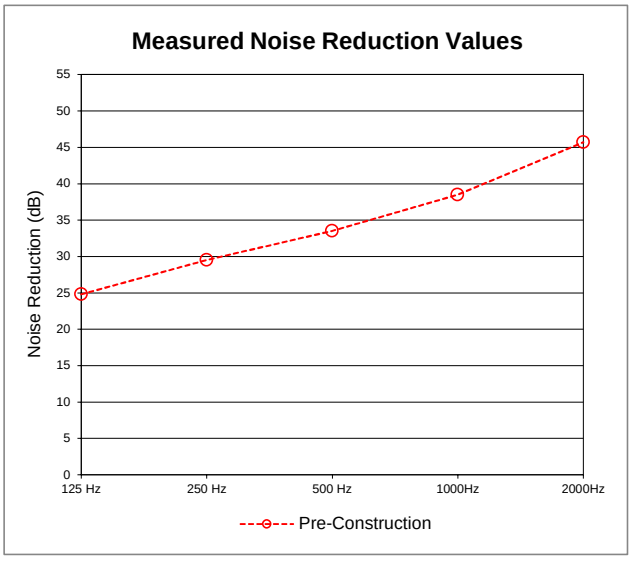
Pre-Construction Sound Pressure Levels (dB)							
April 27, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		50.3	50.7	45.9	43.4	51.9	57.1
Exterior Measurement	(flush)	87.0	89.3	89.6	85.8	85.1	92.5
Exterior Adjusted		81.0	83.3	83.6	79.8	79.1	86.5
Interior Background		35.8	30.9	30.4	30.1	18.6	33.0
Interior Measurement		60.8	55.7	54.0	47.3	43.6	54.9
Interior Adjusted		60.8	55.7	54.0	47.2	43.6	54.9
Noise Reduction		**20.2**	**27.6**	**29.6**	**32.6**	**35.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		30.1	29.5	35.5	34.0	26.3	39.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**30.8 dB**

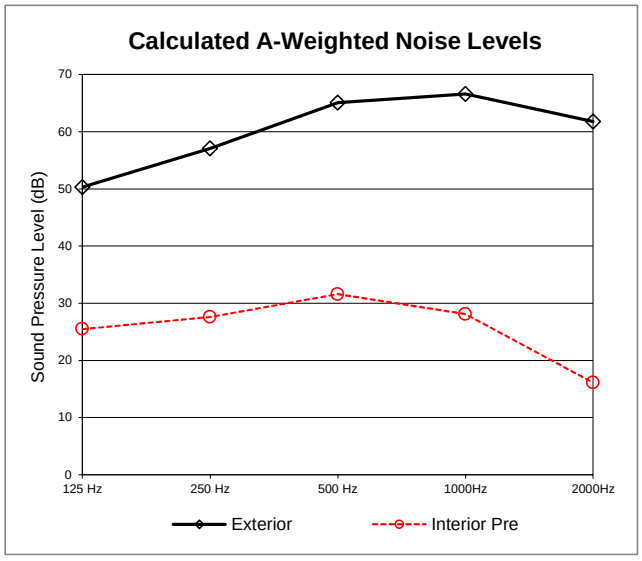




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Bedroom 1 Façade 1
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

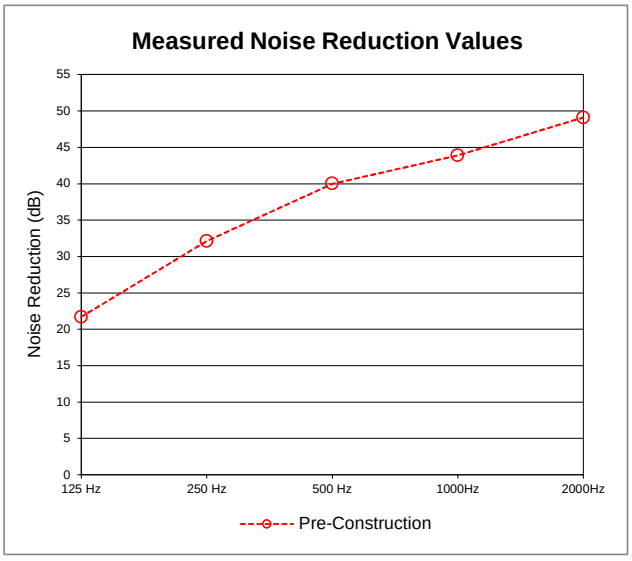
Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.5	51.6	47.8	46.0	49.9	56.2
Exterior Measurement (flush)	93.7	92.0	90.7	88.5	86.8	94.8
Exterior Adjusted	87.7	86.0	84.7	82.5	80.8	88.8
Interior Background	32.6	24.5	16.7	12.8	13.3	23.7
Interior Measurement	62.9	56.5	51.2	44.0	35.1	52.9
Interior Adjusted	62.9	56.5	51.2	44.0	35.1	52.9
Noise Reduction	**24.8**	**29.5**	**33.5**	**38.5**	**45.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	25.5	27.6	31.6	28.1	16.1	34.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.1 dB**

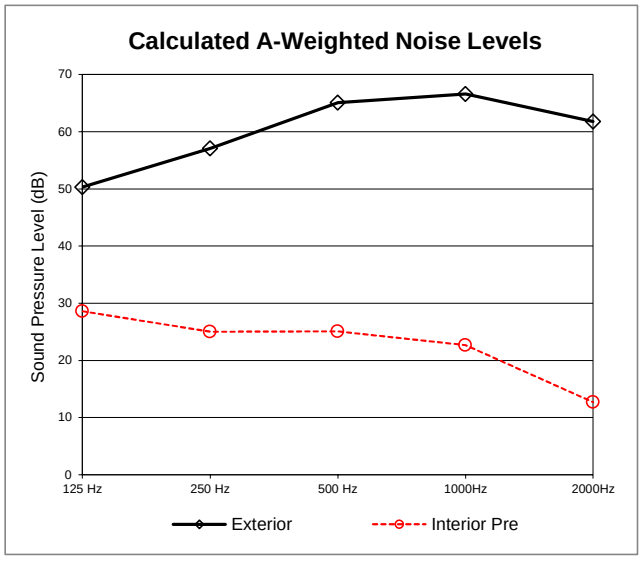




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Bedroom 1 Façade 2
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

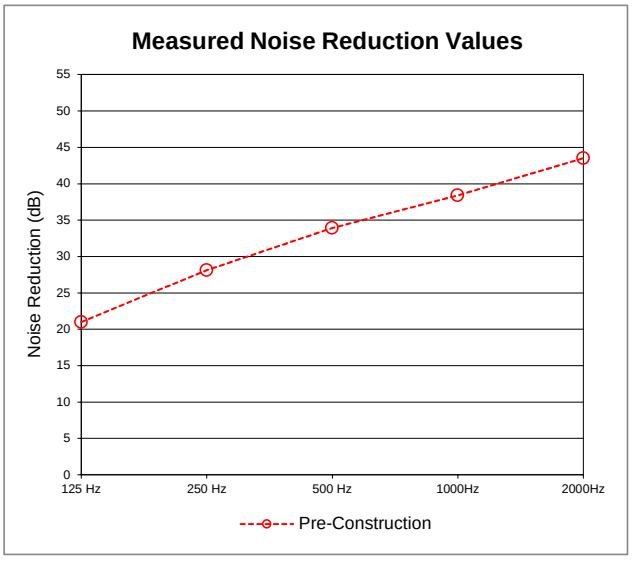
Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.5	51.6	47.8	46.0	49.9	56.2
Exterior Measurement (flush)	102.0	102.1	103.0	96.7	93.2	103.7
Exterior Adjusted	96.0	96.1	97.0	90.7	87.2	97.7
Interior Background	32.6	24.5	16.7	12.8	13.3	23.7
Interior Measurement	74.3	64.0	57.0	46.8	38.1	61.2
Interior Adjusted	74.3	64.0	57.0	46.8	38.1	61.2
Noise Reduction	**21.7**	**32.1**	**40.0**	**43.9**	**49.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.6	25.0	25.1	22.7	12.7	32.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.0 dB**

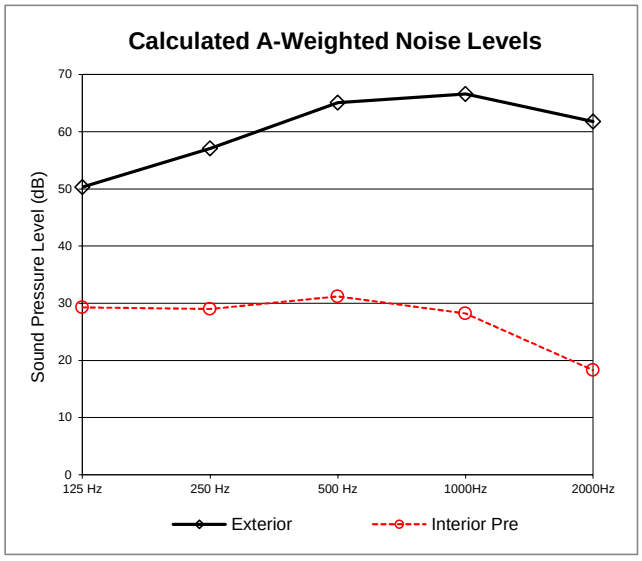




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Bedroom 2 Façade 1
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

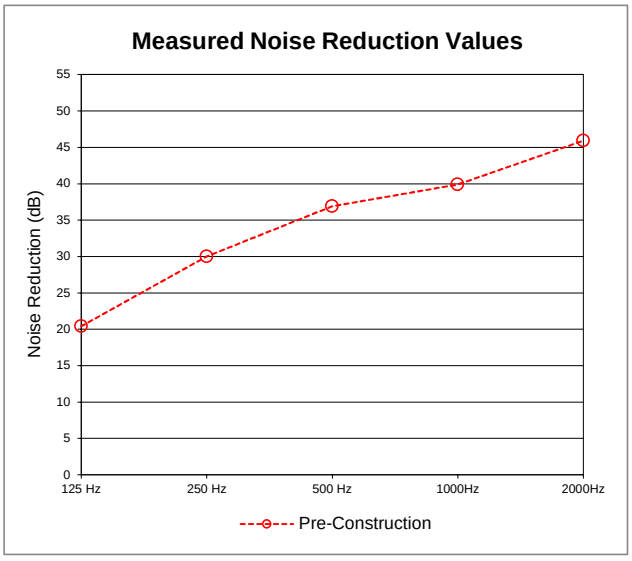
Pre-Construction Sound Pressure Levels (dB)							
April 27, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.8	55.0	49.6	45.4	36.1	51.5
Exterior Measurement	(flush)	94.0	91.4	90.4	88.5	85.0	94.2
Exterior Adjusted		88.0	85.4	84.4	82.5	79.0	88.2
Interior Background		50.5	42.3	30.1	23.6	22.1	37.5
Interior Measurement		67.1	57.4	50.5	44.1	35.7	54.2
Interior Adjusted		67.0	57.3	50.5	44.1	35.5	54.1
Noise Reduction		**21.0**	**28.1**	**33.9**	**38.4**	**43.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		29.3	29.0	31.2	28.2	18.3	35.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**34.3 dB**

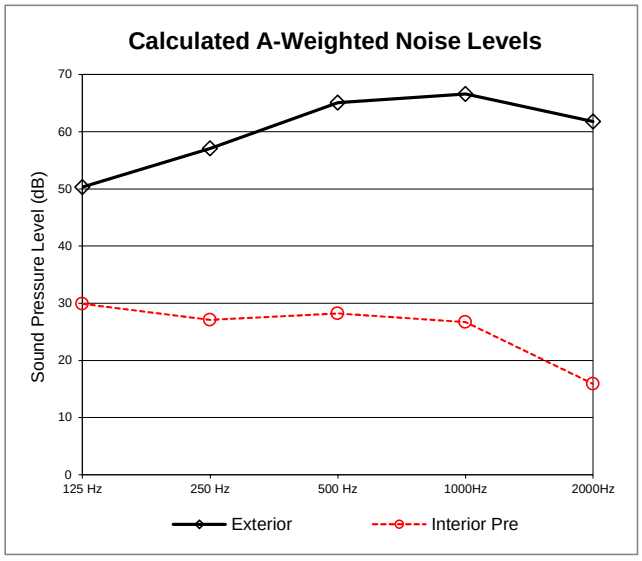




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Bedroom 2 Façade 2
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

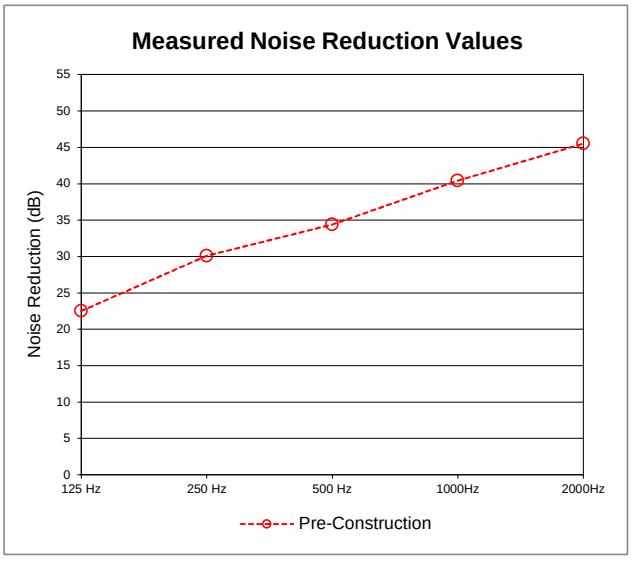
Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.8	55.0	49.6	45.4	36.1	51.5
Exterior Measurement (flush)	101.8	101.7	101.9	95.9	92.5	102.9
Exterior Adjusted	95.8	95.7	95.9	89.9	86.5	96.9
Interior Background	50.5	42.3	30.1	23.6	22.1	37.5
Interior Measurement	75.4	65.7	59.0	50.0	40.7	62.5
Interior Adjusted	75.4	65.7	59.0	50.0	40.6	62.5
Noise Reduction	**20.4**	**30.0**	**36.9**	**39.9**	**45.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.9	27.1	28.2	26.7	15.9	34.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.8 dB**

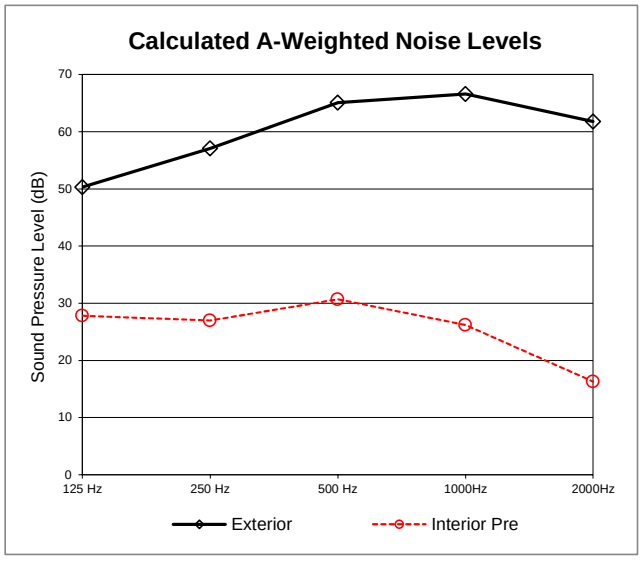




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fullwiler	Tested Room:	Bedroom 3 Façade
Address:	21825 13th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
April 27, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.8	55.0	49.6	45.4	36.1	51.5
Exterior Measurement	(flush)	92.4	90.1	88.6	85.8	82.9	92.0
Exterior Adjusted		86.4	84.1	82.6	79.8	76.9	86.0
Interior Background		41.0	35.0	27.3	27.9	30.4	36.9
Interior Measurement		63.9	54.1	48.2	39.7	32.7	51.0
Interior Adjusted		63.9	54.0	48.2	39.4	31.4	50.8
Noise Reduction		**22.5**	**30.1**	**34.4**	**40.4**	**45.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		27.8	27.0	30.7	26.2	16.3	34.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**35.6 dB**

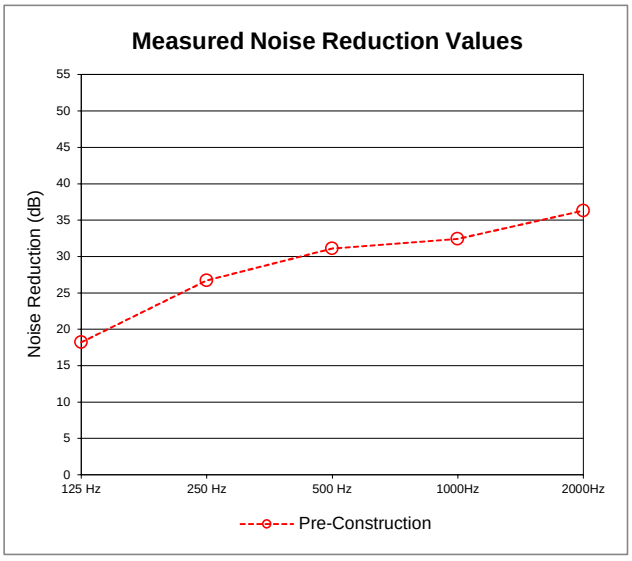


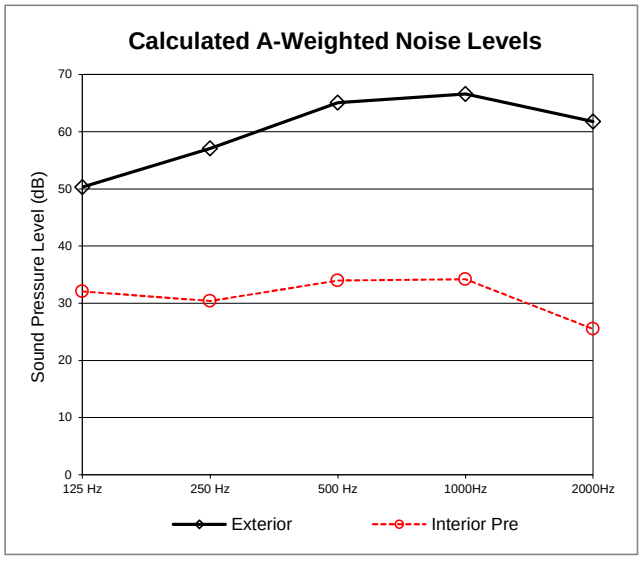


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Living Room Façade 1
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.8	49.5	46.3	44.7	39.5	49.2
Exterior Measurement (flush)	104.0	101.3	101.0	92.2	87.9	100.8
Exterior Adjusted	98.0	95.3	95.0	86.2	81.9	94.8
Interior Background	37.0	37.6	38.6	31.3	29.2	38.9
Interior Measurement	79.8	68.6	63.9	53.8	45.7	66.6
Interior Adjusted	79.8	68.6	63.9	53.8	45.6	66.6
Noise Reduction	**18.2**	**26.7**	**31.1**	**32.4**	**36.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.1	30.4	34.0	34.2	25.5	39.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.9 dB**

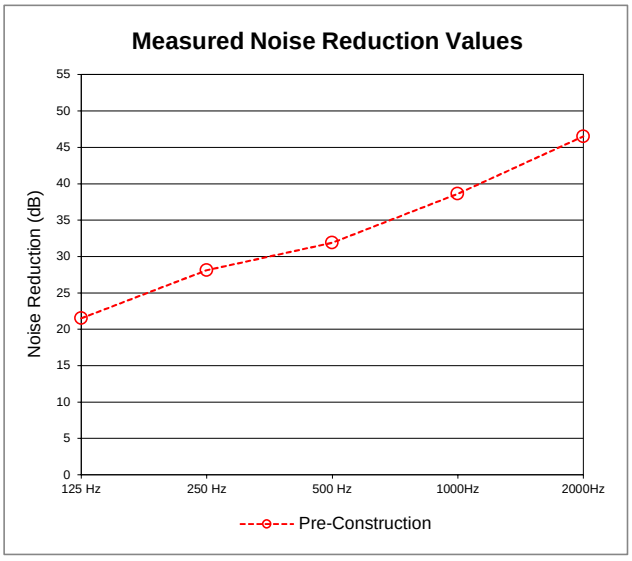


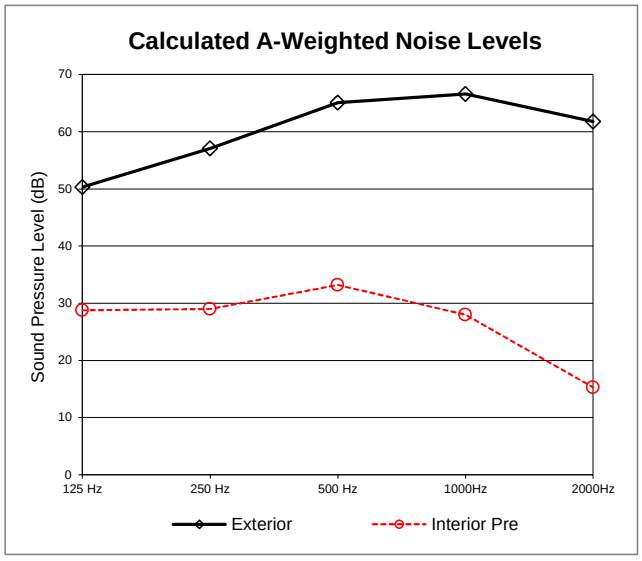


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Living Room Façade 2
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

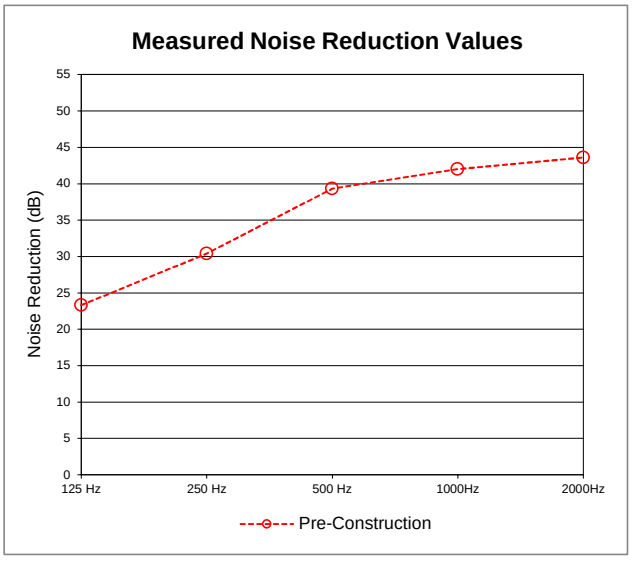
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.8	49.5	46.3	44.7	39.5	49.2
Exterior Measurement (flush)	102.8	97.9	98.6	95.1	93.1	102.1
Exterior Adjusted	96.8	91.9	92.6	89.1	87.1	96.1
Interior Background	37.0	37.6	38.6	31.3	29.2	38.9
Interior Measurement	75.3	63.8	60.7	50.6	40.9	62.7
Interior Adjusted	75.3	63.8	60.7	50.5	40.6	62.7
Noise Reduction	**21.5**	**28.1**	**31.9**	**38.6**	**46.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.8	29.0	33.2	28.0	15.3	36.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.7 dB**

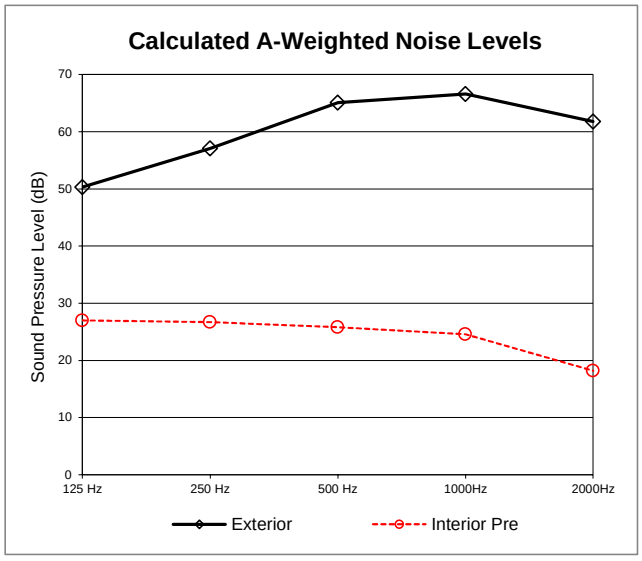




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Dining / Sitting Façade 1
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.8	53.8	46.5	47.1	40.7	51.6
Exterior Measurement (flush)	98.1	98.0	99.3	94.9	91.7	101.3
Exterior Adjusted	92.1	92.0	93.3	88.9	85.7	95.3
Interior Background	35.8	36.8	38.2	33.7	35.9	41.5
Interior Measurement	68.8	61.6	54.1	47.1	43.0	57.5
Interior Adjusted	68.8	61.6	54.0	46.9	42.1	57.4
Noise Reduction	**23.3**	**30.4**	**39.3**	**42.0**	**43.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.0	26.7	25.8	24.6	18.2	32.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**37.7 dB**

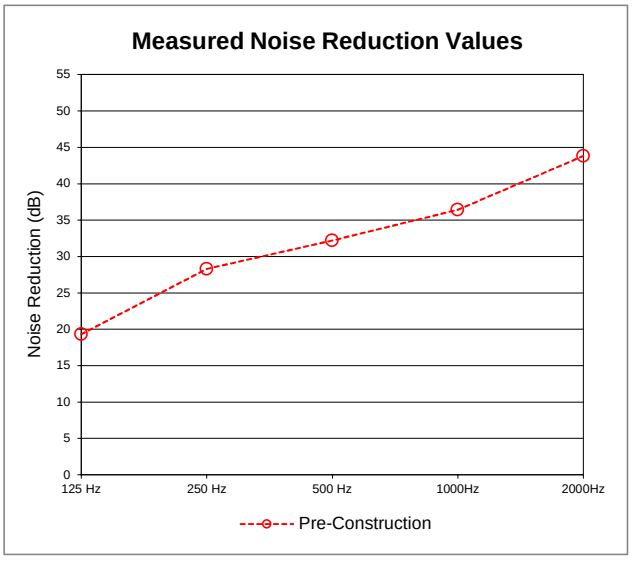


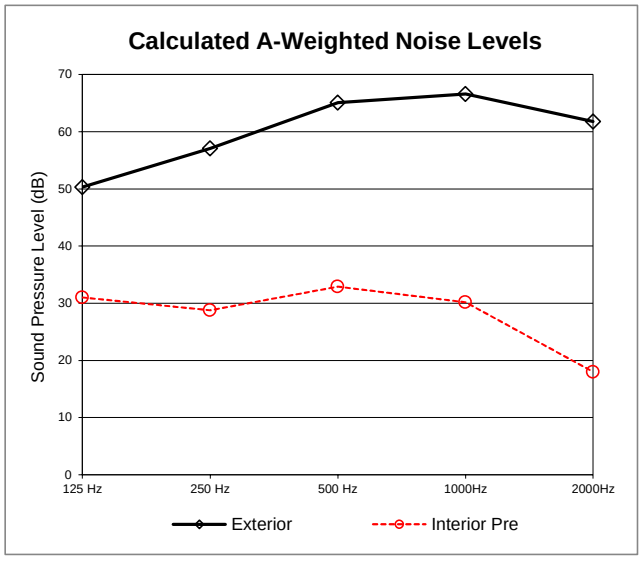


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Dining / Sitting Façade 2
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

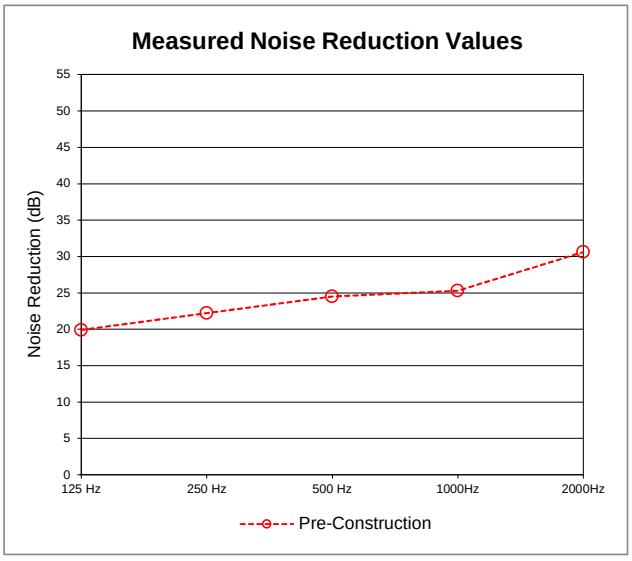
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.8	53.8	46.5	47.1	40.7	51.6
Exterior Measurement (flush)	95.5	95.6	96.2	92.7	89.0	98.5
Exterior Adjusted	89.5	89.6	90.2	86.7	83.0	92.5
Interior Background	35.8	36.8	38.2	33.7	35.9	41.5
Interior Measurement	70.2	61.3	58.0	50.4	40.5	59.4
Interior Adjusted	70.2	61.3	58.0	50.3	39.2	59.3
Noise Reduction	**19.3**	**28.3**	**32.2**	**36.4**	**43.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.0	28.8	32.9	30.2	18.0	37.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.9 dB**

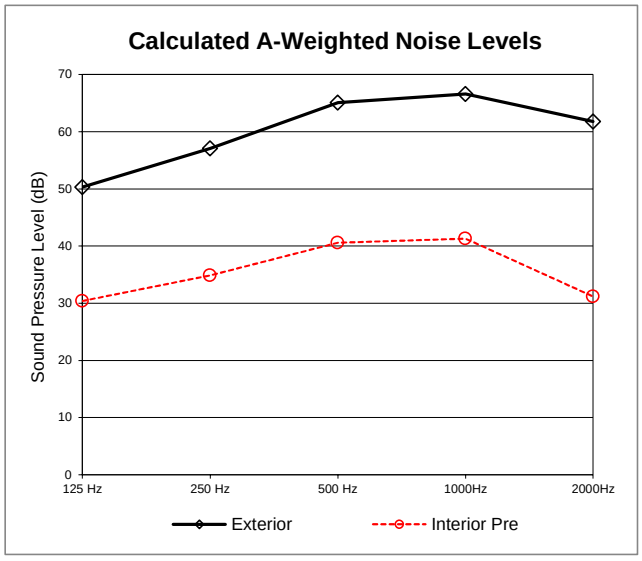




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Kitchen Façade 1
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

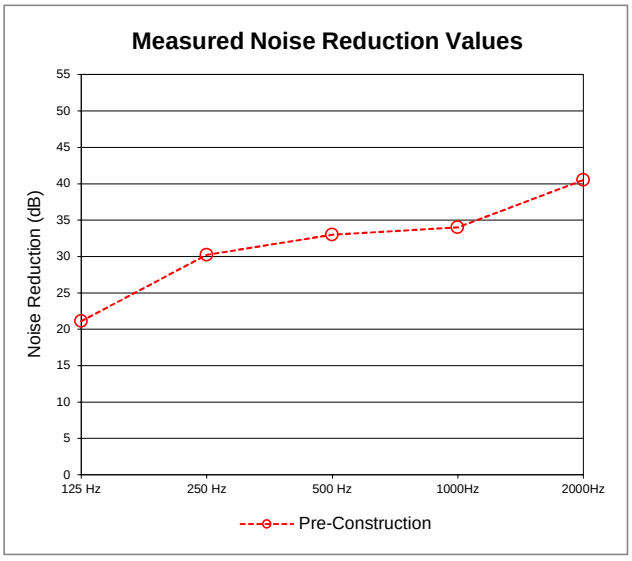
Pre-Construction Sound Pressure Levels (dB)						
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.8	53.8	46.5	47.1	40.7	51.6
Exterior Measurement (flush)	104.4	101.9	102.1	96.8	93.7	104.1
Exterior Adjusted	98.4	95.9	96.1	90.8	87.7	98.1
Interior Background	32.3	26.4	25.7	31.2	35.4	42.5
Interior Measurement	78.5	73.7	71.6	65.5	57.1	72.2
Interior Adjusted	78.5	73.7	71.6	65.5	57.1	72.2
Noise Reduction	**19.9**	**22.2**	**24.5**	**25.3**	**30.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.4	34.9	40.6	41.3	31.2	44.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**25.2 dB**

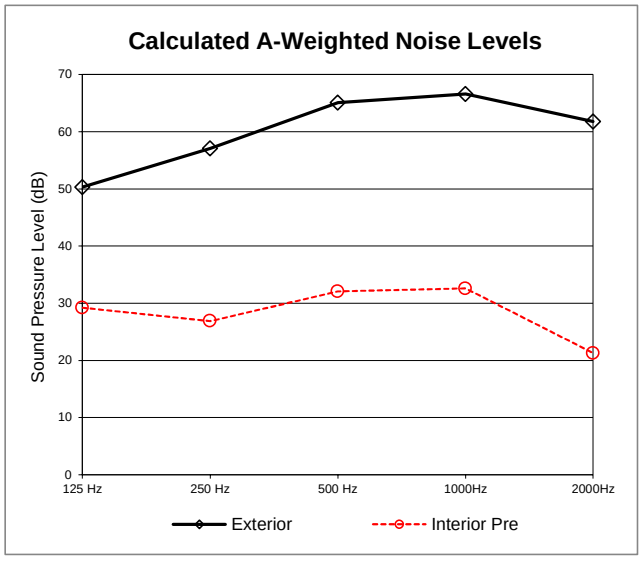




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Kitchen Façade 2
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

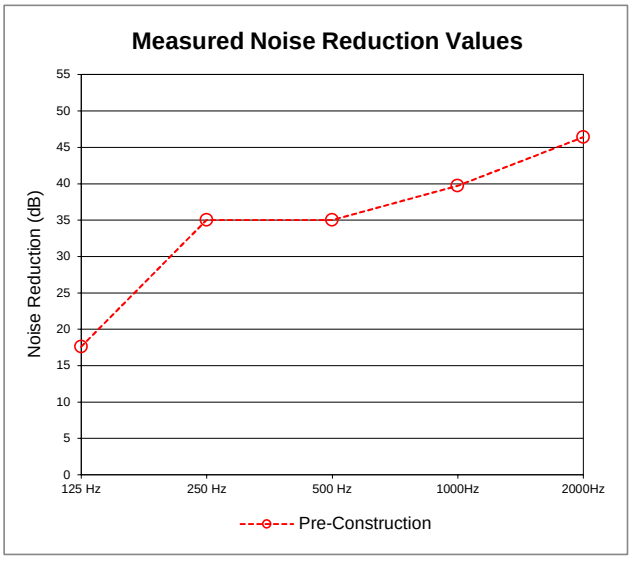
Pre-Construction Sound Pressure Levels (dB)						
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.8	53.8	46.5	47.1	40.7	51.6
Exterior Measurement (flush)	93.7	93.1	94.0	89.6	85.8	95.7
Exterior Adjusted	87.7	87.1	88.0	83.6	79.8	89.7
Interior Background	32.3	26.4	25.7	31.2	35.4	42.5
Interior Measurement	66.6	56.9	55.0	49.7	40.6	56.6
Interior Adjusted	66.6	56.9	55.0	49.6	39.3	56.4
Noise Reduction	**21.1**	**30.2**	**33.0**	**34.0**	**40.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.2	26.9	32.1	32.6	21.3	36.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.1 dB**

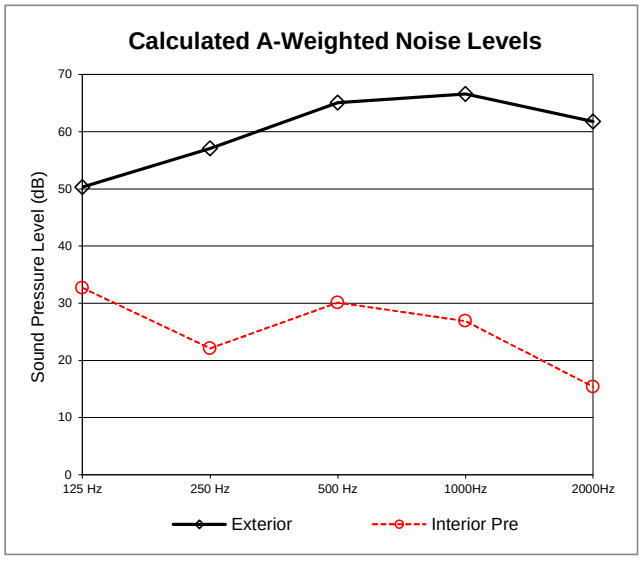




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Bedroom 1 Façade 1
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.7	52.4	48.9	46.4	43.0	51.4
Exterior Measurement (flush)	88.3	93.1	91.4	88.6	88.1	95.6
Exterior Adjusted	82.3	87.1	85.4	82.6	82.1	89.6
Interior Background	49.1	40.8	33.9	29.0	26.7	38.5
Interior Measurement	64.8	52.4	50.5	43.1	36.2	52.7
Interior Adjusted	64.7	52.1	50.4	42.9	35.7	52.5
Noise Reduction	**17.6**	**35.0**	**35.0**	**39.7**	**46.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.7	22.1	30.1	26.9	15.4	35.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.5 dB**

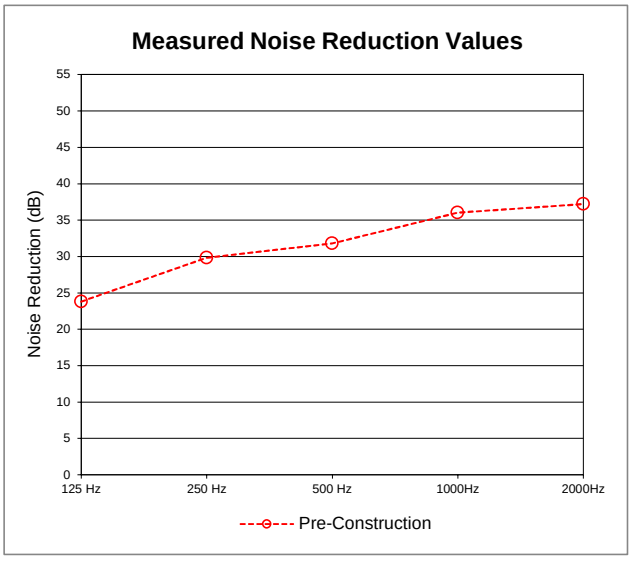


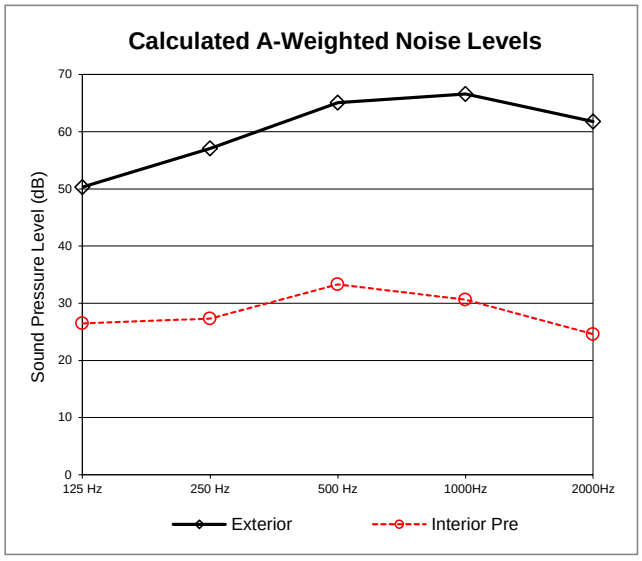


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Bedroom 1 Façade 2
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

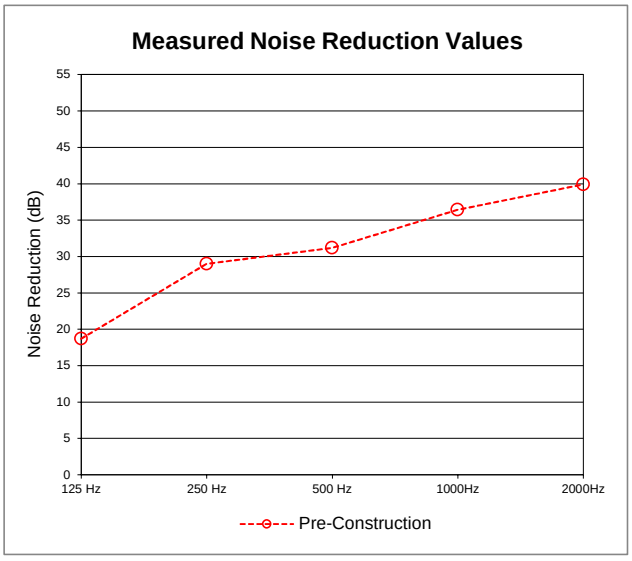
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.7	52.4	48.9	46.4	43.0	51.4
Exterior Measurement (flush)	105.6	102.1	101.6	97.1	94.8	104.7
Exterior Adjusted	99.6	96.1	95.6	91.1	88.8	98.7
Interior Background	49.1	40.8	33.9	29.0	26.7	38.5
Interior Measurement	75.8	66.3	63.8	55.1	51.6	64.9
Interior Adjusted	75.8	66.3	63.8	55.1	51.6	64.9
Noise Reduction	**23.8**	**29.8**	**31.8**	**36.0**	**37.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.5	27.3	33.3	30.6	24.6	36.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.4 dB**

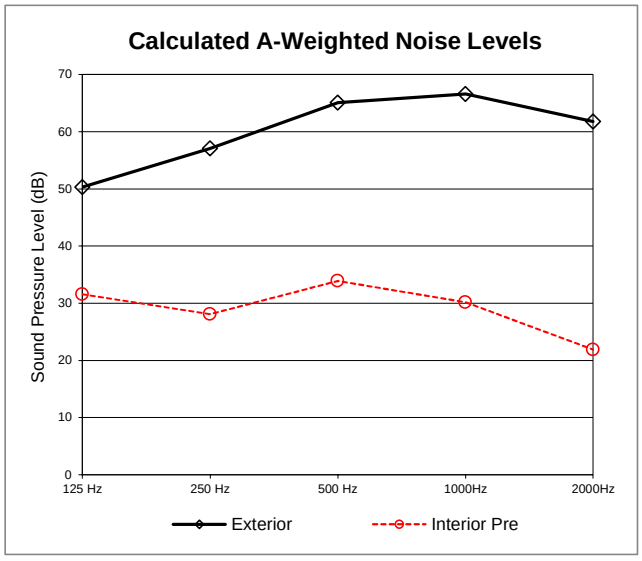




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Bedroom 2 Façade
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

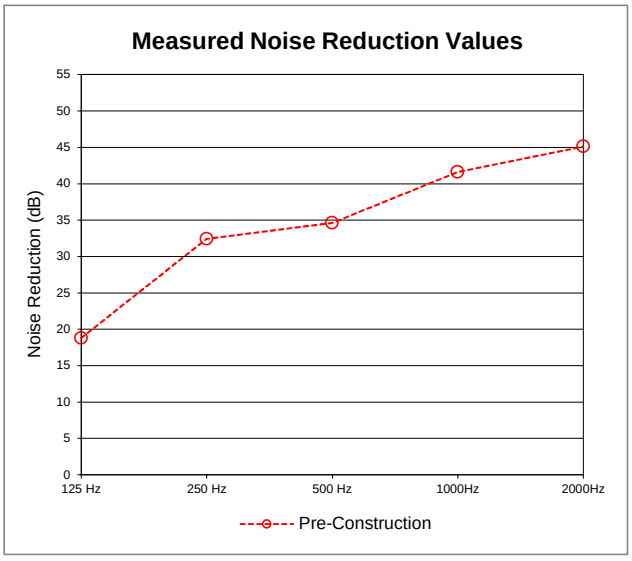
Pre-Construction Sound Pressure Levels (dB)						
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.9	48.8	46.3	46.6	41.4	50.5
Exterior Measurement (flush)	105.0	102.0	102.2	99.0	96.9	105.3
Exterior Adjusted	99.0	96.0	96.2	93.0	90.9	99.3
Interior Background	39.6	34.2	27.5	22.5	17.3	30.8
Interior Measurement	80.3	67.0	65.0	56.6	51.0	66.8
Interior Adjusted	80.3	67.0	65.0	56.6	51.0	66.8
Noise Reduction	**18.7**	**29.0**	**31.2**	**36.4**	**39.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.6	28.1	33.9	30.2	21.9	37.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.4 dB**

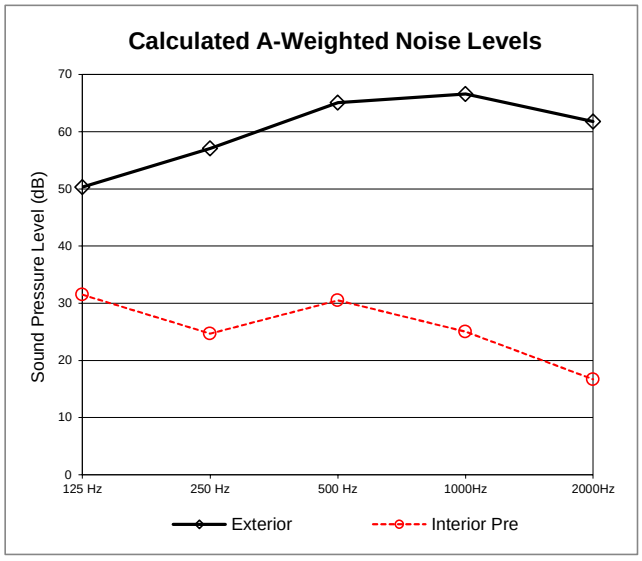




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Bradler	Tested Room:	Bedroom 3 Façade
Address:	11051 14th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 5, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		56.9	56.8	55.1	51.0	47.7	56.3
Exterior Measurement	(flush)	104.2	102.2	102.0	98.3	95.7	104.7
Exterior Adjusted		98.2	96.2	96.0	92.3	89.7	98.7
Interior Background		35.9	29.1	20.8	15.8	14.4	25.9
Interior Measurement		79.4	63.8	61.4	50.7	44.6	65.0
Interior Adjusted		79.4	63.8	61.4	50.7	44.6	65.0
Noise Reduction		**18.8**	**32.4**	**34.6**	**41.6**	**45.1**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		31.5	24.7	30.5	25.0	16.7	35.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**35.0 dB**

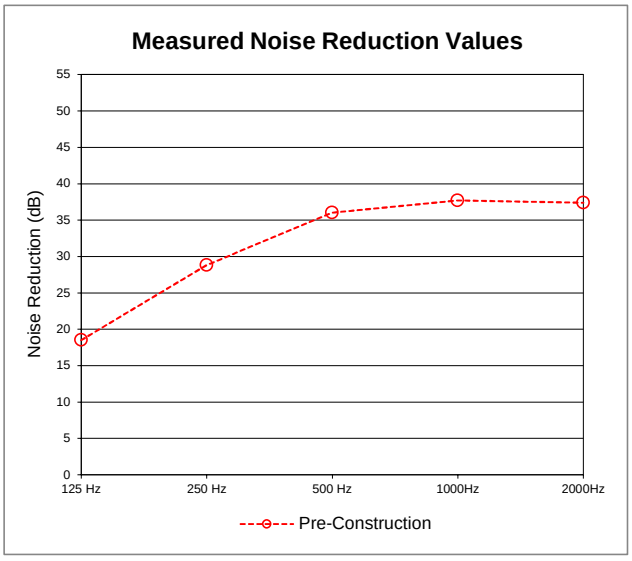


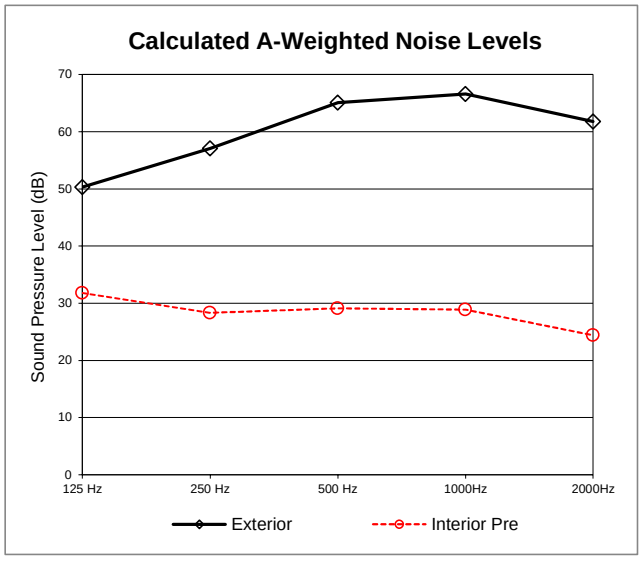


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soung	Tested Room:	Living Room Façade
Address:	21810 14th Ave S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	49.5	44.6	46.1	40.9	32.9	46.2
Exterior Measurement (flush)	90.6	92.5	93.5	89.7	85.2	95.3
Exterior Adjusted	84.6	86.5	87.5	83.7	79.2	89.3
Interior Background	35.0	29.6	20.4	20.4	20.4	28.8
Interior Measurement	66.1	57.7	51.5	46.0	41.8	54.7
Interior Adjusted	66.1	57.7	51.5	46.0	41.8	54.7
Noise Reduction	**18.5**	**28.8**	**36.0**	**37.7**	**37.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.8	28.3	29.1	28.9	24.4	36.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.9 dB**

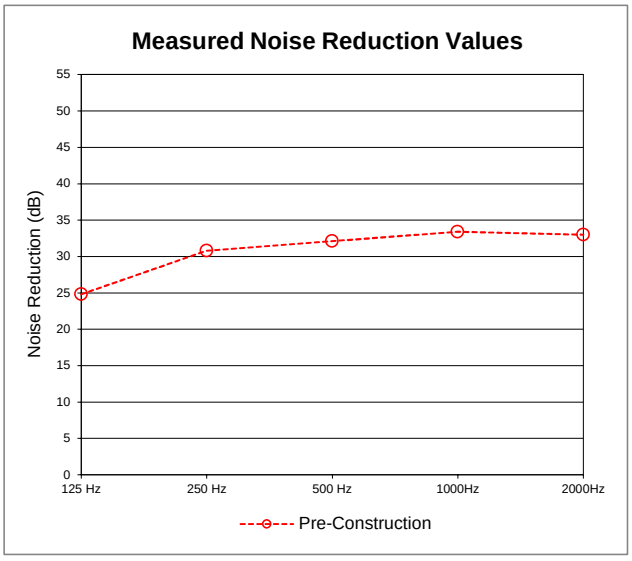


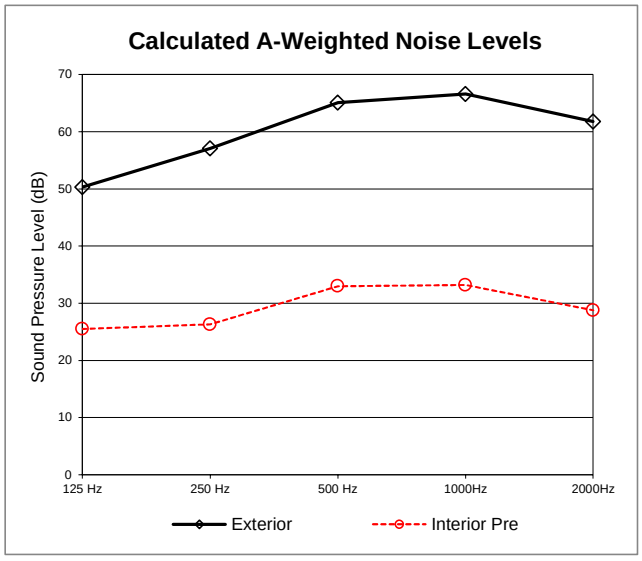


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soung	Tested Room:	Dining / Kitchen Façade 1
Address:	21810 14th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.1	45.6	43.4	41.5	37.7	46.7
Exterior Measurement (flush)	91.3	90.8	92.8	90.0	88.2	96.1
Exterior Adjusted	85.3	84.8	86.8	84.0	82.2	90.1
Interior Background	30.0	31.0	25.0	22.2	20.7	29.6
Interior Measurement	60.5	54.0	54.7	50.6	49.2	56.5
Interior Adjusted	60.5	54.0	54.7	50.6	49.2	56.5
Noise Reduction	**24.8**	**30.8**	**32.1**	**33.4**	**33.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	25.5	26.3	33.0	33.2	28.8	37.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.5 dB**

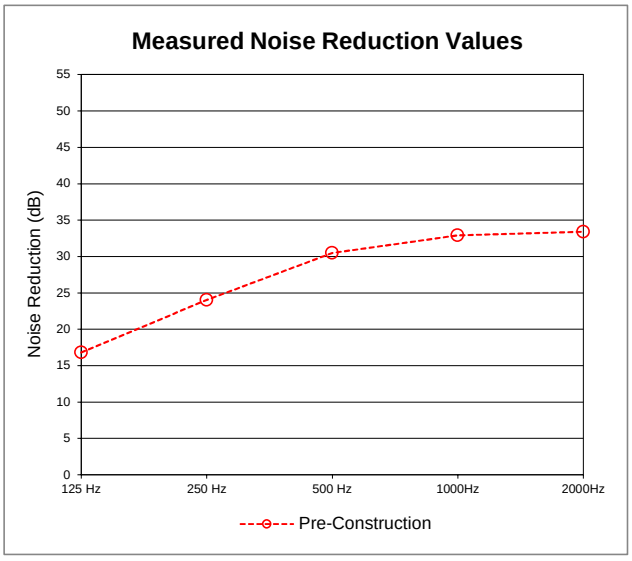


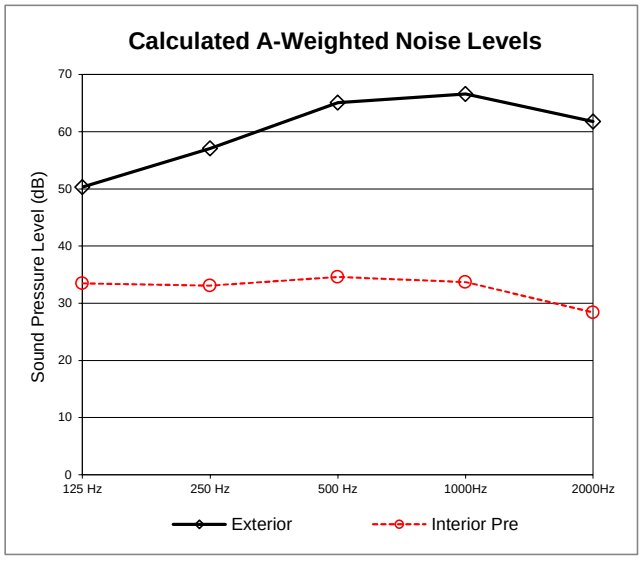


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soung	Tested Room:	Dining / Kitchen Façade 2
Address:	21810 14th Ave S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	49.5	44.6	46.1	40.9	32.9	46.2
Exterior Measurement (flush)	93.2	94.0	96.2	93.8	89.9	98.4
Exterior Adjusted	87.2	88.0	90.2	87.8	83.9	92.4
Interior Background	30.0	31.0	25.0	22.2	20.7	29.6
Interior Measurement	70.4	64.0	59.7	54.9	50.5	61.8
Interior Adjusted	70.4	64.0	59.7	54.9	50.5	61.8
Noise Reduction	**16.8**	**24.0**	**30.5**	**32.9**	**33.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	33.5	33.1	34.6	33.7	28.4	40.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.9 dB**

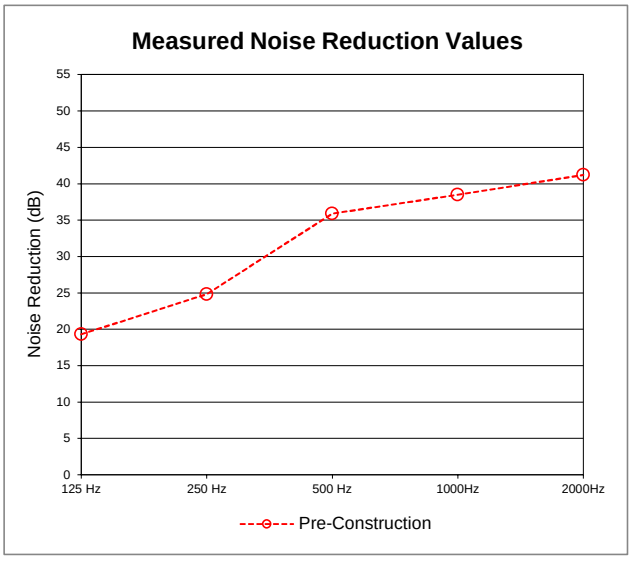


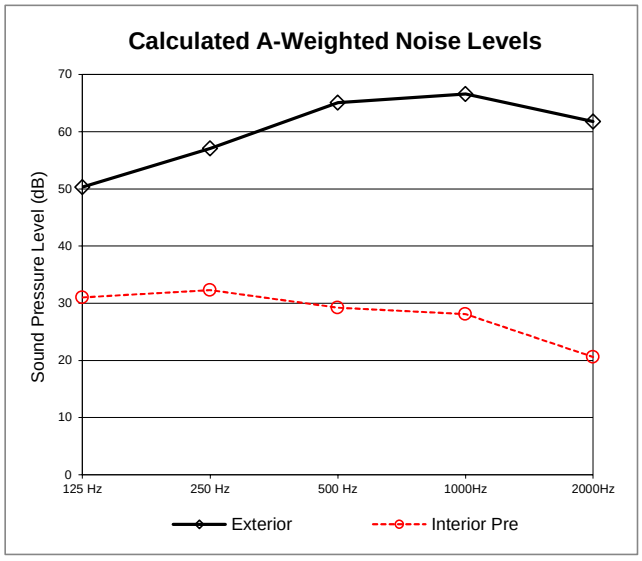


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soung	Tested Room:	Bedroom 1 Façade
Address:	21810 14th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.4	52.4	46.0	43.5	41.1	50.0
Exterior Measurement (flush)	87.5	80.1	84.0	81.0	79.5	87.3
Exterior Adjusted	81.5	74.1	78.0	75.0	73.5	81.3
Interior Background	34.6	28.8	22.0	20.6	21.7	28.8
Interior Measurement	62.2	49.3	42.1	36.6	32.7	48.2
Interior Adjusted	62.2	49.3	42.1	36.5	32.3	48.1
Noise Reduction	**19.3**	**24.8**	**35.9**	**38.5**	**41.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.0	32.3	29.2	28.1	20.6	36.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.4 dB**

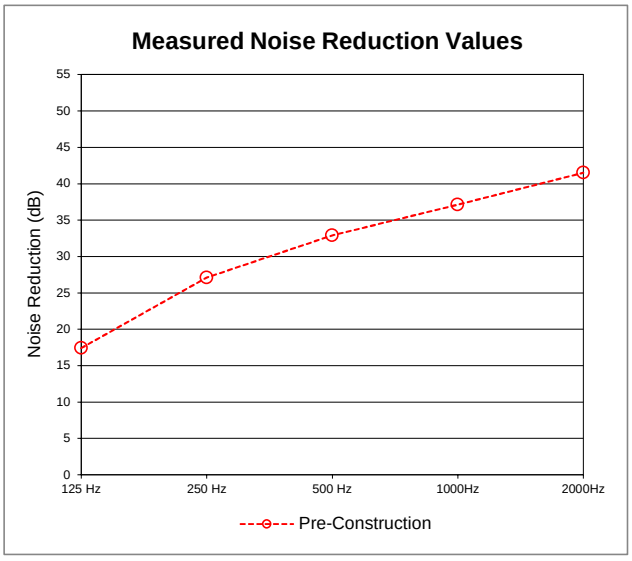


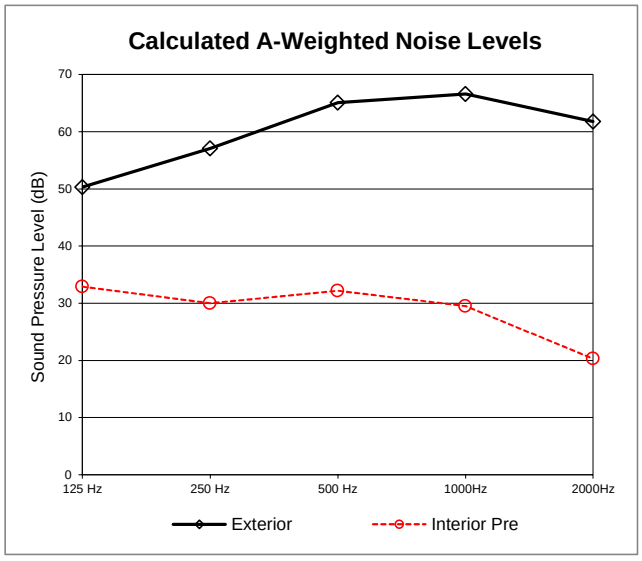


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soung	Tested Room:	Bedroom 2 Façade
Address:	21810 14th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.4	52.4	46.0	43.5	41.1	50.0
Exterior Measurement (flush)	85.4	87.8	87.7	85.1	82.5	90.6
Exterior Adjusted	79.4	81.8	81.7	79.1	76.5	84.6
Interior Background	42.7	38.0	26.1	20.6	18.7	32.5
Interior Measurement	62.1	54.8	48.8	42.0	35.1	51.4
Interior Adjusted	62.0	54.7	48.8	42.0	35.0	51.3
Noise Reduction	**17.4**	**27.1**	**32.9**	**37.1**	**41.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.9	30.0	32.2	29.5	20.3	37.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.5 dB**

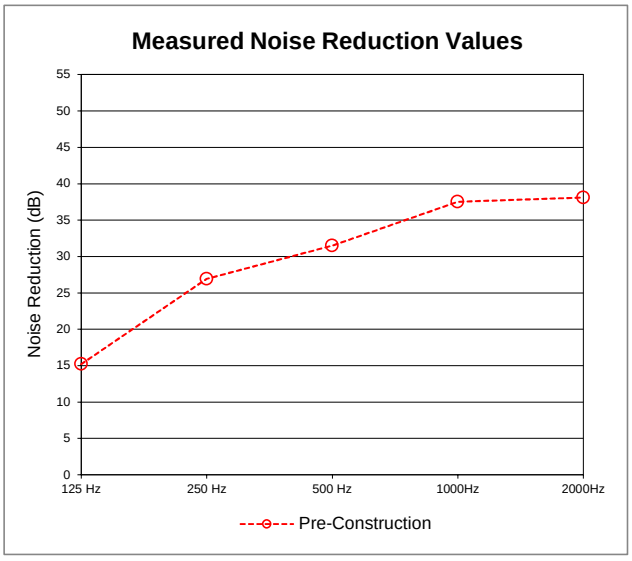


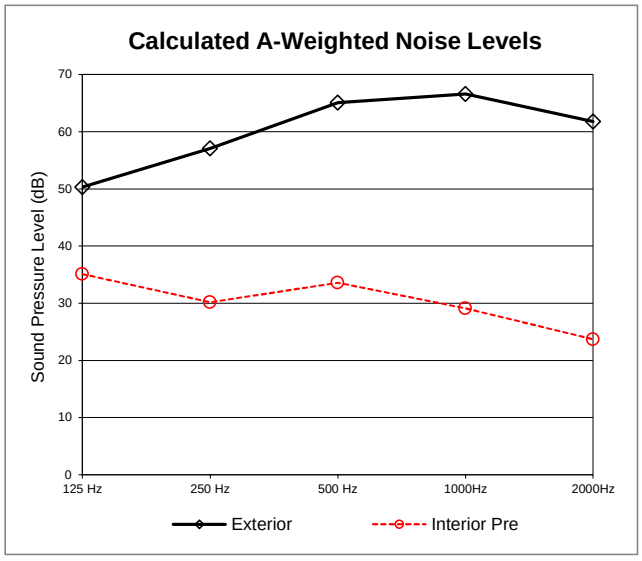


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soung	Tested Room:	Bedroom 3 Façade 1
Address:	21810 14th Ave S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

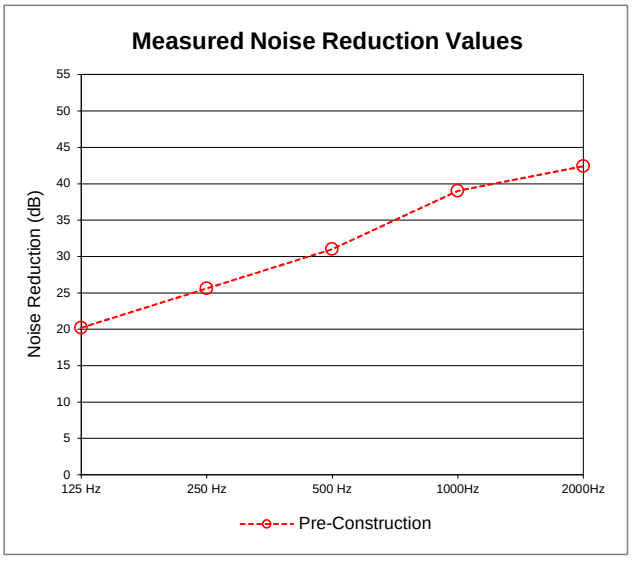
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	63.0	54.2	51.7	48.4	47.0	54.9
Exterior Measurement (flush)	90.5	96.1	95.0	91.3	87.0	96.9
Exterior Adjusted	84.5	90.1	89.0	85.3	81.0	90.9
Interior Background	37.8	29.2	25.7	27.6	28.3	35.5
Interior Measurement	69.3	63.2	57.5	47.8	43.0	59.1
Interior Adjusted	69.3	63.2	57.5	47.8	42.9	59.1
Noise Reduction	**15.2**	**26.9**	**31.5**	**37.5**	**38.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.1	30.2	33.6	29.1	23.7	38.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.2 dB**

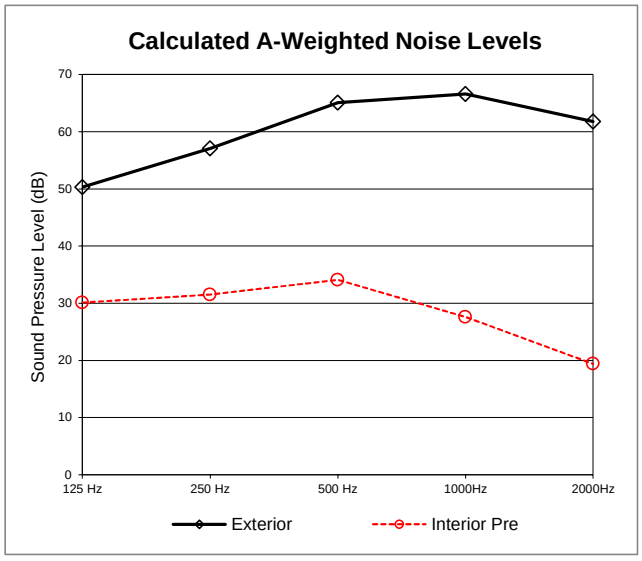




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soung	Tested Room:	Bedroom 3 Façade 2
Address:	21810 14th Ave S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	63.0	54.2	51.7	48.4	47.0	54.9
Exterior Measurement (flush)	86.2	85.6	87.0	84.4	81.2	89.2
Exterior Adjusted	80.2	79.6	81.0	78.4	75.2	83.2
Interior Background	37.8	29.2	25.7	27.6	28.3	35.5
Interior Measurement	60.0	54.0	50.0	39.7	34.1	50.6
Interior Adjusted	60.0	54.0	50.0	39.4	32.8	50.5
Noise Reduction	**20.2**	**25.6**	**31.0**	**39.0**	**42.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.1	31.5	34.1	27.6	19.4	37.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.5 dB**

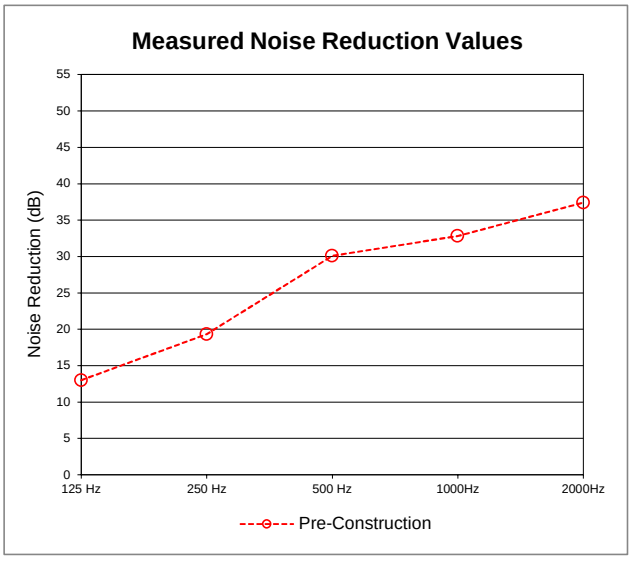


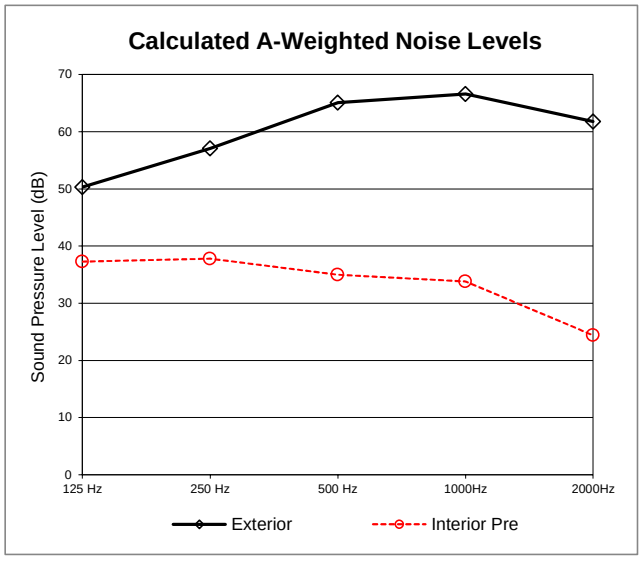


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Living Room Façade
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.1	54.3	53.5	54.2	54.3	59.2
Exterior Measurement	(flush)	89.5	88.5	89.2	85.3	82.5	91.7
Exterior Adjusted		83.5	82.5	83.2	79.3	76.5	85.7
Interior Background		36.0	30.6	31.8	33.6	31.3	38.9
Interior Measurement		68.5	61.2	51.2	44.8	38.1	56.6
Interior Adjusted	(roof)	70.5	63.2	53.1	46.5	39.1	58.5
Noise Reduction		**13.0**	**19.3**	**30.1**	**32.8**	**37.4**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		37.3	37.8	35.0	33.8	24.4	42.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**27.6 dB**

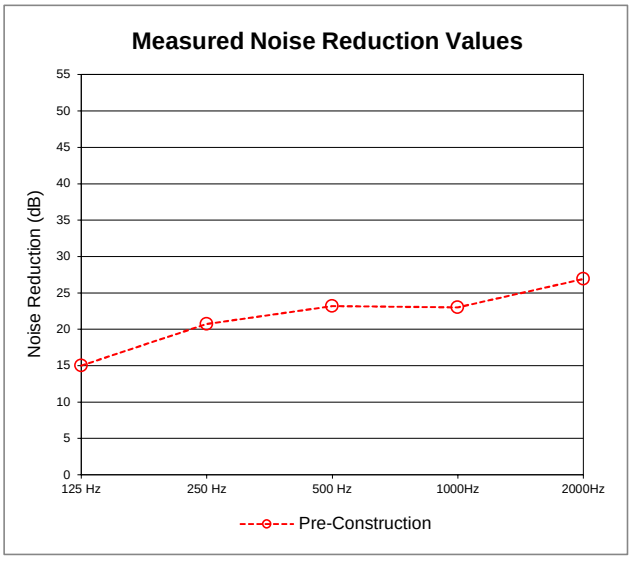


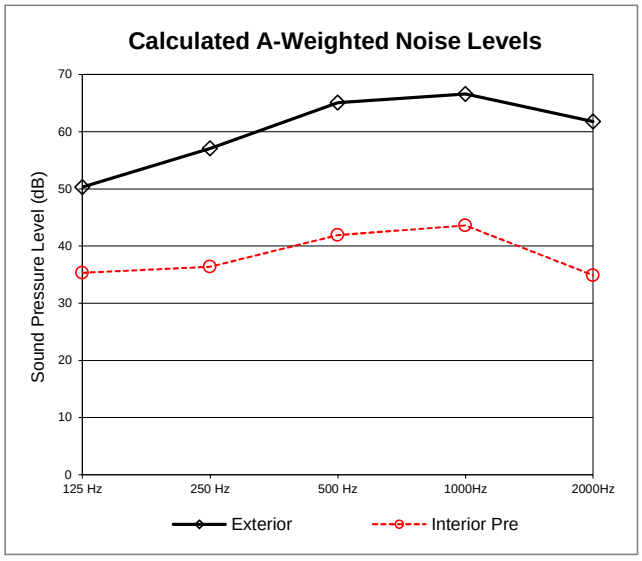


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Sitting Room Façade
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.0	51.5	48.3	47.1	39.2	51.8
Exterior Measurement (flush)	92.3	92.7	91.8	89.4	85.9	95.0
Exterior Adjusted	86.3	86.7	85.8	83.4	79.9	89.0
Interior Background	41.4	40.0	29.6	19.1	12.8	33.0
Interior Measurement	71.3	66.0	62.6	60.4	53.0	65.1
Interior Adjusted	71.3	66.0	62.6	60.4	53.0	65.1
Noise Reduction	**15.0**	**20.7**	**23.2**	**23.0**	**26.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.3	36.4	41.9	43.6	34.9	46.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**23.1 dB**

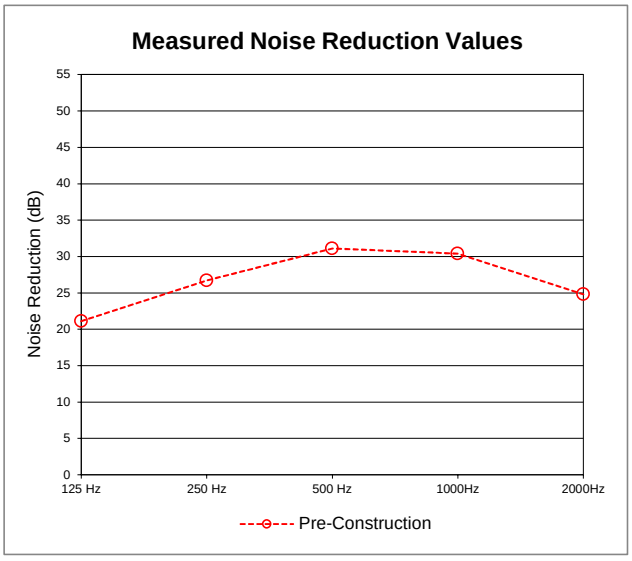


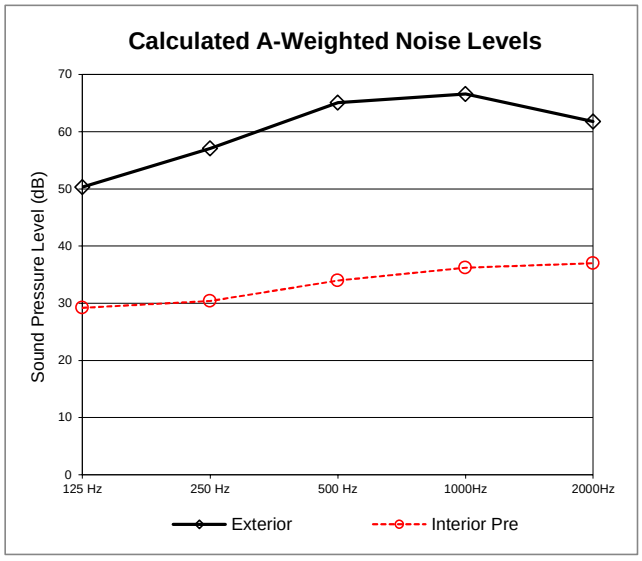


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Dining Room Façade
Address:	23003 17th Ave S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

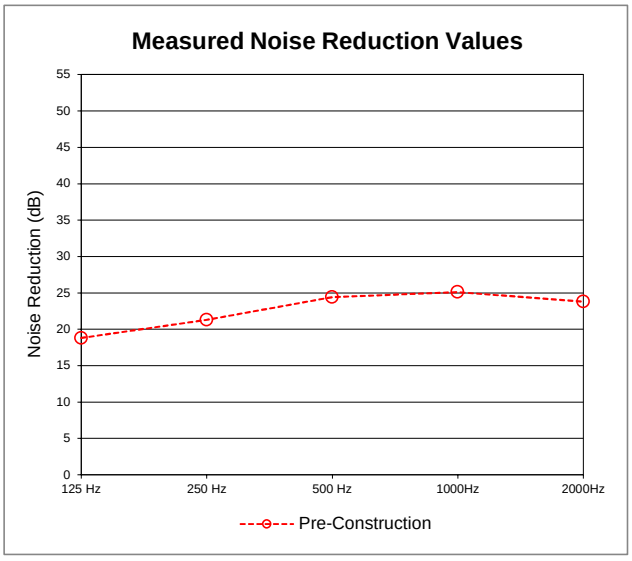
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	49.2	43.4	46.1	44.0	38.4	47.9
Exterior Measurement (flush)	90.7	89.1	89.2	86.7	82.5	91.9
Exterior Adjusted	84.7	83.1	83.2	80.7	76.5	85.9
Interior Background	46.0	40.3	32.0	23.4	16.7	35.2
Interior Measurement	63.7	56.5	52.1	50.3	51.7	58.2
Interior Adjusted	63.6	56.4	52.1	50.3	51.7	58.2
Noise Reduction	**21.1**	**26.7**	**31.1**	**30.4**	**24.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.2	30.4	34.0	36.2	37.0	41.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.7 dB**

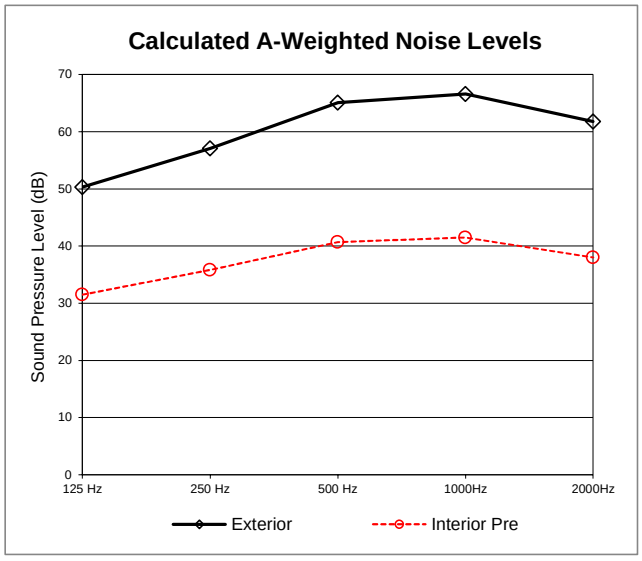




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Kitchen 1 Façade
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 7, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.1	54.3	53.5	54.2	54.3	59.2
Exterior Measurement	(flush)	94.0	85.1	88.2	85.8	81.5	91.2
Exterior Adjusted		88.0	79.1	82.2	79.8	75.5	85.2
Interior Background		43.1	41.6	38.0	30.2	30.1	39.5
Interior Measurement		69.2	57.9	57.8	54.7	51.7	61.0
Interior Adjusted		69.2	57.8	57.8	54.7	51.7	61.0
Noise Reduction		**18.8**	**21.3**	**24.4**	**25.1**	**23.8**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		31.5	35.8	40.7	41.5	38.0	45.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**24.3 dB**

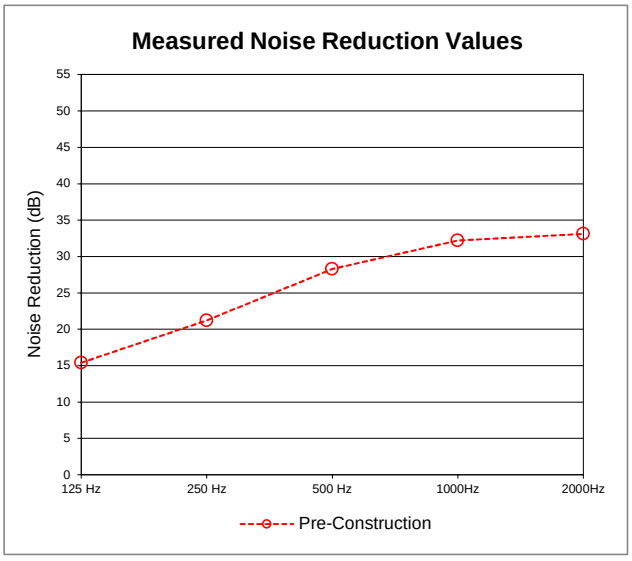


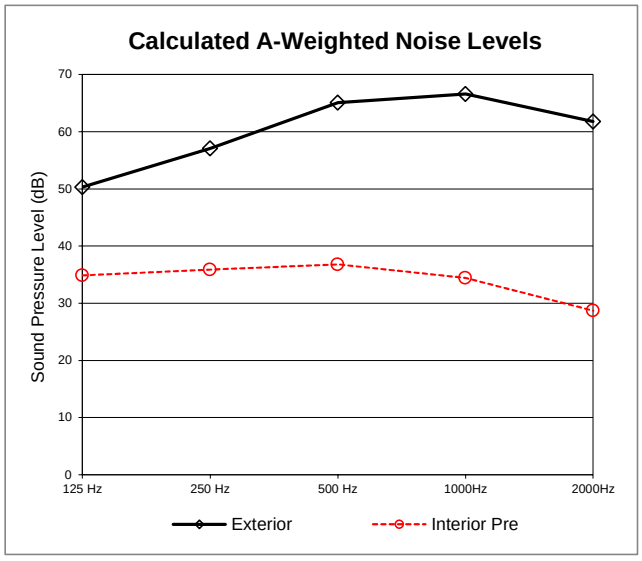


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Kitchen 2 Façade
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		49.2	43.4	46.1	44.0	38.4	47.9
Exterior Measurement	(flush)	91.0	87.5	88.7	87.8	82.9	92.4
Exterior Adjusted		85.0	81.5	82.7	81.8	76.9	86.4
Interior Background		30.4	27.4	31.1	32.7	32.0	37.3
Interior Measurement		67.6	58.3	52.4	47.7	42.2	55.7
Interior Adjusted	(roof)	69.6	60.3	54.4	49.6	43.8	57.6
Noise Reduction		**15.4**	**21.2**	**28.3**	**32.2**	**33.1**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		34.9	35.9	36.8	34.4	28.7	41.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**28.2 dB**

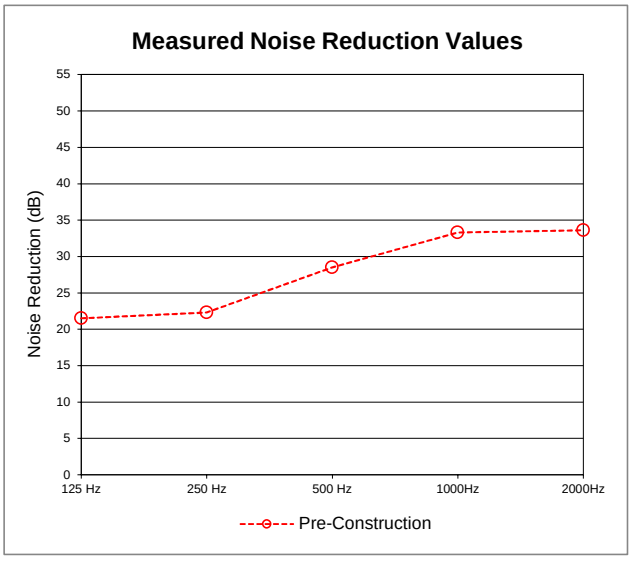


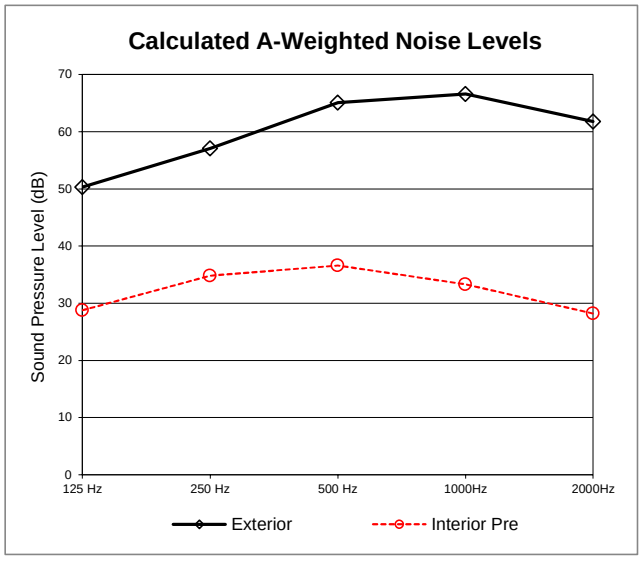


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Bedroom 1 Façade
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.9	52.8	50.8	51.4	46.0	55.1
Exterior Measurement (flush)	93.8	91.0	91.0	89.1	84.2	94.3
Exterior Adjusted	87.8	85.0	85.0	83.1	78.2	88.3
Interior Background	34.2	31.6	25.8	22.5	17.2	28.9
Interior Measurement	66.3	62.7	56.5	49.8	44.6	58.6
Interior Adjusted	66.3	62.7	56.5	49.8	44.6	58.6
Noise Reduction	**21.5**	**22.3**	**28.5**	**33.3**	**33.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.8	34.8	36.6	33.3	28.2	40.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.5 dB**

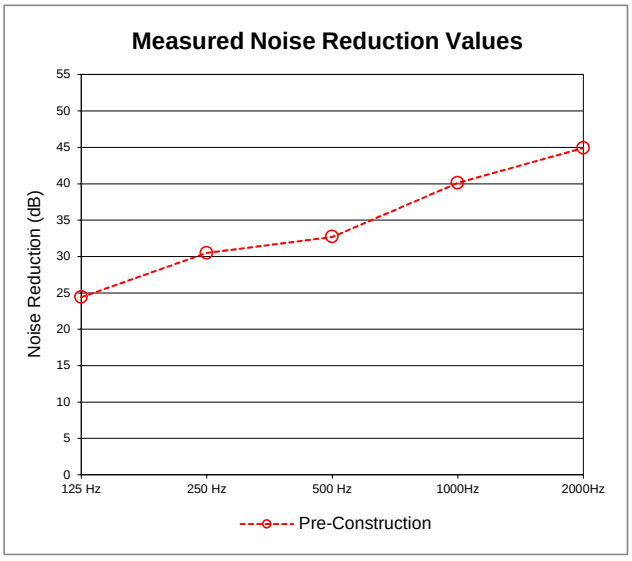


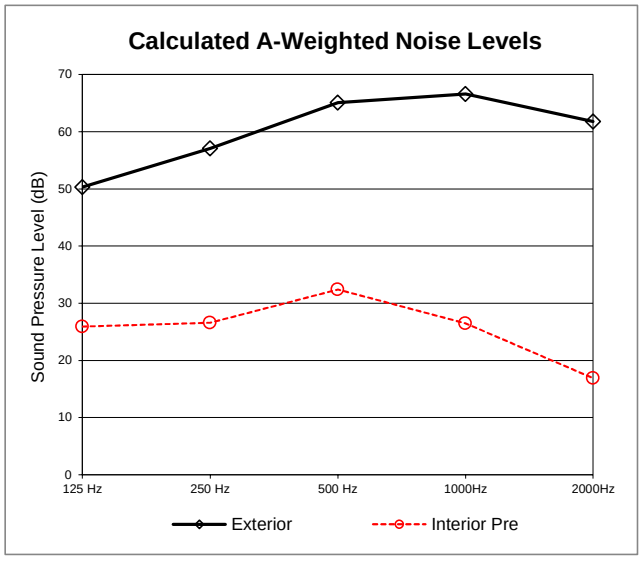


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Bedroom 2 Façade 1
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		61.9	52.8	50.8	51.4	46.0	55.1
Exterior Measurement	(flush)	92.5	89.1	89.1	86.8	83.5	92.2
Exterior Adjusted		86.5	83.1	83.1	80.8	77.5	86.2
Interior Background		37.8	35.0	27.4	24.2	20.2	31.5
Interior Measurement		61.1	51.7	49.4	39.8	31.9	50.0
Interior Adjusted	(roof)	62.1	52.6	50.4	40.7	32.6	50.9
Noise Reduction		**24.4**	**30.5**	**32.7**	**40.1**	**44.9**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		25.9	26.6	32.4	26.5	16.9	34.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**35.1 dB**



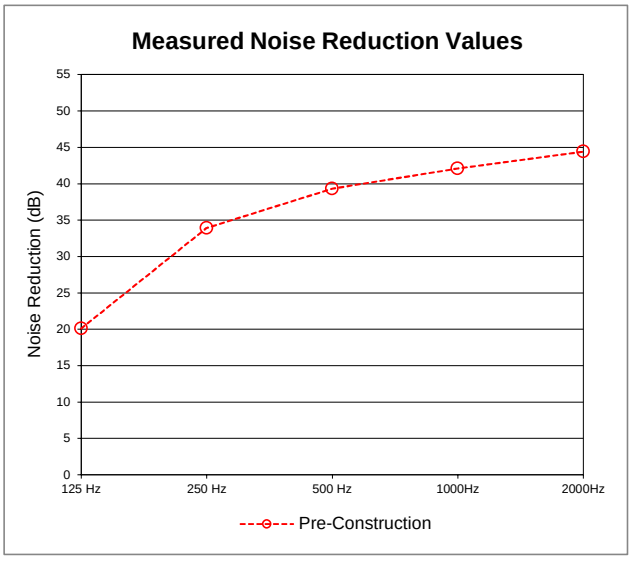


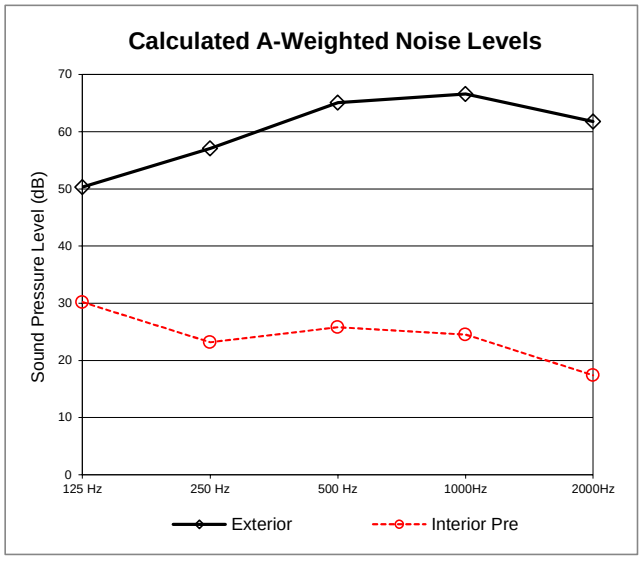
Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Bedroom 2 Façade 2
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		61.9	52.8	50.8	51.4	46.0	55.1
Exterior Measurement	(flush)	99.4	100.1	99.4	94.1	90.9	100.9
Exterior Adjusted		93.4	94.1	93.4	88.1	84.9	94.9
Interior Background		37.8	35.0	27.4	24.2	20.2	31.5
Interior Measurement		72.3	59.2	53.1	45.0	39.6	58.6
Interior Adjusted	(roof)	73.3	60.2	54.1	46.0	40.5	59.6
Noise Reduction		**20.1**	**33.9**	**39.3**	**42.1**	**44.4**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		30.2	23.2	25.8	24.5	17.4	33.0

Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum): 37.0 dB

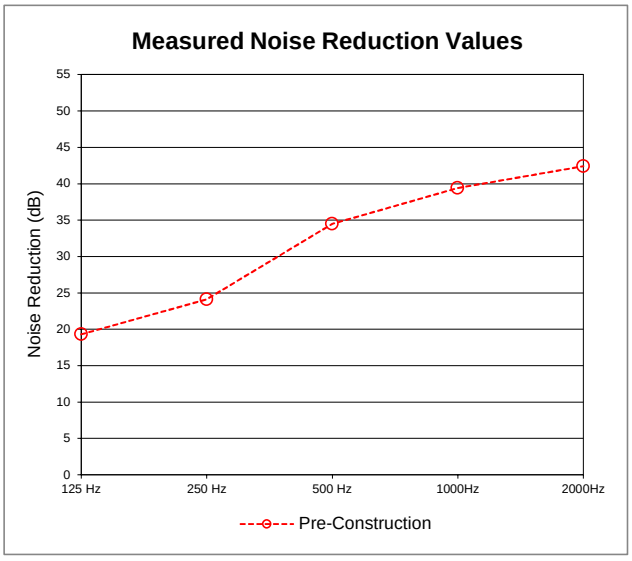


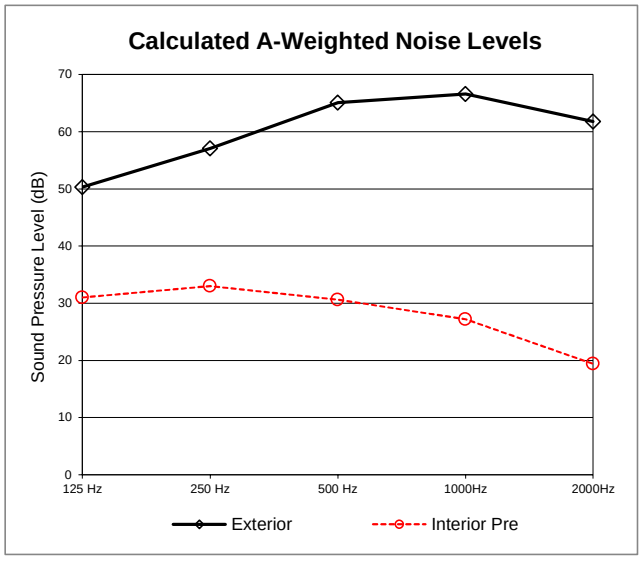


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Bedroom 3 Façade 1
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.9	52.8	50.8	51.4	46.0	55.1
Exterior Measurement (flush)	93.8	86.5	91.6	87.8	82.3	93.0
Exterior Adjusted	87.8	80.5	85.6	81.8	76.3	87.0
Interior Background	29.2	23.9	19.6	16.9	15.9	24.7
Interior Measurement	68.5	56.4	51.1	42.4	34.0	54.6
Interior Adjusted	68.5	56.4	51.1	42.4	33.9	54.6
Noise Reduction	**19.3**	**24.1**	**34.5**	**39.4**	**42.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.0	33.0	30.6	27.2	19.4	37.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.0 dB**

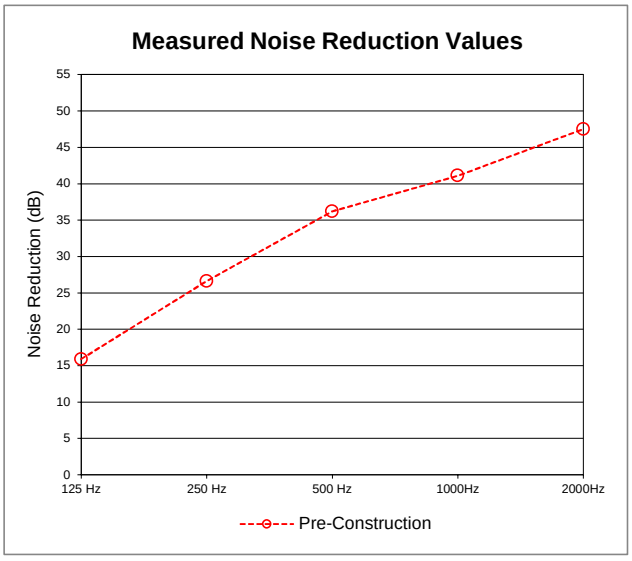


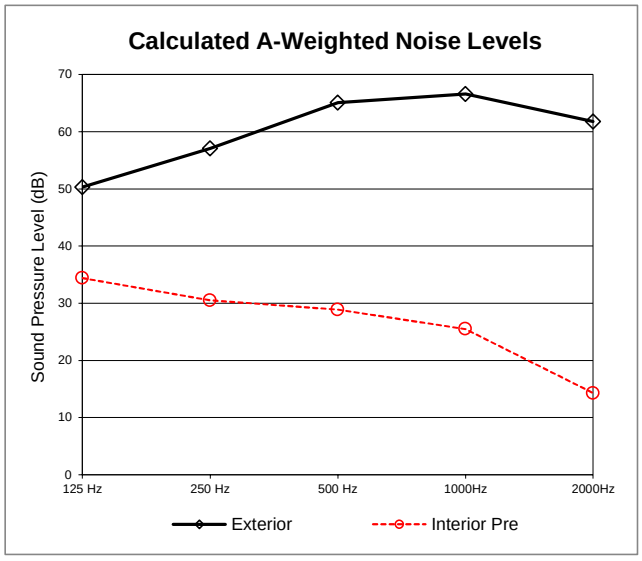


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Bedroom 3 Façade 2
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.9	52.8	50.8	51.4	46.0	55.1
Exterior Measurement (flush)	97.2	101.4	101.1	97.6	94.6	103.7
Exterior Adjusted	91.2	95.4	95.1	91.6	88.6	97.7
Interior Background	29.2	23.9	19.6	16.9	15.9	24.7
Interior Measurement	75.3	68.8	58.9	50.5	41.1	63.8
Interior Adjusted	75.3	68.8	58.9	50.5	41.1	63.8
Noise Reduction	**15.9**	**26.6**	**36.2**	**41.1**	**47.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.4	30.5	28.9	25.5	14.3	37.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.0 dB**

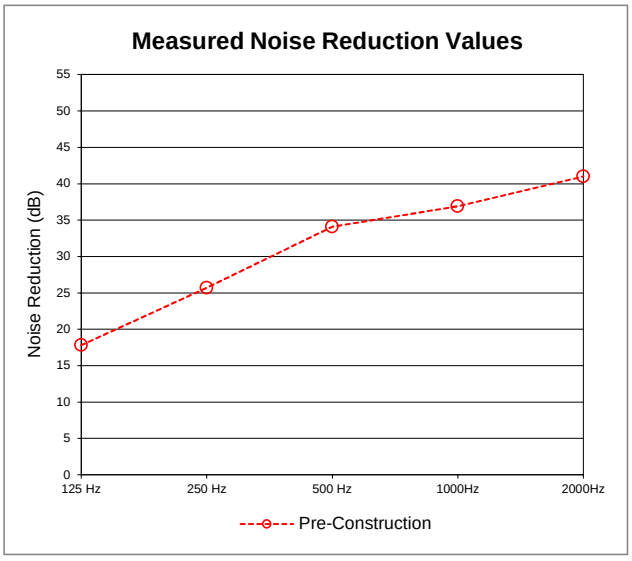


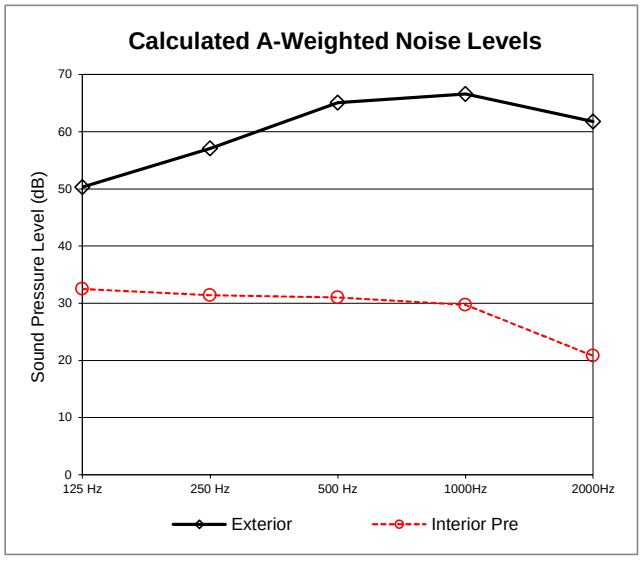


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Bedroom 4 Façade 1
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.9	52.8	50.8	51.4	46.0	55.1
Exterior Measurement (flush)	97.9	100.8	100.7	96.8	91.6	102.5
Exterior Adjusted	91.9	94.8	94.7	90.8	85.6	96.5
Interior Background	37.6	28.2	19.0	12.4	11.9	25.8
Interior Measurement	74.1	69.1	60.6	53.9	44.6	64.4
Interior Adjusted	74.1	69.1	60.6	53.9	44.6	64.4
Noise Reduction	**17.8**	**25.7**	**34.1**	**36.9**	**41.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.5	31.4	31.0	29.7	20.8	37.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.6 dB**

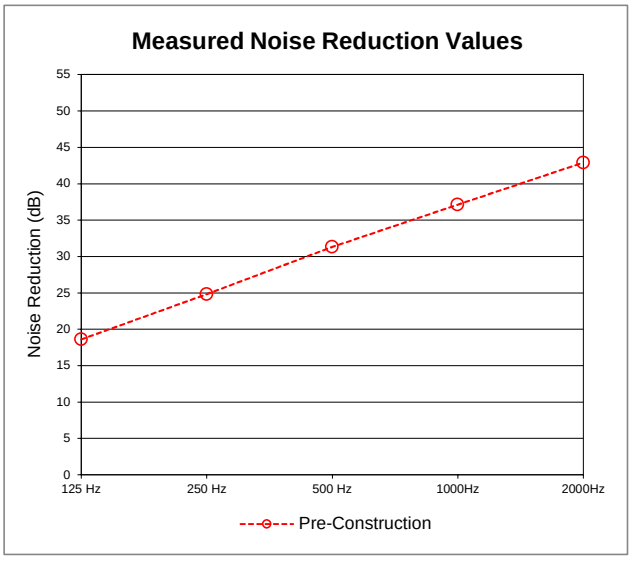


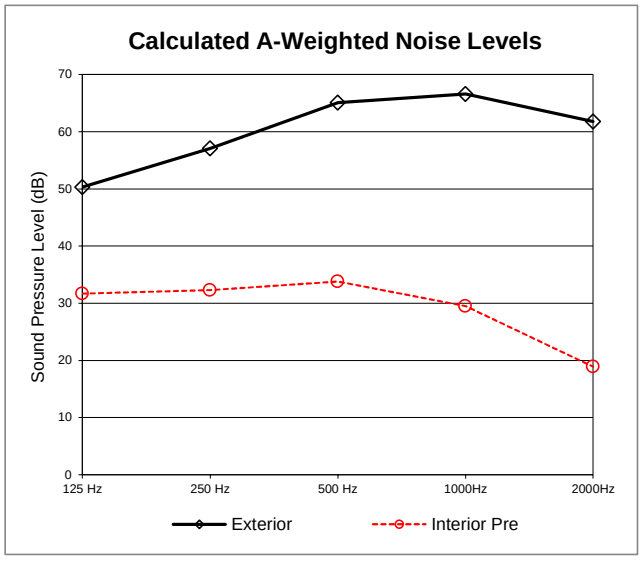


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Bedroom 4 Façade 2
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.9	52.8	50.8	51.4	46.0	55.1
Exterior Measurement (flush)	90.8	88.3	89.4	85.5	82.4	92.1
Exterior Adjusted	84.8	82.3	83.4	79.5	76.4	86.1
Interior Background	37.6	28.2	19.0	12.4	11.9	25.8
Interior Measurement	66.2	57.5	52.1	42.4	33.5	54.1
Interior Adjusted	66.2	57.5	52.1	42.4	33.5	54.1
Noise Reduction	**18.6**	**24.8**	**31.3**	**37.1**	**42.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.7	32.3	33.8	29.5	18.9	38.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.8 dB**

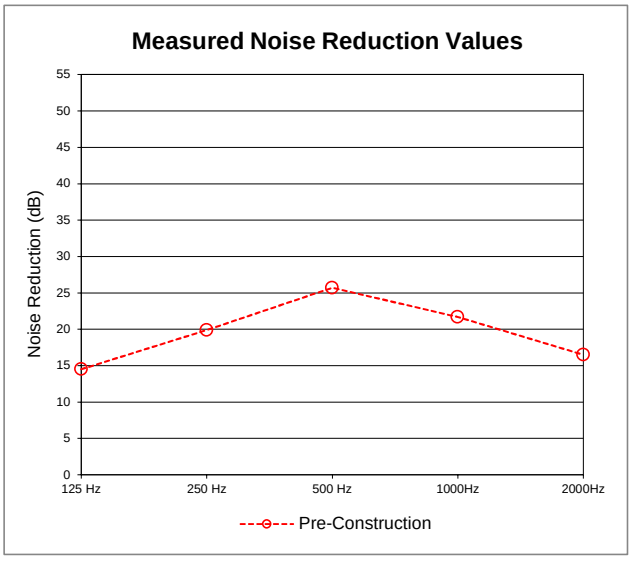


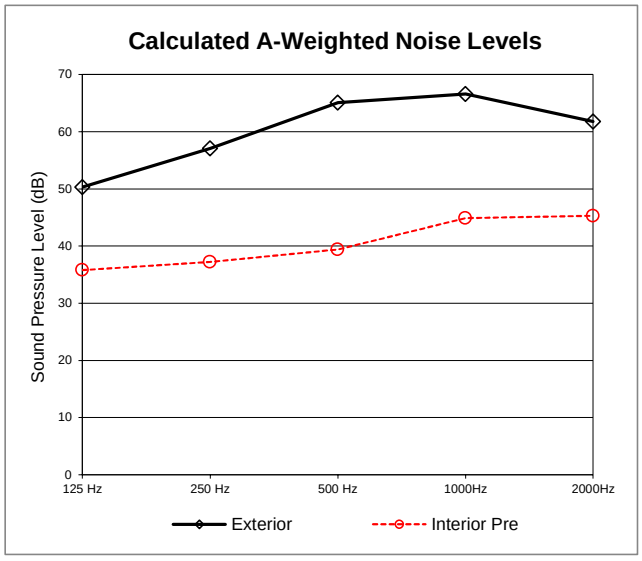


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Office 1 Façade
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		61.0	51.5	48.3	47.1	39.2	51.8
Exterior Measurement	(flush)	94.8	92.7	93.2	87.6	83.4	94.6
Exterior Adjusted		88.8	86.7	87.2	81.6	77.4	88.6
Interior Background		37.7	37.8	35.4	33.0	30.1	38.4
Interior Measurement		72.3	64.8	59.5	57.9	58.9	65.3
Interior Adjusted	(roof)	74.3	66.8	61.5	59.9	60.9	67.3
Noise Reduction		**14.5**	**19.9**	**25.7**	**21.7**	**16.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		35.8	37.2	39.4	44.9	45.3	49.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**20.8 dB**



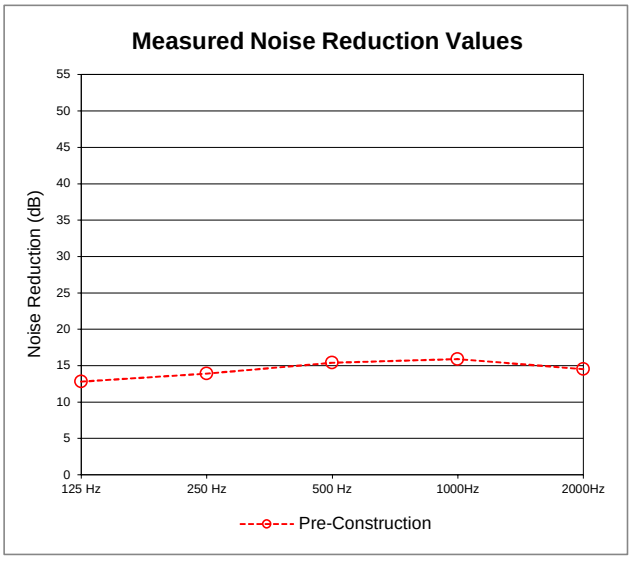


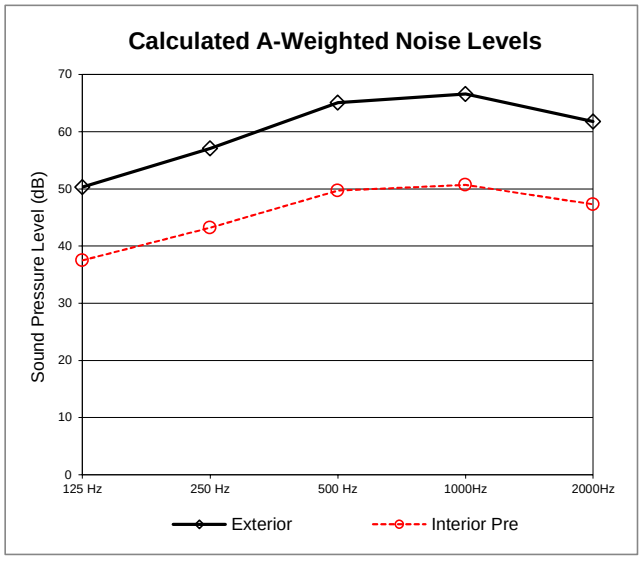
Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Fuchigami	Tested Room:	Office 2 Façade
Address:	23003 17th Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.1	54.3	53.5	54.2	54.3	59.2
Exterior Measurement	(flush)	94.8	93.9	93.2	89.8	87.4	96.0
Exterior Adjusted		88.8	87.9	87.2	83.8	81.4	90.0
Interior Background		30.1	30.7	29.1	23.9	26.3	33.1
Interior Measurement		74.0	72.0	69.8	65.9	64.9	72.3
Interior Adjusted	(roof)	76.0	74.0	71.8	67.9	66.9	74.3
Noise Reduction		**12.8**	**13.9**	**15.4**	**15.9**	**14.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		37.5	43.2	49.7	50.7	47.3	54.6

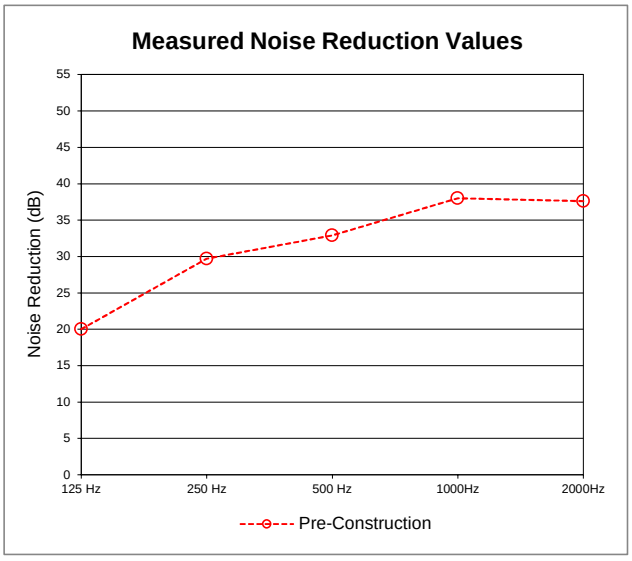
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum): 15.4 dB

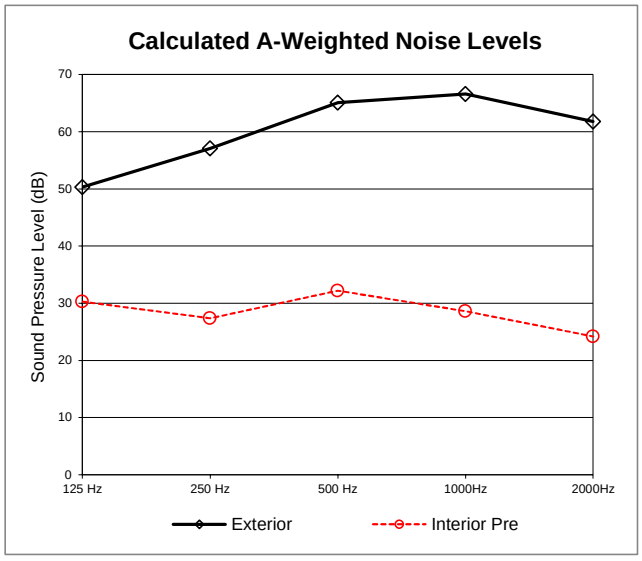




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Aliaana	Tested Room:	Living Room Façade
Address:	10636 18th Ave S	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

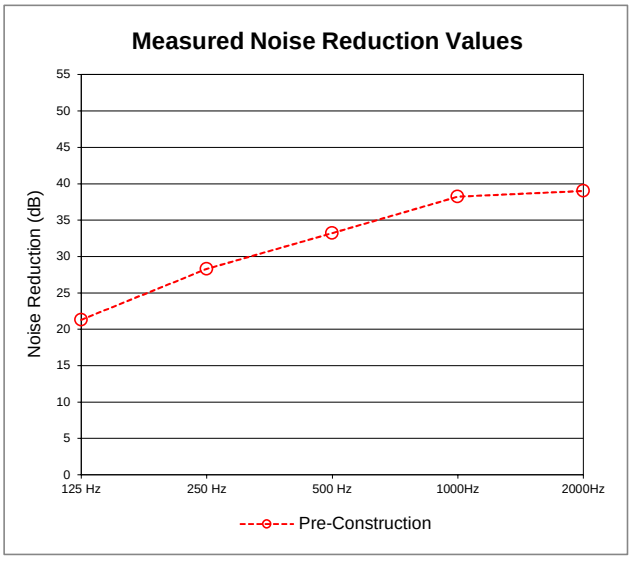
Pre-Construction Sound Pressure Levels (dB)							
April 30, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		66.5	58.3	52.6	49.0	44.5	56.4
Exterior Measurement	(flush)	88.9	93.3	91.5	90.0	88.0	96.3
Exterior Adjusted		82.9	87.3	85.5	84.0	82.0	90.3
Interior Background		33.8	28.2	20.1	18.4	14.8	25.8
Interior Measurement		62.9	57.6	52.6	46.0	44.4	55.3
Interior Adjusted		62.9	57.6	52.6	46.0	44.4	55.3
Noise Reduction		**20.0**	**29.7**	**32.9**	**38.0**	**37.6**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		30.3	27.4	32.2	28.6	24.2	36.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**33.7 dB**

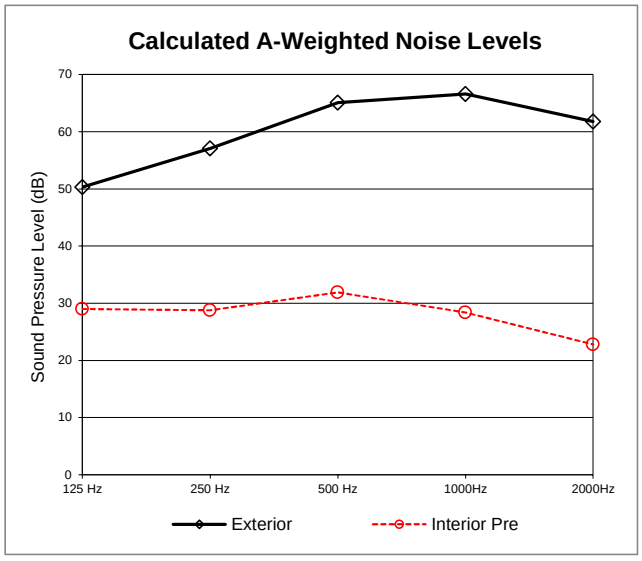




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Aliaana	Tested Room:	Sitting / Dining Façade 1
Address:	10636 18th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

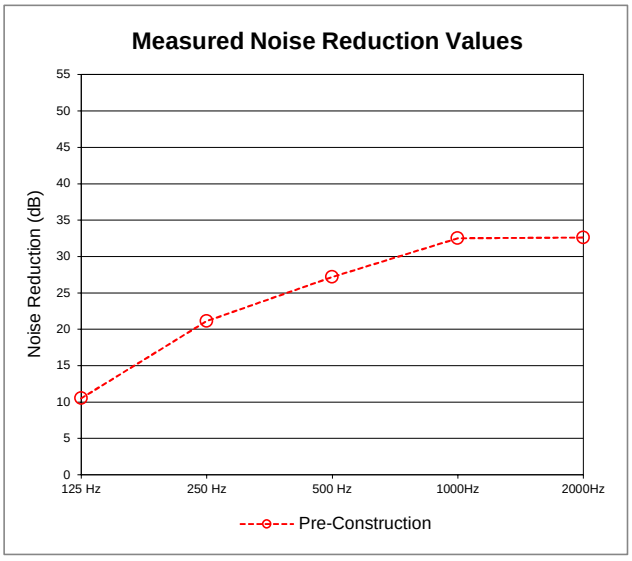
Pre-Construction Sound Pressure Levels (dB)						
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	62.8	58.0	51.8	47.6	41.6	54.7
Exterior Measurement (flush)	107.6	104.7	103.8	99.9	97.7	106.4
Exterior Adjusted	101.6	98.7	97.8	93.9	91.7	100.4
Interior Background	41.7	31.1	21.4	15.7	16.8	29.3
Interior Measurement	80.3	70.4	64.6	55.7	52.7	67.7
Interior Adjusted	80.3	70.4	64.6	55.7	52.7	67.7
Noise Reduction	**21.3**	**28.3**	**33.2**	**38.2**	**39.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.0	28.8	31.9	28.4	22.8	36.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.0 dB**

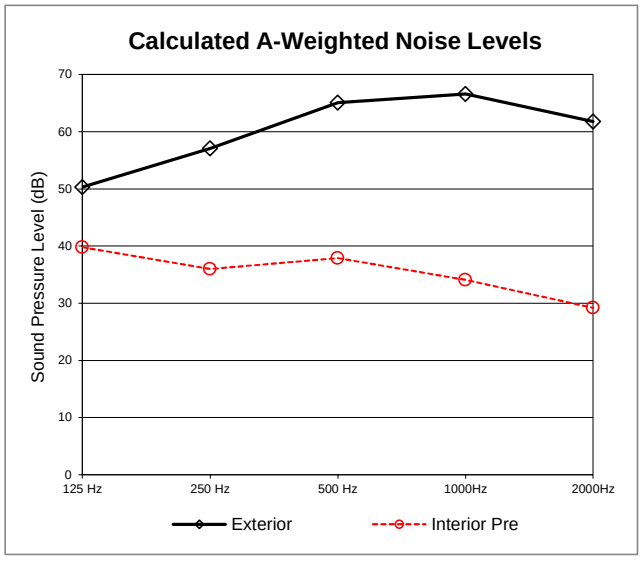




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Aliaana	Tested Room:	Sitting / Dining Façade 2
Address:	10636 18th Ave S	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

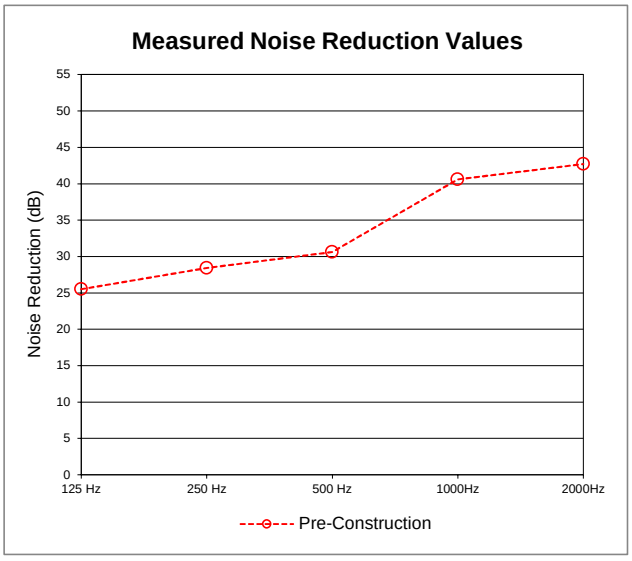
Pre-Construction Sound Pressure Levels (dB)						
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	62.8	58.0	51.8	47.6	41.6	54.7
Exterior Measurement (flush)	86.7	89.1	90.5	87.6	83.8	93.4
Exterior Adjusted	80.7	83.1	84.5	81.6	77.8	87.4
Interior Background	41.7	31.1	21.4	15.7	16.8	29.3
Interior Measurement	70.2	62.0	57.3	49.1	45.2	59.2
Interior Adjusted	70.2	62.0	57.3	49.1	45.2	59.2
Noise Reduction	**10.5**	**21.1**	**27.2**	**32.5**	**32.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	39.8	36.0	37.9	34.1	29.2	43.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**26.4 dB**

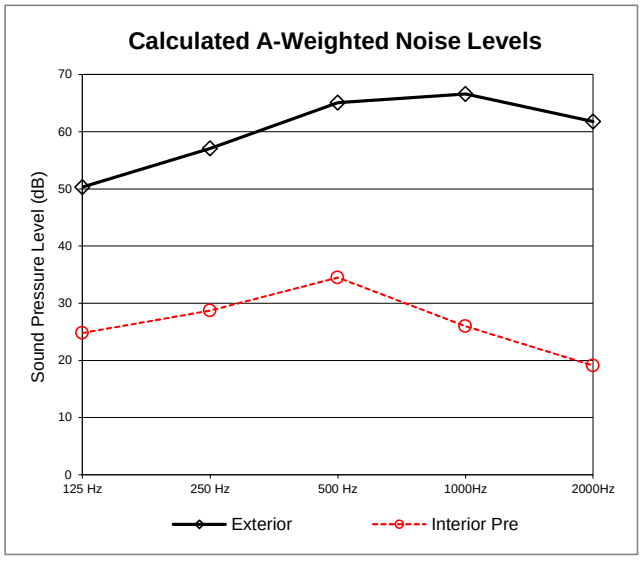




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Aliaana	Tested Room:	Kitchen Façade
Address:	10636 18th Ave S	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
April 30, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		56.5	49.7	49.3	46.3	40.6	51.1
Exterior Measurement	(flush)	100.2	98.3	100.0	96.0	93.4	102.3
Exterior Adjusted		94.2	92.3	94.0	90.0	87.4	96.3
Interior Background		40.1	29.7	23.4	18.1	16.0	33.1
Interior Measurement		68.7	63.9	63.4	49.4	44.7	62.1
Interior Adjusted		68.7	63.9	63.4	49.4	44.7	62.1
Noise Reduction		**25.5**	**28.4**	**30.6**	**40.6**	**42.7**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		24.8	28.7	34.5	26.0	19.1	36.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**33.6 dB**

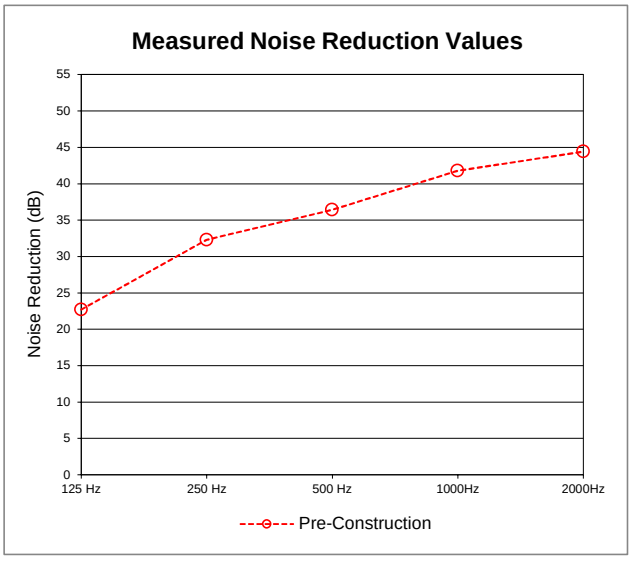


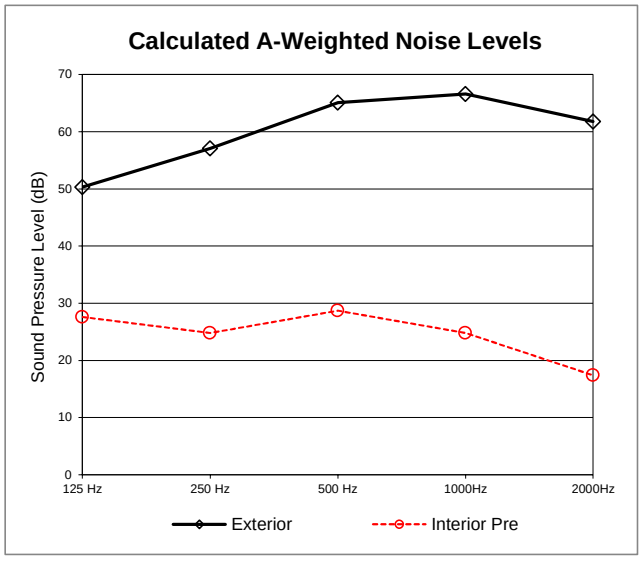


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Aliaana	Tested Room:	Bedroom 1 Façade 1
Address:	10636 18th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

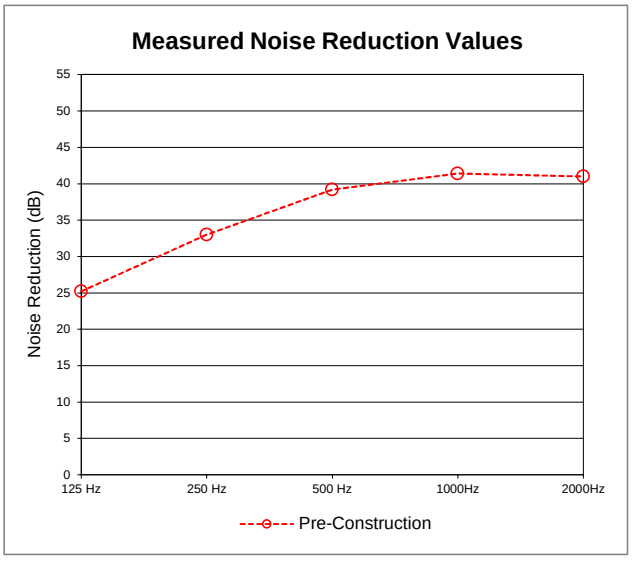
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	66.5	58.3	52.6	49.0	44.5	56.4
Exterior Measurement (flush)	91.0	93.4	92.1	91.1	87.4	96.1
Exterior Adjusted	85.0	87.4	86.1	85.1	81.4	90.1
Interior Background	38.0	27.6	18.4	16.5	17.0	28.7
Interior Measurement	62.3	55.1	49.7	43.3	37.0	52.3
Interior Adjusted	62.3	55.1	49.7	43.3	37.0	52.3
Noise Reduction	**22.7**	**32.3**	**36.4**	**41.8**	**44.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.6	24.8	28.7	24.8	17.4	33.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**37.0 dB**

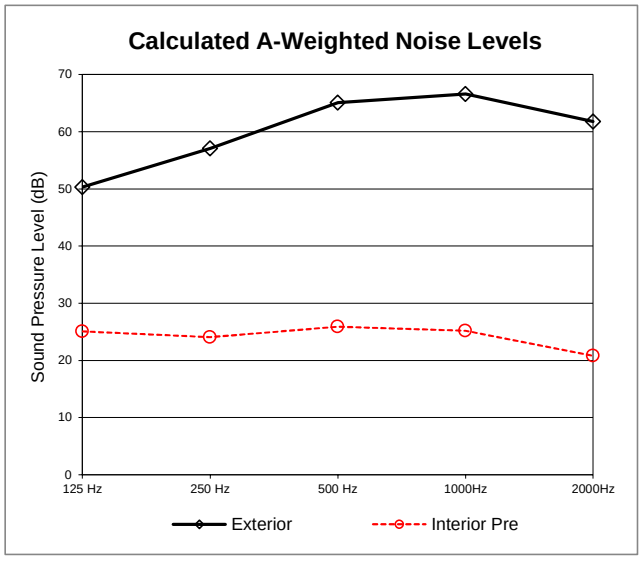




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Aliaana	Tested Room:	Bedroom 1 Façade 2
Address:	10636 18th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

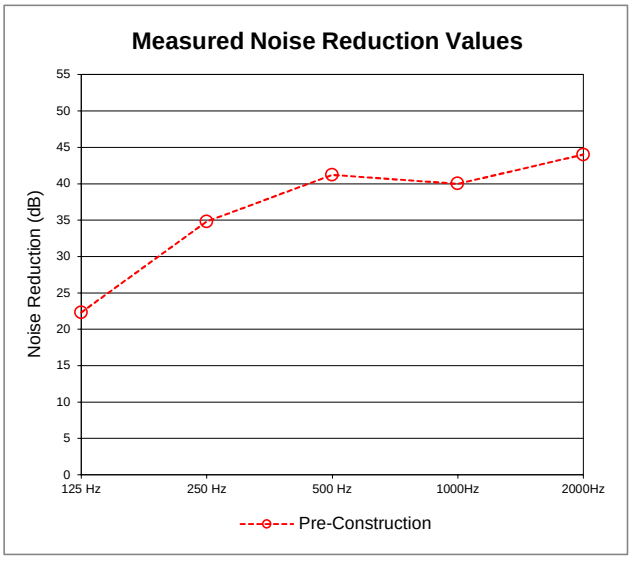
Pre-Construction Sound Pressure Levels (dB)						
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	60.8	56.5	50.7	46.2	36.5	53.0
Exterior Measurement (flush)	104.0	103.0	102.3	98.4	95.3	104.8
Exterior Adjusted	98.0	97.0	96.3	92.4	89.3	98.8
Interior Background	38.0	27.6	18.4	16.5	17.0	28.7
Interior Measurement	72.8	64.0	57.1	51.0	48.3	61.0
Interior Adjusted	72.8	64.0	57.1	51.0	48.3	61.0
Noise Reduction	**25.2**	**33.0**	**39.2**	**41.4**	**41.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	25.1	24.1	25.9	25.2	20.8	31.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.5 dB**

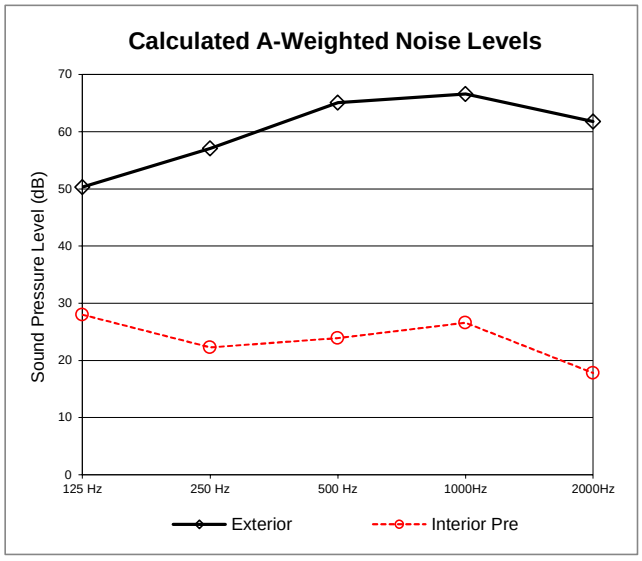




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Aliaana	Tested Room:	Bedroom 2 Façade 1
Address:	10636 18th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	60.8	56.5	50.7	46.2	36.5	53.0
Exterior Measurement (flush)	106.3	104.3	104.5	101.4	99.4	107.7
Exterior Adjusted	100.3	98.3	98.5	95.4	93.4	101.7
Interior Background	39.9	28.0	14.3	11.9	13.4	26.4
Interior Measurement	78.0	63.5	57.3	55.4	49.4	63.1
Interior Adjusted	78.0	63.5	57.3	55.4	49.4	63.1
Noise Reduction	**22.3**	**34.8**	**41.2**	**40.0**	**44.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.0	22.3	23.9	26.6	17.8	31.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.1 dB**

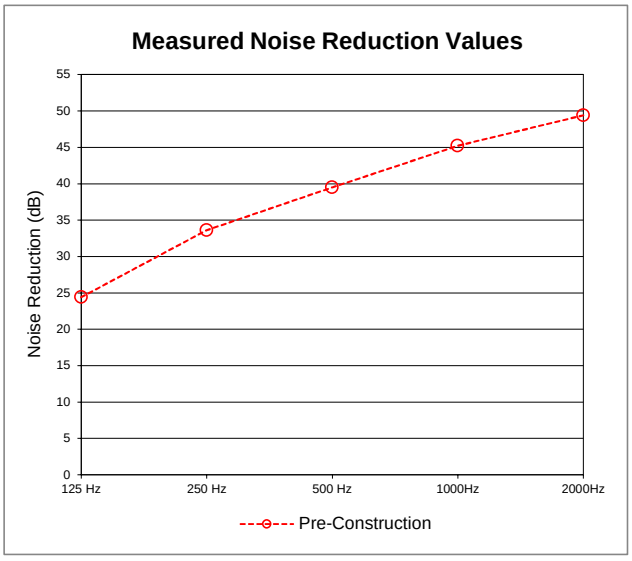


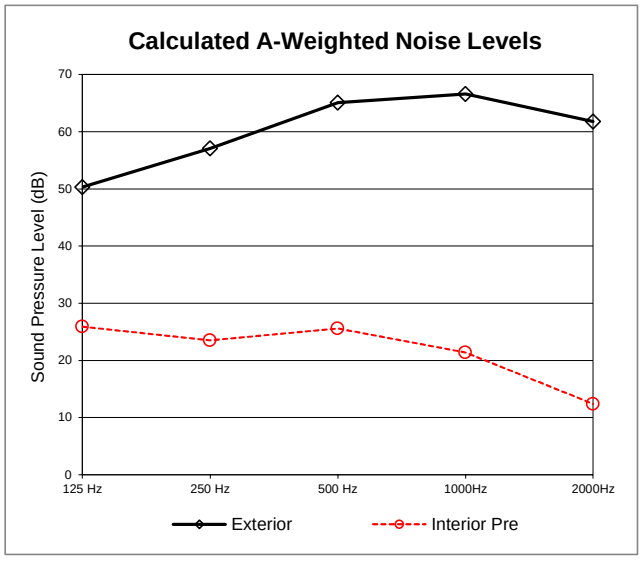


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Aliaana	Tested Room:	Bedroom 2 Façade 2
Address:	10636 18th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.5	49.7	49.3	46.3	40.6	51.1
Exterior Measurement (flush)	103.8	102.3	102.7	98.8	97.0	105.7
Exterior Adjusted	97.8	96.3	96.7	92.8	91.0	99.7
Interior Background	39.9	28.0	14.3	11.9	13.4	26.4
Interior Measurement	73.4	62.7	57.2	47.6	41.6	60.3
Interior Adjusted	73.4	62.7	57.2	47.6	41.6	60.3
Noise Reduction	**24.4**	**33.6**	**39.5**	**45.2**	**49.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	25.9	23.5	25.6	21.4	12.4	30.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**39.5 dB**

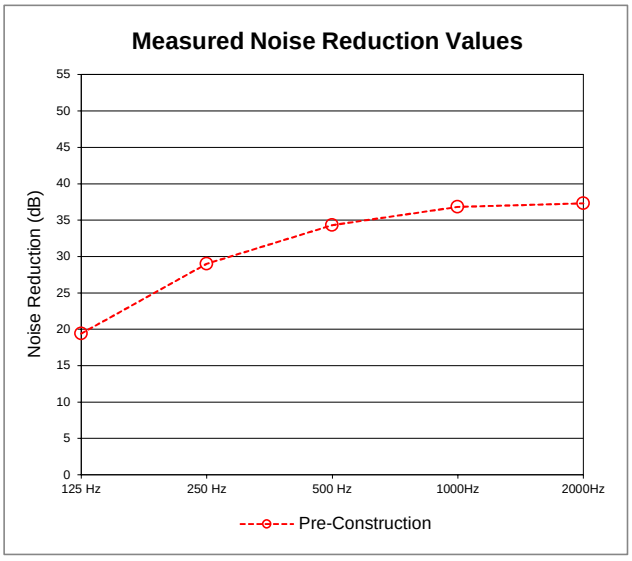


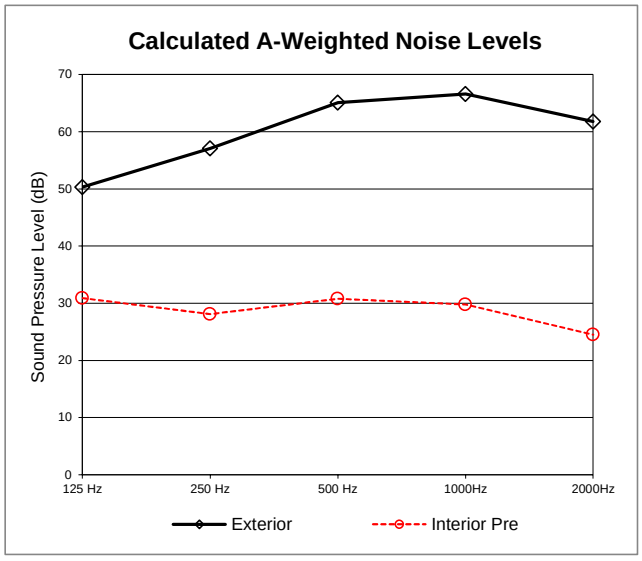


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Living Room Façade 1
Address:	10625 19th Ave S	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

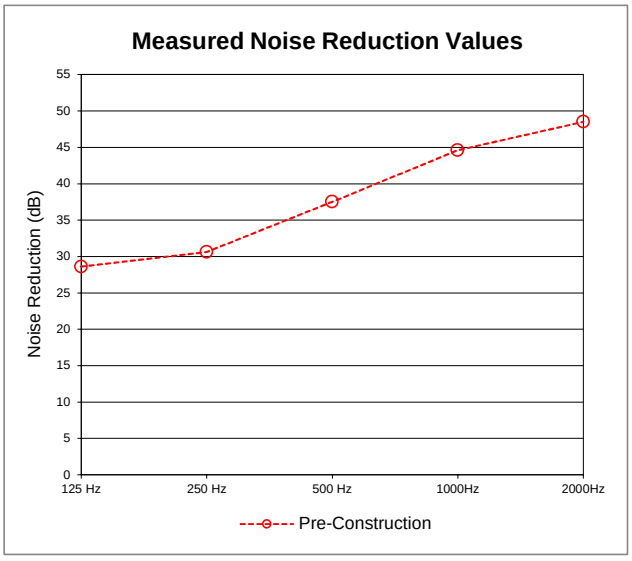
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.9	54.3	54.2	51.7	41.1	55.3
Exterior Measurement (flush)	92.1	91.4	92.2	88.5	85.6	94.9
Exterior Adjusted	86.1	85.4	86.2	82.5	79.6	88.9
Interior Background	39.3	33.0	29.8	27.1	25.8	34.3
Interior Measurement	66.7	56.4	51.9	45.8	42.4	54.8
Interior Adjusted	66.7	56.4	51.9	45.7	42.3	54.8
Noise Reduction	**19.4**	**29.0**	**34.3**	**36.8**	**37.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.9	28.1	30.8	29.8	24.5	36.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.7 dB**

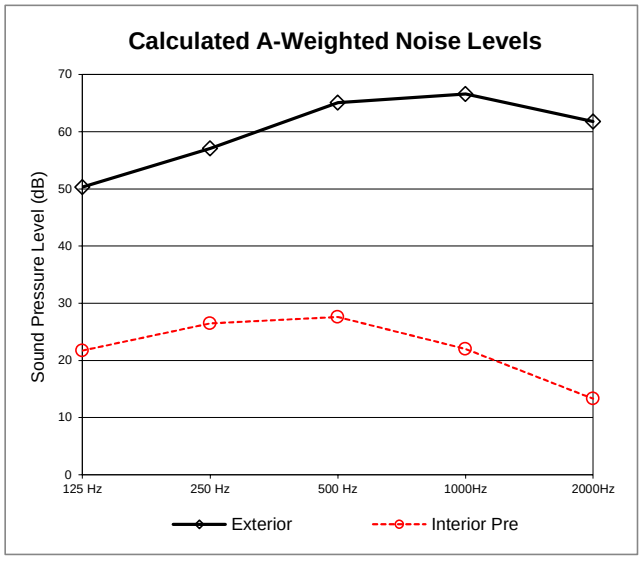




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Living Room Façade 2
Address:	10625 19th Ave S	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 2

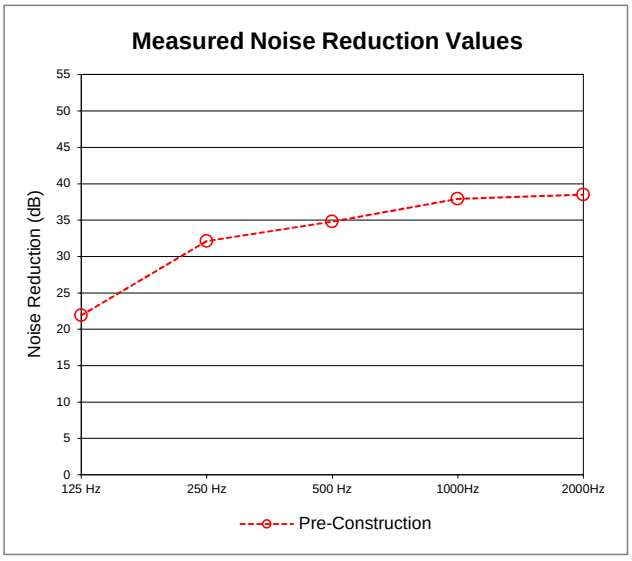
Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.9	54.3	54.2	51.7	41.1	55.3
Exterior Measurement (flush)	104.6	99.9	101.0	98.3	94.5	103.4
Exterior Adjusted	98.6	93.9	95.0	92.3	88.5	97.4
Interior Background	39.3	33.0	29.8	27.1	25.8	34.3
Interior Measurement	70.0	63.3	57.5	47.7	40.2	59.2
Interior Adjusted	70.0	63.3	57.5	47.7	40.0	59.2
Noise Reduction	**28.6**	**30.6**	**37.5**	**44.6**	**48.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	21.7	26.5	27.6	22.0	13.3	31.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.7 dB**

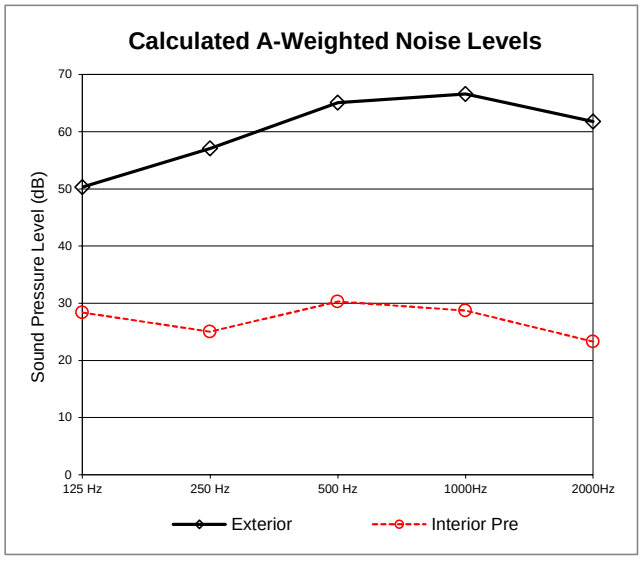




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Dining Room Façade
Address:	10625 19th Ave S	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)							
April 29, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		59.6	57.0	53.7	52.5	45.4	56.4
Exterior Measurement	(flush)	88.0	91.5	91.0	88.8	86.6	95.1
Exterior Adjusted		82.0	85.5	85.0	82.8	80.6	89.1
Interior Background		33.9	30.1	27.6	26.7	26.3	33.4
Interior Measurement		60.1	53.4	50.2	45.0	42.2	53.7
Interior Adjusted		60.1	53.4	50.2	44.9	42.1	53.7
Noise Reduction		**21.9**	**32.1**	**34.8**	**37.9**	**38.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		28.4	25.0	30.3	28.7	23.3	34.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**35.2 dB**

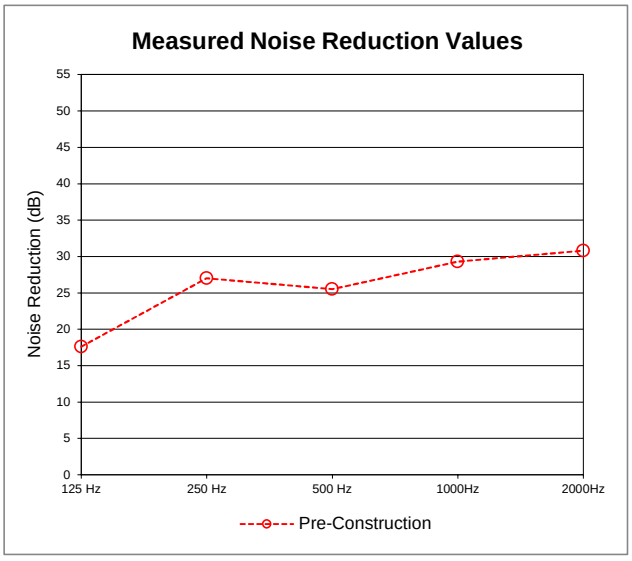


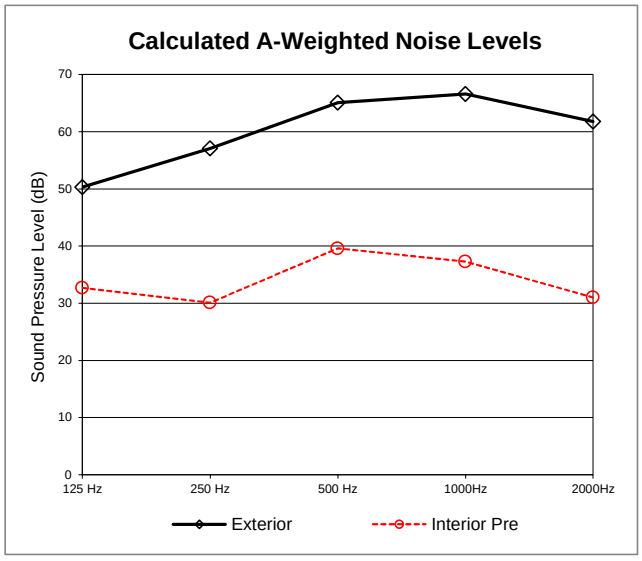


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Kitchen Façade
Address:	10625 19th Ave S	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

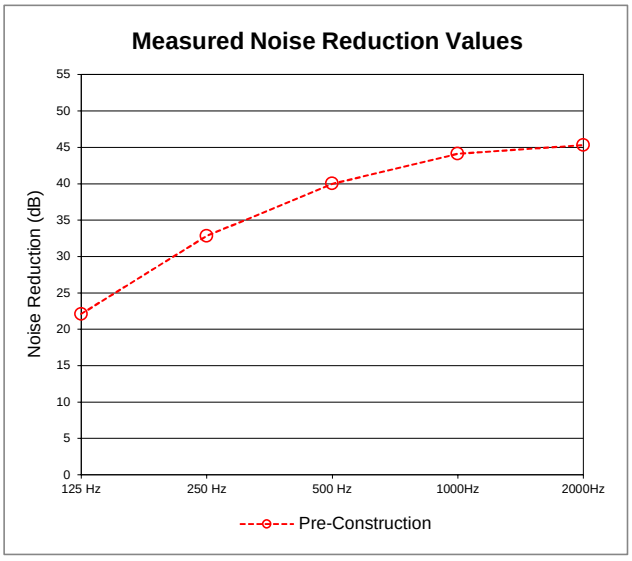
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.6	57.0	53.7	52.5	45.4	56.4
Exterior Measurement (flush)	86.8	90.5	89.8	88.5	87.2	94.8
Exterior Adjusted	80.8	84.5	83.8	82.5	81.2	88.8
Interior Background	34.9	35.3	32.0	30.3	27.5	36.0
Interior Measurement	63.2	57.5	58.3	53.2	50.4	61.3
Interior Adjusted	63.2	57.5	58.3	53.2	50.4	61.3
Noise Reduction	**17.6**	**27.0**	**25.5**	**29.3**	**30.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.7	30.1	39.6	37.3	31.0	42.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**27.3 dB**

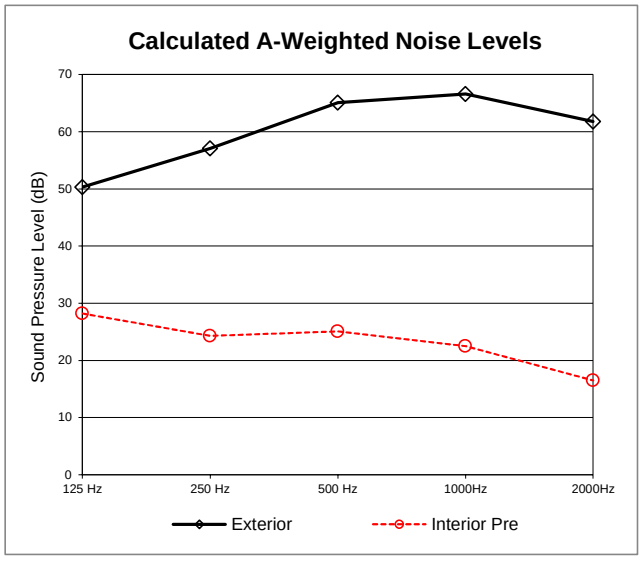




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Bedroom 1 Façade 1
Address:	10625 19th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 2

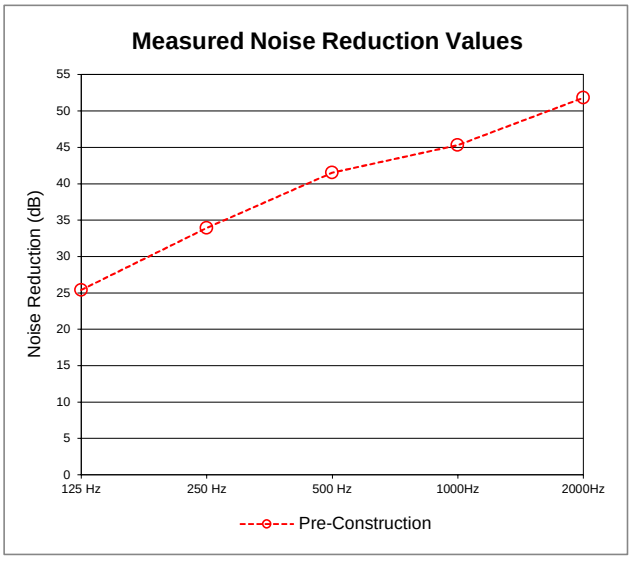
Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.9	54.3	54.2	51.7	41.1	55.3
Exterior Measurement (flush)	91.6	94.0	93.1	89.5	83.5	95.5
Exterior Adjusted	85.6	88.0	87.1	83.5	77.5	89.5
Interior Background	40.0	31.4	25.9	22.4	25.3	32.5
Interior Measurement	63.5	55.2	47.1	39.5	33.0	51.2
Interior Adjusted	63.5	55.2	47.1	39.4	32.2	51.1
Noise Reduction	**22.1**	**32.8**	**40.0**	**44.1**	**45.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.2	24.3	25.1	22.5	16.5	31.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.3 dB**

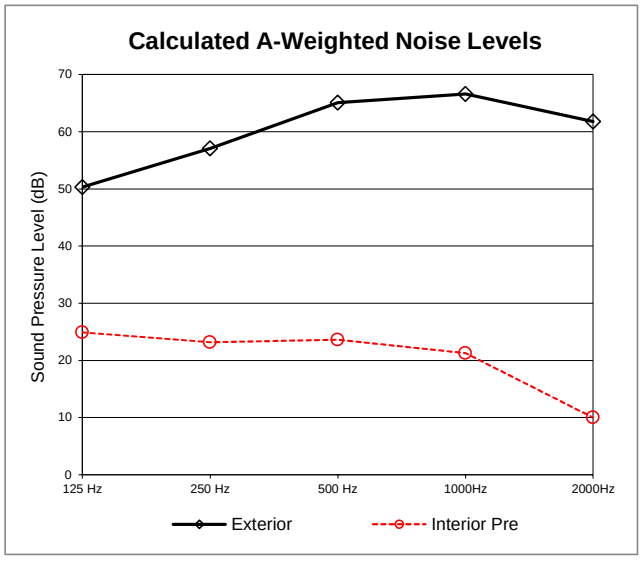




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Bedroom 1 Façade 2
Address:	10625 19th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 2

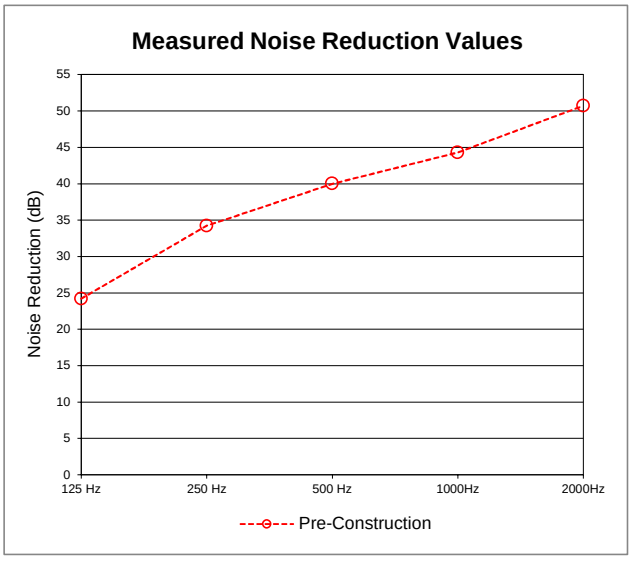
Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.4	59.2	55.2	53.0	41.8	57.0
Exterior Measurement (flush)	108.4	105.7	105.2	99.9	99.4	107.7
Exterior Adjusted	102.4	99.7	99.2	93.9	93.4	101.7
Interior Background	40.0	31.4	25.9	22.4	25.3	32.5
Interior Measurement	77.0	65.8	57.7	48.6	41.7	62.9
Interior Adjusted	77.0	65.8	57.7	48.6	41.6	62.9
Noise Reduction	**25.4**	**33.9**	**41.5**	**45.3**	**51.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	24.9	23.2	23.6	21.3	10.0	29.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**40.5 dB**

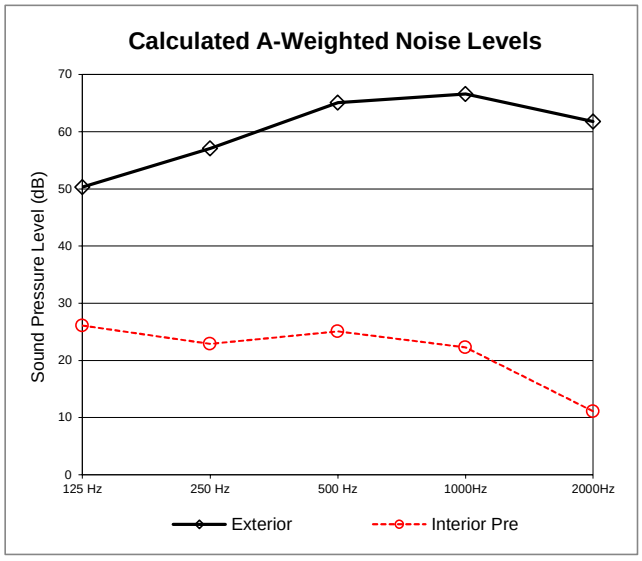




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Bedroom 2 Façade 1
Address:	10625 19th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.4	59.2	55.2	53.0	41.8	57.0
Exterior Measurement (flush)	108.1	105.1	104.7	99.7	99.2	107.6
Exterior Adjusted	102.1	99.1	98.7	93.7	93.2	101.6
Interior Background	41.3	33.5	27.3	24.0	18.9	31.4
Interior Measurement	77.9	64.9	58.7	49.4	42.5	63.2
Interior Adjusted	77.9	64.9	58.7	49.4	42.5	63.2
Noise Reduction	**24.2**	**34.2**	**40.0**	**44.3**	**50.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.1	22.9	25.1	22.3	11.1	30.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**39.6 dB**

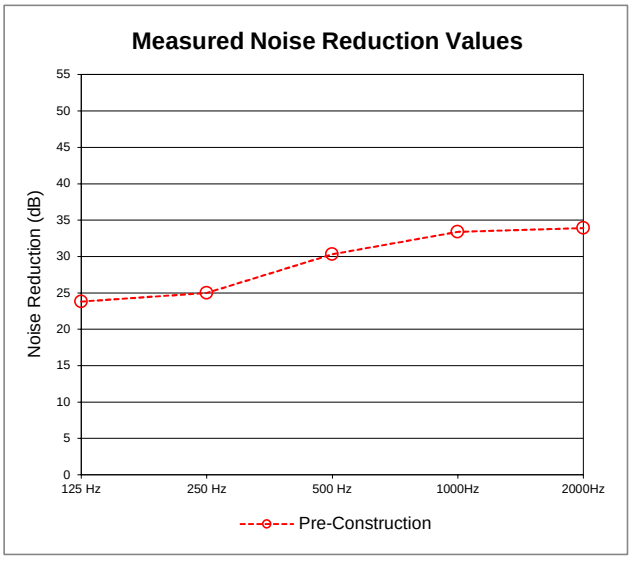


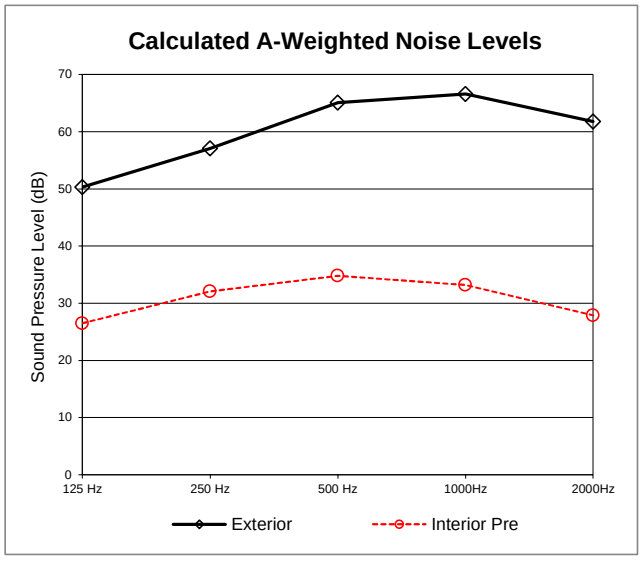


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Bedroom 2 Façade 2
Address:	10625 19th Ave S	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

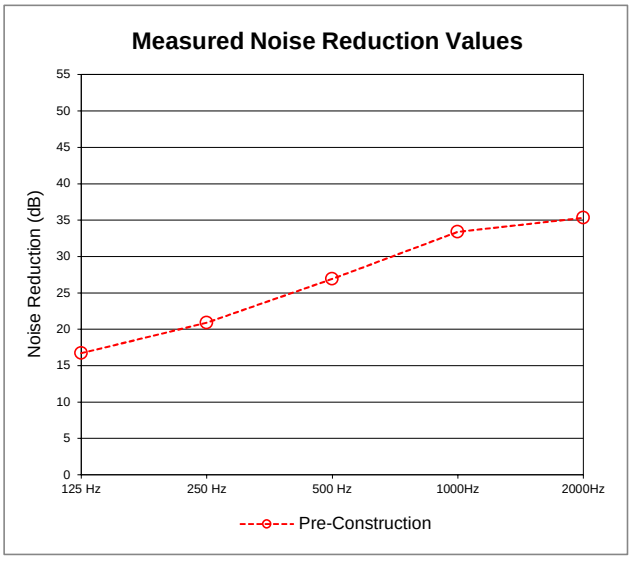
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.6	57.0	53.7	52.5	45.4	56.4
Exterior Measurement (flush)	94.3	93.2	93.7	92.4	87.1	97.0
Exterior Adjusted	88.3	87.2	87.7	86.4	81.1	91.0
Interior Background	41.3	33.5	27.3	24.0	18.9	31.4
Interior Measurement	64.5	62.2	57.4	53.0	47.2	60.1
Interior Adjusted	64.5	62.2	57.4	53.0	47.2	60.1
Noise Reduction	**23.8**	**25.0**	**30.3**	**33.4**	**33.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.5	32.1	34.8	33.2	27.9	38.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.1 dB**

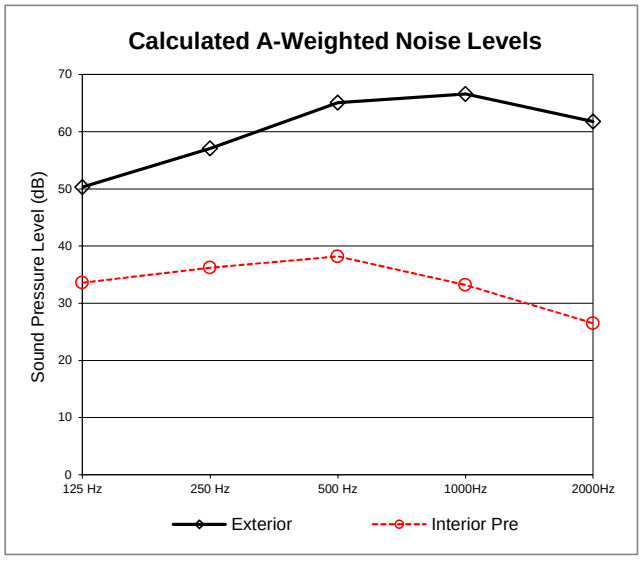




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Office Façade
Address:	10625 19th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	2 of 2

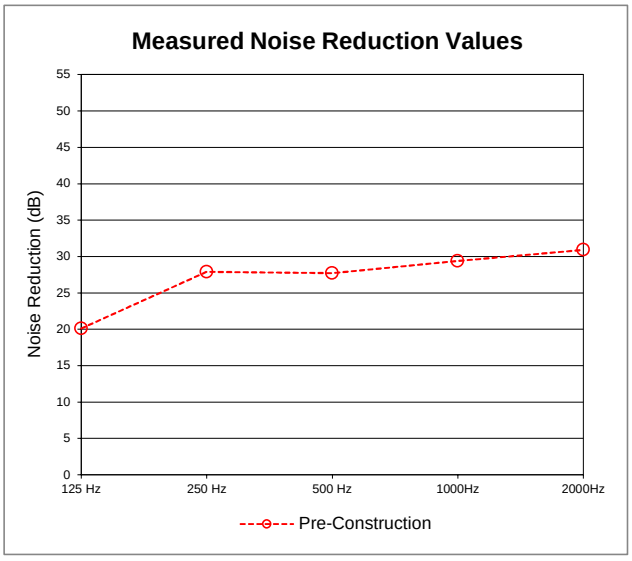
Pre-Construction Sound Pressure Levels (dB)							
April 29, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		61.4	59.2	55.2	53.0	41.8	57.0
Exterior Measurement	(flush)	102.6	100.2	100.3	93.9	90.7	101.1
Exterior Adjusted		96.6	94.2	94.3	87.9	84.7	95.1
Interior Background		44.1	39.8	31.8	29.2	24.1	36.1
Interior Measurement		79.9	73.3	67.4	54.5	49.4	69.2
Interior Adjusted		79.9	73.3	67.4	54.5	49.4	69.2
Noise Reduction		**16.7**	**20.9**	**26.9**	**33.4**	**35.3**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		33.6	36.2	38.2	33.2	26.5	41.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**28.1 dB**

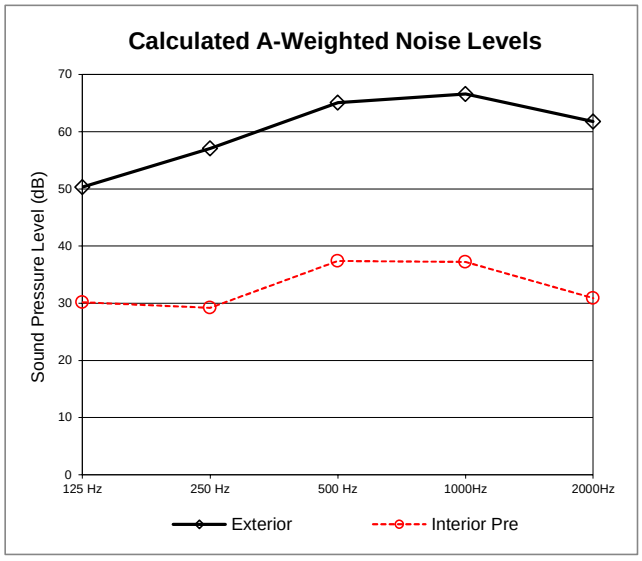




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Vidrio	Tested Room:	Den Façade
Address:	10625 19th Ave S	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	2 of 2

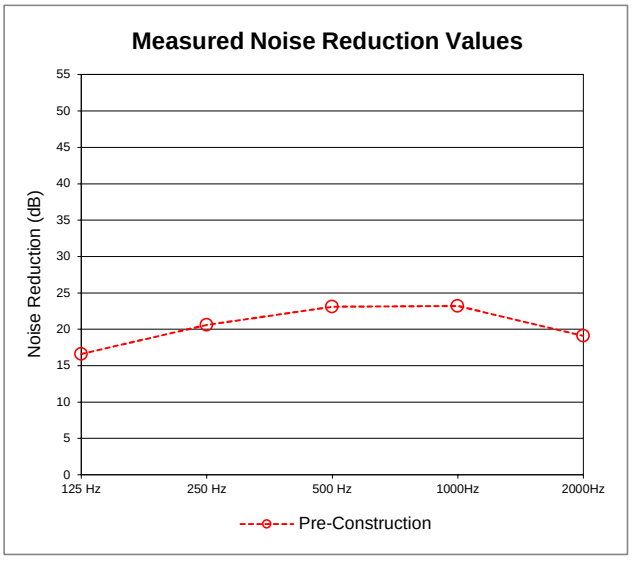
Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.9	54.3	54.2	51.7	41.1	55.3
Exterior Measurement (flush)	93.2	94.0	89.2	82.1	80.8	92.5
Exterior Adjusted	87.2	88.0	83.2	76.1	74.8	86.5
Interior Background	33.0	26.8	26.3	24.9	22.3	30.6
Interior Measurement	67.1	60.1	55.5	46.7	43.9	56.9
Interior Adjusted	67.1	60.1	55.5	46.7	43.9	56.9
Noise Reduction	**20.1**	**27.9**	**27.7**	**29.4**	**30.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.2	29.2	37.4	37.2	30.9	41.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.6 dB**

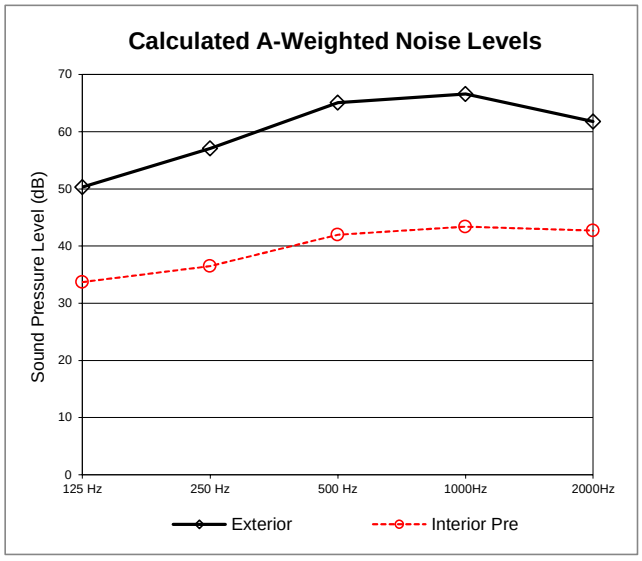




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Living Room Façade 1
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 2

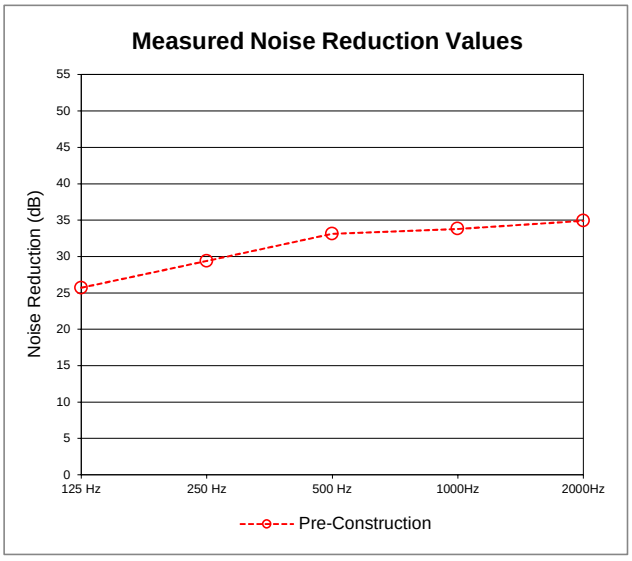
Pre-Construction Sound Pressure Levels (dB)						
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.8	53.0	51.9	47.6	37.4	52.3
Exterior Measurement (flush)	87.2	89.7	89.8	86.3	84.2	92.8
Exterior Adjusted	81.2	83.7	83.8	80.3	78.2	86.8
Interior Background	31.5	28.9	27.2	24.5	19.8	29.9
Interior Measurement	64.6	63.1	60.7	57.1	59.1	65.9
Interior Adjusted	64.6	63.1	60.7	57.1	59.1	65.9
Noise Reduction	**16.6**	**20.6**	**23.1**	**23.2**	**19.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	33.7	36.5	42.0	43.4	42.7	48.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**22.0 dB**

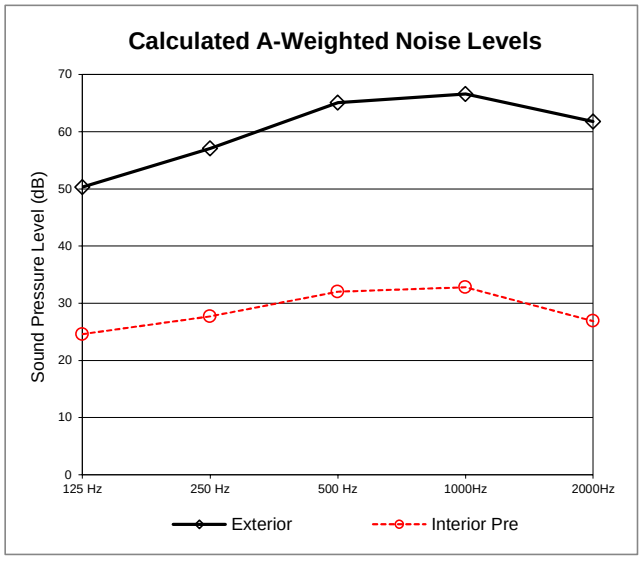




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Living Room Façade 2
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)						
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.8	53.0	51.9	47.6	37.4	52.3
Exterior Measurement (flush)	99.5	96.4	96.1	92.7	89.7	99.5
Exterior Adjusted	93.5	90.4	90.1	86.7	83.7	93.5
Interior Background	31.5	28.9	27.2	24.5	19.8	29.9
Interior Measurement	67.8	61.0	57.0	52.9	48.8	59.6
Interior Adjusted	67.8	61.0	57.0	52.9	48.8	59.6
Noise Reduction	**25.7**	**29.4**	**33.1**	**33.8**	**34.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	24.6	27.7	32.0	32.8	26.9	36.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.1 dB**

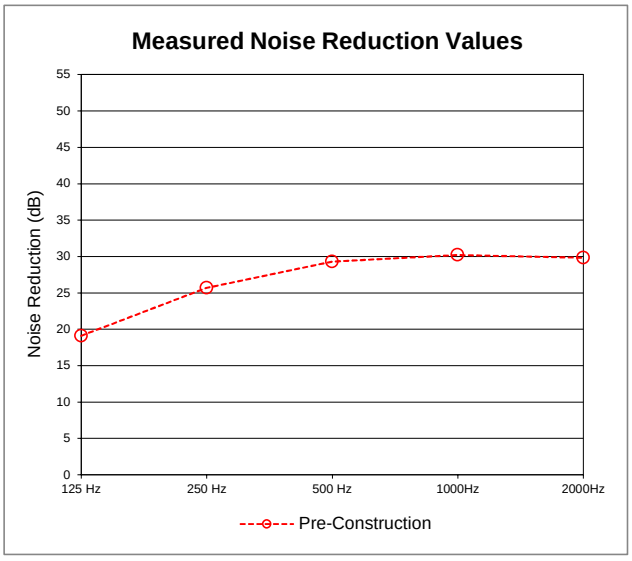


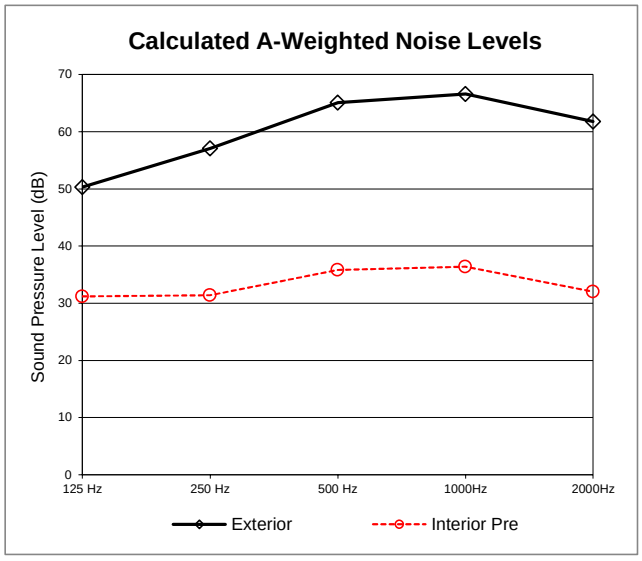


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Sitting Room Façade
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.1	50.9	48.0	45.0	40.2	50.1
Exterior Measurement (flush)	91.4	91.4	91.0	88.4	85.8	94.4
Exterior Adjusted	85.4	85.4	85.0	82.4	79.8	88.4
Interior Background	34.8	25.5	24.9	21.0	17.2	27.7
Interior Measurement	66.3	59.7	55.7	52.2	50.0	59.0
Interior Adjusted	66.3	59.7	55.7	52.2	50.0	59.0
Noise Reduction	**19.1**	**25.7**	**29.3**	**30.2**	**29.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.2	31.4	35.8	36.4	32.0	41.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.0 dB**

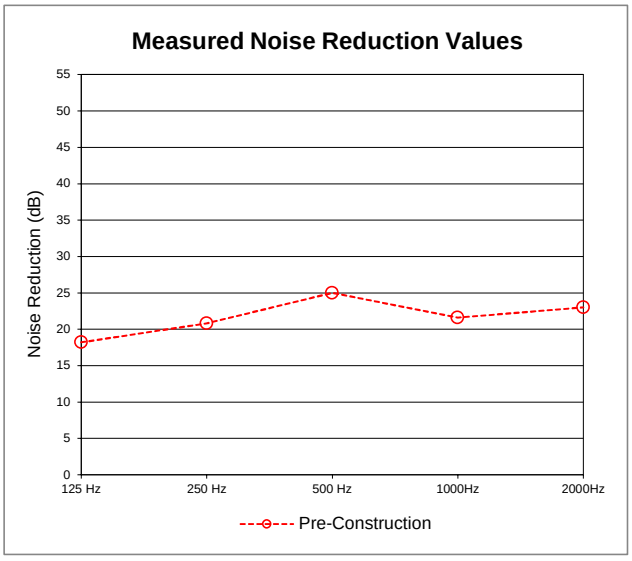


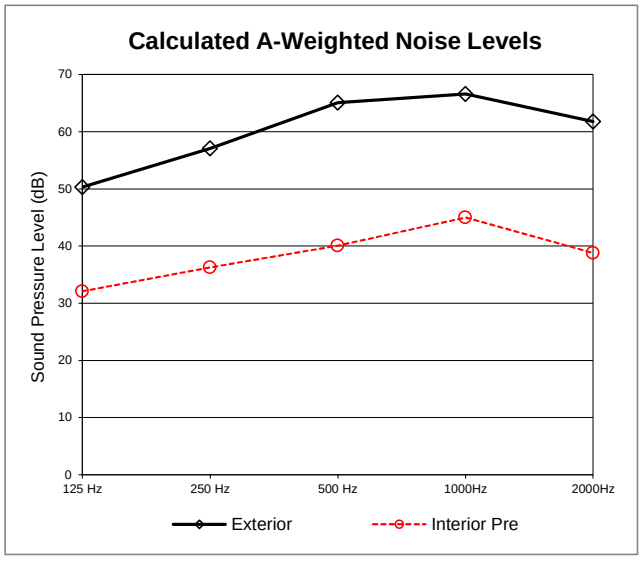


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Dining / Kitchen Façade 1
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.5	43.5	41.7	42.5	39.2	47.0
Exterior Measurement (flush)	94.1	94.1	94.8	91.0	90.0	97.8
Exterior Adjusted	88.1	88.1	88.8	85.0	84.0	91.8
Interior Background	31.5	28.9	27.2	24.5	19.8	29.9
Interior Measurement	69.9	67.3	63.8	63.4	61.0	68.2
Interior Adjusted	69.9	67.3	63.8	63.4	61.0	68.2
Noise Reduction	**18.2**	**20.8**	**25.0**	**21.6**	**23.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.1	36.3	40.1	45.0	38.8	47.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**22.6 dB**

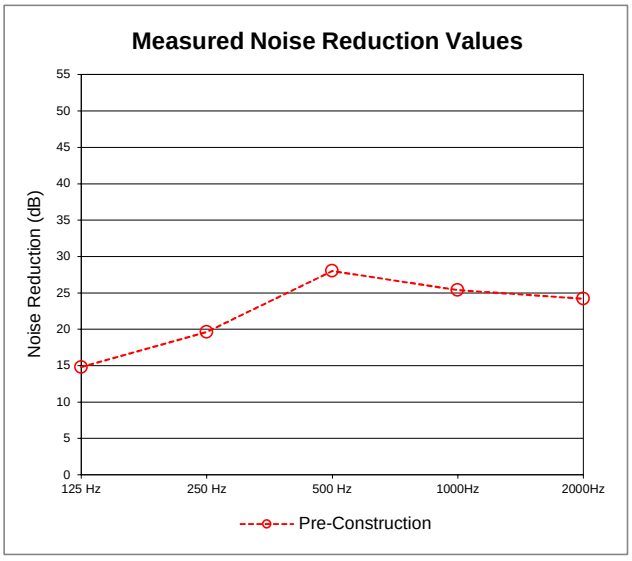


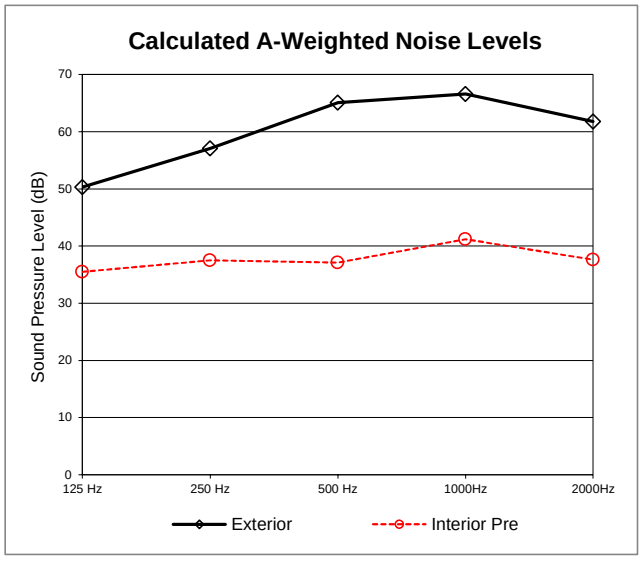


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Dining / Kitchen Façade 2
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.5	43.5	41.7	42.5	39.2	47.0
Exterior Measurement (flush)	85.9	86.7	87.0	84.4	83.0	90.6
Exterior Adjusted	79.9	80.7	81.0	78.4	77.0	84.6
Interior Background	31.5	28.9	27.2	24.5	19.8	29.9
Interior Measurement	65.1	61.1	53.0	53.0	52.8	59.8
Interior Adjusted	65.1	61.1	53.0	53.0	52.8	59.8
Noise Reduction	**14.8**	**19.6**	**28.0**	**25.4**	**24.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.5	37.5	37.1	41.2	37.6	45.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**24.8 dB**

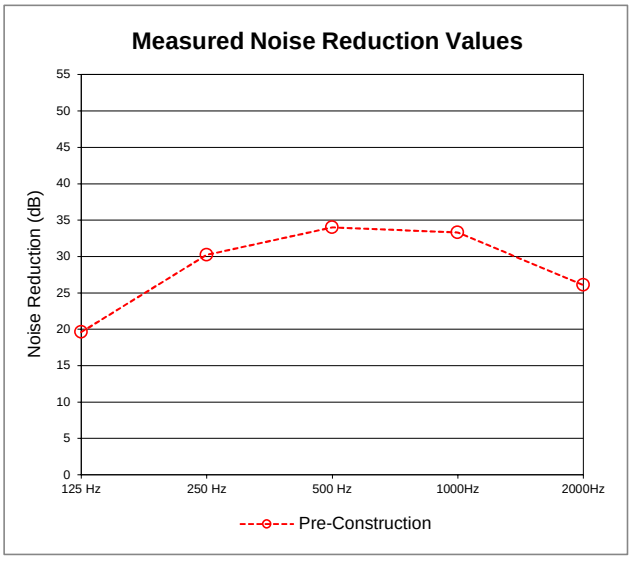


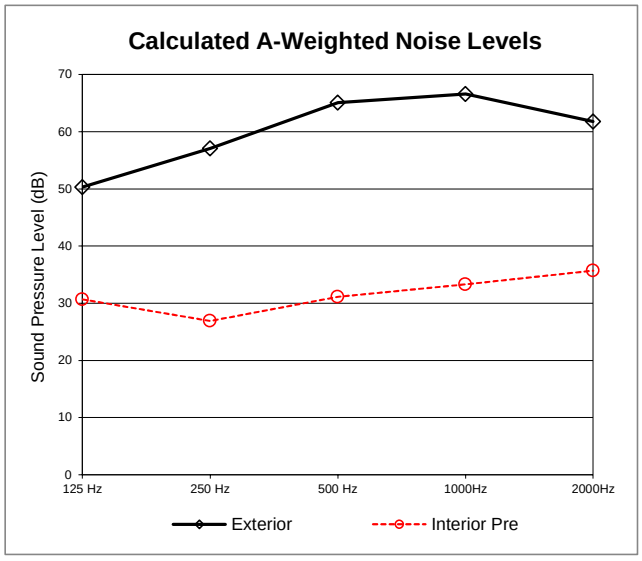


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Bedroom 1 Façade 1
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.5	43.5	41.7	42.5	39.2	47.0
Exterior Measurement (flush)	94.5	93.3	93.2	90.7	86.8	96.6
Exterior Adjusted	88.5	87.3	87.2	84.7	80.8	90.6
Interior Background	31.8	27.0	22.7	21.7	21.7	30.3
Interior Measurement	68.9	57.1	53.2	51.4	54.7	59.9
Interior Adjusted	68.9	57.1	53.2	51.4	54.7	59.9
Noise Reduction	**19.6**	**30.2**	**34.0**	**33.3**	**26.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.7	26.9	31.1	33.3	35.7	39.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.6 dB**

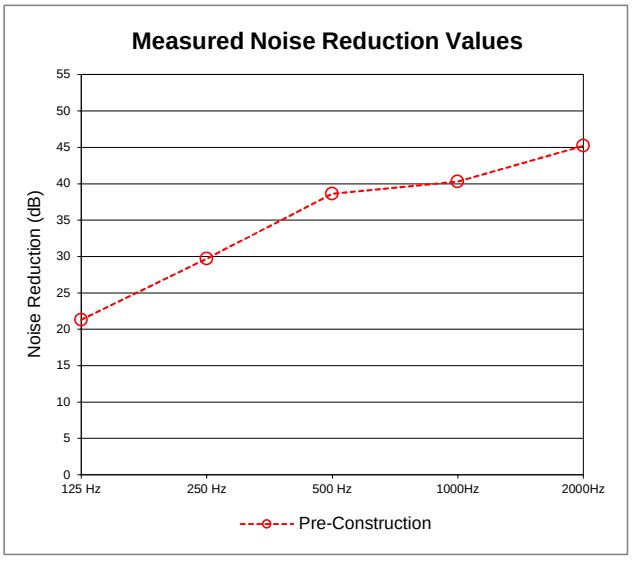


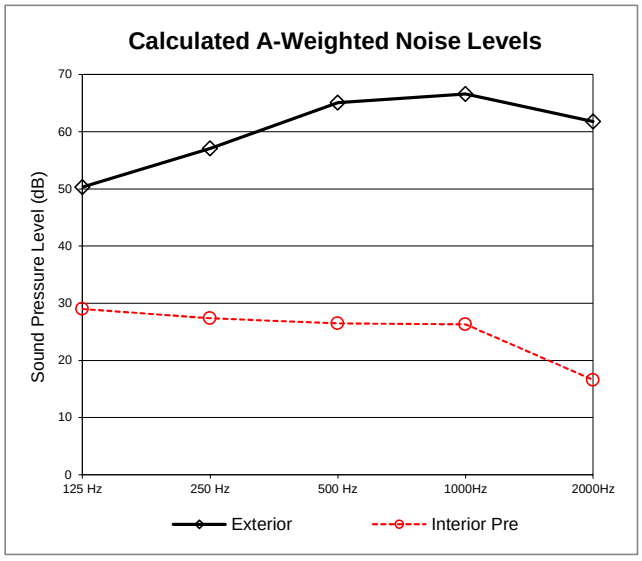


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Bedroom 1 Façade 2
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.5	43.5	41.7	42.5	39.2	47.0
Exterior Measurement (flush)	94.3	94.3	96.4	92.9	91.6	99.5
Exterior Adjusted	88.3	88.3	90.4	86.9	85.6	93.5
Interior Background	31.8	27.0	22.7	21.7	21.7	30.3
Interior Measurement	67.0	58.6	51.8	46.6	40.5	55.2
Interior Adjusted	67.0	58.6	51.8	46.6	40.4	55.2
Noise Reduction	**21.3**	**29.7**	**38.6**	**40.3**	**45.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.0	27.4	26.5	26.3	16.6	33.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.5 dB**

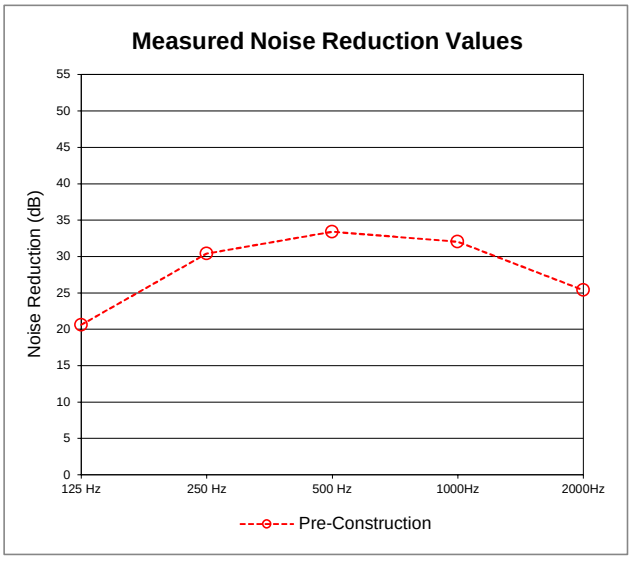


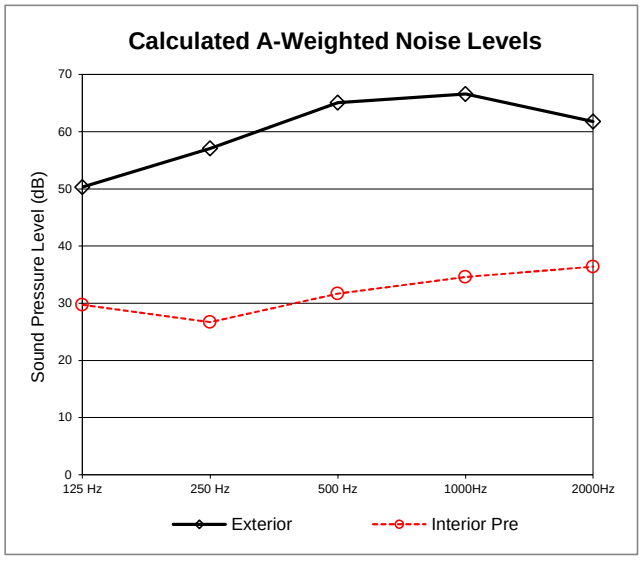


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Bedroom 2 Façade 1
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)

May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.6	50.9	50.7	48.3	42.0	52.2
Exterior Measurement (flush)	92.1	90.2	90.4	86.0	81.8	91.9
Exterior Adjusted	86.1	84.2	84.4	80.0	75.8	85.9
Interior Background	34.8	25.5	24.9	21.0	17.2	27.7
Interior Measurement	65.5	53.8	51.0	48.0	50.4	56.7
Interior Adjusted	65.5	53.8	51.0	48.0	50.4	56.7
Noise Reduction	**20.6**	**30.4**	**33.4**	**32.0**	**25.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.7	26.7	31.7	34.6	36.4	40.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.9 dB**

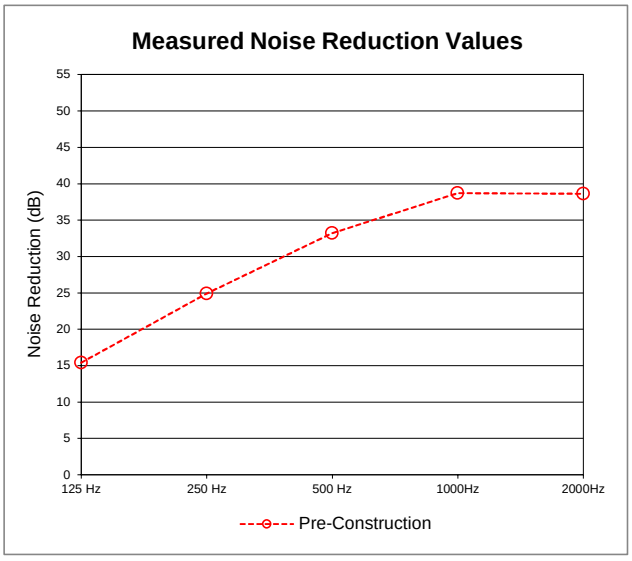


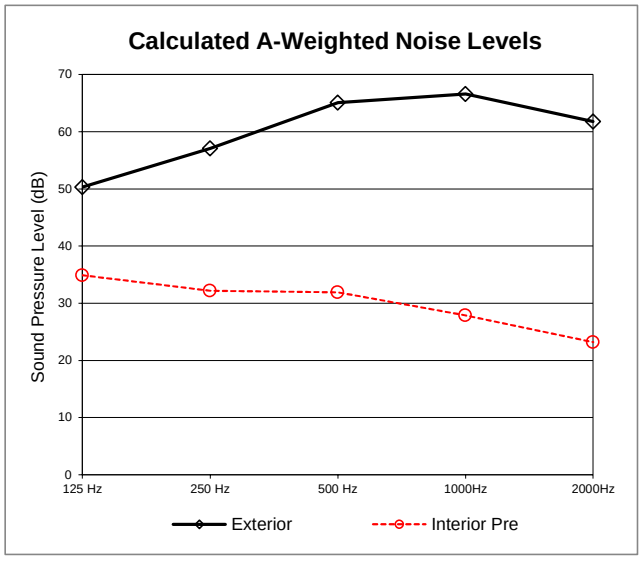


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Bedroom 2 Façade 2
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)

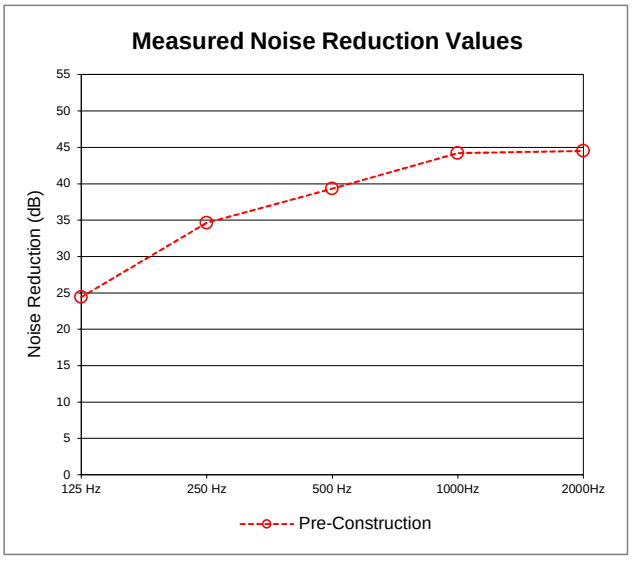
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.6	50.9	50.7	48.3	42.0	52.2
Exterior Measurement (flush)	96.3	93.6	93.1	87.9	85.2	94.6
Exterior Adjusted	90.3	87.6	87.1	81.9	79.2	88.6
Interior Background	34.8	25.5	24.9	21.0	17.2	27.7
Interior Measurement	74.9	62.7	53.9	43.2	40.6	60.5
Interior Adjusted	74.9	62.7	53.9	43.2	40.6	60.5
Noise Reduction	**15.4**	**24.9**	**33.2**	**38.7**	**38.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.9	32.2	31.9	27.9	23.2	38.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.5 dB**

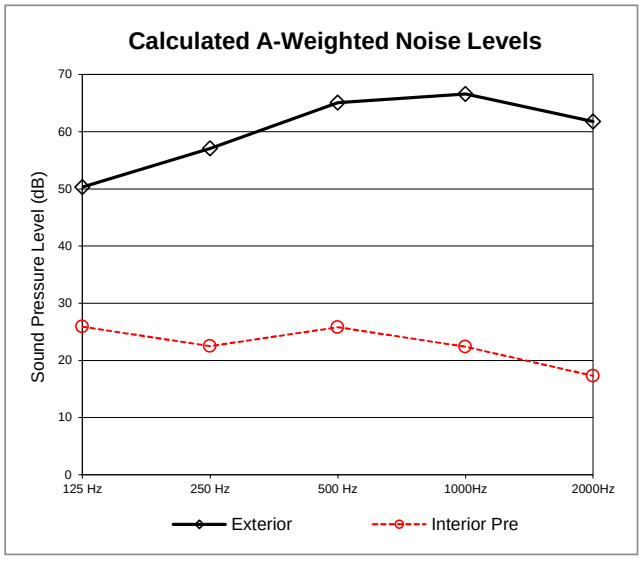




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Green	Tested Room:	Office Façade
Address:	11218 20th Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	2 of 2

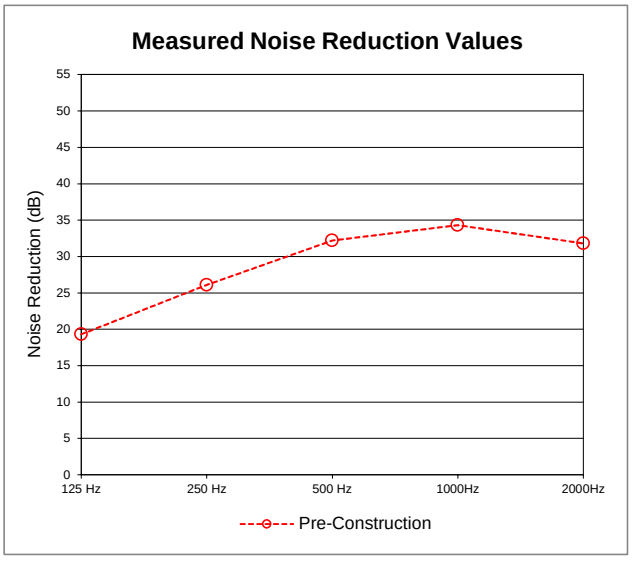
Pre-Construction Sound Pressure Levels (dB)						
May 5, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.5	43.5	41.7	42.5	39.2	47.0
Exterior Measurement (flush)	94.1	92.6	93.2	89.3	85.2	95.4
Exterior Adjusted	88.1	86.6	87.2	83.3	79.2	89.4
Interior Background	36.1	28.8	23.2	22.0	23.1	29.2
Interior Measurement	63.7	52.0	47.9	39.2	35.0	50.5
Interior Adjusted	63.7	52.0	47.9	39.1	34.7	50.5
Noise Reduction	**24.4**	**34.6**	**39.3**	**44.2**	**44.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	25.9	22.5	25.8	22.4	17.3	30.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**39.3 dB**

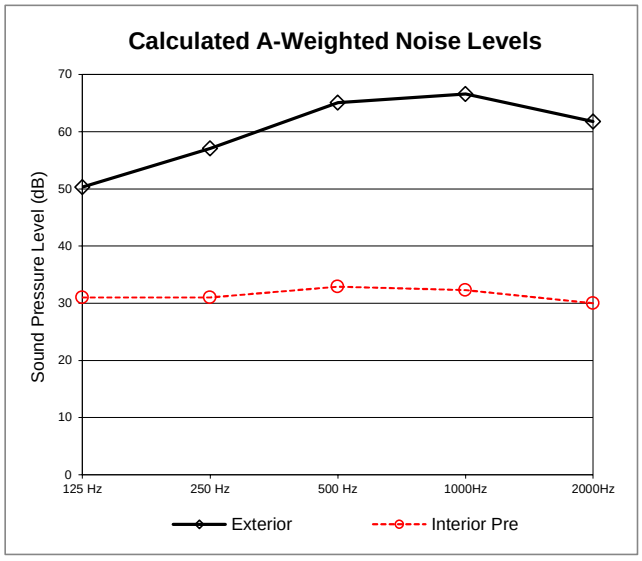




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Tua	Tested Room:	Living Room Façade
Address:	23202 21st Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

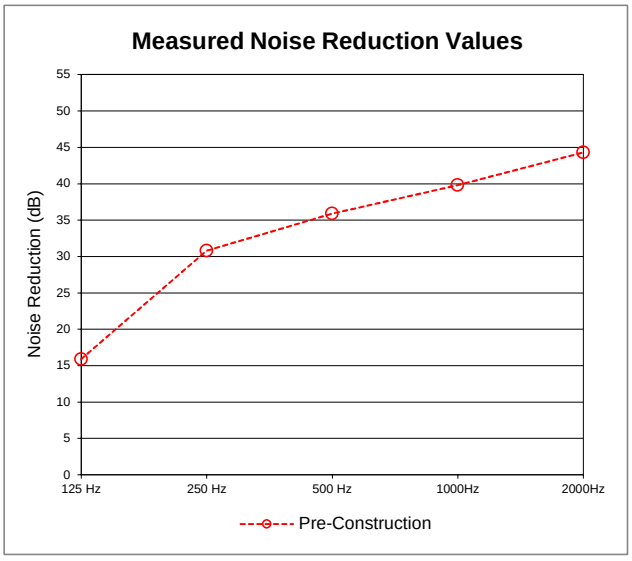
Pre-Construction Sound Pressure Levels (dB)						
May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.6	50.6	48.5	49.1	40.9	51.9
Exterior Measurement (flush)	89.9	89.5	89.7	86.5	82.4	92.3
Exterior Adjusted	83.9	83.5	83.7	80.5	76.4	86.3
Interior Background	37.2	30.7	26.6	23.9	20.9	31.4
Interior Measurement	64.6	57.4	51.5	46.2	44.6	55.3
Interior Adjusted	64.6	57.4	51.5	46.2	44.6	55.3
Noise Reduction	**19.3**	**26.1**	**32.2**	**34.3**	**31.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.0	31.0	32.9	32.3	30.0	38.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.4 dB**

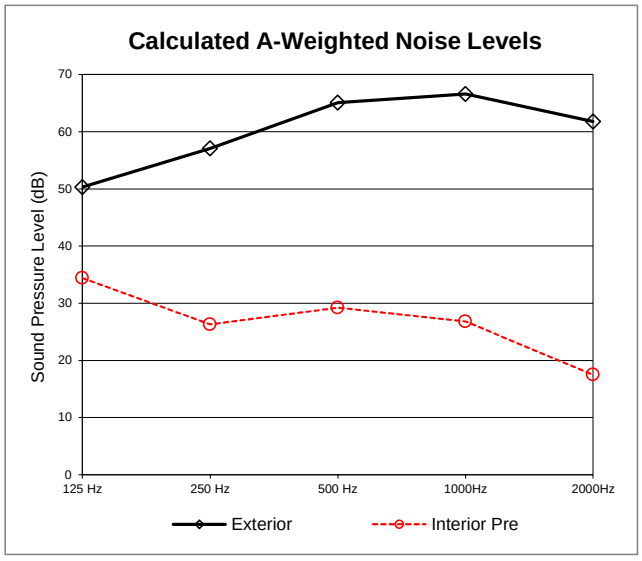




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Tua	Tested Room:	Sitting / Dining Façade 1
Address:	23202 21st Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)							
May 8, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		56.6	52.5	49.2	50.1	42.1	53.1
Exterior Measurement	(flush)	98.8	100.9	100.7	96.0	91.6	102.6
Exterior Adjusted		92.8	94.9	94.7	90.0	85.6	96.6
Interior Background		41.4	37.6	36.7	33.1	30.8	39.1
Interior Measurement		76.9	64.1	58.8	50.3	41.7	62.9
Interior Adjusted		76.9	64.1	58.8	50.2	41.3	62.9
Noise Reduction		**15.9**	**30.8**	**35.9**	**39.8**	**44.3**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		34.4	26.3	29.2	26.8	17.5	36.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**33.4 dB**

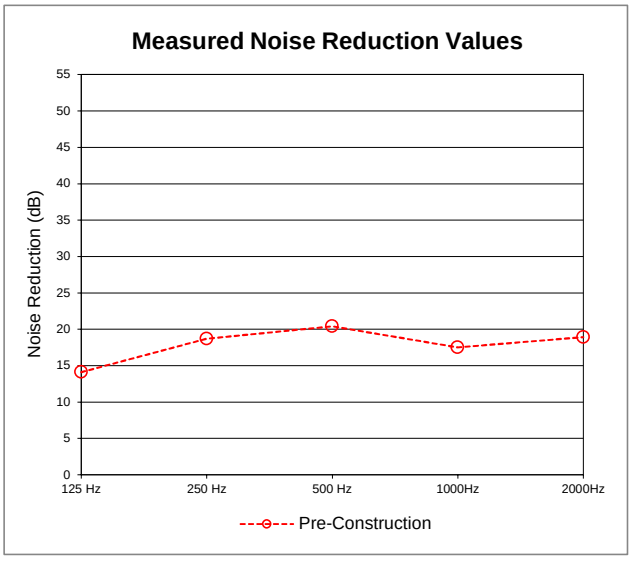


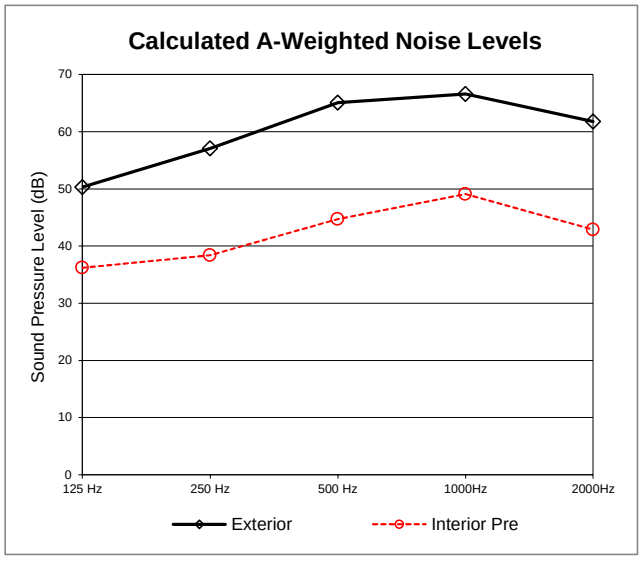


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Tua	Tested Room:	Sitting / Dining Façade 2
Address:	23202 21st Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.6	52.5	49.2	50.1	42.1	53.1
Exterior Measurement (flush)	95.5	96.2	95.5	92.2	87.3	98.2
Exterior Adjusted	89.5	90.2	89.5	86.2	81.3	92.2
Interior Background	41.4	37.6	36.7	33.1	30.8	39.1
Interior Measurement	75.4	71.5	69.1	68.7	62.4	72.2
Interior Adjusted	75.4	71.5	69.1	68.7	62.4	72.2
Noise Reduction	**14.1**	**18.7**	**20.4**	**17.5**	**18.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	36.2	38.4	44.7	49.1	42.9	51.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**18.5 dB**

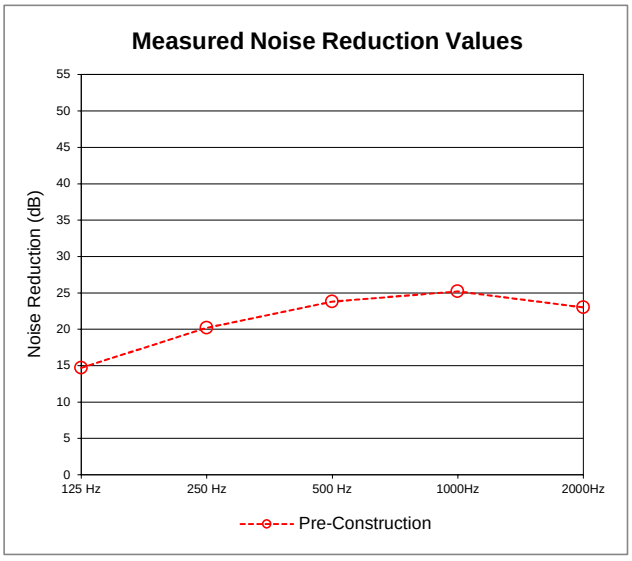


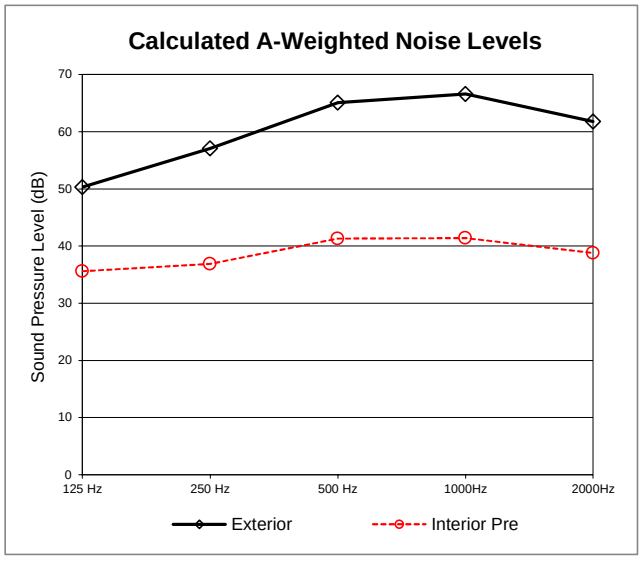


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Tua	Tested Room:	Kitchen Façade
Address:	23202 21st Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.6	50.6	48.5	49.1	40.9	51.9
Exterior Measurement (flush)	88.9	89.3	91.3	86.4	82.1	92.0
Exterior Adjusted	82.9	83.3	85.3	80.4	76.1	86.0
Interior Background	39.6	33.2	32.9	32.3	31.1	38.1
Interior Measurement	68.2	63.1	61.5	55.2	53.1	62.6
Interior Adjusted	68.2	63.1	61.5	55.2	53.1	62.6
Noise Reduction	**14.7**	**20.2**	**23.8**	**25.2**	**23.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.6	36.9	41.3	41.4	38.8	46.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**23.6 dB**

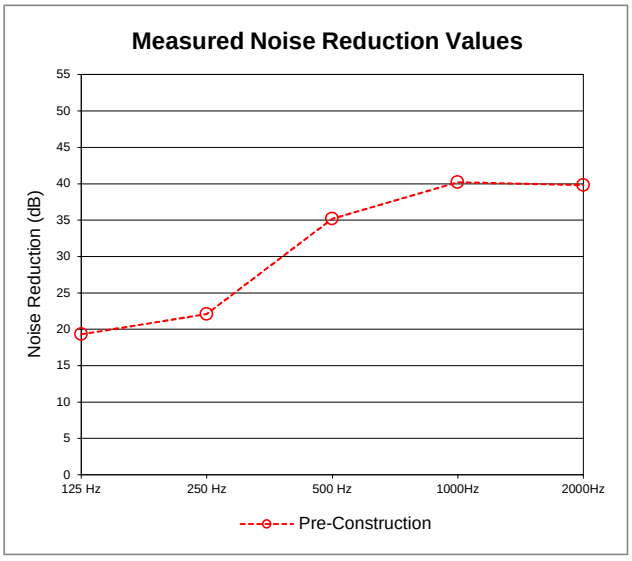


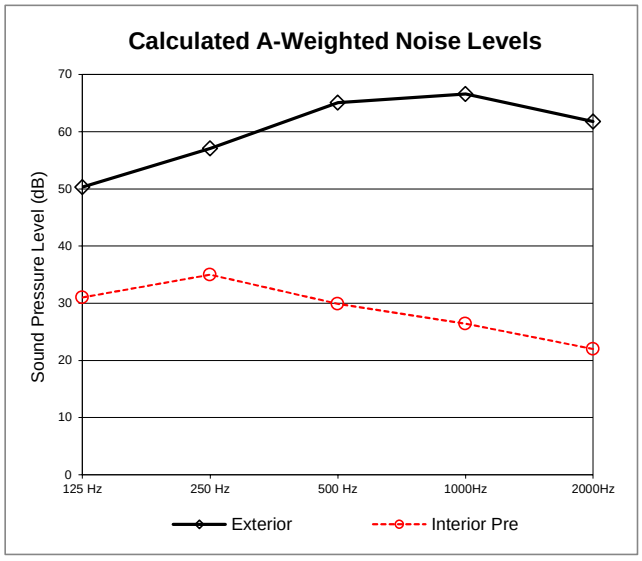


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Tua	Tested Room:	Bedroom 1 Façade
Address:	23202 21st Ave S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	60.5	56.2	53.7	51.3	44.8	55.6
Exterior Measurement (flush)	96.1	94.7	96.7	92.8	87.5	98.3
Exterior Adjusted	90.1	88.7	90.7	86.8	81.5	92.3
Interior Background	37.2	30.7	26.6	23.9	20.9	31.4
Interior Measurement	70.8	66.6	55.5	46.6	41.7	60.4
Interior Adjusted	70.8	66.6	55.5	46.6	41.7	60.4
Noise Reduction	**19.3**	**22.1**	**35.2**	**40.2**	**39.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.0	35.0	29.9	26.4	22.0	37.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.2 dB**

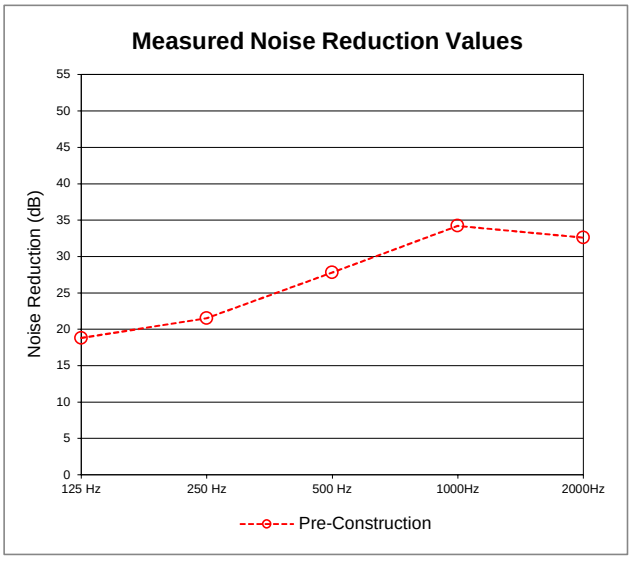


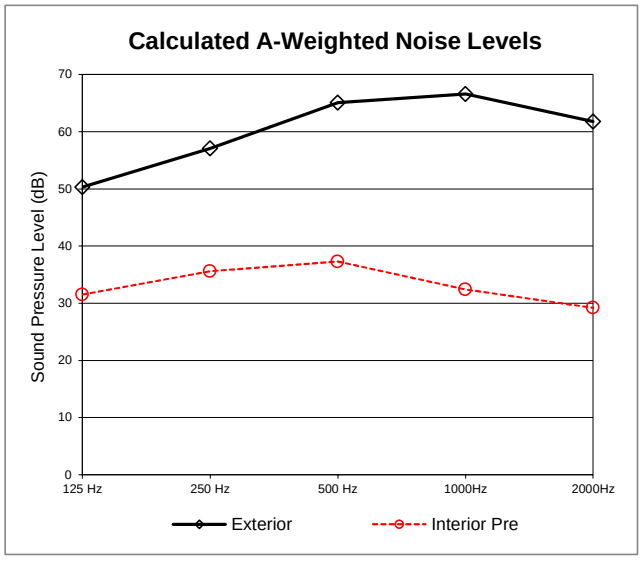


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Tua	Tested Room:	Bedroom 2 Façade
Address:	23202 21st Ave S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.6	52.5	49.2	50.1	42.1	53.1
Exterior Measurement (flush)	87.7	87.1	88.3	86.0	81.3	91.2
Exterior Adjusted	81.7	81.1	82.3	80.0	75.3	85.2
Interior Background	30.2	28.4	27.5	24.2	22.1	30.8
Interior Measurement	62.9	59.6	54.5	45.8	42.7	55.8
Interior Adjusted	62.9	59.6	54.5	45.8	42.7	55.8
Noise Reduction	**18.8**	**21.5**	**27.8**	**34.2**	**32.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.5	35.6	37.3	32.4	29.2	41.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.9 dB**

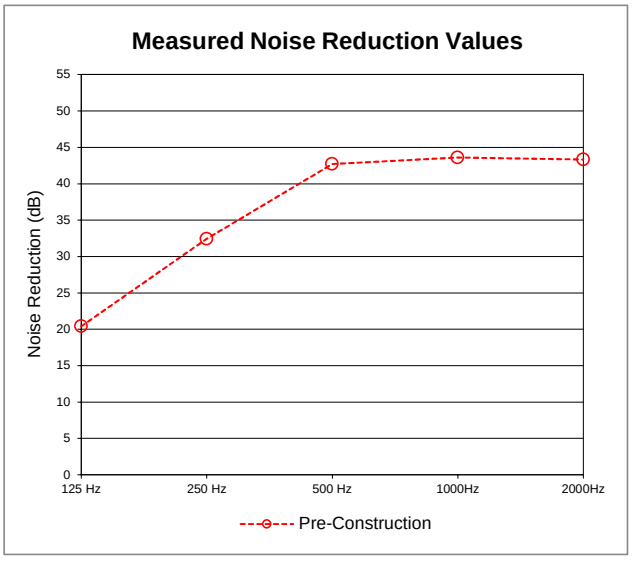


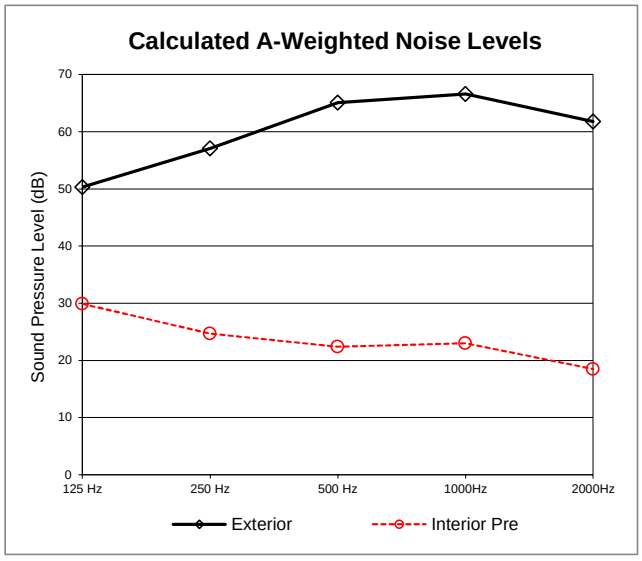


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Tua	Tested Room:	Bedroom 3 Façade
Address:	23202 21st Ave S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.6	52.5	49.2	50.1	42.1	53.1
Exterior Measurement (flush)	88.8	86.3	88.8	84.9	81.7	91.0
Exterior Adjusted	82.8	80.3	82.8	78.9	75.7	85.0
Interior Background	35.8	23.1	17.3	16.5	15.9	25.4
Interior Measurement	62.4	47.9	40.1	35.4	32.5	48.0
Interior Adjusted	62.4	47.9	40.1	35.3	32.4	48.0
Noise Reduction	**20.4**	**32.4**	**42.7**	**43.6**	**43.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.9	24.7	22.4	23.0	18.5	32.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**37.7 dB**

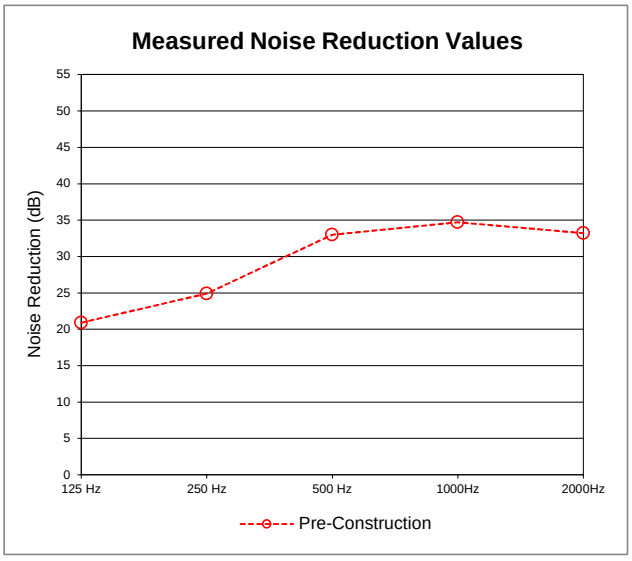


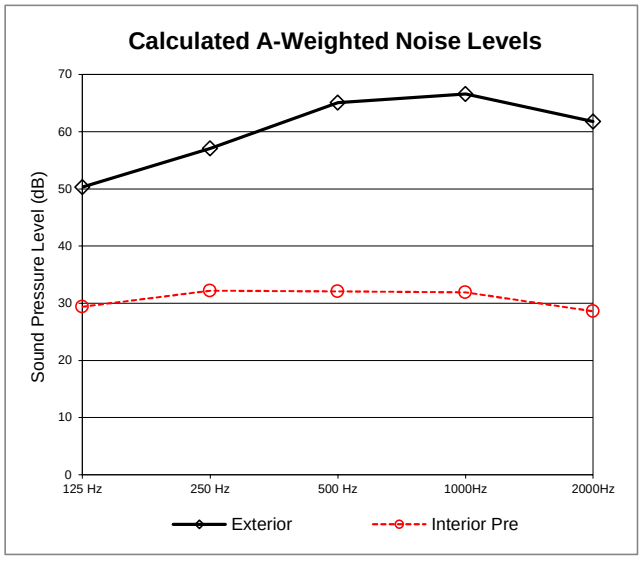


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Tua	Tested Room:	Bedroom 4 Façade
Address:	23202 21st Ave S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.6	50.6	48.5	49.1	40.9	51.9
Exterior Measurement (flush)	96.7	92.9	93.2	88.0	84.9	95.0
Exterior Adjusted	90.7	86.9	87.2	82.0	78.9	89.0
Interior Background	29.4	27.7	25.9	23.6	21.1	29.7
Interior Measurement	69.8	62.0	54.2	47.3	45.7	58.3
Interior Adjusted	69.8	62.0	54.2	47.3	45.7	58.3
Noise Reduction	**20.9**	**24.9**	**33.0**	**34.7**	**33.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.4	32.2	32.1	31.9	28.6	38.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.9 dB**



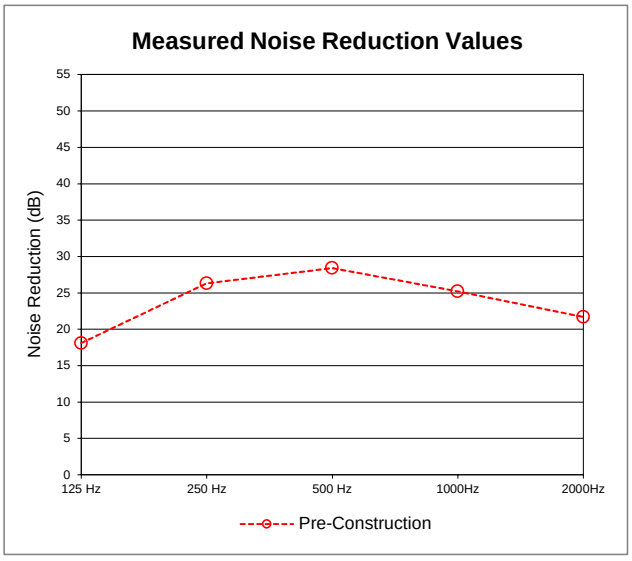


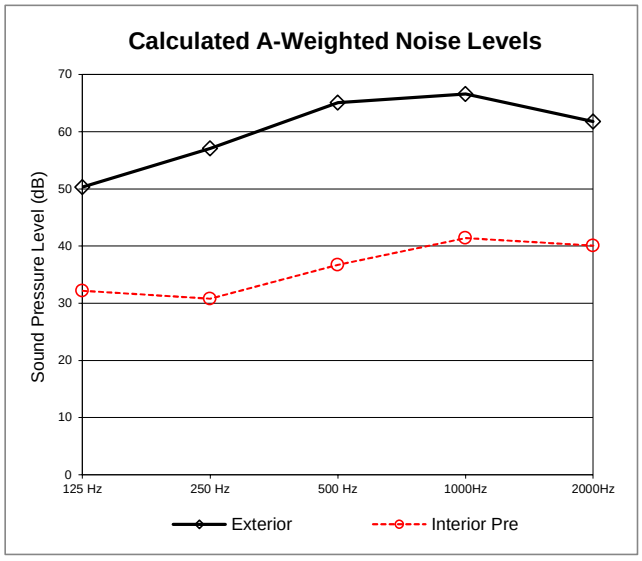
Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Krakow	Tested Room:	Living / Dining / Kitchen Façade
Address:	12203 22nd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	43.9	37.0	37.4	38.4	30.1	41.1
Exterior Measurement (flush)	82.6	83.9	84.9	81.6	79.7	87.5
Exterior Adjusted	76.6	77.9	78.9	75.6	73.7	81.5
Interior Background	39.2	37.8	34.6	31.9	32.9	39.6
Interior Measurement	58.6	51.8	50.6	50.5	52.1	57.1
Interior Adjusted	58.5	51.6	50.5	50.4	52.0	57.0
Noise Reduction	**18.1**	**26.3**	**28.4**	**25.2**	**21.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.2	30.8	36.7	41.4	40.1	45.0

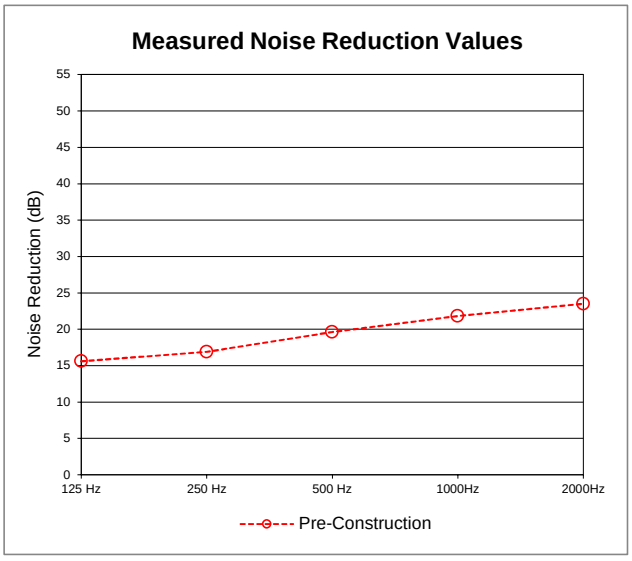
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum): 25.0 dB

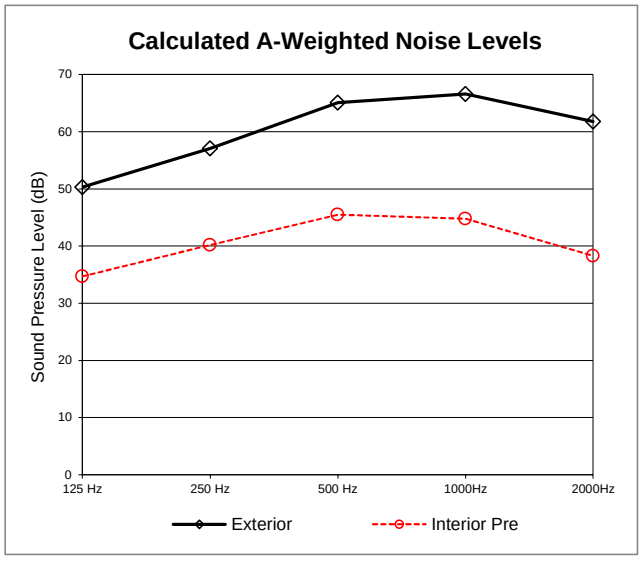




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Krakow	Tested Room:	Sitting Room Façade 1
Address:	12203 22nd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		49.6	49.4	50.6	44.2	38.9	50.1
Exterior Measurement	(flush)	102.5	99.9	100.6	95.1	88.7	101.5
Exterior Adjusted		96.5	93.9	94.6	89.1	82.7	95.5
Interior Background		35.3	33.7	27.8	26.2	27.7	34.5
Interior Measurement		80.9	77.0	75.0	67.3	59.2	75.1
Interior Adjusted		80.9	77.0	75.0	67.3	59.2	75.1
Noise Reduction		**15.6**	**16.9**	**19.6**	**21.8**	**23.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		34.7	40.2	45.5	44.8	38.3	49.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**20.7 dB**

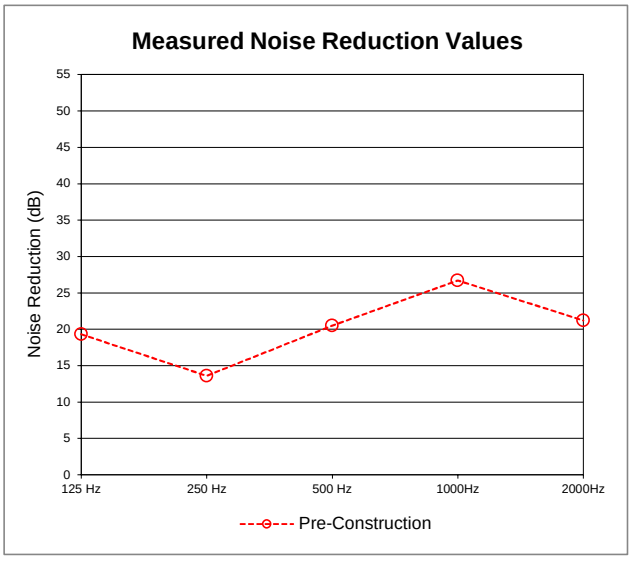


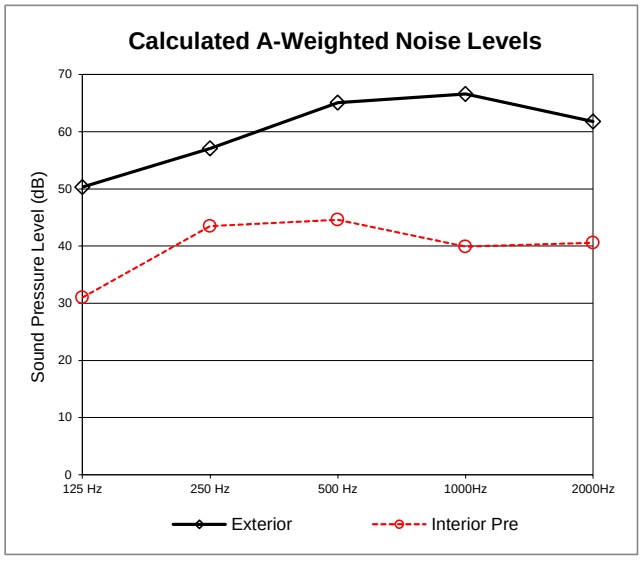


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Krakow	Tested Room:	Sitting Room Façade 2
Address:	12203 22nd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	49.6	49.4	50.6	44.2	38.9	50.1
Exterior Measurement (flush)	96.1	93.8	95.8	93.7	88.6	98.8
Exterior Adjusted	90.1	87.8	89.8	87.7	82.6	92.8
Interior Background	35.3	33.7	27.8	26.2	27.7	34.5
Interior Measurement	70.8	74.2	69.3	61.0	61.4	71.1
Interior Adjusted	70.8	74.2	69.3	61.0	61.4	71.1
Noise Reduction	**19.3**	**13.6**	**20.5**	**26.7**	**21.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.0	43.5	44.6	39.9	40.6	48.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**21.3 dB**

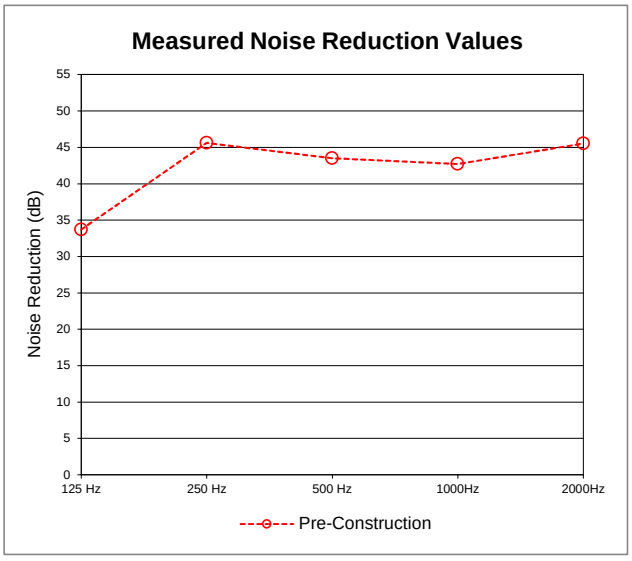


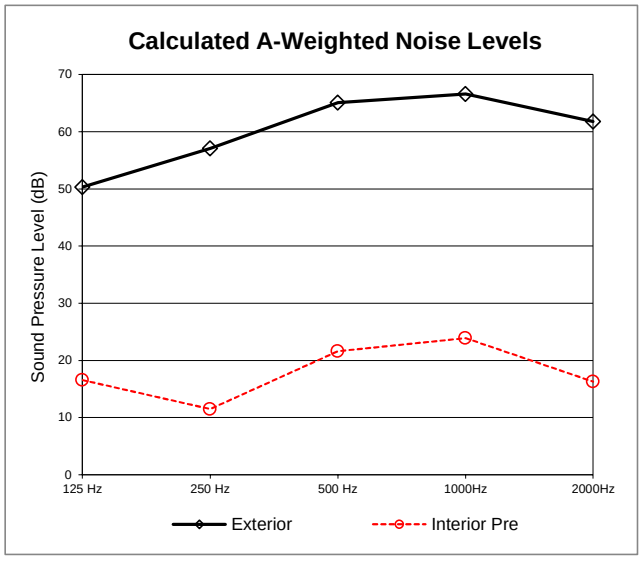


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Krakow	Tested Room:	Bedroom 1 Façade
Address:	12203 22nd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.1	48.7	47.7	44.9	37.9	49.2
Exterior Measurement (flush)	87.2	90.6	89.2	86.8	84.9	93.0
Exterior Adjusted	81.2	84.6	83.2	80.8	78.9	87.0
Interior Background	32.7	30.9	28.2	22.2	17.3	29.2
Interior Measurement	47.6	39.6	40.0	38.2	33.5	43.0
Interior Adjusted	47.5	39.0	39.7	38.1	33.4	42.8
Noise Reduction	**33.7**	**45.6**	**43.5**	**42.7**	**45.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	16.6	11.5	21.6	23.9	16.3	26.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**43.1 dB**

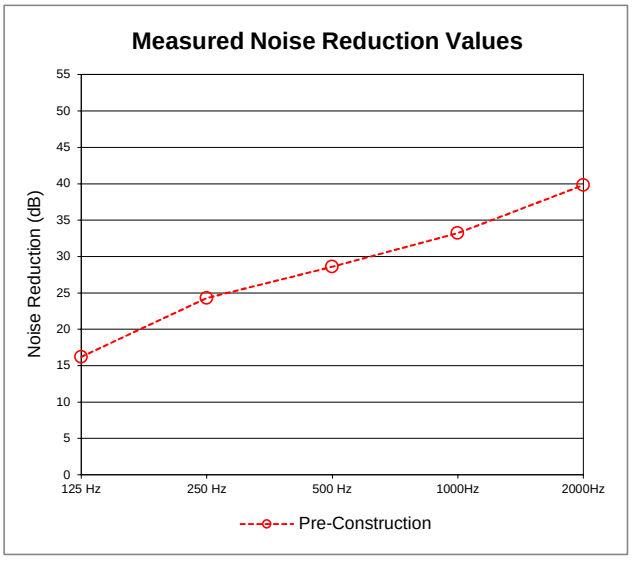


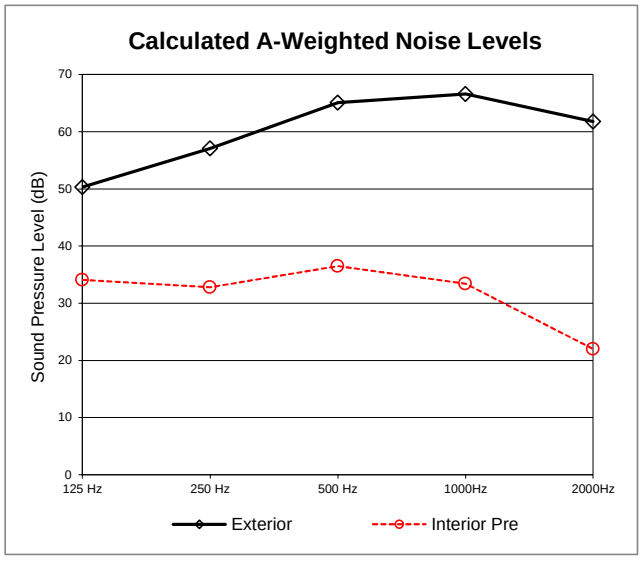


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Krakow	Tested Room:	Bedroom 2 Façade
Address:	12203 22nd Ave S	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

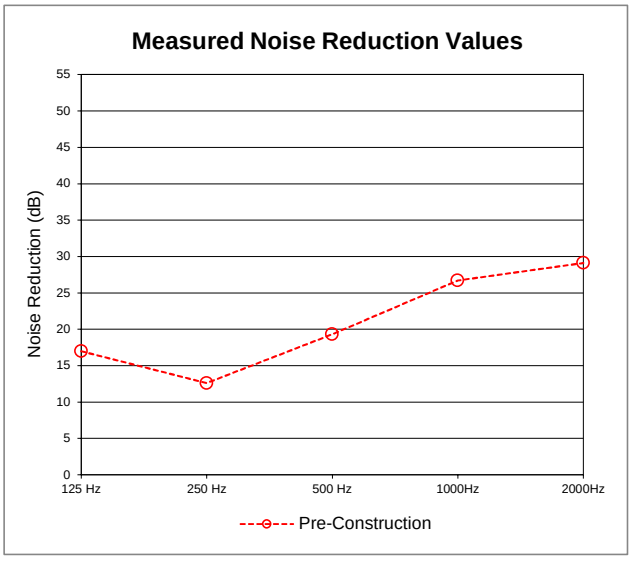
May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.1	48.7	47.7	44.9	37.9	49.2
Exterior Measurement (flush)	92.9	94.9	94.3	89.7	85.3	96.2
Exterior Adjusted	86.9	88.9	88.3	83.7	79.3	90.2
Interior Background	33.1	31.4	28.5	22.4	17.5	29.7
Interior Measurement	70.7	64.6	59.7	50.5	39.5	60.7
Interior Adjusted	70.7	64.6	59.7	50.5	39.5	60.7
Noise Reduction	**16.2**	**24.3**	**28.6**	**33.2**	**39.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.1	32.8	36.5	33.4	22.0	40.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.5 dB**

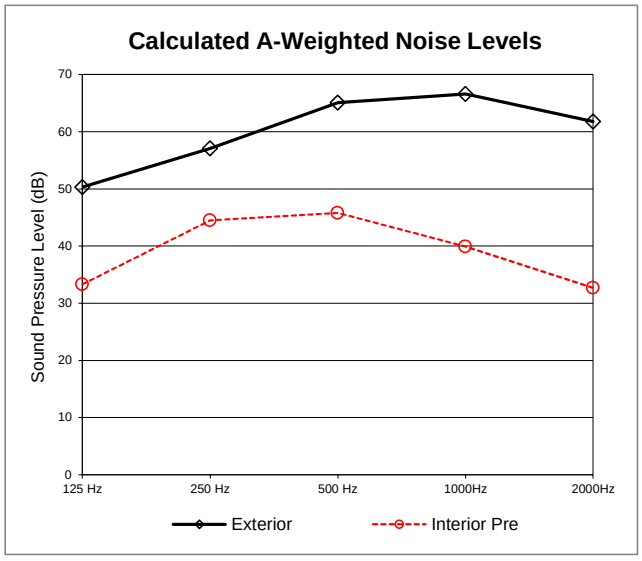




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Krakow	Tested Room:	Office Façade
Address:	12203 22nd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		49.6	49.4	50.6	44.2	38.9	50.1
Exterior Measurement	(flush)	104.5	103.7	103.4	100.5	96.6	106.2
Exterior Adjusted		98.5	97.7	97.4	94.5	90.6	100.2
Interior Background		36.8	34.8	32.9	30.5	30.1	37.0
Interior Measurement		81.5	85.1	78.1	67.8	61.5	79.2
Interior Adjusted		81.5	85.1	78.1	67.8	61.5	79.2
Noise Reduction		**17.0**	**12.6**	**19.3**	**26.7**	**29.1**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		33.3	44.5	45.8	39.9	32.7	49.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**21.0 dB**

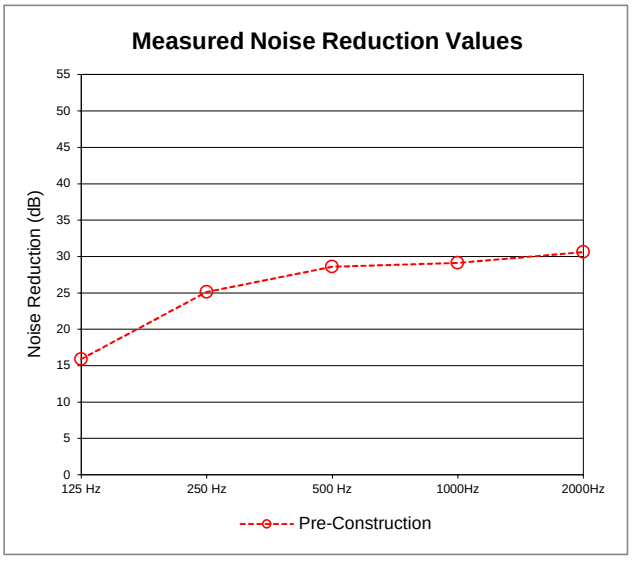


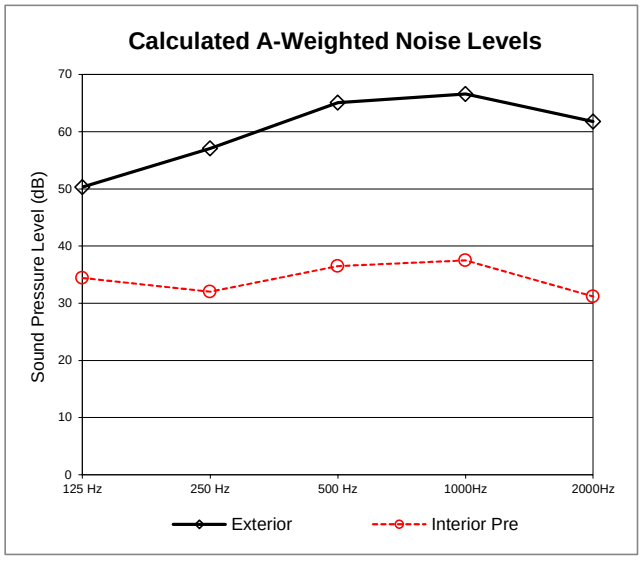


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Carrillo	Tested Room:	Living Room Façade 1
Address:	12205 23rd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

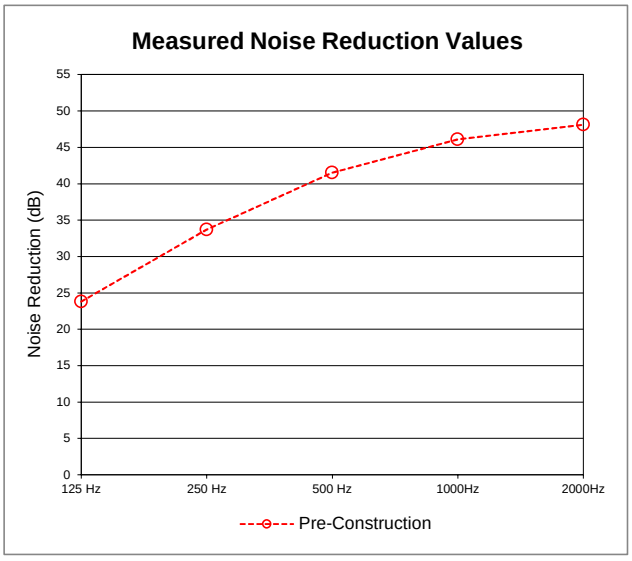
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.8	48.8	47.5	46.1	42.8	50.6
Exterior Measurement (flush)	87.9	89.4	90.7	89.7	90.0	96.4
Exterior Adjusted	81.9	83.4	84.7	83.7	84.0	90.4
Interior Background	38.5	28.3	21.5	18.9	17.7	28.1
Interior Measurement	66.0	58.3	56.1	54.6	53.4	60.1
Interior Adjusted	66.0	58.3	56.1	54.6	53.4	60.1
Noise Reduction	**15.9**	**25.1**	**28.6**	**29.1**	**30.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.4	32.0	36.5	37.5	31.2	42.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.0 dB**

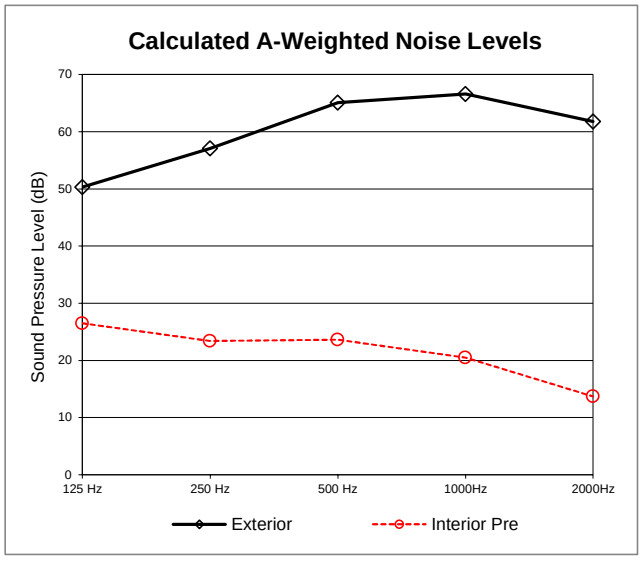




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Carrillo	Tested Room:	Living Room Façade 2
Address:	12205 23rd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

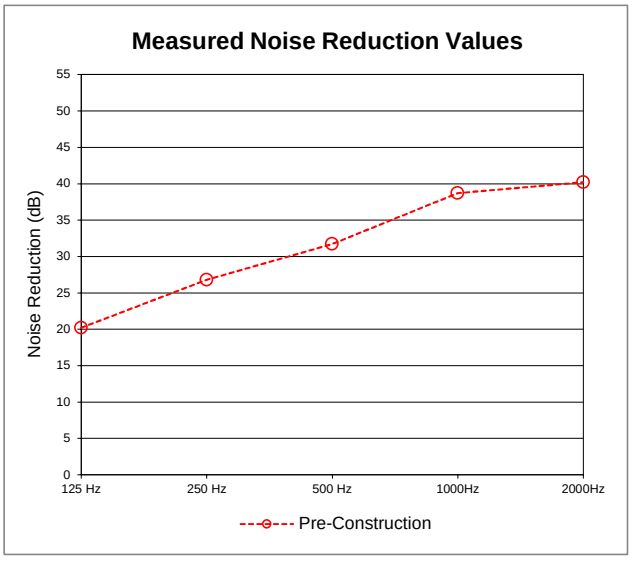
Pre-Construction Sound Pressure Levels (dB)						
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	63.4	56.2	53.2	48.4	40.3	54.5
Exterior Measurement (flush)	106.6	102.7	104.7	101.9	99.0	107.6
Exterior Adjusted	100.6	96.7	98.7	95.9	93.0	101.6
Interior Background	38.5	28.3	21.5	18.9	17.7	28.1
Interior Measurement	76.8	63.0	57.2	49.8	44.9	62.3
Interior Adjusted	76.8	63.0	57.2	49.8	44.9	62.3
Noise Reduction	**23.8**	**33.7**	**41.5**	**46.1**	**48.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.5	23.4	23.6	20.5	13.7	30.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**39.9 dB**

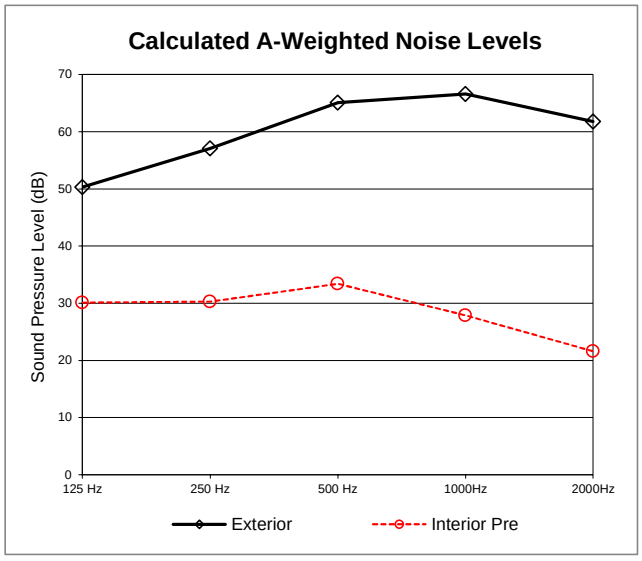




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Carrillo	Tested Room:	Dining Room Façade 1
Address:	12205 23rd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.0	51.3	50.6	44.9	44.6	52.2
Exterior Measurement (flush)	111.3	110.0	108.5	104.5	102.4	111.6
Exterior Adjusted	105.3	104.0	102.5	98.5	96.4	105.6
Interior Background	39.6	33.0	33.1	30.6	26.9	35.4
Interior Measurement	85.1	77.2	70.8	59.8	56.2	73.5
Interior Adjusted	85.1	77.2	70.8	59.8	56.2	73.5
Noise Reduction	**20.2**	**26.8**	**31.7**	**38.7**	**40.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.1	30.3	33.4	27.9	21.6	37.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.0 dB**

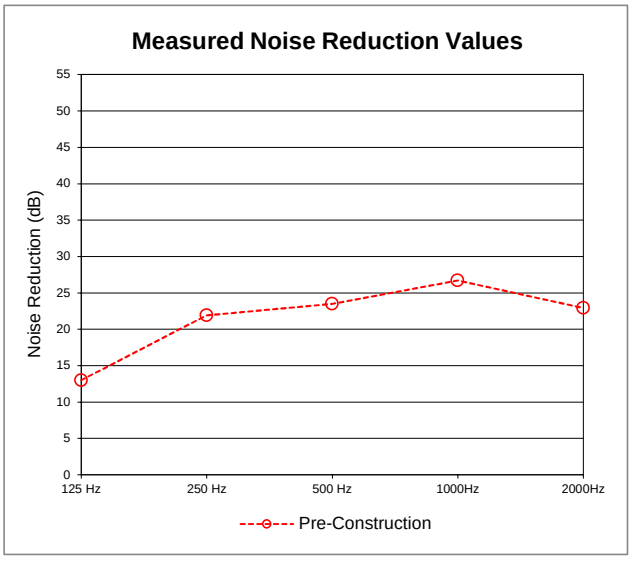


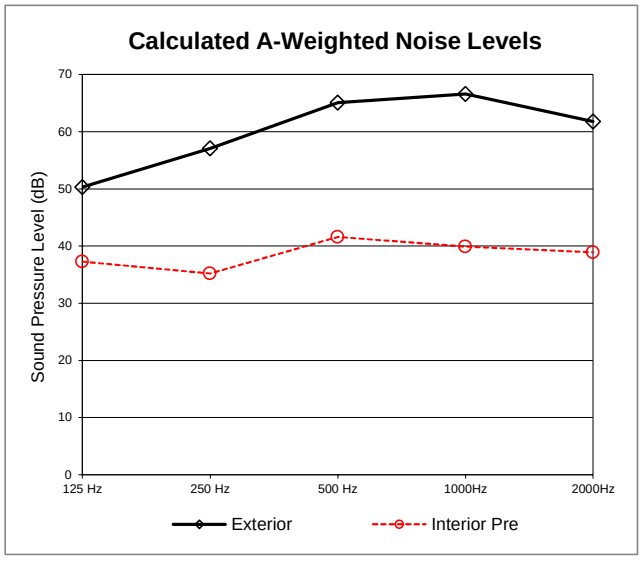


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Carrillo	Tested Room:	Dining Room Façade 2
Address:	12205 23rd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.0	51.3	50.6	44.9	44.6	52.2
Exterior Measurement (flush)	94.3	93.3	93.9	93.6	88.5	97.7
Exterior Adjusted	88.3	87.3	87.9	87.6	82.5	91.7
Interior Background	39.6	33.0	33.1	30.6	26.9	35.4
Interior Measurement	75.3	65.4	64.4	60.9	59.6	67.4
Interior Adjusted	75.3	65.4	64.4	60.9	59.6	67.4
Noise Reduction	**13.0**	**21.9**	**23.5**	**26.7**	**22.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	37.3	35.2	41.6	39.9	38.9	46.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**23.9 dB**

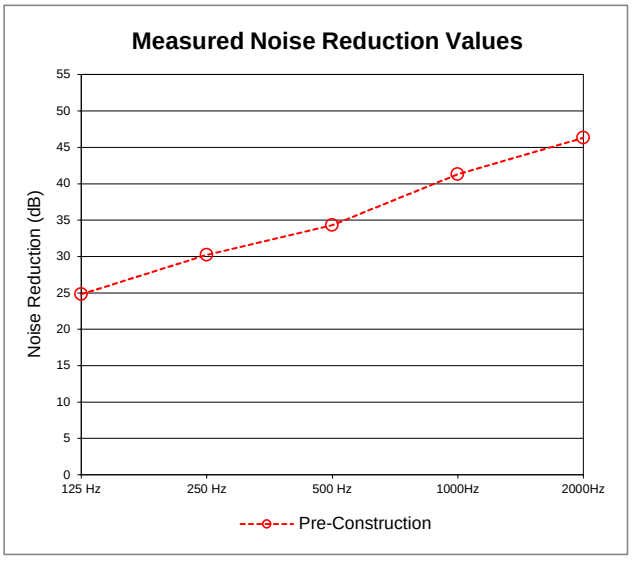


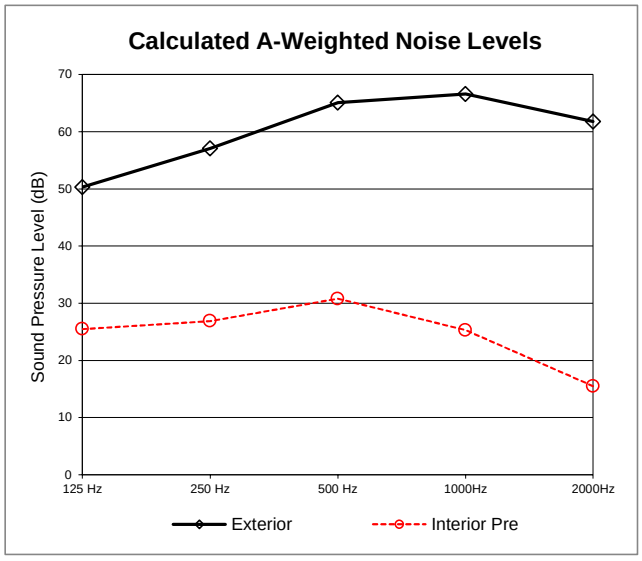


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Carrillo	Tested Room:	Kitchen Façade
Address:	12205 23rd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	63.4	56.2	53.2	48.4	40.3	54.5
Exterior Measurement (flush)	107.9	105.0	105.4	101.2	99.5	108.1
Exterior Adjusted	101.9	99.0	99.4	95.2	93.5	102.1
Interior Background	30.3	22.0	23.0	23.1	23.8	31.5
Interior Measurement	77.1	68.8	65.1	53.9	47.2	66.1
Interior Adjusted	77.1	68.8	65.1	53.9	47.2	66.1
Noise Reduction	**24.8**	**30.2**	**34.3**	**41.3**	**46.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	25.5	26.9	30.8	25.3	15.5	33.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.2 dB**

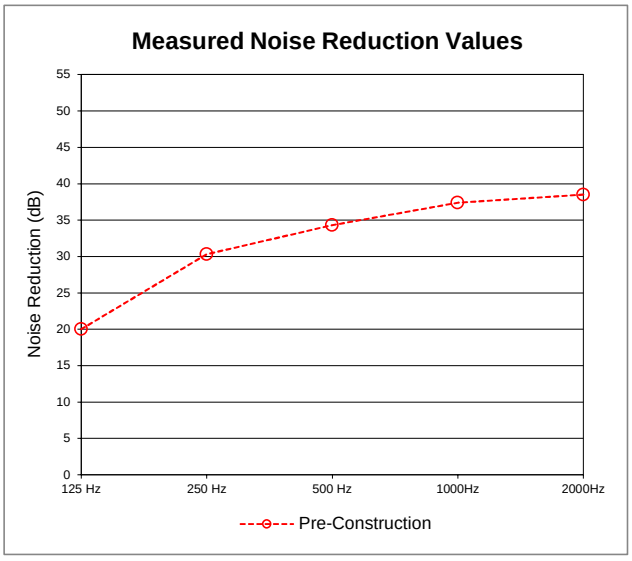


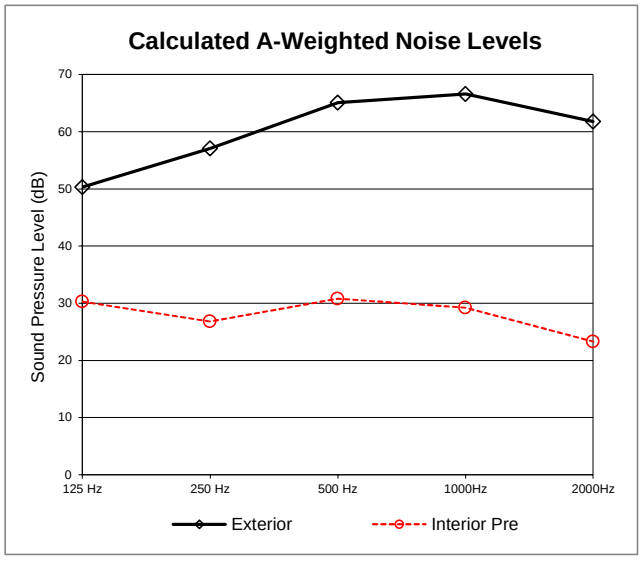


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Carrillo	Tested Room:	Bedroom 1 Façade
Address:	12205 23rd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.8	48.8	47.5	46.1	42.8	50.6
Exterior Measurement (flush)	93.8	93.4	94.3	91.8	91.0	98.7
Exterior Adjusted	87.8	87.4	88.3	85.8	85.0	92.7
Interior Background	39.8	26.4	17.1	15.0	13.3	27.6
Interior Measurement	67.8	57.1	54.0	48.4	46.5	57.0
Interior Adjusted	67.8	57.1	54.0	48.4	46.5	57.0
Noise Reduction	**20.0**	**30.3**	**34.3**	**37.4**	**38.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.3	26.8	30.8	29.2	23.3	35.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.2 dB**

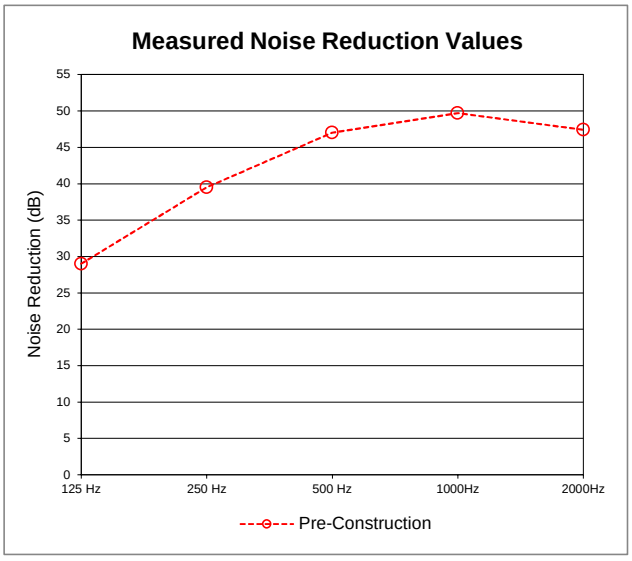


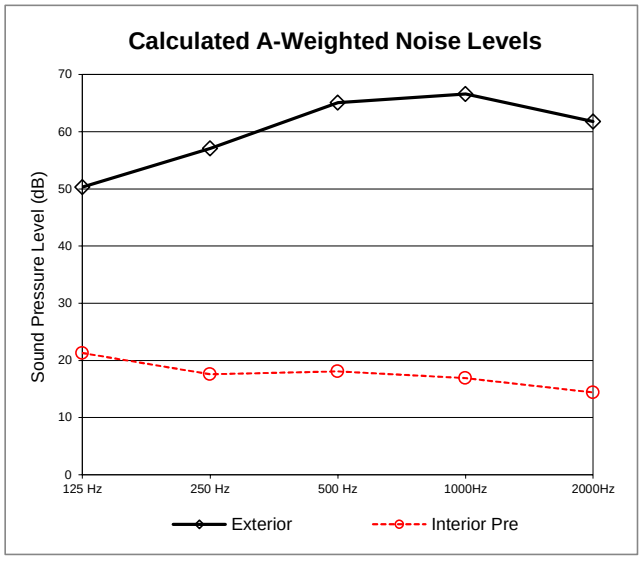


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Carrillo	Tested Room:	Bedroom 2 Façade
Address:	12205 23rd Ave S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.5	51.5	49.4	45.5	36.2	50.5
Exterior Measurement (flush)	107.5	106.6	105.4	102.2	100.8	108.5
Exterior Adjusted	101.5	100.6	99.4	96.2	94.8	102.5
Interior Background	26.9	16.6	22.3	20.5	20.1	28.4
Interior Measurement	72.5	61.1	52.4	46.5	47.4	59.5
Interior Adjusted	72.5	61.1	52.4	46.5	47.4	59.5
Noise Reduction	**29.0**	**39.5**	**47.0**	**49.7**	**47.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	21.3	17.6	18.1	16.9	14.4	25.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**44.8 dB**

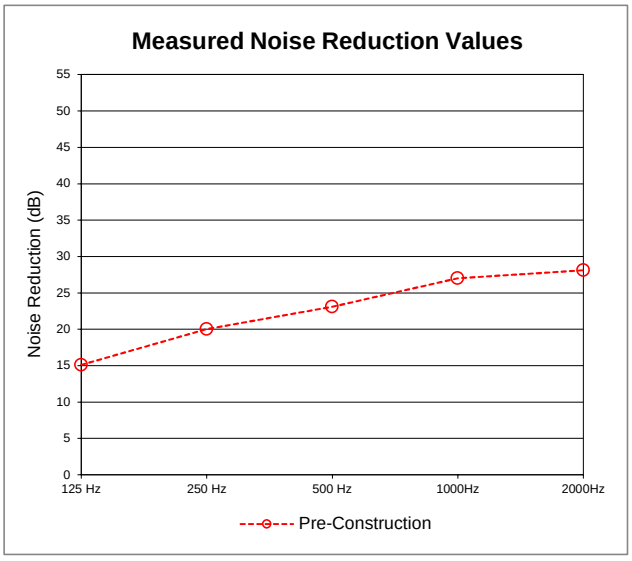


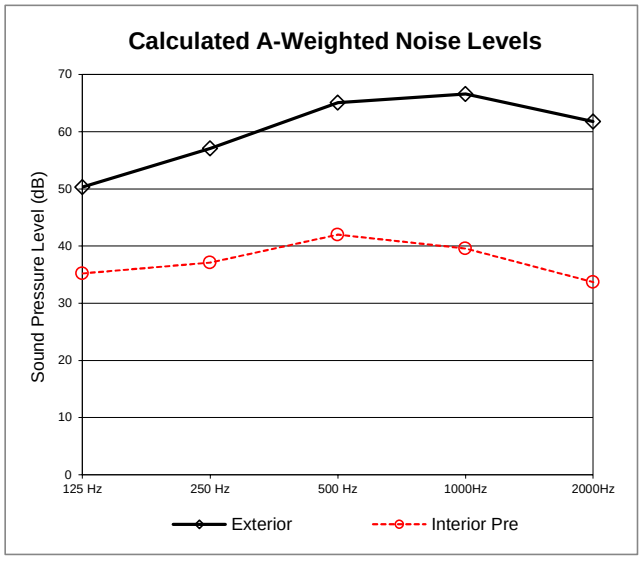


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Gerado	Tested Room:	Living Room Façade
Address:	22920 23rd Pl S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.5	53.0	52.4	52.6	44.9	55.5
Exterior Measurement (flush)	91.6	90.5	90.5	87.4	83.6	93.2
Exterior Adjusted	85.6	84.5	84.5	81.4	77.6	87.2
Interior Background	41.0	33.1	25.6	24.4	28.2	33.7
Interior Measurement	70.5	64.5	61.4	54.4	49.5	62.9
Interior Adjusted	70.5	64.5	61.4	54.4	49.5	62.9
Noise Reduction	**15.1**	**20.0**	**23.1**	**27.0**	**28.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.2	37.1	42.0	39.6	33.7	45.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**24.5 dB**

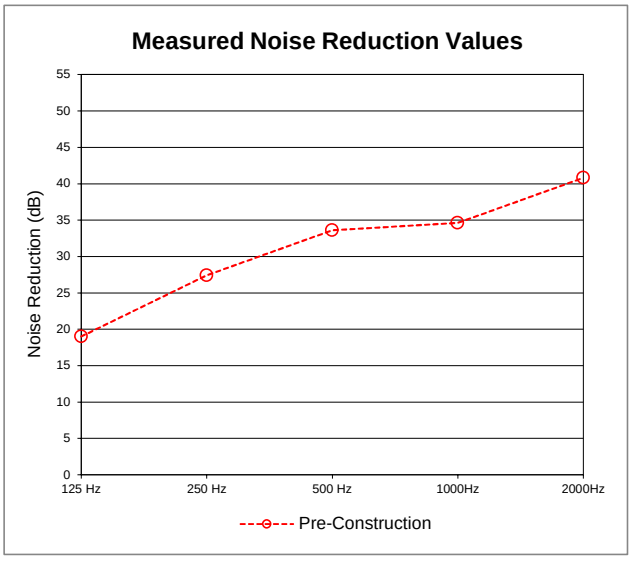


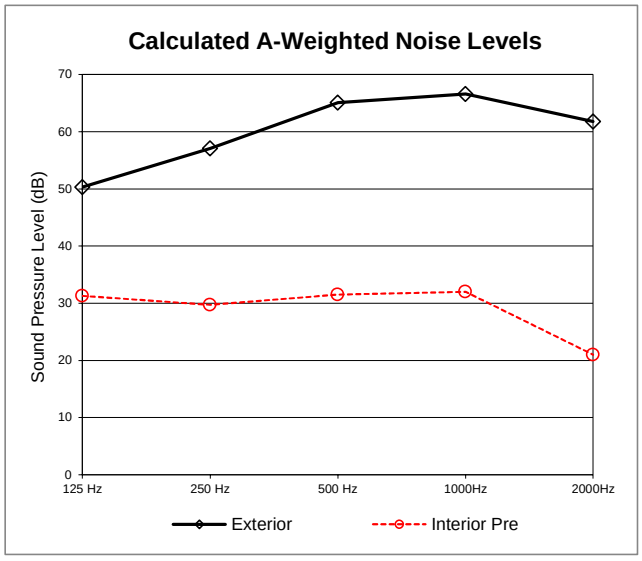


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Gerado	Tested Room:	Sitting / Kitchen Façade 1
Address:	22920 23rd Pl S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.5	50.2	45.8	47.8	42.7	51.9
Exterior Measurement (flush)	98.3	98.4	99.2	94.4	90.0	100.3
Exterior Adjusted	92.3	92.4	93.2	88.4	84.0	94.3
Interior Background	40.9	32.6	17.8	11.8	9.2	29.5
Interior Measurement	73.3	65.0	59.6	53.8	43.2	62.0
Interior Adjusted	73.3	65.0	59.6	53.8	43.2	62.0
Noise Reduction	**19.0**	**27.4**	**33.6**	**34.6**	**40.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.3	29.7	31.5	32.0	21.0	37.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.7 dB**

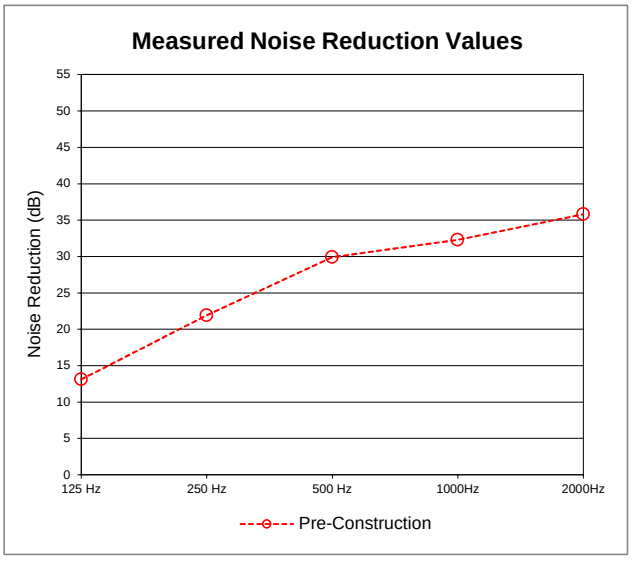


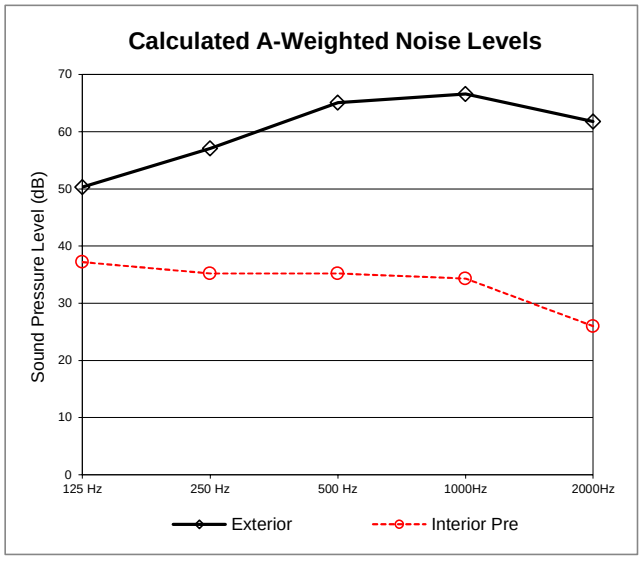


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Gerado	Tested Room:	Sitting / Kitchen Façade 2
Address:	22920 23rd Pl S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.5	50.2	45.8	47.8	42.7	51.9
Exterior Measurement (flush)	94.7	96.6	96.6	92.2	88.4	99.0
Exterior Adjusted	88.7	90.6	90.6	86.2	82.4	93.0
Interior Background	40.9	32.6	17.8	11.8	9.2	29.5
Interior Measurement	75.6	68.7	60.7	53.9	46.6	64.5
Interior Adjusted	75.6	68.7	60.7	53.9	46.6	64.5
Noise Reduction	**13.1**	**21.9**	**29.9**	**32.3**	**35.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	37.2	35.2	35.2	34.3	26.0	41.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.3 dB**

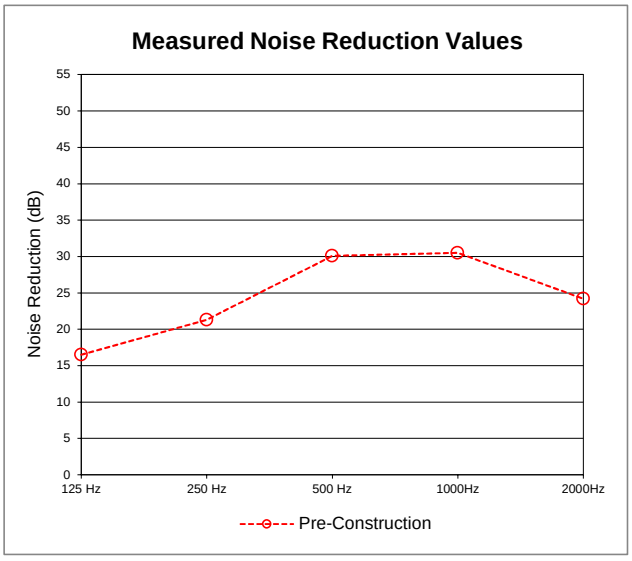


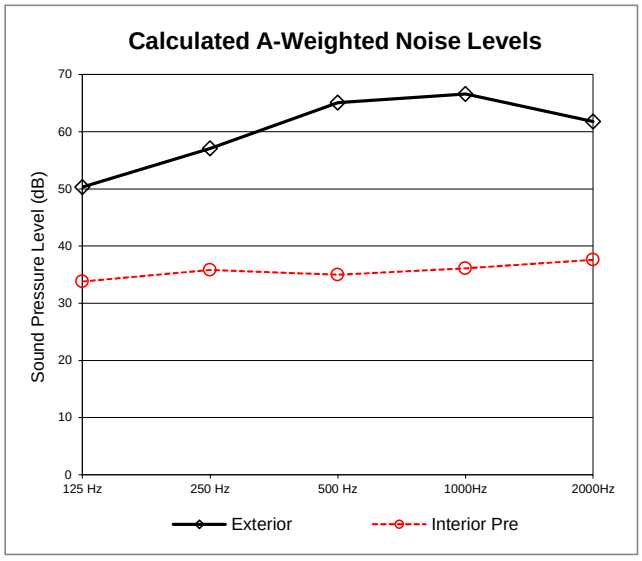


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Gerado	Tested Room:	Bedroom 1 Façade
Address:	22920 23rd Pl S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.5	50.2	45.8	47.8	42.7	51.9
Exterior Measurement (flush)	93.9	93.2	93.5	90.1	85.8	95.6
Exterior Adjusted	87.9	87.2	87.5	84.1	79.8	89.6
Interior Background	34.0	24.1	17.2	15.2	18.6	25.2
Interior Measurement	71.4	65.9	57.4	53.6	55.6	63.0
Interior Adjusted	71.4	65.9	57.4	53.6	55.6	63.0
Noise Reduction	**16.5**	**21.3**	**30.1**	**30.5**	**24.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	33.8	35.8	35.0	36.1	37.6	42.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**27.2 dB**

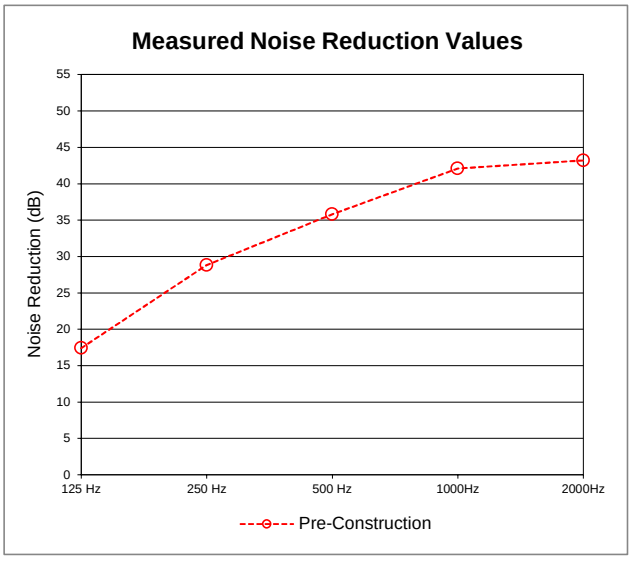


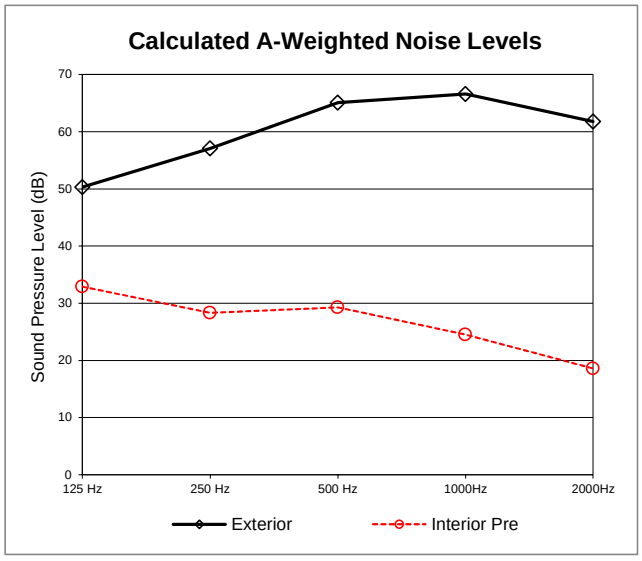


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Gerado	Tested Room:	Bedroom 2 Façade
Address:	22920 23rd Pl S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

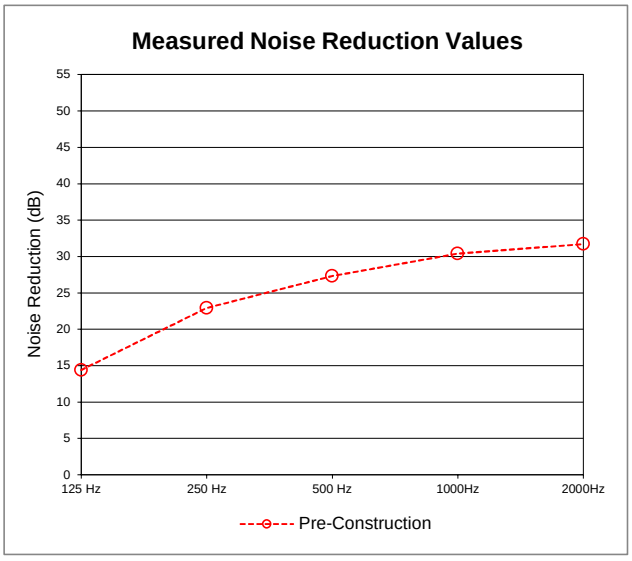
May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	63.0	55.6	58.0	55.9	52.1	60.2
Exterior Measurement (flush)	88.8	86.5	89.1	86.2	83.1	91.9
Exterior Adjusted	82.8	80.5	83.1	80.2	77.1	85.9
Interior Background	41.0	25.6	18.2	16.6	13.7	28.0
Interior Measurement	65.4	51.7	47.3	38.1	33.9	51.3
Interior Adjusted	65.4	51.7	47.3	38.1	33.9	51.3
Noise Reduction	**17.4**	**28.8**	**35.8**	**42.1**	**43.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.9	28.3	29.3	24.5	18.6	35.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.2 dB**

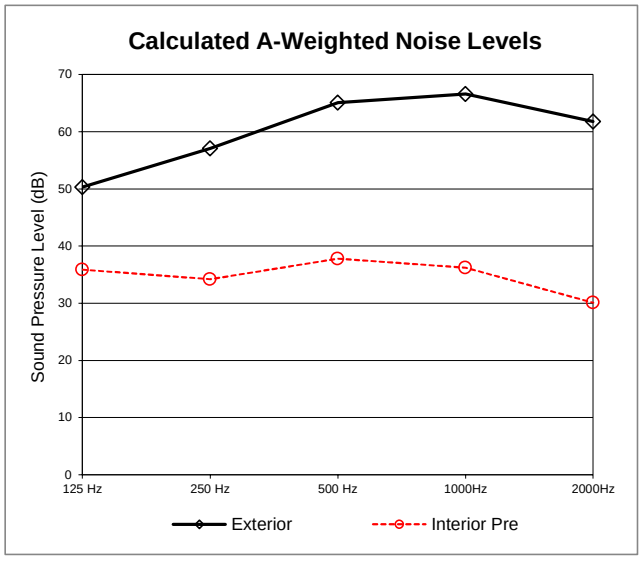




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Gerado	Tested Room:	Office Façade
Address:	22920 23rd Pl S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

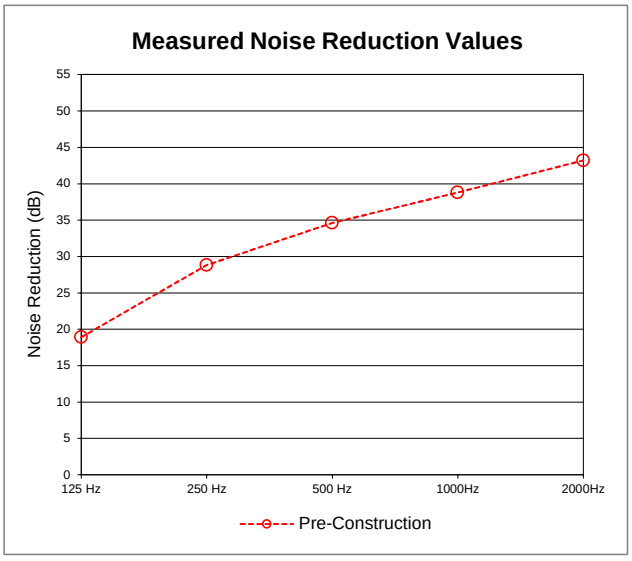
Pre-Construction Sound Pressure Levels (dB)						
May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	63.0	55.6	58.0	55.9	52.1	60.2
Exterior Measurement (flush)	88.1	88.7	88.9	85.0	84.4	92.7
Exterior Adjusted	82.1	82.7	82.9	79.0	78.4	86.7
Interior Background	37.7	27.6	20.8	20.4	23.4	28.9
Interior Measurement	67.7	59.8	55.6	48.6	46.7	58.1
Interior Adjusted	67.7	59.8	55.6	48.6	46.7	58.1
Noise Reduction	**14.4**	**22.9**	**27.3**	**30.4**	**31.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.9	34.2	37.8	36.2	30.1	42.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**27.5 dB**

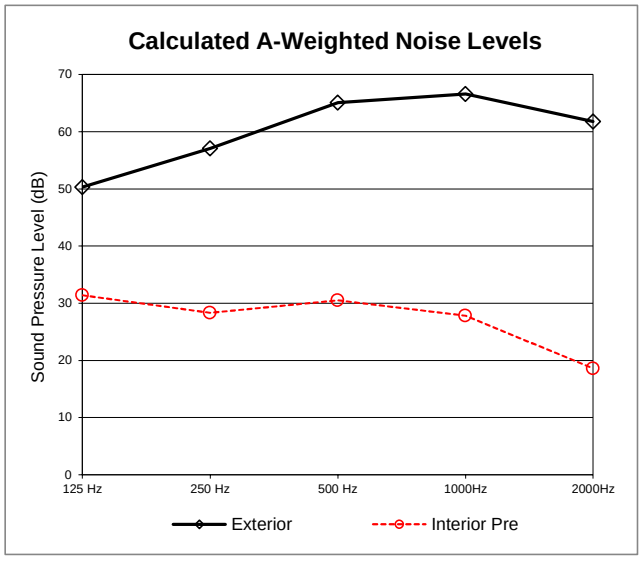




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Living Room Façade
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	48.2	46.3	51.0	55.6	48.2	57.1
Exterior Measurement (flush)	88.8	90.9	91.2	89.2	87.8	95.0
Exterior Adjusted	82.8	84.9	85.2	83.2	81.8	89.0
Interior Background	47.1	39.0	27.0	25.7	22.2	35.4
Interior Measurement	64.0	56.2	50.6	44.5	38.7	53.9
Interior Adjusted	63.9	56.1	50.6	44.4	38.6	53.8
Noise Reduction	**18.9**	**28.8**	**34.6**	**38.8**	**43.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.4	28.3	30.5	27.8	18.6	35.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.1 dB**

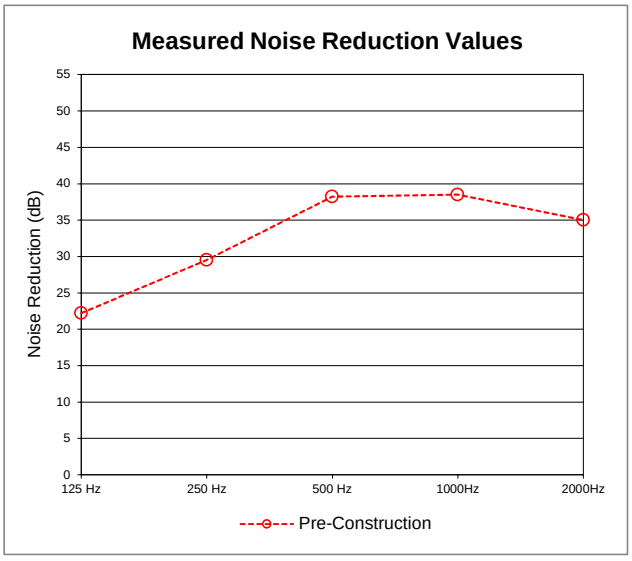


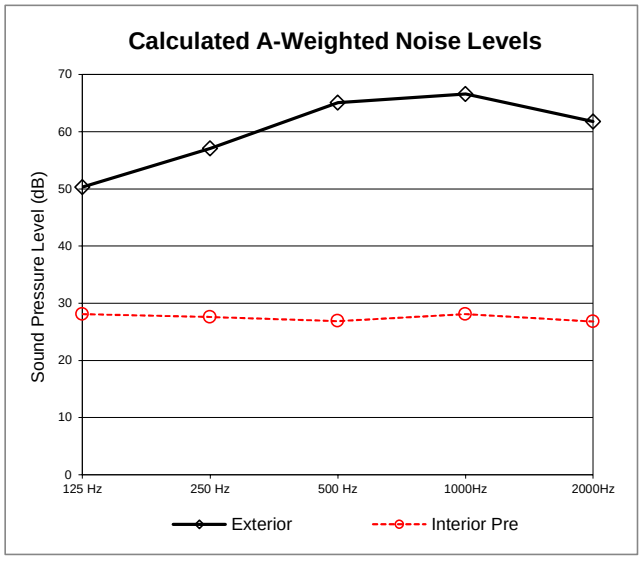


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Sitting / Kitchenette Façade 1
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	69.6	58.8	54.5	56.2	49.0	59.5
Exterior Measurement (flush)	93.0	87.1	91.6	88.9	84.2	94.1
Exterior Adjusted	87.0	81.1	85.6	82.9	78.2	88.1
Interior Background	44.8	31.1	28.3	21.9	21.6	32.6
Interior Measurement	64.8	51.6	47.5	44.4	43.2	53.3
Interior Adjusted	64.8	51.6	47.4	44.4	43.2	53.3
Noise Reduction	**22.2**	**29.5**	**38.2**	**38.5**	**35.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.1	27.6	26.9	28.1	26.8	34.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.5 dB**

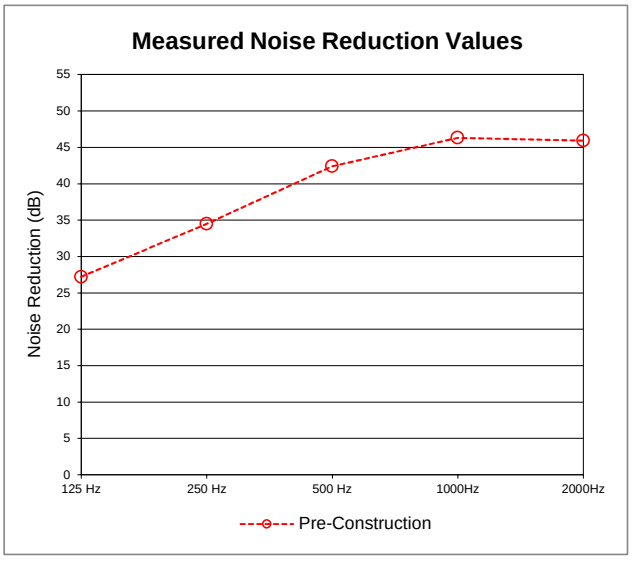


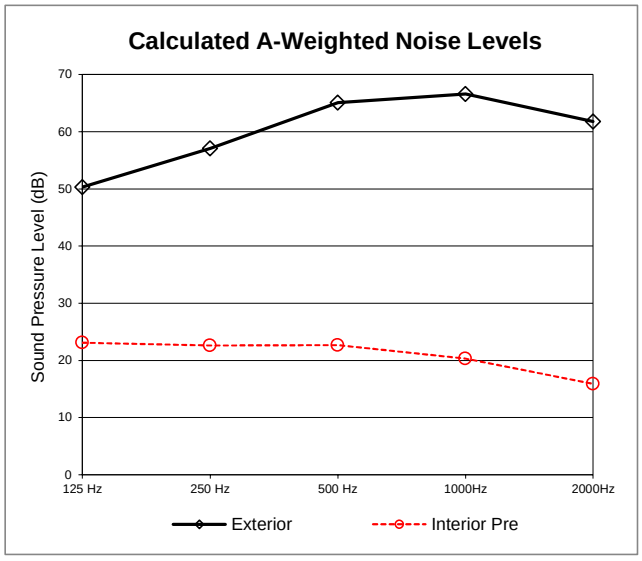


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Sitting / Kitchenette Façade 2
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	48.6	45.0	44.1	45.3	41.0	49.1
Exterior Measurement (flush)	98.4	95.8	95.5	92.9	89.4	98.5
Exterior Adjusted	92.4	89.8	89.5	86.9	83.4	92.5
Interior Background	44.8	31.1	28.3	21.9	21.6	32.6
Interior Measurement	65.2	55.3	47.2	40.7	37.6	52.4
Interior Adjusted	65.2	55.3	47.1	40.6	37.5	52.4
Noise Reduction	**27.2**	**34.5**	**42.4**	**46.3**	**45.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	23.1	22.6	22.7	20.3	15.9	28.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**41.4 dB**

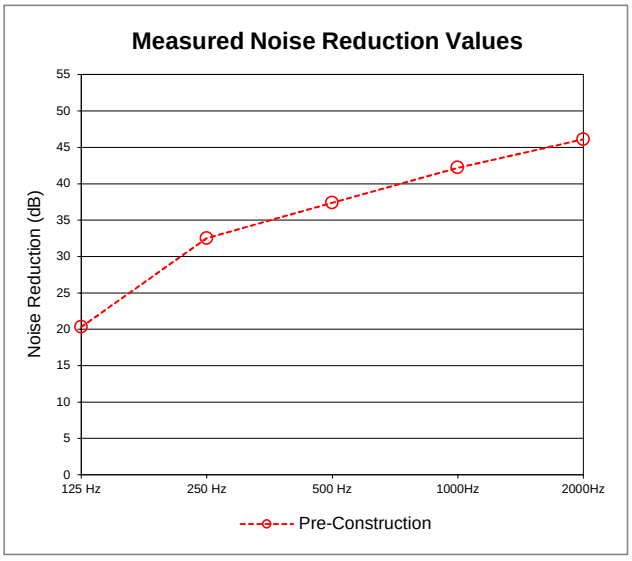


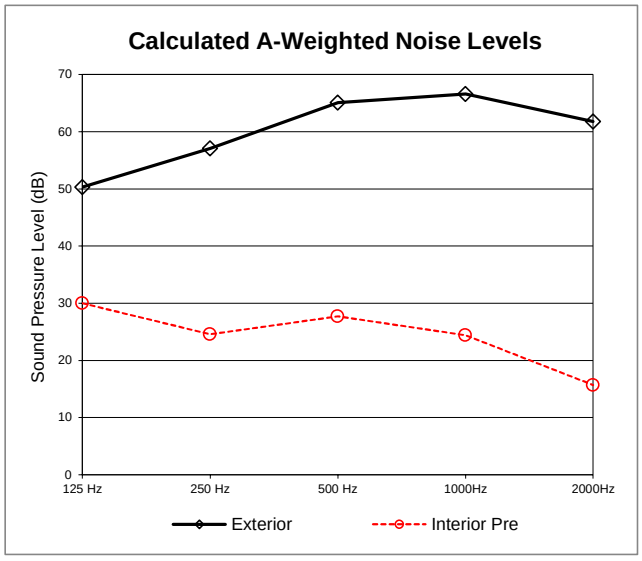


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Sitting / Kitchenette Façade 3
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

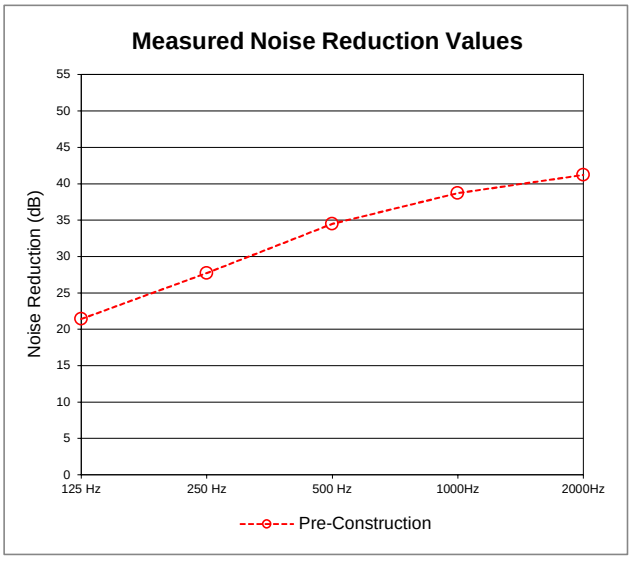
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.0	56.0	56.0	57.4	55.1	61.5
Exterior Measurement (flush)	91.3	87.0	88.7	87.2	84.1	92.7
Exterior Adjusted	85.3	81.0	82.7	81.2	78.1	86.7
Interior Background	44.8	31.1	28.3	21.9	21.6	32.6
Interior Measurement	65.0	48.6	45.4	39.1	32.4	50.8
Interior Adjusted	65.0	48.5	45.3	39.0	32.0	50.7
Noise Reduction	**20.3**	**32.5**	**37.4**	**42.2**	**46.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.0	24.6	27.7	24.4	15.7	33.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.6 dB**

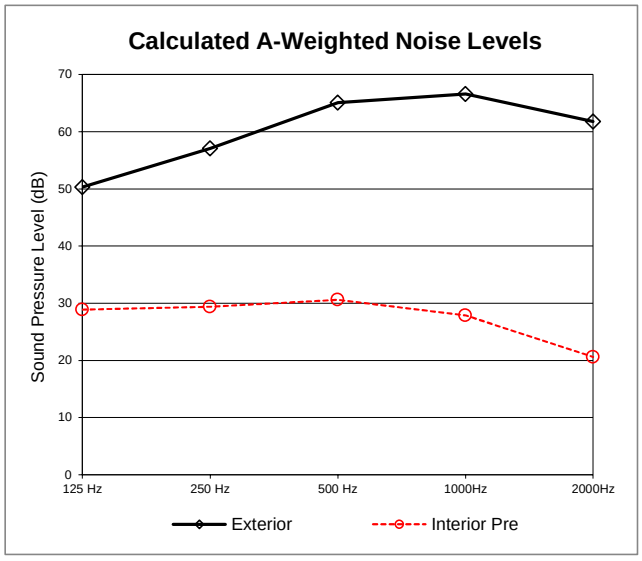




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Dining / Kitchen Façade
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
April 30, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		60.0	55.0	56.7	58.8	47.7	60.5
Exterior Measurement	(flush)	89.0	87.9	89.4	87.9	85.8	94.0
Exterior Adjusted		83.0	81.9	83.4	81.9	79.8	88.0
Interior Background		39.2	23.2	17.5	18.3	17.6	27.7
Interior Measurement		61.6	54.2	48.9	43.2	38.6	51.6
Interior Adjusted		61.6	54.2	48.9	43.2	38.6	51.6
Noise Reduction		**21.4**	**27.7**	**34.5**	**38.7**	**41.2**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		28.9	29.4	30.6	27.9	20.6	35.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**34.5 dB**

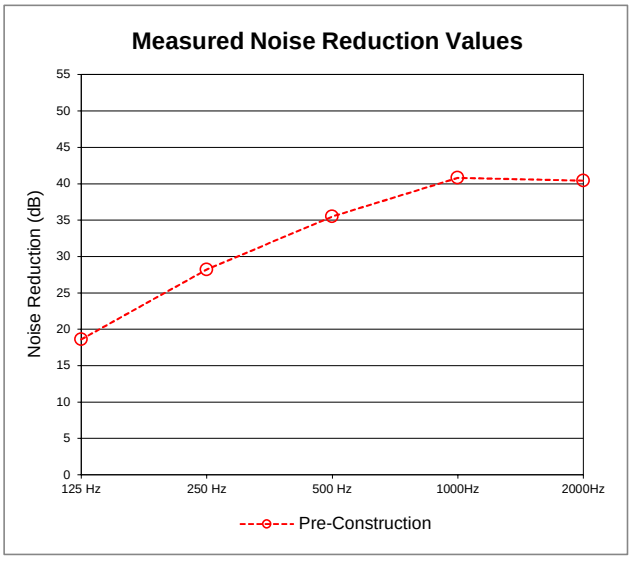


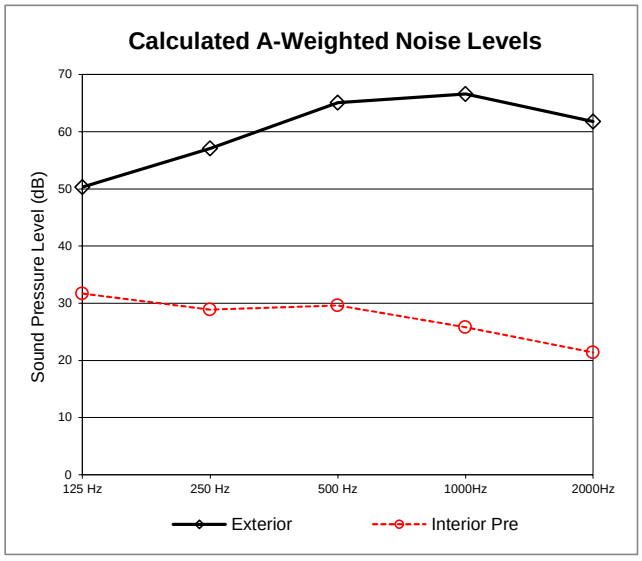


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Bedroom 1 Façade
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	48.2	46.3	51.0	55.6	48.2	57.1
Exterior Measurement (flush)	85.6	89.1	87.8	86.2	84.6	91.8
Exterior Adjusted	79.6	83.1	81.8	80.2	78.6	85.8
Interior Background	39.3	34.0	22.7	20.8	16.1	29.2
Interior Measurement	61.0	54.9	46.3	39.5	38.2	50.9
Interior Adjusted	61.0	54.9	46.3	39.4	38.2	50.9
Noise Reduction	**18.6**	**28.2**	**35.5**	**40.8**	**40.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.7	28.9	29.6	25.8	21.4	35.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.3 dB**

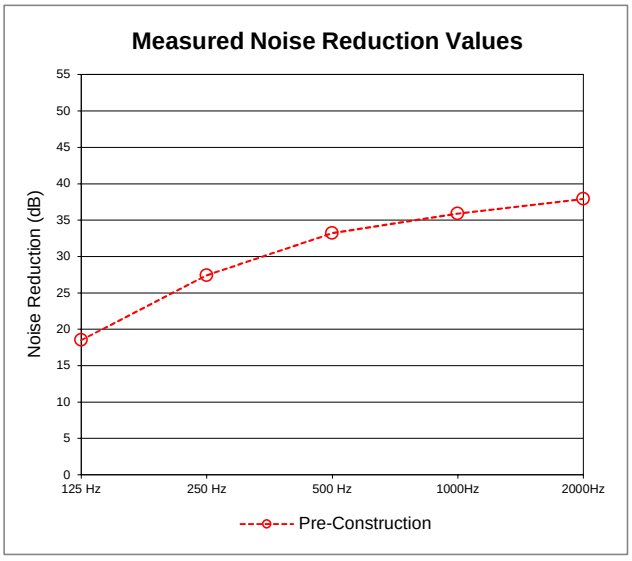


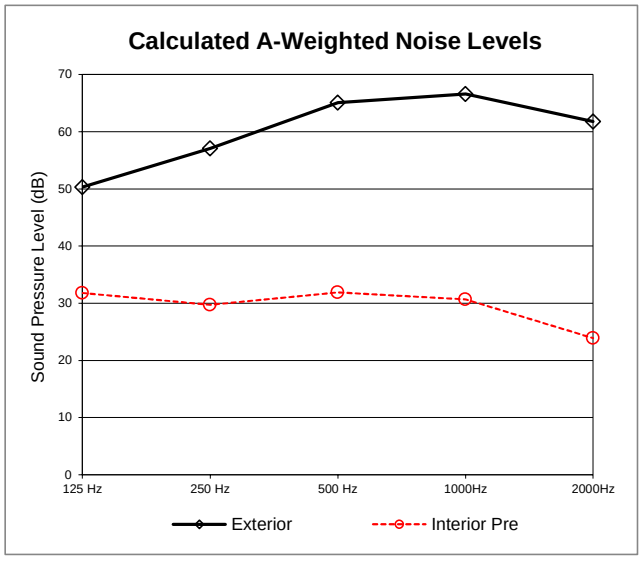


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Bedroom 2 Façade
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	48.2	46.3	51.0	55.6	48.2	57.1
Exterior Measurement (flush)	88.7	89.6	89.2	87.1	86.0	93.1
Exterior Adjusted	82.7	83.6	83.2	81.1	80.0	87.1
Interior Background	37.9	27.5	19.4	20.9	21.2	28.8
Interior Measurement	64.2	56.2	50.0	45.2	42.1	53.9
Interior Adjusted	64.2	56.2	50.0	45.2	42.1	53.9
Noise Reduction	**18.5**	**27.4**	**33.2**	**35.9**	**37.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.8	29.7	31.9	30.7	23.9	37.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.7 dB**

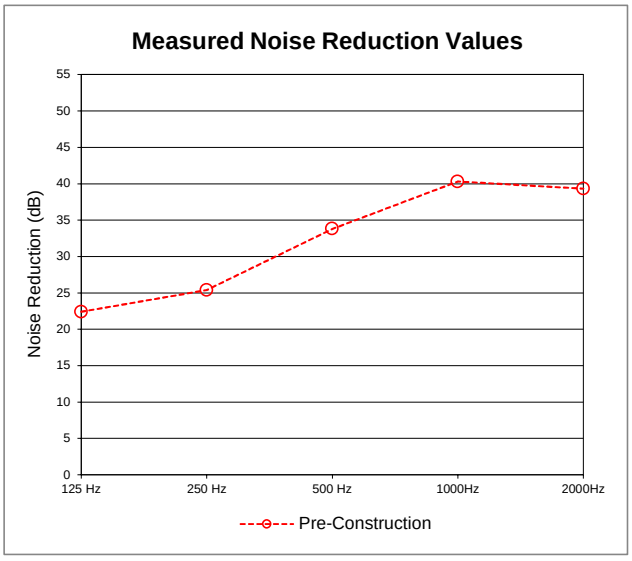


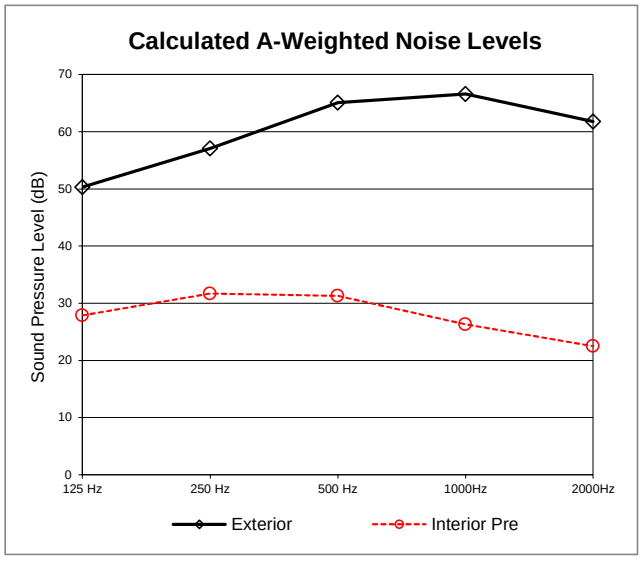


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Bedroom 3 Façade
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.0	56.0	56.0	57.4	55.1	61.5
Exterior Measurement (flush)	95.5	90.6	90.6	88.6	85.0	94.2
Exterior Adjusted	89.5	84.6	84.6	82.6	79.0	88.2
Interior Background	34.7	25.7	22.3	21.4	21.2	28.5
Interior Measurement	67.1	59.2	50.8	42.3	39.8	54.9
Interior Adjusted	67.1	59.2	50.8	42.3	39.7	54.9
Noise Reduction	**22.4**	**25.4**	**33.8**	**40.3**	**39.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.9	31.7	31.3	26.3	22.5	36.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.9 dB**

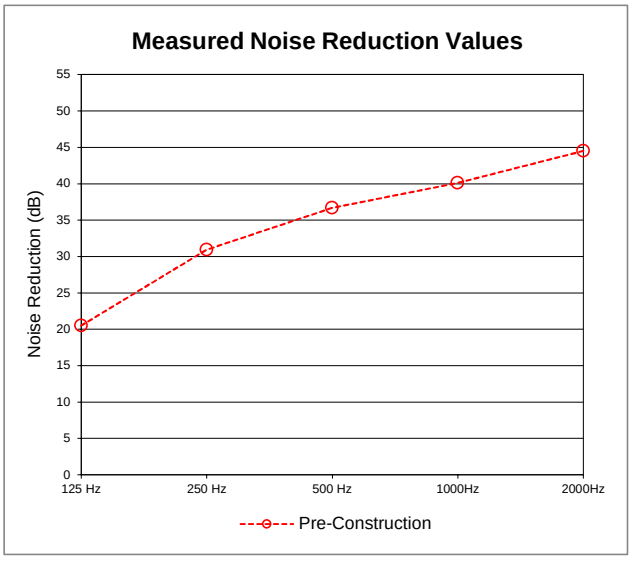


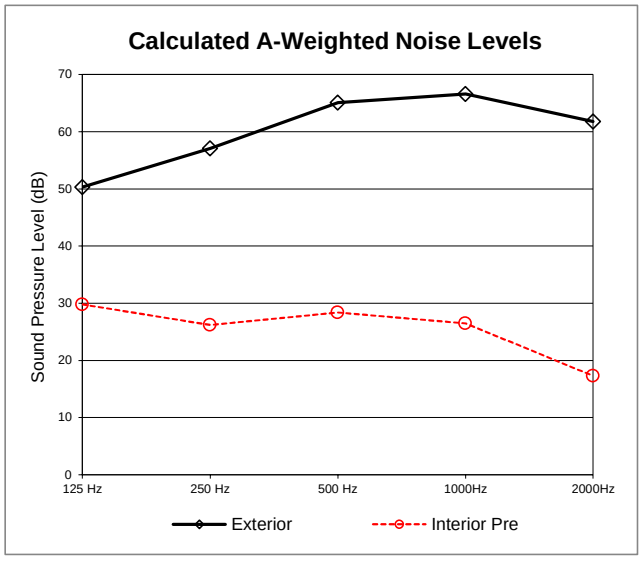


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Bedroom 4 Façade
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	48.2	46.3	51.0	55.6	48.2	57.1
Exterior Measurement (flush)	91.5	85.3	88.0	85.1	82.6	91.4
Exterior Adjusted	85.5	79.3	82.0	79.1	76.6	85.4
Interior Background	42.0	35.0	26.3	22.0	19.9	31.9
Interior Measurement	65.0	48.6	45.4	39.1	32.4	50.8
Interior Adjusted	65.0	48.4	45.3	39.0	32.1	50.7
Noise Reduction	**20.5**	**30.9**	**36.7**	**40.1**	**44.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.8	26.2	28.4	26.5	17.3	34.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.9 dB**

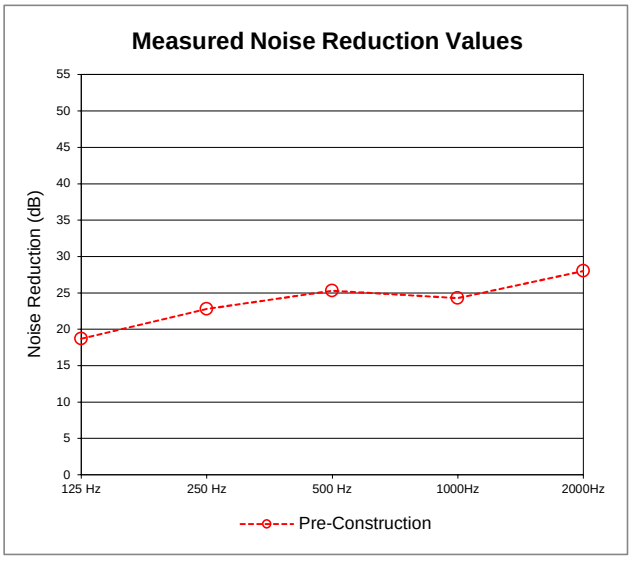


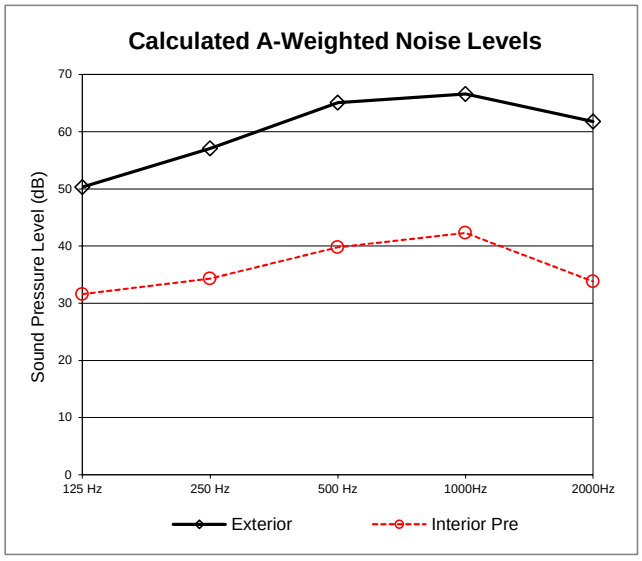


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Berihun	Tested Room:	Office Façade
Address:	13820 24th Ave S	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

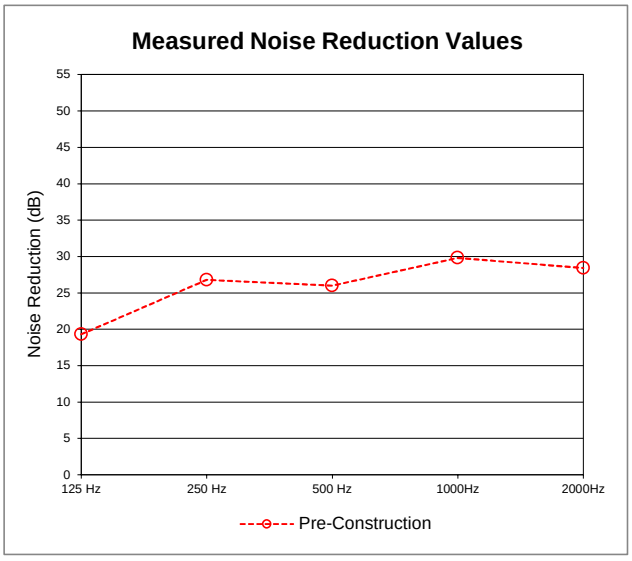
April 30, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.0	56.0	56.0	57.4	55.1	61.5
Exterior Measurement (flush)	90.4	90.0	91.9	88.6	86.0	95.2
Exterior Adjusted	84.4	84.0	85.9	82.6	80.0	89.2
Interior Background	34.0	34.4	34.9	30.0	26.4	35.8
Interior Measurement	65.7	61.2	60.6	58.3	52.0	63.0
Interior Adjusted	65.7	61.2	60.6	58.3	52.0	63.0
Noise Reduction	**18.7**	**22.8**	**25.3**	**24.3**	**28.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.6	34.3	39.8	42.3	33.8	45.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**24.8 dB**

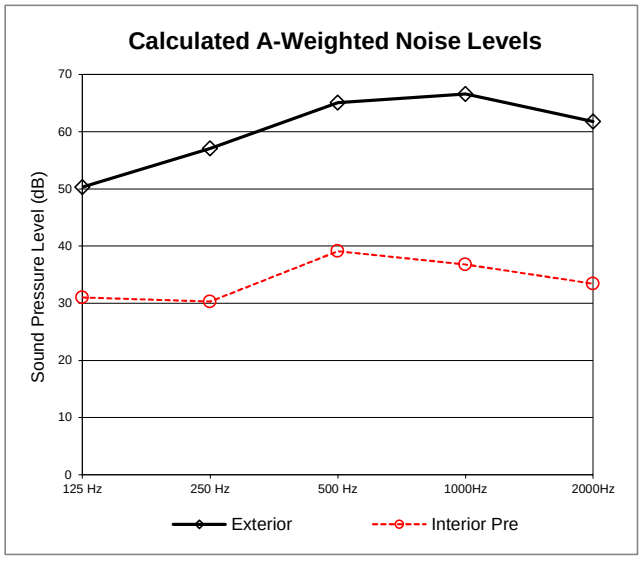




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Living / Dining Façade 1
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.6	51.4	47.8	46.8	37.2	50.8
Exterior Measurement	(flush)	104.0	100.6	100.5	96.5	92.3	102.9
Exterior Adjusted		98.0	94.6	94.5	90.5	86.3	96.9
Interior Background		41.8	33.2	30.8	29.2	21.8	33.8
Interior Measurement		77.7	66.8	67.5	59.7	56.9	68.4
Interior Adjusted	(roof)	78.7	67.8	68.5	60.7	57.9	69.4
Noise Reduction		**19.3**	**26.8**	**26.0**	**29.8**	**28.4**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		31.0	30.3	39.1	36.8	33.4	42.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**27.6 dB**

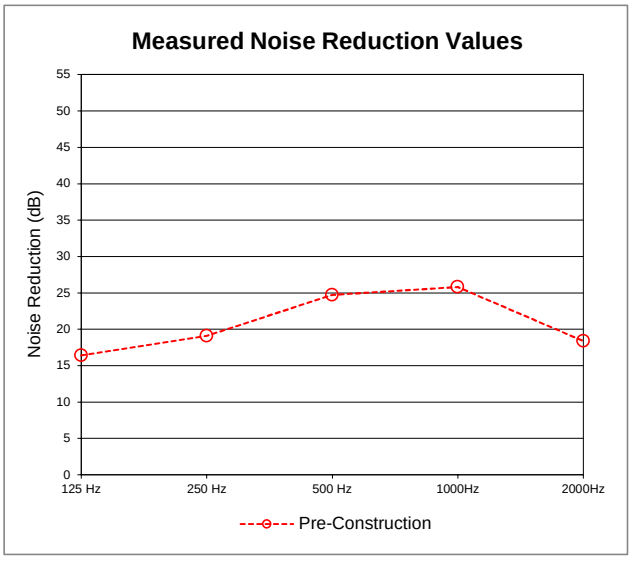


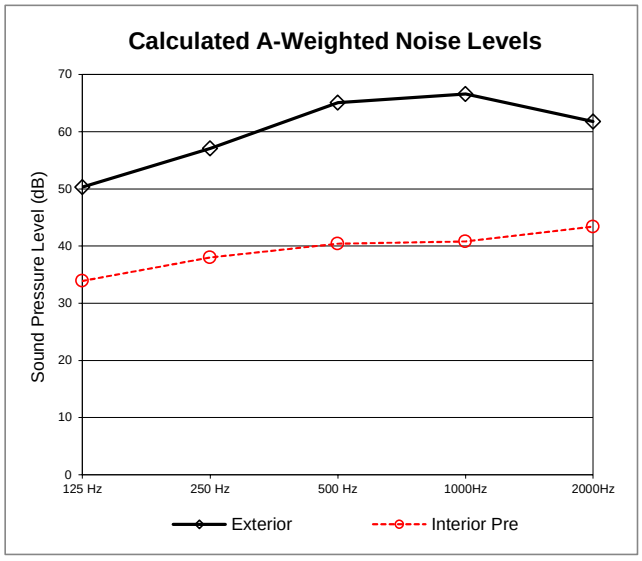


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Living / Dining Façade 2
Address:	10704 Country Club Ln	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

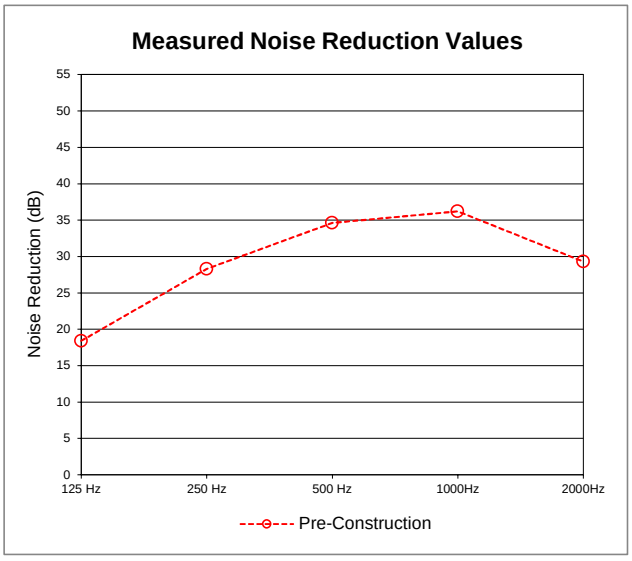
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.6	51.4	47.8	46.8	37.2	50.8
Exterior Measurement	(flush)	91.5	89.5	90.0	86.4	81.7	92.3
Exterior Adjusted		85.5	83.5	84.0	80.4	75.7	86.3
Interior Background		41.8	33.2	30.8	29.2	21.8	33.8
Interior Measurement		68.1	63.4	58.3	53.6	56.3	62.4
Interior Adjusted	(roof)	69.1	64.4	59.3	54.6	57.3	63.4
Noise Reduction		**16.4**	**19.1**	**24.7**	**25.8**	**18.4**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		33.9	38.0	40.4	40.8	43.4	47.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**22.7 dB**

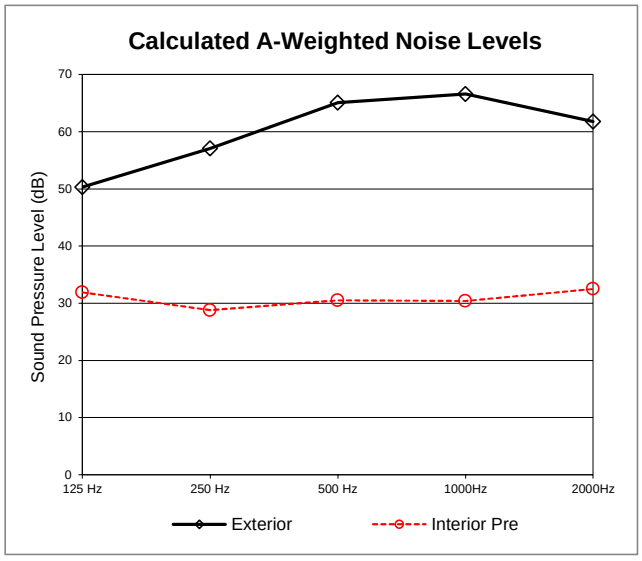




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Family Room Façade
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	0 of 1

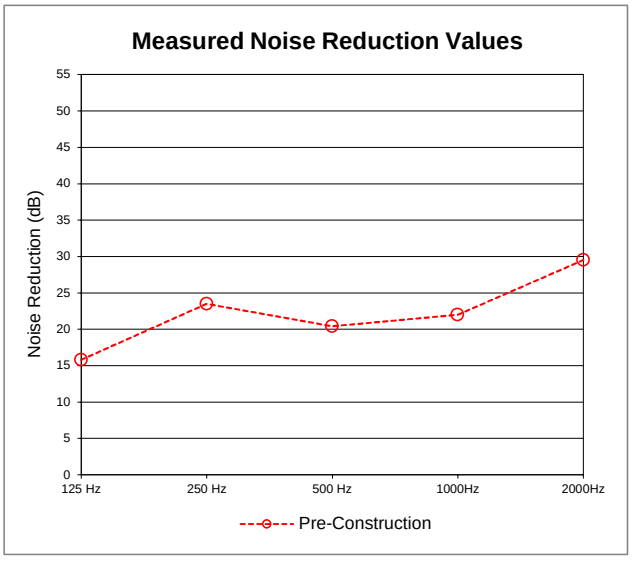
Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		51.3	45.6	45.1	45.3	35.8	48.0
Exterior Measurement	(flush)	94.2	88.3	87.6	85.5	80.7	91.2
Exterior Adjusted		88.2	82.3	81.6	79.5	74.7	85.2
Interior Background		37.4	32.5	30.6	25.2	23.2	33.5
Interior Measurement		69.8	54.0	47.1	43.4	45.4	55.4
Interior Adjusted		69.8	54.0	47.0	43.3	45.4	55.4
Noise Reduction		**18.4**	**28.3**	**34.6**	**36.2**	**29.3**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		31.9	28.8	30.5	30.4	32.5	38.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**32.0 dB**

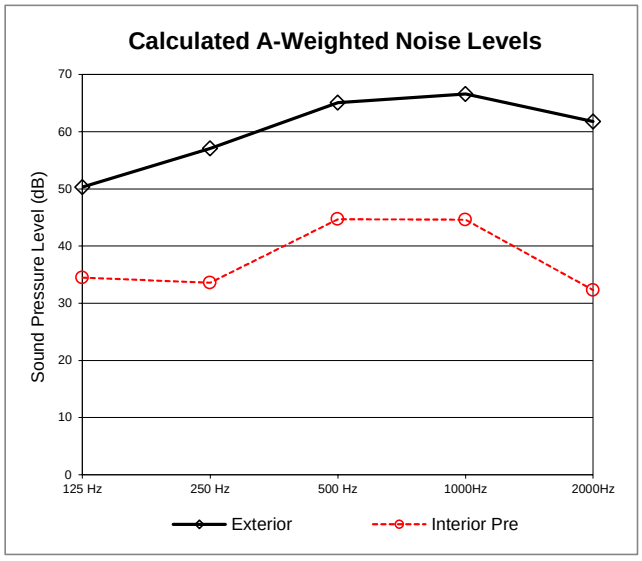




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Sitting / Kitchen Façade 1
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

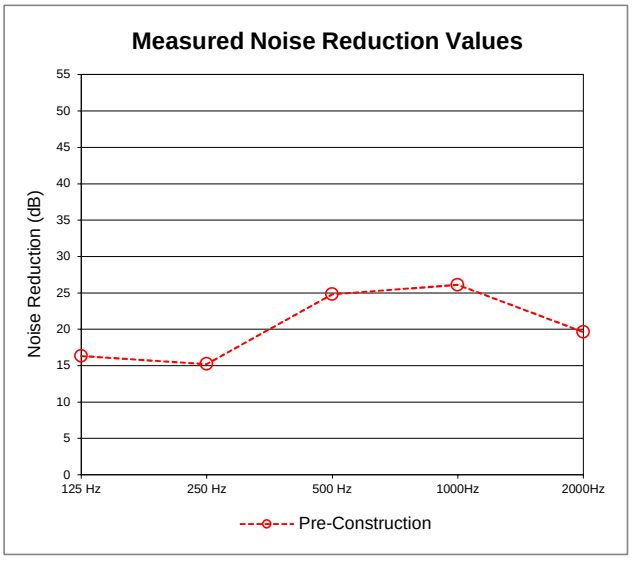
Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.6	51.4	47.8	46.8	37.2	50.8
Exterior Measurement	(flush)	99.8	98.8	99.1	95.4	90.3	101.1
Exterior Adjusted		93.8	92.8	93.1	89.4	84.3	95.1
Interior Background		38.7	26.9	21.4	21.4	22.7	32.0
Interior Measurement		77.0	68.3	71.7	66.4	53.8	71.9
Interior Adjusted	(roof)	78.0	69.3	72.7	67.4	54.8	72.9
Noise Reduction		**15.8**	**23.5**	**20.4**	**22.0**	**29.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		34.5	33.6	44.7	44.6	32.3	48.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**21.9 dB**

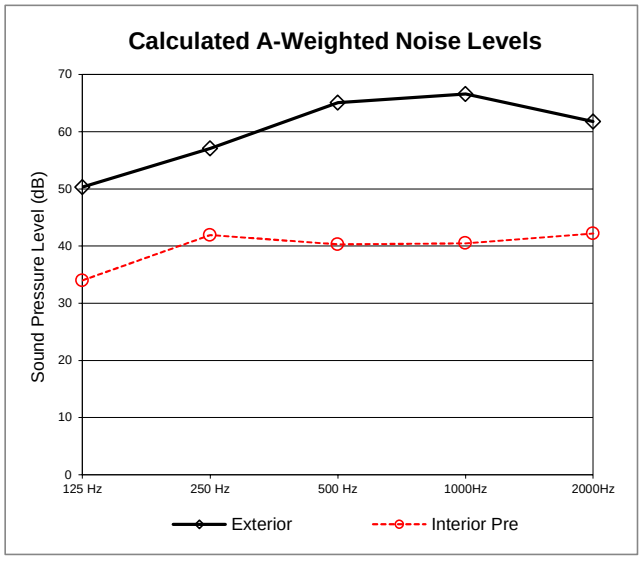




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Sitting / Kitchen Façade 2
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.6	51.4	47.8	46.8	37.2	50.8
Exterior Measurement	(flush)	88.4	84.5	86.0	83.9	81.0	90.0
Exterior Adjusted		82.4	78.5	80.0	77.9	75.0	84.0
Interior Background		38.7	26.9	21.4	21.4	22.7	32.0
Interior Measurement		65.1	62.3	54.2	50.8	54.4	60.0
Interior Adjusted	(roof)	66.1	63.3	55.2	51.8	55.4	61.0
Noise Reduction		**16.3**	**15.2**	**24.8**	**26.1**	**19.6**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		34.0	41.9	40.3	40.5	42.2	47.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**22.5 dB**

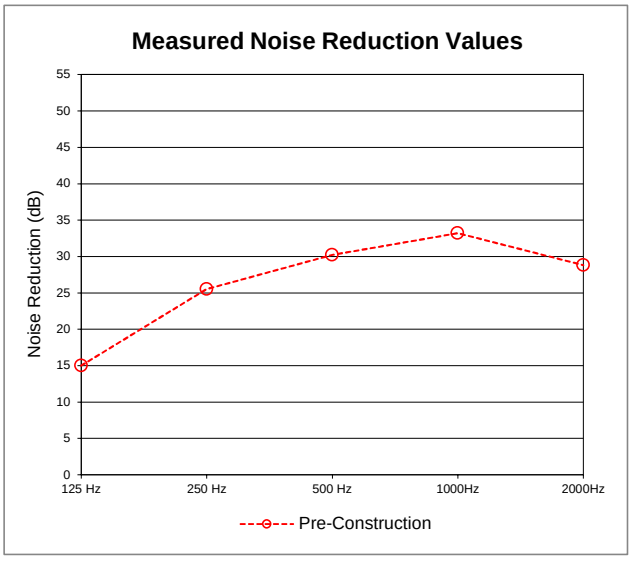


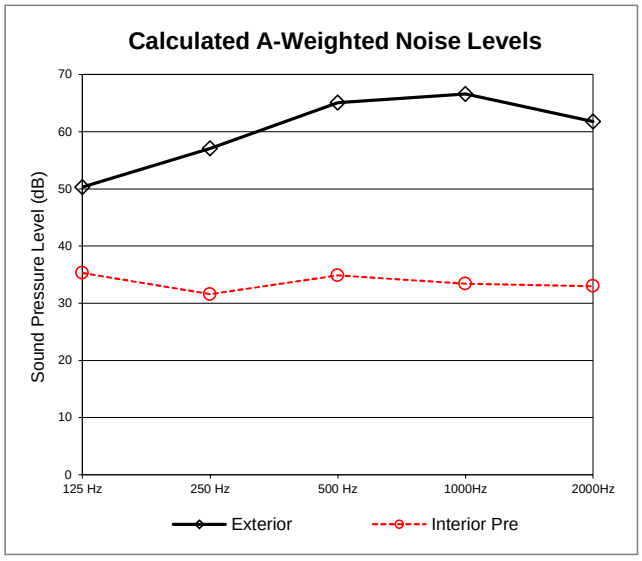


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Bedroom 1 Façade
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

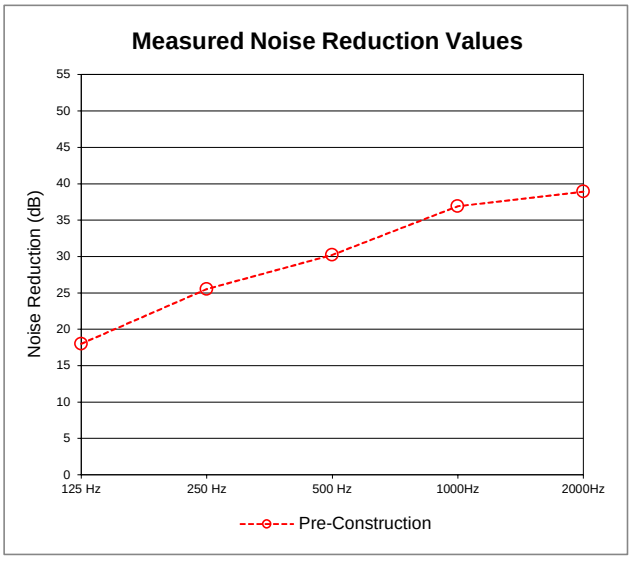
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		51.3	45.6	45.1	45.3	35.8	48.0
Exterior Measurement	(flush)	88.2	90.9	90.5	86.3	84.4	93.4
Exterior Adjusted		82.2	84.9	84.5	80.3	78.4	87.4
Interior Background		41.0	32.9	29.5	24.9	23.5	33.2
Interior Measurement		66.2	58.4	53.3	46.1	48.6	57.4
Interior Adjusted	(roof)	67.2	59.4	54.3	47.1	49.6	58.4
Noise Reduction		**15.0**	**25.5**	**30.2**	**33.2**	**28.8**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		35.3	31.6	34.9	33.4	33.0	40.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**29.2 dB**

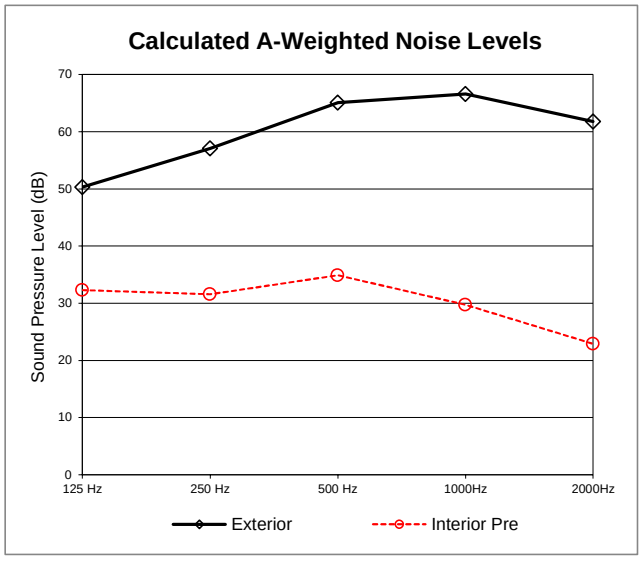




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Bedroom 2 Façade
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		54.7	49.3	47.9	45.6	38.0	49.8
Exterior Measurement	(flush)	98.5	97.7	97.9	95.2	93.5	101.7
Exterior Adjusted		92.5	91.7	91.9	89.2	87.5	95.7
Interior Background		30.6	27.4	22.0	20.2	18.3	27.1
Interior Measurement		73.5	65.2	60.7	51.3	47.6	62.3
Interior Adjusted	(roof)	74.5	66.2	61.7	52.3	48.6	63.3
Noise Reduction		**18.0**	**25.5**	**30.2**	**36.9**	**38.9**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		32.3	31.6	34.9	29.7	22.9	38.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**31.3 dB**

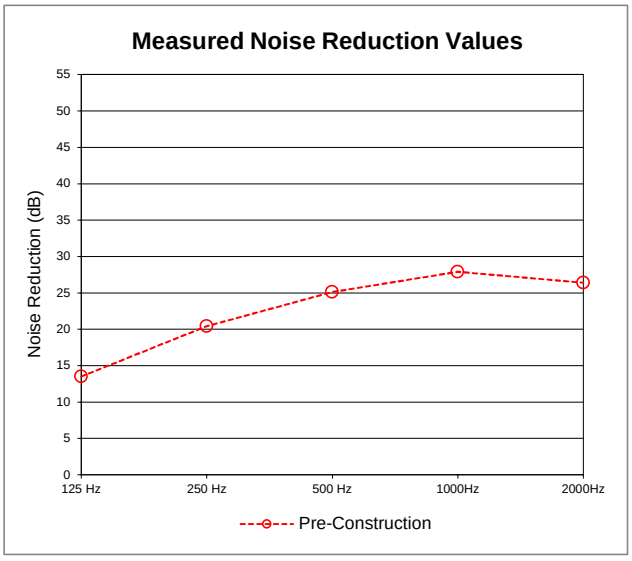


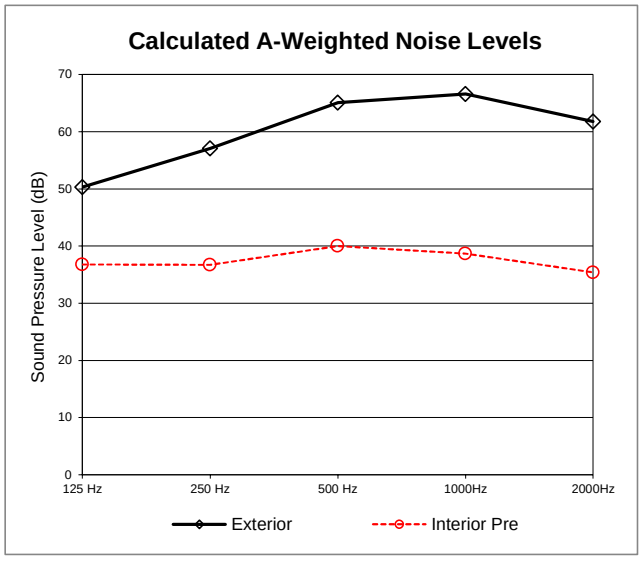


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Bedroom 3 Façade 1
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

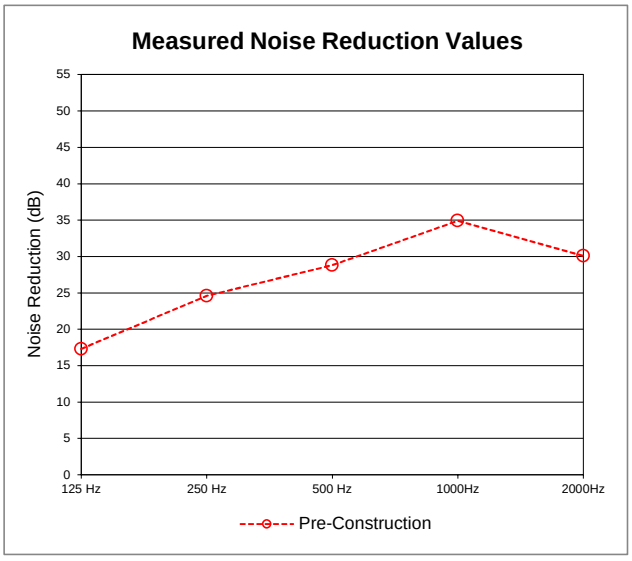
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		55.0	52.3	46.8	43.4	36.6	49.4
Exterior Measurement	(flush)	104.1	102.5	101.4	97.6	94.7	104.7
Exterior Adjusted		98.1	96.5	95.4	91.6	88.7	98.7
Interior Background		35.8	34.0	32.0	27.3	24.5	33.4
Interior Measurement		83.6	75.1	69.3	62.7	61.3	72.6
Interior Adjusted	(roof)	84.6	76.1	70.3	63.7	62.3	73.6
Noise Reduction		**13.5**	**20.4**	**25.1**	**27.9**	**26.4**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		36.8	36.7	40.0	38.7	35.4	44.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**25.2 dB**

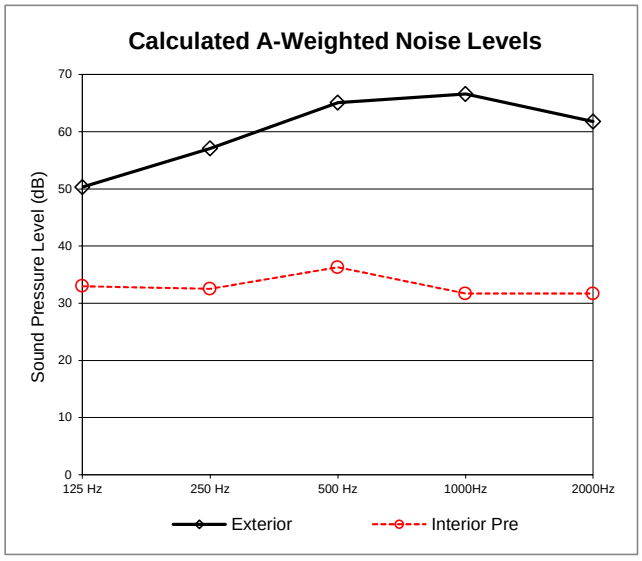




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Bedroom 3 Façade 2
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

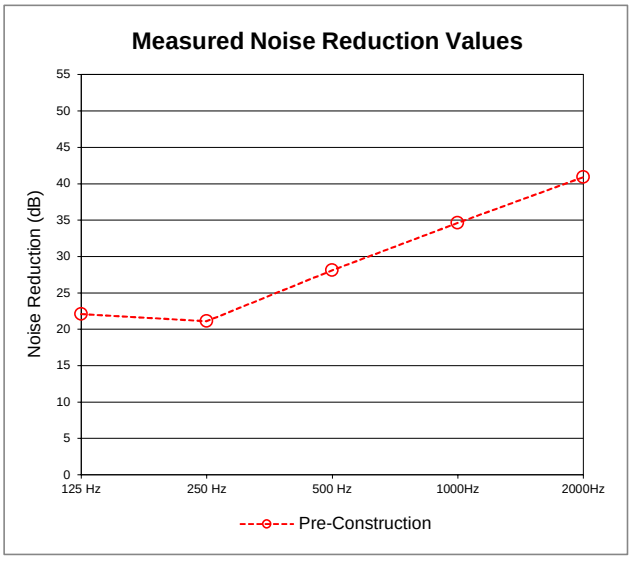
Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		55.0	52.3	46.8	43.4	36.6	49.4
Exterior Measurement	(flush)	101.1	100.3	100.5	97.1	94.0	103.2
Exterior Adjusted		95.1	94.3	94.5	91.1	88.0	97.2
Interior Background		35.8	34.0	32.0	27.3	24.5	33.4
Interior Measurement		76.8	68.7	64.7	55.2	56.9	66.9
Interior Adjusted	(roof)	77.8	69.7	65.7	56.2	57.9	67.9
Noise Reduction		**17.3**	**24.6**	**28.8**	**34.9**	**30.1**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		33.0	32.5	36.3	31.7	31.7	40.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**29.6 dB**

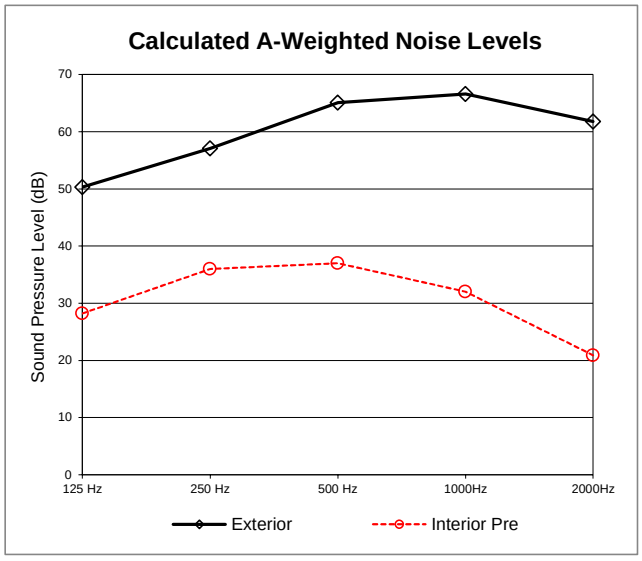




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Bedroom 4 Façade
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	0 of 1

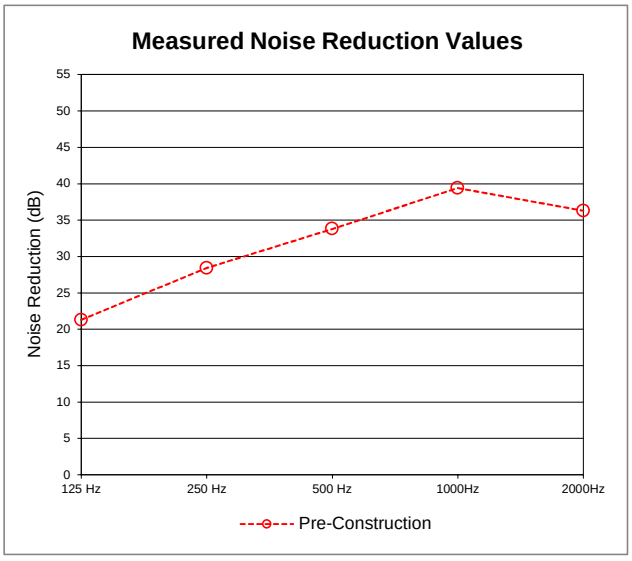
Pre-Construction Sound Pressure Levels (dB)						
May 6, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.0	52.3	46.8	43.4	36.6	49.4
Exterior Measurement (flush)	101.9	102.3	101.8	96.7	92.8	103.3
Exterior Adjusted	95.9	96.3	95.8	90.7	86.8	97.3
Interior Background	34.1	26.2	20.4	13.8	14.6	24.8
Interior Measurement	73.8	75.2	67.7	56.1	45.9	69.1
Interior Adjusted	73.8	75.2	67.7	56.1	45.9	69.1
Noise Reduction	**22.1**	**21.1**	**28.1**	**34.6**	**40.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.2	36.0	37.0	32.0	20.9	40.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.4 dB**

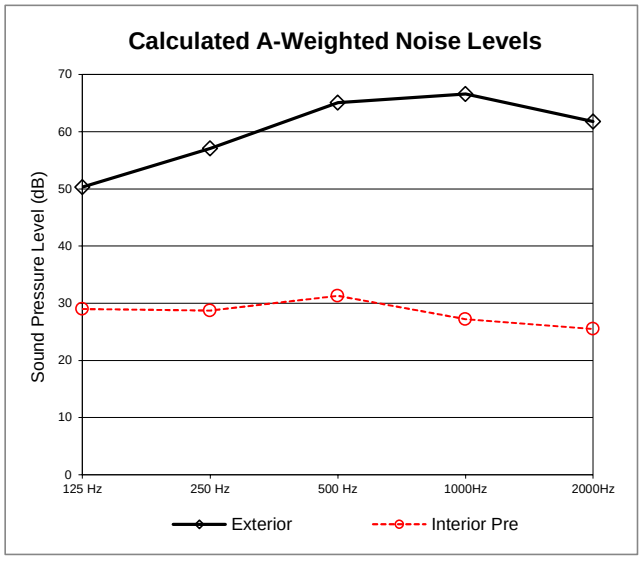




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Brogdon	Tested Room:	Office Façade
Address:	10704 Country Club Ln	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	0 of 1

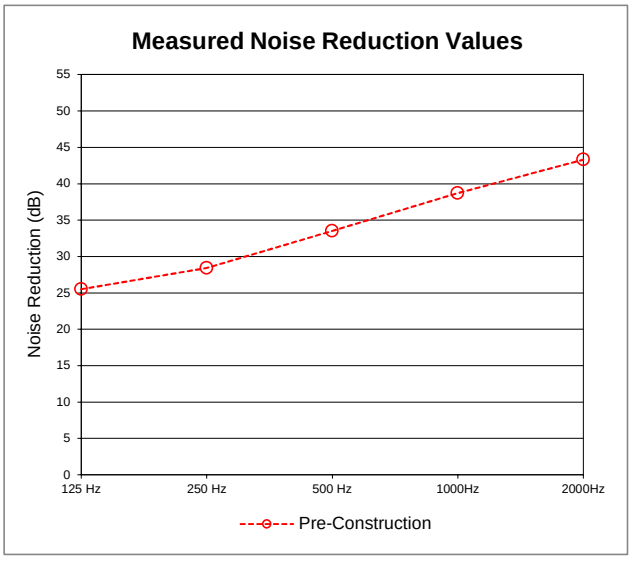
Pre-Construction Sound Pressure Levels (dB)							
May 6, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		51.3	45.6	45.1	45.3	35.8	48.0
Exterior Measurement	(flush)	100.7	100.2	100.5	95.8	91.7	102.0
Exterior Adjusted		94.7	94.2	94.5	89.8	85.7	96.0
Interior Background		38.6	32.4	31.9	26.4	21.6	32.6
Interior Measurement		73.4	65.8	60.7	50.4	49.4	62.7
Interior Adjusted		73.4	65.8	60.7	50.4	49.4	62.7
Noise Reduction		**21.3**	**28.4**	**33.8**	**39.4**	**36.3**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		29.0	28.7	31.3	27.2	25.5	35.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**34.2 dB**

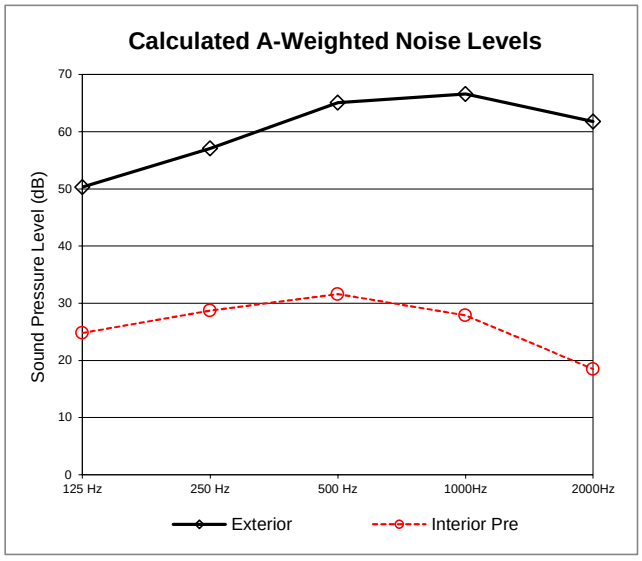




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Podelka	Tested Room:	Living Room Façade 1
Address:	11244 Glendale Way S	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

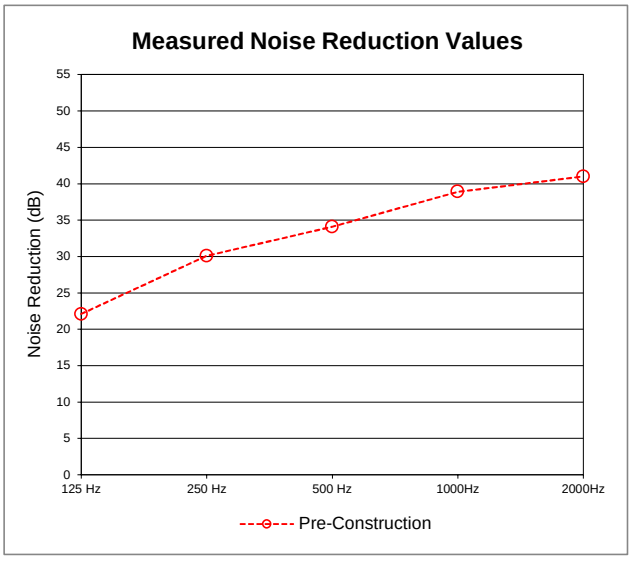
Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.7	62.7	56.9	48.2	42.0	58.3
Exterior Measurement (flush)	99.2	97.1	96.4	92.9	91.3	99.3
Exterior Adjusted	93.2	91.1	90.4	86.9	85.3	93.3
Interior Background	34.8	28.9	25.4	25.7	21.7	30.7
Interior Measurement	67.7	62.7	56.9	48.2	42.0	58.3
Interior Adjusted	67.7	62.7	56.9	48.2	42.0	58.3
Noise Reduction	**25.5**	**28.4**	**33.5**	**38.7**	**43.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	24.8	28.7	31.6	27.9	18.5	35.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.0 dB**

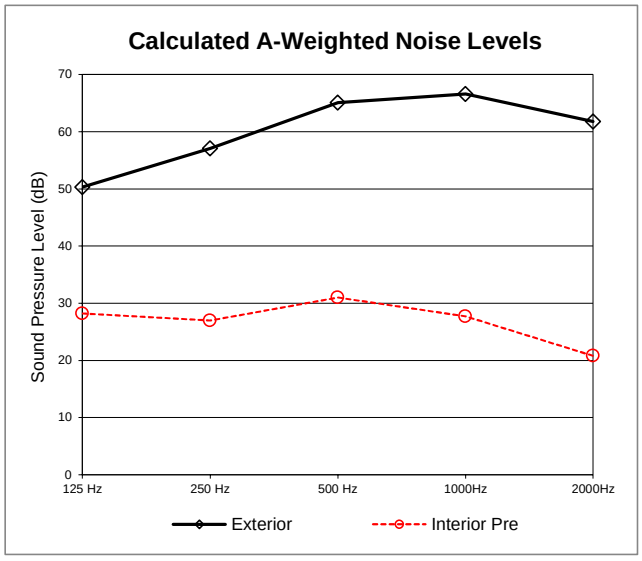




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Podelka	Tested Room:	Living Room Façade 2
Address:	11244 Glendale Way S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	64.2	62.3	61.4	57.9	46.5	62.0
Exterior Measurement (flush)	95.7	96.3	95.9	92.0	89.7	98.8
Exterior Adjusted	89.7	90.3	89.9	86.0	83.7	92.8
Interior Background	34.8	28.9	25.4	25.7	21.7	30.7
Interior Measurement	67.6	60.2	55.8	47.1	42.7	57.4
Interior Adjusted	67.6	60.2	55.8	47.1	42.7	57.4
Noise Reduction	**22.1**	**30.1**	**34.1**	**38.9**	**41.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.2	27.0	31.0	27.7	20.8	35.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.0 dB**

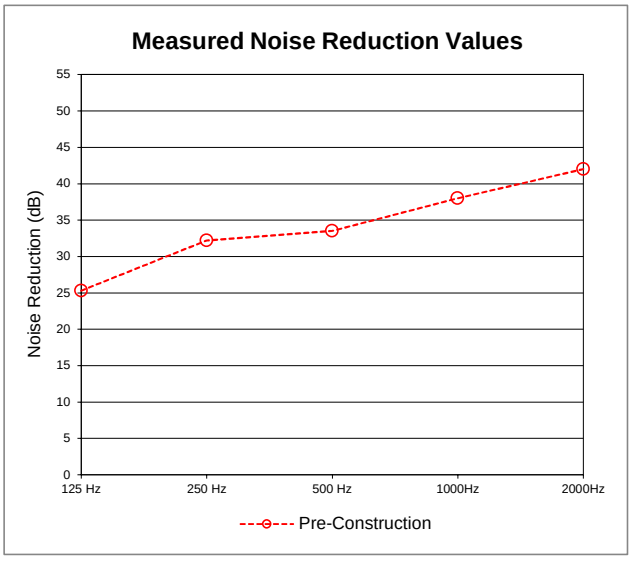


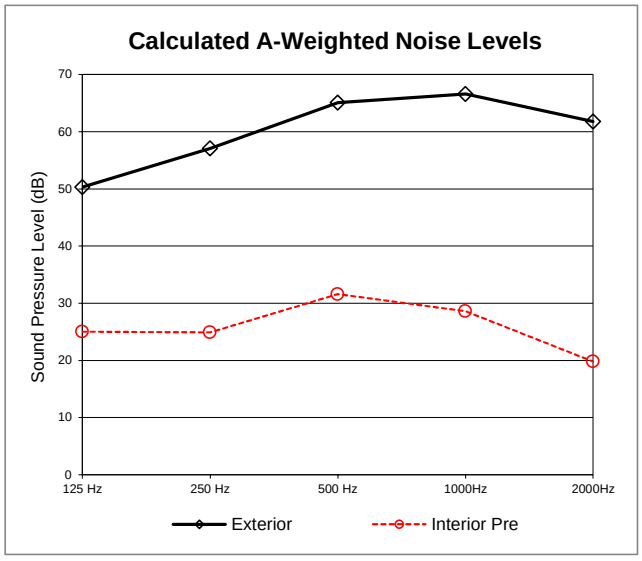


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Podelka	Tested Room:	Kitchen Façade 1
Address:	11244 Glendale Way S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.2	60.2	54.9	55.0	45.9	58.8
Exterior Measurement (flush)	109.6	106.9	104.9	101.6	97.1	107.9
Exterior Adjusted	103.6	100.9	98.9	95.6	91.1	101.9
Interior Background	45.9	37.9	31.9	27.6	25.7	35.8
Interior Measurement	78.3	68.7	65.4	57.6	49.1	67.0
Interior Adjusted	78.3	68.7	65.4	57.6	49.1	67.0
Noise Reduction	**25.3**	**32.2**	**33.5**	**38.0**	**42.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	25.0	24.9	31.6	28.6	19.8	34.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.4 dB**

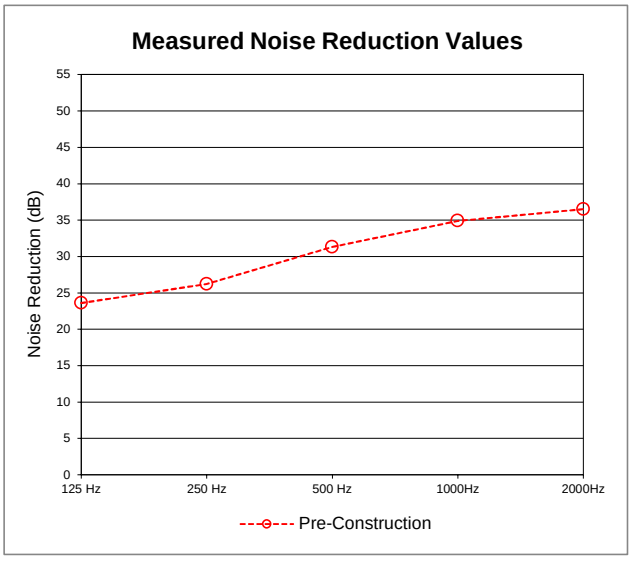


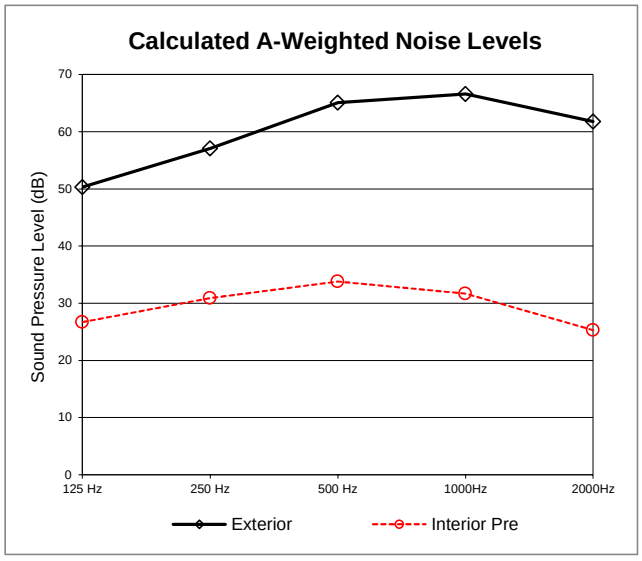


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Podelka	Tested Room:	Kitchen Façade 2
Address:	11244 Glendale Way S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

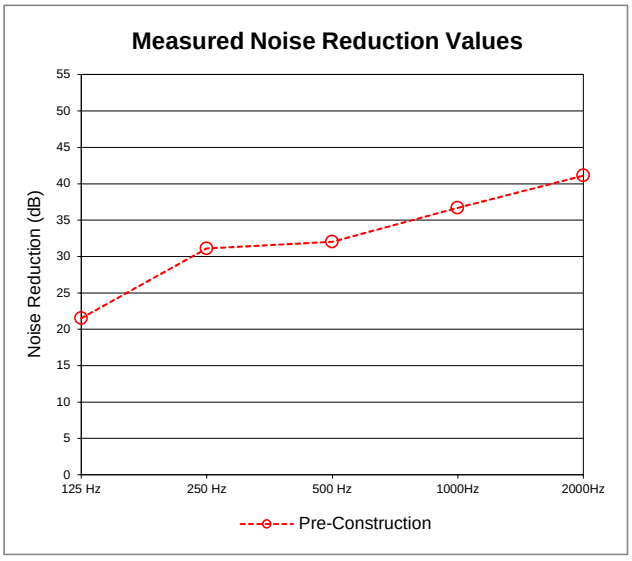
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	64.2	62.3	61.4	57.9	46.5	62.0
Exterior Measurement (flush)	96.1	94.2	94.4	90.9	88.4	97.4
Exterior Adjusted	90.1	88.2	88.4	84.9	82.4	91.4
Interior Background	45.9	37.9	31.9	27.6	25.7	35.8
Interior Measurement	66.5	62.0	57.1	50.0	45.9	58.7
Interior Adjusted	66.5	62.0	57.1	50.0	45.9	58.7
Noise Reduction	**23.6**	**26.2**	**31.3**	**34.9**	**36.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.7	30.9	33.8	31.7	25.3	37.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.3 dB**

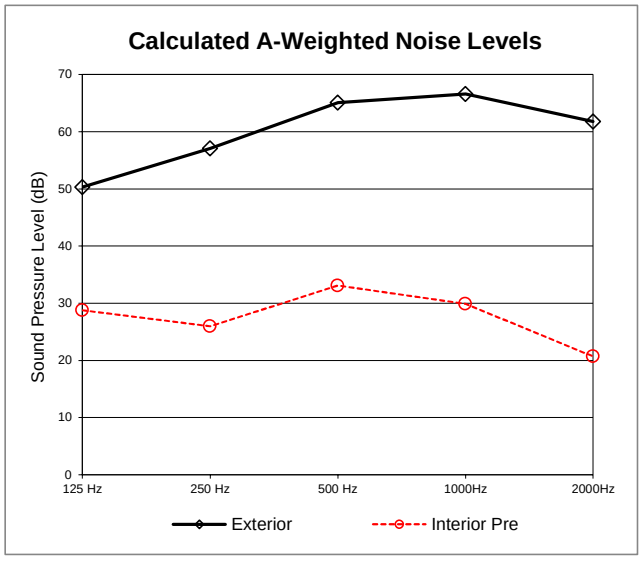




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Podelka	Tested Room:	Bedroom 1 Façade
Address:	11244 Glendale Way S	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

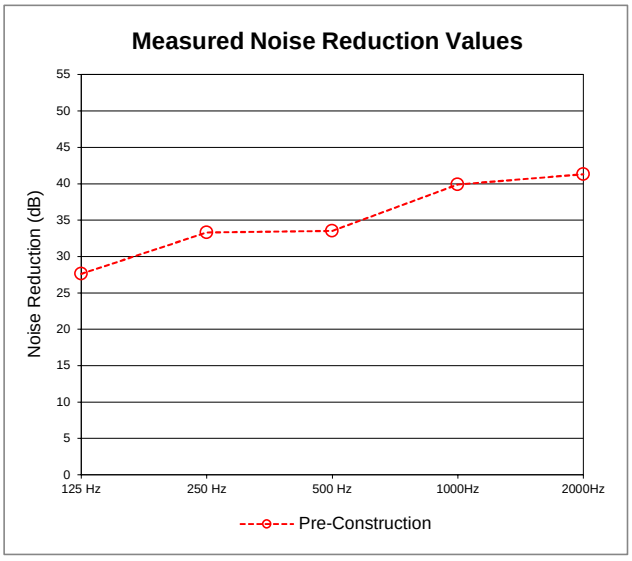
Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.5	56.7	56.4	58.3	49.2	60.3
Exterior Measurement (flush)	88.5	90.2	90.0	88.3	84.4	94.2
Exterior Adjusted	82.5	84.2	84.0	82.3	78.4	88.2
Interior Background	33.1	31.5	25.6	23.4	20.6	31.7
Interior Measurement	61.0	53.1	52.0	45.6	37.4	52.7
Interior Adjusted	61.0	53.1	52.0	45.6	37.3	52.7
Noise Reduction	**21.5**	**31.1**	**32.0**	**36.7**	**41.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.8	26.0	33.1	29.9	20.7	36.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.7 dB**

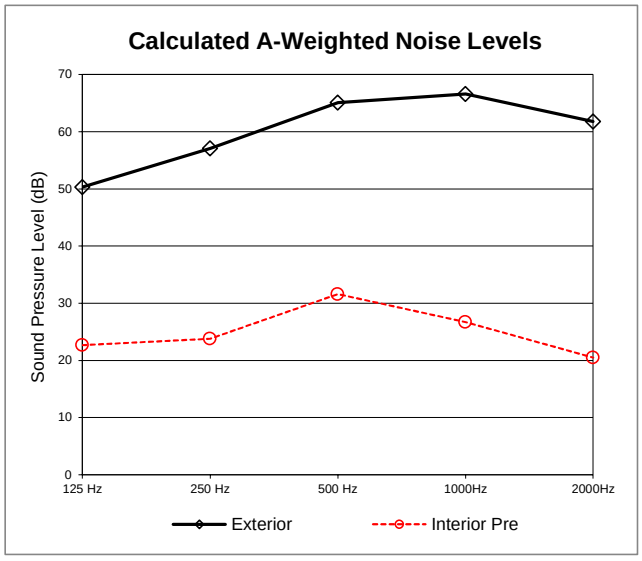




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Podelka	Tested Room:	Bedroom 2 Façade 1
Address:	11244 Glendale Way S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

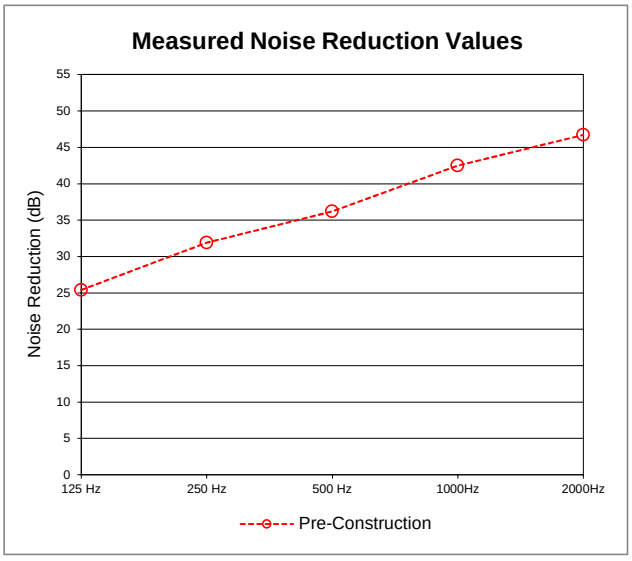
Pre-Construction Sound Pressure Levels (dB)							
April 29, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		54.5	56.7	56.4	58.3	49.2	60.3
Exterior Measurement	(flush)	105.3	103.5	102.6	98.3	96.0	105.2
Exterior Adjusted		99.3	97.5	96.6	92.3	90.0	99.2
Interior Background		28.9	24.5	22.5	23.1	22.5	29.8
Interior Measurement		71.7	64.2	63.1	52.4	48.7	62.9
Interior Adjusted		71.7	64.2	63.1	52.4	48.7	62.9
Noise Reduction		**27.6**	**33.3**	**33.5**	**39.9**	**41.3**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		22.7	23.8	31.6	26.7	20.5	33.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**36.1 dB**

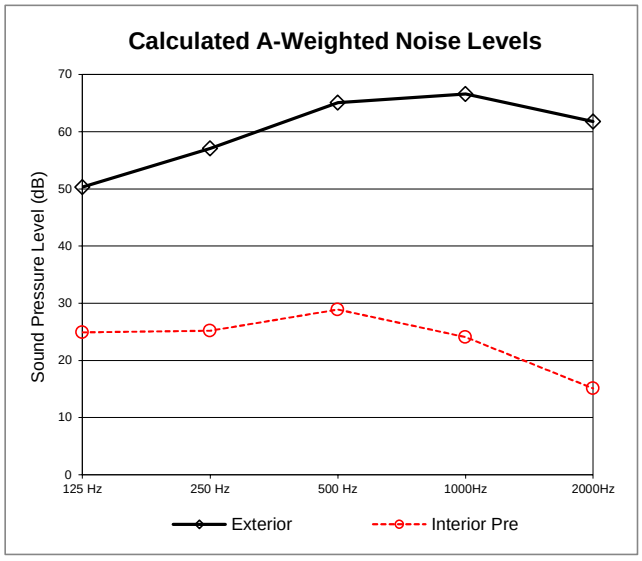




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Podelka	Tested Room:	Bedroom 2 Façade 2
Address:	11244 Glendale Way S	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
April 29, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		48.6	50.1	48.5	51.5	43.9	53.5
Exterior Measurement	(flush)	105.0	103.4	102.0	98.3	97.3	105.9
Exterior Adjusted		99.0	97.4	96.0	92.3	91.3	99.9
Interior Background		28.9	24.5	22.5	23.1	22.5	29.8
Interior Measurement		73.6	65.5	59.8	49.8	44.6	62.1
Interior Adjusted		73.6	65.5	59.8	49.8	44.6	62.1
Noise Reduction		**25.4**	**31.9**	**36.2**	**42.5**	**46.7**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		24.9	25.2	28.9	24.1	15.1	32.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**37.7 dB**



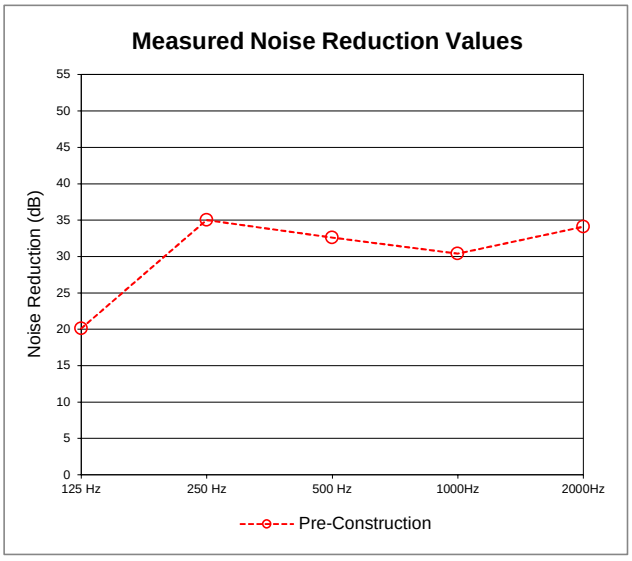


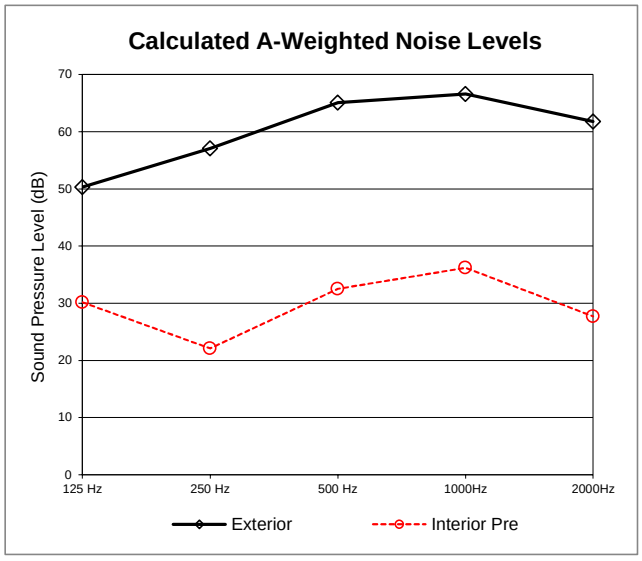
Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Hang & Cha	Tested Room:	Living Room Façade 1
Address:	1614 S 106th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 5, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		48.8	54.8	48.2	48.3	43.1	52.6
Exterior Measurement	(flush)	98.4	99.9	98.6	93.2	88.5	99.8
Exterior Adjusted		92.4	93.9	92.6	87.2	82.5	93.8
Interior Background		41.3	35.5	30.7	27.1	28.2	35.0
Interior Measurement		71.8	58.4	59.5	56.3	47.9	61.5
Interior Adjusted	(roof)	72.3	58.9	60.0	56.8	48.4	62.0
Noise Reduction		**20.1**	**35.0**	**32.6**	**30.4**	**34.1**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		30.2	22.1	32.5	36.2	27.7	38.9

Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum): 31.1 dB

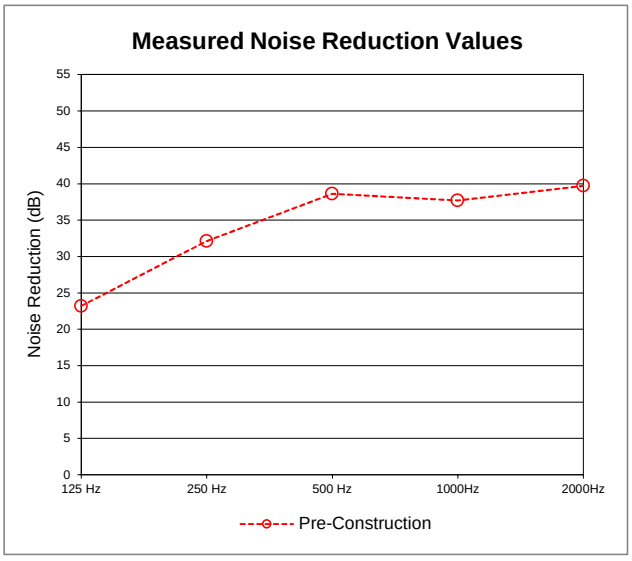


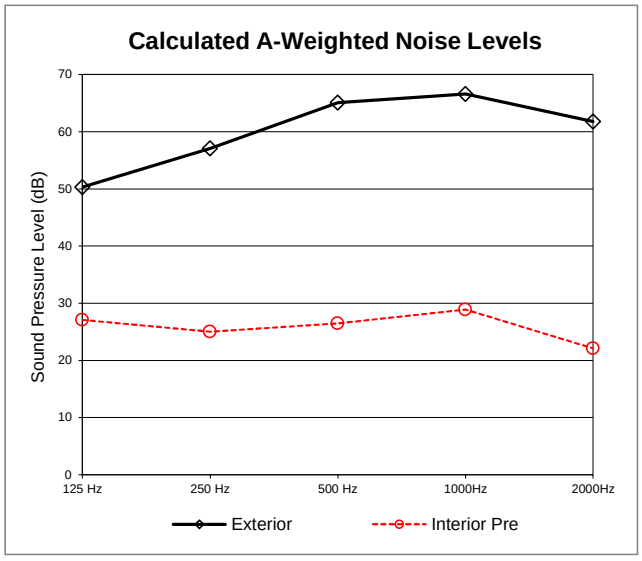


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Hang & Cha	Tested Room:	Living Room Façade 2
Address:	1614 S 106th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

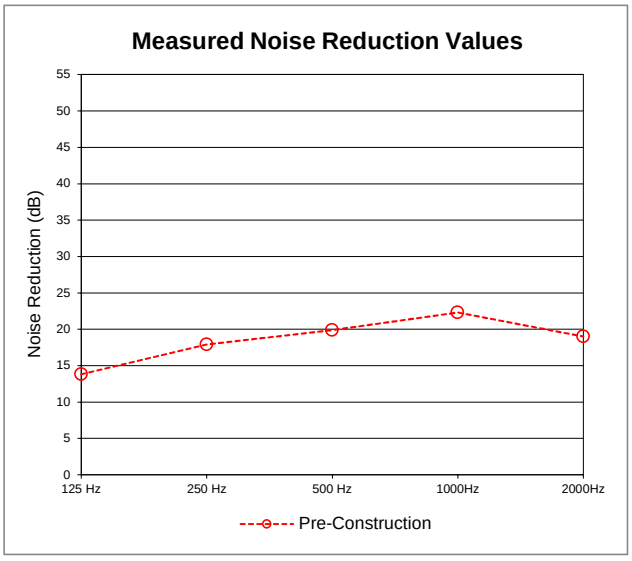
May 5, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		48.8	54.8	48.2	48.3	43.1	52.6
Exterior Measurement	(flush)	85.7	88.8	87.2	84.5	81.3	90.5
Exterior Adjusted		79.7	82.8	81.2	78.5	75.3	84.5
Interior Background		41.3	35.5	30.7	27.1	28.2	35.0
Interior Measurement		56.1	50.3	42.4	40.5	35.9	47.6
Interior Adjusted	(roof)	56.5	50.7	42.6	40.8	35.6	47.9
Noise Reduction		**23.2**	**32.1**	**38.6**	**37.7**	**39.7**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		27.1	25.0	26.5	28.9	22.1	33.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**36.5 dB**

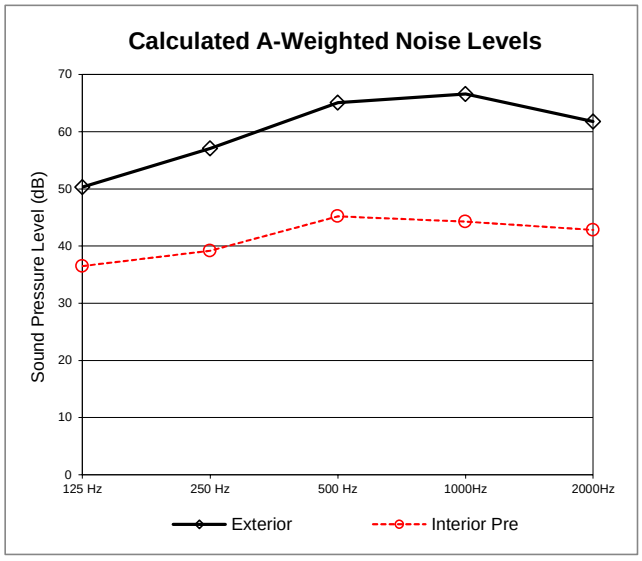




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Hang & Cha	Tested Room:	Dining / Kitchen Façade 1
Address:	1614 S 106th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

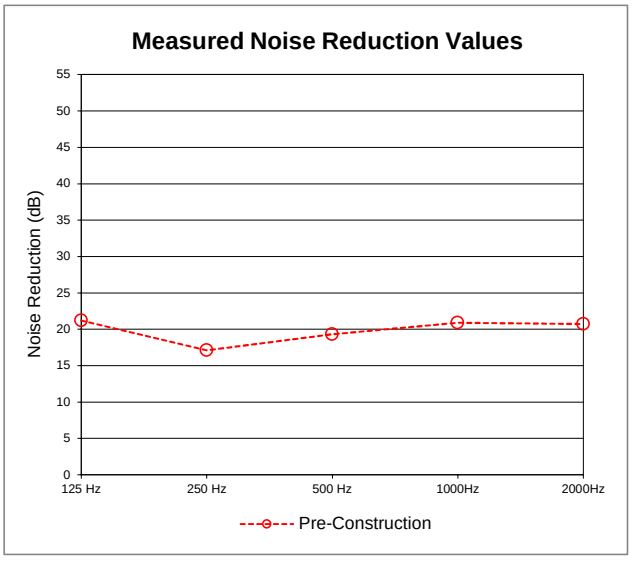
Pre-Construction Sound Pressure Levels (dB)							
May 5, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		57.2	50.5	48.2	45.0	40.0	50.2
Exterior Measurement	(flush)	99.1	97.1	98.2	93.8	89.9	99.8
Exterior Adjusted		93.1	91.1	92.2	87.8	83.9	93.8
Interior Background		42.5	31.7	27.6	30.0	26.0	34.1
Interior Measurement		78.8	72.7	71.8	65.0	64.4	73.5
Interior Adjusted	(roof)	79.3	73.2	72.3	65.5	64.9	74.0
Noise Reduction		**13.8**	**17.9**	**19.9**	**22.3**	**19.0**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		36.5	39.2	45.2	44.3	42.8	49.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**20.4 dB**

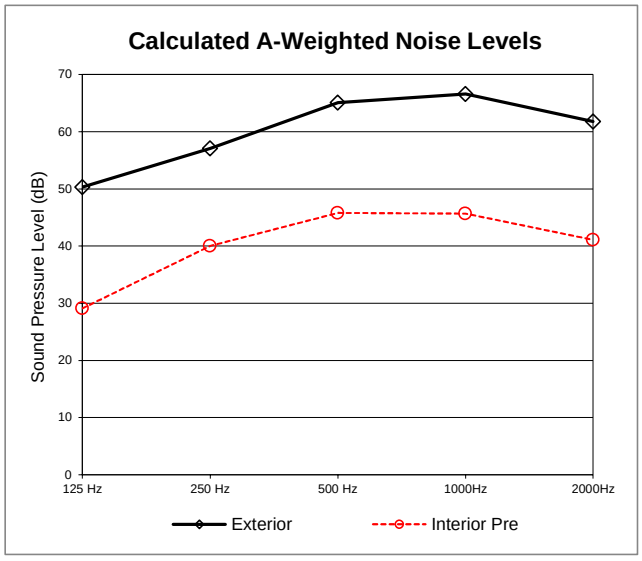




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Hang & Cha	Tested Room:	Dining / Kitchen Façade 2
Address:	1614 S 106th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

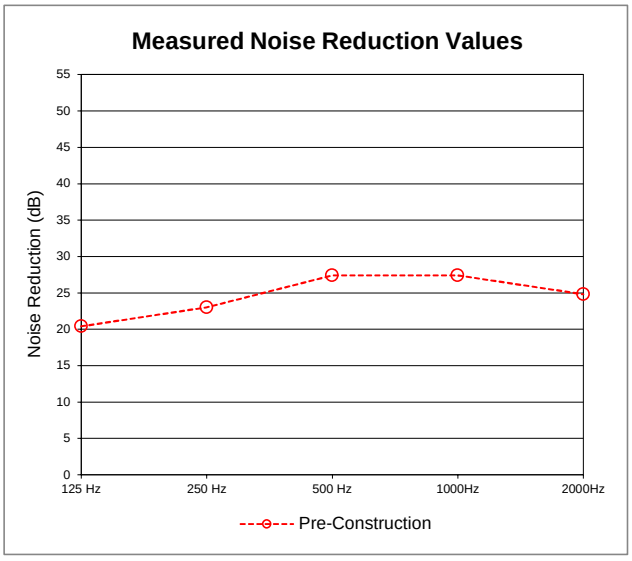
Pre-Construction Sound Pressure Levels (dB)							
May 5, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		57.2	50.5	48.2	45.0	40.0	50.2
Exterior Measurement	(flush)	92.8	92.9	93.5	91.1	86.7	96.2
Exterior Adjusted		86.8	86.9	87.5	85.1	80.7	90.2
Interior Background		42.5	31.7	27.6	30.0	26.0	34.1
Interior Measurement		65.1	69.3	67.7	63.7	59.5	70.7
Interior Adjusted	(roof)	65.6	69.8	68.2	64.2	60.0	71.2
Noise Reduction		**21.2**	**17.1**	**19.3**	**20.9**	**20.7**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		29.1	40.0	45.8	45.7	41.1	50.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**20.0 dB**

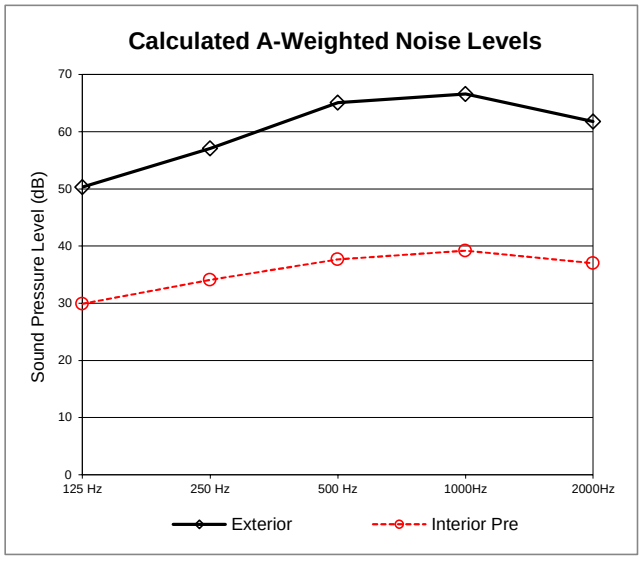




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Hang & Cha	Tested Room:	Bedroom 1 Façade 1
Address:	1614 S 106th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

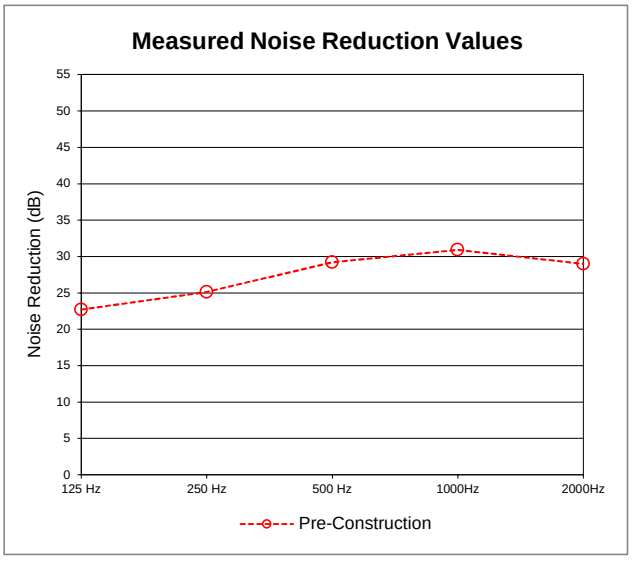
Pre-Construction Sound Pressure Levels (dB)							
May 5, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		55.5	50.4	51.8	47.2	42.0	52.3
Exterior Measurement	(flush)	89.1	85.2	87.8	83.4	79.9	89.3
Exterior Adjusted		83.1	79.2	81.8	77.4	73.9	83.3
Interior Background		41.3	35.5	30.7	27.1	28.2	35.0
Interior Measurement		62.2	55.7	53.9	49.5	48.6	56.1
Interior Adjusted	(roof)	62.7	56.2	54.4	50.0	49.1	56.6
Noise Reduction		**20.4**	**23.0**	**27.4**	**27.4**	**24.8**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		29.9	34.1	37.7	39.2	37.0	43.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**26.4 dB**

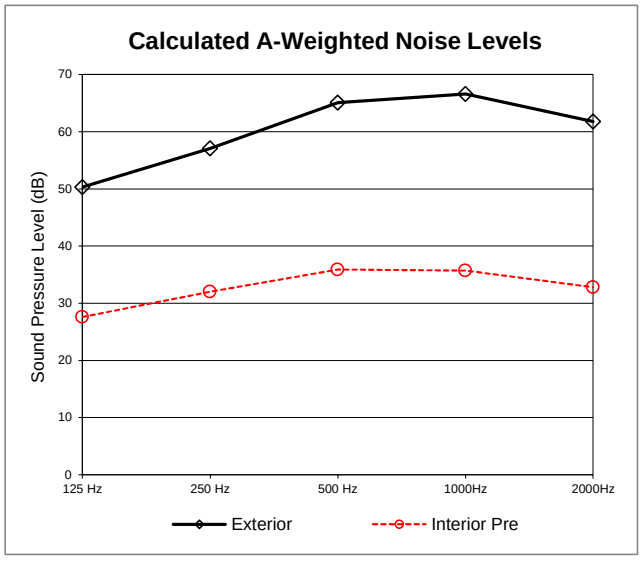




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Hang & Cha	Tested Room:	Bedroom 1 Façade 2
Address:	1614 S 106th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

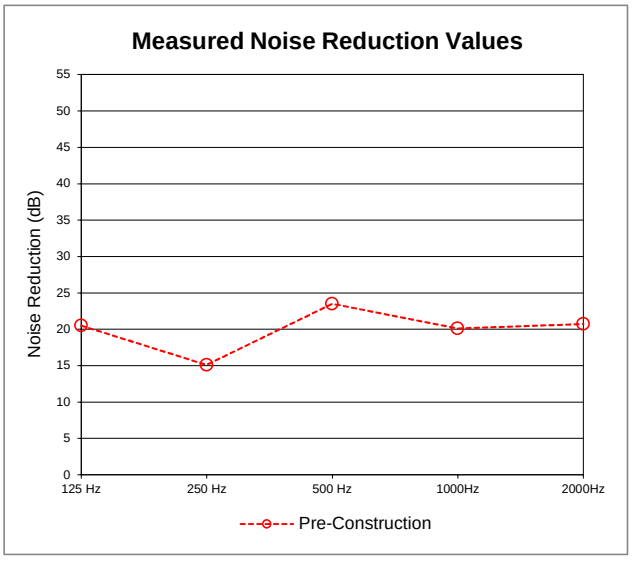
Pre-Construction Sound Pressure Levels (dB)							
May 5, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		55.5	50.4	51.8	47.2	42.0	52.3
Exterior Measurement	(flush)	100.0	96.8	96.7	93.8	89.9	99.1
Exterior Adjusted		94.0	90.8	90.7	87.8	83.9	93.1
Interior Background		41.3	35.5	30.7	27.1	28.2	35.0
Interior Measurement		70.8	65.2	61.0	56.4	54.4	63.5
Interior Adjusted	(roof)	71.3	65.7	61.5	56.9	54.9	64.0
Noise Reduction		**22.7**	**25.1**	**29.2**	**30.9**	**29.0**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		27.6	32.0	35.9	35.7	32.8	40.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**29.3 dB**

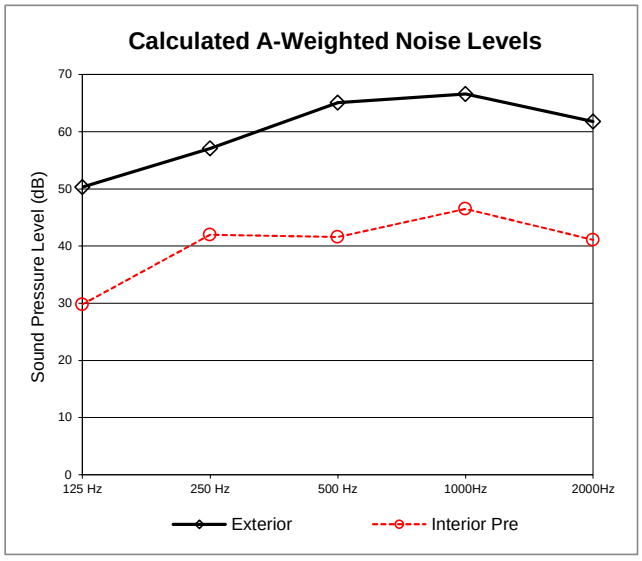




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Hang & Cha	Tested Room:	Bedroom 2 Façade
Address:	1614 S 106th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

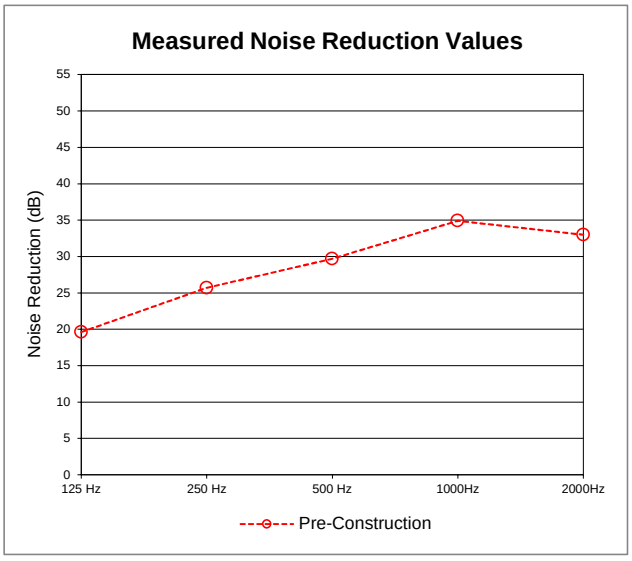
Pre-Construction Sound Pressure Levels (dB)							
May 5, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		62.2	57.0	49.4	43.8	39.0	52.8
Exterior Measurement	(flush)	89.2	86.8	88.0	85.1	82.9	91.2
Exterior Adjusted		83.2	80.8	82.0	79.1	76.9	85.2
Interior Background		35.5	30.0	33.2	28.4	22.6	33.4
Interior Measurement		62.2	65.2	58.0	58.5	55.7	63.0
Interior Adjusted	(roof)	62.7	65.7	58.5	59.0	56.2	63.5
Noise Reduction		**20.5**	**15.1**	**23.5**	**20.1**	**20.7**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		29.8	42.0	41.6	46.5	41.1	49.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**20.5 dB**

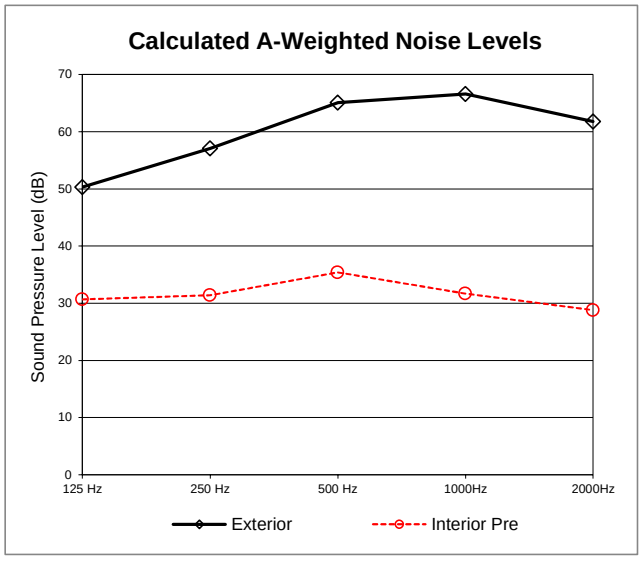




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Qamar	Tested Room:	Living Room Façade
Address:	1606 S 107th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

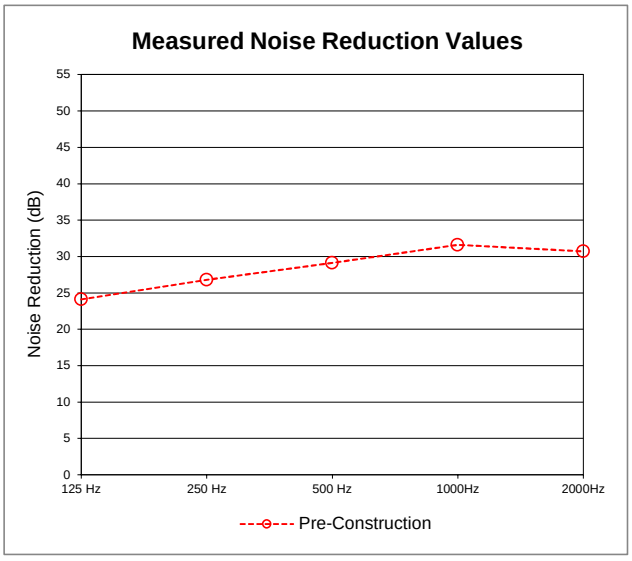
Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	51.8	45.6	43.9	43.4	32.7	46.7
Exterior Measurement (flush)	83.6	88.2	86.0	85.0	83.7	90.4
Exterior Adjusted	77.6	82.2	80.0	79.0	77.7	84.4
Interior Background	37.4	30.9	23.5	17.3	16.5	28.1
Interior Measurement	58.0	56.5	50.3	44.1	44.7	53.4
Interior Adjusted	58.0	56.5	50.3	44.1	44.7	53.4
Noise Reduction	**19.6**	**25.7**	**29.7**	**34.9**	**33.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.7	31.4	35.4	31.7	28.8	39.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.8 dB**

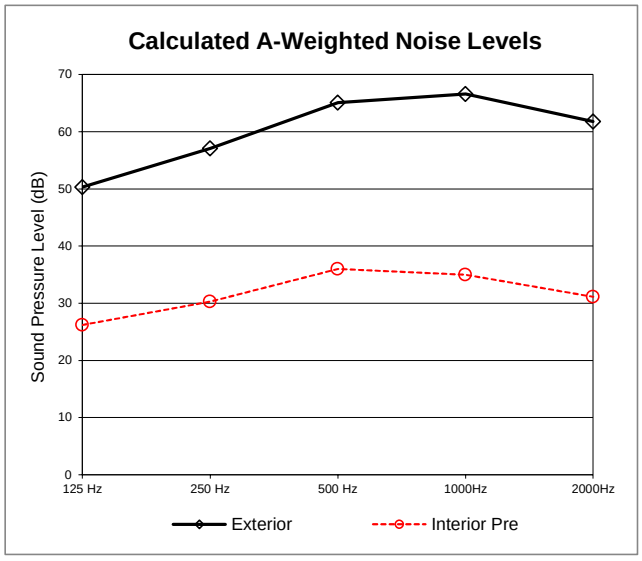




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Qamar	Tested Room:	Kitchen Façade
Address:	1606 S 107th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.7	50.9	47.1	45.0	39.5	50.3
Exterior Measurement (flush)	93.0	92.3	93.2	89.5	86.4	95.3
Exterior Adjusted	87.0	86.3	87.2	83.5	80.4	89.3
Interior Background	39.6	35.6	30.0	25.8	22.8	32.9
Interior Measurement	62.9	59.5	58.1	51.9	49.7	60.1
Interior Adjusted	62.9	59.5	58.1	51.9	49.7	60.1
Noise Reduction	**24.1**	**26.8**	**29.1**	**31.6**	**30.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.2	30.3	36.0	35.0	31.1	40.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.0 dB**

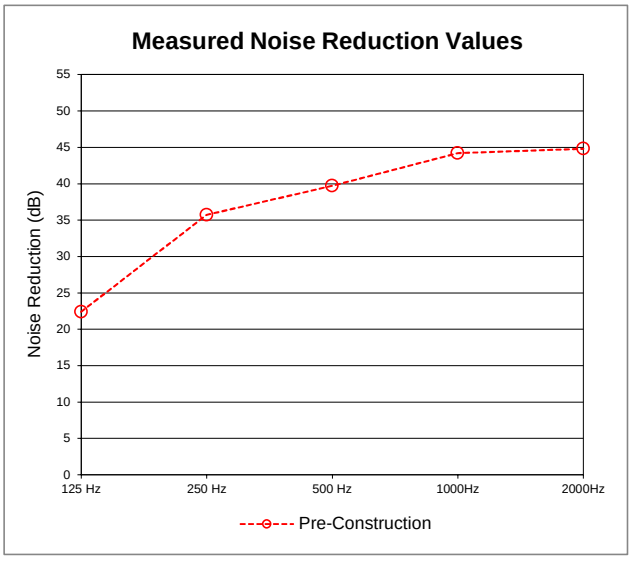


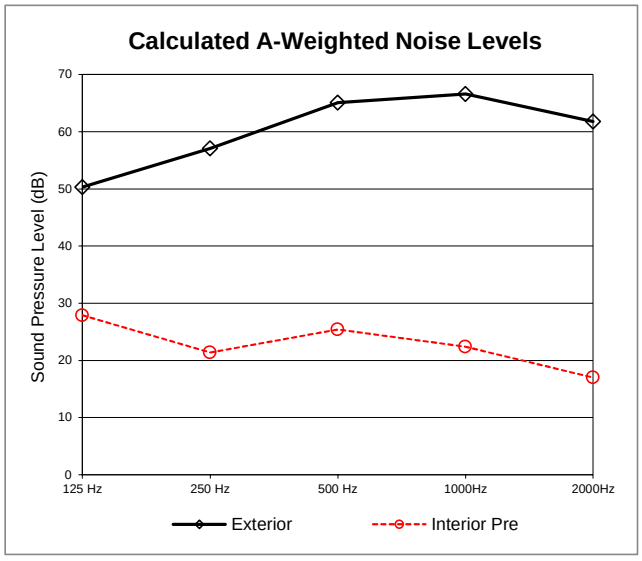


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Qamar	Tested Room:	Bedroom 1 Façade
Address:	1606 S 107th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.7	50.9	47.1	45.0	39.5	50.3
Exterior Measurement (flush)	90.5	95.3	95.3	93.3	87.1	97.7
Exterior Adjusted	84.5	89.3	89.3	87.3	81.1	91.7
Interior Background	31.7	29.6	23.6	17.0	17.9	27.2
Interior Measurement	62.1	53.6	49.6	43.1	36.4	51.5
Interior Adjusted	62.1	53.6	49.6	43.1	36.3	51.5
Noise Reduction	**22.4**	**35.7**	**39.7**	**44.2**	**44.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.9	21.4	25.4	22.4	17.0	31.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.8 dB**

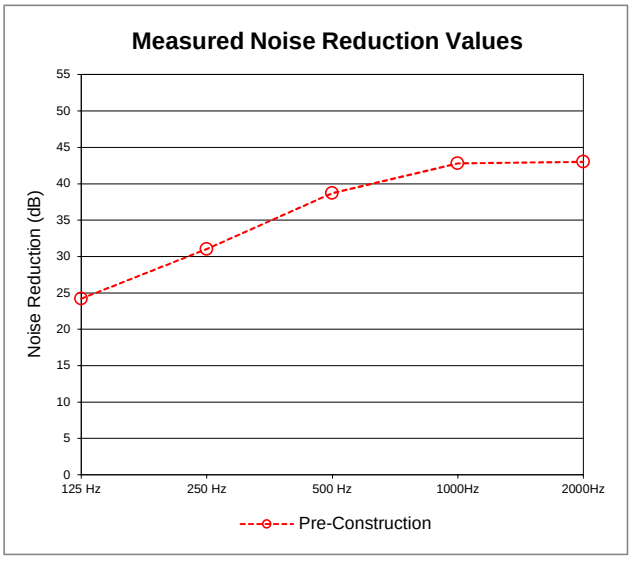


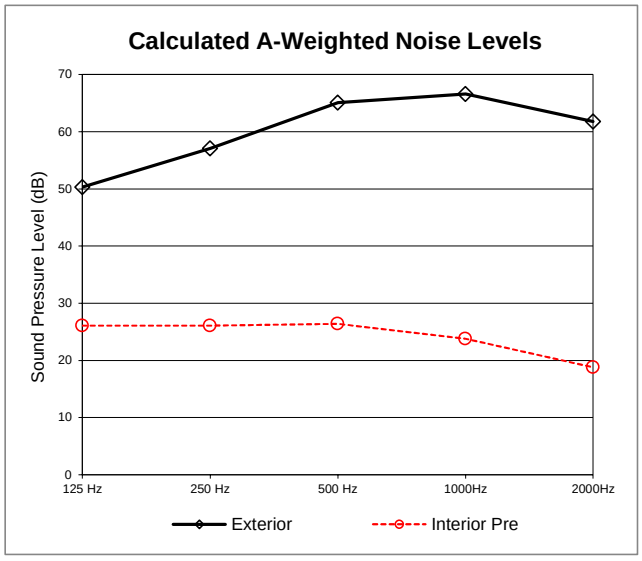


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Qamar	Tested Room:	Bedroom 2 Façade
Address:	1606 S 107th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	51.8	45.6	43.9	43.4	32.7	46.7
Exterior Measurement (flush)	89.9	93.1	93.4	90.2	86.3	96.0
Exterior Adjusted	83.9	87.1	87.4	84.2	80.3	90.0
Interior Background	36.4	27.3	20.9	18.8	20.3	28.8
Interior Measurement	59.7	56.1	48.7	41.4	37.4	51.5
Interior Adjusted	59.7	56.1	48.7	41.4	37.3	51.5
Noise Reduction	**24.2**	**31.0**	**38.7**	**42.8**	**43.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.1	26.1	26.4	23.8	18.8	32.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.0 dB**

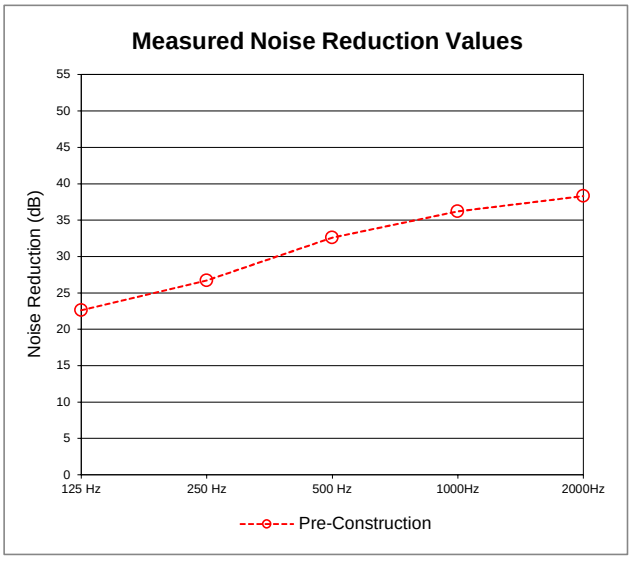


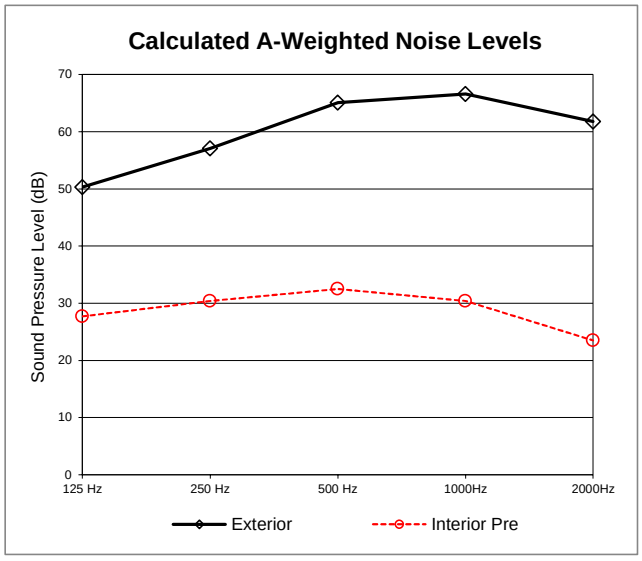


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Qamar	Tested Room:	Bedroom 3 Façade
Address:	1606 S 107th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

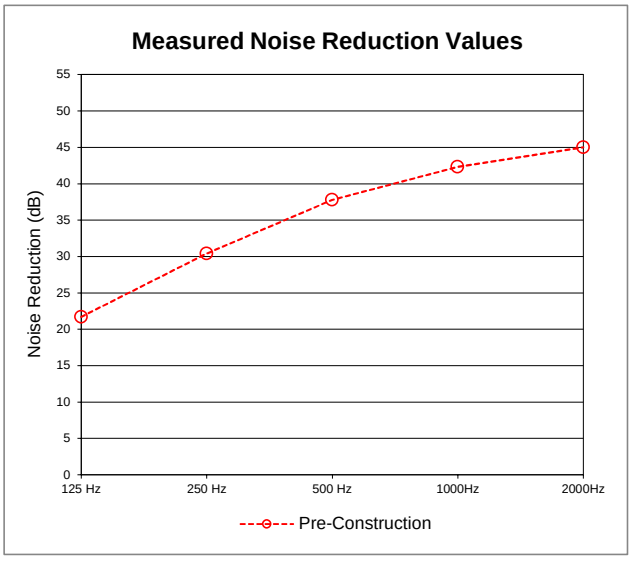
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	51.8	45.6	43.9	43.4	32.7	46.7
Exterior Measurement (flush)	93.6	93.4	93.6	91.3	87.7	96.9
Exterior Adjusted	87.6	87.4	87.6	85.3	81.7	90.9
Interior Background	25.5	21.4	18.8	14.8	15.3	24.0
Interior Measurement	65.0	60.7	55.0	49.1	43.4	57.0
Interior Adjusted	65.0	60.7	55.0	49.1	43.4	57.0
Noise Reduction	**22.6**	**26.7**	**32.6**	**36.2**	**38.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.7	30.4	32.5	30.4	23.5	36.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.2 dB**

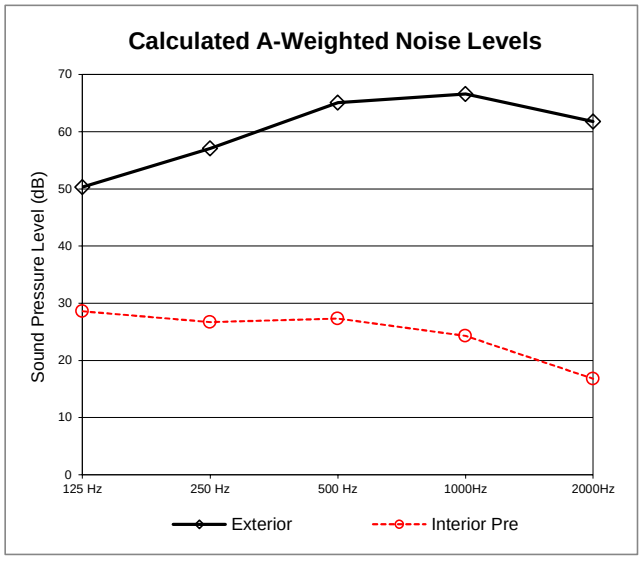




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Qamar	Tested Room:	Office Façade
Address:	1606 S 107th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

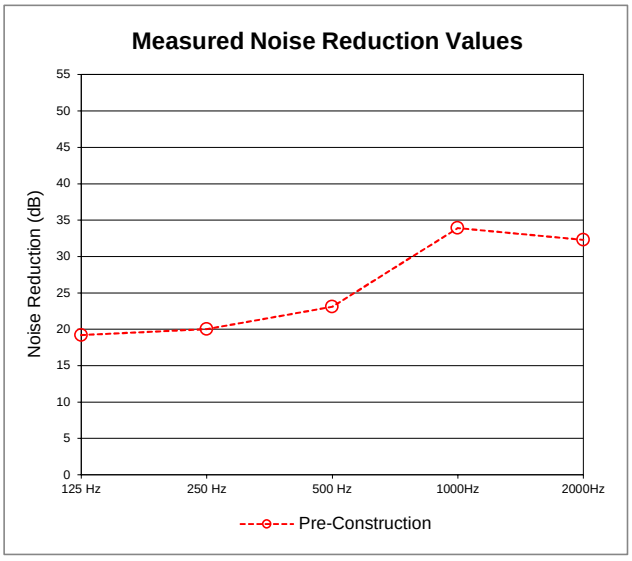
Pre-Construction Sound Pressure Levels (dB)						
April 29, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.7	50.9	47.1	45.0	39.5	50.3
Exterior Measurement (flush)	88.3	93.7	92.7	89.5	86.0	95.7
Exterior Adjusted	82.3	87.7	86.7	83.5	80.0	89.7
Interior Background	34.1	23.7	17.0	17.9	20.4	27.4
Interior Measurement	60.6	57.3	48.9	41.2	35.1	51.8
Interior Adjusted	60.6	57.3	48.9	41.2	35.0	51.8
Noise Reduction	**21.7**	**30.4**	**37.8**	**42.3**	**45.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.6	26.7	27.3	24.3	16.8	33.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.9 dB**

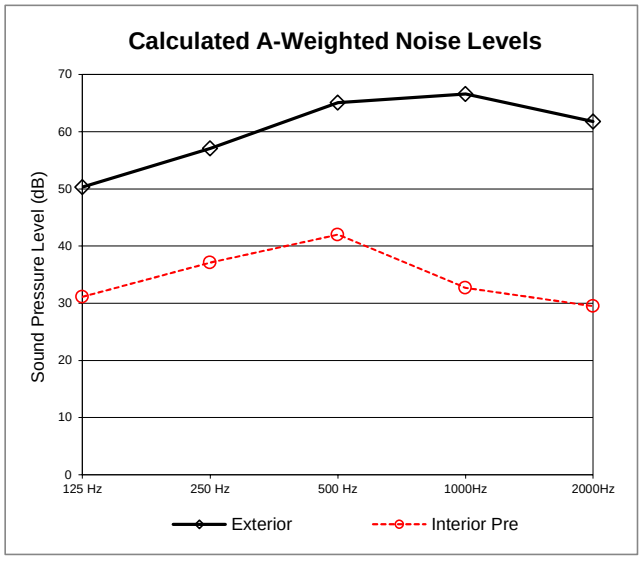




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Norris	Tested Room:	Living / Dining Façade 1
Address:	1804 S 107th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

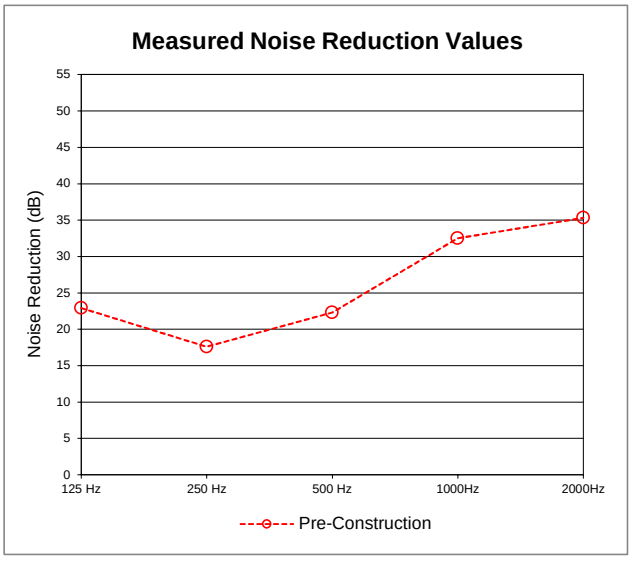
Pre-Construction Sound Pressure Levels (dB)						
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	61.3	53.8	50.6	47.1	37.4	52.2
Exterior Measurement (flush)	88.1	90.5	89.1	87.0	82.2	91.9
Exterior Adjusted	82.1	84.5	83.1	81.0	76.2	85.9
Interior Background	41.6	37.6	30.4	27.0	19.9	33.8
Interior Measurement	62.9	64.5	60.0	47.1	43.9	60.3
Interior Adjusted	62.9	64.5	60.0	47.1	43.9	60.3
Noise Reduction	**19.2**	**20.0**	**23.1**	**33.9**	**32.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.1	37.1	42.0	32.7	29.5	44.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**26.0 dB**

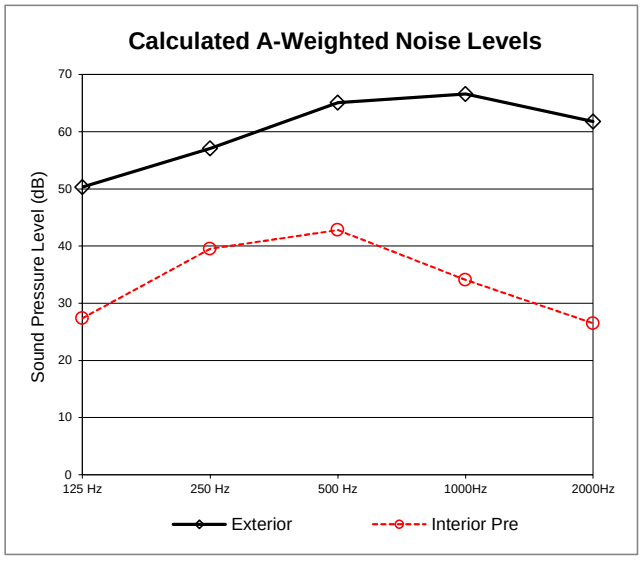




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Norris	Tested Room:	Living / Dining Façade 2
Address:	1804 S 107th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.9	54.9	50.4	45.2	35.5	52.0
Exterior Measurement (flush)	99.2	98.3	98.0	94.5	92.4	101.3
Exterior Adjusted	93.2	92.3	92.0	88.5	86.4	95.3
Interior Background	30.4	27.2	23.9	27.9	23.8	31.6
Interior Measurement	70.3	74.7	69.7	56.0	51.1	69.8
Interior Adjusted	70.3	74.7	69.7	56.0	51.1	69.8
Noise Reduction	**22.9**	**17.6**	**22.3**	**32.5**	**35.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.4	39.5	42.8	34.1	26.5	45.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**25.0 dB**

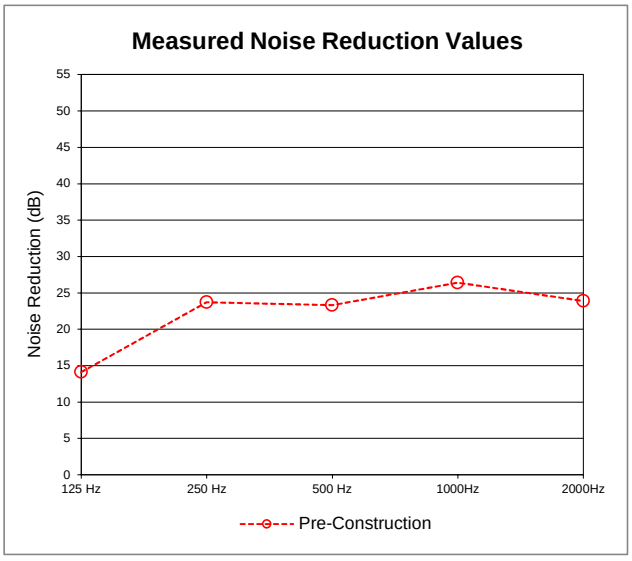


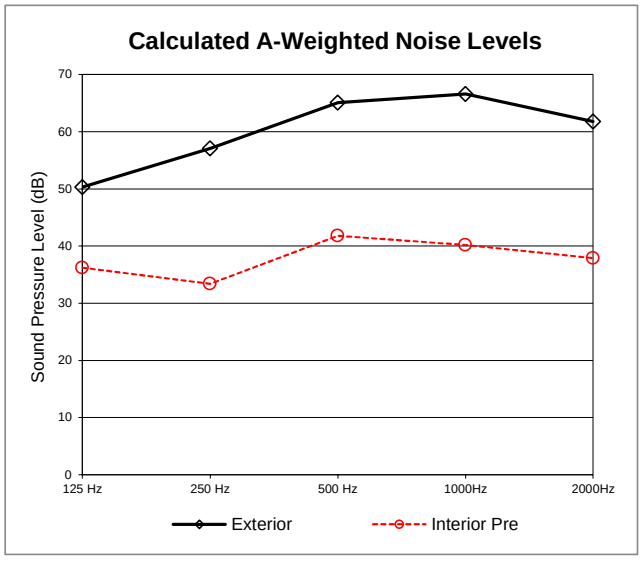


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Norris	Tested Room:	Sitting Room Façade 1
Address:	1804 S 107th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.9	54.9	50.4	45.2	35.5	52.0
Exterior Measurement (flush)	83.3	85.8	85.5	82.9	81.6	89.7
Exterior Adjusted	77.3	79.8	79.5	76.9	75.6	83.7
Interior Background	42.8	34.2	27.7	18.1	13.8	32.9
Interior Measurement	63.2	56.1	56.2	50.5	51.7	59.3
Interior Adjusted	63.2	56.1	56.2	50.5	51.7	59.3
Noise Reduction	**14.1**	**23.7**	**23.3**	**26.4**	**23.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	36.2	33.4	41.8	40.2	37.9	45.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**24.2 dB**

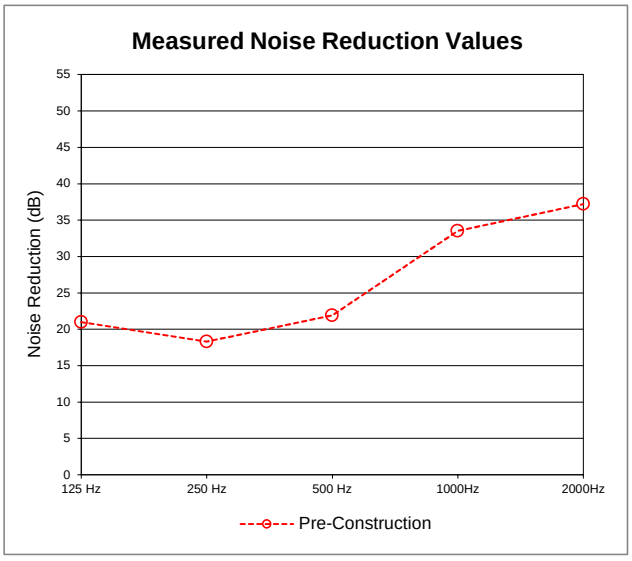


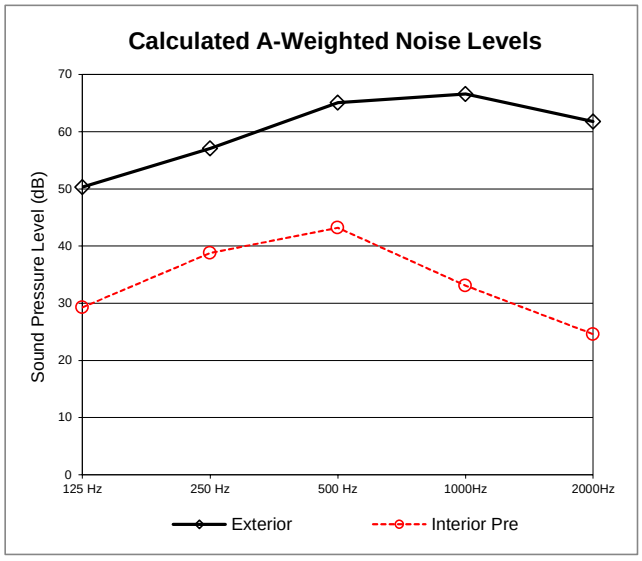


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Norris	Tested Room:	Sitting Room Façade 2
Address:	1804 S 107th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

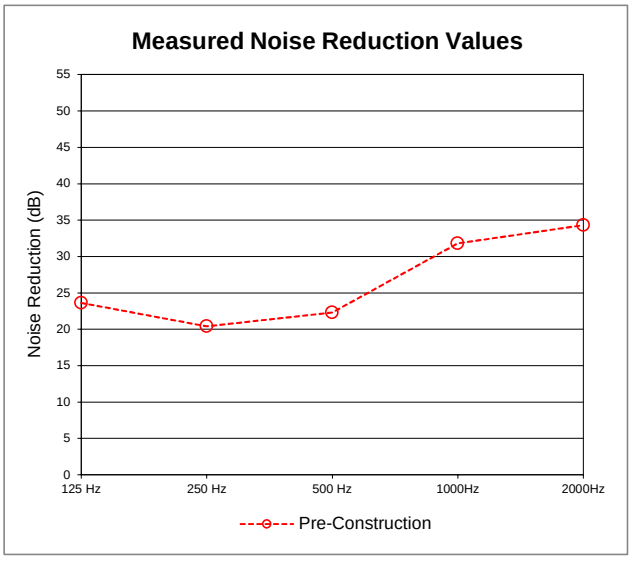
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.9	54.9	50.4	45.2	35.5	52.0
Exterior Measurement (flush)	100.7	98.2	97.2	92.7	89.0	99.4
Exterior Adjusted	94.7	92.2	91.2	86.7	83.0	93.4
Interior Background	42.8	34.2	27.7	18.1	13.8	32.9
Interior Measurement	73.7	73.9	69.3	53.2	45.8	69.4
Interior Adjusted	73.7	73.9	69.3	53.2	45.8	69.4
Noise Reduction	**21.0**	**18.3**	**21.9**	**33.5**	**37.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.3	38.8	43.2	33.1	24.6	45.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**25.0 dB**

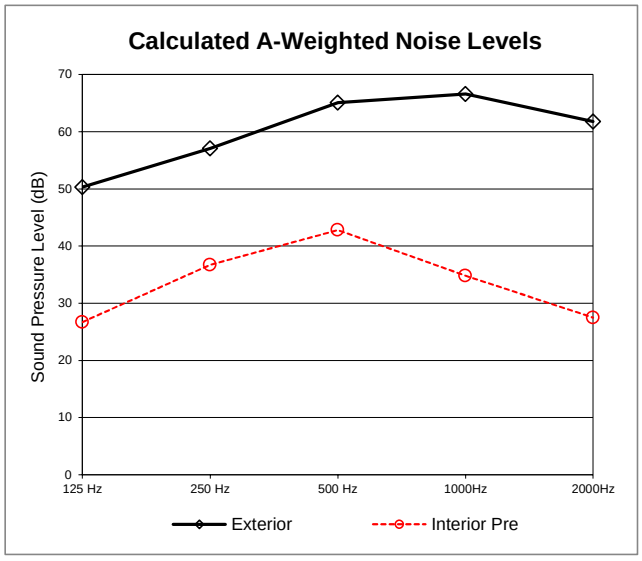




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Norris	Tested Room:	Kitchen Façade
Address:	1804 S 107th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 1, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		59.9	54.9	50.4	45.2	35.5	52.0
Exterior Measurement	(flush)	101.0	98.4	97.9	94.7	91.7	101.3
Exterior Adjusted		95.0	92.4	91.9	88.7	85.7	95.3
Interior Background		44.4	41.3	33.2	25.5	18.9	36.6
Interior Measurement		71.4	72.0	69.6	56.9	51.4	68.7
Interior Adjusted		71.4	72.0	69.6	56.9	51.4	68.7
Noise Reduction		**23.6**	**20.4**	**22.3**	**31.8**	**34.3**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		26.7	36.7	42.8	34.8	27.5	44.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**25.6 dB**

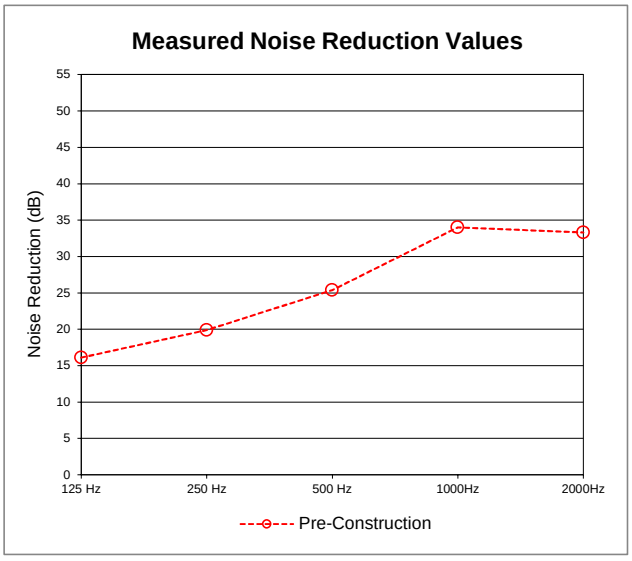


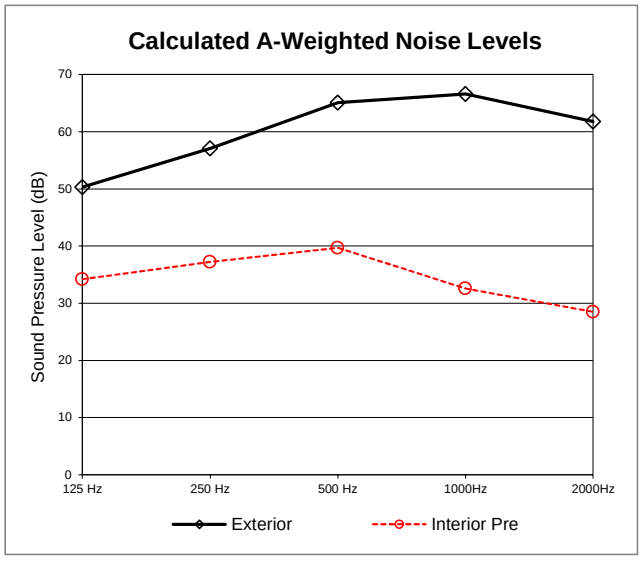


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Norris	Tested Room:	Bedroom 1 Façade 1
Address:	1804 S 107th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.6	51.7	49.8	49.6	47.4	54.1
Exterior Measurement (flush)	88.4	93.4	92.3	89.7	86.2	96.5
Exterior Adjusted	82.4	87.4	86.3	83.7	80.2	90.5
Interior Background	31.2	27.1	21.2	16.4	17.3	26.2
Interior Measurement	66.3	67.5	60.9	49.7	46.9	62.4
Interior Adjusted	66.3	67.5	60.9	49.7	46.9	62.4
Noise Reduction	**16.1**	**19.9**	**25.4**	**34.0**	**33.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.2	37.2	39.7	32.6	28.5	43.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**27.0 dB**

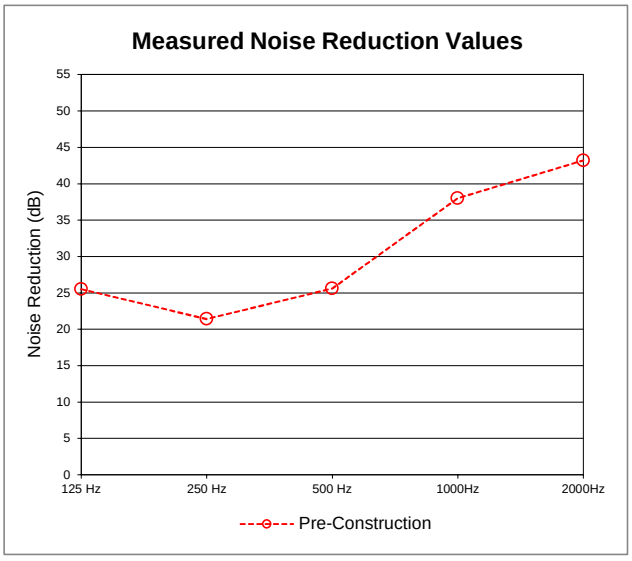


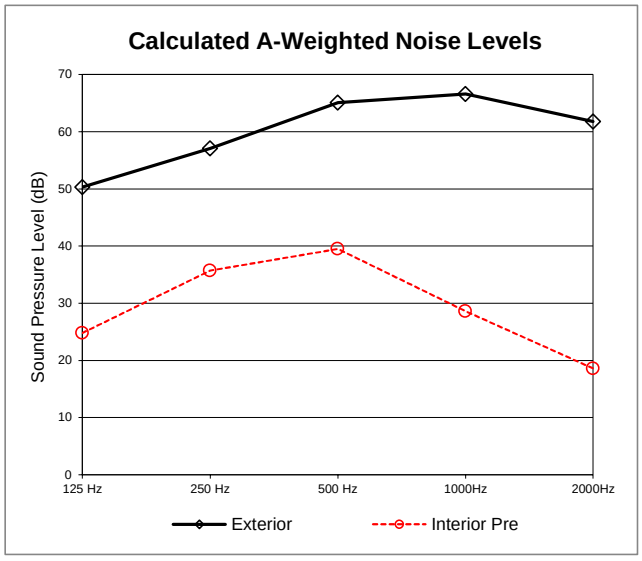


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Norris	Tested Room:	Bedroom 1 Façade 2
Address:	1804 S 107th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

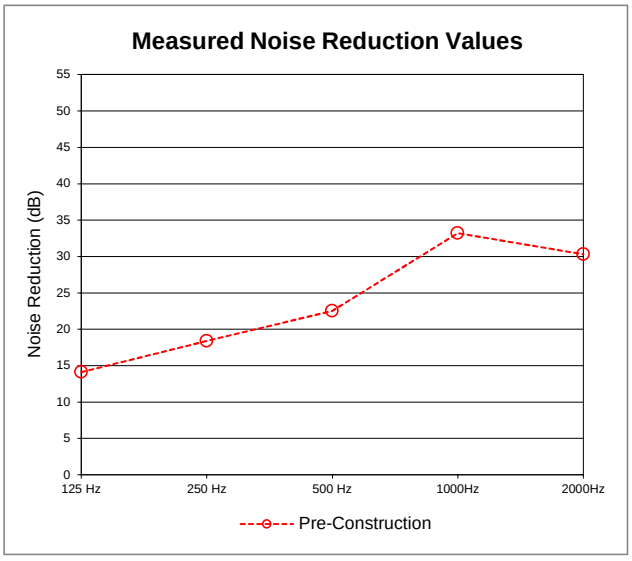
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.6	51.7	49.8	49.6	47.4	54.1
Exterior Measurement (flush)	108.2	105.6	105.0	101.7	100.0	110.1
Exterior Adjusted	102.2	99.6	99.0	95.7	94.0	104.1
Interior Background	31.2	27.1	21.2	16.4	17.3	26.2
Interior Measurement	76.7	78.2	73.4	57.7	50.8	73.4
Interior Adjusted	76.7	78.2	73.4	57.7	50.8	73.4
Noise Reduction	**25.5**	**21.4**	**25.6**	**38.0**	**43.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	24.8	35.7	39.5	28.6	18.6	41.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.6 dB**

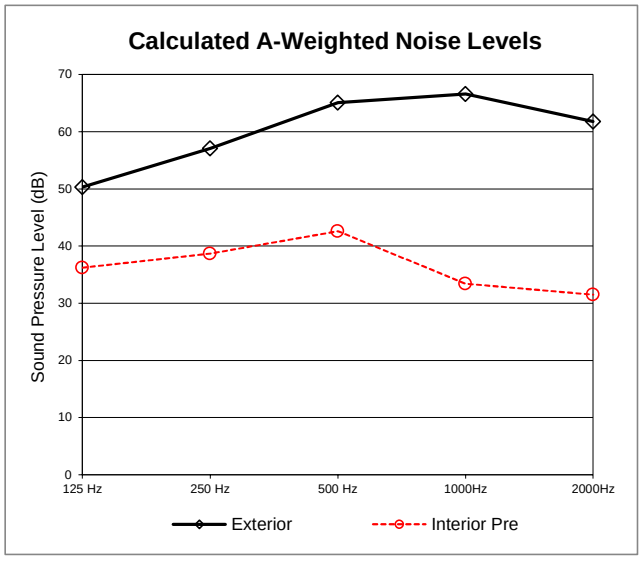




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Norris	Tested Room:	Bedroom 2 Façade
Address:	1804 S 107th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.6	51.7	49.8	49.6	47.4	54.1
Exterior Measurement (flush)	87.0	91.7	91.3	89.2	85.3	95.1
Exterior Adjusted	81.0	85.7	85.3	83.2	79.3	89.1
Interior Background	33.4	32.3	24.5	16.6	14.5	27.7
Interior Measurement	66.9	67.3	62.8	50.0	49.0	63.8
Interior Adjusted	66.9	67.3	62.8	50.0	49.0	63.8
Noise Reduction	**14.1**	**18.4**	**22.5**	**33.2**	**30.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	36.2	38.7	42.6	33.4	31.5	45.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**24.8 dB**

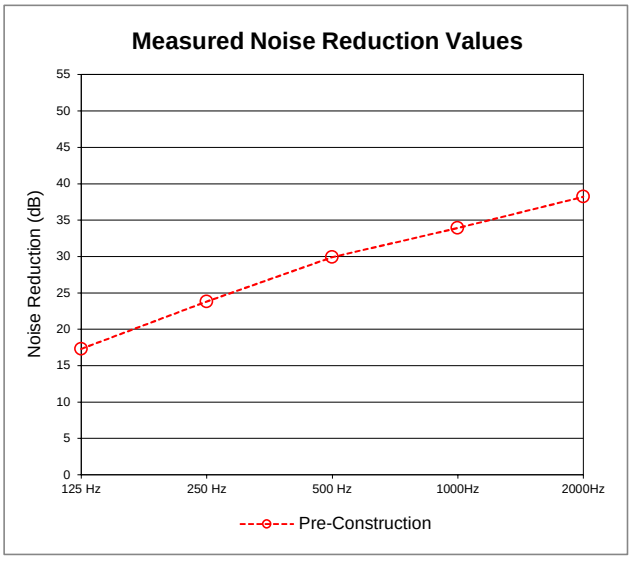


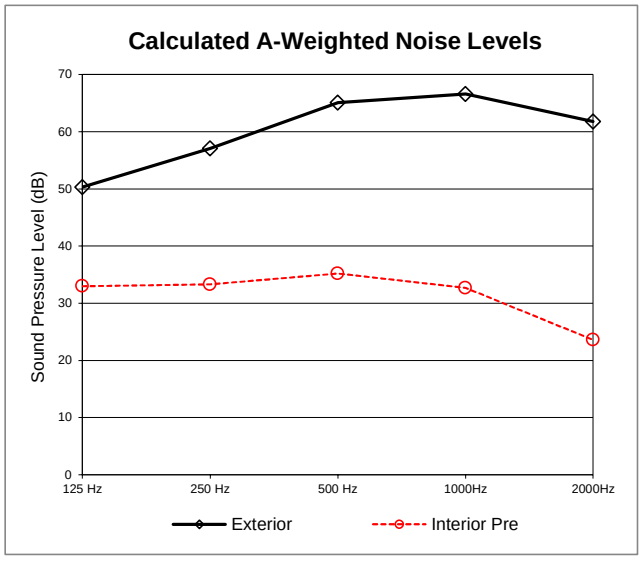


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Living Room Façade 1
Address:	2038 S 108th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.6	55.1	54.0	49.6	43.8	54.9
Exterior Measurement (flush)	89.1	90.7	90.5	87.6	85.7	93.3
Exterior Adjusted	83.1	84.7	84.5	81.6	79.7	87.3
Interior Background	39.7	32.3	27.8	28.7	22.9	32.9
Interior Measurement	65.8	60.9	54.6	47.8	41.6	56.6
Interior Adjusted	65.8	60.9	54.6	47.7	41.5	56.6
Noise Reduction	**17.3**	**23.8**	**29.9**	**33.9**	**38.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	33.0	33.3	35.2	32.7	23.6	39.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.2 dB**

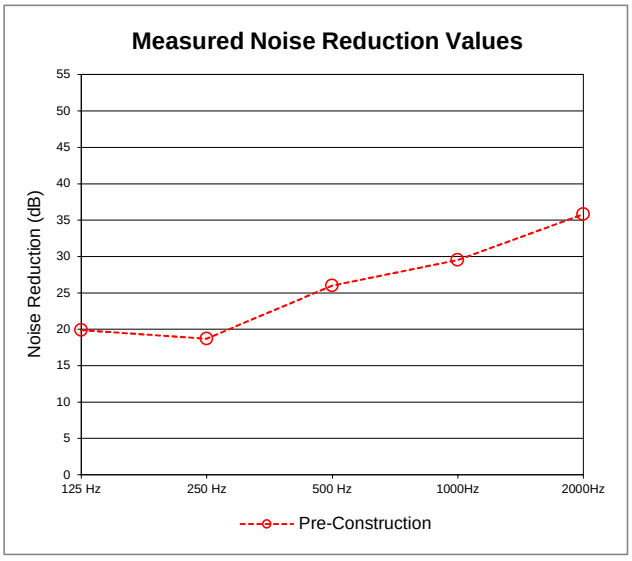


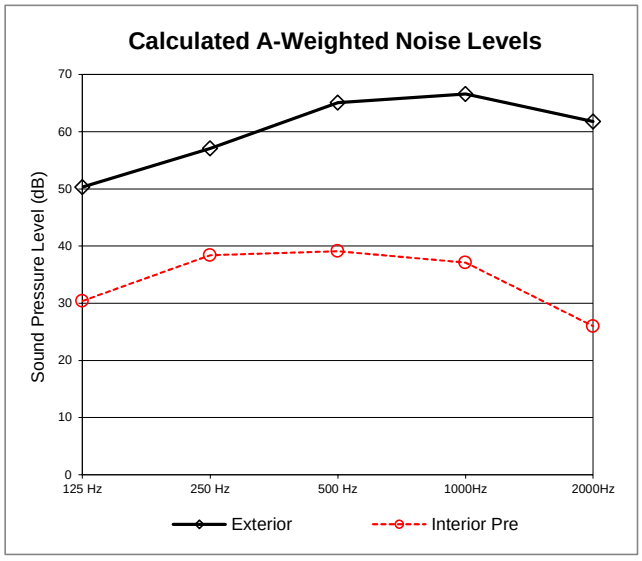


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Living Room Façade 2
Address:	2038 S 108th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.6	55.1	54.0	49.6	43.8	54.9
Exterior Measurement (flush)	95.8	93.2	93.3	87.4	85.2	95.8
Exterior Adjusted	89.8	87.2	87.3	81.4	79.2	89.8
Interior Background	39.7	32.3	27.8	28.7	22.9	32.9
Interior Measurement	69.9	68.5	61.3	51.9	43.4	63.0
Interior Adjusted	69.9	68.5	61.3	51.9	43.4	63.0
Noise Reduction	**19.9**	**18.7**	**26.0**	**29.5**	**35.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.4	38.4	39.1	37.1	26.0	43.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**26.6 dB**



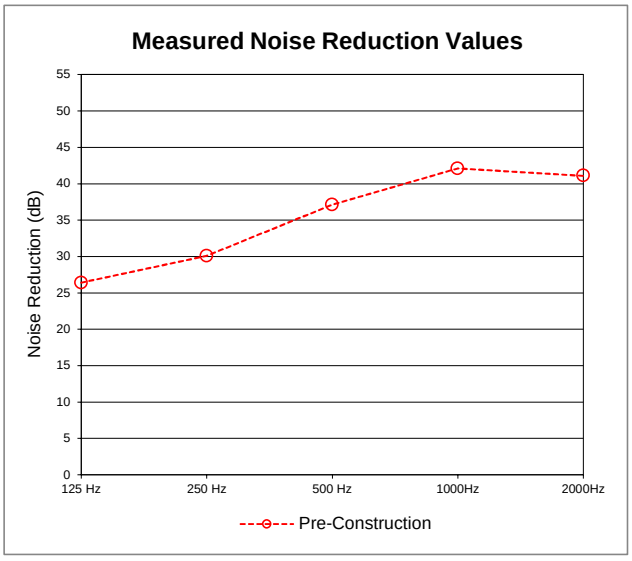


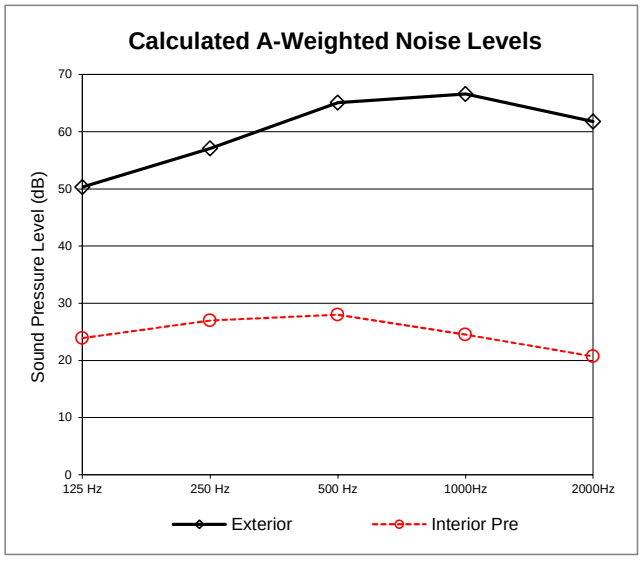
Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Sitting Room Façade 1
Address:	2038 S 108th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	44.5	42.7	43.2	39.9	37.3	45.3
Exterior Measurement (flush)	96.7	90.7	93.8	90.2	83.9	95.8
Exterior Adjusted	90.7	84.7	87.8	84.2	77.9	89.8
Interior Background	40.2	41.7	40.4	33.7	26.9	40.2
Interior Measurement	64.3	54.8	51.1	42.7	37.2	54.0
Interior Adjusted	64.3	54.6	50.7	42.1	36.8	53.8
Noise Reduction	**26.4**	**30.1**	**37.1**	**42.1**	**41.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	23.9	27.0	28.0	24.5	20.7	32.5

Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum): 37.5 dB

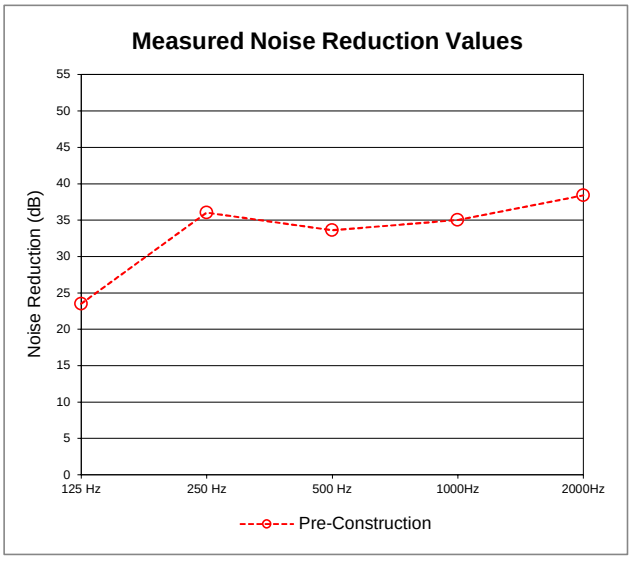


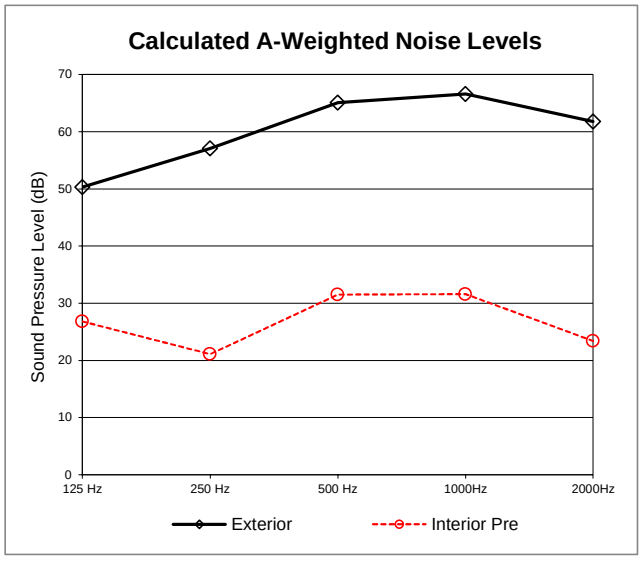


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Sitting Room Façade 2
Address:	2038 S 108th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

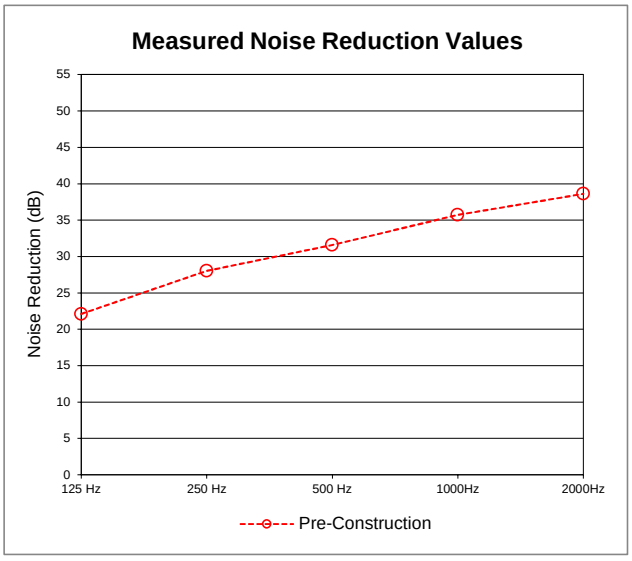
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	44.5	42.7	43.2	39.9	37.3	45.3
Exterior Measurement (flush)	93.5	97.8	97.5	94.7	92.2	101.2
Exterior Adjusted	87.5	91.8	91.5	88.7	86.2	95.2
Interior Background	40.2	41.7	40.4	33.7	26.9	40.2
Interior Measurement	64.0	56.0	58.0	53.7	47.8	59.3
Interior Adjusted	64.0	55.8	57.9	53.7	47.8	59.2
Noise Reduction	**23.5**	**36.0**	**33.6**	**35.0**	**38.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.8	21.1	31.5	31.6	23.4	35.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.3 dB**

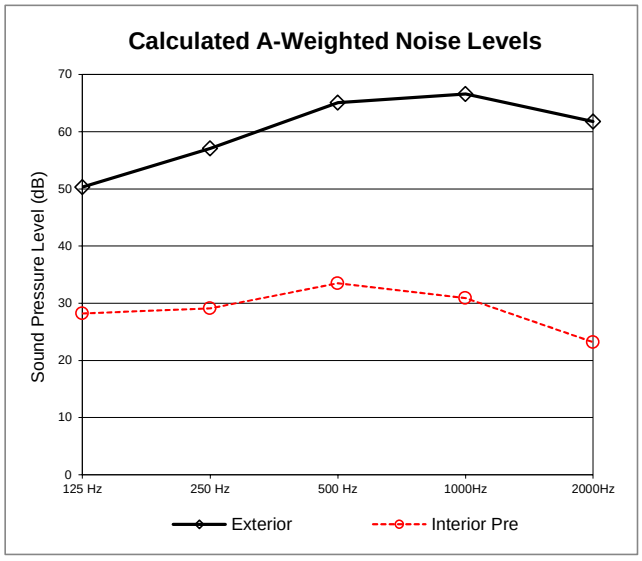




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Dining Room Façade
Address:	2038 S 108th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	50.9	47.7	48.1	47.8	38.7	50.4
Exterior Measurement (flush)	93.2	94.2	94.3	90.6	87.2	96.7
Exterior Adjusted	87.2	88.2	88.3	84.6	81.2	90.7
Interior Background	39.7	32.3	27.8	28.7	22.9	32.9
Interior Measurement	65.1	60.2	56.7	48.9	42.6	57.5
Interior Adjusted	65.1	60.2	56.7	48.9	42.6	57.5
Noise Reduction	**22.1**	**28.0**	**31.6**	**35.7**	**38.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.2	29.1	33.5	30.9	23.2	37.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.9 dB**

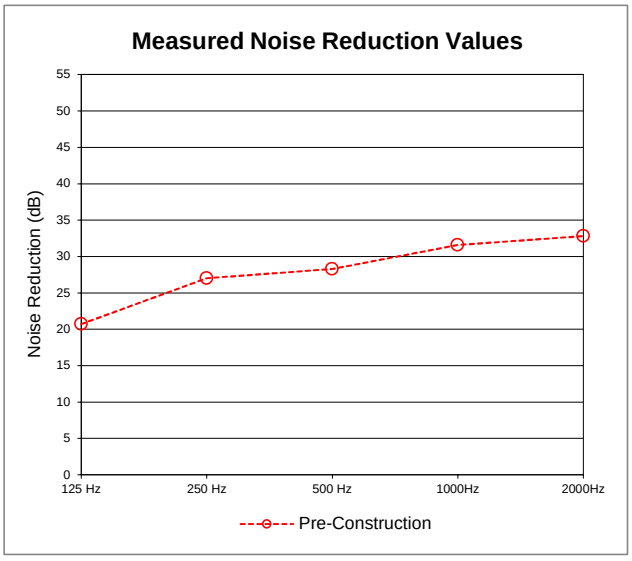


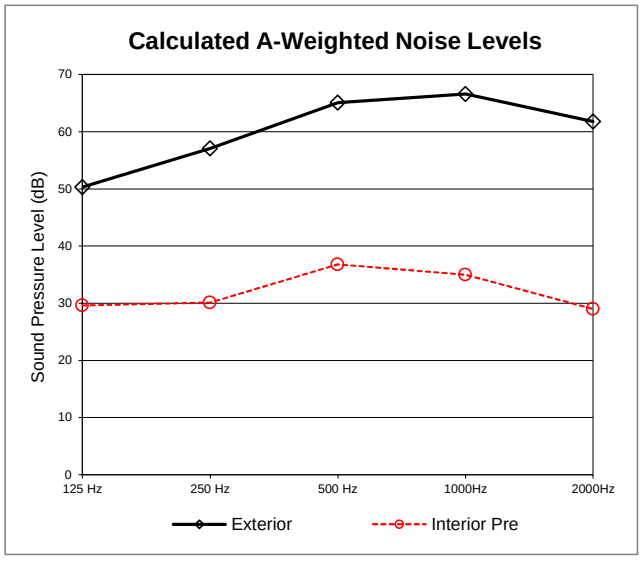


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Kitchen Façade
Address:	2038 S 108th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

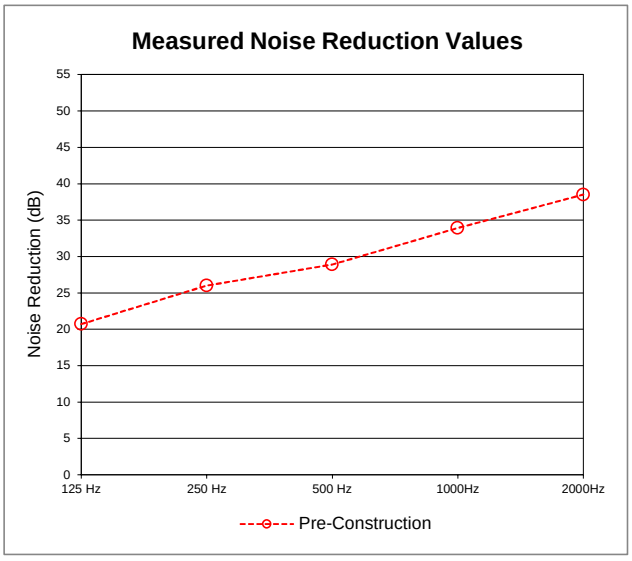
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	50.9	47.7	48.1	47.8	38.7	50.4
Exterior Measurement (flush)	85.8	90.2	89.1	86.1	83.5	92.7
Exterior Adjusted	79.8	84.2	83.1	80.1	77.5	86.7
Interior Background	35.7	35.4	31.6	32.6	33.4	40.2
Interior Measurement	59.1	57.2	54.8	48.6	45.0	55.8
Interior Adjusted	59.1	57.2	54.8	48.5	44.7	55.7
Noise Reduction	**20.7**	**27.0**	**28.3**	**31.6**	**32.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.6	30.1	36.8	35.0	29.0	40.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.7 dB**

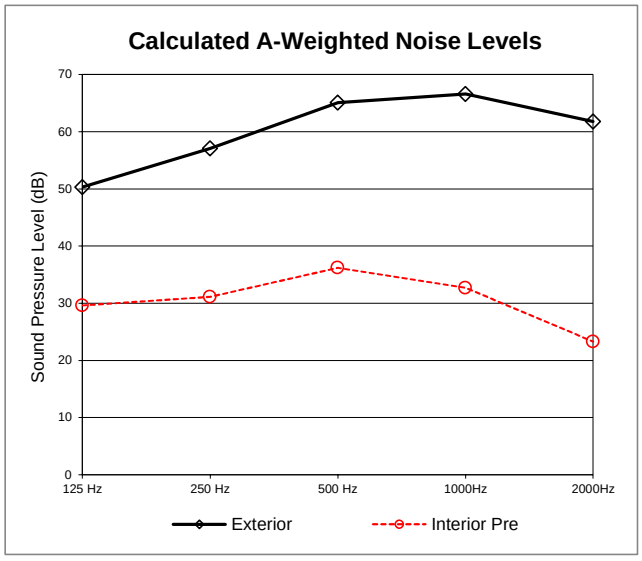




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Bedroom 1 Façade
Address:	2038 S 108th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

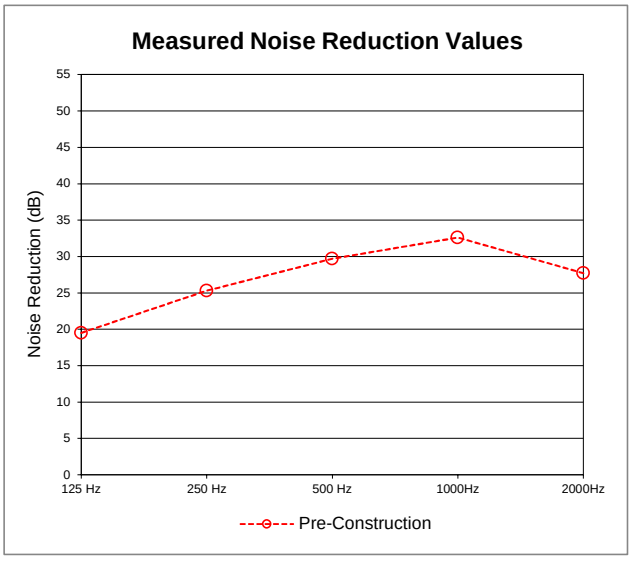
Pre-Construction Sound Pressure Levels (dB)						
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.0	50.7	46.8	44.4	37.7	49.0
Exterior Measurement (flush)	92.6	95.4	94.1	92.0	89.8	98.2
Exterior Adjusted	86.6	89.4	88.1	86.0	83.8	92.2
Interior Background	38.0	31.9	28.6	23.8	21.1	31.7
Interior Measurement	65.9	63.4	59.2	52.1	45.3	59.9
Interior Adjusted	65.9	63.4	59.2	52.1	45.3	59.9
Noise Reduction	**20.7**	**26.0**	**28.9**	**33.9**	**38.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.6	31.1	36.2	32.7	23.3	39.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.7 dB**

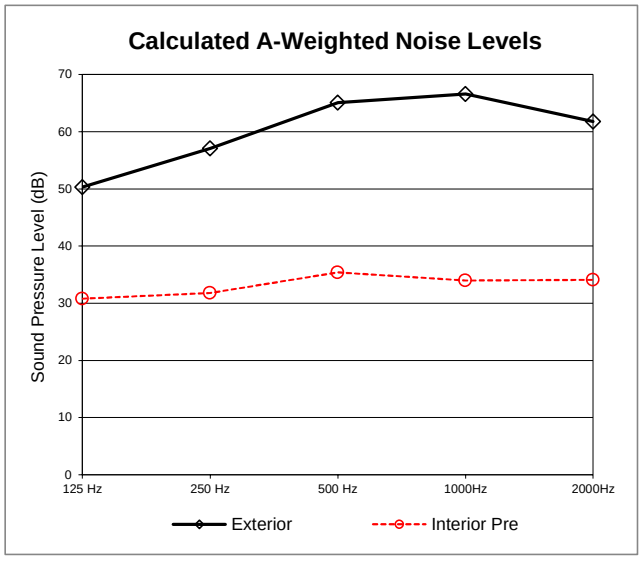




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Bedroom 2 Façade
Address:	2038 S 108th St	Exposed Surface:	Façade & Roof
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.0	50.7	46.8	44.4	37.7	49.0
Exterior Measurement (flush)	96.0	92.7	94.8	90.3	86.2	96.4
Exterior Adjusted	90.0	86.7	88.8	84.3	80.2	90.4
Interior Background	32.7	28.0	23.1	22.4	23.1	29.8
Interior Measurement	70.5	61.4	59.1	51.7	52.5	61.0
Interior Adjusted	70.5	61.4	59.1	51.7	52.5	61.0
Noise Reduction	**19.5**	**25.3**	**29.7**	**32.6**	**27.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.8	31.8	35.4	34.0	34.1	40.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.5 dB**

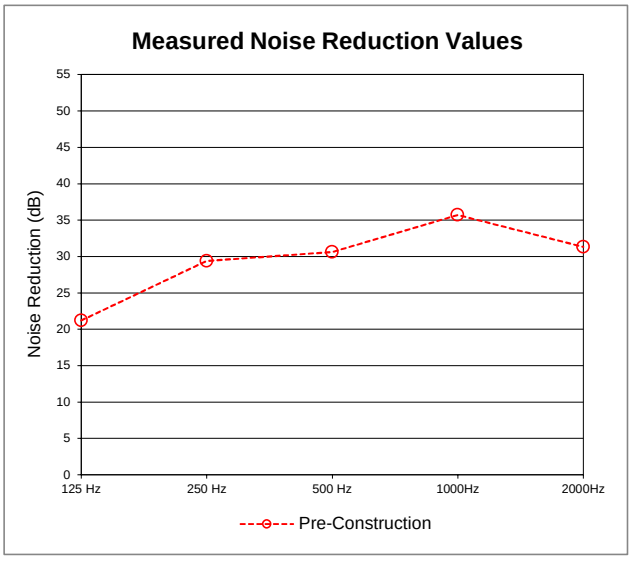


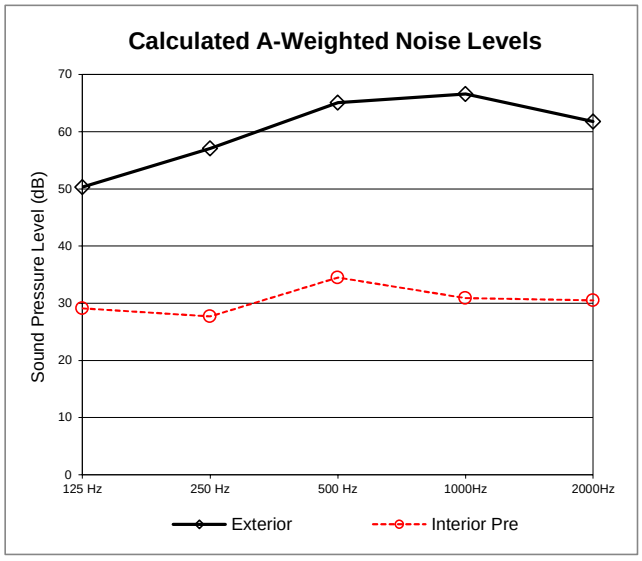


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Bedroom 3 Façade 1
Address:	2038 S 108th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

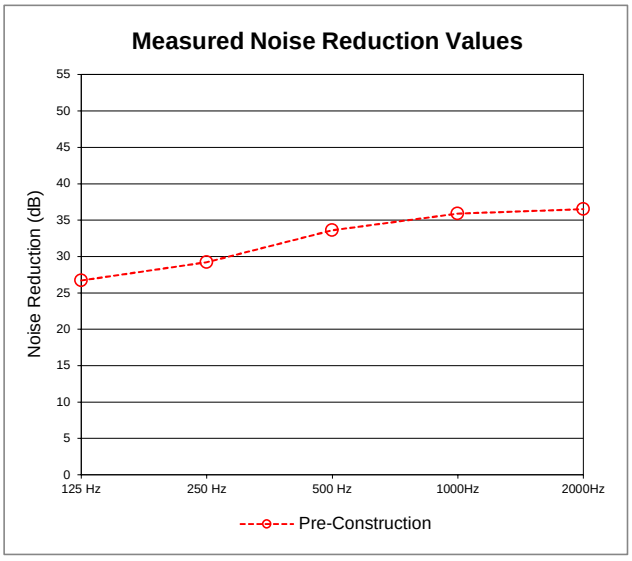
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.6	55.1	54.0	49.6	43.8	54.9
Exterior Measurement (flush)	101.9	101.4	100.4	97.1	93.7	103.4
Exterior Adjusted	95.9	95.4	94.4	91.1	87.7	97.4
Interior Background	32.7	25.7	20.1	17.3	15.9	25.3
Interior Measurement	74.7	66.0	63.8	55.4	56.4	65.6
Interior Adjusted	74.7	66.0	63.8	55.4	56.4	65.6
Noise Reduction	**21.2**	**29.4**	**30.6**	**35.7**	**31.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.1	27.7	34.5	30.9	30.5	38.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.8 dB**

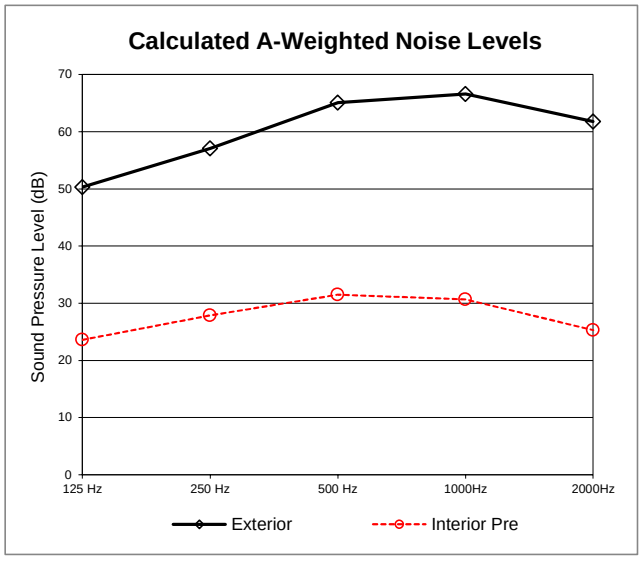




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Bedroom 3 Façade 2
Address:	2038 S 108th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.6	55.1	54.0	49.6	43.8	54.9
Exterior Measurement (flush)	111.6	107.0	106.8	99.9	95.8	107.7
Exterior Adjusted	105.6	101.0	100.8	93.9	89.8	101.7
Interior Background	32.7	25.7	20.1	17.3	15.9	25.3
Interior Measurement	78.9	71.8	67.2	58.0	53.3	68.7
Interior Adjusted	78.9	71.8	67.2	58.0	53.3	68.7
Noise Reduction	**26.7**	**29.2**	**33.6**	**35.9**	**36.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	23.6	27.9	31.5	30.7	25.3	35.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.2 dB**

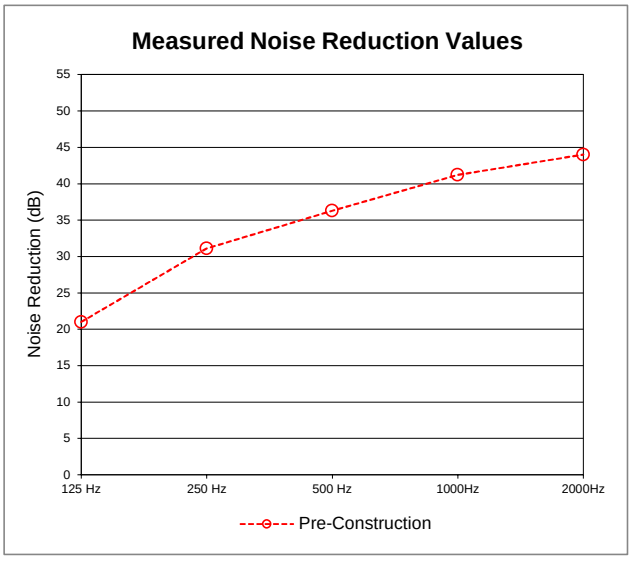


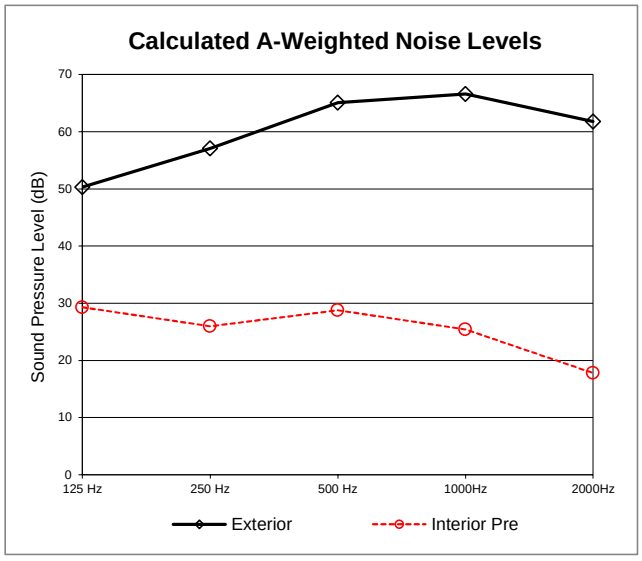


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Bedroom 4 Façade
Address:	2038 S 108th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

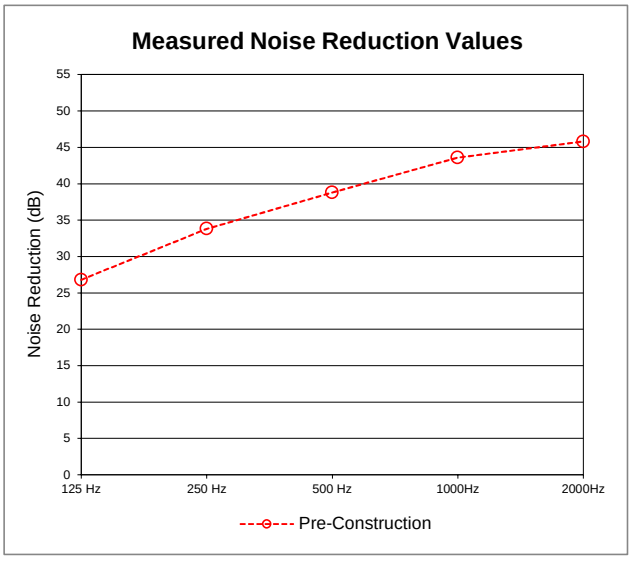
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.6	55.1	54.0	49.6	43.8	54.9
Exterior Measurement (flush)	101.3	101.3	101.6	97.0	92.7	103.5
Exterior Adjusted	95.3	95.3	95.6	91.0	86.7	97.5
Interior Background	31.5	25.7	21.6	18.9	16.6	25.6
Interior Measurement	74.3	64.2	59.3	49.8	42.7	61.9
Interior Adjusted	74.3	64.2	59.3	49.8	42.7	61.9
Noise Reduction	**21.0**	**31.1**	**36.3**	**41.2**	**44.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.3	26.0	28.8	25.4	17.8	33.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.2 dB**

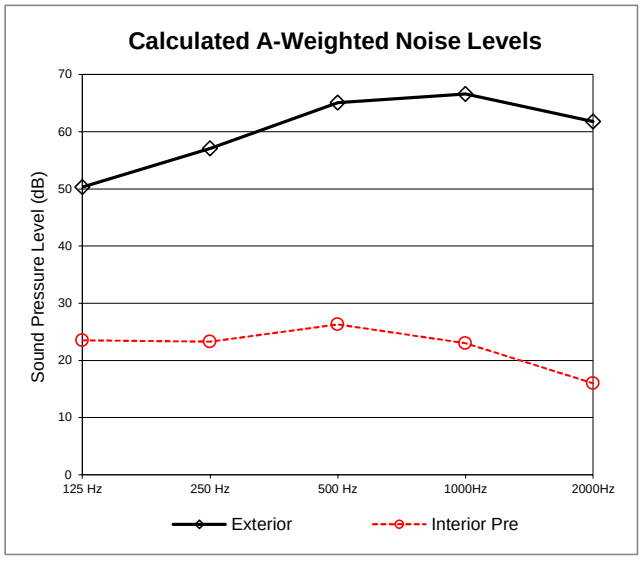




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Johns	Tested Room:	Bedroom 5 Façade
Address:	2038 S 108th St	Exposed Surface:	Façade
Local City:	Seattle	Floor / Stories:	0 of 1

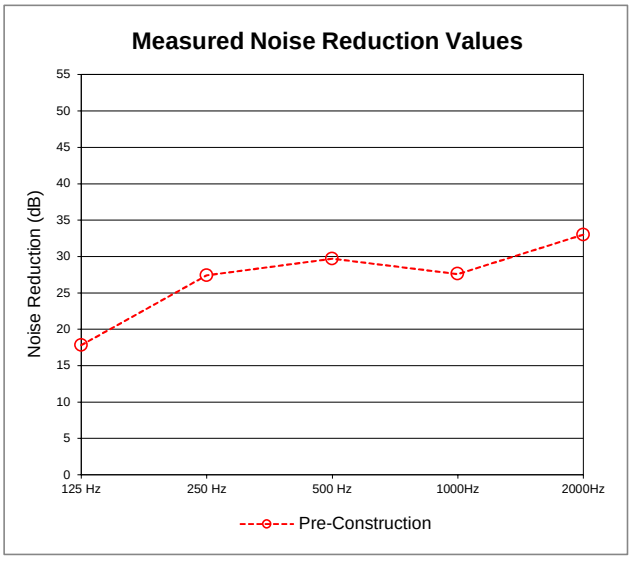
Pre-Construction Sound Pressure Levels (dB)						
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	50.9	47.7	48.1	47.8	38.7	50.4
Exterior Measurement (flush)	94.4	91.1	90.1	87.5	85.2	93.7
Exterior Adjusted	88.4	85.1	84.1	81.5	79.2	87.7
Interior Background	29.7	25.4	23.9	18.1	16.5	25.8
Interior Measurement	61.6	51.3	45.3	37.9	33.5	48.7
Interior Adjusted	61.6	51.3	45.3	37.9	33.4	48.7
Noise Reduction	**26.8**	**33.8**	**38.8**	**43.6**	**45.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	23.5	23.3	26.3	23.0	16.0	30.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**39.6 dB**

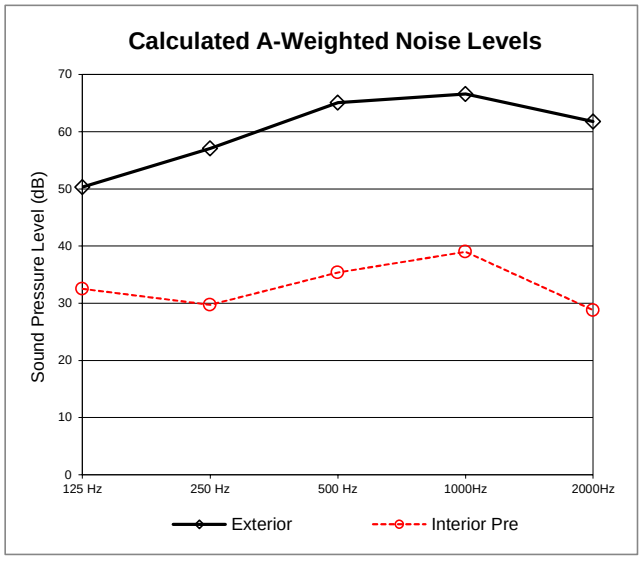




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Living Room Façade
Address:	1405 S 134th St	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 1, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		59.6	54.3	51.1	45.6	45.6	53.8
Exterior Measurement	(flush)	90.5	90.1	90.6	88.4	86.8	94.8
Exterior Adjusted		84.5	84.1	84.6	82.4	80.8	88.8
Interior Background		36.8	30.4	26.8	24.8	18.6	29.9
Interior Measurement		66.7	56.7	54.9	54.8	47.8	58.8
Interior Adjusted		66.7	56.7	54.9	54.8	47.8	58.8
Noise Reduction		**17.8**	**27.4**	**29.7**	**27.6**	**33.0**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		32.5	29.7	35.4	39.0	28.8	41.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**28.3 dB**

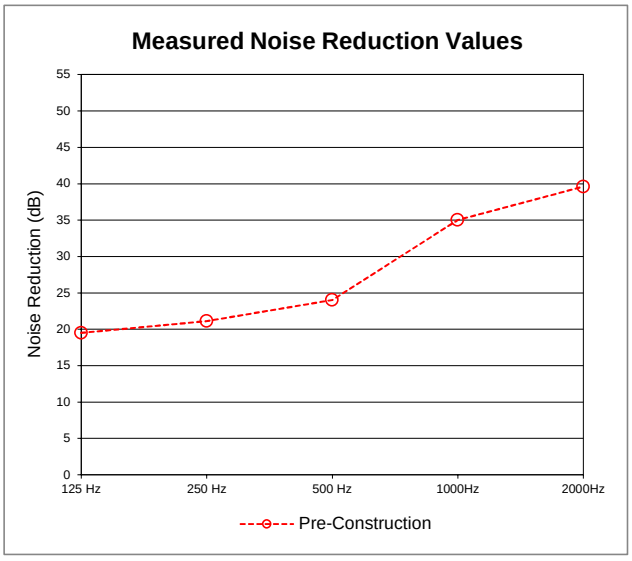


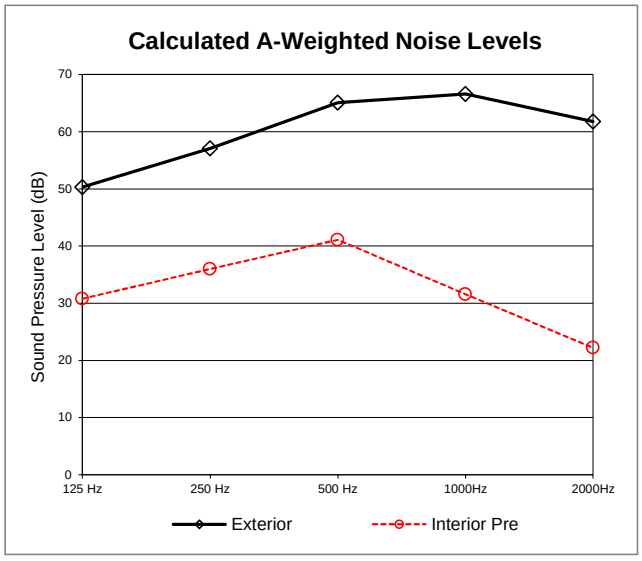


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Sitting Room Façade 1
Address:	1405 S 134th St	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.9	55.0	56.5	54.7	44.0	57.7
Exterior Measurement (flush)	92.9	95.1	94.5	91.7	89.6	98.2
Exterior Adjusted	86.9	89.1	88.5	85.7	83.6	92.2
Interior Background	37.5	31.4	29.0	22.9	23.6	32.2
Interior Measurement	67.4	68.0	64.5	50.7	44.0	64.1
Interior Adjusted	67.4	68.0	64.5	50.7	44.0	64.1
Noise Reduction	**19.5**	**21.1**	**24.0**	**35.0**	**39.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.8	36.0	41.1	31.6	22.2	42.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**27.1 dB**

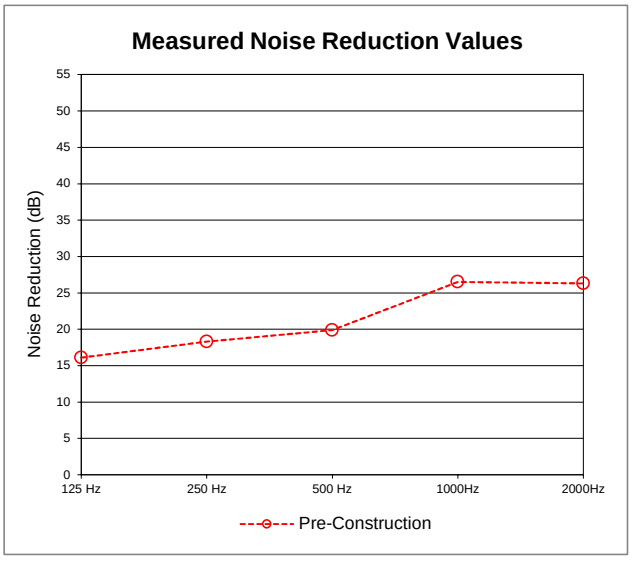


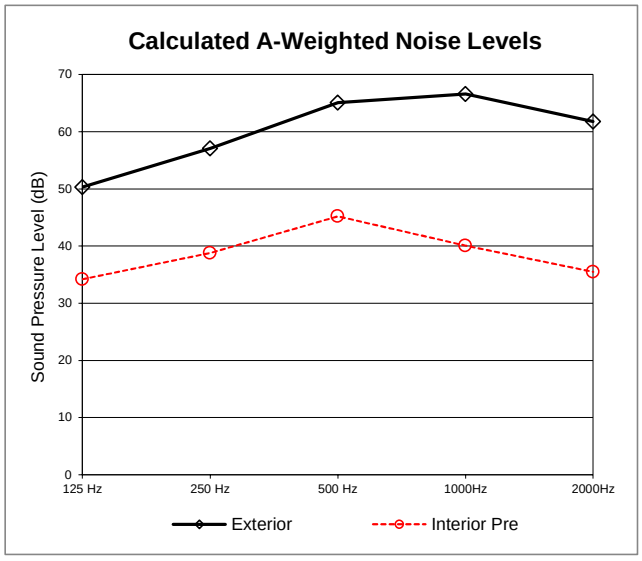


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Sitting Room Façade 2
Address:	1405 S 134th St	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.9	44.4	46.4	44.7	39.5	49.2
Exterior Measurement (flush)	91.6	89.6	91.5	88.8	85.2	95.0
Exterior Adjusted	85.6	83.6	85.5	82.8	79.2	89.0
Interior Background	37.5	31.4	29.0	22.9	23.6	32.2
Interior Measurement	69.5	65.3	65.6	56.3	52.9	64.9
Interior Adjusted	69.5	65.3	65.6	56.3	52.9	64.9
Noise Reduction	**16.1**	**18.3**	**19.9**	**26.5**	**26.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.2	38.8	45.2	40.1	35.5	47.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**22.4 dB**

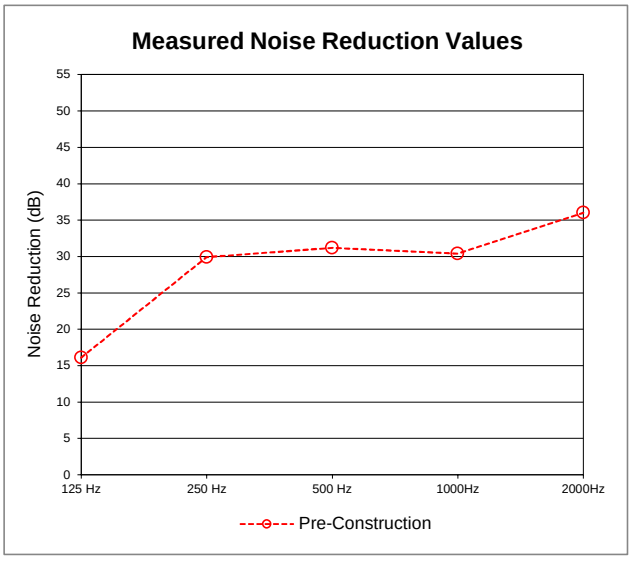


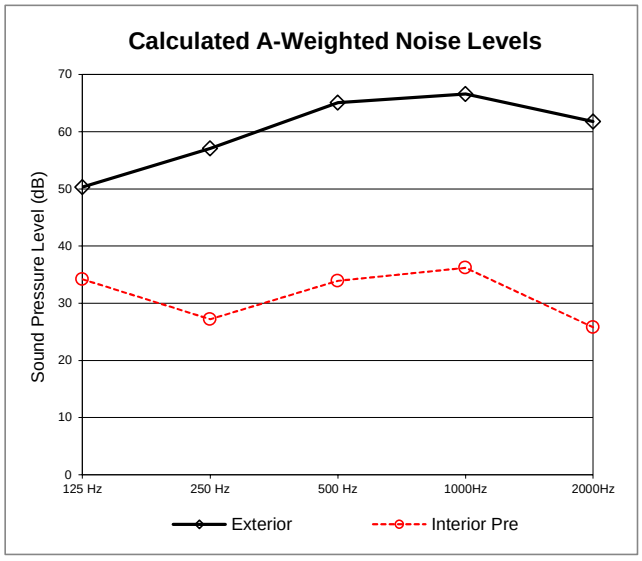


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Kitchen Façade
Address:	1405 S 134th St	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

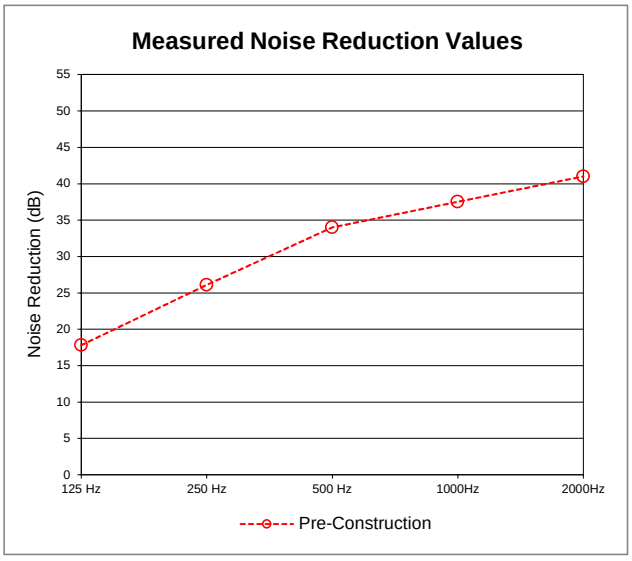
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.6	54.3	51.1	45.6	45.6	53.8
Exterior Measurement (flush)	87.6	92.9	91.5	89.5	87.0	95.9
Exterior Adjusted	81.6	86.9	85.5	83.5	81.0	89.9
Interior Background	42.9	37.5	35.6	31.2	26.4	37.3
Interior Measurement	65.5	57.0	54.4	53.1	45.1	57.5
Interior Adjusted	65.5	57.0	54.3	53.1	45.0	57.5
Noise Reduction	**16.1**	**29.9**	**31.2**	**30.4**	**36.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.2	27.2	33.9	36.2	25.8	40.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.9 dB**

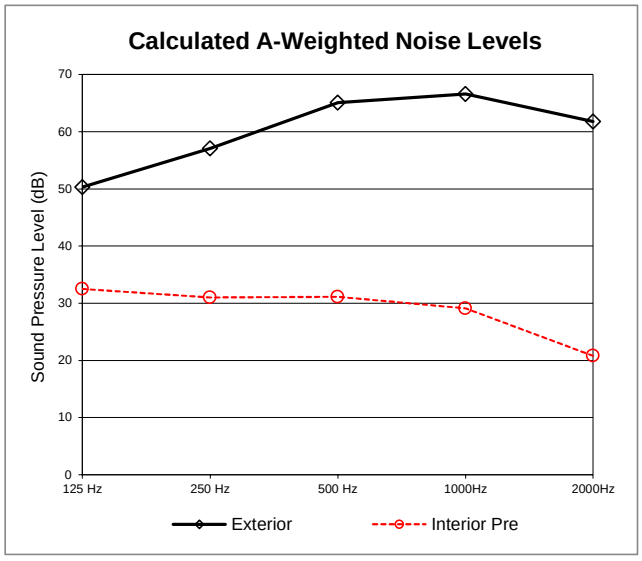




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Bedroom 1 Façade
Address:	1405 S 134th St	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.9	44.4	46.4	44.7	39.5	49.2
Exterior Measurement (flush)	90.7	91.8	92.7	89.4	87.0	95.2
Exterior Adjusted	84.7	85.8	86.7	83.4	81.0	89.2
Interior Background	41.7	33.9	26.4	24.6	20.9	31.9
Interior Measurement	66.9	59.7	52.7	45.9	40.1	55.5
Interior Adjusted	66.9	59.7	52.7	45.9	40.0	55.5
Noise Reduction	**17.8**	**26.1**	**34.0**	**37.5**	**41.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.5	31.0	31.1	29.1	20.8	37.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.8 dB**

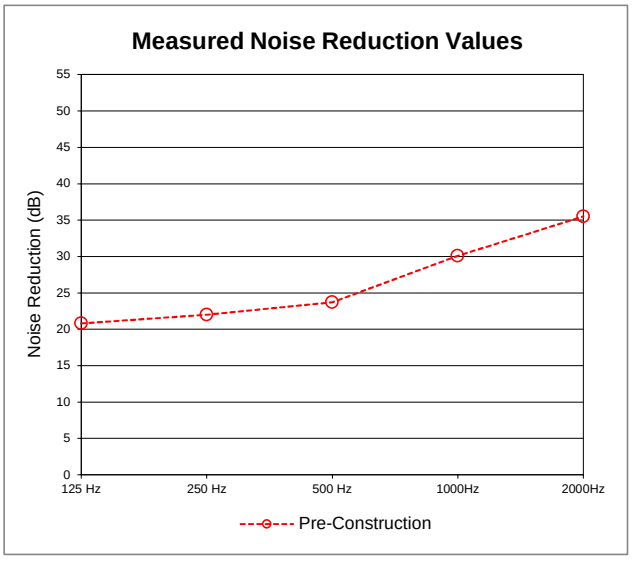


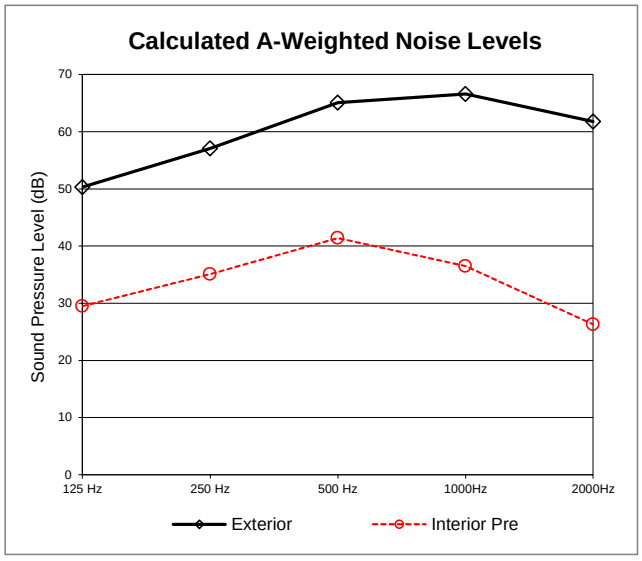


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Bedroom 2 Façade
Address:	1405 S 134th St	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.9	44.4	46.4	44.7	39.5	49.2
Exterior Measurement (flush)	91.9	91.1	91.3	88.9	88.0	95.2
Exterior Adjusted	85.9	85.1	85.3	82.9	82.0	89.2
Interior Background	38.1	39.7	30.7	27.9	21.5	34.4
Interior Measurement	65.1	63.1	61.6	52.8	46.5	61.1
Interior Adjusted	65.1	63.1	61.6	52.8	46.5	61.1
Noise Reduction	**20.8**	**22.0**	**23.7**	**30.1**	**35.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.5	35.1	41.4	36.5	26.3	43.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**26.4 dB**

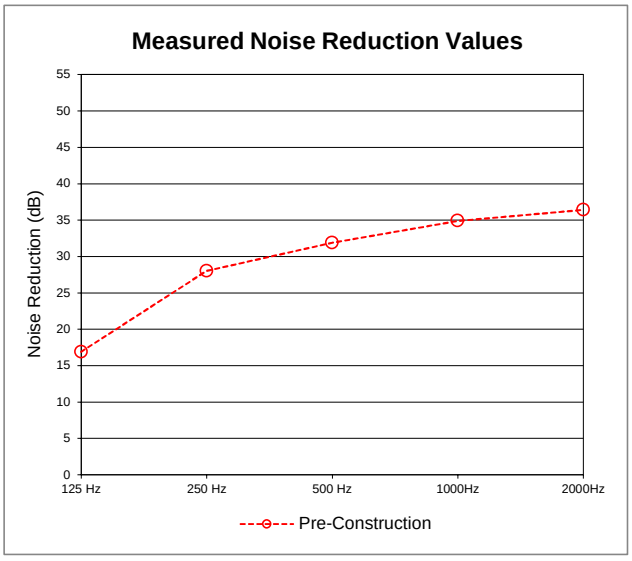


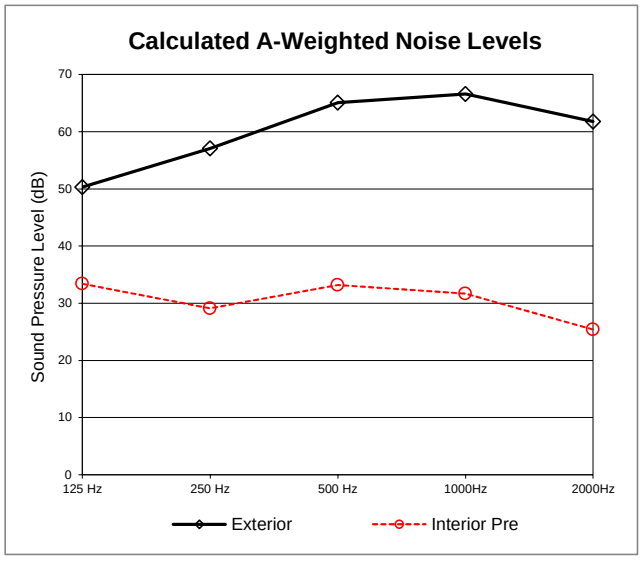


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Bedroom 3 Façade 1
Address:	1405 S 134th St	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	57.0	52.3	51.7	46.1	38.9	51.9
Exterior Measurement (flush)	80.3	85.9	83.4	81.9	79.1	87.6
Exterior Adjusted	74.3	79.9	77.4	75.9	73.1	81.6
Interior Background	37.7	34.2	32.6	32.0	27.9	36.4
Interior Measurement	57.4	52.0	45.7	41.5	37.2	49.5
Interior Adjusted	57.4	51.9	45.5	41.0	36.7	49.3
Noise Reduction	**16.9**	**28.0**	**31.9**	**34.9**	**36.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	33.4	29.1	33.2	31.7	25.4	38.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.6 dB**

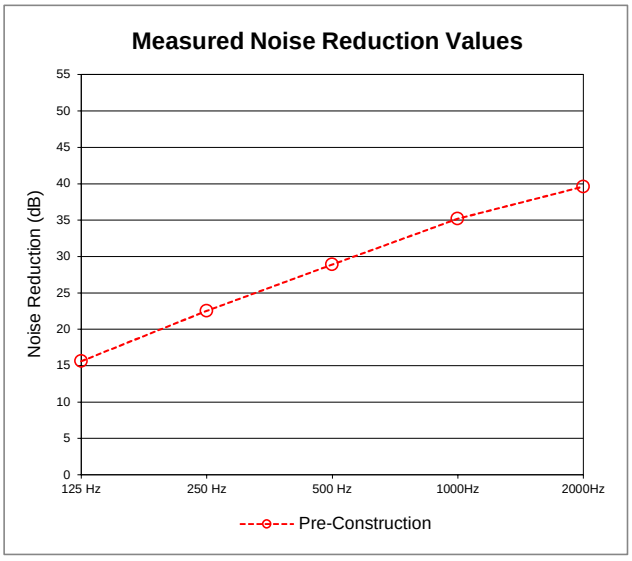


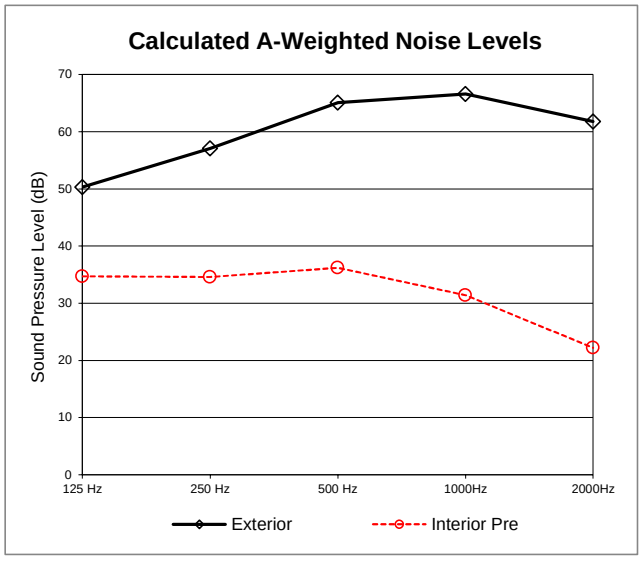


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Bedroom 3 Façade 2
Address:	1405 S 134th St	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.9	44.4	46.4	44.7	39.5	49.2
Exterior Measurement (flush)	87.3	88.1	89.5	87.6	86.3	93.3
Exterior Adjusted	81.3	82.1	83.5	81.6	80.3	87.3
Interior Background	37.7	34.2	32.6	32.0	27.9	36.4
Interior Measurement	65.7	59.6	54.6	46.6	40.9	56.1
Interior Adjusted	65.7	59.6	54.6	46.4	40.7	56.1
Noise Reduction	**15.6**	**22.5**	**28.9**	**35.2**	**39.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.7	34.6	36.2	31.4	22.2	40.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.4 dB**

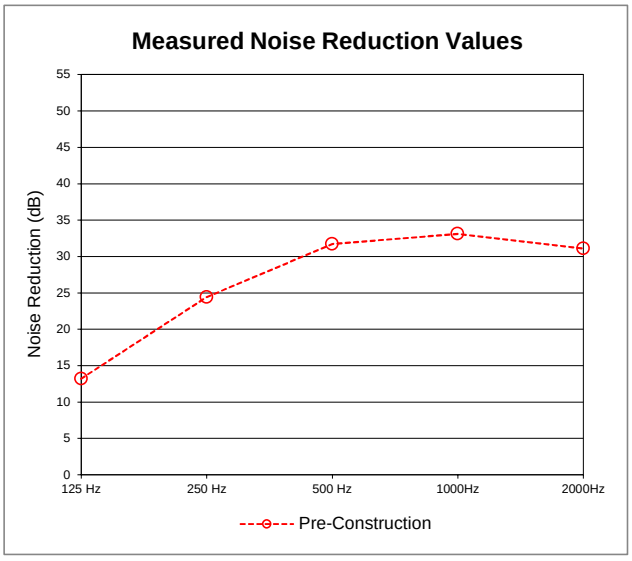


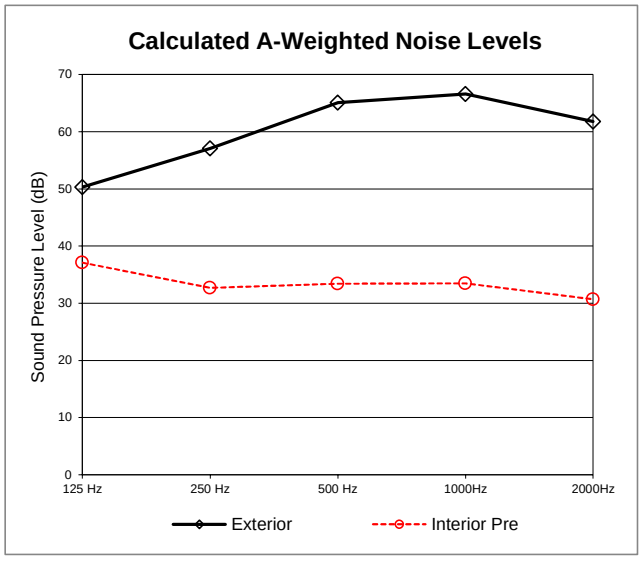


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Byrd	Tested Room:	Bedroom 4 Façade
Address:	1405 S 134th St	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

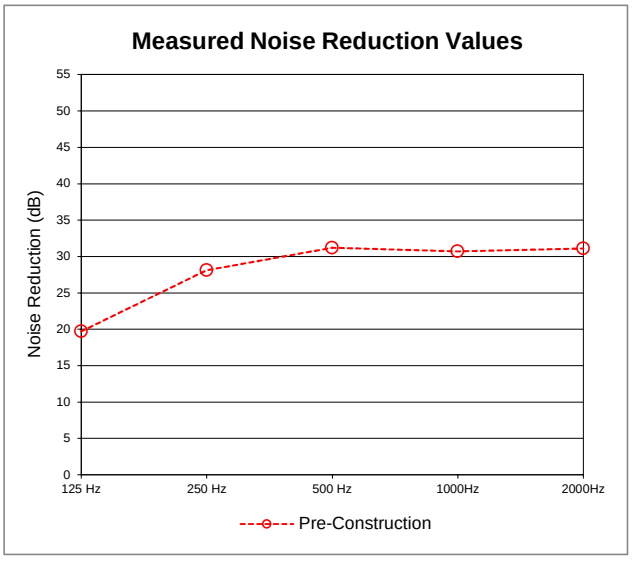
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.6	54.3	51.1	45.6	45.6	53.8
Exterior Measurement (flush)	85.4	88.8	87.9	85.1	82.8	92.0
Exterior Adjusted	79.4	82.8	81.9	79.1	76.8	86.0
Interior Background	40.6	29.6	33.0	28.5	22.7	34.5
Interior Measurement	66.2	58.4	50.3	46.1	45.7	55.3
Interior Adjusted	66.2	58.4	50.2	46.0	45.7	55.3
Noise Reduction	**13.2**	**24.4**	**31.7**	**33.1**	**31.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	37.1	32.7	33.4	33.5	30.7	41.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.0 dB**

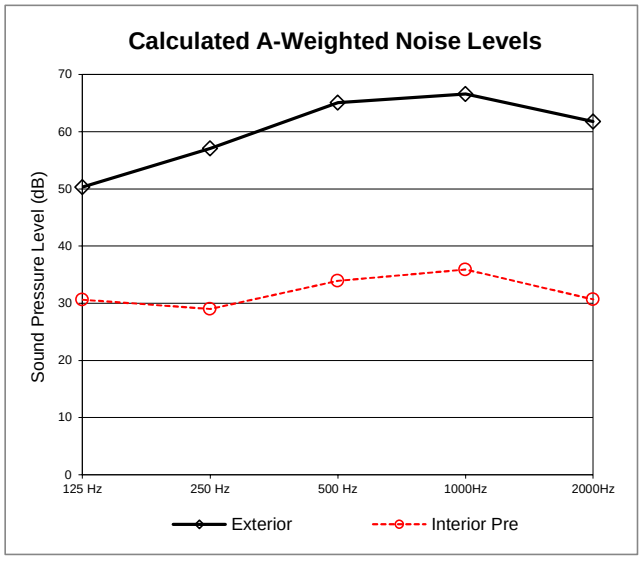




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Thom	Tested Room:	Living Room Façade
Address:	2620 S 148th St	Exposed Surface:	Façade & Roof
Local City:	SeaTac	Floor / Stories:	1 of 1

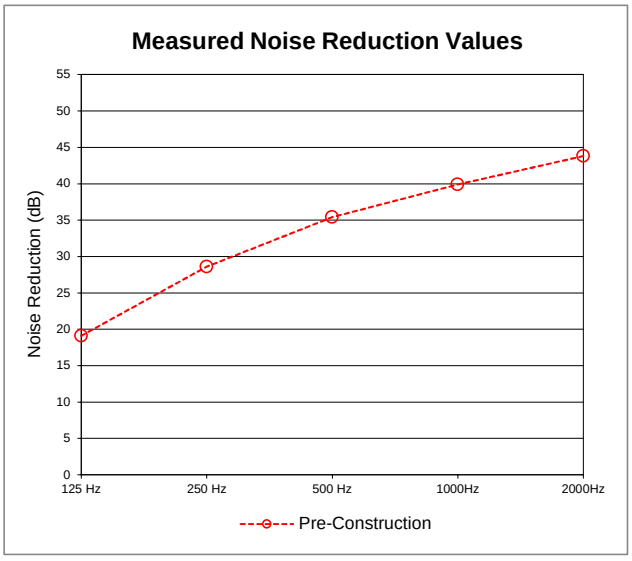
Pre-Construction Sound Pressure Levels (dB)							
May 1, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		41.8	37.6	37.1	36.7	33.3	41.0
Exterior Measurement	(flush)	89.5	88.8	87.9	87.0	85.0	93.9
Exterior Adjusted		83.5	82.8	81.9	81.0	79.0	87.9
Interior Background		35.7	35.7	33.5	30.4	28.9	36.6
Interior Measurement		63.8	54.8	50.8	50.3	48.0	56.1
Interior Adjusted		63.8	54.7	50.7	50.3	47.9	56.1
Noise Reduction		**19.7**	**28.1**	**31.2**	**30.7**	**31.1**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		30.6	29.0	33.9	35.9	30.7	39.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**30.2 dB**

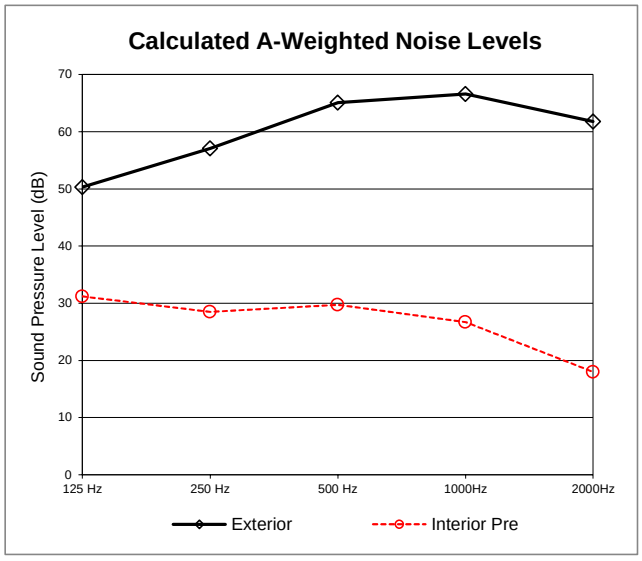




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Thom	Tested Room:	Dining Room Façade 1
Address:	2620 S 148th St	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 1, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		57.5	55.2	64.9	57.6	53.2	63.8
Exterior Measurement	(flush)	104.1	103.3	103.5	99.9	95.2	105.8
Exterior Adjusted		98.1	97.3	97.5	93.9	89.2	99.8
Interior Background		36.0	33.8	38.4	37.2	32.7	40.8
Interior Measurement		79.0	68.7	62.1	54.1	45.6	65.8
Interior Adjusted		79.0	68.7	62.1	54.0	45.4	65.8
Noise Reduction		**19.1**	**28.6**	**35.4**	**39.9**	**43.8**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		31.2	28.5	29.7	26.7	18.0	35.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**34.6 dB**

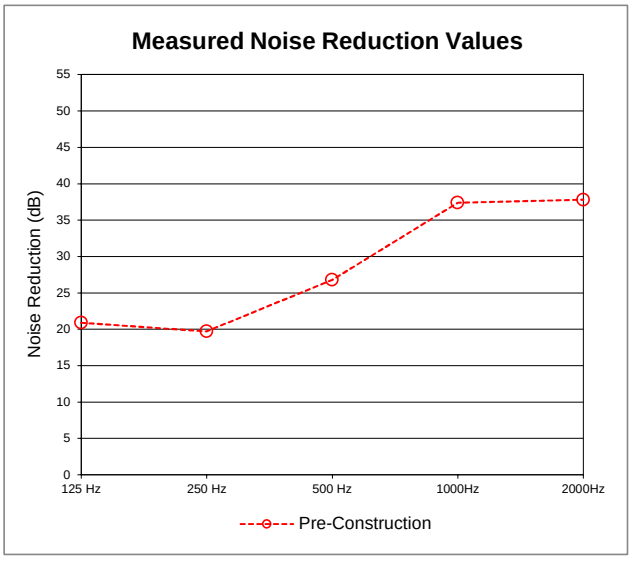


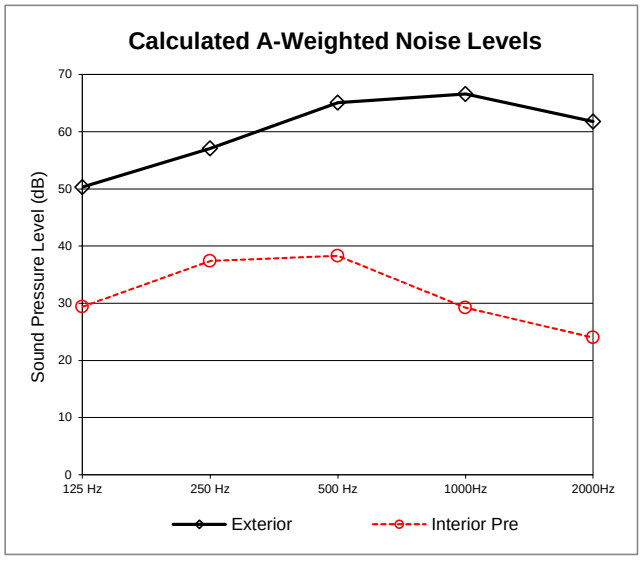


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Thom	Tested Room:	Dining Room Façade 2
Address:	2620 S 148th St	Exposed Surface:	Façade
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	57.5	55.2	64.9	57.6	53.2	63.8
Exterior Measurement (flush)	103.5	103.0	103.5	101.1	97.4	106.3
Exterior Adjusted	97.5	97.0	97.5	95.1	91.4	100.3
Interior Background	36.0	33.8	38.4	37.2	32.7	40.8
Interior Measurement	76.6	77.3	70.7	57.7	53.6	71.3
Interior Adjusted	76.6	77.3	70.7	57.7	53.6	71.3
Noise Reduction	**20.9**	**19.7**	**26.8**	**37.4**	**37.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.4	37.4	38.3	29.2	24.0	41.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.5 dB**

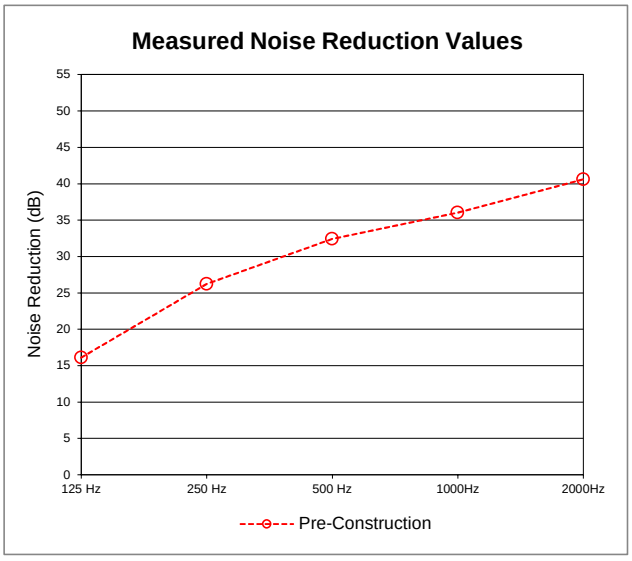


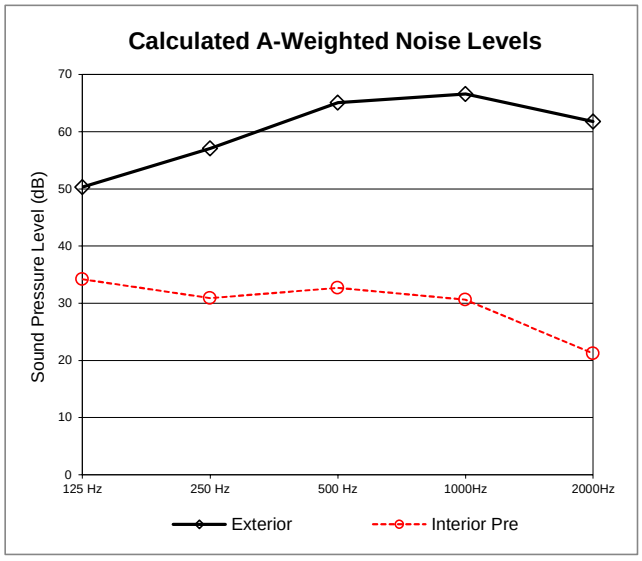


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Thom	Tested Room:	Kitchen Façade
Address:	2620 S 148th St	Exposed Surface:	Façade & Roof
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	57.5	55.2	64.9	57.6	53.2	63.8
Exterior Measurement (flush)	92.7	95.1	93.9	89.4	86.0	95.9
Exterior Adjusted	86.7	89.1	87.9	83.4	80.0	89.9
Interior Background	39.2	30.3	31.4	32.1	28.4	36.1
Interior Measurement	70.6	62.9	55.5	47.5	39.7	58.7
Interior Adjusted	70.6	62.9	55.5	47.4	39.4	58.7
Noise Reduction	**16.1**	**26.2**	**32.4**	**36.0**	**40.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.2	30.9	32.7	30.6	21.2	38.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.5 dB**

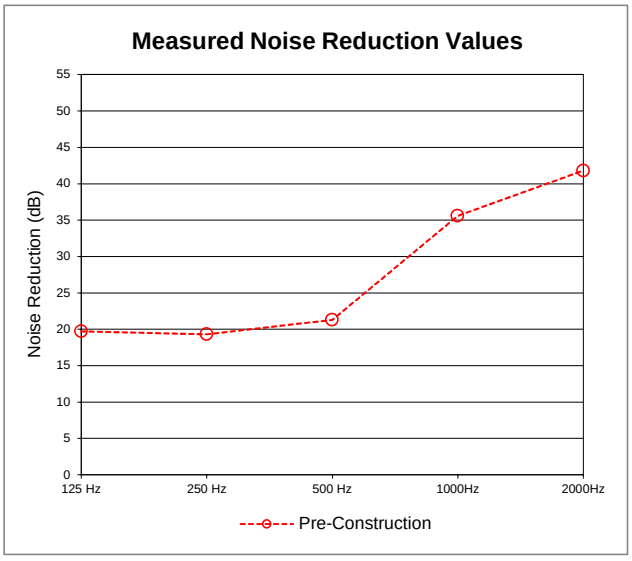


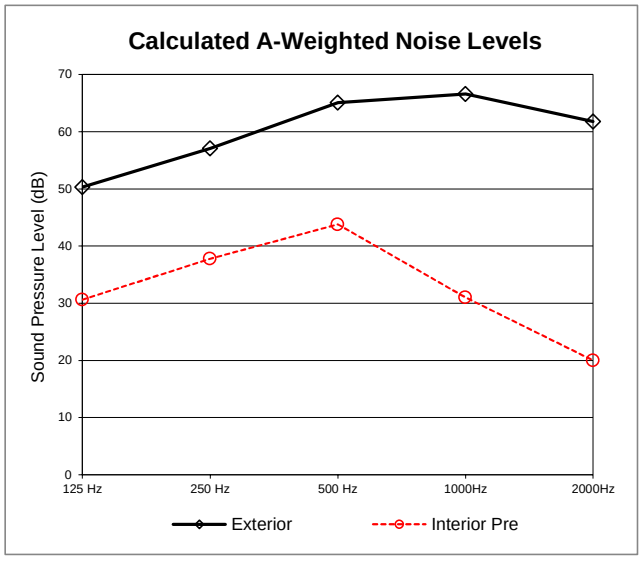


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Thom	Tested Room:	Bedroom 1 Façade
Address:	2620 S 148th St	Exposed Surface:	Façade & Roof
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	41.8	37.6	37.1	36.7	33.3	41.0
Exterior Measurement (flush)	86.7	81.8	84.9	84.5	82.2	89.8
Exterior Adjusted	80.7	75.8	78.9	78.5	76.2	83.8
Interior Background	34.8	26.8	19.8	15.7	17.3	26.5
Interior Measurement	61.0	56.5	57.6	42.9	34.5	56.1
Interior Adjusted	61.0	56.5	57.6	42.9	34.4	56.1
Noise Reduction	**19.7**	**19.3**	**21.3**	**35.6**	**41.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.6	37.8	43.8	31.0	20.0	45.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**24.9 dB**

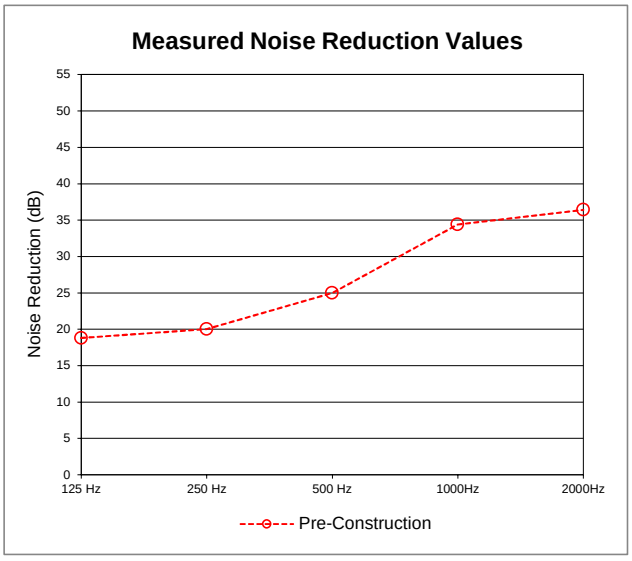


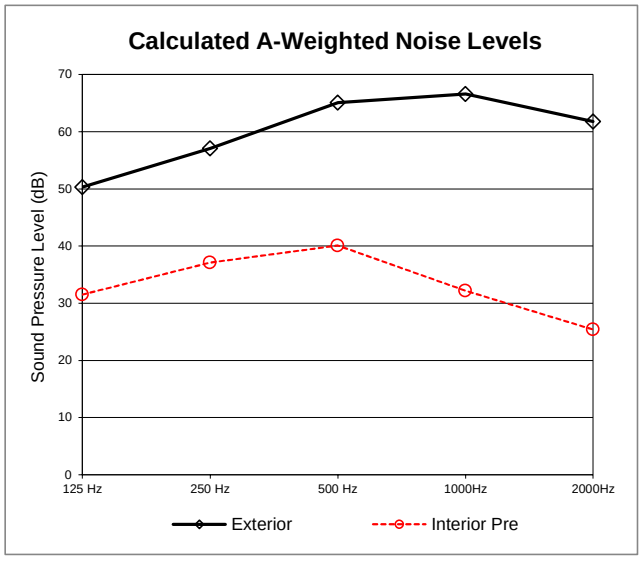


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Thom	Tested Room:	Bedroom 2 Façade
Address:	2620 S 148th St	Exposed Surface:	Façade & Roof
Local City:	SeaTac	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

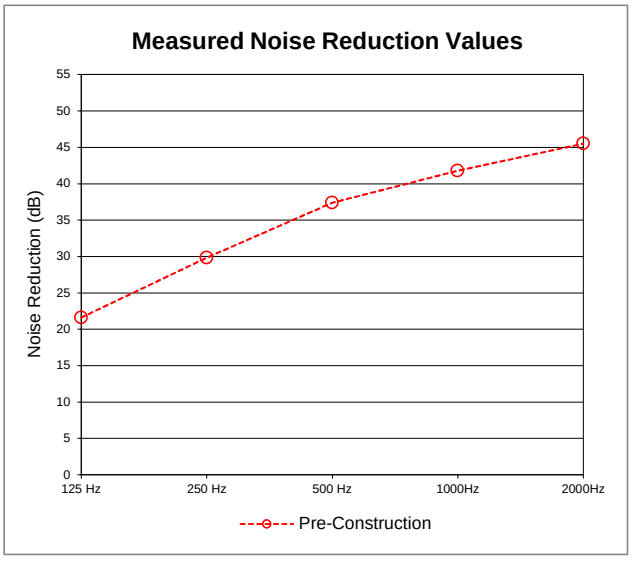
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	41.8	37.6	37.1	36.7	33.3	41.0
Exterior Measurement (flush)	88.7	86.1	87.6	85.6	84.1	91.8
Exterior Adjusted	82.7	80.1	81.6	79.6	78.1	85.8
Interior Background	37.8	36.6	23.5	20.6	25.2	32.8
Interior Measurement	63.9	60.1	56.6	45.2	41.8	57.1
Interior Adjusted	63.9	60.1	56.6	45.2	41.7	57.1
Noise Reduction	**18.8**	**20.0**	**25.0**	**34.4**	**36.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.5	37.1	40.1	32.2	25.4	42.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**27.3 dB**

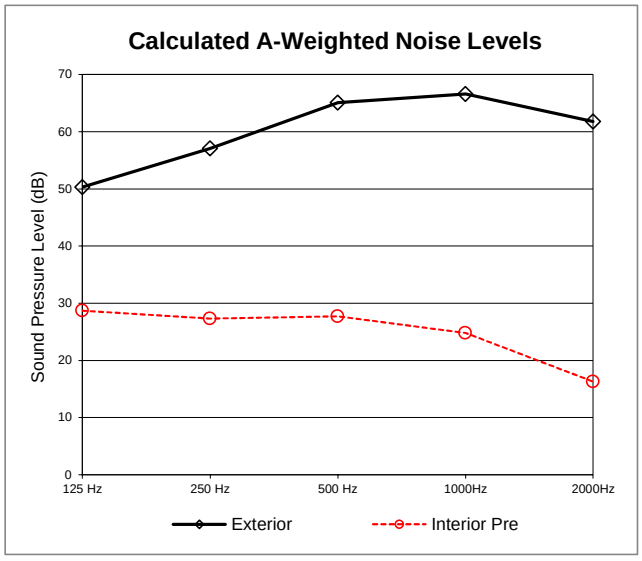




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Thom	Tested Room:	Bedroom 3 Façade
Address:	2620 S 148th St	Exposed Surface:	Façade & Roof
Local City:	SeaTac	Floor / Stories:	1 of 1

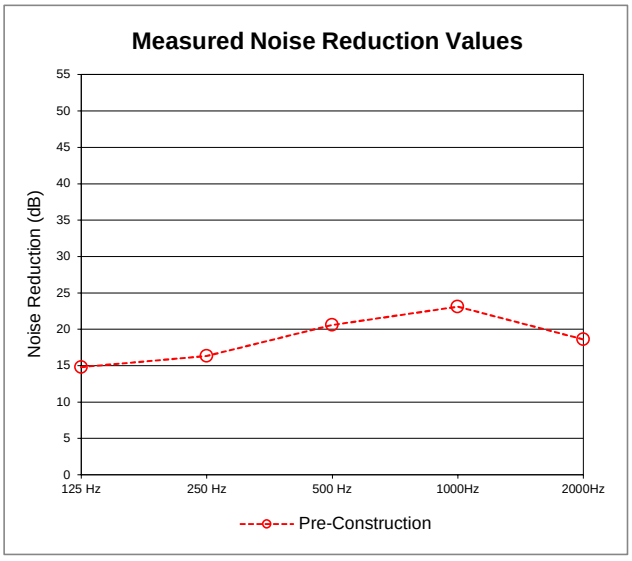
Pre-Construction Sound Pressure Levels (dB)						
May 1, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	57.6	55.7	56.5	65.8	57.2	66.9
Exterior Measurement (flush)	93.2	93.6	94.2	91.0	86.7	96.2
Exterior Adjusted	87.2	87.6	88.2	85.0	80.7	90.2
Interior Background	23.1	27.3	16.4	18.8	17.7	26.1
Interior Measurement	65.6	57.8	50.8	43.2	35.3	53.9
Interior Adjusted	65.6	57.8	50.8	43.2	35.2	53.9
Noise Reduction	**21.6**	**29.8**	**37.4**	**41.8**	**45.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.7	27.3	27.7	24.8	16.3	33.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.6 dB**

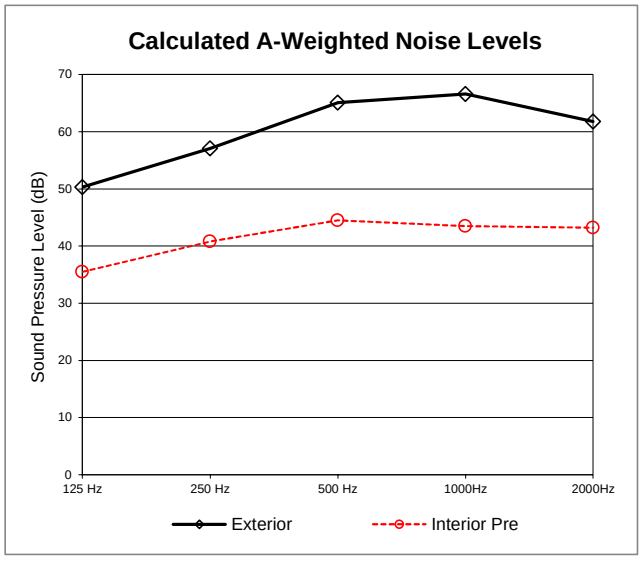




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	McDowell	Tested Room:	Living / Kitchen Façade
Address:	2560 S 152nd St	Exposed Surface:	Façade & Roof
Local City:	Seatac	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)							
May 7, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		64.3	57.0	54.1	56.7	48.9	59.3
Exterior Measurement	(flush)	82.3	79.7	84.5	80.6	77.4	86.2
Exterior Adjusted		76.2	73.7	78.5	74.6	71.4	80.2
Interior Background		33.5	24.1	22.6	27.6	28.6	34.5
Interior Measurement		61.4	57.4	57.9	51.5	52.8	59.7
Interior Adjusted		61.4	57.4	57.9	51.5	52.8	59.7
Noise Reduction		**14.8**	**16.3**	**20.6**	**23.1**	**18.6**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		35.5	40.8	44.5	43.5	43.2	49.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**20.6 dB**

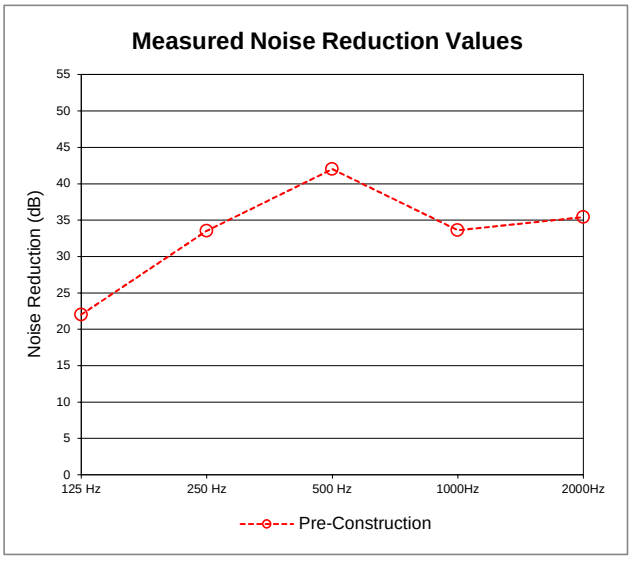


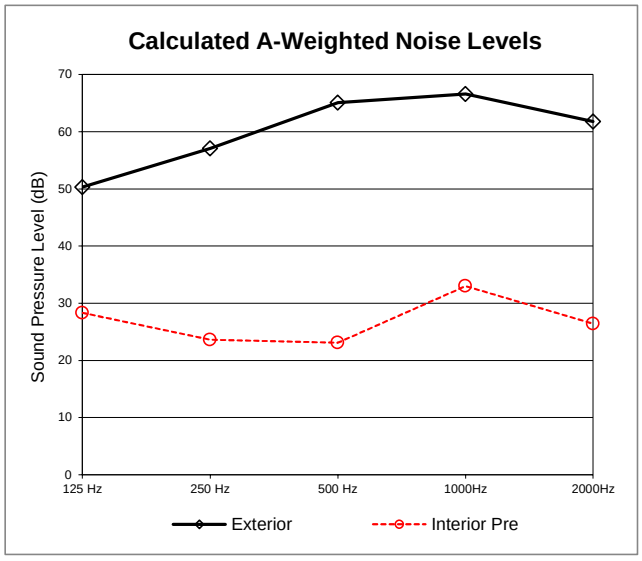


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	McDowell	Tested Room:	Bedroom 1 Façade 1
Address:	2560 S 152nd St	Exposed Surface:	Façade
Local City:	Seatac	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

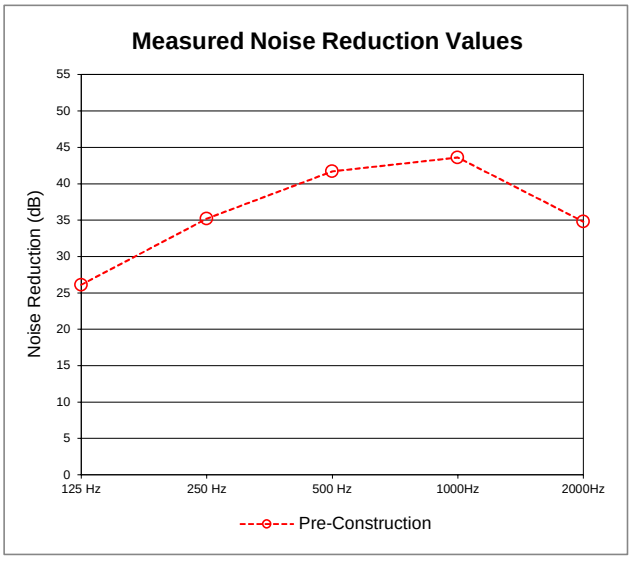
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	63.4	55.0	56.0	57.2	48.7	59.6
Exterior Measurement (flush)	87.9	89.4	89.5	86.5	83.9	92.6
Exterior Adjusted	81.9	83.4	83.5	80.5	77.9	86.6
Interior Background	34.5	24.3	24.9	21.4	19.0	28.0
Interior Measurement	59.9	49.9	41.6	46.9	42.5	50.7
Interior Adjusted	59.9	49.9	41.5	46.9	42.5	50.7
Noise Reduction	**22.0**	**33.5**	**42.0**	**33.6**	**35.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.3	23.6	23.1	33.0	26.4	35.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.5 dB**

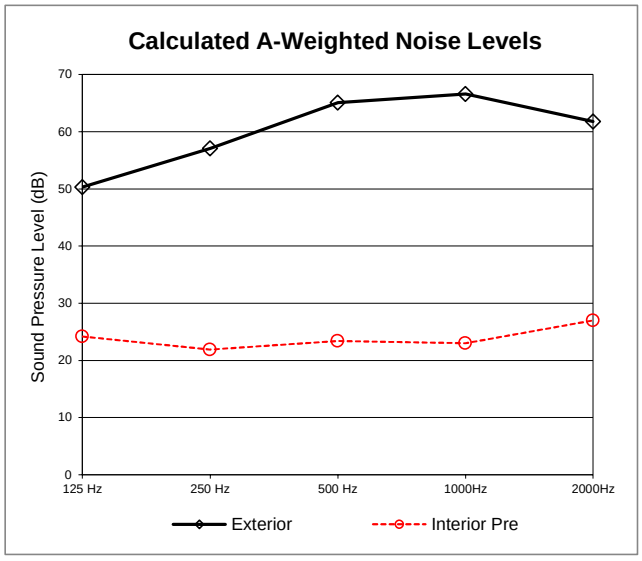




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	McDowell	Tested Room:	Bedroom 1 Façade 2
Address:	2560 S 152nd St	Exposed Surface:	Façade & Roof
Local City:	Seatac	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)						
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.0	50.0	48.5	50.6	44.1	53.8
Exterior Measurement (flush)	96.9	95.8	95.5	93.3	89.0	98.3
Exterior Adjusted	90.9	89.8	89.5	87.3	83.0	92.3
Interior Background	34.5	24.3	24.9	21.4	19.0	28.0
Interior Measurement	64.8	54.6	47.8	43.7	48.2	54.8
Interior Adjusted	64.8	54.6	47.8	43.7	48.2	54.8
Noise Reduction	**26.1**	**35.2**	**41.7**	**43.6**	**34.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	24.2	21.9	23.4	23.0	27.0	31.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.7 dB**

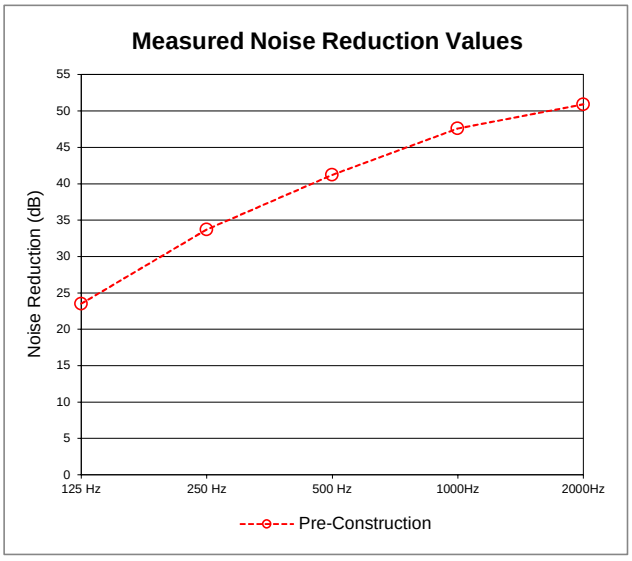


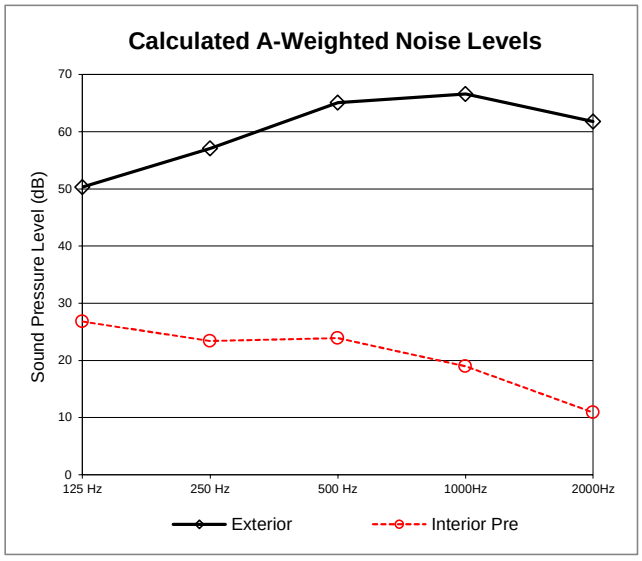


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	McDowell	Tested Room:	Bedroom 2 Façade
Address:	2560 S 152nd St	Exposed Surface:	Façade & Roof
Local City:	Seatac	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

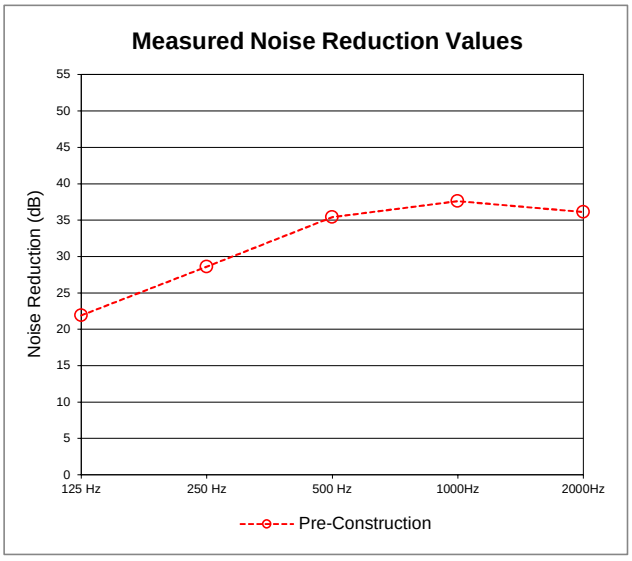
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	51.9	46.8	44.8	47.6	37.6	50.4
Exterior Measurement (flush)	92.2	94.9	93.8	90.6	88.5	97.1
Exterior Adjusted	86.2	88.9	87.8	84.6	82.5	91.1
Interior Background	32.4	23.3	19.1	22.1	25.1	30.1
Interior Measurement	62.7	55.2	46.6	37.1	32.5	51.1
Interior Adjusted	62.7	55.2	46.6	37.0	31.6	51.1
Noise Reduction	**23.5**	**33.7**	**41.2**	**47.6**	**50.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.8	23.4	23.9	19.0	10.9	30.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**39.9 dB**

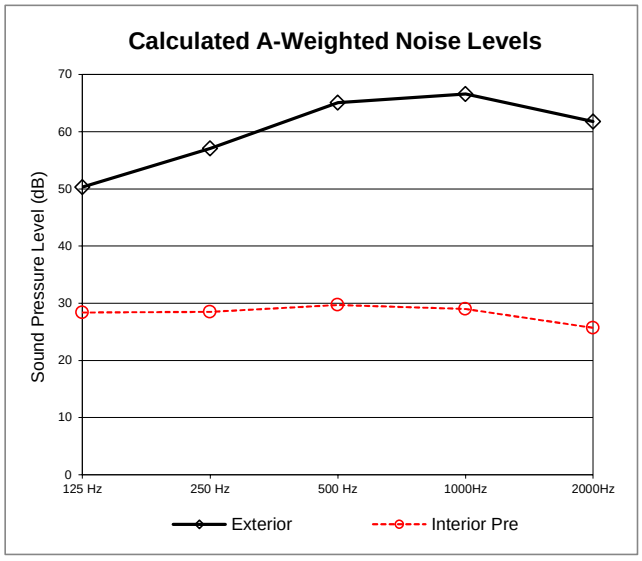




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	McDowell	Tested Room:	Bedroom 3 Façade
Address:	2560 S 152nd St	Exposed Surface:	Façade
Local City:	Seatac	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)						
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	63.4	55.0	56.0	57.2	48.7	59.6
Exterior Measurement (flush)	93.9	89.8	90.7	88.0	85.4	93.8
Exterior Adjusted	87.9	83.8	84.7	82.0	79.4	87.8
Interior Background	34.0	21.8	18.4	16.7	17.6	26.0
Interior Measurement	66.0	55.2	49.3	44.4	43.3	53.5
Interior Adjusted	66.0	55.2	49.3	44.4	43.3	53.5
Noise Reduction	**21.9**	**28.6**	**35.4**	**37.6**	**36.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.4	28.5	29.7	29.0	25.7	35.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.6 dB**

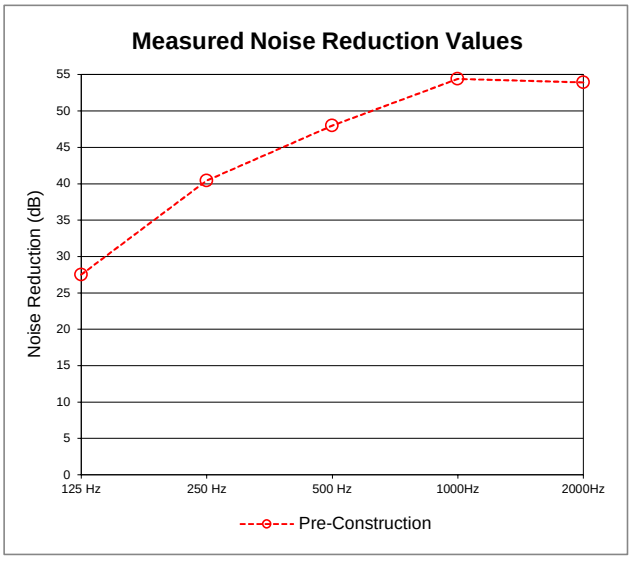


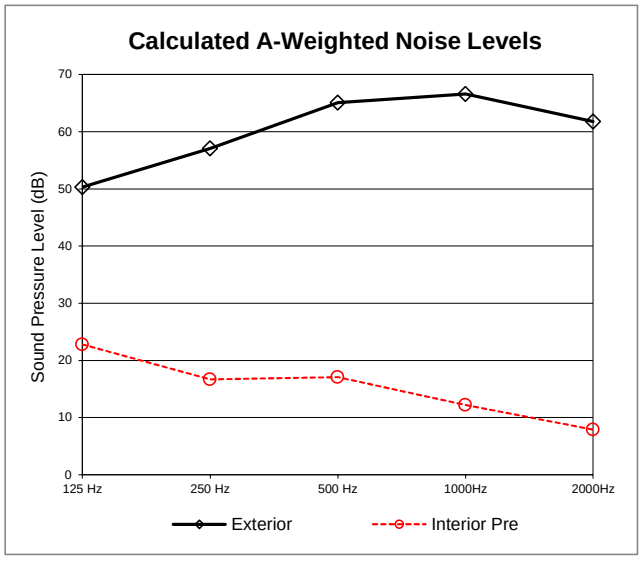


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	McDowell	Tested Room:	Office Façade
Address:	2560 S 152nd St	Exposed Surface:	Façade
Local City:	Seatac	Floor / Stories:	2 of 2

Pre-Construction Sound Pressure Levels (dB)

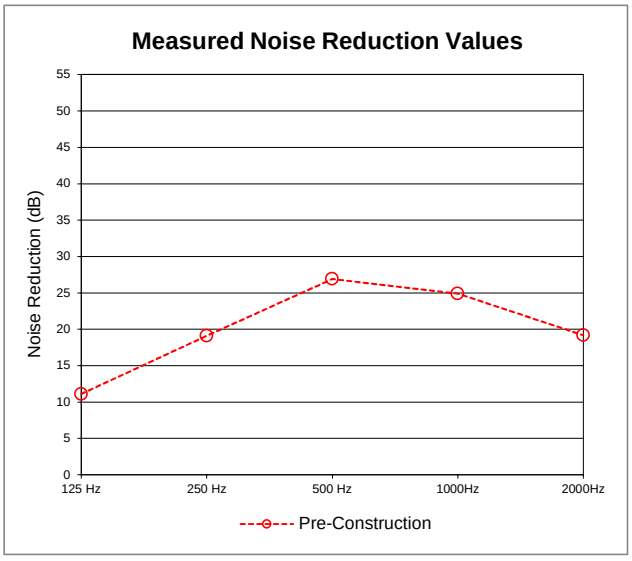
May 7, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	47.3	38.1	37.8	38.3	31.9	45.5
Exterior Measurement (flush)	95.5	95.2	93.3	91.2	87.1	96.2
Exterior Adjusted	89.5	89.2	87.3	85.2	81.1	90.2
Interior Background	35.9	25.2	20.6	18.1	17.8	26.4
Interior Measurement	62.0	48.8	39.4	31.0	27.7	46.5
Interior Adjusted	62.0	48.8	39.3	30.8	27.2	46.5
Noise Reduction	**27.5**	**40.4**	**48.0**	**54.4**	**53.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	22.8	16.7	17.1	12.2	7.9	24.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**45.1 dB**

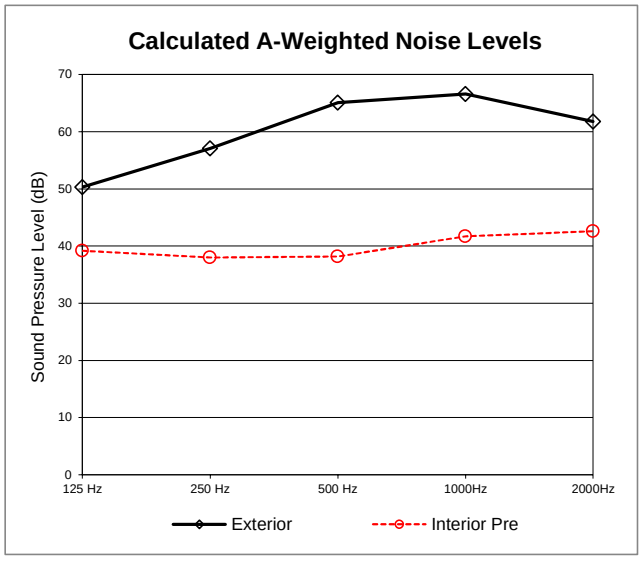




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Neuharth	Tested Room:	Living / Dining Façade
Address:	824 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

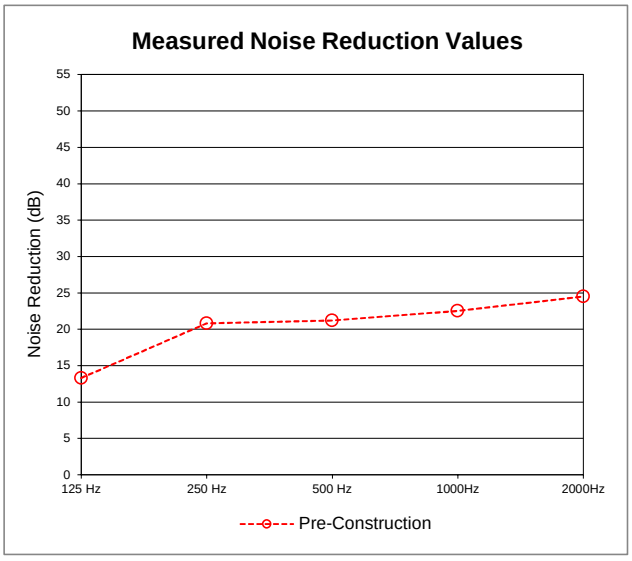
Pre-Construction Sound Pressure Levels (dB)						
May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.2	51.1	51.5	51.4	46.4	54.7
Exterior Measurement (flush)	85.2	82.8	87.0	84.0	81.2	89.6
Exterior Adjusted	79.2	76.8	81.0	78.0	75.2	83.6
Interior Background	40.1	33.0	33.7	29.1	30.0	38.1
Interior Measurement	68.1	57.7	54.1	53.1	56.0	61.6
Interior Adjusted	68.1	57.7	54.1	53.1	56.0	61.6
Noise Reduction	**11.1**	**19.1**	**26.9**	**24.9**	**19.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	39.2	38.0	38.2	41.7	42.6	47.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**22.7 dB**

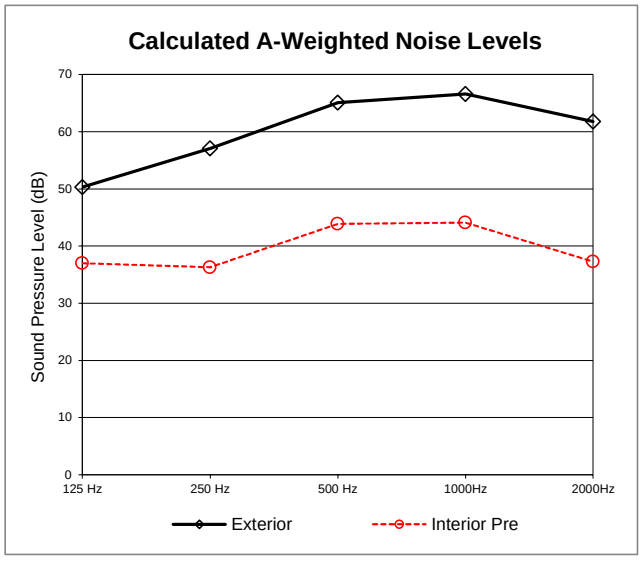




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Neuharth	Tested Room:	Kitchen Façade
Address:	824 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 8, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		48.5	43.8	47.6	47.9	42.0	50.8
Exterior Measurement	(flush)	94.3	97.8	96.4	93.7	89.7	99.2
Exterior Adjusted		88.3	91.8	90.4	87.7	83.7	93.2
Interior Background		38.7	36.5	38.0	31.8	22.9	37.2
Interior Measurement		75.0	71.0	69.2	65.2	59.2	71.3
Interior Adjusted		75.0	71.0	69.2	65.2	59.2	71.3
Noise Reduction		**13.3**	**20.8**	**21.2**	**22.5**	**24.5**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		37.0	36.3	43.9	44.1	37.3	48.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**21.9 dB**

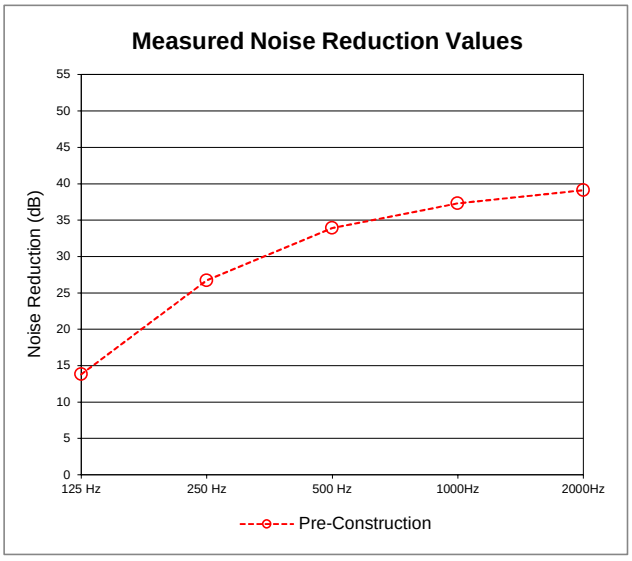


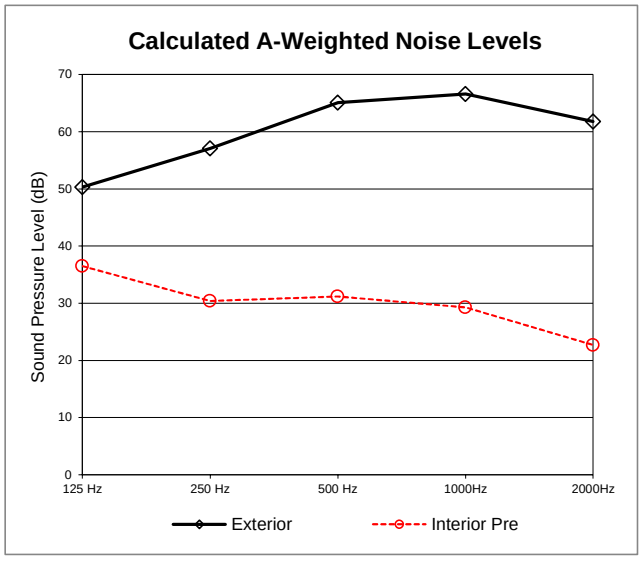


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Neuharth	Tested Room:	Bedroom 1 Façade
Address:	824 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	48.5	43.8	47.6	47.9	42.0	50.8
Exterior Measurement (flush)	94.5	93.6	94.3	90.8	86.5	96.3
Exterior Adjusted	88.5	87.6	88.3	84.8	80.5	90.3
Interior Background	33.1	31.3	31.8	27.6	27.1	33.8
Interior Measurement	74.7	60.9	54.4	47.5	41.6	59.6
Interior Adjusted	74.7	60.9	54.4	47.5	41.4	59.6
Noise Reduction	**13.8**	**26.7**	**33.9**	**37.3**	**39.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	36.5	30.4	31.2	29.3	22.7	39.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.0 dB**

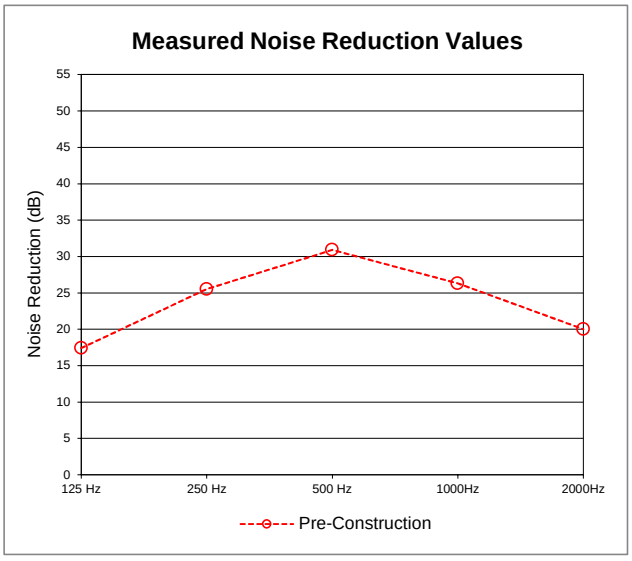


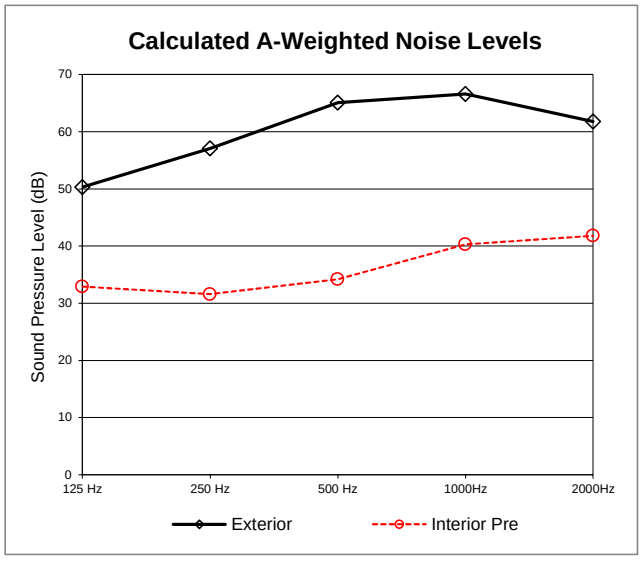


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Neuharth	Tested Room:	Bedroom 2 Façade
Address:	824 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.2	51.1	51.5	51.4	46.4	54.7
Exterior Measurement (flush)	86.0	83.4	85.9	82.9	80.2	88.8
Exterior Adjusted	80.0	77.4	79.9	76.9	74.2	82.8
Interior Background	40.6	32.9	30.7	28.9	29.7	35.7
Interior Measurement	62.6	52.0	49.1	50.6	54.2	58.9
Interior Adjusted	62.6	51.9	49.0	50.6	54.2	58.9
Noise Reduction	**17.4**	**25.5**	**30.9**	**26.3**	**20.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.9	31.6	34.2	40.3	41.8	45.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**25.0 dB**

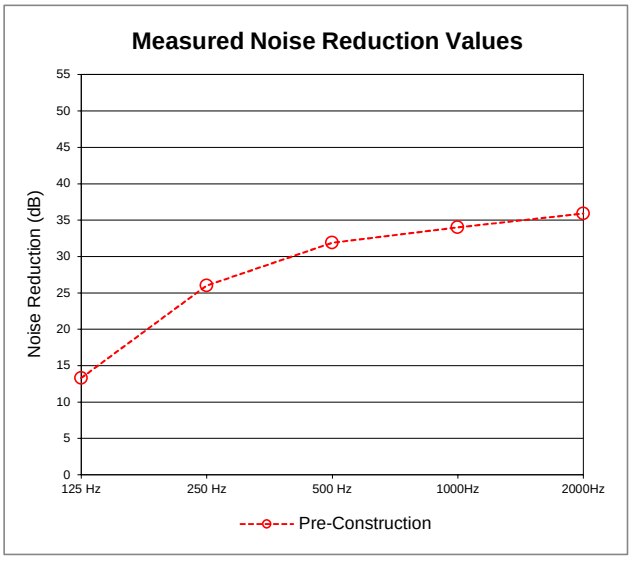


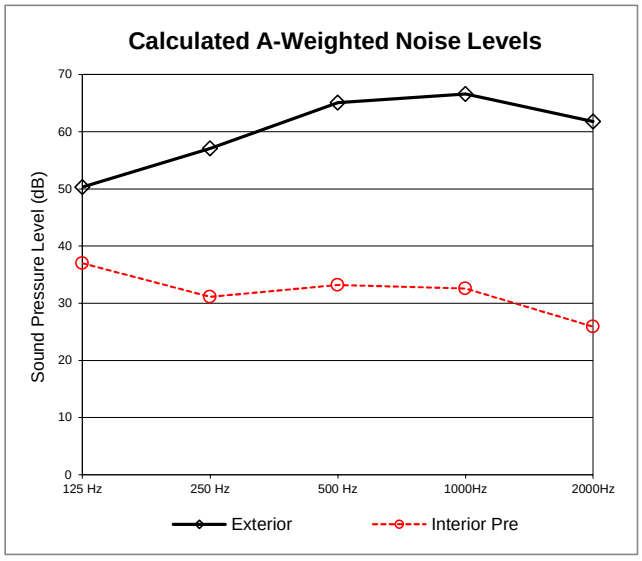


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Neuharth	Tested Room:	Bedroom 3 Façade
Address:	824 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

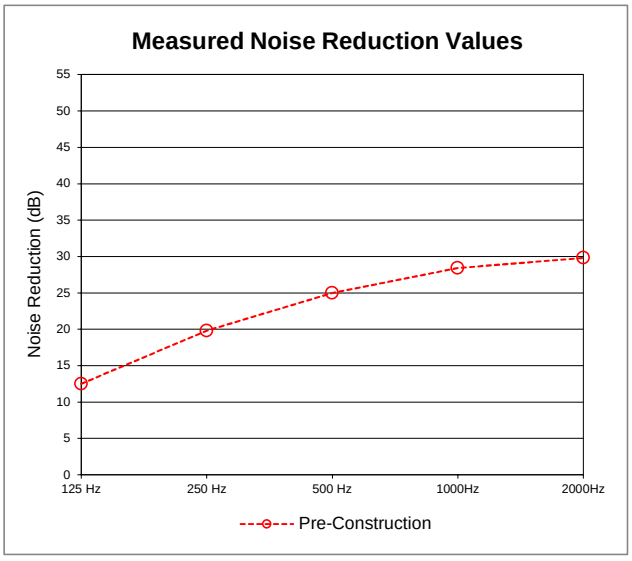
May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.2	51.1	51.5	51.4	46.4	54.7
Exterior Measurement (flush)	85.0	85.9	87.5	84.7	83.2	91.2
Exterior Adjusted	79.0	79.9	81.5	78.7	77.2	85.2
Interior Background	34.0	31.2	30.9	29.1	27.6	34.7
Interior Measurement	65.7	53.9	49.7	44.8	41.5	54.4
Interior Adjusted	65.7	53.9	49.6	44.7	41.3	54.4
Noise Reduction	**13.3**	**26.0**	**31.9**	**34.0**	**35.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	37.0	31.1	33.2	32.6	25.9	40.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.7 dB**

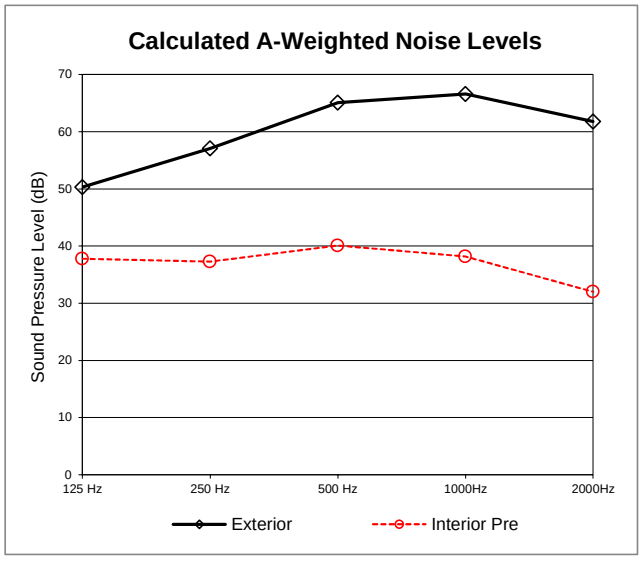




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Neuharth	Tested Room:	Office Façade
Address:	824 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 8, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	51.4	47.1	50.4	49.4	42.0	52.4
Exterior Measurement (flush)	92.1	94.7	94.6	90.0	84.7	95.6
Exterior Adjusted	86.1	88.7	88.6	84.0	78.7	89.6
Interior Background	39.1	33.7	30.0	24.4	21.6	32.7
Interior Measurement	73.6	68.9	63.6	55.6	48.9	65.4
Interior Adjusted	73.6	68.9	63.6	55.6	48.9	65.4
Noise Reduction	**12.5**	**19.8**	**25.0**	**28.4**	**29.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	37.8	37.3	40.1	38.2	32.0	44.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**25.3 dB**

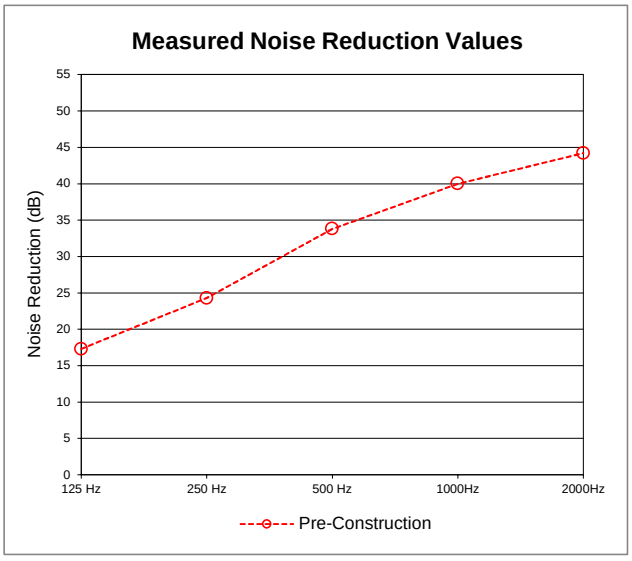


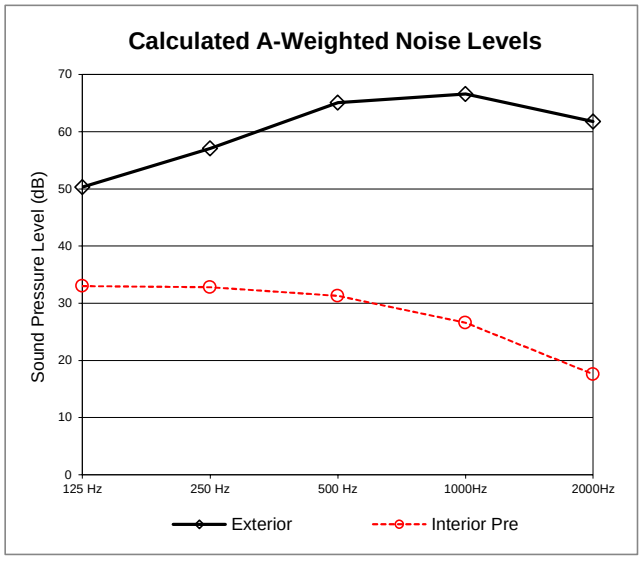


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Parker	Tested Room:	Living Room Façade
Address:	825 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.3	52.7	54.9	50.8	43.5	55.4
Exterior Measurement (flush)	87.9	87.7	88.9	87.2	84.4	92.8
Exterior Adjusted	81.9	81.7	82.9	81.2	78.4	86.8
Interior Background	39.4	31.1	27.7	24.8	25.6	33.1
Interior Measurement	64.6	57.4	49.1	41.3	34.8	52.8
Interior Adjusted	64.6	57.4	49.1	41.2	34.2	52.8
Noise Reduction	**17.3**	**24.3**	**33.8**	**40.0**	**44.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	33.0	32.8	31.3	26.6	17.6	37.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.4 dB**

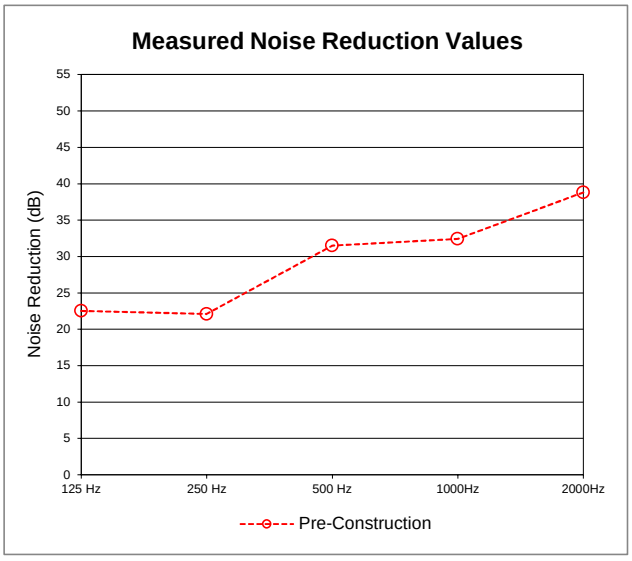


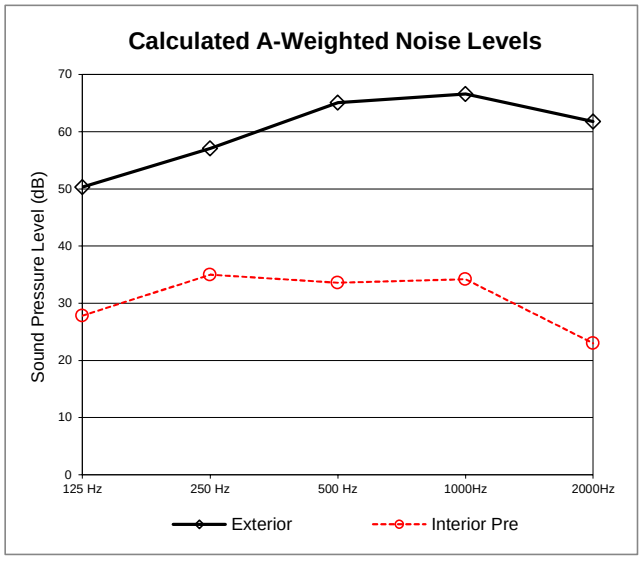


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Parker	Tested Room:	Dining Room Façade
Address:	825 S 177th Pl	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.1	52.5	50.5	46.8	42.3	52.4
Exterior Measurement (flush)	106.2	106.3	106.7	100.3	97.6	107.4
Exterior Adjusted	100.2	100.3	100.7	94.3	91.6	101.4
Interior Background	36.7	27.0	19.6	18.1	17.2	27.8
Interior Measurement	77.7	78.2	69.2	61.9	52.8	72.0
Interior Adjusted	77.7	78.2	69.2	61.9	52.8	72.0
Noise Reduction	**22.5**	**22.1**	**31.5**	**32.4**	**38.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.8	35.0	33.6	34.2	23.0	39.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.5 dB**

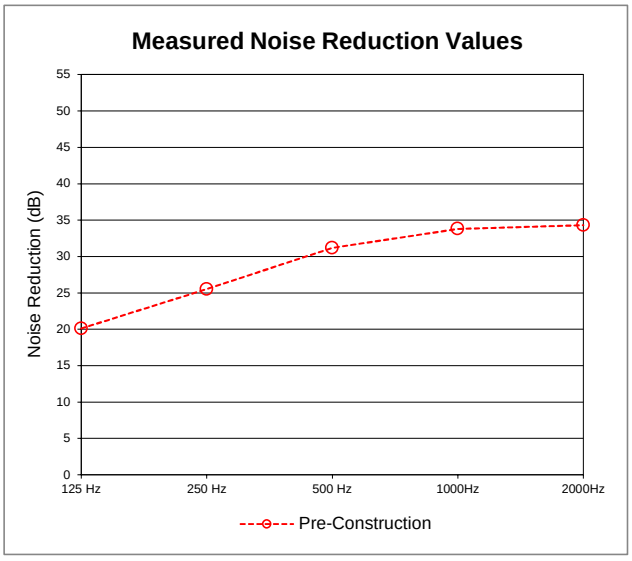


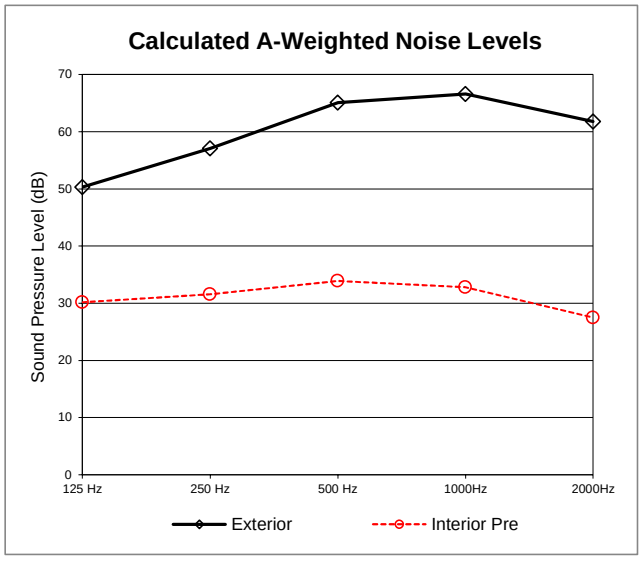


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Parker	Tested Room:	Kitchen Façade
Address:	825 S 177th Pl	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	50.0	47.1	49.5	49.5	46.8	53.7
Exterior Measurement (flush)	91.4	93.2	93.0	89.1	86.7	94.9
Exterior Adjusted	85.4	87.2	87.0	83.1	80.7	88.9
Interior Background	36.7	27.0	19.6	18.1	17.2	27.8
Interior Measurement	65.3	61.7	55.8	49.3	46.4	58.2
Interior Adjusted	65.3	61.7	55.8	49.3	46.4	58.2
Noise Reduction	**20.1**	**25.5**	**31.2**	**33.8**	**34.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.2	31.6	33.9	32.8	27.5	38.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.3 dB**

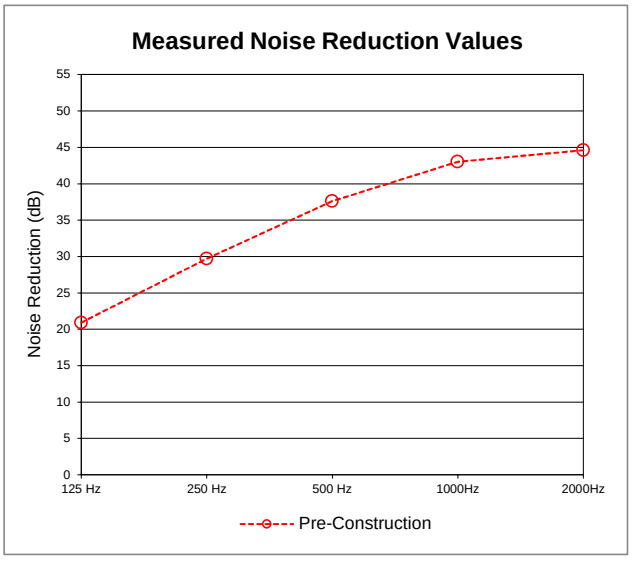


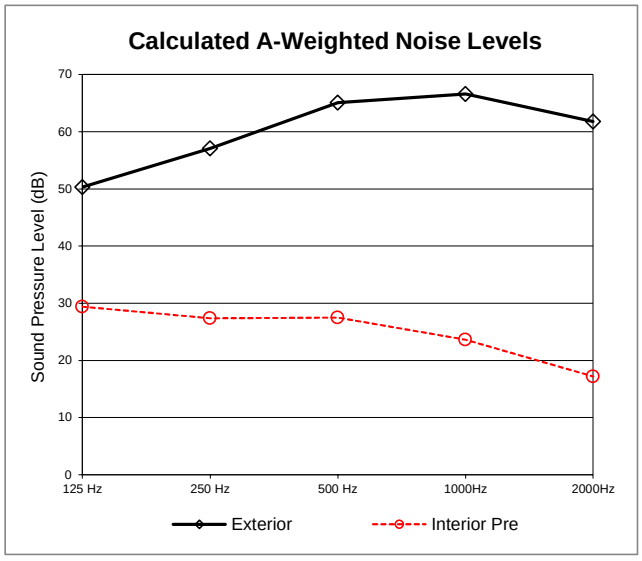


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Parker	Tested Room:	Bedroom 1 Façade
Address:	825 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	50.0	47.1	49.5	49.5	46.8	53.7
Exterior Measurement (flush)	92.9	93.2	94.0	90.6	85.8	95.7
Exterior Adjusted	86.9	87.2	88.0	84.6	79.8	89.7
Interior Background	38.6	26.2	20.0	15.6	13.3	26.5
Interior Measurement	66.0	57.5	50.4	41.6	35.2	53.7
Interior Adjusted	66.0	57.5	50.4	41.6	35.2	53.7
Noise Reduction	**20.9**	**29.7**	**37.6**	**43.0**	**44.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.4	27.4	27.5	23.6	17.2	33.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.5 dB**

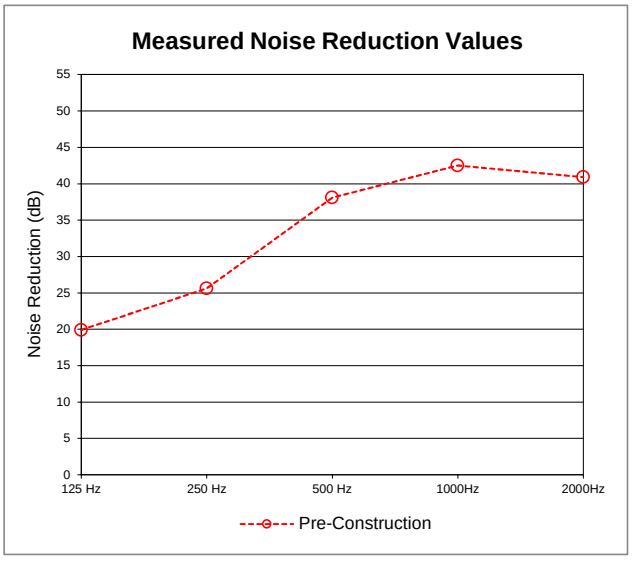


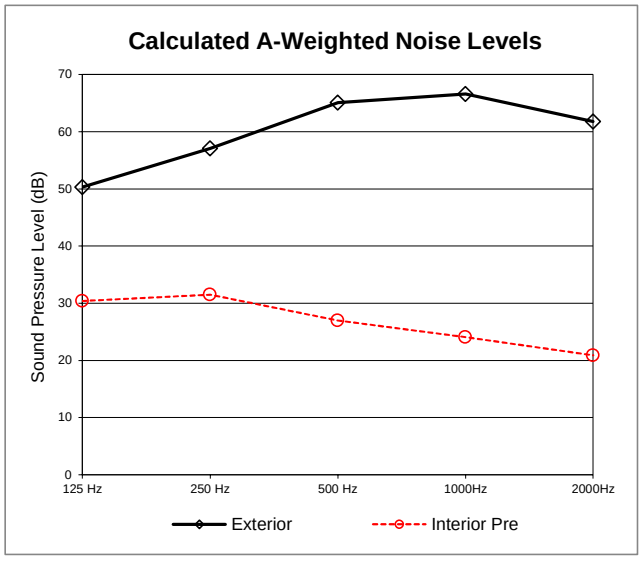


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Parker	Tested Room:	Bedroom 2 Façade
Address:	825 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.3	52.7	54.9	50.8	43.5	55.4
Exterior Measurement (flush)	89.6	81.2	87.0	83.0	80.3	88.6
Exterior Adjusted	83.6	75.2	81.0	77.0	74.3	82.6
Interior Background	29.8	22.4	22.7	17.3	16.2	26.1
Interior Measurement	63.7	49.6	42.9	34.6	33.5	48.9
Interior Adjusted	63.7	49.6	42.9	34.5	33.4	48.9
Noise Reduction	**19.9**	**25.6**	**38.1**	**42.5**	**40.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.4	31.5	27.0	24.1	20.9	35.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.7 dB**

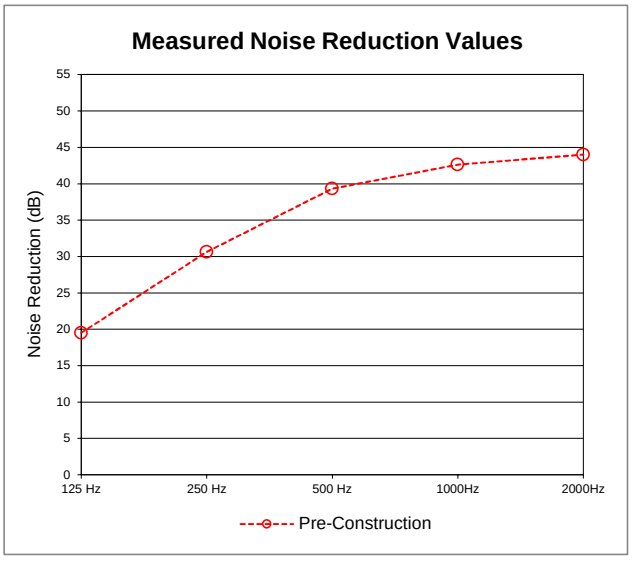


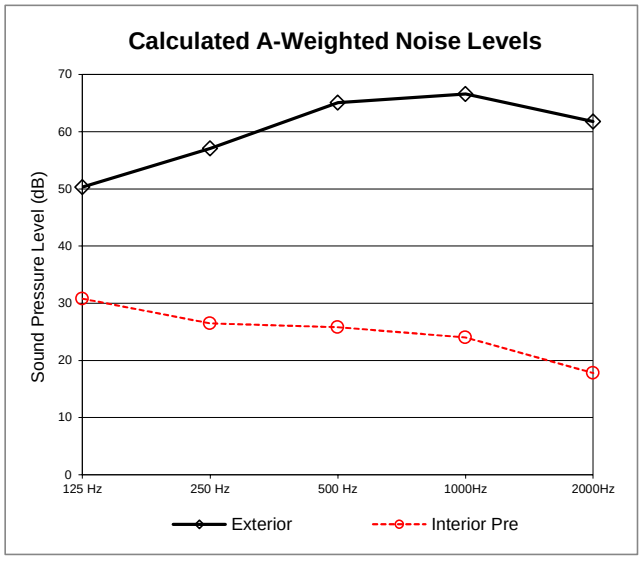


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Parker	Tested Room:	Bedroom 3 Façade
Address:	825 S 177th Pl	Exposed Surface:	Façade & Roof
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.3	52.7	54.9	50.8	43.5	55.4
Exterior Measurement (flush)	90.1	86.4	89.9	86.2	83.7	91.9
Exterior Adjusted	84.1	80.4	83.9	80.2	77.7	85.9
Interior Background	28.5	21.6	16.9	13.2	14.8	24.9
Interior Measurement	64.6	49.8	44.6	37.6	33.8	49.7
Interior Adjusted	64.6	49.8	44.6	37.6	33.7	49.7
Noise Reduction	**19.5**	**30.6**	**39.3**	**42.6**	**44.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.8	26.5	25.8	24.0	17.8	33.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.3 dB**

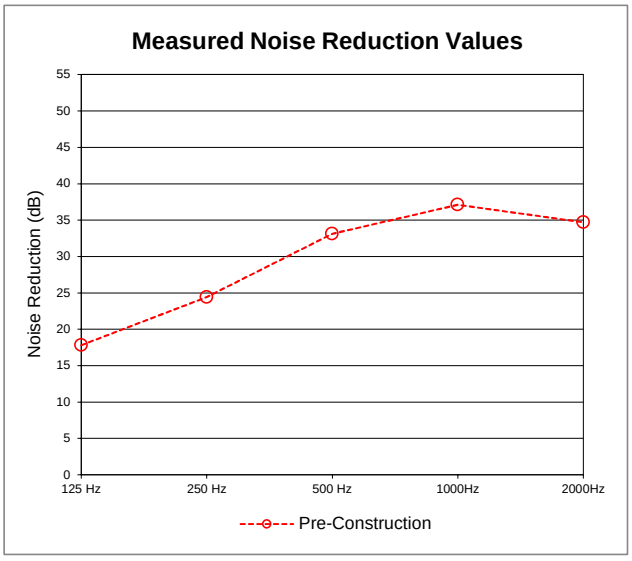


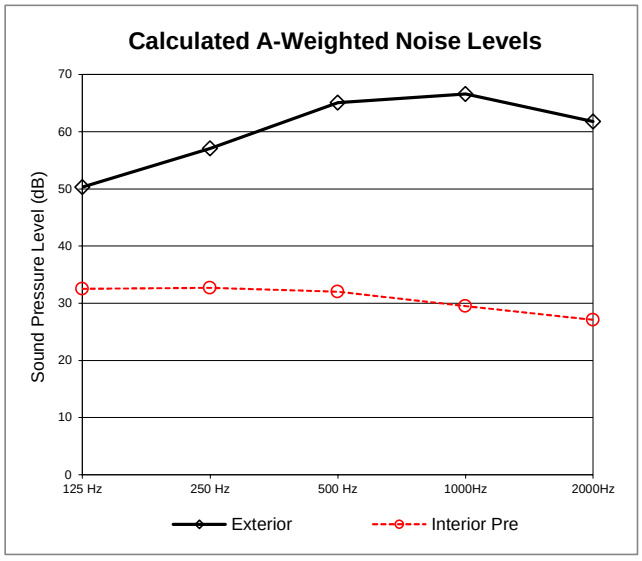


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Parker	Tested Room:	Office Façade 1
Address:	825 S 177th Pl	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	52.9	49.1	50.9	49.3	43.6	53.0
Exterior Measurement (flush)	87.8	83.3	88.5	84.2	81.3	89.9
Exterior Adjusted	81.8	77.3	82.5	78.2	75.3	83.9
Interior Background	42.0	37.7	29.0	22.3	20.9	33.1
Interior Measurement	64.0	53.0	49.4	41.2	40.6	52.5
Interior Adjusted	64.0	52.9	49.4	41.1	40.6	52.4
Noise Reduction	**17.8**	**24.4**	**33.1**	**37.1**	**34.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.5	32.7	32.0	29.5	27.1	38.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.8 dB**

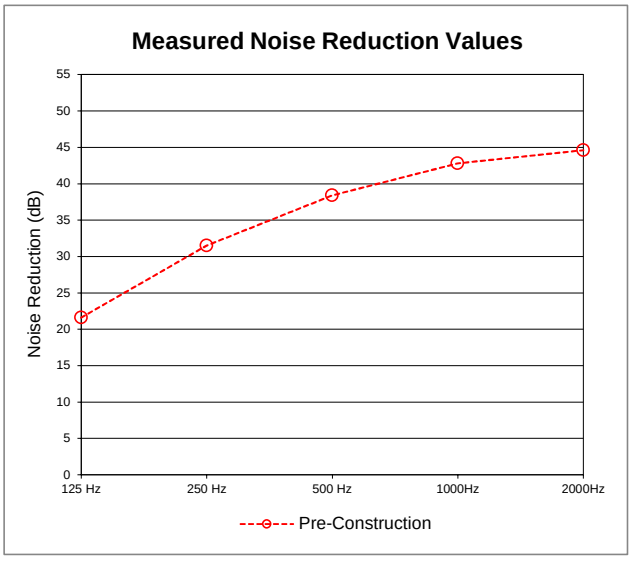


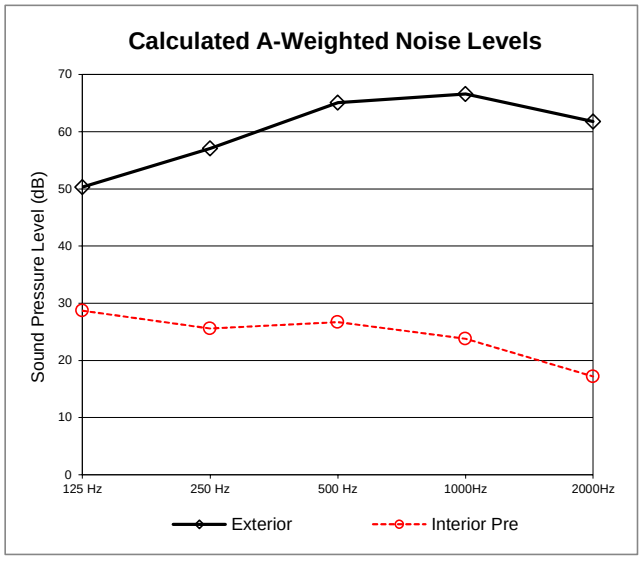


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Parker	Tested Room:	Office Façade 2
Address:	825 S 177th Pl	Exposed Surface:	Façade
Local City:	Burien	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

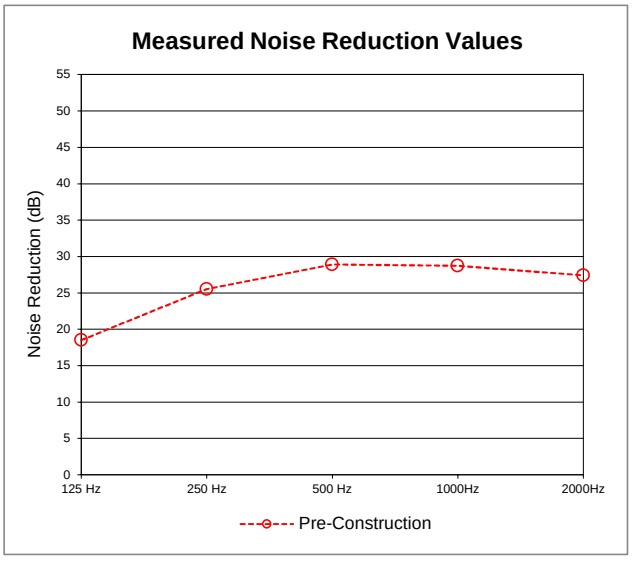
April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.1	52.5	50.5	46.8	42.3	52.4
Exterior Measurement (flush)	108.5	105.3	106.7	101.7	97.8	108.2
Exterior Adjusted	102.5	99.3	100.7	95.7	91.8	102.2
Interior Background	42.0	37.7	29.0	22.3	20.9	33.1
Interior Measurement	80.9	67.8	62.3	52.9	47.2	66.3
Interior Adjusted	80.9	67.8	62.3	52.9	47.2	66.3
Noise Reduction	**21.6**	**31.5**	**38.4**	**42.8**	**44.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.7	25.6	26.7	23.8	17.2	32.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**37.3 dB**

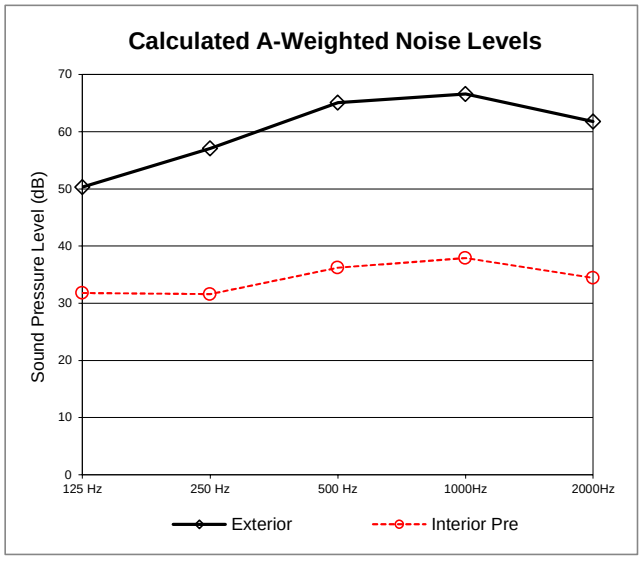




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Living / Dining Façade 1
Address:	1045 S 197th St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

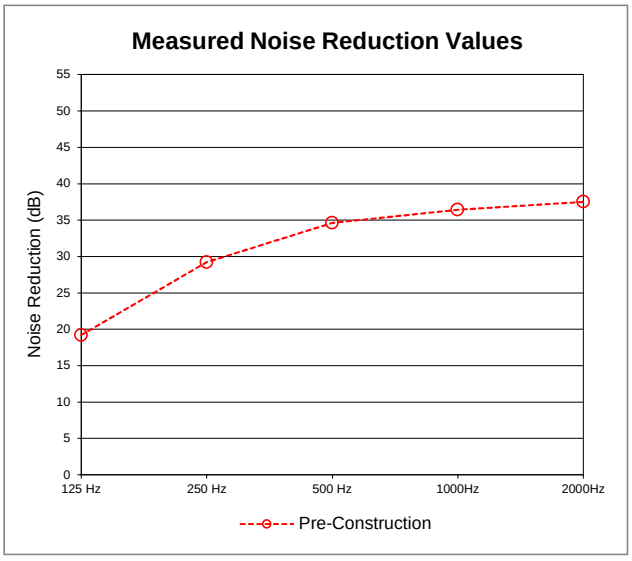
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.5	51.5	47.7	44.1	37.1	49.6
Exterior Measurement (flush)	93.7	93.6	93.8	89.7	85.3	96.0
Exterior Adjusted	87.7	87.6	87.8	83.7	79.3	90.0
Interior Background	45.3	40.9	42.6	35.3	32.9	42.6
Interior Measurement	69.2	62.1	59.0	55.0	52.0	61.8
Interior Adjusted	69.2	62.1	58.9	55.0	51.9	61.7
Noise Reduction	**18.5**	**25.5**	**28.9**	**28.7**	**27.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.8	31.6	36.2	37.9	34.4	42.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**27.9 dB**

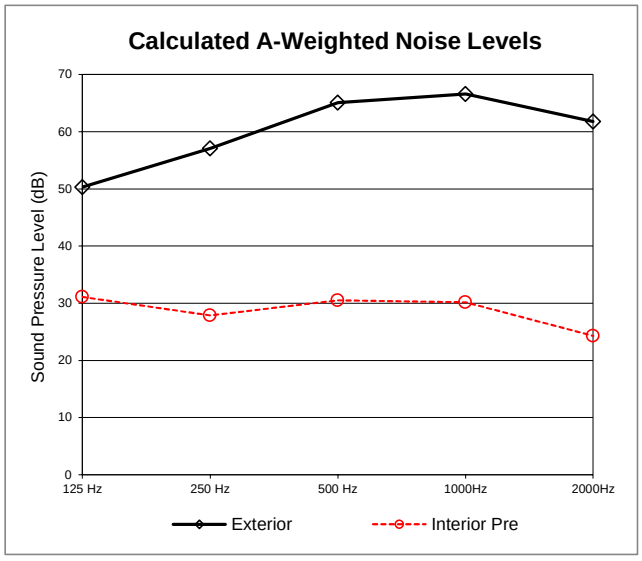




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Living / Dining Façade 2
Address:	1045 S 197th St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

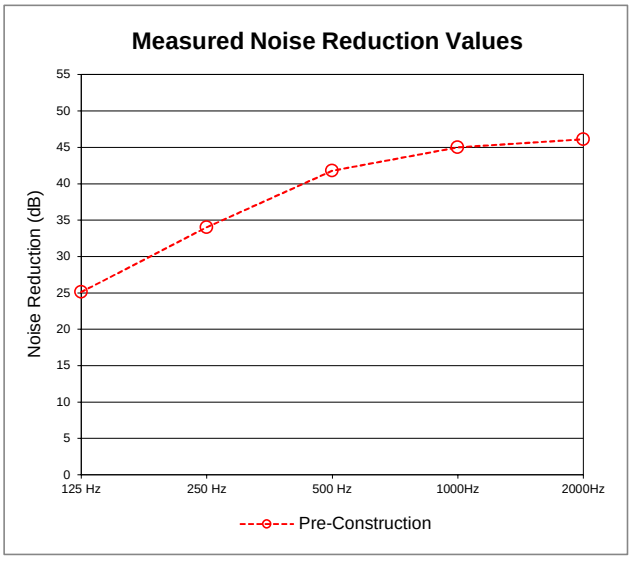
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.5	51.5	47.7	44.1	37.1	49.6
Exterior Measurement (flush)	91.0	90.1	90.5	87.1	84.2	93.3
Exterior Adjusted	85.0	84.1	84.5	81.1	78.2	87.3
Interior Background	45.3	40.9	42.6	35.3	32.9	42.6
Interior Measurement	65.8	55.1	50.6	45.2	41.4	53.7
Interior Adjusted	65.8	54.9	49.9	44.7	40.7	53.3
Noise Reduction	**19.2**	**29.2**	**34.6**	**36.4**	**37.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.1	27.9	30.5	30.2	24.3	36.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.6 dB**

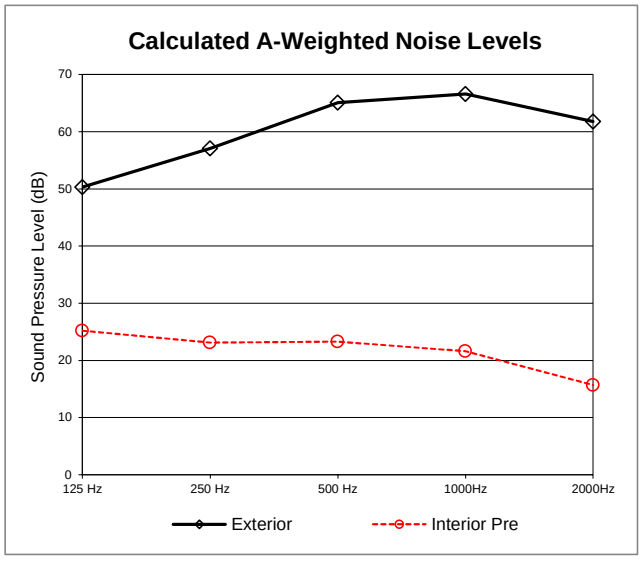




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Sitting Room Façade 1
Address:	1045 S 197th St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 2

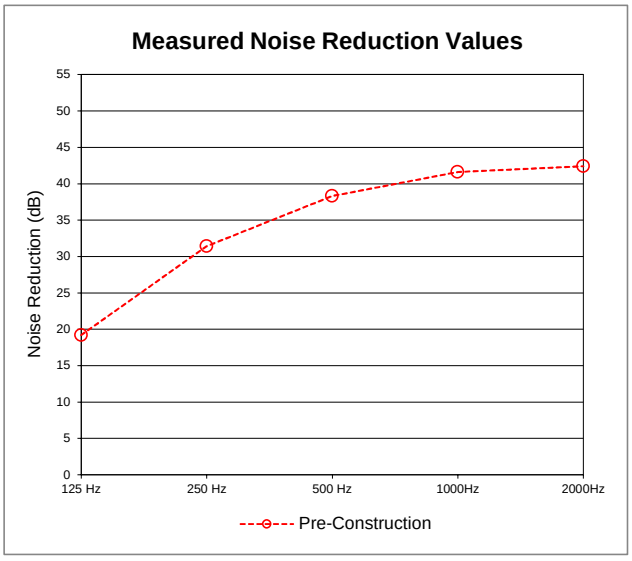
Pre-Construction Sound Pressure Levels (dB)							
May 4, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		57.8	50.8	44.7	41.3	34.2	47.8
Exterior Measurement	(flush)	107.6	109.0	106.7	101.3	94.9	108.5
Exterior Adjusted		101.6	103.0	100.7	95.3	88.9	102.5
Interior Background		45.9	37.6	35.5	35.3	26.1	38.5
Interior Measurement		76.5	69.0	58.9	50.4	42.9	63.8
Interior Adjusted		76.5	69.0	58.9	50.3	42.8	63.8
Noise Reduction		**25.1**	**34.0**	**41.8**	**45.0**	**46.1**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		25.2	23.1	23.3	21.6	15.7	29.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**40.3 dB**

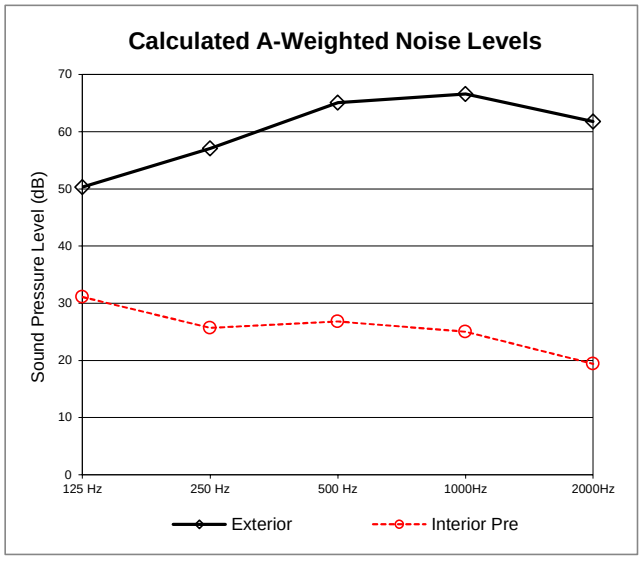




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Sitting Room Façade 2
Address:	1045 S 197th St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

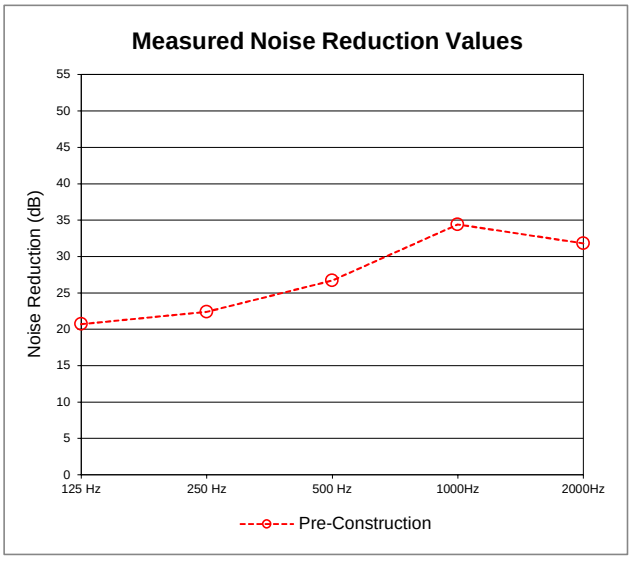
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.5	51.5	47.7	44.1	37.1	49.6
Exterior Measurement (flush)	99.0	101.3	99.7	96.8	92.0	102.2
Exterior Adjusted	93.0	95.3	93.7	90.8	86.0	96.2
Interior Background	45.9	37.6	35.5	35.3	26.1	38.5
Interior Measurement	73.8	63.9	55.4	49.4	43.7	60.8
Interior Adjusted	73.8	63.9	55.4	49.2	43.6	60.8
Noise Reduction	**19.2**	**31.4**	**38.3**	**41.6**	**42.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.1	25.7	26.8	25.0	19.4	34.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.9 dB**

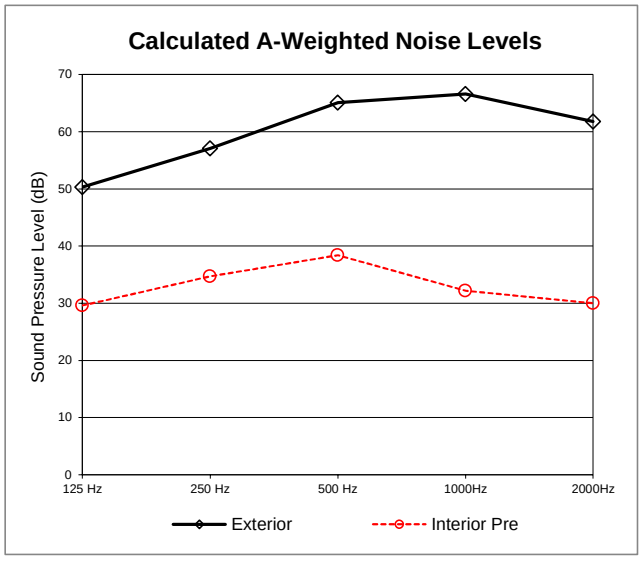




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Sitting Room Façade 3
Address:	1045 S 197th St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)							
May 4, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		57.8	50.8	44.7	41.3	34.2	47.8
Exterior Measurement	(flush)	95.0	97.3	96.7	92.9	87.5	98.5
Exterior Adjusted		89.0	91.3	90.7	86.9	81.5	92.5
Interior Background		45.9	37.6	35.5	35.3	26.1	38.5
Interior Measurement		68.3	68.9	64.0	52.6	49.7	64.4
Interior Adjusted		68.3	68.9	64.0	52.5	49.7	64.4
Noise Reduction		**20.7**	**22.4**	**26.7**	**34.4**	**31.8**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		29.6	34.7	38.4	32.2	30.0	41.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**28.7 dB**

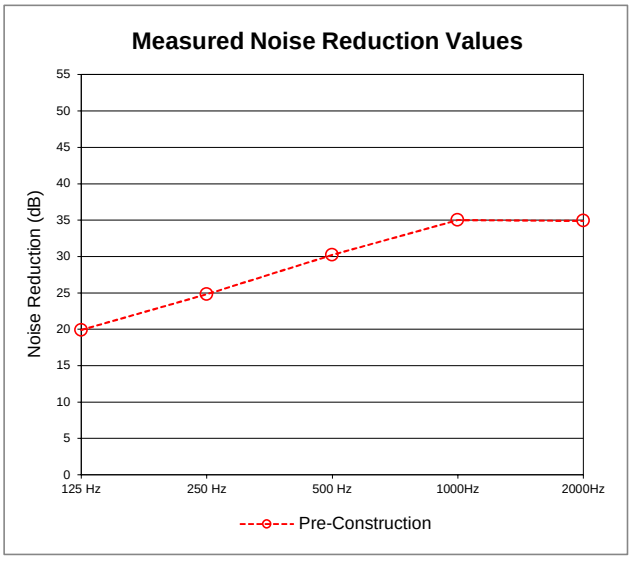


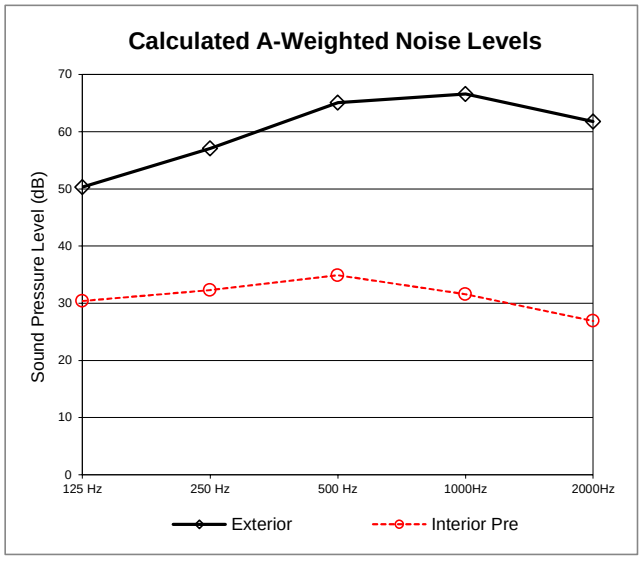


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Kitchen Façade
Address:	1045 S 197th St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 2

Pre-Construction Sound Pressure Levels (dB)

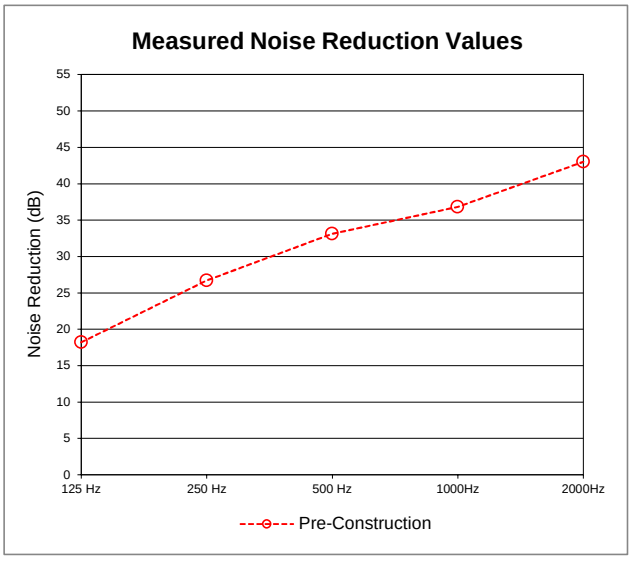
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	53.5	49.7	50.2	49.0	43.2	53.0
Exterior Measurement (flush)	94.1	92.8	94.4	92.5	87.8	97.3
Exterior Adjusted	88.1	86.8	88.4	86.5	81.8	91.3
Interior Background	46.4	43.6	41.2	35.9	30.4	42.0
Interior Measurement	68.2	62.1	58.3	51.6	47.0	59.6
Interior Adjusted	68.2	62.0	58.2	51.5	46.9	59.5
Noise Reduction	**19.9**	**24.8**	**30.2**	**35.0**	**34.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.4	32.3	34.9	31.6	26.9	38.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.1 dB**

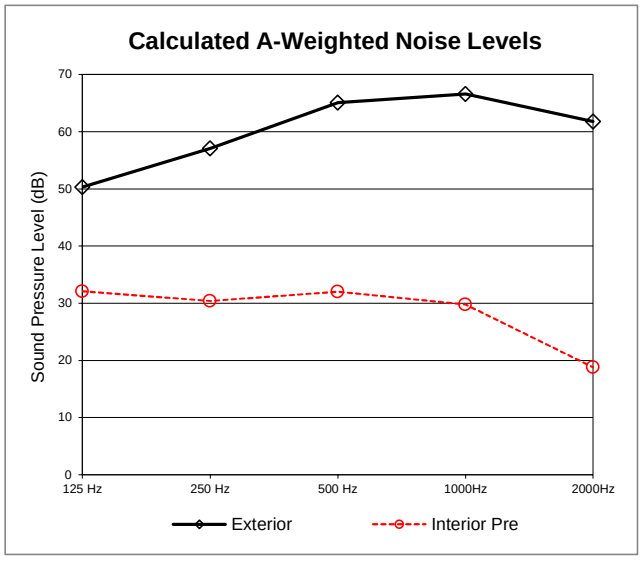




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Bedroom 1 Façade
Address:	1045 S 197th St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

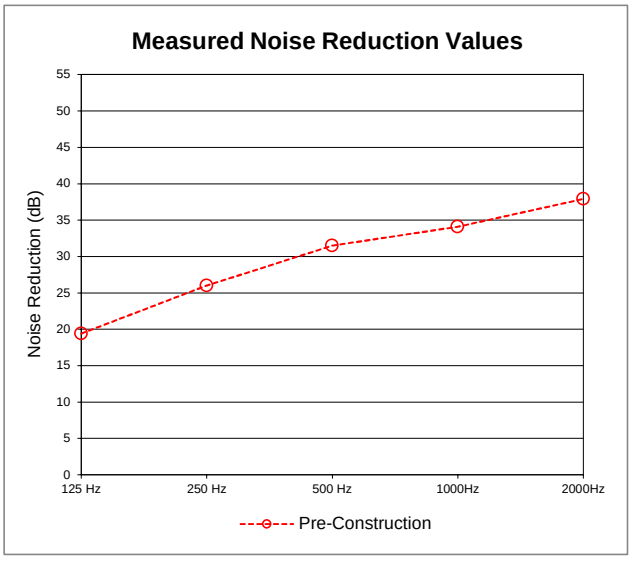
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.2	48.4	48.2	47.8	42.0	51.4
Exterior Measurement (flush)	87.7	91.1	89.7	86.7	84.2	93.1
Exterior Adjusted	81.7	85.1	83.7	80.7	78.2	87.1
Interior Background	42.2	40.9	42.3	33.2	27.7	41.1
Interior Measurement	63.5	58.5	51.2	44.3	35.9	53.6
Interior Adjusted	63.5	58.4	50.6	43.9	35.2	53.3
Noise Reduction	**18.2**	**26.7**	**33.1**	**36.8**	**43.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.1	30.4	32.0	29.8	18.8	37.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.7 dB**

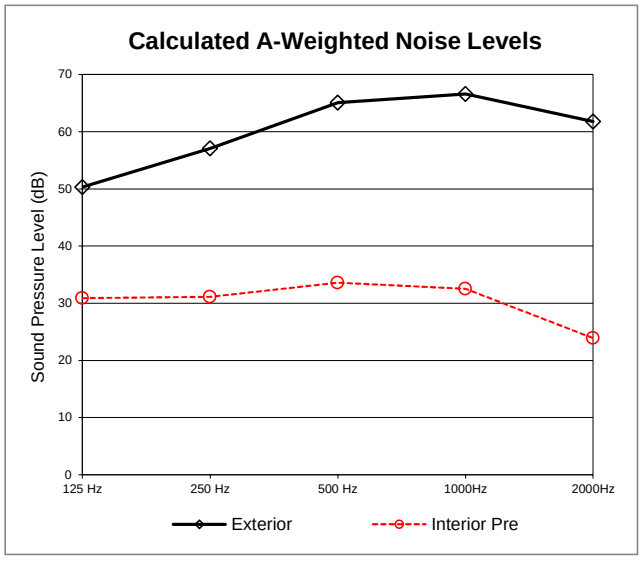




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Bedroom 2 Façade
Address:	1045 S 197th St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 2

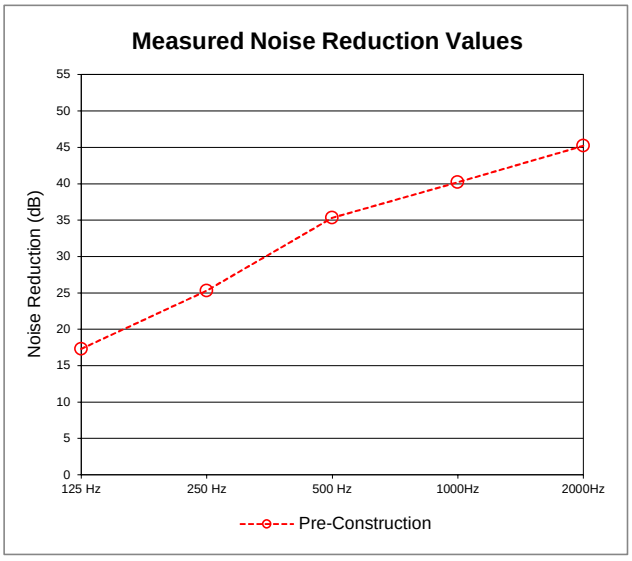
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	56.2	48.4	48.2	47.8	42.0	51.4
Exterior Measurement (flush)	89.3	93.3	91.9	89.3	85.8	95.2
Exterior Adjusted	83.3	87.3	85.9	83.3	79.8	89.2
Interior Background	43.4	43.5	45.9	35.0	29.5	43.9
Interior Measurement	63.9	61.4	55.0	49.4	42.1	57.0
Interior Adjusted	63.9	61.3	54.4	49.2	41.9	56.8
Noise Reduction	**19.4**	**26.0**	**31.5**	**34.1**	**37.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.9	31.1	33.6	32.5	23.9	38.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.7 dB**

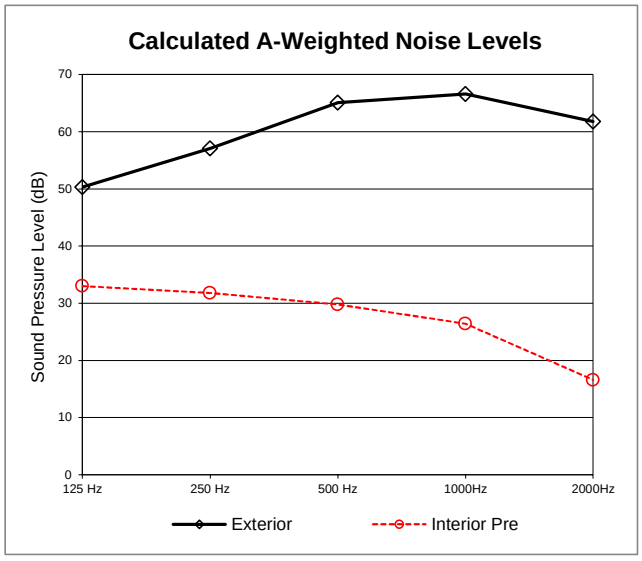




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Bedroom 3 Façade
Address:	1045 S 197th St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	2 of 2

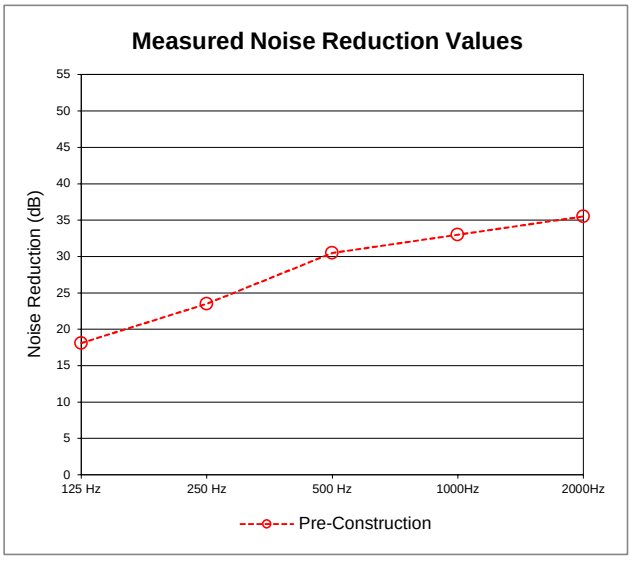
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	57.8	50.8	44.7	41.3	34.2	47.8
Exterior Measurement (flush)	90.6	89.0	89.2	85.7	82.8	92.3
Exterior Adjusted	84.6	83.0	83.2	79.7	76.8	86.3
Interior Background	49.9	39.2	32.6	24.1	23.0	36.7
Interior Measurement	67.4	57.8	48.0	39.6	32.2	54.2
Interior Adjusted	67.3	57.7	47.9	39.5	31.6	54.1
Noise Reduction	**17.3**	**25.3**	**35.3**	**40.2**	**45.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	33.0	31.8	29.8	26.4	16.6	36.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.1 dB**

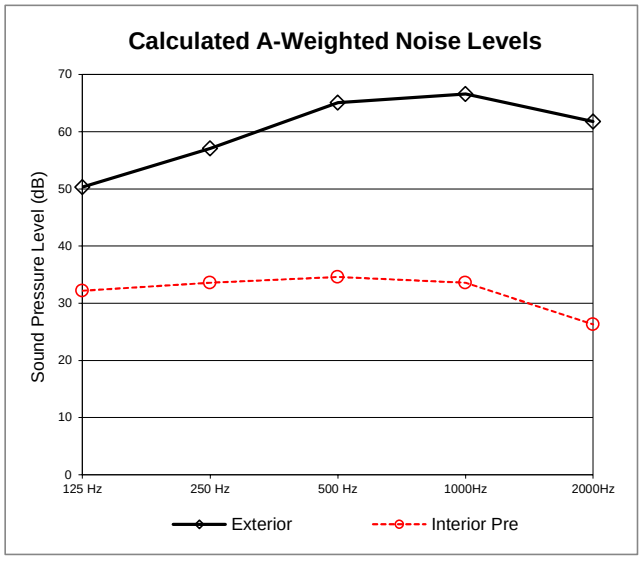




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Wiseman	Tested Room:	Office Façade
Address:	1045 S 197th St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	2 of 2

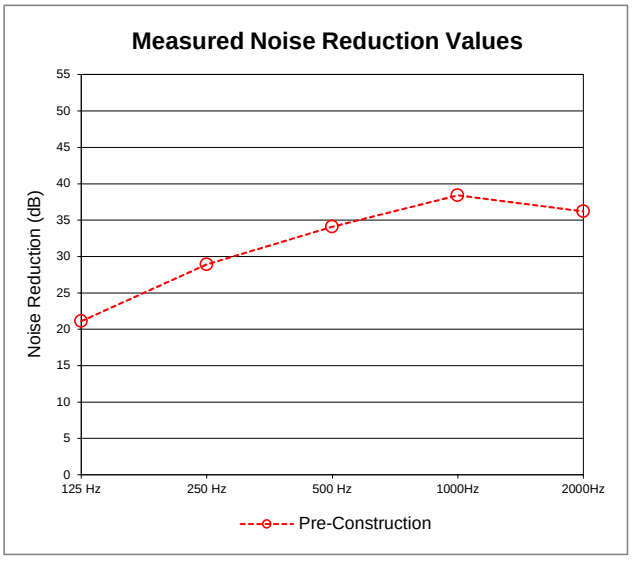
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.5	51.5	47.7	44.1	37.1	49.6
Exterior Measurement (flush)	93.6	92.3	91.8	89.0	86.8	94.9
Exterior Adjusted	87.6	86.3	85.8	83.0	80.8	88.9
Interior Background	45.2	44.1	44.9	32.5	24.7	42.9
Interior Measurement	69.5	62.9	55.7	50.1	45.3	58.6
Interior Adjusted	69.5	62.8	55.3	50.0	45.3	58.5
Noise Reduction	**18.1**	**23.5**	**30.5**	**33.0**	**35.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.2	33.6	34.6	33.6	26.3	39.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.2 dB**

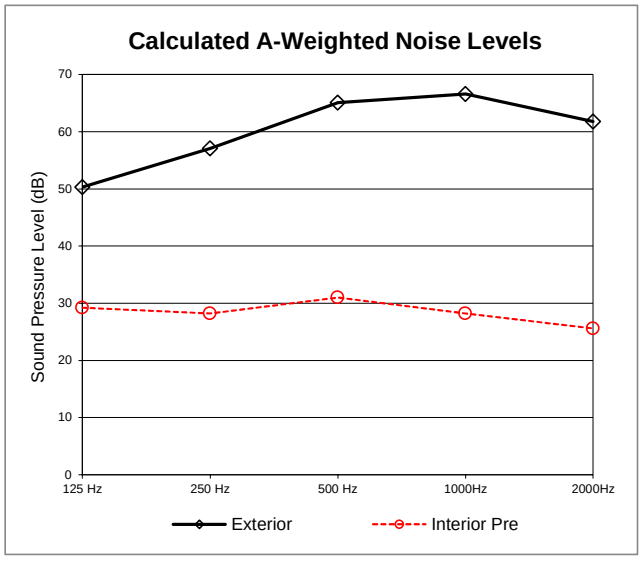




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Keyes	Tested Room:	Living Room Façade 1
Address:	2218 S 222nd St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

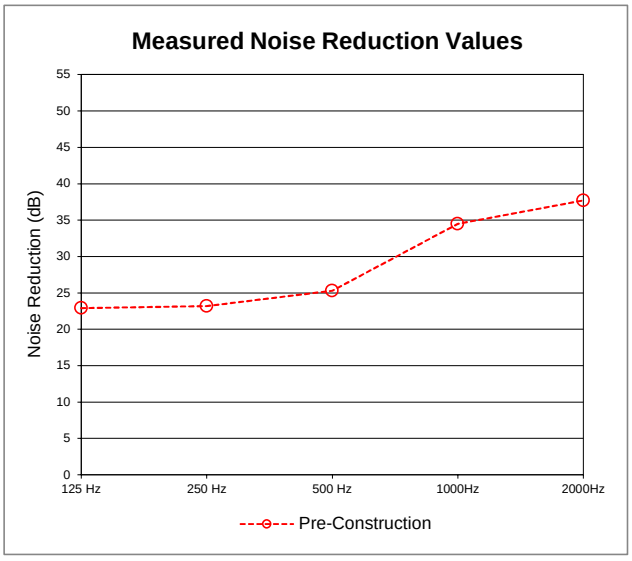
Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	64.0	52.0	50.8	51.0	45.2	55.0
Exterior Measurement (flush)	88.2	87.4	89.3	86.0	83.3	91.8
Exterior Adjusted	82.2	81.4	83.3	80.0	77.3	85.8
Interior Background	30.8	28.7	25.8	25.0	16.9	28.9
Interior Measurement	61.1	52.5	49.2	41.7	41.1	51.6
Interior Adjusted	61.1	52.5	49.2	41.6	41.1	51.6
Noise Reduction	**21.1**	**28.9**	**34.1**	**38.4**	**36.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.2	28.2	31.0	28.2	25.6	35.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.2 dB**

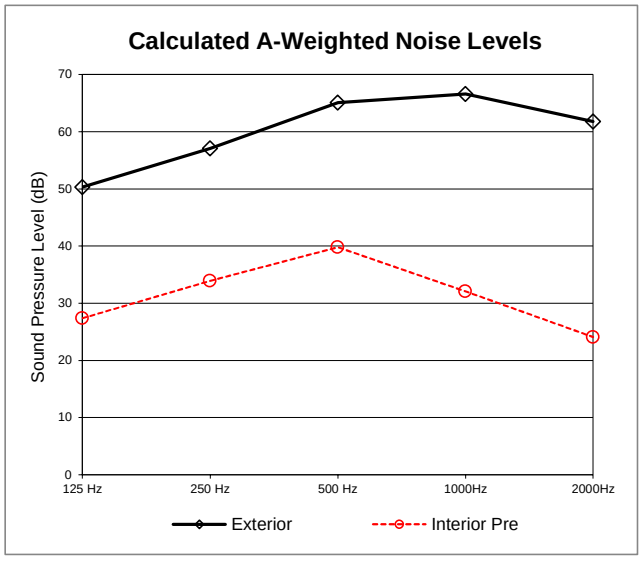




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Keyes	Tested Room:	Living Room Façade 2
Address:	2218 S 222nd St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	64.0	52.0	50.8	51.0	45.2	55.0
Exterior Measurement (flush)	99.9	100.5	98.7	94.8	89.1	100.5
Exterior Adjusted	93.9	94.5	92.7	88.8	83.1	94.5
Interior Background	30.8	28.7	25.8	25.0	16.9	28.9
Interior Measurement	71.0	71.3	67.4	54.3	45.4	67.0
Interior Adjusted	71.0	71.3	67.4	54.3	45.4	67.0
Noise Reduction	**22.9**	**23.2**	**25.3**	**34.5**	**37.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.4	33.9	39.8	32.1	24.1	41.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.4 dB**

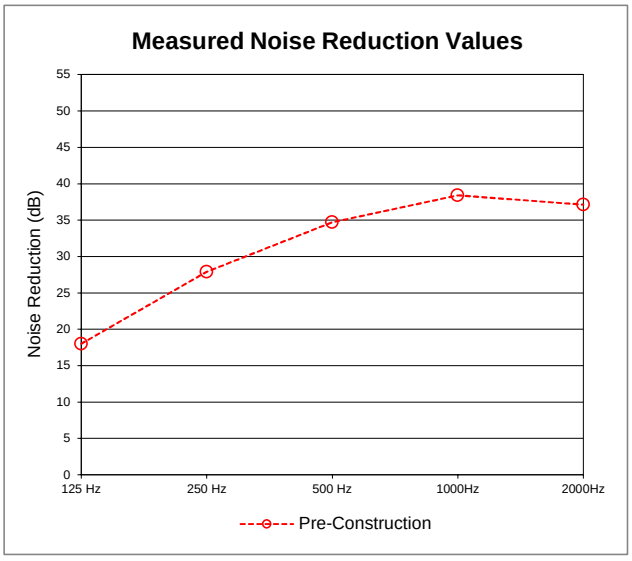


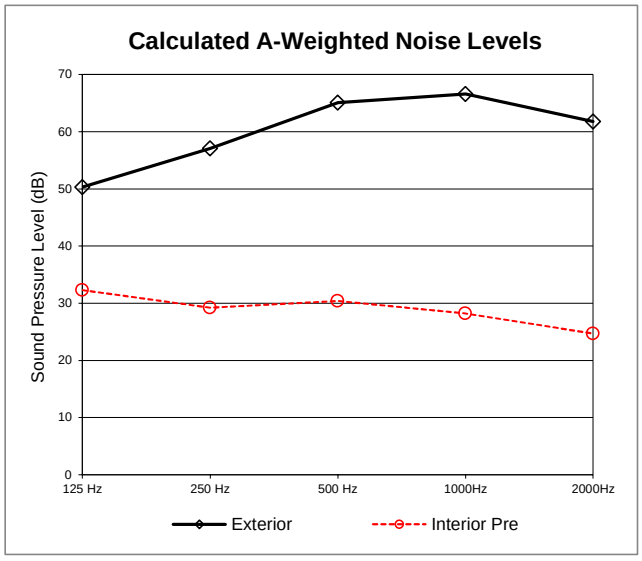


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Keyes	Tested Room:	Dining / Kitchen Façade 1
Address:	2218 S 222nd St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.0	62.5	56.9	53.5	47.6	59.5
Exterior Measurement (flush)	89.5	88.7	91.5	87.7	84.7	93.6
Exterior Adjusted	83.5	82.7	85.5	81.7	78.7	87.6
Interior Background	41.6	33.8	30.9	28.7	23.3	34.3
Interior Measurement	65.5	54.8	50.8	43.4	41.7	53.8
Interior Adjusted	65.5	54.8	50.8	43.3	41.6	53.8
Noise Reduction	**18.0**	**27.9**	**34.7**	**38.4**	**37.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.3	29.2	30.4	28.2	24.7	36.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.4 dB**

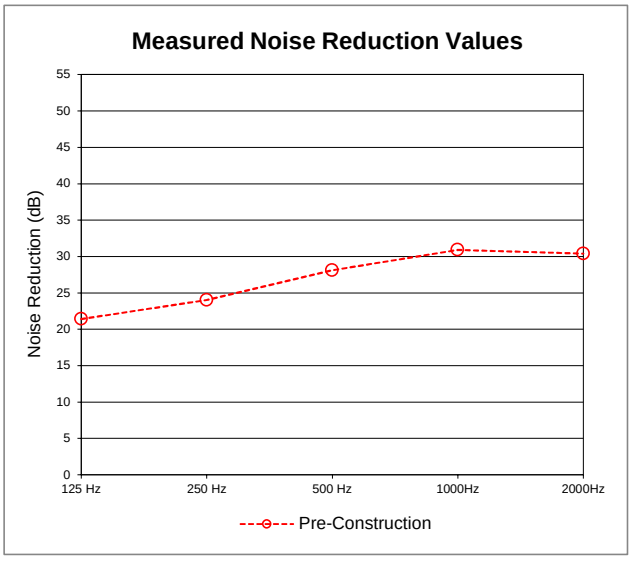


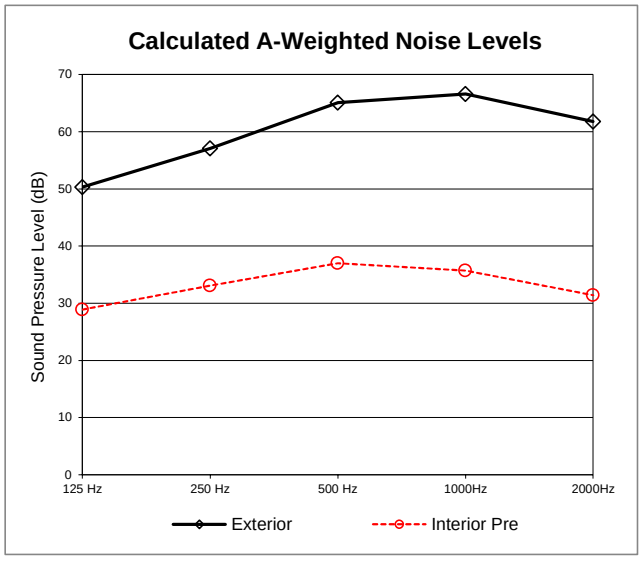


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Keyes	Tested Room:	Dining / Kitchen Façade 2
Address:	2218 S 222nd St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

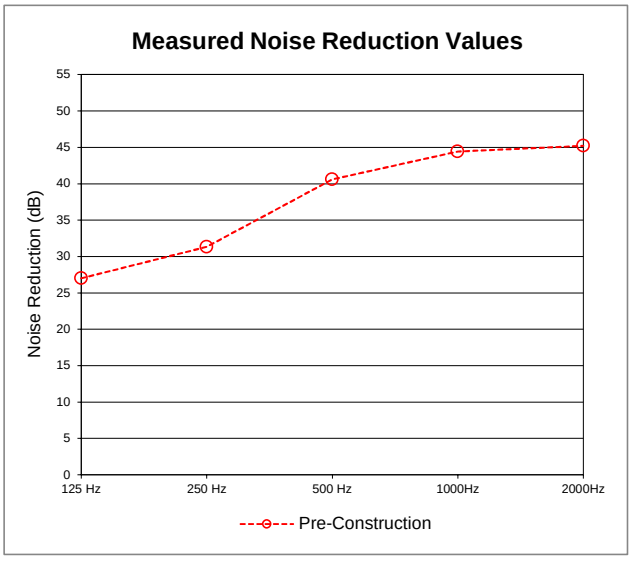
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	64.0	52.0	50.8	51.0	45.2	55.0
Exterior Measurement (flush)	97.0	98.4	98.9	94.6	89.7	100.2
Exterior Adjusted	91.0	92.4	92.9	88.6	83.7	94.2
Interior Background	41.6	33.8	30.9	28.7	23.3	34.3
Interior Measurement	69.6	68.4	64.8	57.7	53.3	65.8
Interior Adjusted	69.6	68.4	64.8	57.7	53.3	65.8
Noise Reduction	**21.4**	**24.0**	**28.1**	**30.9**	**30.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.9	33.1	37.0	35.7	31.4	41.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.9 dB**

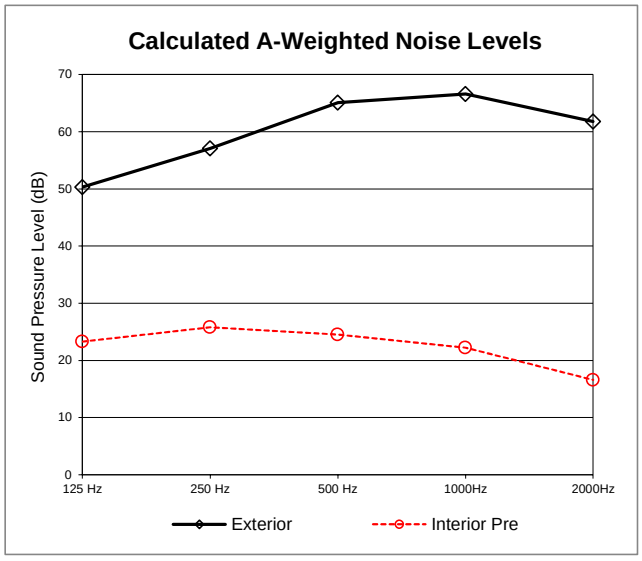




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Keyes	Tested Room:	Bedroom 1 Façade 1
Address:	2218 S 222nd St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.5	62.5	58.6	54.3	47.2	60.2
Exterior Measurement (flush)	87.1	84.4	89.0	85.8	82.2	91.1
Exterior Adjusted	81.1	78.4	83.0	79.8	76.2	85.1
Interior Background	35.4	34.6	27.7	20.2	18.2	30.3
Interior Measurement	54.2	47.3	42.5	35.5	31.2	44.8
Interior Adjusted	54.1	47.1	42.4	35.4	31.0	44.6
Noise Reduction	**27.0**	**31.3**	**40.6**	**44.4**	**45.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	23.3	25.8	24.5	22.2	16.6	30.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**39.6 dB**

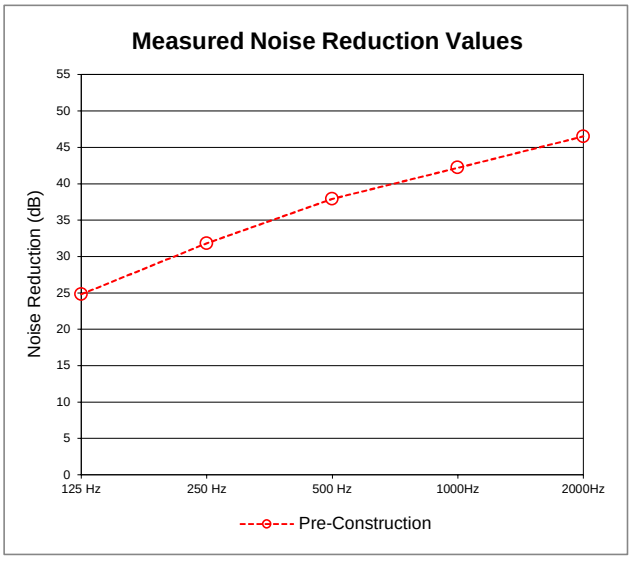


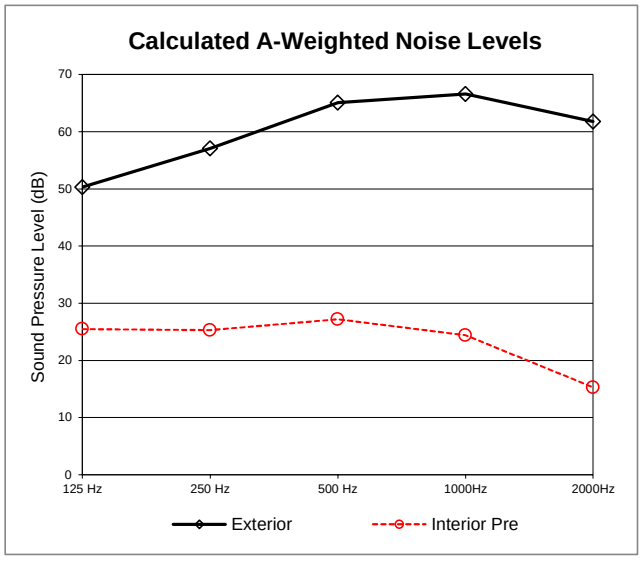


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Keyes	Tested Room:	Bedroom 1 Façade 2
Address:	2218 S 222nd St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

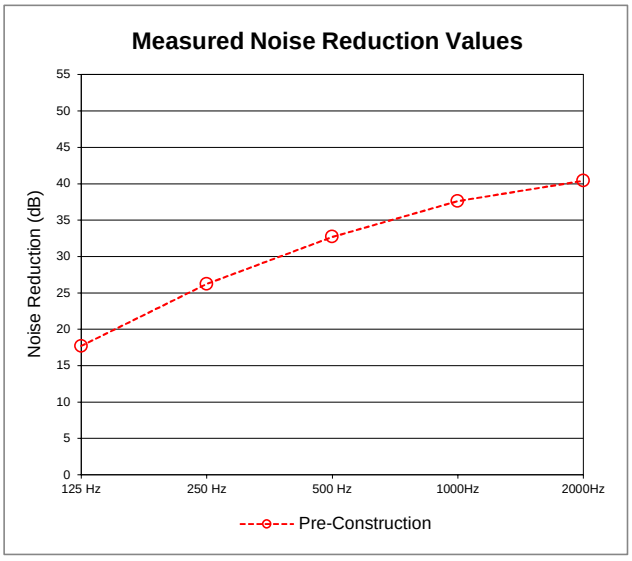
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.5	62.5	58.6	54.3	47.2	60.2
Exterior Measurement (flush)	97.0	98.3	97.7	92.3	88.5	99.2
Exterior Adjusted	91.0	92.3	91.7	86.3	82.5	93.2
Interior Background	35.4	34.6	27.7	20.2	18.2	30.3
Interior Measurement	66.2	60.5	53.8	44.1	36.1	55.9
Interior Adjusted	66.2	60.5	53.8	44.1	36.0	55.9
Noise Reduction	**24.8**	**31.8**	**37.9**	**42.2**	**46.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	25.5	25.3	27.2	24.4	15.3	31.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**38.2 dB**

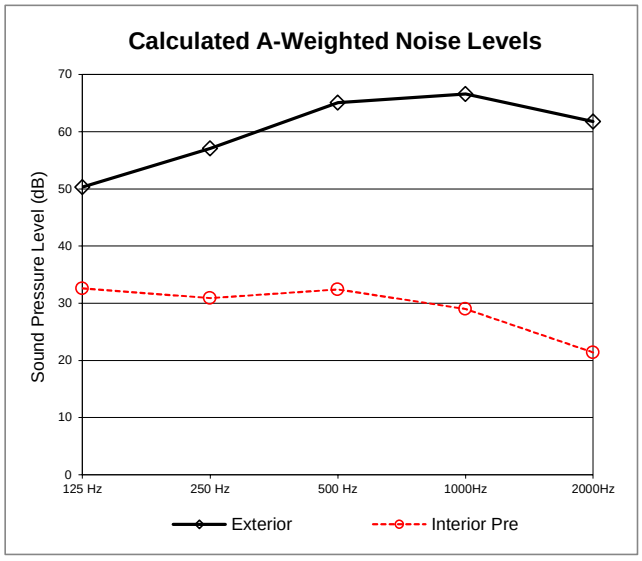




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Keyes	Tested Room:	Bedroom 2 Façade
Address:	2218 S 222nd St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	67.5	62.5	58.6	54.3	47.2	60.2
Exterior Measurement (flush)	96.6	93.8	98.1	93.3	89.7	99.4
Exterior Adjusted	90.6	87.8	92.1	87.3	83.7	93.4
Interior Background	29.4	20.1	16.1	14.0	15.2	23.4
Interior Measurement	72.9	61.6	59.4	49.7	43.3	60.5
Interior Adjusted	72.9	61.6	59.4	49.7	43.3	60.5
Noise Reduction	**17.7**	**26.2**	**32.7**	**37.6**	**40.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.6	30.9	32.4	29.0	21.4	37.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.4 dB**

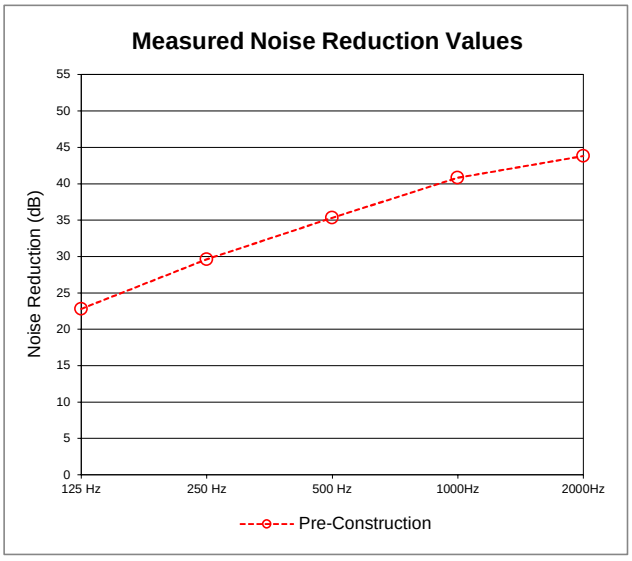


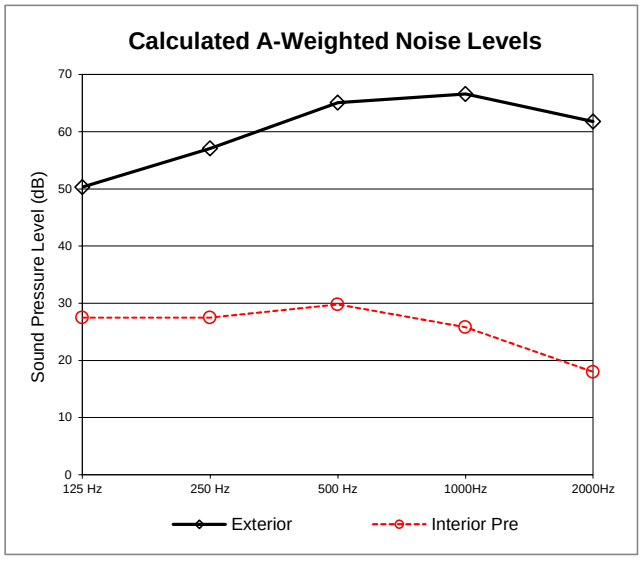


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Keyes	Tested Room:	Bedroom 3 Façade
Address:	2218 S 222nd St	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

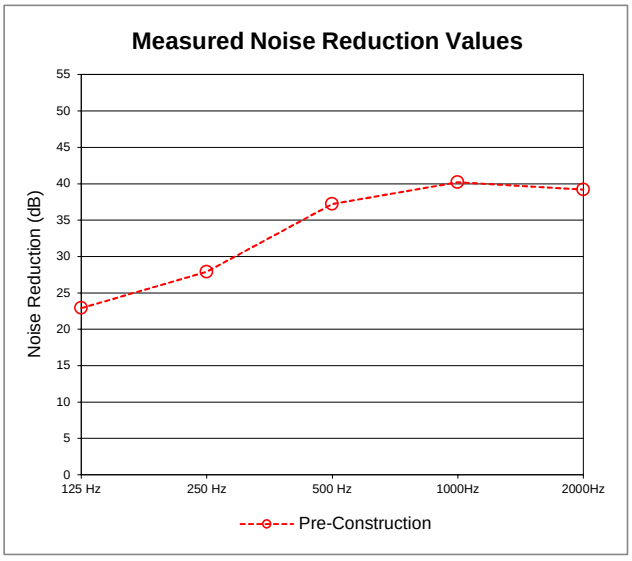
April 27, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	59.6	53.0	50.4	49.3	40.7	53.0
Exterior Measurement (flush)	92.4	96.3	96.1	92.4	87.0	98.0
Exterior Adjusted	86.4	90.3	90.1	86.4	81.0	92.0
Interior Background	24.2	18.7	14.7	16.0	14.2	23.0
Interior Measurement	63.6	60.7	54.8	45.6	37.2	56.0
Interior Adjusted	63.6	60.7	54.8	45.6	37.2	56.0
Noise Reduction	**22.8**	**29.6**	**35.3**	**40.8**	**43.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.5	27.5	29.8	25.8	18.0	34.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.0 dB**

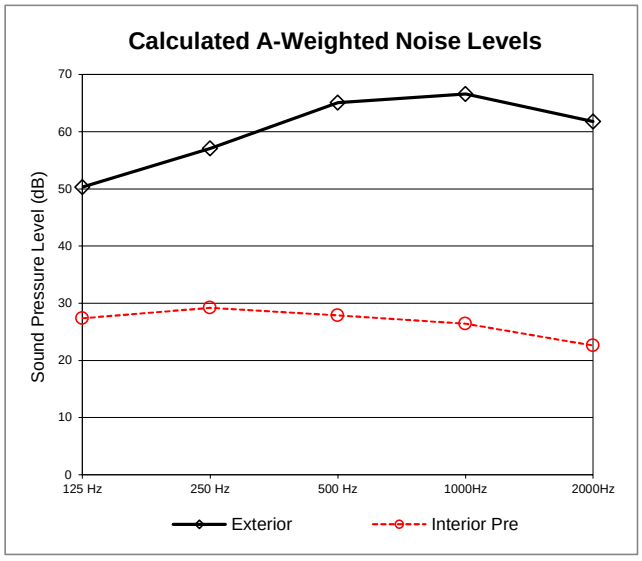




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Butler	Tested Room:	Living Room Façade 1
Address:	2219 S 222nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.3	54.9	52.8	58.7	53.4	60.7
Exterior Measurement (flush)	90.5	88.0	91.3	88.2	85.6	94.2
Exterior Adjusted	84.5	82.0	85.3	82.2	79.6	88.2
Interior Background	45.5	40.4	32.8	25.5	24.4	36.2
Interior Measurement	61.7	54.3	48.2	42.1	40.5	52.0
Interior Adjusted	61.6	54.1	48.1	42.0	40.4	51.9
Noise Reduction	**22.9**	**27.9**	**37.2**	**40.2**	**39.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.4	29.2	27.9	26.4	22.6	34.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.8 dB**

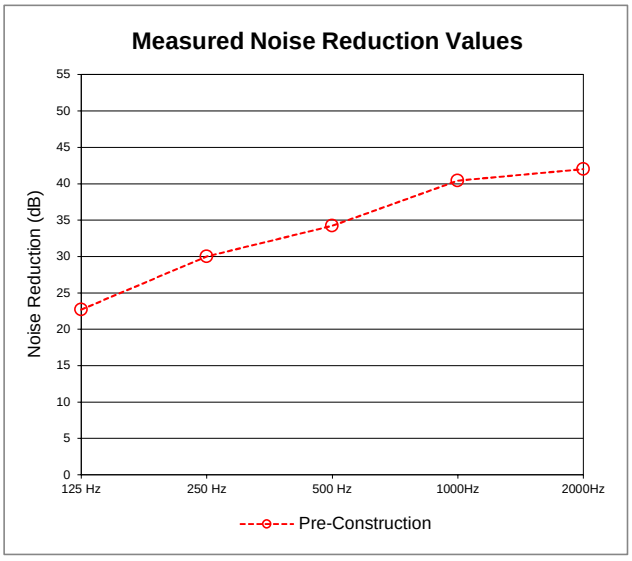


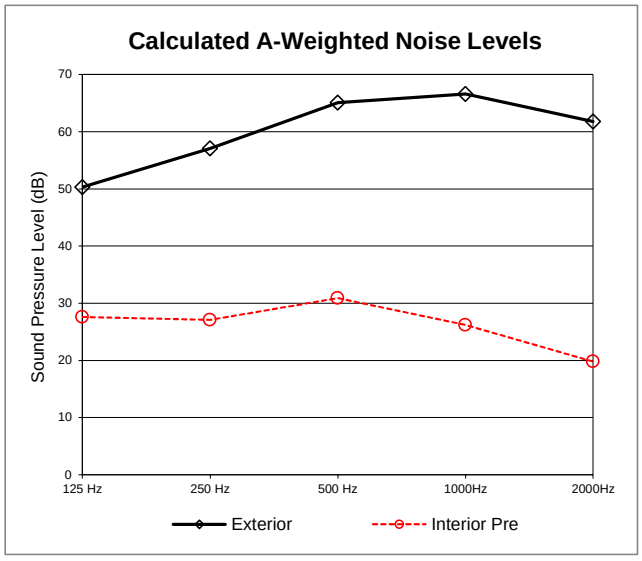


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Butler	Tested Room:	Living Room Façade 2
Address:	2219 S 222nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	54.3	54.9	52.8	58.7	53.4	60.7
Exterior Measurement (flush)	90.9	92.5	91.7	89.4	88.8	96.0
Exterior Adjusted	84.9	86.5	85.7	83.4	82.8	90.0
Interior Background	45.5	40.4	32.8	25.5	24.4	36.2
Interior Measurement	62.3	56.6	51.6	43.1	40.9	53.6
Interior Adjusted	62.2	56.5	51.5	43.0	40.8	53.5
Noise Reduction	**22.7**	**30.0**	**34.2**	**40.4**	**42.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.6	27.1	30.9	26.2	19.8	34.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.5 dB**

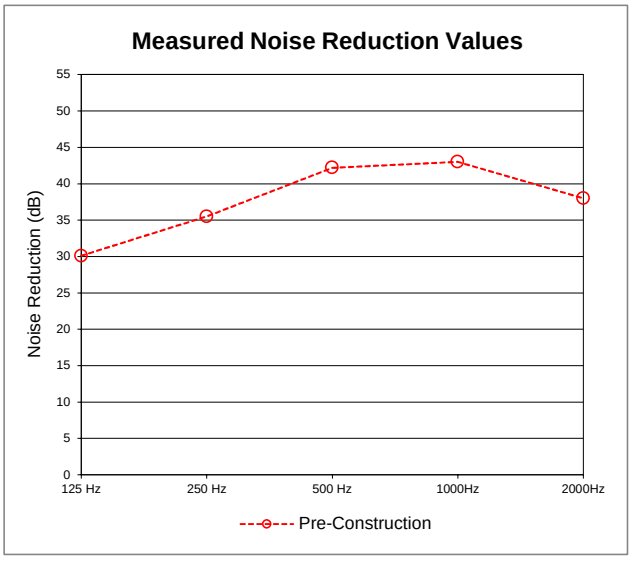


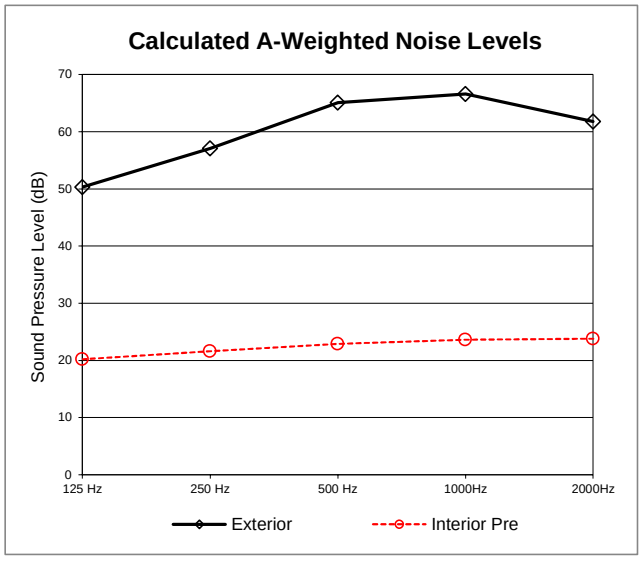


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Butler	Tested Room:	Sitting Room Façade 1
Address:	2219 S 222nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		60.2	51.0	52.4	50.3	43.1	54.2
Exterior Measurement	(flush)	108.2	103.5	103.8	98.2	93.8	105.2
Exterior Adjusted		102.2	97.5	97.8	92.2	87.8	99.2
Interior Background		29.8	23.1	21.6	13.2	13.0	24.6
Interior Measurement		70.6	60.5	54.1	47.7	48.3	58.7
Interior Adjusted	(roof)	72.1	62.0	55.6	49.2	49.8	60.2
Noise Reduction		**30.1**	**35.5**	**42.2**	**43.0**	**38.0**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		20.2	21.6	22.9	23.6	23.8	29.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**40.4 dB**

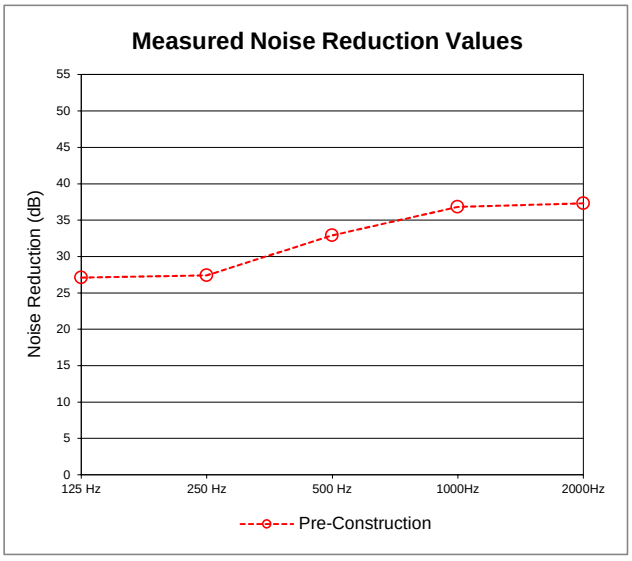


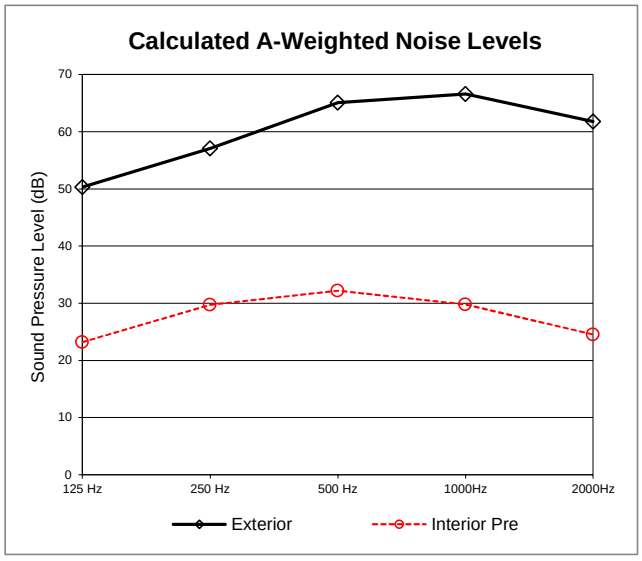


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Butler	Tested Room:	Sitting Room Façade 2
Address:	2219 S 222nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	60.2	51.0	52.4	50.3	43.1	54.2
Exterior Measurement (flush)	91.9	85.4	88.4	87.3	83.0	92.0
Exterior Adjusted	85.9	79.4	82.4	81.3	77.0	86.0
Interior Background	29.8	23.1	21.6	13.2	13.0	24.6
Interior Measurement	58.8	52.0	49.5	44.5	39.7	51.5
Interior Adjusted	58.8	52.0	49.5	44.5	39.7	51.5
Noise Reduction	**27.1**	**27.4**	**32.9**	**36.8**	**37.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	23.2	29.7	32.2	29.8	24.5	36.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**33.9 dB**

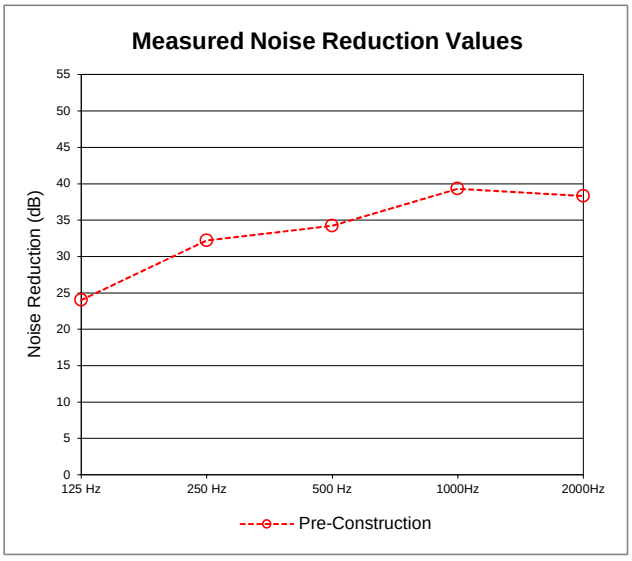


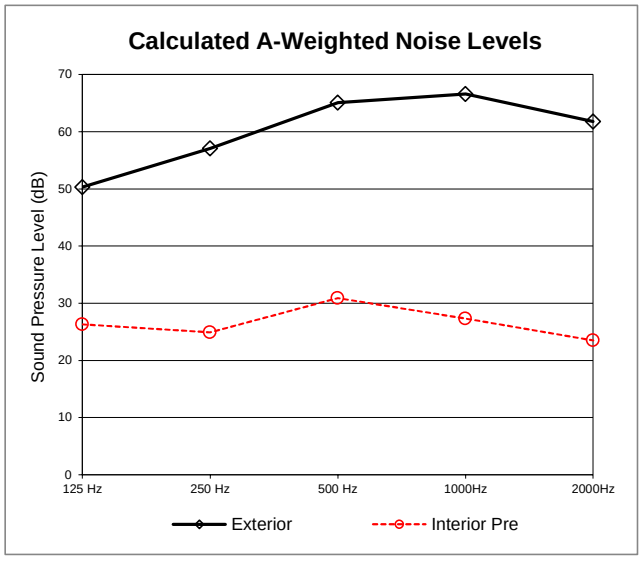


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Butler	Tested Room:	Kitchen Façade
Address:	2219 S 222nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.5	55.4	53.1	52.8	44.4	55.8
Exterior Measurement (flush)	91.8	92.8	92.4	91.3	89.2	97.0
Exterior Adjusted	85.8	86.8	86.4	85.3	83.2	91.0
Interior Background	48.5	34.9	27.4	28.6	29.4	37.2
Interior Measurement	62.0	54.6	52.2	46.1	45.0	54.5
Interior Adjusted	61.8	54.6	52.2	46.0	44.9	54.4
Noise Reduction	**24.0**	**32.2**	**34.2**	**39.3**	**38.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.3	24.9	30.9	27.3	23.5	34.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.6 dB**

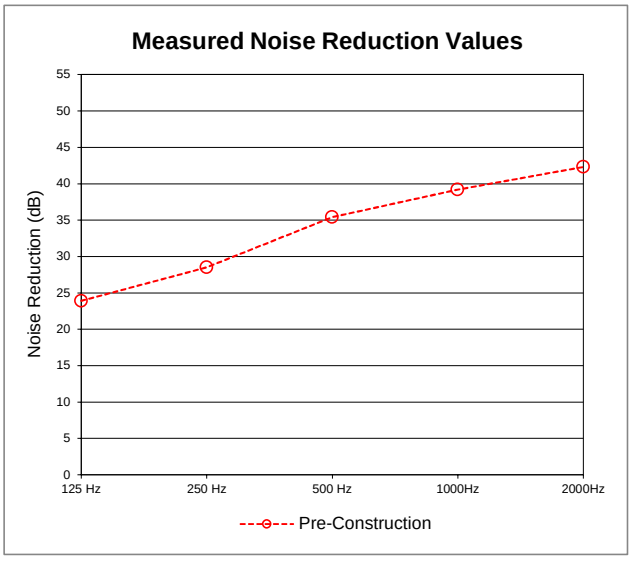


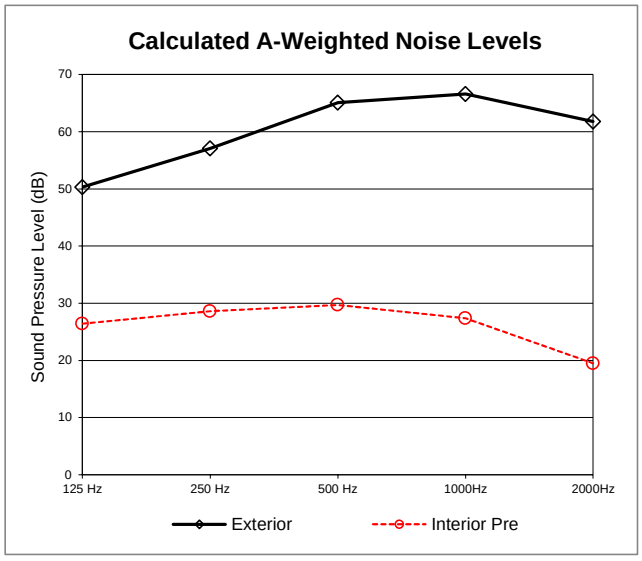


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Butler	Tested Room:	Bedroom 1 Façade
Address:	2219 S 222nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	60.2	51.0	52.4	50.3	43.1	54.2
Exterior Measurement (flush)	87.1	92.0	91.0	86.6	82.6	93.0
Exterior Adjusted	81.1	86.0	85.0	80.6	76.6	87.0
Interior Background	43.5	39.0	28.8	21.5	17.1	33.2
Interior Measurement	57.4	57.6	49.6	41.4	34.4	51.6
Interior Adjusted	57.2	57.5	49.6	41.4	34.3	51.5
Noise Reduction	**23.9**	**28.5**	**35.4**	**39.2**	**42.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	26.4	28.6	29.7	27.4	19.5	34.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.6 dB**

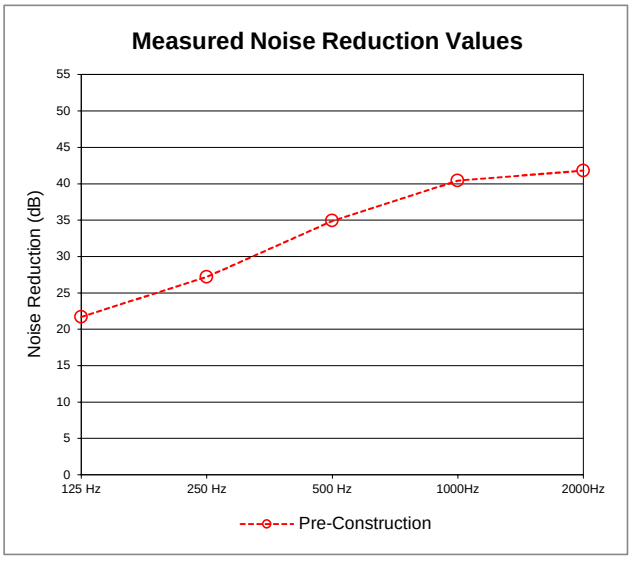


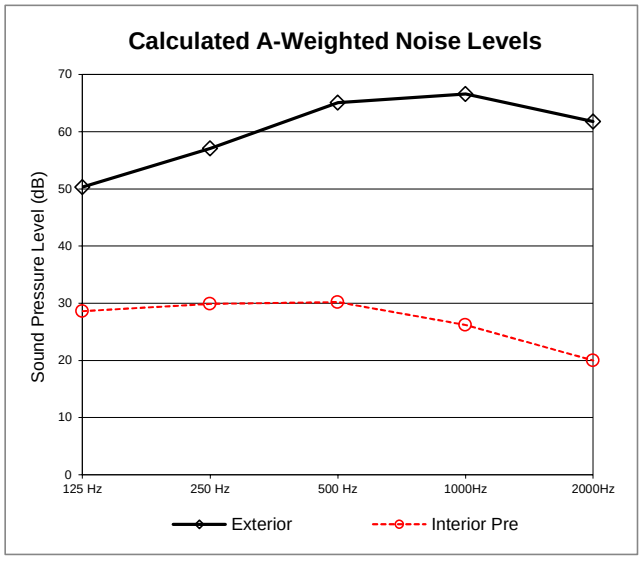


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Butler	Tested Room:	Bedroom 2 Façade
Address:	2219 S 222nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.5	55.4	53.1	52.8	44.4	55.8
Exterior Measurement (flush)	86.7	91.7	89.9	87.8	85.3	93.2
Exterior Adjusted	80.7	85.7	83.9	81.8	79.3	87.2
Interior Background	32.3	24.6	19.1	16.8	17.0	26.5
Interior Measurement	59.0	58.5	49.0	41.4	37.5	52.1
Interior Adjusted	59.0	58.5	49.0	41.4	37.5	52.1
Noise Reduction	**21.7**	**27.2**	**34.9**	**40.4**	**41.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	28.6	29.9	30.2	26.2	20.0	35.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**34.9 dB**

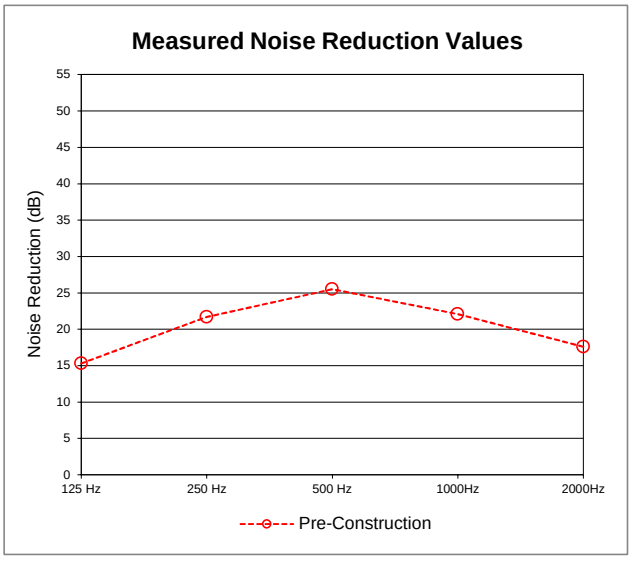


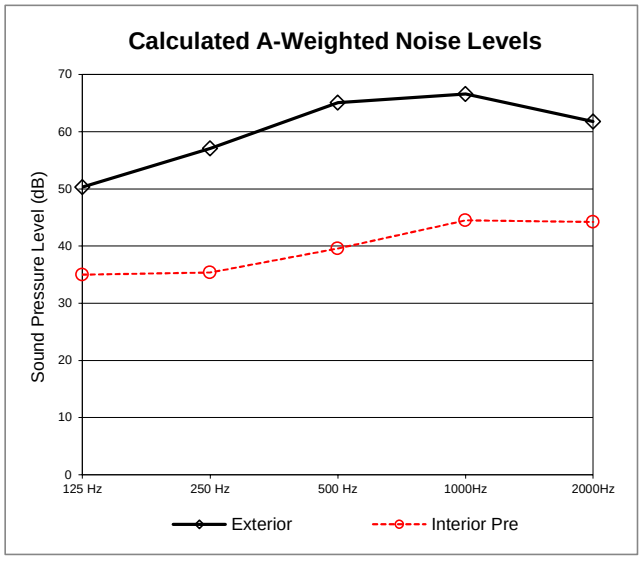


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Living Room Façade 1
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

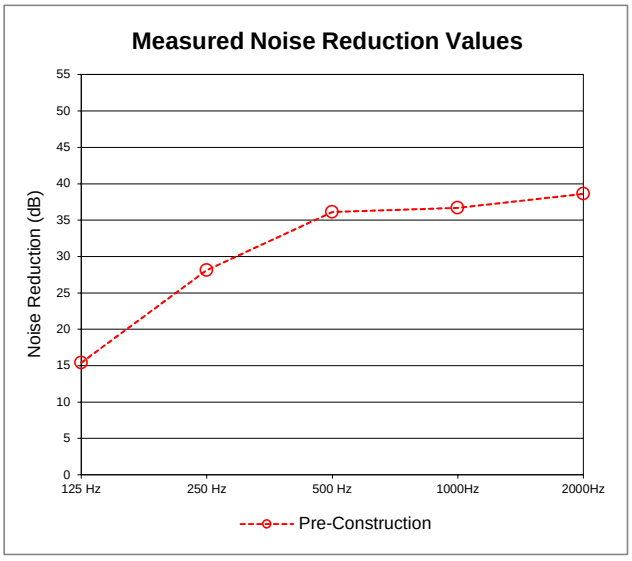
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	62.2	52.4	46.6	44.5	40.2	50.9
Exterior Measurement (flush)	83.7	82.2	82.6	81.7	79.8	86.8
Exterior Adjusted	77.7	76.2	76.6	75.7	73.8	80.8
Interior Background	45.9	41.3	40.4	33.7	27.8	40.5
Interior Measurement	62.5	54.7	51.5	53.6	56.2	61.9
Interior Adjusted	62.4	54.5	51.1	53.6	56.2	61.9
Noise Reduction	**15.3**	**21.7**	**25.5**	**22.1**	**17.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	35.0	35.4	39.6	44.5	44.2	48.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**21.5 dB**

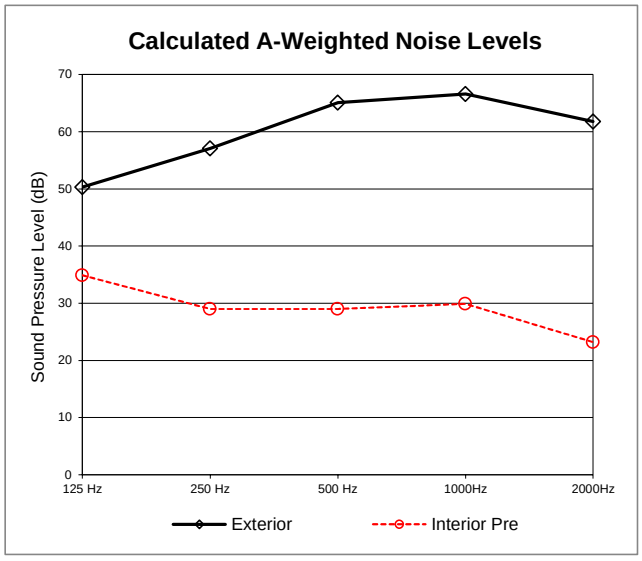




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Living Room Façade 2
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

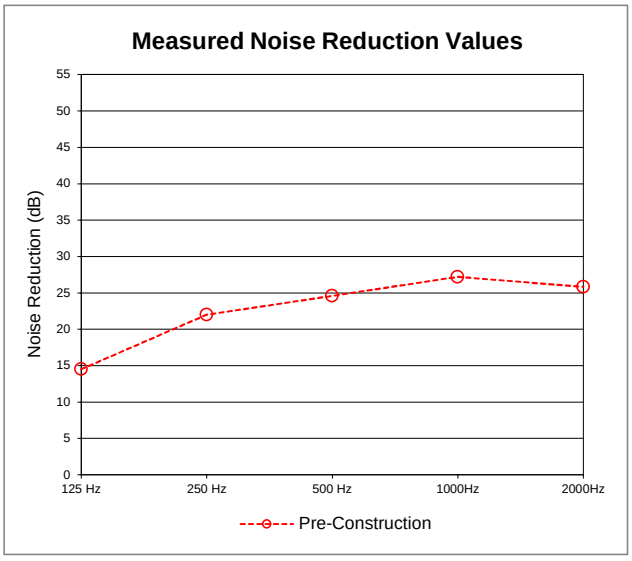
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	62.2	52.4	46.6	44.5	40.2	50.9
Exterior Measurement (flush)	99.1	97.7	96.1	91.2	89.5	98.6
Exterior Adjusted	93.1	91.7	90.1	85.2	83.5	92.6
Interior Background	45.9	41.3	40.4	33.7	27.8	40.5
Interior Measurement	77.7	63.6	54.2	48.6	45.0	62.8
Interior Adjusted	77.7	63.6	54.0	48.5	44.9	62.8
Noise Reduction	**15.4**	**28.1**	**36.1**	**36.7**	**38.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.9	29.0	29.0	29.9	23.2	37.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.3 dB**

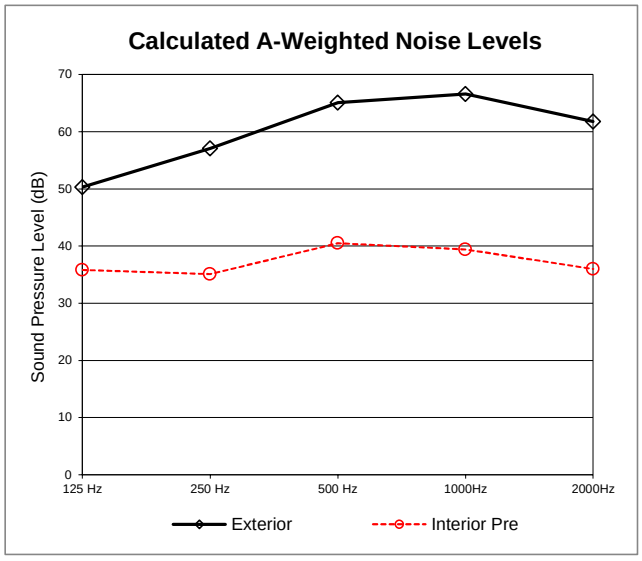




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Living Room Façade 3
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 4, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		62.2	52.4	46.6	44.5	40.2	50.9
Exterior Measurement	(flush)	87.2	89.1	88.6	85.1	83.3	91.7
Exterior Adjusted		81.2	83.1	82.6	79.1	77.3	85.7
Interior Background		45.9	41.3	40.4	33.7	27.8	40.5
Interior Measurement		66.7	61.1	58.1	52.0	51.5	60.4
Interior Adjusted		66.7	61.1	58.0	51.9	51.5	60.4
Noise Reduction		**14.5**	**22.0**	**24.6**	**27.2**	**25.8**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		35.8	35.1	40.5	39.4	36.0	44.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**25.1 dB**

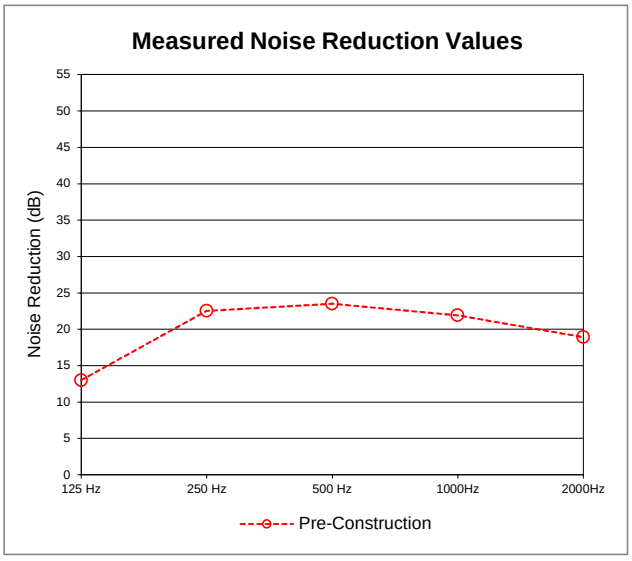


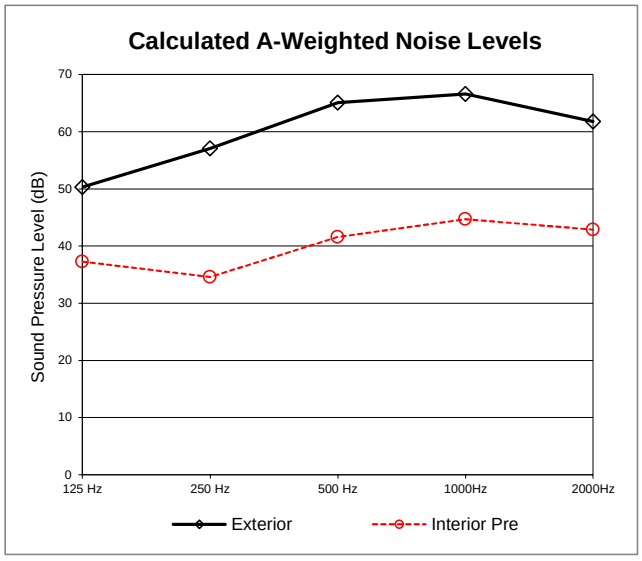


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Sitting / Dining Façade 1
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	57.6	54.1	55.6	49.0	38.7	55.0
Exterior Measurement (flush)	82.5	85.9	83.7	82.2	78.7	87.8
Exterior Adjusted	76.5	79.9	77.7	76.2	72.7	81.8
Interior Background	34.9	31.9	35.6	28.7	27.3	35.9
Interior Measurement	63.5	57.4	54.3	54.3	53.8	60.1
Interior Adjusted	63.5	57.4	54.2	54.3	53.8	60.1
Noise Reduction	**13.0**	**22.5**	**23.5**	**21.9**	**18.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	37.3	34.6	41.6	44.7	42.9	48.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**21.4 dB**

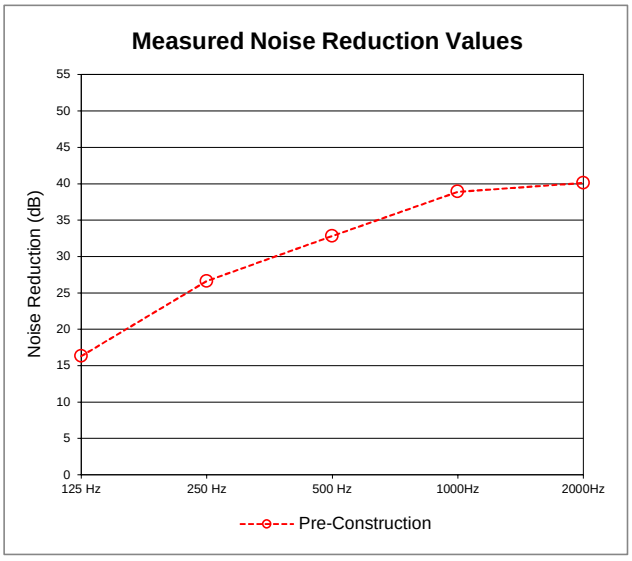


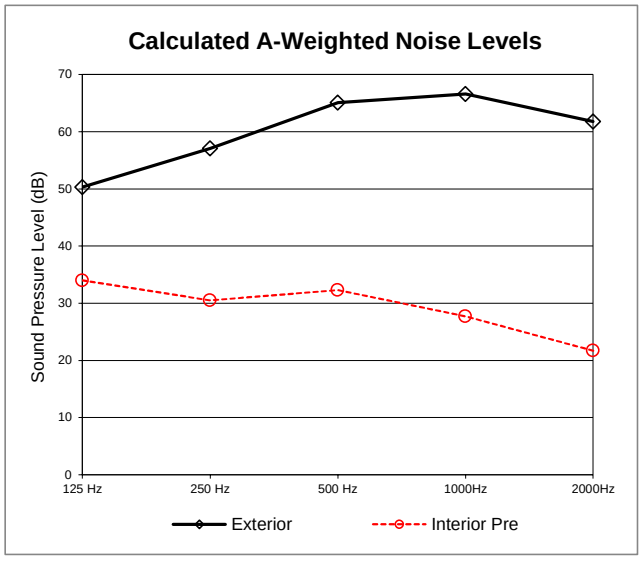


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Sitting / Dining Façade 2
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	57.6	54.1	55.6	49.0	38.7	55.0
Exterior Measurement (flush)	84.5	88.0	88.1	86.7	83.3	91.7
Exterior Adjusted	78.5	82.0	82.1	80.7	77.3	85.7
Interior Background	34.9	31.9	35.6	28.7	27.3	35.9
Interior Measurement	62.2	55.4	49.5	42.0	37.6	51.9
Interior Adjusted	62.2	55.4	49.3	41.8	37.2	51.8
Noise Reduction	**16.3**	**26.6**	**32.8**	**38.9**	**40.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.0	30.5	32.3	27.7	21.7	37.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**32.2 dB**

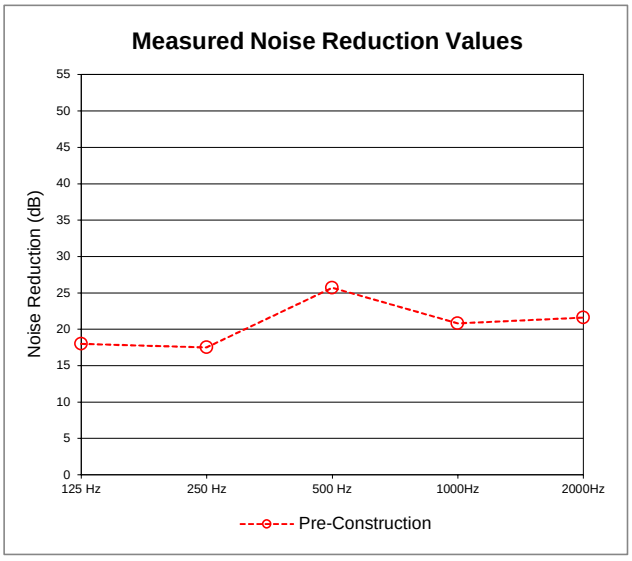


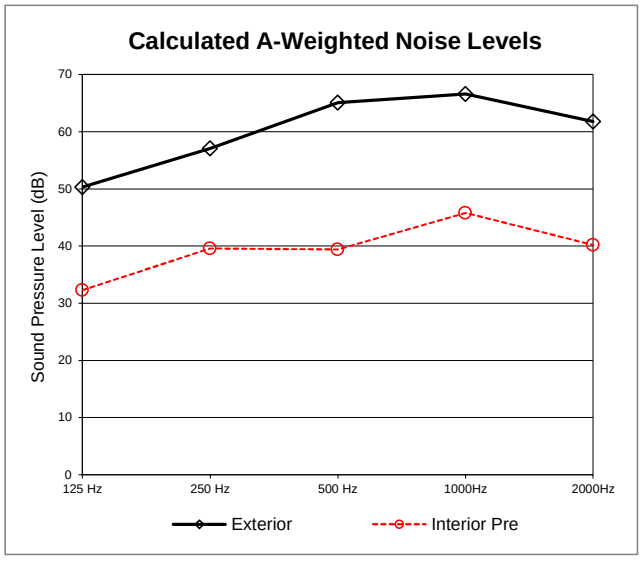


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Kitchen Façade
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

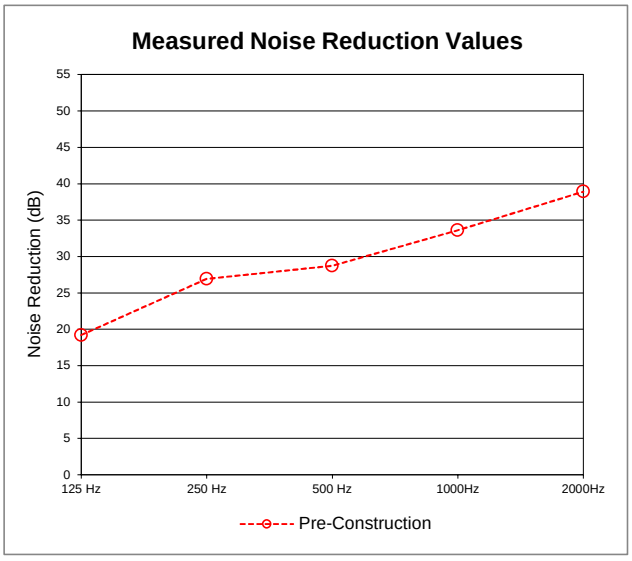
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.0	52.1	46.3	42.5	35.5	49.0
Exterior Measurement (flush)	86.7	88.8	88.7	85.6	85.0	92.2
Exterior Adjusted	80.7	82.8	82.7	79.6	79.0	86.2
Interior Background	36.8	36.2	40.0	37.7	33.6	42.0
Interior Measurement	62.7	65.3	57.1	58.8	57.4	63.8
Interior Adjusted	62.7	65.3	57.0	58.8	57.4	63.8
Noise Reduction	**18.0**	**17.5**	**25.7**	**20.8**	**21.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	32.3	39.6	39.4	45.8	40.2	48.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**21.7 dB**

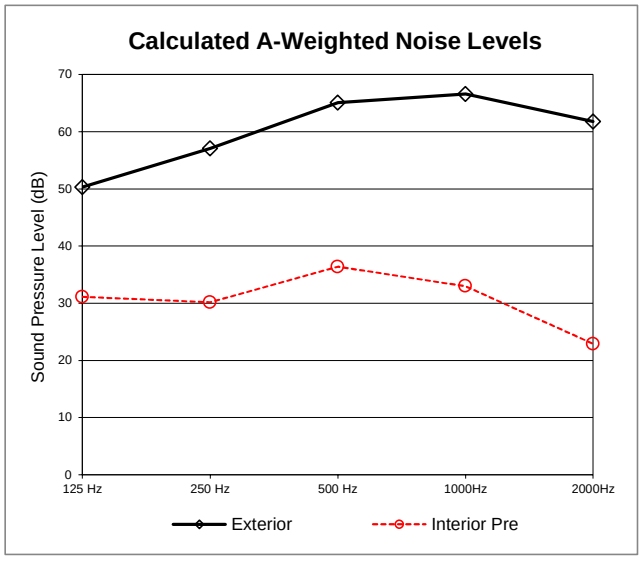




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Bedroom 1 Façade
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.0	52.1	46.3	42.5	35.5	49.0
Exterior Measurement (flush)	91.5	89.8	90.4	88.3	86.2	94.0
Exterior Adjusted	85.5	83.8	84.4	82.3	80.2	88.0
Interior Background	31.7	32.5	37.4	28.6	24.1	36.1
Interior Measurement	66.3	56.9	55.8	48.7	41.4	56.1
Interior Adjusted	66.3	56.9	55.7	48.7	41.3	56.1
Noise Reduction	**19.2**	**26.9**	**28.7**	**33.6**	**38.9**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.1	30.2	36.4	33.0	22.9	39.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.5 dB**

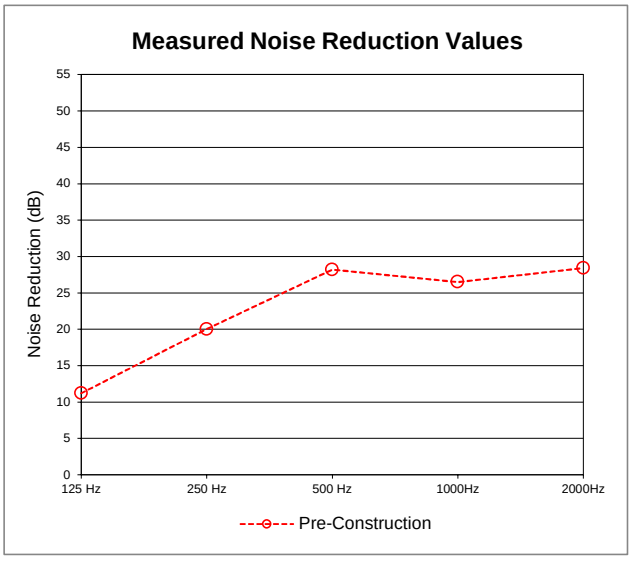


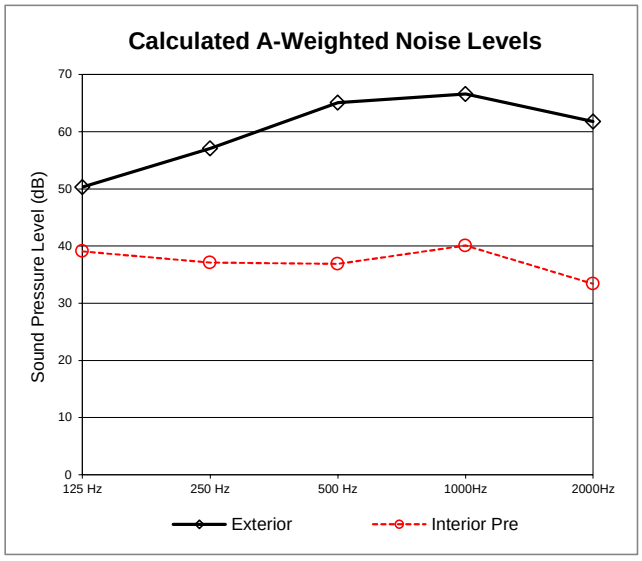


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Bedroom 2 Façade
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.4	54.8	49.9	44.5	37.6	51.2
Exterior Measurement (flush)	86.9	86.4	85.7	83.4	83.5	90.8
Exterior Adjusted	80.9	80.4	79.7	77.4	77.5	84.8
Interior Background	33.0	28.9	31.5	25.0	20.2	31.5
Interior Measurement	69.7	60.4	51.5	50.9	49.1	58.0
Interior Adjusted	69.7	60.4	51.5	50.9	49.1	58.0
Noise Reduction	**11.2**	**20.0**	**28.2**	**26.5**	**28.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	39.1	37.1	36.9	40.1	33.4	44.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**25.1 dB**

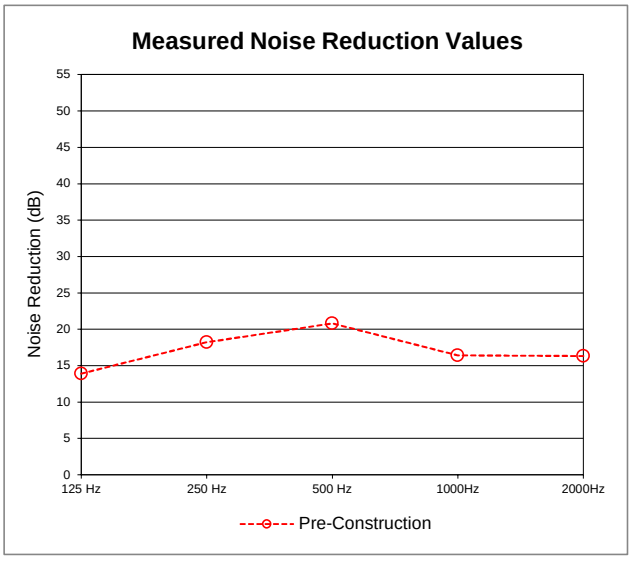


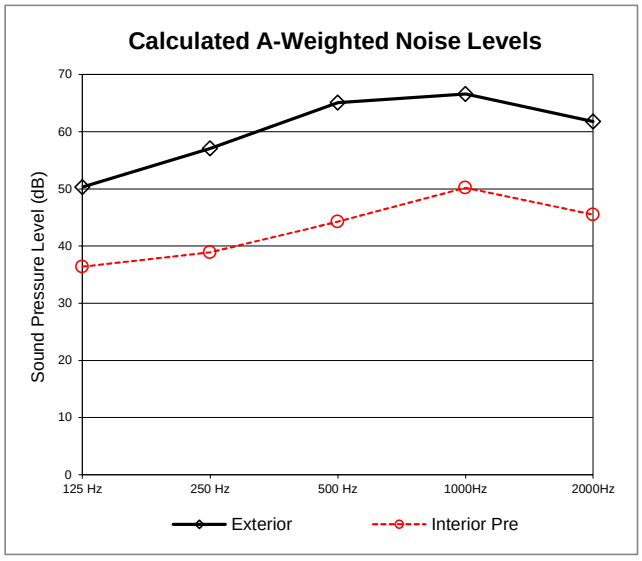


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Soden	Tested Room:	Bedroom 3 Façade
Address:	1819 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.4	54.8	49.9	44.5	37.6	51.2
Exterior Measurement (flush)	82.9	84.7	84.7	83.2	81.1	90.1
Exterior Adjusted	76.9	78.7	78.7	77.2	75.1	84.1
Interior Background	32.6	34.8	37.9	29.2	23.6	36.6
Interior Measurement	63.0	60.5	57.9	60.8	58.8	65.3
Interior Adjusted	63.0	60.5	57.9	60.8	58.8	65.3
Noise Reduction	**13.9**	**18.2**	**20.8**	**16.4**	**16.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	36.4	38.9	44.3	50.2	45.5	52.5
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**17.5 dB**

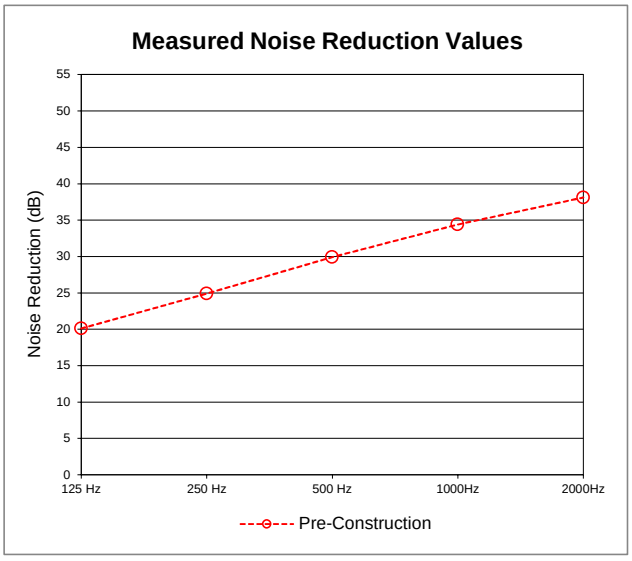


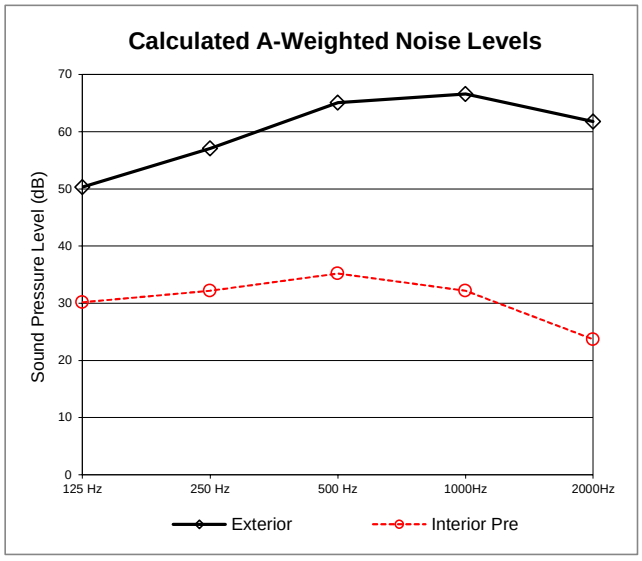


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Kawabata	Tested Room:	Living Room Façade
Address:	2035 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

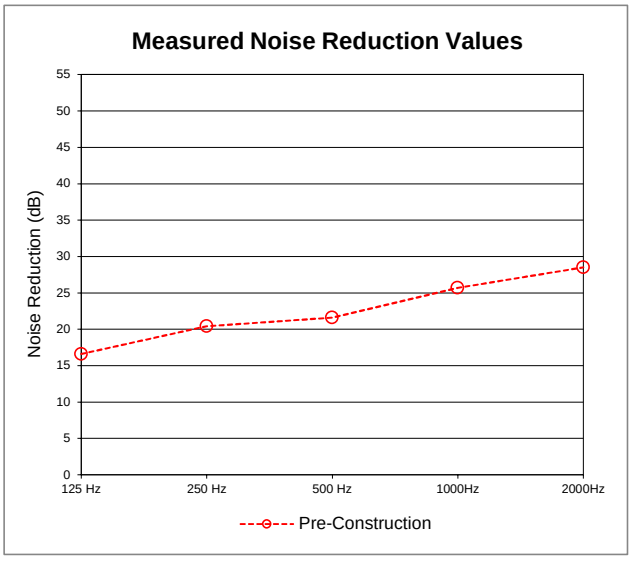
April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	49.0	43.6	42.4	45.6	38.2	47.8
Exterior Measurement (flush)	97.6	95.8	95.6	92.2	91.0	98.9
Exterior Adjusted	91.6	89.8	89.6	86.2	85.0	92.9
Interior Background	36.9	32.0	39.3	28.5	22.1	37.9
Interior Measurement	71.5	64.9	59.7	51.8	46.9	61.7
Interior Adjusted	71.5	64.9	59.7	51.8	46.9	61.7
Noise Reduction	**20.1**	**24.9**	**29.9**	**34.4**	**38.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.2	32.2	35.2	32.2	23.7	39.0
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.0 dB**

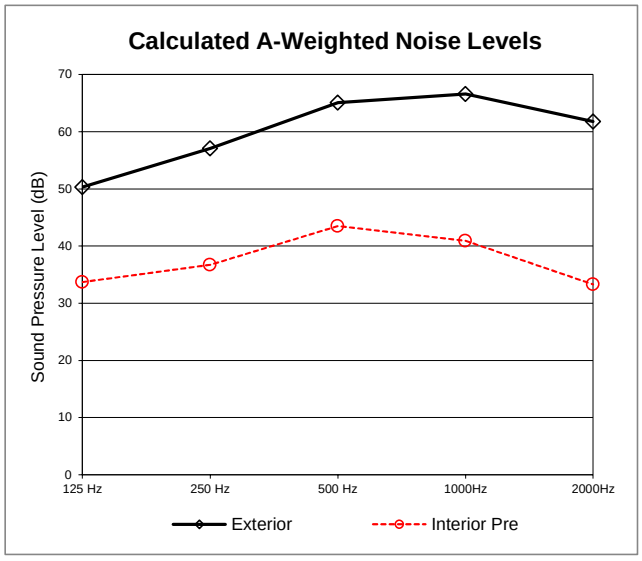




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Kawabata	Tested Room:	Sitting Room Façade
Address:	2035 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	46.6	39.9	41.8	41.9	37.1	46.2
Exterior Measurement (flush)	92.0	92.1	92.6	89.1	86.5	95.8
Exterior Adjusted	86.0	86.1	86.6	83.1	80.5	89.8
Interior Background	34.3	38.0	36.4	30.1	25.3	37.1
Interior Measurement	69.4	65.7	65.0	57.4	52.0	64.9
Interior Adjusted	69.4	65.7	65.0	57.4	52.0	64.9
Noise Reduction	**16.6**	**20.4**	**21.6**	**25.7**	**28.5**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	33.7	36.7	43.5	40.9	33.3	46.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**23.6 dB**

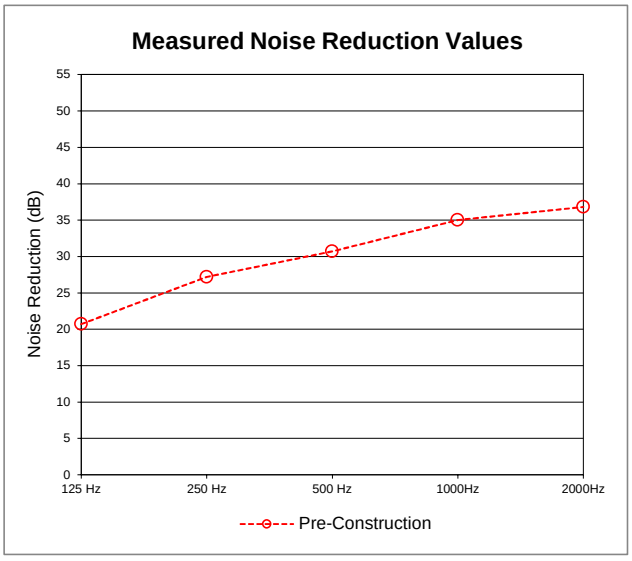


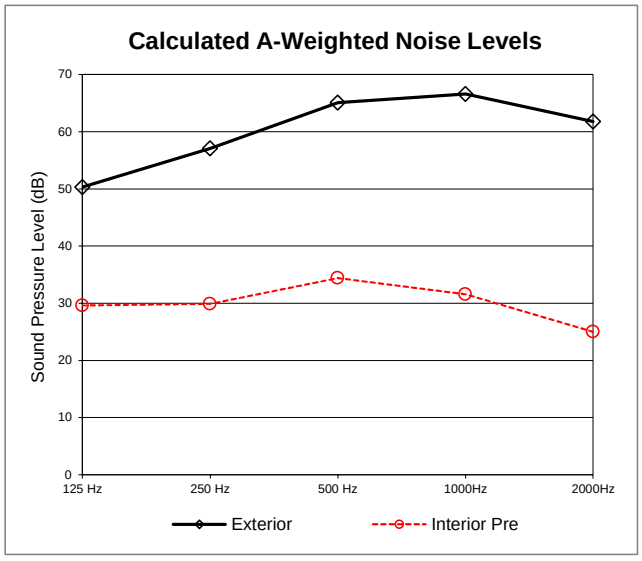


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Kawabata	Tested Room:	Dining / Kitchen Façade
Address:	2035 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

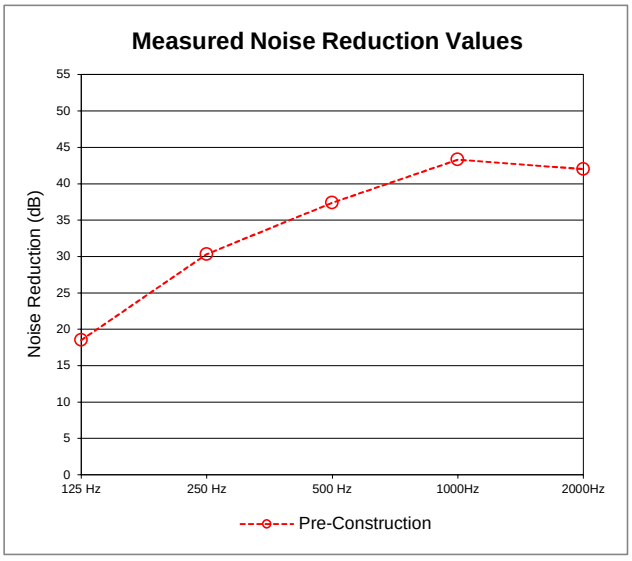
April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	46.6	39.9	41.8	41.9	37.1	46.2
Exterior Measurement (flush)	92.3	90.0	90.0	86.4	84.4	92.7
Exterior Adjusted	86.3	84.0	84.0	80.4	78.4	86.7
Interior Background	47.2	31.9	26.4	23.3	18.9	33.3
Interior Measurement	65.7	56.8	53.3	45.4	41.6	55.1
Interior Adjusted	65.6	56.8	53.3	45.4	41.6	55.1
Noise Reduction	**20.7**	**27.2**	**30.7**	**35.0**	**36.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	29.6	29.9	34.4	31.6	25.0	38.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**31.9 dB**

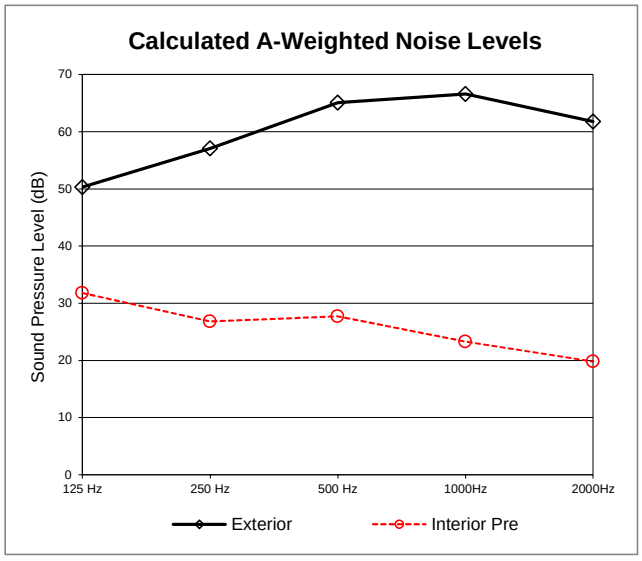




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Kawabata	Tested Room:	Bedroom 1 Façade
Address:	2035 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)						
April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	49.0	43.6	42.4	45.6	38.2	47.8
Exterior Measurement (flush)	95.0	91.8	93.0	90.5	88.0	96.2
Exterior Adjusted	89.0	85.8	87.0	84.5	82.0	90.2
Interior Background	45.6	27.5	24.3	23.8	19.4	31.1
Interior Measurement	70.5	55.5	49.6	41.3	40.0	55.3
Interior Adjusted	70.5	55.5	49.6	41.2	40.0	55.3
Noise Reduction	**18.5**	**30.3**	**37.4**	**43.3**	**42.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.8	26.8	27.7	23.3	19.8	34.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**35.4 dB**

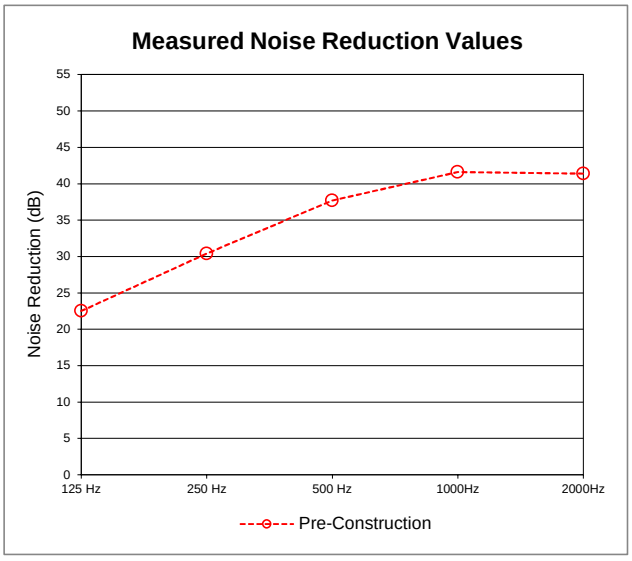


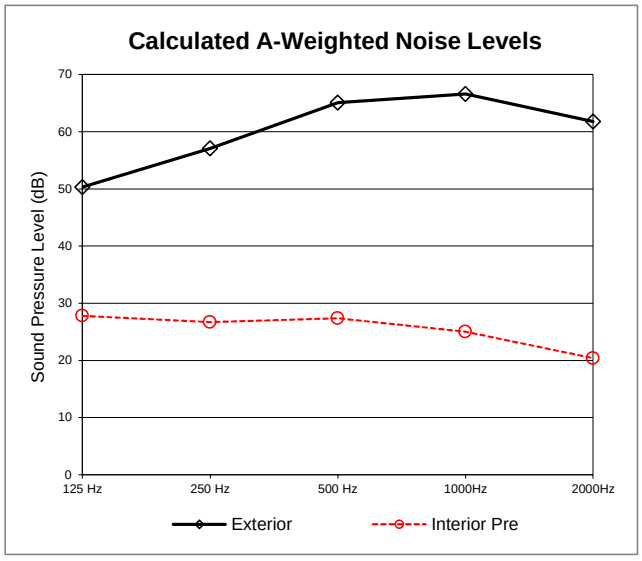


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Kawabata	Tested Room:	Bedroom 2 Façade
Address:	2035 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	46.6	39.9	41.8	41.9	37.1	46.2
Exterior Measurement (flush)	87.4	87.9	88.3	85.8	84.5	91.7
Exterior Adjusted	81.4	81.9	82.3	79.8	78.5	85.7
Interior Background	30.9	22.6	22.4	23.2	22.3	29.2
Interior Measurement	58.9	51.5	44.6	38.3	37.2	49.0
Interior Adjusted	58.9	51.5	44.6	38.2	37.1	49.0
Noise Reduction	**22.5**	**30.4**	**37.7**	**41.6**	**41.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.8	26.7	27.4	25.0	20.4	33.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.9 dB**

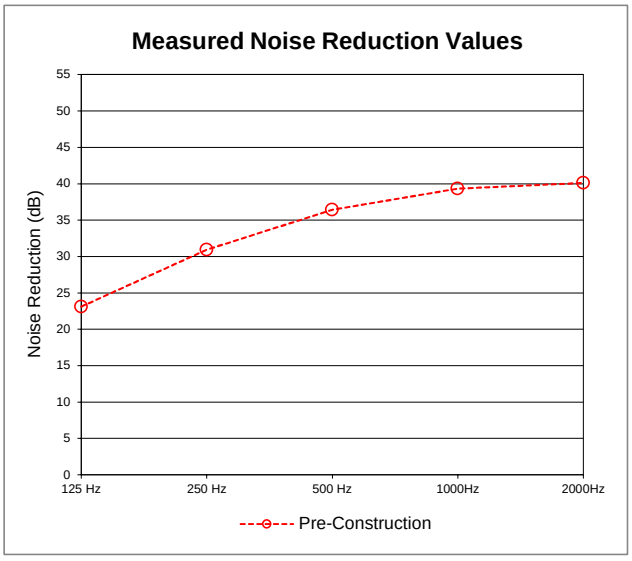


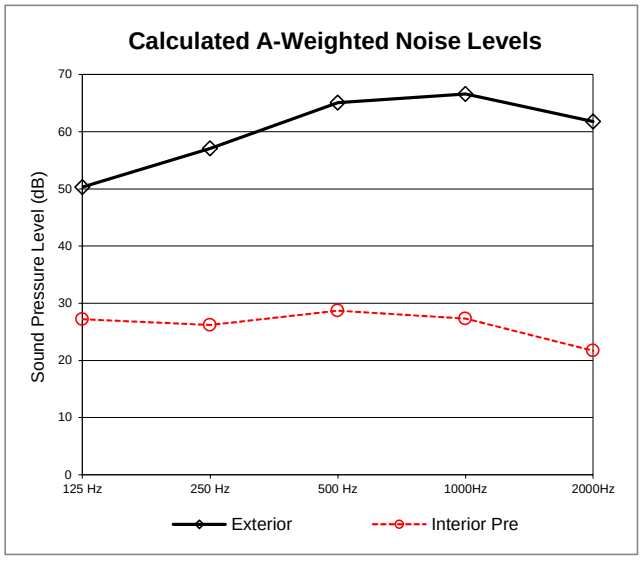


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Kawabata	Tested Room:	Bedroom 3 Façade
Address:	2035 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	46.6	39.9	41.8	41.9	37.1	46.2
Exterior Measurement (flush)	88.6	86.9	87.7	85.5	83.4	91.2
Exterior Adjusted	82.6	80.9	81.7	79.5	77.4	85.2
Interior Background	42.5	37.3	32.1	28.4	25.1	35.5
Interior Measurement	59.6	50.2	45.5	40.5	37.6	48.9
Interior Adjusted	59.5	50.0	45.3	40.2	37.3	48.7
Noise Reduction	**23.1**	**30.9**	**36.4**	**39.3**	**40.1**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	27.2	26.2	28.7	27.3	21.7	33.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**36.3 dB**

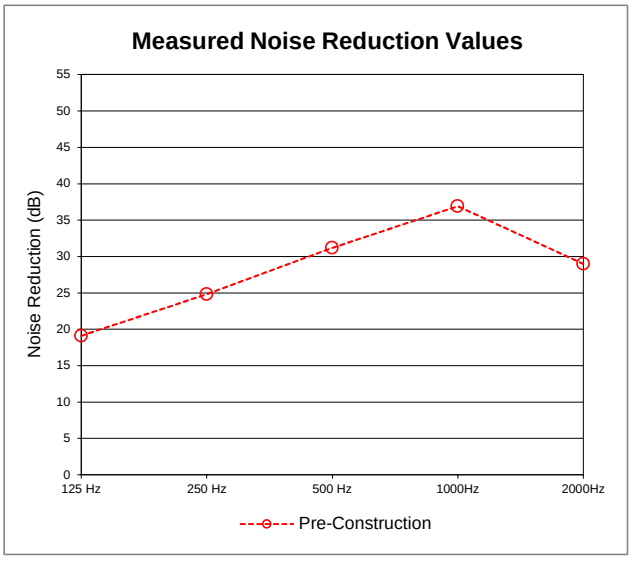


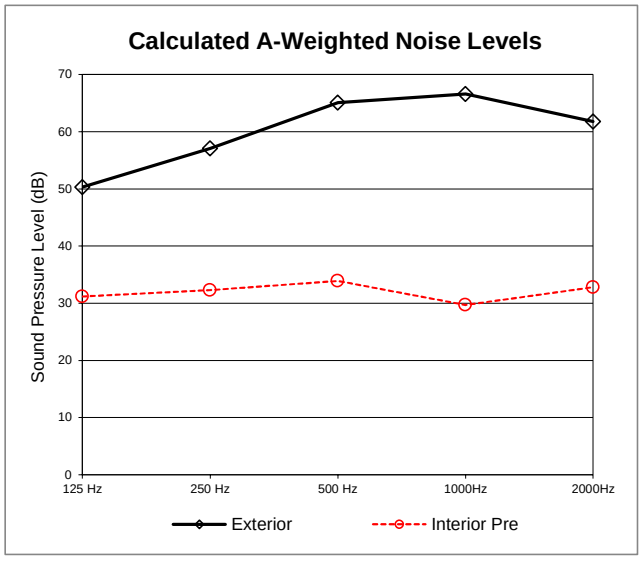


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Kawabata	Tested Room:	Bedroom 4 Façade
Address:	2035 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	49.0	43.6	42.4	45.6	38.2	47.8
Exterior Measurement (flush)	92.7	91.4	92.1	90.2	85.2	95.3
Exterior Adjusted	86.7	85.4	86.1	84.2	79.2	89.3
Interior Background	43.6	31.6	28.3	24.5	24.2	34.4
Interior Measurement	67.6	60.6	54.9	47.3	50.2	58.2
Interior Adjusted	67.6	60.6	54.9	47.3	50.2	58.2
Noise Reduction	**19.1**	**24.8**	**31.2**	**36.9**	**29.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.2	32.3	33.9	29.7	32.8	39.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**30.8 dB**

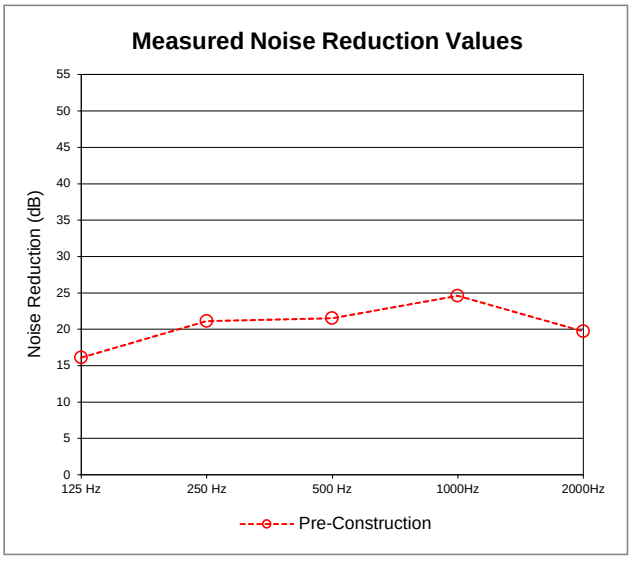


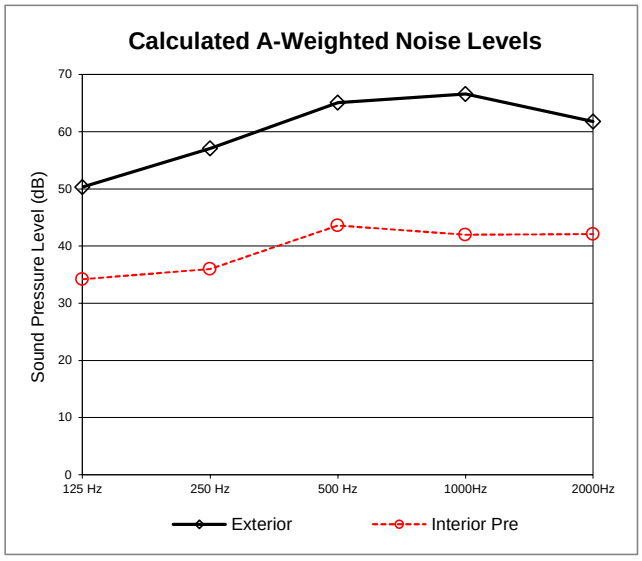


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Kawabata	Tested Room:	Office Façade
Address:	2035 S 232nd St	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	0 of 1

Pre-Construction Sound Pressure Levels (dB)

April 28, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	46.6	39.9	41.8	41.9	37.1	46.2
Exterior Measurement (flush)	92.2	86.6	89.3	88.5	83.9	92.8
Exterior Adjusted	86.2	80.6	83.3	82.5	77.9	86.8
Interior Background	36.7	29.5	25.6	22.6	22.2	30.0
Interior Measurement	70.1	59.5	61.8	57.9	58.2	64.6
Interior Adjusted	70.1	59.5	61.8	57.9	58.2	64.6
Noise Reduction	**16.1**	**21.1**	**21.5**	**24.6**	**19.7**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	34.2	36.0	43.6	42.0	42.1	47.9
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**22.1 dB**

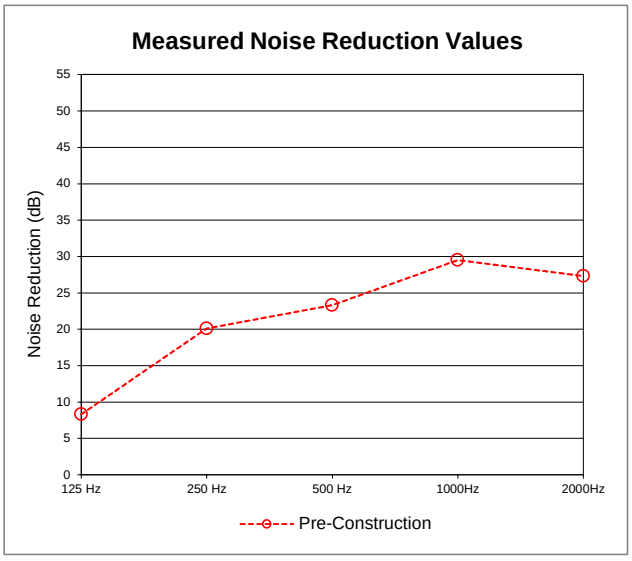


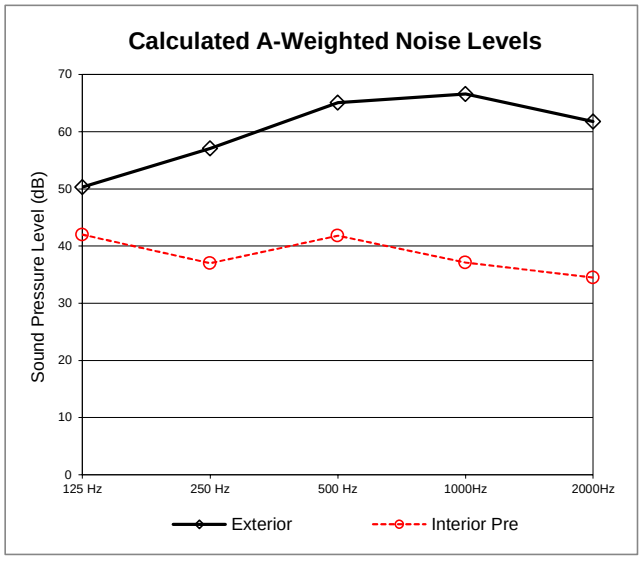


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Living Room Façade 1
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

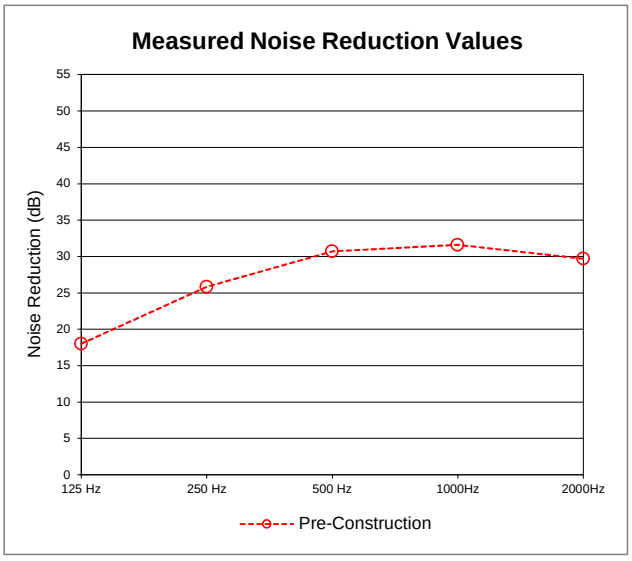
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.4	56.5	50.8	48.3	38.9	53.2
Exterior Measurement (flush)	88.0	82.8	85.4	83.8	82.3	90.0
Exterior Adjusted	82.0	76.8	79.4	77.8	76.3	84.0
Interior Background	44.7	41.7	37.1	33.9	35.2	42.1
Interior Measurement	73.7	56.8	56.2	48.5	49.2	61.0
Interior Adjusted	73.7	56.7	56.1	48.3	49.0	60.9
Noise Reduction	**8.3**	**20.1**	**23.3**	**29.5**	**27.3**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	42.0	37.0	41.8	37.1	34.5	46.4
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**23.6 dB**

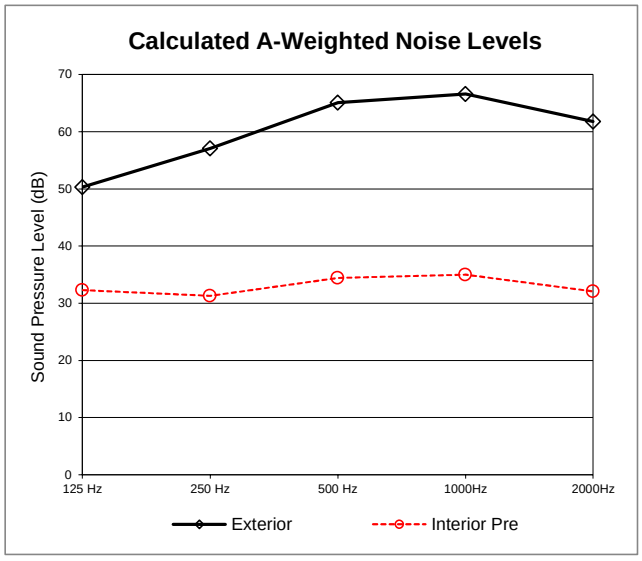




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Living Room Façade 2
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 4, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		58.4	56.5	50.8	48.3	38.9	53.2
Exterior Measurement	(flush)	97.9	98.0	99.5	95.5	90.1	100.6
Exterior Adjusted		91.9	92.0	93.5	89.5	84.1	94.6
Interior Background		44.7	41.7	37.1	33.9	35.2	42.1
Interior Measurement		73.9	66.2	62.8	57.9	54.5	65.0
Interior Adjusted		73.9	66.2	62.8	57.9	54.4	65.0
Noise Reduction		**18.0**	**25.8**	**30.7**	**31.6**	**29.7**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		32.3	31.3	34.4	35.0	32.1	40.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**29.8 dB**

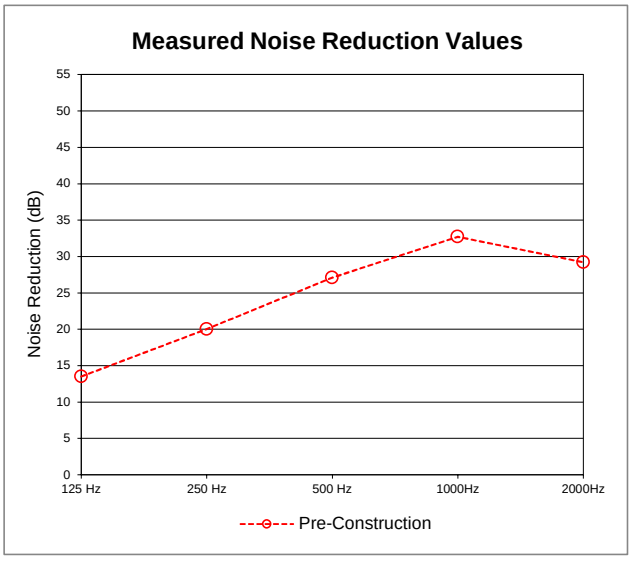


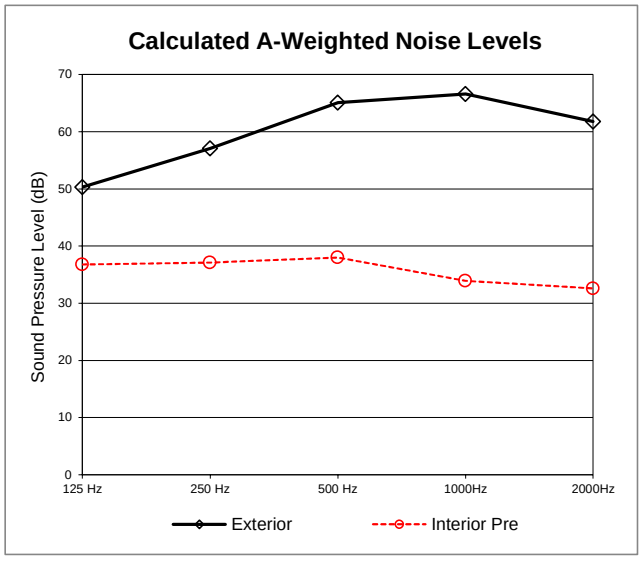


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Dining Room Façade
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	45.2	40.5	48.7	55.9	42.8	56.3
Exterior Measurement (flush)	90.1	80.5	85.9	84.0	81.7	89.8
Exterior Adjusted	84.1	74.5	79.9	78.0	75.7	83.8
Interior Background	35.5	35.0	33.0	32.8	32.3	39.7
Interior Measurement	70.6	54.5	52.8	45.5	46.7	58.2
Interior Adjusted	70.6	54.5	52.8	45.3	46.5	58.1
Noise Reduction	**13.5**	**20.0**	**27.1**	**32.7**	**29.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	36.8	37.1	38.0	33.9	32.6	43.1
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**26.9 dB**

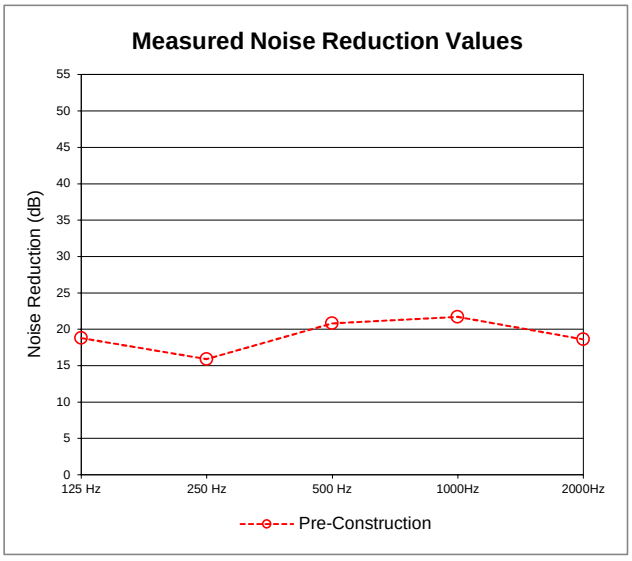


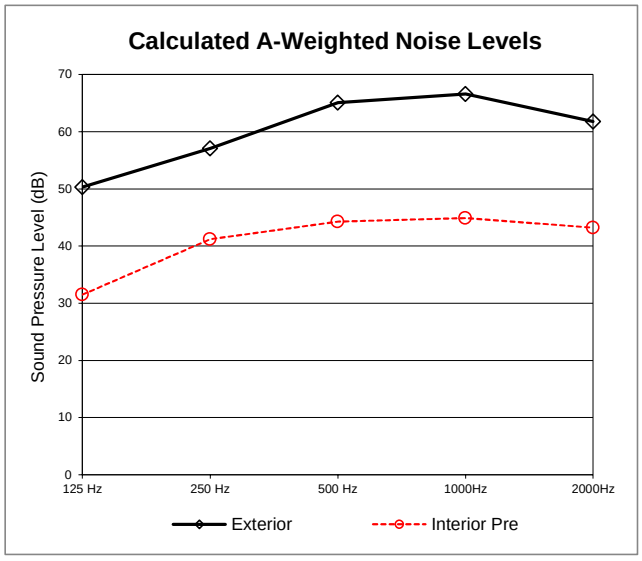


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Kitchen Façade 1
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.4	56.5	50.8	48.3	38.9	53.2
Exterior Measurement (flush)	101.8	103.1	101.9	99.1	95.8	105.1
Exterior Adjusted	95.8	97.1	95.9	93.1	89.8	99.1
Interior Background	46.0	42.4	35.8	36.7	33.4	41.5
Interior Measurement	77.0	81.2	75.1	71.4	71.2	78.9
Interior Adjusted	77.0	81.2	75.1	71.4	71.2	78.9
Noise Reduction	**18.8**	**15.9**	**20.8**	**21.7**	**18.6**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.5	41.2	44.3	44.9	43.2	49.7
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**20.3 dB**

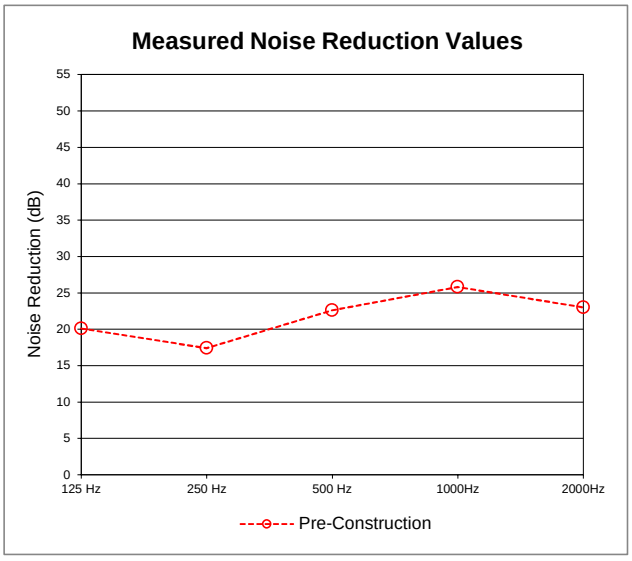


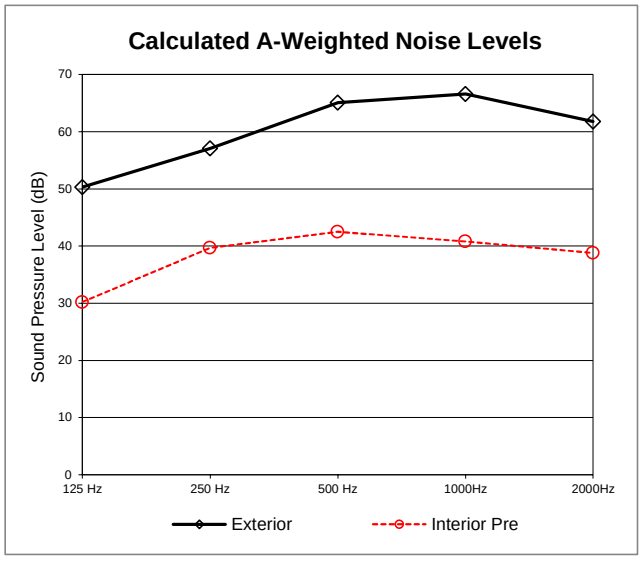


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Kitchen Façade 2
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

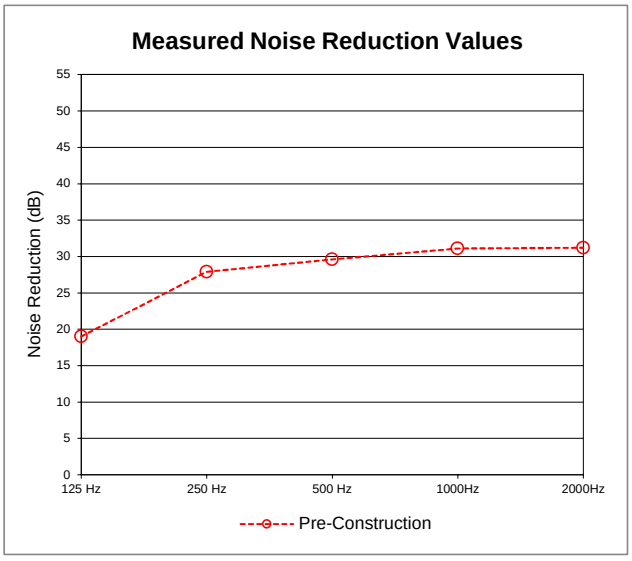
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	58.4	56.5	50.8	48.3	38.9	53.2
Exterior Measurement (flush)	98.4	94.8	95.3	91.6	87.1	97.1
Exterior Adjusted	92.4	88.8	89.3	85.6	81.1	91.1
Interior Background	46.0	42.4	35.8	36.7	33.4	41.5
Interior Measurement	72.3	71.4	66.7	59.8	58.1	69.4
Interior Adjusted	72.3	71.4	66.7	59.8	58.1	69.4
Noise Reduction	**20.1**	**17.4**	**22.6**	**25.8**	**23.0**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	30.2	39.7	42.5	40.8	38.8	46.8
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**23.2 dB**

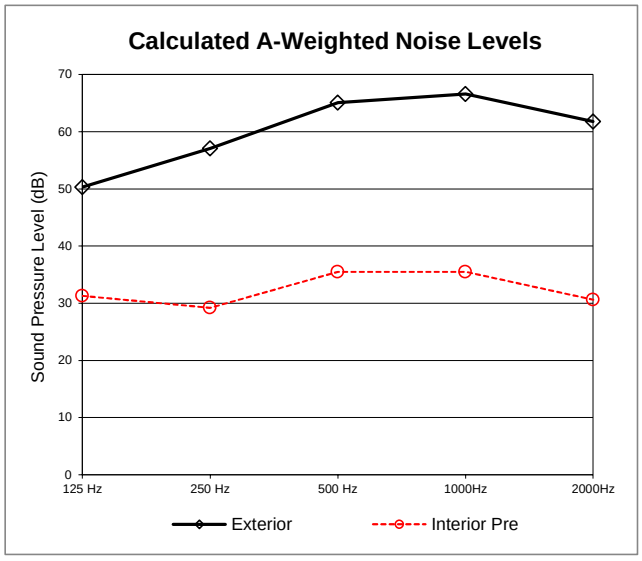




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Bedroom 1 Façade 1
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

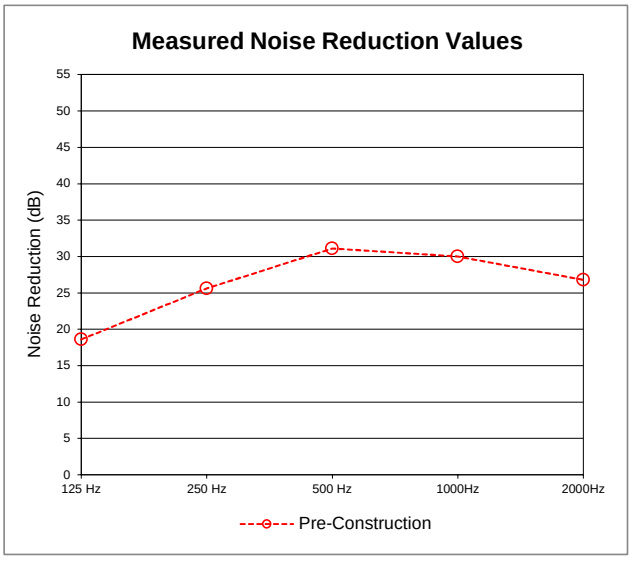
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.1	51.7	50.1	52.5	40.4	54.1
Exterior Measurement (flush)	97.0	98.2	96.2	92.2	88.5	98.7
Exterior Adjusted	91.0	92.2	90.2	86.2	82.5	92.7
Interior Background	32.1	25.4	25.9	21.9	18.7	28.3
Interior Measurement	72.0	64.3	60.6	55.1	51.3	62.9
Interior Adjusted	72.0	64.3	60.6	55.1	51.3	62.9
Noise Reduction	**19.0**	**27.9**	**29.6**	**31.1**	**31.2**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.3	29.2	35.5	35.5	30.6	40.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.8 dB**

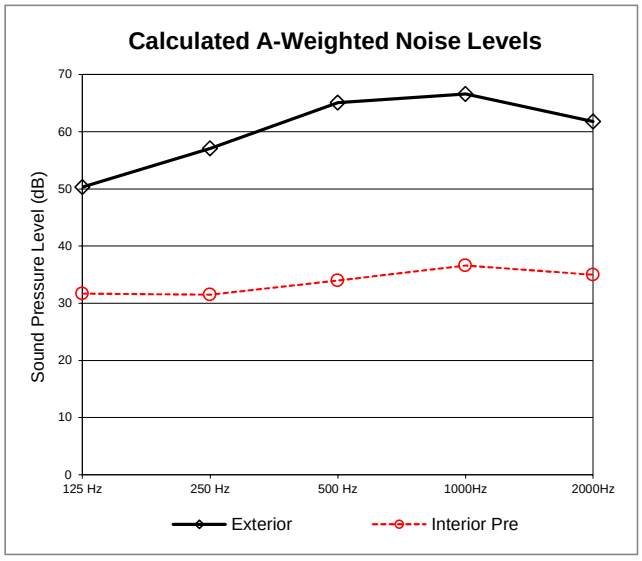




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Bedroom 1 Façade 2
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

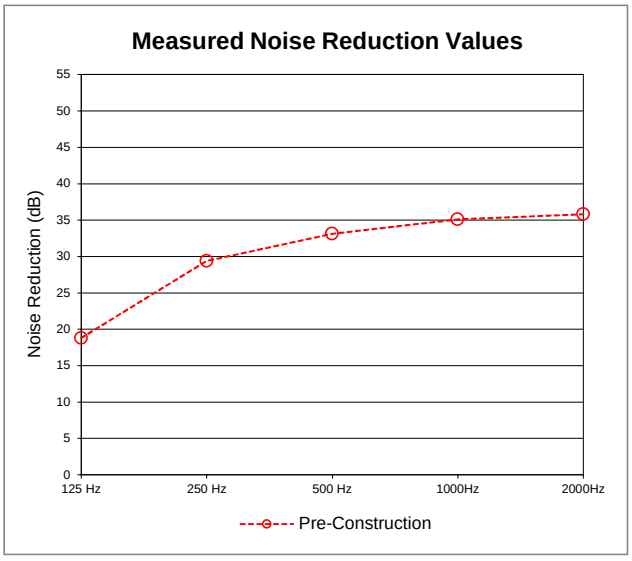
Pre-Construction Sound Pressure Levels (dB)						
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	55.1	51.7	50.1	52.5	40.4	54.1
Exterior Measurement (flush)	88.7	87.0	88.7	84.2	80.4	91.1
Exterior Adjusted	82.7	81.0	82.7	78.2	74.4	85.1
Interior Background	32.1	25.4	25.9	21.9	18.7	28.3
Interior Measurement	64.1	55.4	51.6	48.2	47.6	55.5
Interior Adjusted	64.1	55.4	51.6	48.2	47.6	55.5
Noise Reduction	**18.6**	**25.6**	**31.1**	**30.0**	**26.8**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	31.7	31.5	34.0	36.6	35.0	41.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**28.8 dB**

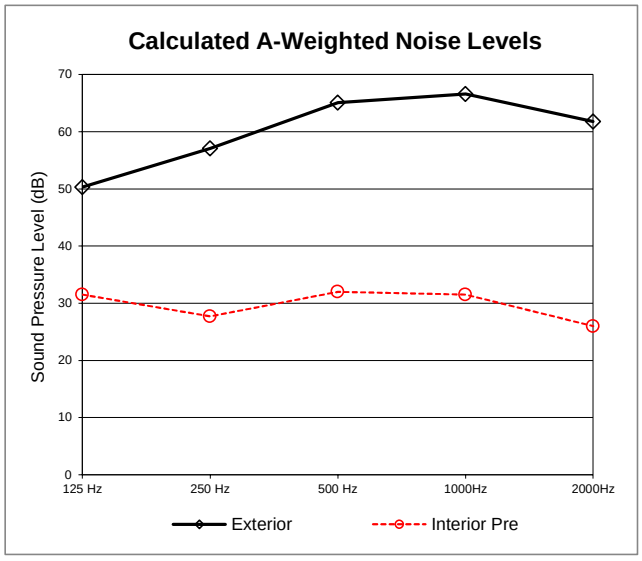




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Bedroom 2 Façade
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 4, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		55.1	51.7	50.1	52.5	40.4	54.1
Exterior Measurement	(flush)	96.3	98.1	96.3	94.0	91.0	99.9
Exterior Adjusted		90.3	92.1	90.3	88.0	85.0	93.9
Interior Background		36.8	33.8	26.1	20.2	17.1	29.5
Interior Measurement		71.5	62.7	57.2	52.9	49.2	61.3
Interior Adjusted		71.5	62.7	57.2	52.9	49.2	61.3
Noise Reduction		**18.8**	**29.4**	**33.1**	**35.1**	**35.8**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		31.5	27.7	32.0	31.5	26.0	37.3
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**32.7 dB**

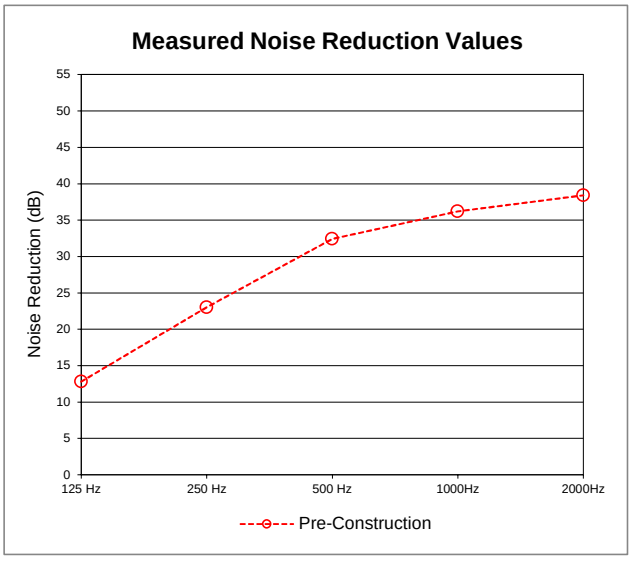


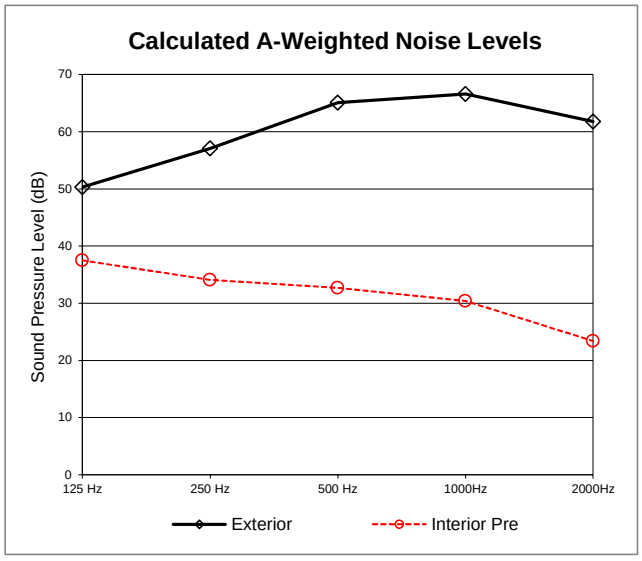


Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Bedroom 3 Façade 1
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)

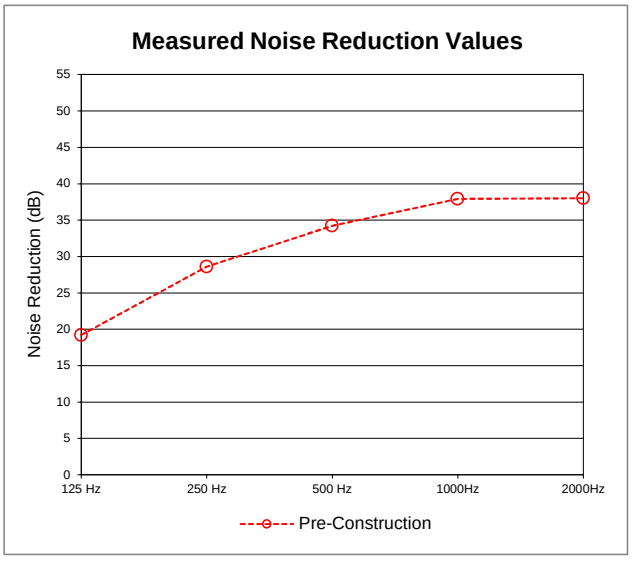
May 4, 2026	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background	45.2	40.5	48.7	55.9	42.8	56.3
Exterior Measurement (flush)	89.8	84.8	87.5	84.3	81.4	90.7
Exterior Adjusted	83.8	78.8	81.5	78.3	75.4	84.7
Interior Background	45.9	34.8	26.2	23.5	25.7	36.0
Interior Measurement	71.0	55.8	49.1	42.2	37.3	56.5
Interior Adjusted	71.0	55.8	49.1	42.1	37.0	56.5
Noise Reduction	**12.8**	**23.0**	**32.4**	**36.2**	**38.4**	-
Exterior Noise Level	50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level	37.5	34.1	32.7	30.4	23.4	40.6
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):						**29.4 dB**

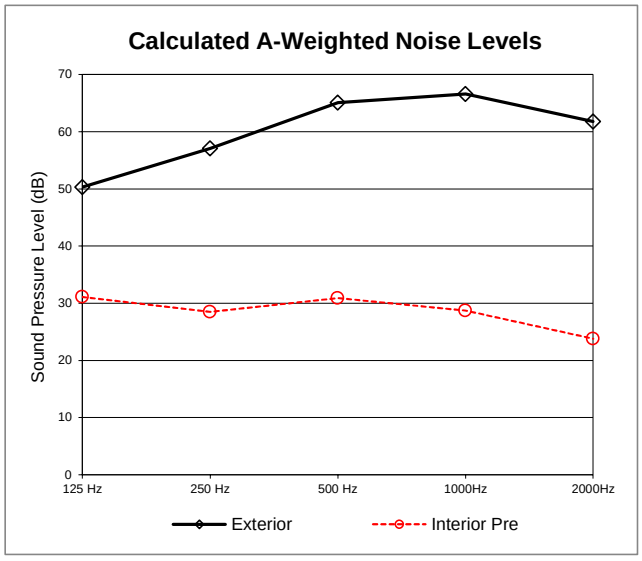




Airport:	Seattle-Tacoma International Airport	Job Number:	03-12150.001.004
Project	Repair and Replacement Program	City and State:	Seattle WA
Resident:	Nguyen	Tested Room:	Bedroom 3 Façade 2
Address:	23030 Thunderbird Dr S	Exposed Surface:	Façade & Roof
Local City:	Des Moines	Floor / Stories:	1 of 1

Pre-Construction Sound Pressure Levels (dB)							
May 4, 2026		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	A-Weighted Overall Level
Exterior Background		45.2	40.5	48.7	55.9	42.8	56.3
Exterior Measurement	(flush)	92.6	92.0	91.8	88.4	84.1	94.8
Exterior Adjusted		86.6	86.0	85.8	82.4	78.1	88.8
Interior Background		45.9	34.8	26.2	23.5	25.7	36.0
Interior Measurement		67.4	57.4	51.6	44.5	40.3	55.0
Interior Adjusted		67.4	57.4	51.6	44.5	40.1	54.9
Noise Reduction		**19.2**	**28.6**	**34.2**	**37.9**	**38.0**	-
Exterior Noise Level		50.3	57.1	65.1	66.6	61.8	70.0
Interior Noise Level		31.1	28.5	30.9	28.7	23.8	36.2
Noise Level Reduction (based on A-weighted Boeing 737-800 noise spectrum):							**33.8 dB**





SAMP SEPA Comment — Environmental Justice Issues

Subject: ***Environmental Justice Analysis — Inadequate Disclosure of Disproportionate Nighttime Noise Burden on Overburdened Communities***

Jeffery Bogen
6/27/2026
Des Moines, WA Resident and Member of Des Moines Airport Advisory Committee

Re: SEA Sustainable Airport Master Plan (SAMP) SEPA DEIS — Appendix K (Socioeconomics, Environmental Justice, Children's Health) and Appendix J (Noise and Noise-Compatible Land Use)

Introduction

This comment addresses the Environmental Justice (EJ) analysis in Appendix K of the SAMP SEPA DEIS and its companion noise analysis in Appendix J. The Appendix K EJ Memorandum concludes that the SAMP Near-Term Projects (NTPs) will produce no disproportionate adverse effects on minority or low-income communities. This comment demonstrates that this conclusion is not supported by the DEIS's own data, for three independent reasons: (1) the noise impact assessment underlying the EJ conclusion relies exclusively on DNL averaging, a metric incapable of capturing the nighttime event frequency, runway-specific concentration, and cargo operation timing that define the actual noise burden on south-side EJ communities; (2) the Appendix K analysis acknowledges Washington's HEAL Act definitions but explicitly declines to apply HEAL Act standards — a legally significant omission that the Final EIS must address; and (3) the DEIS's own Appendix J data, when properly analyzed, reveals a south-side nighttime noise burden of approximately 91 operations per night in 2022 growing to approximately 110 per night by 2037 under the Proposed Action — a 21% increase falling on the WADOH index 9–10 communities the EJ memorandum identifies as most environmentally burdened. This analysis is derived directly from the DEIS's own Appendix J runway utilization and day/night split tables, cross-multiplied against Appendix A Table 6 total operations. None of it is performed or disclosed in the EJ memorandum.

Section 1: The Affected Communities Are Among Washington's Most Environmentally Burdened

The Appendix K EJ Memorandum documents the vulnerability of affected communities using the Washington State Department of Health Environmental Health Disparities (WADOH EHD) tool. The memorandum's own Table 5-1 shows that every census tract in the General Study Area — encompassing Des Moines, Burien, SeaTac, and surrounding communities — scores 7 or higher on the WADOH index, with the majority scoring 9 or 10, the maximum possible vulnerability rating. The memorandum states explicitly: "The majority of the census tracts in each of the different study areas have scores of 9 or 10 on the WADOH Index, indicating that the area is vulnerable to changes in environmental exposures and economic impacts."

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The WADOH index integrates fourteen environmental exposure and sensitive population factors, including diesel exhaust PM2.5, toxic releases, proximity to hazardous waste, cardiovascular disease death rates, asthma rates, poverty rates, and educational attainment. These communities are not marginally elevated in environmental burden — they score at or near the top of Washington's statewide vulnerability index. **The Appendix K memorandum correctly identifies this vulnerability and then proceeds to find no significant disproportionate impact based on a noise metric that is structurally incapable of measuring the primary exposure pathway that distinguishes these communities from less-affected areas: nighttime noise event frequency from commercial jet and cargo aircraft operations.**

Section 2: The HEAL Act Analysis Is Legally and Voluntarily Inadequate

The Appendix K EJ Memorandum states: "The Port of Seattle is not an agency subject to Washington's HEAL Act (RCW 70A.02.020); the Port utilized the definition of 'vulnerable populations' from HEAL." This single sentence disposes of Washington's primary environmental justice statute in one clause. This comment demonstrates that this dismissal is inadequate on three independent grounds: the HEAL Act's standards apply to this SEPA process through Ecology's mandatory oversight role even if not directly to the Port; the Port's own documented public commitments to environmental leadership establish a voluntary standard it has not met; and the **HEAL Act's EJ assessment requirements represent the current Washington legislative standard for what an adequate EJ analysis looks like, which this document fails to satisfy even by voluntary application.**

2.1 The HEAL Act Applies to This SEPA Process Through the Department of Ecology

The seven agencies mandated to comply with the HEAL Act (RCW 70A.02.020) include the Washington Department of Ecology and the Washington Department of Transportation. The Port of Seattle is not among them. However, this does not mean the HEAL Act has no bearing on the SAMP SEPA process.

The Washington Department of Ecology is a HEAL Act covered agency that has been conducting HEAL-required Environmental Justice Assessments for significant agency actions since July 1, 2023 (Ecology, ecology.wa.gov/about-us/who-we-are/environmental-justice/heal). Ecology's HEAL EJ assessments draw on both RCW 70A.02 requirements and EPA guidance for EJ methodologies in NEPA and SEPA reviews. Ecology exercises SEPA oversight authority over this DEIS as a matter of Washington law. That oversight role is itself an agency action that Ecology takes in its capacity as a HEAL covered agency. Ecology's HEAL obligations — including the requirement to use cumulative environmental health impact analysis under *RCW 70A.02.060(2)(b)* and to identify overburdened communities expected to be affected under *RCW 70A.02.060(2)(*c) — apply to its SEPA oversight function, not merely to its own direct project actions. A SEPA document that Ecology approves or accepts without

requiring HEAL-standard EJ analysis for WADOH 9–10 communities is a document that Ecology itself has failed to apply its HEAL obligations to.

Similarly, if the Washington Department of Transportation or any other HEAL covered agency provides funding, grants, or project authorization for any SAMP NTP, that agency's HEAL EJ assessment obligation is independently triggered. WSDOT conducts HEAL EJ assessments for new transportation projects of $15 million or more (WSDOT, wsdot.wa.gov/about/environmental-justice). **The Final EIS must disclose whether any HEAL covered agency is involved in SAMP NTP funding or authorization and, if so, whether that agency has conducted a HEAL-required EJ assessment for its action.**

2.2 The Port's Own Public Commitments Establish a Voluntary EJ Leadership Standard It Has Not Met

The Port of Seattle has made extensive public commitments to environmental justice leadership that are directly relevant to this analysis. The Port's Commission page describes the Port as "leading in environmental and sustainability efforts" with values "rooted in serving the citizens of King County" including "social equity, and environmental justice" as explicit Commission committee commitments (portseattle.org/about/commission; portseattle.org/page/sustainability-environment-and-climate-committee).

More specifically, the Port established the South King and Port Communities Fund (SKPCF) in 2019 precisely to address near-airport communities. In 2024, the Commission authorized $14 million for the fund — an increase from $10 million the previous five years — to support community-led projects advancing equity and environmental improvements. Commissioner Toshiko Hasegawa stated at the fund's 2025 award announcement: "These investments put resources directly in the hands of community organizations that are leading solutions on the ground in communities near the airport. This fund is a reflection of our commitment to addressing the environmental needs of our neighboring communities." (Port of Seattle, portseattle.org/news/port-seattle-awards-record-850k-community-led-environmental-improvements, June 2026). Since 2020, the fund has supported over 80 projects through more than 50 organizations totaling $9.25 million, specifically targeting communities the Port's own Equity Index identifies as having the greatest disparities.

These commitments create a voluntary standard against which the SAMP SEPA EJ analysis must be measured**. The Port cannot simultaneously claim to be leading in environmental justice for near-airport communities** — investing $14 million in community equity programs targeting the exact communities at issue — **and produce an EJ analysis that dismisses Washington's primary environmental justice statute in one sentence, relies on a DNL metric incapable of capturing the actual nighttime noise burden on those communities, and proposes no mitigation beyond a reference to the SIP.** The gap between the Port's public EJ commitments and the Appendix K EJ analysis is itself a disclosure deficiency: the Final EIS should explain how the Port's $14 million community investment commitment and its SAMP EJ analysis are consistent.

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2.3 The HEAL Act's EJ Assessment Standards Define What an Adequate Analysis Requires

Regardless of whether the HEAL Act directly binds the Port, it establishes Washington's current legislative standard for what an adequate EJ analysis of significant actions affecting overburdened communities must contain. Under RCW 70A.02.060, a HEAL-compliant EJ assessment must: (a) use cumulative environmental health impact analysis, such as the WADOH Environmental Health Disparities map or other data that considers the combined effects of the proposed action on overburdened communities (RCW 70A.02.060(2)(b)); (b) identify overburdened communities and vulnerable populations expected to be affected and the specific potential environmental and health impacts (RCW 70A.02.060(2)(c)); and (c) if the agency determines it lacks authority to avoid or reduce environmental harm to overburdened communities, provide a clear public explanation of that determination (RCW 70A.02.060(7)).

The Appendix K EJ Memorandum fails all three of these standards. It uses the WADOH index to identify community vulnerability but does not use cumulative environmental health impact analysis to assess the combined effects of aviation noise, aviation UFPs, roadway emissions, and socioeconomic stress on those communities. It identifies WADOH 9–10 scores without identifying the specific potential health impacts — including nighttime noise impacts from approximately 91 south-side operations per night, cardiovascular disease risk in communities already elevated on cardiovascular mortality, and UFP exposure in communities downwind of cargo narrowbody operations. And when the Port concludes it cannot reduce noise impacts beyond SIP eligibility, it provides no explanation of why operational mitigation under its own voluntary Late Night Noise Limitation Program cannot be strengthened.

The Final EIS must either conduct a HEAL-standard cumulative environmental health impact analysis for the SAMP NTPs' effects on overburdened communities or explain with specificity why such analysis was not conducted and what alternative analysis satisfies SEPA's requirement for a reasonably thorough discussion of environmental impacts under WAC 197-11-330. The Port's public EJ leadership commitments, Ecology's HEAL obligations in its SEPA oversight role, and Washington's legislative standard under RCW 70A.02 all point in the same direction: **an EJ analysis that dismisses the HEAL Act in one sentence and relies on a single DNL threshold does not meet the standard Washington has established for protecting overburdened communities from significant agency actions.**

Section 3: The EJ Noise Conclusion Is Circular — It Inherits DNL's Blindness

The Appendix K noise EJ finding states that no significant noise impacts affect EJ communities because "noise-sensitive areas within the 65+ DNL contour would not experience noise level increases of 1.5 DNL or more." This conclusion is circular: it applies the same DNL 1.5 dB threshold that the DEIS uses for its primary noise significance determination, and it is subject to the same fundamental limitation — DNL

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averaging cannot reveal event frequency, inter-event respite intervals, or nighttime event counts. The EJ analysis adds no independent analytical content to the noise significance determination. It simply reports that the DNL threshold is not crossed and concludes there is no disproportionate impact.

This circularity is particularly damaging in the EJ context because the communities at issue — WADOH index 9–10 — are not experiencing a marginally elevated DNL. They are experiencing a qualitatively different noise environment characterized by event frequency and nighttime concentration that DNL cannot measure. The DEIS's own Appendix J data, when analyzed with runway utilization and day/night split data, reveals the actual nighttime operations burden on south-side communities. That analysis, presented in Section 4 below, is never performed in the EJ memorandum.

Additionally, the Appendix K memorandum identifies "Death from cardiovascular disease" as a WADOH sensitive population factor for the affected communities — and then dismisses it by cross-referencing the Appendix J conclusion that aircraft noise "does not affect the incidence of cardiovascular disease." A companion SEPA comment demonstrates that the Appendix J cardiovascular conclusion omits peer-reviewed studies directly contradicting it, including a 2025 study in the Journal of the American College of Cardiology, the HYENA Project's multi-country findings, and Schmidt et al. (2013, European Heart Journal 34:3508–3514). **The EJ memorandum's dismissal of cardiovascular risk for communities already elevated on cardiovascular disease mortality rests on a scientifically inadequate foundation.**

Section 4: What the DEIS's Own Data Actually Shows About South-Side Nighttime Burden

Appendix J Tables 7, 8, and 30–37 provide runway utilization percentages by operator category for the 2022 existing condition and all 2032 and 2037 alternatives. Tables 2, 3, and 18–25 provide day/night operation splits by operator category for the same scenarios. Cross-multiplying these tables against the total annual operations from Appendix A Table 6 produces the following verified nighttime operations burden on south-side communities. SEA operates in either south flow or north flow depending on wind conditions, and both occur at night. South-side community impact arises in both flows: in south flow, departures use the 16x runway ends (16L, 16C, 16R), climbing southbound over Des Moines, Burien, and SeaTac south communities; in north flow, arrivals approach from the south and land on the 34x runway ends (34L, 34C, 34R), descending northbound over those same communities. The Appendix J runway utilization percentages are annual blended figures that already reflect the actual mix of south-flow and north-flow nights across the year. South-side nighttime community impact is therefore correctly defined as: all 16x nighttime departures (south flow) plus all 34x nighttime arrivals (north flow).

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Table 1. South-Side Community Nighttime Operations by Scenario

Scenario	16L+16R Deps (S-flow)	16C Deps + 34C Arr	34L Arr + 34R Arr (N-flow)	Total South-Side/Night	vs. 2022 Baseline
2022 Existing (baseline)	61.5 + 0.0	4.8 + 0.5	21.8 + 2.1	**~91/night**	**—**
2032 No Action	43.7 + 0.0	24.8 + 0.5	26.9 + 4.3	**~100/night**	**+10/night (+11%)**
2032 Proposed Action	45.6 + 0.0	26.0 + 1.1	26.4 + 4.0	**~103/night**	**+12/night (+14%)**
2037 No Action	45.6 + 0.0	25.4 + 0.5	23.6 + 4.1	**~99/night**	**+8/night (+9%)**
2037 Proposed Action	49.5 + 0.0	27.8 + 1.1	27.2 + 4.5	**~110/night**	**+19/night (+21%)**

Sources: Appendix J Tables 7, 8, 18–25, 30–37 (runway utilization and day/night splits); Appendix A Table 6 (total annual operations). Night = 22:00–06:59 per Appendix J. South-side community impact = 16x departures (south flow, climbing south over communities) + 34x arrivals (north flow, approaching from south over communities). Appendix J utilization percentages are annual blended figures reflecting actual south-flow/north-flow mix. Cell format: south-flow dep + north-flow arr where applicable. 16R departures = 0% per Appendix J Table 8 in all scenarios.

4.1 The Runway 16C Shift: A SAMP-Specific Impact Not Disclosed in the EJ Analysis

One of the most significant findings in the runway utilization data is the projected redistribution of departures from Runway 16L to Runway 16C between 2022 and 2032. In 2022, Runway 16C (the center runway, whose south-flow departures climb over central Burien and SeaTac) accounts for only 5.1% of all departures — approximately 4.8 southbound nighttime departures per night. Under both the 2032 No Action and 2032 Proposed Action scenarios, Runway 16C's share grows to approximately 25–27% — approximately 26–28 southbound nighttime departures per night (Appendix J Tables 31 and 33). This represents a nearly sixfold increase in 16C nighttime south-flow departure utilization, driven by TAAM airfield modeling that reflects congestion relief from SAMP taxiway improvements.

The Runway 16C departure path tracks directly over central Burien and SeaTac — communities that include significant minority and low-income populations and score 9–10 on the WADOH index. The TAAM airfield simulation modeling driving this runway redistribution reflects congestion relief from SAMP taxiway improvements. This means the SAMP NTPs themselves contribute to a shift in nighttime departure concentration toward communities not historically exposed at this level. **The EJ memorandum does not disclose, analyze, or address this runway-specific redistribution of nighttime noise burden.**

4.2 Cargo Operations: 89% Nighttime Concentration on South-Side Departure Runways

Appendix J Table 3 documents that cargo narrowbody jet departures at SEA occur 89% at night — the highest nighttime concentration of any operator category at the airport. Cargo heavy jet departures occur 37.5% at night. These cargo operations are not randomly distributed across runways: Appendix J Table 8 shows that cargo narrowbody jet departures use Runway 16L for 63% of their operations and Runway 34R for 37%. Cargo heavy jet departures use Runway 16L for 70.4% of operations.

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The consequence is that the communities directly under Runway 16L — southern Des Moines, northern Burien, and the areas of SeaTac west of the airport — experience cargo departure noise that is concentrated almost entirely during nighttime hours. These are the same communities that score 9–10 on the WADOH index and that Appendix K identifies as having elevated cardiovascular disease mortality rates — the precise health outcome that the peer-reviewed literature most directly links to nighttime aircraft noise exposure. Cargo narrowbody departure operations — which per Appendix J Table 3 occur 89% at night (22:00–06:59) and per Table 8 use Runway 16L for 63% of those operations — are therefore structurally concentrated during the nighttime hours that include the SEA Quiet Skies window (00:00–05:00). Appendix J does not break out cargo narrowbody operations by sub-window within the nighttime period, but the 89% nighttime concentration reflects the structural cargo scheduling pattern in which aircraft arrive with freight during daytime hours (only 4% of cargo narrowbody arrivals occur at night per Appendix J Table 2) and depart after loading overnight. This concentration is not incidental — it is built into the cargo business model and will persist and grow regardless of fleet type. None of this is separately disclosed or analyzed in the EJ memorandum.

4.3 The 2037 Figures the EJ Memorandum Does Not Connect to Mitigation

The Appendix K EJ memorandum discloses that by 2037 under the Proposed Action, 1,851 additional housing units and 4,439 additional people will fall within the 65+ DNL contour above the No Action scenario. This figure — more than five times the 337-home figure cited for 2032 — is the most direct disclosure of EJ community impact in the entire document. Yet it appears without any connection to the Sound Insulation Program's (SIP) capacity to address it, the multi-year timeline before those homes would be eligible for SIP consideration, or the Port's existing program obligations that would delay construction. A companion SEPA comment documents that the SIP cannot reach the 337 newly impacted homes in 2032 for at least five to ten years due to ROA timeline, pre-ROA constraints, existing queue depth, and SAMP phasing. For the 1,851 additional units disclosed for 2037, the gap is even larger. The EJ memorandum identifies these 4,439 people as members of overburdened communities (WADOH 9–10) and then points to a mitigation program that cannot reach them on any disclosed timeline.

4.4 Extending the Quiet Skies Framework as EJ Mitigation for SAMP Growth

The Port of Seattle's Late Night Noise Limitation Program — established in 2019 and focused on the midnight–5:00 AM window — represents the Port's own acknowledgment that operations during the deepest sleep hours warrant specific community protection measures. The program uses SEL monitoring at four close-in monitors, reports quarterly on exceedances by carrier, assigns penalty scores in the Fly Quiet Incentive Program, and includes a revised Runway Use Agreement minimizing use of the west runway (16R/34L) during midnight to 5:00 AM (Port of Seattle, portseattle.org/programs/late-night-noise-limitation-program, effective September 4, 2019). **The EJ memorandum does not reference this program in its noise analysis, does not evaluate whether it is working for the WADOH 9–10 communities it was**

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designed to protect, and does not address whether SAMP operational growth is consistent with its objectives.

This comment does not request that the Port impose binding flight restrictions, which federal law under the Airport Noise and Capacity Act of 1990 (ANCA, 49 U.S.C. § 47521 et seq.) prohibits for federally-funded airports that did not have curfews in place before 1990. SEA did not have such a curfew and cannot impose one without a Part 161 study and FAA approval — a process that has not succeeded at any U.S. airport in recent decades. **This comment instead requests that the Port strengthen and extend its existing voluntary framework as EJ-specific mitigation for SAMP growth. Four voluntary measures are available to the Port within its existing legal authority:**

1. **Maintain and strengthen the existing midnight–5:00 AM program with EJ-specific reporting.** The current Late Night Noise Limitation Program reports exceedances by carrier but not by community. The Port should add EJ-specific reporting that discloses, by census tract, the number of midnight–5:00 AM operations and exceedances affecting each WADOH 9–10 community, enabling public evaluation of whether the program is delivering its stated community protection objectives in the specific neighborhoods it was designed to serve.
2. **Expand monitoring and public reporting to the full DNL nighttime penalty period (10:00 PM–7:00 AM).** The existing program covers only midnight–5:00 AM, leaving the 10:00 PM–midnight and 5:00–7:00 AM shoulder hours unmonitored under the program framework. As seatacnoise.info notes, these shoulder hours are omitted specifically because they are “prime time for many carriers — especially to Asia” (seatacnoise.info/noise-reports). SAMP Appendix A Table 6 documents substantial widebody departure growth at SEA including transpacific routes operated by Delta (A350-900) and Alaska (B787), which generate significant low-frequency noise during these shoulder hours over EJ communities. The Port cannot restrict these operations under ANCA, but it can voluntarily expand its monitoring and quarterly reporting window to cover 10:00 PM–7:00 AM, making the shoulder-hour burden on EJ communities visible in the public record and subject to the same carrier accountability as midnight–5:00 AM operations.
3. **Tighten Fly Quiet scoring thresholds as SAMP operations grow, with EJ community weighting.** The Fly Quiet Incentive Program currently assigns penalty scores for exceedances of noise thresholds at the four close-in monitors during midnight–5:00 AM. As SAMP growth adds approximately 19 additional nighttime operations per night over south-side communities by 2037, the Port should evaluate whether current thresholds remain appropriate and whether operations over WADOH 9–10 census tracts should receive additional weighting in the scoring methodology. The Port’s own Equity Index rates these communities “Very Low” across all categories; differential weighting for operations over the most environmentally burdened communities is consistent with the Port’s own equity commitments and does not require FAA authorization.

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4. **Negotiate voluntary carrier agreements for EJ community protection during SAMP construction and operations.** ANCA prohibits airports from imposing restrictions but does not prohibit voluntary agreements with individual carriers for schedule adjustments, aircraft substitutions during late-night hours, or adherence to preferential departure procedures over EJ communities. The Port already has a voluntary Runway Use Agreement minimizing west runway (16R/34L) use during midnight–5:00 AM. The Port should negotiate analogous voluntary commitments from major carriers as a condition of SAMP capacity expansion — specifically, committing to quieter aircraft types during 10:00 PM–7:00 AM over WADOH 9–10 communities and adherence to existing noise abatement departure procedures (NADPs) for all operations during those hours.

The DEIS finds no significant noise impact on EJ communities based on a DNL threshold that cannot see any of these nighttime exposure patterns. The four voluntary measures above do not require overturning that finding — they are within the Port's existing authority, consistent with its own program framework, and directly responsive to the SAMP growth documented in Appendix A Table 6. A Final EIS that identifies WADOH 9–10 communities as the most environmentally burdened in the study area and then proposes no operational mitigation for the additional 19 nighttime operations per night those communities will absorb by 2037 does not satisfy SEPA's mandate for a reasonably thorough discussion of mitigation measures under WAC 197-11-330.

4.5 The SEA Quiet Skies Program: A Port Commitment Not Reflected in the EJ Analysis

The Port of Seattle's Quiet Skies program commits to preferentially protecting the midnight–5:00 AM window for communities surrounding SEA. This is a discretionary Port commitment — unlike FAA-mandated metrics, it represents the Port's own stated standard for community protection during the most sensitive sleep hours. The Port's own Appendix J Table 3 documents that cargo narrowbody jet departures — 89% of which occur at night — are concentrated precisely in this Quiet Skies window, departing on Runway 16L and overflying communities the Port's own Equity Index rates "Very Low" across every category. The DEIS's Appendix J data establishes that south-side communities experience approximately 91 total nighttime operations per night in 2022 across all south-side runway ends (16x south-flow departures plus 34x north-flow arrivals) — growing to approximately 110 per night by 2037 under the Proposed Action, with a portion concentrated within the Quiet Skies protected window.

The EJ memorandum does not reference the Quiet Skies program, does not disclose measured event counts during the Quiet Skies window, and does not evaluate whether SAMP operational growth is consistent with the Port's own stated community protection commitment. **The Final EIS should disclose the current and projected nighttime event frequency during the Quiet Skies window for each operational monitor location and evaluate whether SAMP growth — which adds approximately 34 additional south-side nighttime operations per night by 2037 — is consistent with the Port's Quiet Skies commitment for the overburdened communities it was designed to protect.**

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Section 5: Requested Supplemental Analysis in the Final EIS

This comment requests that the Port of Seattle address the following in the SAMP SEPA Final EIS:

1. **Resolve the HEAL Act coverage question.** Explicitly determine whether the Port of Seattle is a covered agency under RCW 70A.02.020, and if not, explain why voluntary HEAL-equivalent cumulative burden analysis was not conducted for communities scoring 9–10 on the WADOH index. If HEAL standards apply or are voluntarily adopted, provide the required cumulative environmental health impact assessment for overburdened communities in the SAMP study area.
2. **Disclose total south-side nighttime operations burden by runway end.** Using the runway utilization data in Appendix J Tables 7, 8, and 30–37 and the day/night splits in Tables 2, 3, and 18–25, calculate and disclose the total nighttime operations (22:00–06:59) on each south-side runway end (16L, 16C, 16R) for the 2022 existing condition and all 2032 and 2037 alternatives. Present these figures in the EJ analysis to allow evaluation of runway-specific nighttime burden on communities under each flight path, rather than relying solely on the DNL contour boundary.
3. **Disclose and analyze the Runway 16C departure shift.** The TAAM-modeled runway utilization in Appendix J Tables 31–37 shows Runway 16C departure utilization growing from 5.1% in 2022 to approximately 25–27% by 2032 and 2037 — a fivefold increase in nighttime 16C departures that directly affects central Burien and SeaTac EJ communities. The Final EIS EJ analysis must disclose this runway redistribution, identify the communities under the 16C departure path, characterize their WADOH vulnerability scores, and evaluate whether this redistribution constitutes a disproportionate impact requiring additional mitigation.
4. **Disclose cargo operation nighttime concentration and its EJ implications.** Appendix J Table 3 documents that cargo narrowbody jet departures occur 89% at night and use Runway 16L for 63% of operations — directly overflying Des Moines, Burien, and southern SeaTac communities that score 9–10 on the WADOH index and have elevated cardiovascular disease mortality rates. The Final EIS EJ analysis must disclose the cargo operator nighttime concentration, identify which communities bear this burden, and evaluate whether this concentration constitutes a disproportionate adverse effect on those communities under SEPA's and Executive Order 12898's environmental justice standards.
5. **Connect the 2037 EJ disclosure to mitigation capacity.** The Appendix K memorandum discloses that 1,851 additional housing units and 4,439 additional people will fall within the 65+ DNL contour by 2037 under the Proposed Action. The Final EIS must connect this disclosure to a realistic assessment of when and whether Sound Insulation Program mitigation can reach these additional residents, given the Part 150 ROA timeline, SIRRPP construction delays, and existing program queue depth documented in the Port's own program records.

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6. **Evaluate Quiet Skies consistency with SAMP growth and EJ obligations.** The Final EIS should disclose current and projected nighttime event frequency during the Quiet Skies window (00:00–05:00) at each operational NOMS monitor location, evaluate whether SAMP operational growth is consistent with the Port's own Quiet Skies commitment for overburdened communities, and identify what operational measures the Port proposes to maintain the Quiet Skies commitment as south-side nighttime operations grow from approximately 91 per night in 2022 to approximately 110 per night by 2037 under the Proposed Action (with total airport-wide nighttime operations across all runways and communities growing from approximately 175 to 222 per night over the same period per Appendix J Tables 2 and 18–25).
7. **Update the cardiovascular health finding in the EJ analysis.** The Appendix K EJ memorandum dismisses cardiovascular disease risk by reference to Appendix J's conclusion that aircraft noise shows no effect on cardiovascular disease. A companion SEPA comment demonstrates that this conclusion omits peer-reviewed studies directly contradicting it. The Final EIS EJ analysis must address cardiovascular health effects for communities with elevated cardiovascular disease mortality (WADOH index factor) using the current peer-reviewed literature, including Schmidt et al. (2013, European Heart Journal 34:3508–3514), the HYENA Project, and the 2025 Journal of the American College of Cardiology findings.

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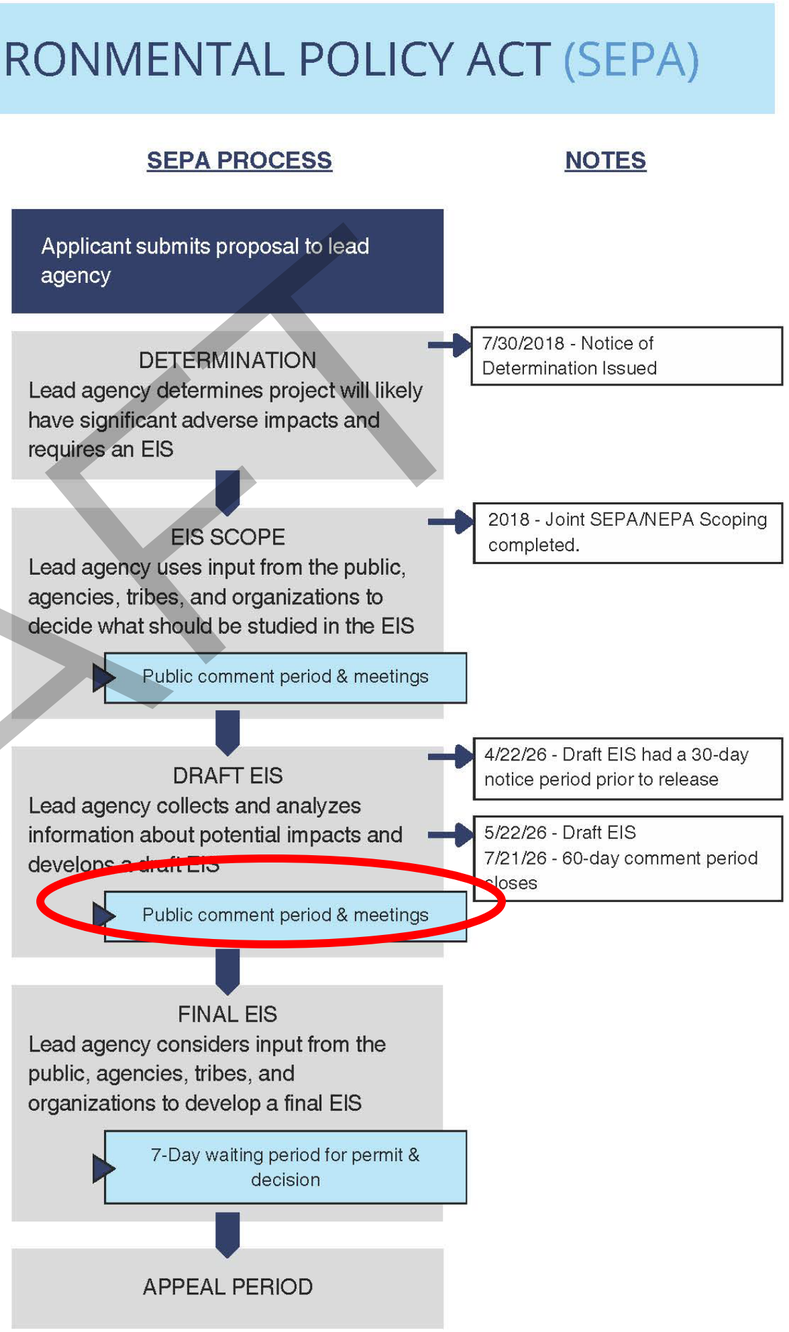
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SAMP Update

July 9, 2026

SEPA

- The Port of Seattle is the lead agency for SEPA
- The Port provided a 30-day notice prior to publication.
- The 3-Cities requested a 90 day comment period
- The Port is providing a 60 day comment period (ending July 21)
- Port Commission Public Hearing: July 9, 4pm – 6pm - Hybrid – In-person at the SEA Conference Center and online
- Comments can be submitted online, by email, mail, or at the Port of Seattle's SAMP public meetings the week of June 22nd

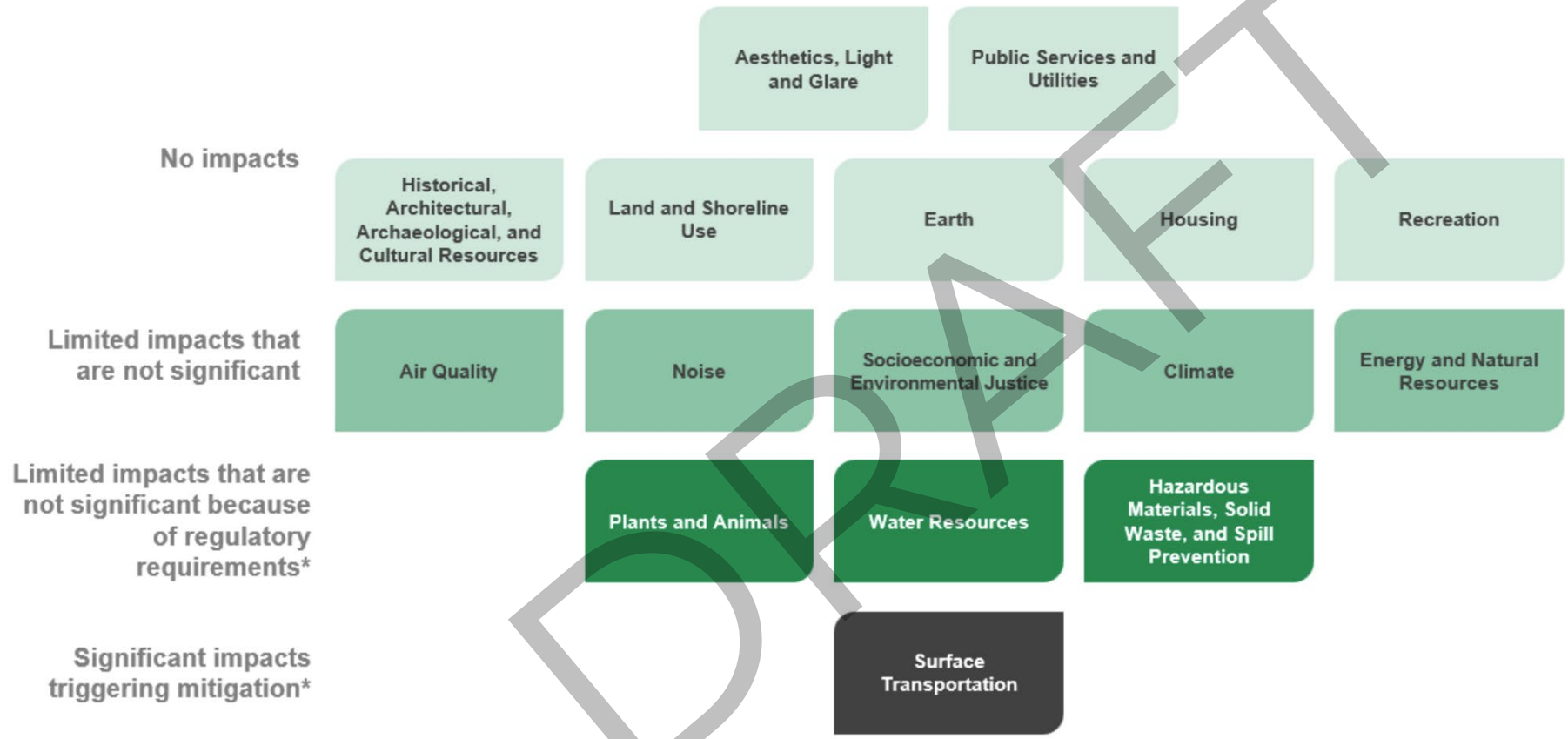


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SEPA

EXHIBIT S-2: CHART OF IMPACTS



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*Mitigation identified in the NEPA EA was carried forward into the DRAFT SEPA EIS.

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SEPA

According to the SEPA document:

The SEPA Draft EIS builds on the earlier NEPA review by providing additional analysis for several topics, including:

- Air pollutant dispersion modeling
- Human health risk assessment
- Qualitative reviews of ultrafine particle emissions and the effects of noise on human health
- Analysis of the impacts of greenhouse gas emissions attributable to the NTPs as well as the effects of climate change on SEA, including resiliency measures
- Environmental justice analysis using tools developed by the Port and the Washington Department of Health

The SEPA found that, with the implementation of mitigation for surface transportation and measures to minimize other impacts, no significant adverse environmental impacts would result from construction of the NTPs.

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SEPA DEIS Response – Airport Committee

- Recommendation to submit comments officially as the City of Des Moines Airport Committee

- Comments drafted by Jeff Bogen, committee member and retired from the Federal Aviation Agency (FAA)

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SEPA DEIS Response – Airport Committee

- Comments address:
  - Health Impacts Cumulative Effects
  - Aircraft Seat Capacity Estimates
  - Health Effects of Aviation Noise
  - Aircraft Noise Cumulative Exposure Analysis
  - Noise Analysis Deficiency
  - Adequacy of the Sound Insulation Program (SIP) as Mitigation
  - Sound Implementation Program (SIP) Limitations
  - Environmental Justice

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SEPA DEIS Response – Cities of Burien, Des Moines, & SeaTac

- Comments prepared by Perteet-Ardurra, Leland, and Ogden Murphy Wallace.

- Comments Include:
  - Air Quality
  - Hazardous Materials and Solid Waste Technical Report and Findings
  - Water Resources
  - Transportation
  - Noise
  - Economic, Fiscal, and Socioeconomic Impacts
  - Legal and Regulatory Framework

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SEPA DEIS Response – Burien, Des Moines, & SeaTac

Public Meeting/Community Open House:

Tuesday July 14th 6pm
Burien City Hall
400 SW 152nd St
Burien, WA 98166

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Goal is to assist community members:

- Make sure their voice is heard
- Understand areas of potential concern
- How to address concerns to the port

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