



DEVELOPMENT STANDARDS

1. Location Requirements

- Outside of required front and side setback.
- Five feet or more from any property line†.
- Outside required setbacks for storm drain, sewer line, watercourse, and oceanfront bluff.

2. Sound Attenuation Requirements

- Two forms of sound attenuation are required for each A/C unit, such as: internal sound blanket, shock absorption pad, enclosure with sound attenuating insulation.
- An A/C unit may not exceed the maximum noise level for its noise when measured at a shared property line.
Use the A/C Unit Noise Analysis Guide on the reverse page to calculate your A/C unit estimate noise level.

3. Maximum Allowed A/C Unit Noise Levels (Decibels)

Noise Zone I	All single, two and multiple-family residential properties: 50
Noise Zone II	All commercial properties: 65
Noise Zone III	The residential portion of mixed use properties: 55
Noise Zone IV	Certain districts in downtown specific plan area—CBD1, CBD2, CBDVC, CBDCB and civic arts district: 70
Noise Zone V	All manufacturing or industrial properties and all other uses: 60

REQUIRED SUBMITTAL ITEMS

1. A/C Unit Analysis Worksheet and Site Plan

2. **A/C Unit Manufacturer Sheets** | Circle the model identification number, max noise level (decibels), and unit dimensions.

3. **Sound Attenuation Manufacturer Sheets** | A minimum of two forms of sound attenuation are required.
Circle the estimated noise level (decibels) reduction.

REVIEW & APPROVAL PROCESS

1. Homeowners Associations Approval

- Properties in Blue Lagoon or Lagunita must obtain HOA approval before zoning review.
- Properties in Three Arch Bay or Irvine Cove must obtain HOA approval after zoning review.

2. Zoning Review

- Over-the-Counter review of the required submittal requirements may be done if the proposed AC units are located on the ground, comply with allowed locations and noise limits, do not have property constraints, and if all required submittal items are provided.
- Zoning Plan Check, the submittal of required items for formal review by an assigned planner, is required if the AC units do not qualify for over-the-counter zoning review.

3. Public Hearing

- Administrative Design Review or Planning Commission may be required for AC units that are elevated.
- Design Review Board may be required for AC units that are elevated or need variances.

4. Building Review

- After HOA, zoning review, and public hearings are completed, then the project must be submitted to the Building Division for Building Plan Check. After the completion of Building Plan Check, then a building permit may be issued for the AC unit(s).

NOTES

Variances | Projects that do not comply with the location or noise limit requirements will require variances.

City Maps GIS | lagunabeachcity.net/gis

Setbacks Guide | lagunabeachcity.net/setbacks

Zoning Plan Check | lagunabeachcity.net/zpc

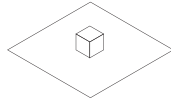
Building Plan Check | lagunabeachcity.net/bpc

† A/C units in multi-family complexes may be less than five feet from nearest shared wall.

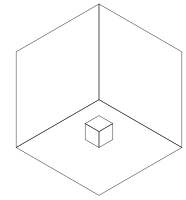


LOCATION NOISE FACTOR | This factor takes into consideration the effects of walls and other reflective surfaces adjacent to the A/C unit.

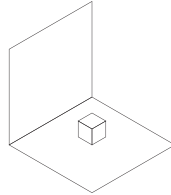
(a) A/C unit on the ground or roof or inside of building wall with no adjacent surface within 10 feet.
NOISE FACTOR: 0 dB



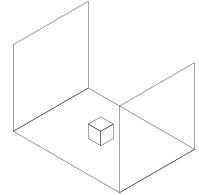
(c) A/C unit on the ground or roof or inside of building wall within 10 feet of two adjacent walls forming an inside corner to both surfaces.
NOISE FACTOR: 6 dB



(b) A/C unit on the ground or roof or inside of building wall with a single adjacent reflective surface within 10 feet.
NOISE FACTOR: 3 dB



(d) A/C unit on the ground or roof or inside of building wall and between two opposite reflecting surfaces less than 15 feet apart.
NOISE FACTOR: 6 dB



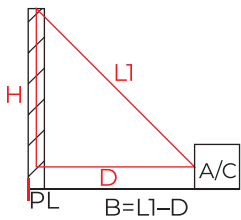
DISTANCE NOISE FACTOR | Use the distance from the AC unit to the nearest shared property line to find the Distance Factor. For A/C units in multi-family complexes measure to nearest shared wall instead of property line.

feet	VALUE (dB)	feet	VALUE (dB)	feet	VALUE (dB)	feet	VALUE (dB)	feet	VALUE (dB)
5	11.5	12	19	19	23	30	27	100	37.5
6	13	13	19.5	20	23.5	40	29.5	125	39.5
7	14.5	14	20.5	21	24	50	31	150	41
8	15.5	15	21	22	24.5	60	33	175	42.5
9	16.5	16	21.5	23	24.5	70	34.5	200	43.5
10	17.5	17	22	24	25	80	35.5	400	49.5
11	18.5	18	22.5	25	25.5	90	36.5		

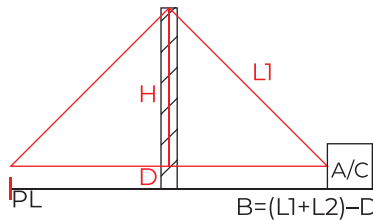
BARRIER NOISE REDUCTION | Barriers such as the corner of a building, the edge of a roof, or a heavy wall of masonry, etc., can provide substantial reductions in the sound level of A/C units. Fencing without insulation is not sufficient to qualify for this reduction. The barrier noise reduction value is found using this formula: $B=(L1+L2)-D$. For A/C units in multi-family complexes measure to nearest shared wall instead of property line.

Where:

- L1 = Distance from center of A/C unit to edge of barrier
- L2 = Distance from edge of barrier to nearest shared property line
- D = Direct distance from A/C unit to the nearest shared property line
- The height from center of A/C unit to top of barrier, H, can be used to calculate L1 and L2 using $H^2+D^2=L1^2$ or $H^2+D^2=L2^2$

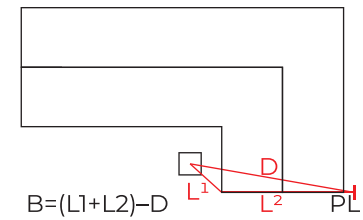


Example 1: Heavy continuous wall at property line.



Example 2: Heavy continuous wall between A/C and property line

B (feet)	VALUE (dB)	B (feet)	VALUE (dB)
0.5	4	3	12
1	7	6	15
2	10	12	17



Example 3 Corner of building (bird's eye view).

MULTIPLE A/C UNITS NOISE FACTOR

Finding Combined Noise Level of Two (Loudest) Units:

- Find difference of estimated noise levels for loudest two units (noise analysis step 6, pg 3)
- Refer to table (see right) to find corresponding noise factor.
- Add noise factor to louder of two units to find combined noise level of both units.

Finding Combined Noise Level of Three or More Units

- Find difference between combined noise level of loudest two units and next loudest unit.
- Refer to table (see right) to find corresponding noise factor.
- Find the combined noise level of the loudest three units by adding the noise factor to combined noise level of loudest two units.
- If there are more units, compare combined noise level of loudest three units with next loudest unit. Repeat method in prior steps for additional units.

Difference between est. noise levels (dB)	NOISE FACTOR (dB) to add to larger noise level
0.0 to 0.5	3
1.0 to 1.5	2
2.0 to 3.0	2.5
3.5 to 5.0	1.5
5.5 to 7.0	1
> 7.0	0

Note: If the difference between units is not shown, round up to the nearest value in the table.



Address: _____

Zone or Specific Plan Area: _____ Homeowners Association: _____

PROPERTY CONSTRAINTS | Check off boxes if they are true for your property. Refer to lagunabeachcity.net/gis.

- Sewer Storm Drain Oceanfront Bluff Watercourse

REQUIRED SETBACKS | Identify your property's required setbacks below. Refer to lagunabeachcity.net/setbacks.

Front(s): _____ Sides: _____ Rear or Bluff: _____

COMPLIANT LOCATIONS | Check off boxes if they are true for your proposed AC unit location(s).

- Outside of required front setback Outside of Required Storm Drain or Sewer Line Setback
 Outside of required side setback Outside of Required Watercourse Setback
 5 feet or more from any property line Outside of Required Bluff Setback

PROPOSED LOCATIONS | Check off boxes that apply to your proposed AC unit location(s).

- On Ground Roof Deck Wall-Mounted Inside Enclosed Building Other

PROPOSED SETBACKS | Identify the distance, in feet, from the proposed AC unit(s) to the nearest two property lines. For A/C units in multi-family complexes measure to nearest shared wall instead of property line.

	Unit 1	Unit 2	Unit 3	Unit 4
[Front, Rear, Side] Property Line	_____	_____	_____	_____
[Front, Rear, Side] Property Line	_____	_____	_____	_____

MANUFACTURER INFORMATION

AC Unit Manufacturer Name	_____	_____	_____	_____
Model ID	_____	_____	_____	_____
Maximum Noise Level (dB)	_____	_____	_____	_____
Unit Dimensions (L x W x H)	_____	_____	_____	_____

SOUND ATTENUATION | A minimum of 2 types of sound attenuation are required per unit. A shock absorption pad counts as one type, but does not count towards any sound reduction. An internal sound blanket is assumed to produce a noise reduction of 5 decibels. For other types of attenuation, provide manufacturer specification sheets that verify reductions indicated below.

Type of Sound Attenuation 1:	_____	_____	_____	_____
Minimum Noise Reduction (dB):	_____	_____	_____	_____
Type of Sound Attenuation 2:	_____	_____	_____	_____
Minimum Noise Reduction (dB):	_____	_____	_____	_____
Type of Sound Attenuation 3:	_____	_____	_____	_____
Minimum Noise Reduction (dB):	_____	_____	_____	_____
Type of Sound Attenuation 4:	_____	_____	_____	_____
Minimum Noise Reduction (dB):	_____	_____	_____	_____

A/C UNIT NOISE ANALYSIS | For each A/C unit, calculate the estimated noise level at the nearest shared property line (step 6). For A/C units in multi-family complexes measure to nearest shared wall instead of property line. Refer to the A/C Unit Noise Analysis Guide and the A/C unit manufacture and sound attenuation information above to determine the values below.

1) Maximum Noise Level	_____	_____	_____	_____
2) Location Noise Factor	+ _____	+ _____	+ _____	+ _____
3) Distance Noise Factor	- _____	- _____	- _____	- _____
4) Barrier Noise Reduction	- _____	- _____	- _____	- _____
5) Combined Sound Attenuation	- _____	- _____	- _____	- _____
6) Total Estimated Noise (dB)	= _____	= _____	= _____	= _____

MULTIPLE A/C UNIT NOISE ANALYSIS

	Unit A	Unit B	Unit C	Unit D
7) Estimated Noise from Step 6 (List from loudest to quietest)	_____	_____	_____	_____
	A & B	A, B & C	A, B, C & D	
8) Noise Factor (dB)	_____	_____	_____	
9) Combined Noise Level (dB)	_____	_____	_____	



DRAW A SITE PLAN | of the entire property in the space below or provide on a separate paper (minimum size: 8.5x11 inches). Refer to City GIS for reference (lagunabeachcity.net/GIS). Check off boxes to confirm each requisite site plan element is shown.

Property Lines

Required Setbacks

Proposed Setbacks

A/C Unit Location(s)

Abutting Street(s) Labeled

A large, empty grid of light blue lines on a white background, intended for drawing a site plan.