



## PLANNING & ZONING COMMISSION MEETING MINUTES

August 9, 2023, 6:30pm

66 Thillen Drive, Fox Lake, IL

Also Available Virtually Through the Link Below

**I. Call To Order** The meeting was opened at 6:32 PM

**II. Pledge Of Allegiance**

<b>III. Roll Call</b>	<b>Present</b>	<b>Absent</b>
Commissioner: Bongiovanni	___x___	_____
Legge	___x___	_____
Swanson	___x___	_____
Nakanishi	___x___	_____
Bell	___x___	_____
Chairman: Gauger	___x___	_____

via zoom

A quorum was established.

Also in attendance: Patricia Russell, Dusty Hosna

**IV. Approval of July 12, 2023 Meeting Minutes**

Commissioner Nakanishi made a motion to approve the minutes of the July 12, 2023 meeting, as written, seconded by Commissioner Bongiovanni.

### **Affirmative Vote**

All were in favor. Motion Passed.

**V. Old Business**

1) **174 Riverside Island Drive** – Special Use Permit for Short-term Rental

Open: 6:36PM

Closed: 7:42PM

Luke and Angie Thorn were sworn in.

Chairman Gauger summarized the reason for this hearing: petition was opened at the hearing last month and the Commission felt that a little more of getting to know the neighborhood and coming up with a couple of different plans was in order.

What has changed in the last month?

Mrs. Thorn stated that the meeting last month was very telling. The Riverside Island community is a tight-knit neighborhood consisting of families, retirees and long-term residents. The Thorns understand that concerns come up when a short-term rental comes into a neighborhood and they understand those concerns.

The Thorns utmost priority is to be responsible hosts and they want to positively contribute to the community. Mrs. Thorn listed some concerns that were brought up at the last meeting. She offered information about them, including that they live in Antioch and have been there for 6 years and have no plans to move away from the chain-of-lakes. Their long-term goal is to provide a place for their children and grandchildren. Also, they have a large family and want to make this location accessible for them to enjoy. They also want to use this as a short-term rental to off-set the cost of the property.

Mrs. Thorn stated that they are hard workers and live their lives with integrity. They are not lazy and they hold themselves accountable when needed and they strive to make good relationships within the community. She said that they genuinely value the neighborhood and the strong sense of community. They have learned through this process that open dialog and mutual respect will be vital to maintaining a harmonious environment.

The Thorns have managed a long-term rental before in North Liberty, Iowa, for the last 6 years. (A letter of recommendation is included with the handout Mrs. Thorn provided, which is attached to this document as Attachment A). They have reflected on some of the concerns mentioned by the neighbors last month and have taken action on some of the items:

Parking concern: they will limit parking to 2 vehicles; there is a ring camera that will allow them to see if this is being violated.

Signage concern: Mrs. Thorn contacted Street Department and asked to have signs posted on the bridge and that work has been done. Also, there is a “no fishing” sign near the bridge.

Road concern: The Thorns will be flexible about accommodations in adverse weather, if needed.

Safety concern: the Thorns do not expect anyone to have to “police” their property. They will be enforcing their rules upon their guests and making sure that they abide by the rules. Also, Mrs. Thorn has contacted the Fox Lake Police Department and requested an additional patrol of the area once the rentals begin. The Police Department agreed.

Real Estate concern: Short-term rentals can have a positive effect on neighborhoods and financial well-being of neighbors. There is also a ripple effect on the community, especially in small towns.

The Thorns have established communications with all of their neighbors on the island by sending a letter stating their intentions, including their proposed rules and regulations and their contact information. They also held an open house and many of the neighbors attended. They had some good conversations about the proposed

short-term rental. They felt very welcomed by the neighbors who attended.

Mrs. Thorn said that they have put together a good package and complied with every requirement in the village ordinances and have taken the time to thoughtfully address the concerns of the neighbors.

Commissioner Bongiovanni questioned having 6 adults but only 2 vehicles.

Commissioner Nakanishi said that she appreciates that the Thorns didn't say that they want to share this home with other people, as many other STR's petitioners say. They were honest in stating that they want to offset some of the expenses.

### **Audience Comments**

**Robbie Balan and Tom Klein** were sworn in. (171 Riverside Island Drive)

Ms. Balan submitted an email to the Commission and Chairman Gauger said that it would be included with the minutes (see Attachment B).

Ms. Balan stated that she appreciates all that the Thorns have done. She also spoke about the density issues saying that theirs would be the only STR on the island now but that would not be true for long. In a couple of years, she expects that 20% of the island could be STR's which would make drastic changes in island life.

Mr. Klein said that they did meet with the Thorn family and were able to share some of their concerns. Mr. Klein thinks that the Thorns are terrific people but they are asking to put a business in the middle of the neighborhood. The Thorns have their own regulations and decisions; the neighborhood preference would be that they don't have a short-term rental on the island. This affects parking; but also it means increased traffic from renters, people coming to clean after the rental, etc. The island properties are not connected to city water so they have well and septic systems, roads are small, there are no fire hydrants. This is an isolated group of 19 homes. 80% of the home owners signed a petition saying that they do not want a short-term rental on the island. The neighbors have nothing personal against Luke and Angie, they are just trying to defend their community, keep their neighborhood and not have a business come in.

**Mike and Janette Jennings** were sworn in. (182 Riverside Island)

Mrs. Jennings stated that the road on the island is also a pedestrian walk-way. Especially on the weekends, 75% of the island is out, either walking to the Legion or around the Legion or taking a jog with their children or grandchildren and there are no sidewalks. This makes safety a concern. There is no posted speed limit and there are "blind" turns of which visitors may not be aware.

Mr. Jennings said that they have been residents of the island for over 25 years preserving the community. The vast majority of the residents of the island are here tonight against the proposed STR. The island is not a place where a business should be.

**Robert Pausch** was sworn in. (176 Riverside Island Drive)

Mr. Pausch owns the property adjacent to the Thorns. He mentioned the danger of

the road where it meets with the “main drag”. Mr. Pausch had a guest who was involved in an accident situation, that area is extremely dangerous, especially for people who are unfamiliar with the area. He also has concerns about parking and potentially having cars parking in front of his home.

**Jennifer McDonald** was sworn in.

Ms. McDonald thanked the commissioners for their time. She lives at the end of the road on the island and has problems with people trying to turn around and hitting their cars, mail box, fence, etc. Even the postal workers have done damage to her property while trying to turn around. When she bought her home, she was advised not to buy a place in Fox Lake; it’s the end of the line (for Metra). They purchased because Fox Lake is as close to the Wisconsin border as they could get.

Ms. McDonald said that there have been a lot more people hanging out on Main Street. “It’s not great”, but she believes in this town and people who live here do too. She invested in the town and she wants other people to invest in it; people who actually live here and care.

She said that she has nothing against the Thorns personally but for them to denigrate our way of life in order for them to make money. . “it just sucks”.

**Jason Dutmers** was sworn in. (by zoom)

Mr. Dutmers is the owner at 14 N. Lake Ave and he applauds owners of short-term rentals. The Board needs to look at this through ordinances:

- 1) Is there an ordinance that defines “adult” by age? Chairman Gauger said that there is an ordinance that states an adult is age 18 or greater. Mr. Dutmers said that STR companies consider an adult anyone over 12 years of age. This creates a problem when trying to book a rental location.
- 2) Is there anyone watching that STR ordinances are being followed? Chairman Gauger said no, but you can contact Dusty Hosna and he can send out an enforcement officer. There is not enough revenue generated by the tax on the short-term rentals to hire a person to scour the internet in that regard. There is enforcement happening with illegal STR’s. Dusty Hosna said that we did have a study done regarding STR’s in Fox Lake (legal and illegal). The information generated will be part of an upcoming workshop. We also have neighbors who do a really good job

of monitoring and keeping us aware of what is going on. Also, we have some properties in the adjudication process. Chairman Gauger hopes that this will help to assure that we are working on this situation. Mr. Dutmers also mentioned the problem of tent cities, parking problems and extra people hanging around town.

**Susan Stark** was sworn in. (179 Riverside Island)

Ms. Stark thanked the Commissioners for their time and consideration. She stated that 11 homes are represented at the meeting tonight out of 18 on the island (not including the petitioners). Close to 90% of the island signed a petition of protest



(see Attachment B). She said it was great to have met Angie and Luke. Ms. Stark did go to their open house and found them to be lovely people with lovely kids. Ms. Stark said, neighbors are neighbors and we would love to have them for neighbors but this will be stranger after stranger after stranger.

Ms. Stark thanked whoever put short-term rental information on the front page of the Village website. What “struck” her was the phrase regarding short-term rentals “while maintaining the peace and comfort of our residential areas.” Some residents are not comfortable with having a short-term rental business on the island. We say “community” but it’s just a tiny little island with a road. She also appreciates that local realtors and potential buyers are made aware that a short-term rental approval is not guaranteed.

Ms. Stark also appreciates Angie calling Streets and Public Works about the road signs. Ms. Stark had run into Tom Muehlfelder and had also asked him about the signs for this bridge and the one at Atwater. Tom said that we don’t have any sign that read “One-Car Bridge” on hand so he had the “Narrow Bridge” signs put up for now. It also has been noticed that the gap in the base of the bridge has been pushing apart and within the last couple of weeks it has been noticed that the bolts at the top of the railings have split out. Ms. Stark has notified Tom about this and he will look into this issue.

Ms. Stark pointed out that, although there is some research showing that some short-term rentals can have some benefit, there are also some down-sides. They bring higher and higher prices to the market which eliminates potential buyers. We previously had testimony from a couple who did not buy a property in Fox Lake because there were already STR’s on that street. For the current residents, if we wanted to sell our home we are eliminating a portion of the market of potential buyers.

At the last meeting, Mr. Legge had mentioned that with a 2 car limit, even though there are 3 bedrooms maybe it should be limited to 4 adults with children. Also, there was a protest letter that stated the windows in the basement bedroom do not pass egress. Also, we see that the ordinance says “unlimited children”. That is a little uncomfortable.

**Ava Dawson was sworn in.**

Ms. Dawson does not currently live on Riverside Island but she did live there for an extended period of time when she was younger. She has lived in Fox Lake since she was 5 years old.

Riverside Island is a magical, peaceful place to a lot of people. Owning a house there is incredible because it feels so far removed from everything. It feels like it is miles away from civilization. She feels safe on the island because she knows that she can trust the residents that reside on the island. She knows most of them personally. She wants to feel safe being outside at night, walking the dog, walking to the Legion and back, etc. Ms. Dawson feels that she would not be able to do that with strangers on the island. She is 17 years old and appreciates Riverside Island because it is the only place in Fox Lake where she feels safe any time of the day. She doesn’t worry about being made uneasy regarding her personal safety. She doesn’t know who is going to be renting this house. She appreciates that the

owners have stated that they will be keeping very close tabs on the renters but they can't do that 100% of the time.

We don't know who is coming into this tiny one-street island. It can't even be called a neighborhood. It is 19 houses and 1 house of those 19 being an AirB&B is a really big deal for the little community that is there. She said she would hate to see that taken away from the residents because someone wants to start a business there. While she does appreciate that STR's can be beneficial to a community, she does not think it would be beneficial for a community that is this small and this closely-knit and has been for a long time such as Riverside Island.

**Luke and Angie Thorn** returned to the podium.

Chairman Gauger said that he was glad that the Thorns had decided to limit parking to just 2 cars. He asked if they would consider renting just 2 bedrooms for a year. Mr. Thorn said, respectfully, the ordinance said 3 bedroom, 2 adults each and based upon the purchase they made they would like to stick with that. Mr. Thorn feels that, the reduction in cars allowed would help them to stick to the 6 adult limit. Commissioner Nakanishi suggested that, if the bedroom in the basement does not have proper egress, people should not be sleeping there. Mrs. Thorn said that this was not a concern on their rental inspection and the home was appraised for 3 legal bedrooms. There are 2 windows in the basement bedroom. Chairman Gauger added that a door and a window is an egress. The Thorns offered to have another inspection if needed. Mrs. Thorn also said that there is a closet in every bedroom.

Mrs. Thorn said that they know that if they rented only 2 bedrooms, it would limit the number of guests. She said that she did a survey of properties in Fox Lake that are on AirB&B and found that the average guest count is 7. So, going from 6 to 4 adults puts the Thorns at a huge disadvantage. They have tried to accommodate with the cars and everything else and they just ask for an equal opportunity as has been given to a lot of others in the area. Mrs. Thorn feels that they have done a lot more than some of the others who have been allowed to rent out their whole house. They are not asking for 5 bedrooms or 20 people. It's just 3 bedrooms, 6 adults. Mrs. Thorn asked if this is a deal breaker for the commissioners.

Chairman Gauger said that this is why he presented the question of reducing the number of potential renter to them. To see what their convictions were. Mrs. Thorn said that they are totally willing to go down to 2 bedrooms in a year if renting 3 proves to be an issue. She also reminded that they did address the parking issue by reducing the limit of vehicles to 2. Also, on the weekends, the island is loud. It is right by Route 12 and there is boat noise, music from boats, people screaming, the police station is right there, you can hear the road traffic from Route 12. So, if it is a noise concern, the island is already loud. If it's a safety issue, she understands that; the more people, the more potential issues. That is why they called the police station and asked for additional patrols.

## **Comments**

Commissioner Legge said he is amazed and optimistic about the petitioners as well as the community here. When looking at the various petitioners that are approaching us, many times there is at least one side that doesn't care. In this case everyone really cares. There are a lot of very valid points being made on both

sides.

Regarding the driving and accident situations on the island, those problems can happen anywhere. Commissioner Legge pointed to the testimony regarding accidents involving a guest of one of the residents and the mail-person. Accidents can happen anywhere. There is the concern of crime and the concern of something that could be detrimental to the community. Guests through AirB&B or other STR companies who are under contract are probably not going to create a danger to the community. These renters are people who are looking for a vacation just as anyone else here tonight might look for a vacation.

In regard to the number of bedrooms, Commissioner Legge feels that component is a concession that can help enrich the opportunity for the petitioners to get a chance to demonstrate to the community that they can manage this in a responsible and proper manner and relieve their fears. The petitioners can then come back after a year and ask for the additional room.

Mrs. Thorn said she feels they are being punished. She went through more than a year of minutes from the Planning and Zoning Commission and the Village Board of Trustees and she feels that she and her husband are not asking for a lot. There are people who were renting short-term without a permit and have now been accepted. There are people who are renting out multiple units on their property. We are not asking for 5 bedrooms. Chairman Gauger reminded that they don't have 5 bedrooms. Mrs. Thorn said that she mentioned 5 bedrooms because houses with 5 bedrooms have gotten approved. She is asking for an equal opportunity compared to what those property owners got.

Commissioner Legge noted that most of the properties in Fox Lake have more than 3 bedrooms. Also, there is a lot more to focus on. The Thorns are not being treated any differently than anyone else; there is no punishment that this board is looking to bestow on anybody. We are trying to bring a fair opportunity to the community that you are moving into as well for yourselves. Everybody has rights.

Mr. Thorn does not feel that, within a year, the neighbors will want more renters allowed. In a year they will be in the same situation and without facts to base a denial off of, they would like to go with 3 rooms with 2 adults each.

Commissioner Nakanishi said that she sees a lot of residents of the island here and wonders if they would be more accepting of a long-term rental there. This would allow more time for the Thorns to get to know the neighbors. Mrs. Thorn said that this is something that they have considered. Mrs. Thorn has already submitted an application for that purpose.

Chairman Gauger noted that between this meeting and the meeting last month, we have had about 3 hours of testimony from all sides of this issue. We have been given much to think about.

### **Motion of Recommendation**

Commissioner Swanson made a motion to approve the petition for a Special Use Permit to operate a short-term rental on the property commonly known as 174 Riverside Island Drive, Fox Lake, Illinois, in accordance with Village of Fox Lake Zoning Ordinance 9-1-6-10, subsection C with Standards 1, 2, 3, 4, 5, and 6

satisfied.

The motion was seconded by Chairman Gauger.

### **Discussion**

Commissioner Legge asked if this motion is for 3 bedrooms. Chairman Gauger said yes.

<b>Roll Call Vote</b>	<b>Yea</b>	<b>Nay</b>	
Commissioner: Bongiovanni	_____	__x__	
Legge	_____	__x__	
Swanson	__x__	_____	
Nakanishi	_____	__x__	
Bell	_____	_____	Abstain
Chairman: Gauger	__x__	_____	

Motion failed

Chairman Gauger explained that the petition has been denied. It will be sent to the Village Board of Trustees and they will have the opportunity to overturn this decision should they feel that it needs to be overturned.

Mrs. Thorn asked; what is the basis for the denial other than the community speakers. Chairman Gauge said that, after 3 hours of testimony, for and against, each one of the commissioners made up their mind.

### **2) 51 Marvin St – Special Use Permit for Short-term Rental**

No one was in attendance for this petition. It will be dropped from Old Business.

No further action is required.

### **New Business**

#### **1) 21 W Grand Ave #2 – Special Use Permit for Short-term Rental**

Open: 7:44 PM      Closed: 7:52 PM

Additional documents were submitted after the meeting packed was published (see Attachment C)

**John Carlander** was sworn in.

Mr. Carlander is stepping in for Peter (owner of the Coffee Shop). The proposed short-term rental is above the Coffee Shop. Peter owns the building and had the second floor office converted into a 2 bedroom apartment.

Chairman Gauge asked how many adults are planned. 2 bedrooms equates to 4 adults. There are 3 pin numbers on the application. Commissioner Bell said that one pin number is for parking area.

Commissioner Swanson asked if there is a private entry to the upstairs. Yes.

Commissioner Bongiovanni asked if the property passed inspection. Yes. Also, this was rented previously for several months.

Chairman Gauger noted that this is in the business district and therefore the amount of short-term rental properties is unlimited.

### **Audience Comment**

**Scott Wilson** was sworn in.

Mr. Wilson owns the property to the south on Pistakee Lake Road. He wonders about where parking will be. He has dogs and they will surely bark at strangers coming and going.

Chairman Gauge asked where people parked before when they rented it. Mr. Wilson said they parked in the gravel driveway but that has been changed since they have the Coffee Shop.

John Carlander returned and said that the parking will be in the Coffee Shop area. This is what the other tenant did.

### **Motion of Recommendation**

Commissioner Nakanishi made a motion to approve the petition for a Special Use Permit to operate a short-term rental on the property commonly known as 21 W Grand Avenue #2, Fox Lake, Illinois, in accordance with Village of Fox Lake Zoning Ordinance 9-1-6-10, subsection C with Standards 1, 2, 3, 4, 5, and 6 satisfied.

The motion was seconded by Commissioner Bongiovanni.

### **Discussion**

None.

<b>Roll Call Vote</b>		<b>Yea</b>	<b>Nay</b>
Commissioner:	Bongiovanni	<u>  x  </u>	<u>        </u>
	Legge	<u>  x  </u>	<u>        </u>
	Swanson	<u>  x  </u>	<u>        </u>
	Nakanishi	<u>  x  </u>	<u>        </u>
	Bell	<u>  x  </u>	<u>        </u>
Chairman:	Gauger	<u>  x  </u>	<u>        </u>

Motion Passed.

### **Public Comment**

*In accordance with the Illinois Open Meeting Act, the general public may address the Commission regarding any matter on the agenda or not on the agenda.*

**Dusty Hosna**, Community Development Director, said “thank you” for appreciating us for putting the short-term rental information on our website. A large part of that effort was our Village Assistant Administrator. He also stated that

any Special Use Permit that goes from Planning and Zoning to the Board of Trustees and is contested by more than 20% of the property owners needs a super-majority vote.

**Nathan Groenendal** (by zoom), stated that there is an AirB&B listing for 26 N. Lake; and this property is not registered by the Village. Dusty said that he has received 3 emails today about this.

**Chairman Gauger** welcomed Jeff Bell back to his “old seat” on the Planning and Zoning Commission. Jeff took a little break for a while we’re glad to have him back. Jeff said that he is happy to be here.

(NOTE: Due to speaker problems, the people who joined the meeting by zoom were very difficult to hear and some details of their comments may have been missed.)

## **VI. Adjournment**

Motion to adjourn was made by Commissioner Swanson and seconded by Commissioner Bell.

### **Affirmative Vote**

All in favor.

Meeting closed at: 7:54 PM

Respectfully submitted by,



Patricia Russell  
Deputy Clerk

**Click the following link to attend this meeting via Zoom:**

Topic: P&Z Meeting

Time: Aug 9, 2023 06:30 PM Central Time (US and Canada)

Join Zoom Meeting

<https://us06web.zoom.us/j/81698439673?pwd=WW5PdUIMdDNZamtlVIZ6QnA4bHJLQT09>

Meeting ID: 816 9843 9673

Passcode: 982599

**NOTE: This submission begins with page 5**

## Supporting Material

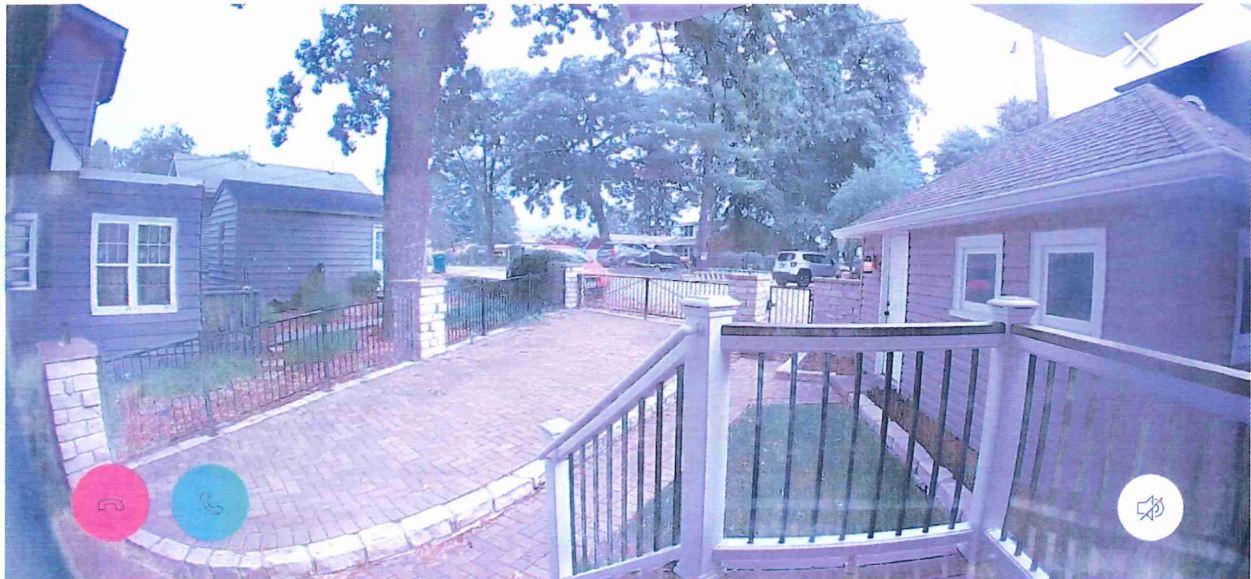
Letter from our previous tenant at 227 S Park Ridge Rd, North Liberty, IA.

*To Whom it may concern:*

*My husband and I were tenants of Angie and Luke Thorn from August 2019 through July 2020. They graciously opened their rental to us as we were moving to the Iowa City, IA area from St Louis, MO. They made the transition very easy. They were fast with communication, and handled any issues that arose with the rental promptly. They also provided plenty of advance notice of any maintenance that was scheduled. Their property was well maintained and perfect for us. The only reason we moved out of their rental was the fact that we bought our own home. I recommended them to several friends and acquaintances that were looking for a rental in the area after we moved out. I can't speak highly enough of how well managed the property and any issues were.*

*Kendra Tracy*

View from our Ring camera:



Bridge as of 13 July 2023 before installing signs





Copy of building sketch from appraisal showing 3 legal bedrooms.



## Building Sketch

Borrower	ANGIE THORN AND LUKE THORN				
Property Address	174 Riverside Island Dr				
City	Fox Lake	County	Lake	State	IL Zip Code 60020
Lender/Client	Cross Country Mortgage LLC				

The sketch shows two floor plans. The **First Floor** is a rectangle measuring 32' by 31', containing a Balcony (32' x 8'), Living Room, Bedroom, Bath, Kitchen, and another Bedroom. The **Basement** is a rectangle measuring 32' by 31', containing an Enclosed Porch (18' x 8'), Utility Room, Rec Room, Laundry, Bedroom, and Bath.

TOTAL Sketch by a la mode		Area Calculations Summary	
<b>Living Area</b>		<b>Calculation Details</b>	
First Floor	992 Sq ft		$32 \times 31 = 992$
<b>Total Living Area (Rounded):</b>		<b>992 Sq ft</b>	
<b>Non-living Area</b>			
Balcony	256 Sq ft		$32 \times 8 = 256$
Enclosed Porch	144 Sq ft		$18 \times 8 = 144$
Basement	992 Sq ft		$31 \times 32 = 992$

**Letter to neighbors being sent out via mail on Jul 27th**

Dear Neighbors of Riverside Island,

I hope this letter finds you well. We are writing to you as your neighbors and as responsible individuals who are enthusiastic about embarking on a short-term rental hosting venture in our wonderful community (174 Riverside Island Dr). We value the neighborhood and the relationships we share, which is why we wanted to reach out and seek your support and understanding in this endeavor.

We understand that concerns may arise when a property is utilized as a short-term rental, and we want to assure you that our utmost priority is to be responsible hosts who contribute positively to our community. We have always been committed to being good neighbors, and we will continue to uphold these values throughout our hosting journey.

As we embark on this endeavor, we would like to share with you some of the measures we will take to ensure a positive experience for both the guests and our neighborhood. Please see the rules and regulations we are proposing attached to this letter.

We genuinely value the neighborhood and the strong sense of community. We understand that open dialogue and mutual support are vital to maintaining a harmonious living environment for everyone. If you have any concerns or suggestions, we are more than willing to listen and address them promptly. You can email your feedback to [angie.thorn15@gmail.com](mailto:angie.thorn15@gmail.com) or give us a call at (309) 337-0427 (Angie) or (847) 343-7434 (Luke).

In addition, we are planning to hold an Open House at the property on Wednesday August 2nd from 5:30 - 7:30 pm for you to get to know us better and ask any questions you may have as we go through this process.

Thank you for taking the time to read this letter. We greatly appreciate your support, and we look forward to continuing our positive neighborly relationship.

Wishing you the very best, and thank you for your understanding.

Sincerely,

Angie and Luke Thorn

## Rules and Regulations

### 1. Check-in and check-out

Please follow check-in and check-out times listed below.

Check-In Time	3 pm
Check-Out Time	10 am

### 2. Parking

This property can accommodate 2 cars in the driveway. Due to limited space in the neighborhood, no more than 2 cars are allowed to be parked on the property during your entire stay. No parking in the street. If you need parking accommodations, please contact us prior to your stay. No boats or boat trailers should be brought onto Riverside Island Drive.

### 3. No pets allowed.

No exceptions.

### 4. No smoking inside the property - including the garage.

Please contain cigarette and cigar waste appropriately and dispose of it in the outside trash bins.

### 5. No unregistered guests are allowed.

If you are expecting daytime guests, please provide us with their names prior to your stay. Remember - parking is limited to 2 cars.

The maximum overnight occupancy is 6 adults (2 per bed). Exceeding the village ordinance will result in a \$500 fine.

### 6. No parties or events.

Absolutely no parties are allowed on the property. Please see rule #5.

## 7. Outdoor Areas

If using the firepit, ensure no open flames are left unattended, especially overnight. Thoroughly extinguish fires after use of the firepit.

Lifejackets and rescue equipment are located in the storage cabinet near the dock.

No running on the dock.

Do not jump off the dock into the water.

Children under 10 must be accompanied by an adult at all times when on the dock or near the water.

## 8. Quiet hours are 10 pm - 8 am.

Please respect the neighbors and abide by the quiet times listed above.

No yelling or loud music is allowed at any time during your stay.

## 9. No illegal substances allowed anywhere on the property.

## 10. Contact Information and Emergency Contact

If you have any issues at all during your stay, please contact the property owners:

Angie Thorn	(309) 337-0427
Luke Thorn	(847) 343-7434

**There is a FIRST AID KIT and FIRE EXTINGUISHER located in the laundry room on the shelf. There is also a FIRE EXTINGUISHER and FIRST AID KIT in the shed by the water.**

Fox Lake Police (non-emergency)	(847) 587-3100
Police Emergency	911
Fox Lake Fire Department non-emergency)	847-587-3312



#### 11. Compliance

Any violators of the house rules will be fined \$250 minimum per violation.

In accordance with the Village of Fox Lake Short Term Rental ordinance, this vacation rental has a 2-night minimum stay, and no more than 30 nights.

12. No limos on the island, there is limited space to turn around and if there are people parked in the street, will make it very difficult to turn around.

13. Boat trailers must be stored elsewhere due to the limited parking spaces available. Boat trailers may not be parked on the street.

## PROTEST LETTER

Application for Special Use Permit Short-Term Rental (STR)  
174 Riverside Island Drive

**TO:** Fox Lake Zoning Board of Appeals  
**DATE:** August 8, 2023  
**SUBJECT:** Protest Letter in opposition to 174 Riverside Island Drive Special Use Permit for Short-Term Rental Request

**FROM:** Below signed current residents of Riverside Island Drive, Fox Lake, Illinois  
**CONCERNS:** The intent and purpose of the Fox Lake Zoning Ordinance (*Section 9-1-1-2*) is:

- To promote and protect the public health, safety, morals, comfort and general welfare of the people.

We appreciate the work the zoning board does and respect both the board and the petitioners. We also understand the need for Short Term Rentals in our community but would suggest that the island is an atypical property and would be more seriously impacted by this change of use. Because of the complexities of this situation we oppose allowing a short-term rental in our community. Here are some of our initial findings and concerns:

### PROPERTY CONCERNS/REGULATIONS

#### SEPTIC

1. All of the homes on the island have well and septic systems. Most of the septic systems were built between the 1920's and 1940's. Based on the STR application, 6 adults and unlimited children could occupy this home. Our septic systems were not designed for this type of use. Not only can there be an undesirable odor but there are environmental concerns due to the immediate proximity to Nippersink Lake.

#### EGRESS

2. This property will list for rent as a 3 bedroom, but the basement bedroom does not have an egress window. As we understand it, egress windows are a requirement for all basement bedrooms. *Section R310 - Emergency Escape and Rescue Openings*



#### PARKING REQUIREMENTS

3. As noted at the prior meeting, the home has a very small garage with an opening only 93" wide x 80" high. It is useful for storage, but it is unlikely that renters can pull through such a small opening and squeeze out of their

vehicles. The driveway is 33' long. The ordinance states each parking space must be 9' wide x 18' long, requiring 36' for 2 cars, so the driveway can only accommodate one car. *Ordinance 6-2-7-7 6a*

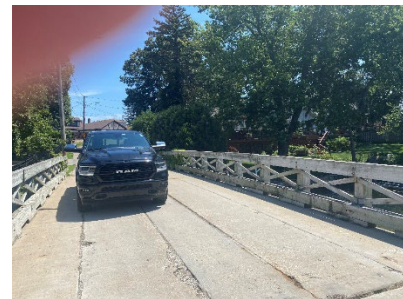
4. In the application for the STR the owner states that if renters need parking accommodations beyond 2 spots, to call them. How will they accommodate more parking via a phone call?

## CONGESTION

1. Riverside Island is a small neighborhood consisting of only 19 homes. Homes are tightly concentrated on small lots, some less than 0.2 acres. The homes have pie shaped lots with the most space on the water side while the street side is very tight and congested.
2. Riverside Island has only one access road with a dead end and no turnaround. The road at the end of the island is only 11' wide. The dead-end of Riverside Island Drive can become so congested that cars, plows, garbage trucks and rescue vehicles can't get in and out. Cars unknowingly reach the end of the road and must back up as far as they can to find an open driveway that allows them to turn around. Some try to turn around at the end of the road, inevitably damaging the properties that abut it. The home requested for short term rental (174) is just prior to this dead-end. In the last year alone, one resident had their car door run into, while another resident had their mailbox severed from its post and dragged down the street. Garbage cans, mailboxes and fences have all been hit, so additional traffic is a major concern. The previous owner added a gate across his driveway because cars were using it as a turnaround and damaging his property. Unfortunately, additional traffic will become the burden of the surrounding properties.
3. The bridge and road serving the island are also very narrow. The access road and bridge are very narrow and drivers must pull onto the shoulder to let other vehicles traveling in the opposite direction pass or go over the bridge. Visitors who are unaware of this often drive on the bridge while a car is already on it. Usually, they're only inches apart and may be beyond the weight limit of the bridge. It was not designed for excessive weight or traffic.



Single lane access road



Single lane bridge



Dead end of road  
174 garage on right foreground



Trucks must back up almost a ¼ mile  
across the bridge and to the  
American Legion before they can  
turn around

## **SAFETY**

### **FROM THE NATIONAL INSTITUTE OF HEALTH**

1. A proliferation of Airbnb's, or similar short-term rentals, in a neighborhood contributes to higher rates of crime in the area, according to a new study by two Northeastern researchers. The relationship is likely because the highly transient housing "pokes holes in the social fabric of the neighborhood," says Dan O'Brien, associate professor of public policy and urban affairs who, with his colleague Babak Hydari, associate professor of engineering, recently published a comprehensive study of Airbnb listings and crime rates in neighborhoods throughout Boston. The study can be found on the NIH website at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8279333/>.
2. The objectives of owners of short-term rentals conflict with those of residents in a neighborhood. Residents want a quiet, peaceful, safe place to live. Owners of STRs want to introduce a money-making business into the neighborhood. Although Short Term Rental owners have rules for renters and can be reached by their phones in case of a problem, the burden ultimately lies on the residents who will be left to call police or owners when incidents occur and experience the "problem" in real time.


### **OUTDOOR FIRES**


3. The listing also includes access to a firepit. It should be noted that Riverside Island doesn't have fire hydrants.

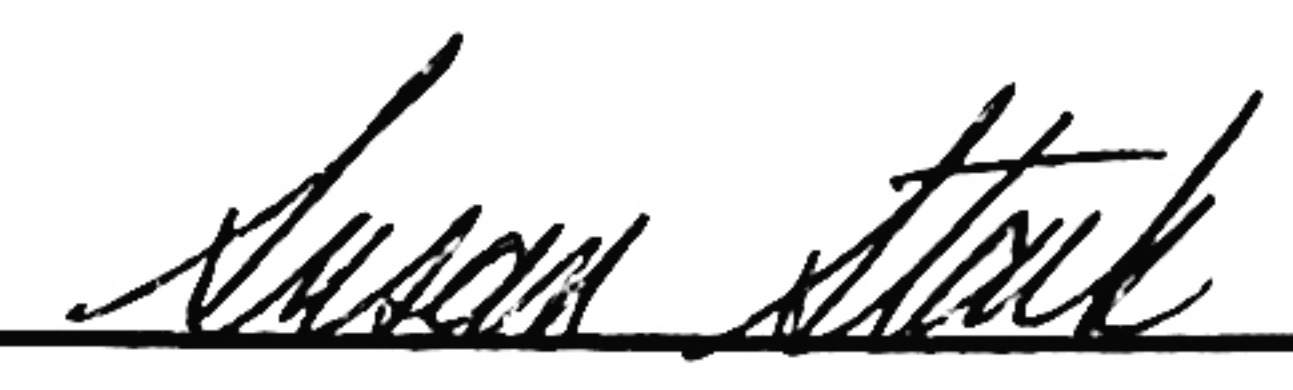
## **REQUEST:**


Of the 19 homes on Riverside Island, 16 of them, nearly 85%, have signed this Protest Letter opposing a Short-Term Rental on Riverside Island. We respectfully request that the Zoning Board and Board of Trustees do not recommend approval of a Special Use permit for a Short-Term Rental at 174 Riverside Island Drive.

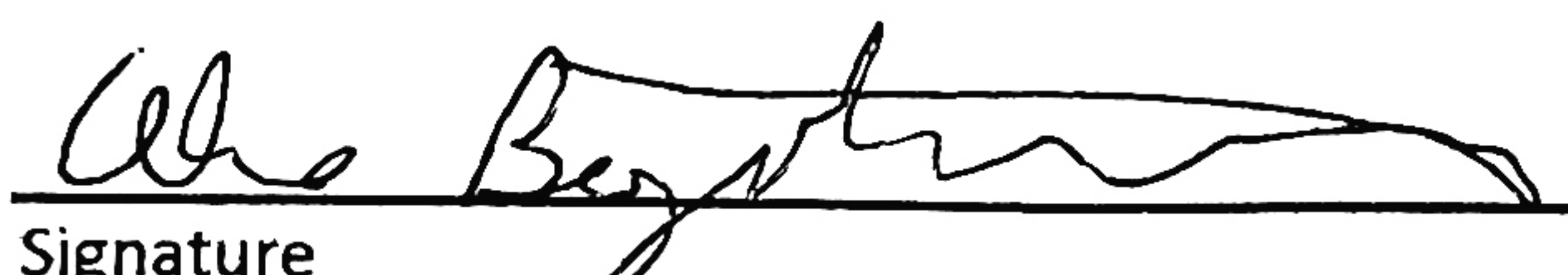



  
Signature  
ROBERT PANSCHI  
Printed  
176  
Riverside Island Drive House Number


  
Signature  
Jennifer Fivacchi  
Printed  
178  
Riverside Island Drive House Number


  
Signature  
SUSAN STARK  
Printed  
179  
Riverside Island Drive House Number


  
Signature  
JENNIFER McDONALD  
Printed  
170  
Riverside Island Drive House Number

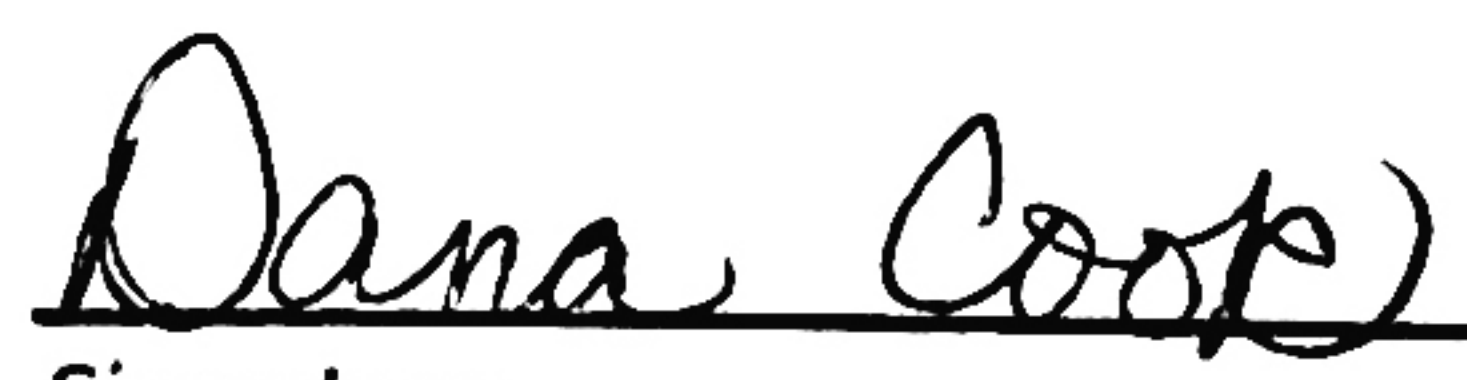
  
Signature  
ALEX BOGDANOVITCH  
Printed  
173  
Riverside Island Drive House Number

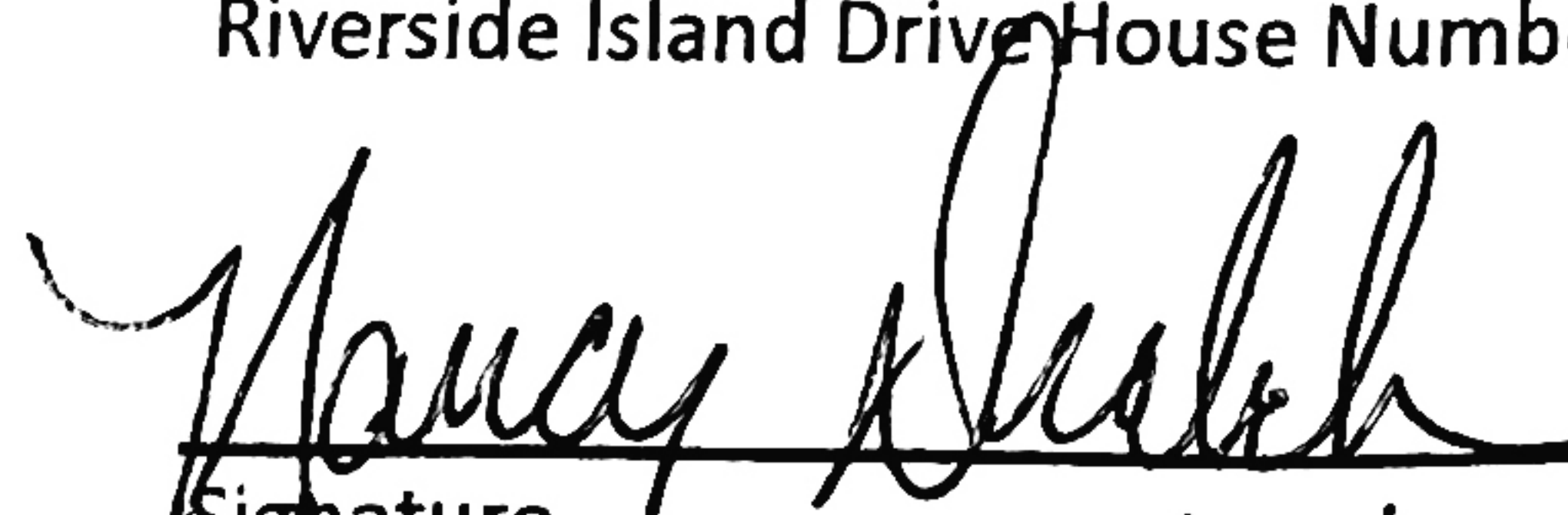
  
Signature  
RYAN McDONALD  
Printed  
170  
Riverside Island Drive House Number

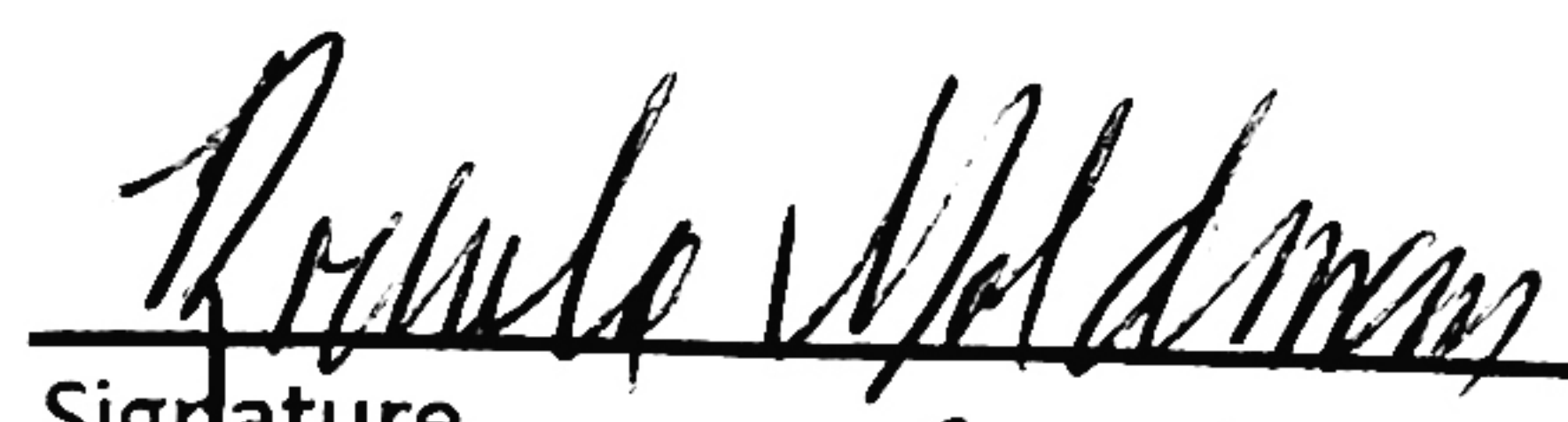
  
Signature  
Robt Baber  
Printed  
173  
Riverside Island Drive House Number

  
Signature  
Thomas Klein  
Printed  
171  
Riverside Island Drive House Number

  
Signature  
Chuck Danegger  
Printed  
177  
Riverside Island Drive House Number

  
Signature  
Dana Cook  
Printed  
171  
Riverside Island Drive House Number

  
Signature  
Nancy Drabek  
Printed  
180  
Riverside Island Drive House Number

  
Signature  
Rochelle Goldman  
Printed  
192  
Riverside Island Drive House Number





Signature

BRUCE VARULNIS

Printed

172 RIVERSIDE

Riverside Island Drive House Number



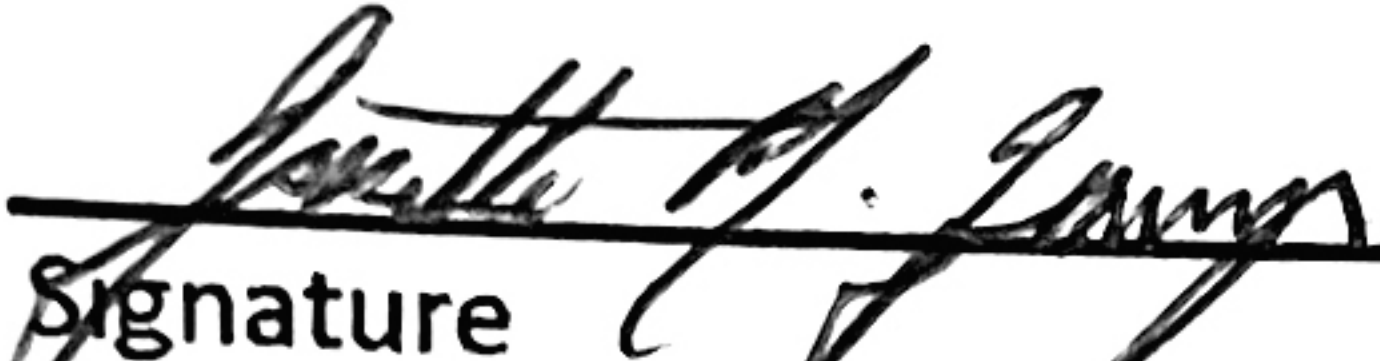
Signature

GARY T LACKHOUSE

Printed

185

Riverside Island Drive House Number




Signature

JANETTE JANNINGS

Printed

182 RIVERSIDE ISL DR.

Riverside Island Drive House Number FL 61100



Signature

Michael F Jannings

Printed

182 Riverside Island Dr, Fox Lake, 60072

Riverside Island Drive House Number



Signature

TIMOTHY B. PERRIN

Printed

183 RIVERSIDE ISLAND DR

Riverside Island Drive House Number



Signature

Pamela Perrin

Printed

183 RIVERSIDE ISLAND

Riverside Island Drive House Number



Signature

NICK SHERIDAN

Printed

188

Riverside Island Drive House Number



Signature

Isabel Smilie

Printed

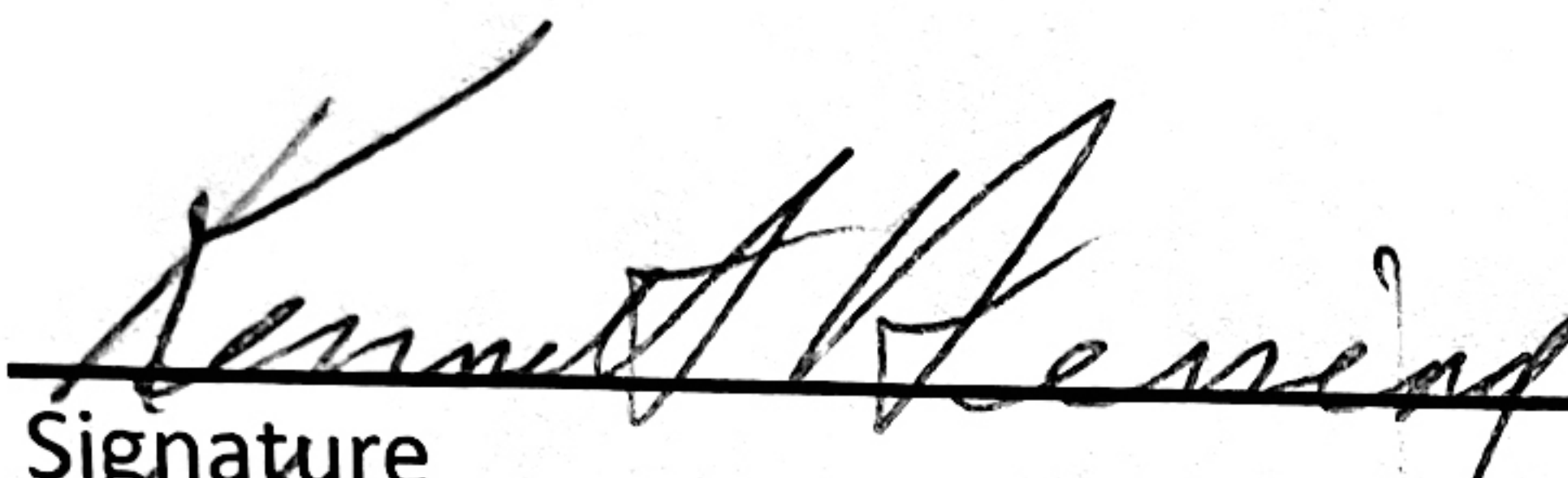
182e.

Riverside Island Drive House Number

Signature

Printed

Riverside Island Drive House Number



Signature

Kenneth Herring

Printed

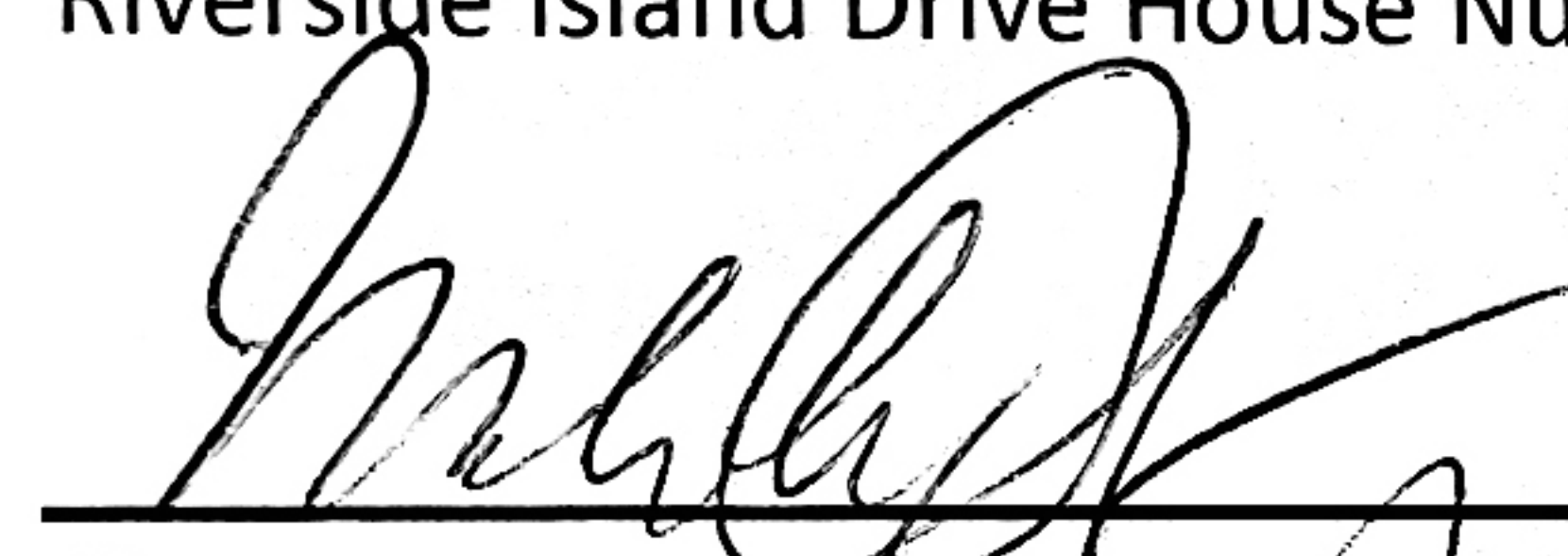
190

Riverside Island Drive House Number

Signature

Printed

Riverside Island Drive House Number



Signature

MARKI DUVANT

Printed

192

Riverside Island Drive House Number



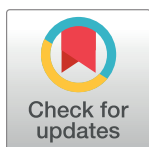
RESEARCH ARTICLE

# Airbnb and neighborhood crime: The incursion of tourists or the erosion of local social dynamics?

Laiyang Ke<sup>1</sup>, Daniel T. O'Brien<sup>1,3</sup>, Babak Heydari<sup>1,2,4\*</sup>

**1** School of Public Policy and Urban Affairs, Northeastern University, Boston, MA, United States of America, **2** Department of Mechanical and Industrial Engineering, Northeastern University, Boston, MA, United States of America, **3** Boston Area Research Initiative (BARI), Northeastern University, Boston, MA, United States of America, **4** Network Science Institute, Northeastern University, Boston, MA, United States of America

\* [b.heydari@northeastern.edu](mailto:b.heydari@northeastern.edu)



## OPEN ACCESS

**Citation:** Ke L, T. O'Brien D, Heydari B (2021) Airbnb and neighborhood crime: The incursion of tourists or the erosion of local social dynamics? PLoS ONE 16(7): e0253315. <https://doi.org/10.1371/journal.pone.0253315>

**Editor:** Shihe Fu, Xiamen University, CHINA

**Received:** September 1, 2020

**Accepted:** May 24, 2021

**Published:** July 14, 2021

**Copyright:** © 2021 Ke et al. This is an open access article distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Data Availability Statement:** All data files are available under [https://github.com/heydarilab/AirbnbCrime/blob/main/Airbnb\\_Crime\\_Boston.csv](https://github.com/heydarilab/AirbnbCrime/blob/main/Airbnb_Crime_Boston.csv).

**Funding:** The authors were partially supported by the TIER 1: Seed Grant/Proof of Concept Program of Northeastern University. The work was also in part supported by the National Science Foundation, under Grant CMMI-1548521. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

**Competing interests:** The authors have declared that no competing interests exist.

## Abstract

The proliferation of internet-based home-sharing platforms like Airbnb has raised heated debates, with many in the general public believing that the presence of Airbnb listings can lead to an increase in crime and disorder in residential neighborhoods. Despite the importance of this debate to residents, policymakers, and other stakeholders, few studies have examined the causal linkage between Airbnb listings and crime in neighborhoods. We conduct the first such empirical test in Boston neighborhoods, focusing on two potential mechanisms: (1) the inflow of tourists might generate or attract crime; and (2) the creation of transient properties undermines local social dynamics. Corresponding to these mechanisms, we examine whether the number of tourists (approximated with reviews) or the prevalence of listings predict more incidents of private conflict, social disorder, and violence both concurrently and in the following year. We find evidence that increases in Airbnb listings—but not reviews—led to more violence in neighborhoods in later years. This result supports the notion that the prevalence of Airbnb listings erodes the natural ability of a neighborhood to prevent crime, but does not support the interpretation that elevated numbers of tourists bring crime with them.

## Introduction

The expansion of internet-based short-term rental platforms like Airbnb has raised heated debates in recent years. Airbnb enables travelers and visitors to stay in idle private residential properties as an alternative to hotels. Consequently, it creates an inflow of tourists into residential neighborhoods without hotels where they were previously unlikely to go, potentially causing undesirable impacts (aka negative externalities) for these neighborhoods [1]. One of the concerns held by some in the general public and presented in multiple media reports is that the presence of Airbnb listings can lead to an increase in crime and disorder in a neighborhood. For example, an article in 2016 in the New York Times reported that residents in New Orleans were distraught at Airbnb guests' disruptive behaviors [2]. The story resulted in a

city-wide request for stricter regulations on home-sharing activities. Another article from *Splinter News* told a broader story of how sharing economy platforms like Uber and Airbnb are exploited by criminals [3]. Similar concerns have even given rise to websites like *AirbnbHell.com*, which documents the dangers of using Airbnb services. However, despite a number of media claims and anecdotal evidence, few studies have examined the causal linkage between Airbnb listings (or short-term rentals more generally) and crime in neighborhoods, and those that have done so largely descriptively [4]. Thus, there remains a need for a robust empirical test of this relationship that can inform residents, policy makers, and other stakeholders.

### Short-term rentals and crime: Two potential mechanisms

Most of the discussions about short-term rentals and crime in neighborhoods rest on the logic that tourists might bring such issues, a relationship that has been investigated more generally by researchers in both criminology and tourism. Often, this relationship is framed in terms of routine activities theory [5], in which a crime is understood as requiring three minimal elements: a motivated offender, a suitable target, and the lack of a guardian. There are three hypotheses that arise from this framing. Ryan (1993) makes the case for two of these. One is that tourists make for suitable targets, either because they are known to have money on them or are more vulnerable when navigating an unfamiliar city. Second, he argues that because tourist locations are known to have many suitable targets, they attract more potential offenders, putting both tourists and residents at greater risk [6]. There is more evidence for the first of these two hypotheses, as at least three studies have found that tourists are more likely to be victimized than locals [7–13]. Third, some have noted that tourists might engage in criminal or disruptive behavior themselves. For example, Boivin and Felson (2018) found that urban neighborhoods with more visitors feature elevated rates of crime committed by visitors but no increase in crimes committed by locals [14]. Similarly, arguments against short-term rentals often hinge on the assumption that tourists might bring drunkenness or other unruly behavior with them. Such behaviors are more frequent in downtown areas and business districts with many shops, restaurants, and bars, but would be less familiar in a residential neighborhood that now has many short-term rentals [15].

We also note a second mechanism by which short-term rentals might impact neighborhood crime, one that is less prevalent in public discussions. It draws off of the sociological/criminological concept of social organization—that is, neighborhoods whose residents know and trust each other and share common values are more able to establish and enforce social norms [16]. In turn, they tend to have lower levels of crime [17]. One of the main factors that inhibits a strong social organization is residential instability, because it is hard to develop relationships and establish norms if a sizable proportion of the population is transient [18]. It would stand to reason, then, that if a sufficient number of units throughout a community have been converted to short-term rentals—the most transient form of occupancy possible—it can undermine the social organization and its ability to discourage and prevent crime. A strong social organization is also associated with and able to support various dynamics and processes subsumed under the term ‘social capital,’ including trust, reciprocity, and social cooperation [19]. Further, researchers focusing more on this latter set of terminologies has repeatedly found that numerous manifestations of social capital are associated with lower incidence of crime [20, 21]. Moreover, previous theoretical work have demonstrated an strong impact of community structure (measured by network modularity) on population level attributes such as cooperation, fairness and stability [22–26].

We then have two potential mechanisms by which short-term rentals can lead to increased crime in a neighborhood—by bringing tourists who then perpetrate crime and disorder, or by creating transience that undermines local social dynamics that might in turn mitigate or prevent crime. It is important to note that these mechanisms are not mutually exclusive and could be operating simultaneously. That said, we note two analytic considerations that might disentangle their presence. The first consideration is temporal. If issues generated by the prevalence of short-term rentals arise from the presence of tourists themselves, we would anticipate increases in Airbnb listings and crime to be nearly if not perfectly concurrent. In contrast, if an abundance of listings is undermining the social organization of the community and its natural ability to prevent and discourage crime, then there would be a more gradual erosion. In this case we would expect to see any effect of Airbnb listings on crime be lagged, increasing over time. The second consideration regards the way we measure the presence of Airbnb in a community. If tourists themselves are perpetrating crime and disorder, the focus should be on the quantity of tourists listings are bringing to the neighborhood, rather than the listings themselves. Alternatively, if the concern is transience, we will want to focus on the quantity of listings. We describe our measurement strategy for each in the next subsection.

### Previous evidence and the current study

Whether those staying in Airbnb listings attract or perpetrate crime, or, alternatively, a large number of Airbnb listings undermine the social organization of the community, it has become a common perception that the rise of short-term rentals in a residential neighborhood will be accompanied by a rise in crime. This notion has only been examined by two empirical studies, though neither directly tests this causal claim. One study looking at the association only examined the correlation between crime and Airbnb listings and did not control for other neighborhood characteristics nor the temporal relationship between the arrival of Airbnb listings and shifts in the crime rate [4]. Another paper used policy implementations as a natural experiment, but analyzed only at the citywide scale [27].

Here we fill this gap in the literature by testing whether the presence of Airbnb leads to increases in crime across the neighborhoods of Boston, MA. As noted above, we use two measurement strategies to study the link between short-term rentals and crime. First, we quantify the influx of Airbnb-related tourists by tabulating reviews for Airbnb listings in the neighborhood. The measure of *usage* is drawn from [29]. Our second strategy focuses on the listings in a neighborhood, for which we employ two such measures. The more common measure in the literature is what we refer to as *density*, which is the number of listings divided by the total number of households. This measure is one step forward to what we expect to impact neighborhood social organization. However, it does not take into account the geographic distribution of these listings. To illustrate, consider two neighborhoods with the same number of households and the same number of Airbnb listings. In one, the listings are distributed throughout the neighborhood, in the other, they are concentrated in two condo buildings that have been effectively converted into unofficial hotels. It would seem likely that the former would have a more pernicious impact on the neighborhood's social networks by undermining relationships more broadly, whereas the impacts of the latter would be more contained at a handful of properties. Thus, we also create measure we refer to as *penetration*, which is defined as the proportion of buildings in the neighborhood with Airbnb listings. This better captures how Airbnb listings are distributed through the community, potentially better capturing how likely they are to impact the social organization. As described above, an association between usage and crime would be evidence that tourists are generating or attracting crime and

disorder themselves. Meanwhile, if penetration or density are predictive of crime and disorder and usage is not, there is a stronger case that an abundance of listings in a neighborhood are undermining the social organization.

We examine the relationships between the measures of Airbnb usage, penetration, and density and three types of social disorder and crime: public social disorder (e.g., drunkenness, loitering), private conflict (e.g., landlord-tenant disputes, vandalism), and violence (e.g., fights), all per 1,000 persons in a neighborhood. This allows us to examine in a nuanced way the nature of the impact that short-term rentals might have on neighborhoods. We use fixed effects models to conduct these analyses, comparing the relationships between these variables from 2011–2017, as Airbnb went from a minor to more major factor in Boston neighborhoods. As noted above, the two mechanisms by which short-term rentals might impact neighborhoods—either the tourists generating or attracting crime themselves, or the prevalence of listings eroding the social organization—would operate on different time scales. If the presence of tourists is responsible for crime, we would anticipate the impacts to occur in the same year as the increase of usage. The erosion of the social organization would take more time to result in elevated crime, lagging increases in listings by one or more years. Thus, we run the difference-in-difference fixed effects models with the Airbnb measures as measured concurrently with the crime outcome measures, with a one-year lag between the Airbnb measures and crime and disorder, and then with a two-year lag. Importantly, this work adds a rigorous empirical perspective to the ongoing debate regarding the negative externalities of short-term rental platforms such as Airbnb.

## Data and methods

### Measuring Airbnb presence

We use the period between 2011 to 2018 to quantify the presence of Airbnb in Boston. To estimate the presence of Airbnb in a neighborhood, we obtained datasets from InsideAirbnb.com, an independent, non-commercial website that scrapes and publishes longitudinal Airbnb listings' records for cities across the world for the purpose of research. InsideAirbnb.com has published these data annually since 2015, but Airbnb entered Boston in 2009. In order to overcome this limitation, we leveraged the "host since" field, which indicates the date a property became an Airbnb listing, to estimate which Airbnb listings were present in each year 2011–2014. Koster et al. (2018) took a similar approach using the date of a listing's first review, but we found that the "host since" variable more consistently had a value and would be more precise in any case. InsideAirbnb.com also publishes a separate dataset on the reviews received by each listing along with the listings data [28]. The reviews datasets have been used to estimate the amount of tourists brought by Airbnb services [29, 30]. We note that although we consider the start year of our study as 2011, there were still some Airbnb units in Boston as early as 2008 that are not considered in this study. This should not impact the results given the limited nature of this presence; however it might have implications for testing pre-treatment parallel trends in the DID analysis as we will explain in the *Robustness Check* Section.

Following the practice of Horn & Merante (2017), we use census tracts to approximate neighborhoods (avg. population = 4,000; 168 with meaningful population in Boston). We then linked listings to the containing census tract, allowing us to calculate neighborhood-level measures of Airbnb's prevalence. Though listings are not necessarily geographically precise, InsideAirbnb.com indicates that listings are 0–450 feet from the actual address. Meanwhile, census tracts cover .5 mile radius, meaning that most listings should fall in the appropriate census tract.

We use three measures to quantify the level of Airbnb presence in each tract. Specifically, these aim to operationalize the quantity of listings and the quantity of tourists they bring to the neighborhood. For listings, our primary measure *penetration* sought to capture how they were spatially distributed across the neighborhoods. It was calculated as the number of unique addresses with listings divided by the number of parcels (lots that contain one or more units, per the City of Boston's Assessing Department) in the census tract, thereby approximating the number of buildings with at least one Airbnb listing. This might be a more appropriate proxy, for instance, when Airbnb listings are many in a neighborhood but concentrated in one or two condo buildings, thus geographically constraining their overall impact. For robustness, we also measured *density*, or the ratio of Airbnb listings to housing units. This measurement has been widely adopted in previous studies on Airbnb [31, 32]. The quantity of tourists attracted was operationalized as *usage*, calculated as the number of reviews divided by housing units in a census tract as recommended by Schild (2019) [29].

### Using 911 call data to measure crime activity

We utilized three variables measuring crime and disorder developed by the Boston Area Research Initiative from 911 dispatches from 2011–2018. These measures were calculated as the rate per 1,000 residents of events falling into a pre-determined set of categories from the dispatches. They include: public social disorder, including intoxicated individuals, lewdness, and drunken disturbances; private conflict includes issues like landlord/tenant trouble, breaking and entering, and vandalism; and violence includes events like armed robberies, assaults, a person with knife, and fights.

### Estimation strategies

The key research question we ask in this study is whether the proliferation of Airbnb in a neighborhood lead to higher level of crime events in that neighborhood. The panel dataset we assembled at the census tract-level allows us to employ a generalized multiple time period, multiple group Difference-in-Difference (DID) design, in which Airbnb presence acts as a continuous “treatment”, predicting changes in crime in a neighborhood.

The estimated equation is:

$$Y_{i,t} = \alpha + \gamma \text{Airbnb}_{i,t-\tau} + \delta X_{i,t} + \eta_i + \beta_t + \varepsilon_{i,t} \quad (1)$$

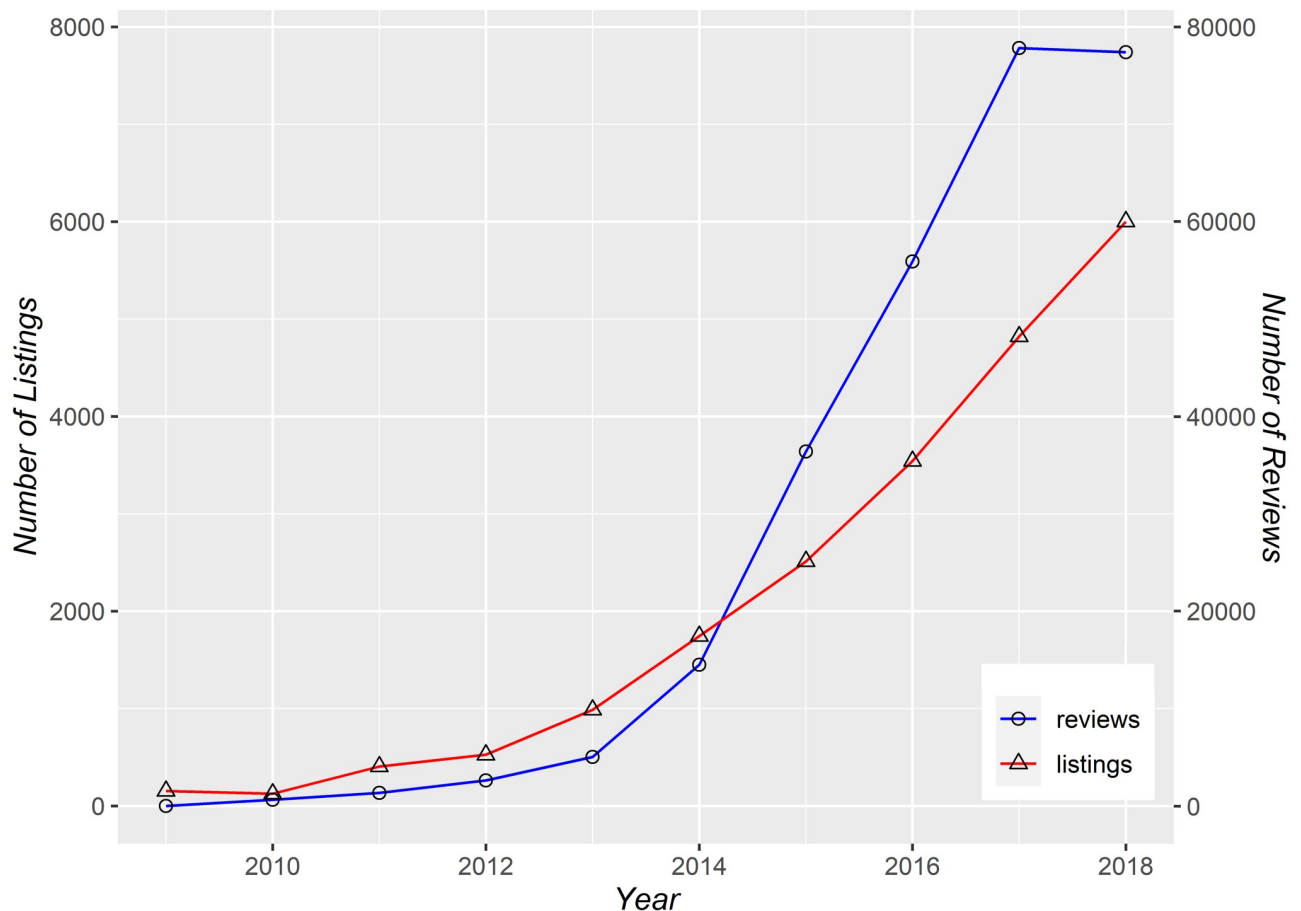
where  $i$  represents the census tract,  $t$  represents the year, and  $\tau$  is used to introduce time lag and lead for the treatment variable.  $Y_{i,t}$  is the crime level measured by the number of private conflict, social disorder, and violence events per 1,000 people,  $X_{i,t}$  is a vector of time-variant neighborhood-level controls, and  $\gamma$  is the estimated causal effect of Airbnb presence.  $\eta$  and  $\beta$  are the neighborhood (tract) and year fixed effects, respectively, capturing both time-invariant characteristics of tracts and spatially-invariant characteristics of years (for example, a city-wide increase in Airbnb prevalence or crime level). We report the results based on using *income* as the main tract-level control variable, although we test a number of other controls for robustness test.  $\text{Income}_{i,t}$  measures the median household income (drawn from the American Community Survey's five year estimations at the census tract-level, appropriate to the year in question). We estimate Eq (1) using deviation from mean approach, and standard errors are clustered at the tract level.

To further test the direction of causality for the results, we use a lag/lead analysis in the spirit of Granger [33, 34]. This method is used when the sample includes multiple years and uses both lead and lagged versions of the treatment variable ( $\tau$  can be both positive and negative).

## Results

### Descriptive analyses

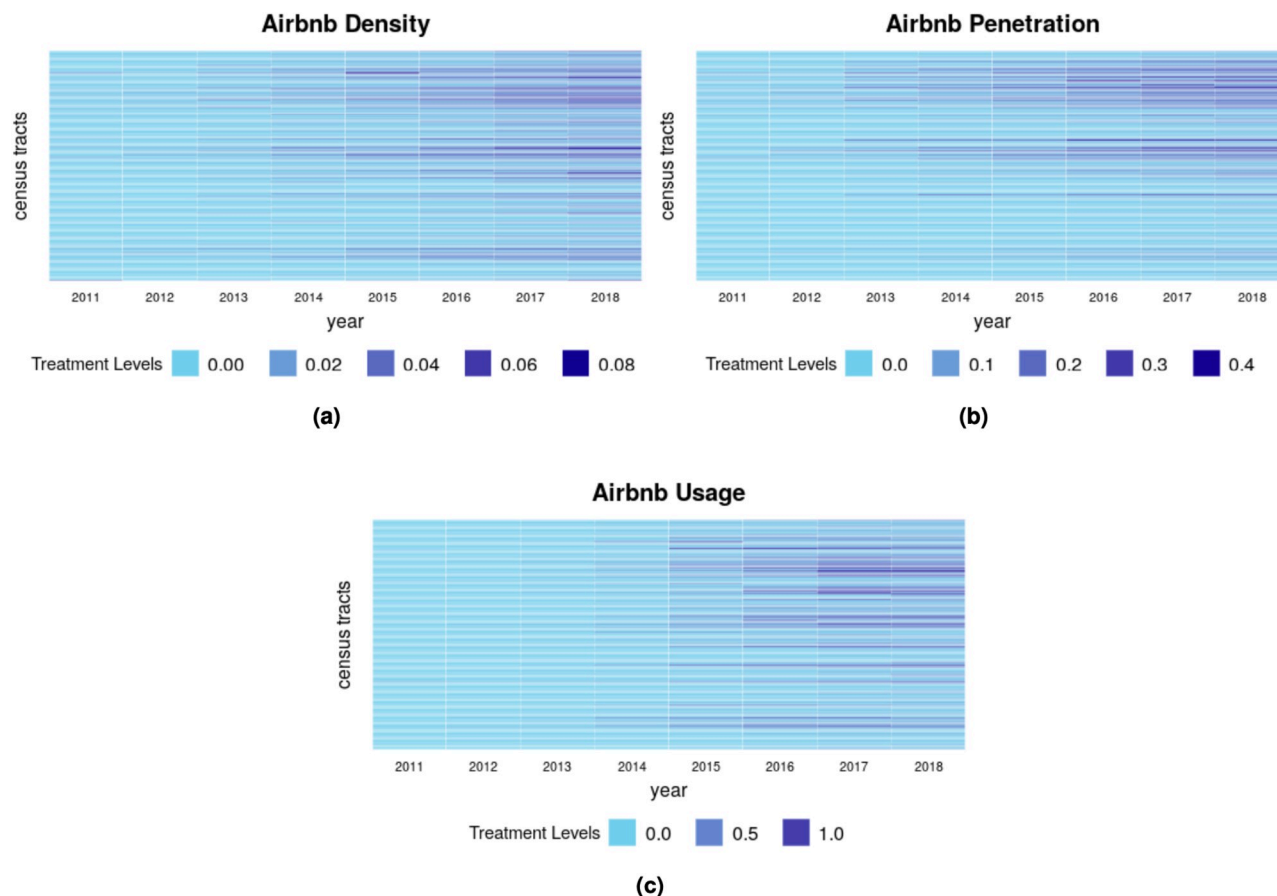
Before testing our main question, it is useful to examine the growth and distribution of Airbnb activities in Boston. As depicted in Fig 1, Airbnb had limited presence in Boston at first, with a negligible number of listings and reviews before 2014. There was rapid growth, however, between 2014 and 2018, over which time the number of listings more than doubled from 2,558 to 6,014. There were also nearly 80,000 total reviews by 2018. That is not to say, however, that this growth was uniform across neighborhoods. Certain census tracts were the first to have a measurable presence of Airbnb and then proceeded to have high levels of Airbnb listings. Fig 2 shows how Airbnb services increased from 2010 to 2018 and across census tracts in Boston. We focus on two main measures to capture Airbnb activities: penetration, or the proportion of buildings with at least one listing; and usage, or the number of reviews per housing unit in the neighborhood. As indicated in Fig 2a, by 2018, the tracts with the highest penetration of Airbnb had listings in as many as 40% of buildings. Likewise, the neighborhoods with the highest level of usage had as many as one review per housing unit. In contrast, in many other tracts the presence of Airbnb was limited or even absent throughout the study period. Meanwhile a handful of tracts started with very low Airbnb presence and then witnessed rapid growth of Airbnb-related activities.



**Fig 1. Airbnb's expansion in Boston.** The number of Airbnb listings and reviews in Boston between 2009 and 2018.

<https://doi.org/10.1371/journal.pone.0253315.g001>





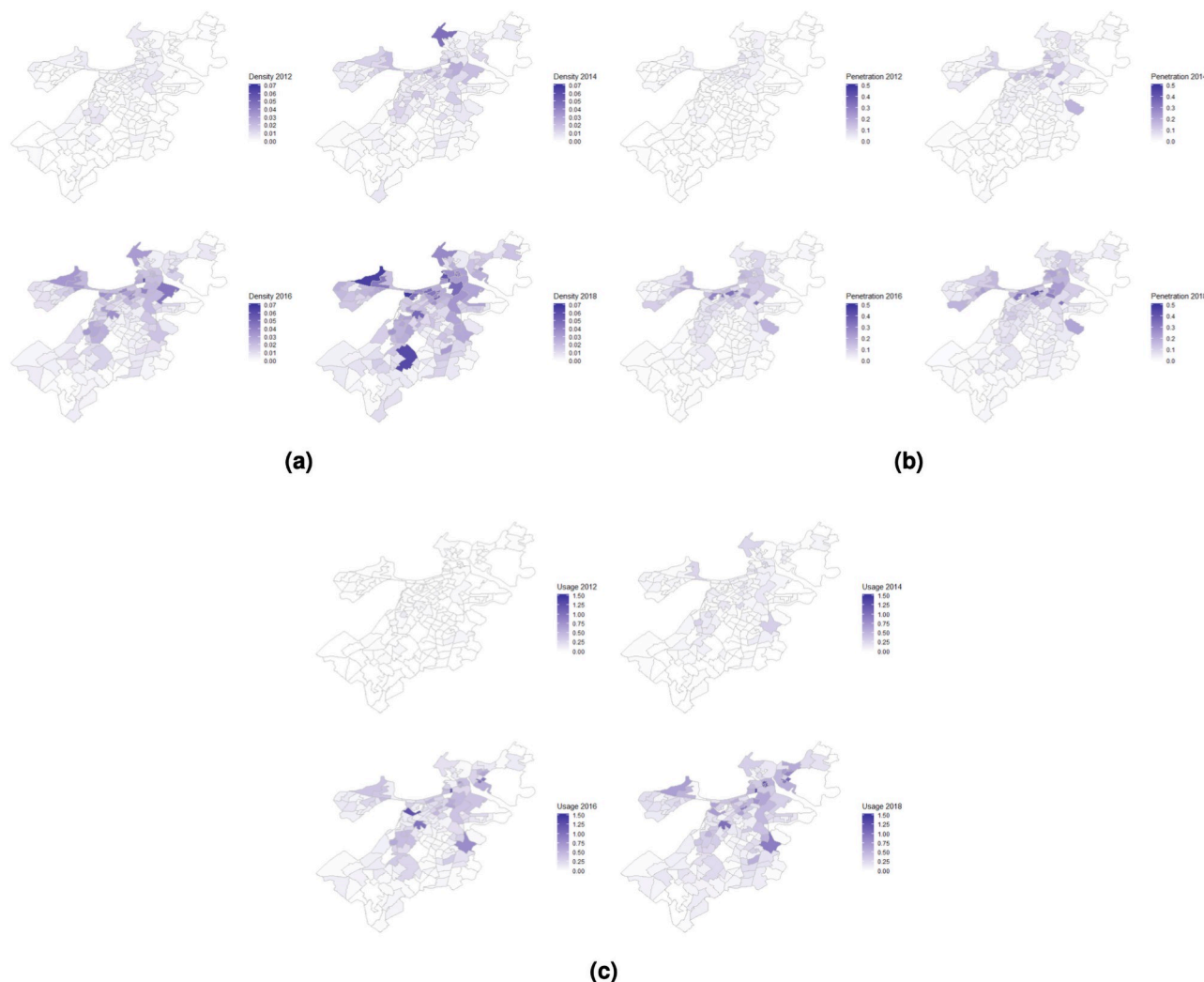
**Fig 2. Airbnb's presence in Boston.** (a) Airbnb density, (b) Airbnb penetration, and (c) Airbnb usage. Each row represents a census tract from 2011 to 2018. The darker the color, the higher the Airbnb presence. Tracts are in the same position in each panel, meaning we can compare panels to confirm that most tracts with high level of presence on one measure scored similarly on the other measures.

<https://doi.org/10.1371/journal.pone.0253315.g002>

Fig 3 maps the spatial distributions of the three measures of Airbnb supply over time. For Airbnb density (Fig 3a), we see that census tracts in the urban center (northeast on the map) show relatively high Airbnb presence from the beginning, but that in recent years the tracts with the highest level of Airbnb penetration emanate further out into surrounding, more residential neighborhoods.

### The concurrent and lagged impacts of Airbnb on crime

We use difference-in-difference models (Eq (1)) to test whether a rise in the prevalence of Airbnb in a census tract in one year predicts increases in crime and disorder in the following year. We focus on two ways in which short-term rentals can impact a neighborhood. The first is through two measures of the quantity of listings in a neighborhood: the penetration of Airbnb, measured as the proportion of buildings with at least one listing; and the density of Airbnb, or the ratio of listings to total households. We believe the latter is the stronger measure for our purposes (see Introduction for more), but include both as a check. The second strategy is to capture the amount of tourists brought in by listings via the measurement of usage, or the ratio of user reviews to households. The model outcomes include three measures of crime and disorder: private conflict between people who live together, like landlord-tenant disputes; public social disorder, like drunkenness and noise complaints; and public violence, including



**Fig 3. Evolution of spatial distributions of Airbnb in Boston.** (a) Airbnb density, (b) Airbnb penetration, and (c) Airbnb usage in 2012, 2014, 2016, and 2018.

<https://doi.org/10.1371/journal.pone.0253315.g003>

fights (see Methods). The models control for tract-level and year fixed effects. In order to make the parameter estimates that follow more interpretable, we note that the average census tract in the average year experienced 11.32 events of private conflict, 7.68 events of public social disorder, and 28.58 events of public violence per 1,000 residents.

We begin by testing the relationship between Airbnb prevalence and crime in the same year (See Table 1). We see only one significant effect, which is Airbnb penetration predicting higher levels of violent crime ( $\beta = 0.328, p < 0.05$ ). Otherwise, density and usage were not associated with any forms of crime, nor were social disorder or private conflict associated with any of the Airbnb measures.

We then compare these results to models that test the relationship between Airbnb measures from the previous year on crime (i.e., one-year lags). In these models, neighborhoods with a higher level of Airbnb penetration saw rises in violent crime in the following year ( $\beta = 0.546, p < 0.0001$ ), and notably to a greater extent than the concurrent measure of penetration. There was still no corresponding effect on public social disorder or private conflict,

Table 1. Same-year DID regressions on social disorder and crime.

	Events of Private Conflict	Events of Social Disorder	Events of Violence
Airbnb Density (%)	-0.207 (0.207)	0.080 (0.285)	1.226 (0.621)
Airbnb Penetration (%)	0.005 (0.035)	-0.004 (0.073)	0.328* (0.133)
Airbnb Usage (%)	0.000 (0.008)	-0.004 (0.011)	0.025 (0.021)
Tract FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Observations	1171	1171	1171
F (Density)	0.88	1.20	2.17
F (Penetration)	0.36	0.97	3.13
F (Usage)	0.36	0.93	0.77

Note: clustered standard errors are displayed in parenthesis. Control variable is median household income. The average census tract in the average year experienced 11.32 events of private conflict, 7.68 events of public social disorder, and 28.58 events of public violence per 1,000 residents. Significance levels:

\*  $p < 0.05$ ;

\*\*  $p < 0.01$ ;

\*\*\*  $p < 0.001$ .

<https://doi.org/10.1371/journal.pone.0253315.t001>

however. Airbnb density in the previous year was also associated with higher levels of violent crime, albeit at a lower significance, and thus magnitude, relative to penetration ( $\beta = 1.407$ ,  $p < 0.05$ ). Airbnb usage had no effect on any of the three measures in the following year (Table 2).

Table 2. One-year lagged independent variables.

	Events of Private Conflict			Events of Social Disorder			Events of Violence		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Airbnb Penetration (lag 1)	0.041 (0.039)			-0.115 (0.118)			0.546*** (0.133)		
Airbnb Density (lag 1)		-0.112 (0.227)			-0.426 (0.293)			1.407* (0.614)	
Airbnb Usage (lag 1)			0.001 (0.009)			-0.011 (0.016)			0.037 (0.021)
Tract FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1004	1004	1004	1004	1004	1004	1004	1004	1004
F	0.62	0.16	0.04	0.8	1.32	0.79	8.7	2.69	1.56

Note: clustered standard errors are displayed in parenthesis. Control variable is median household income. The average census tract in the average year experienced 11.32 events of private conflict, 7.68 events of public social disorder, and 28.58 events of public violence per 1,000 residents.

Significance levels:

\*  $p < 0.05$ ;

\*\*  $p < 0.01$ ;

\*\*\*  $p < 0.001$ .

<https://doi.org/10.1371/journal.pone.0253315.t002>

Table 3. Two-year lagged independent variables.

	Events of Private Conflict			Events of Social Disorder			Events of Violence		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Airbnb Penetration (lag 2)	0.097*			-0.162			0.553***		
	(0.041)			(0.107)			(0.119)		
Airbnb Density (lag 2)		0.039			-0.884			1.167*	
		(0.215)			(0.472)			(0.529))	
Airbnb Usage (lag 2)			0.014			-0.036			0.037
			(0.013)			(0.029)			(0.027)
Tract FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	837	837	837	837	837	837	837	837	837
F	3.41	0.53	1.02	2.71	3.71	2.79	10.8	2.43	1.04

Note: clustered standard errors are displayed in parenthesis. Control variable is median household income. The average census tract in the average year experienced 11.32 events of private conflict, 7.68 events of public social disorder, and 28.58 events of public violence per 1,000 residents.

Significance levels:

\*  $p < 0.05$ ;

\*\*  $p < 0.01$ ;

\*\*\*  $p < 0.001$ .

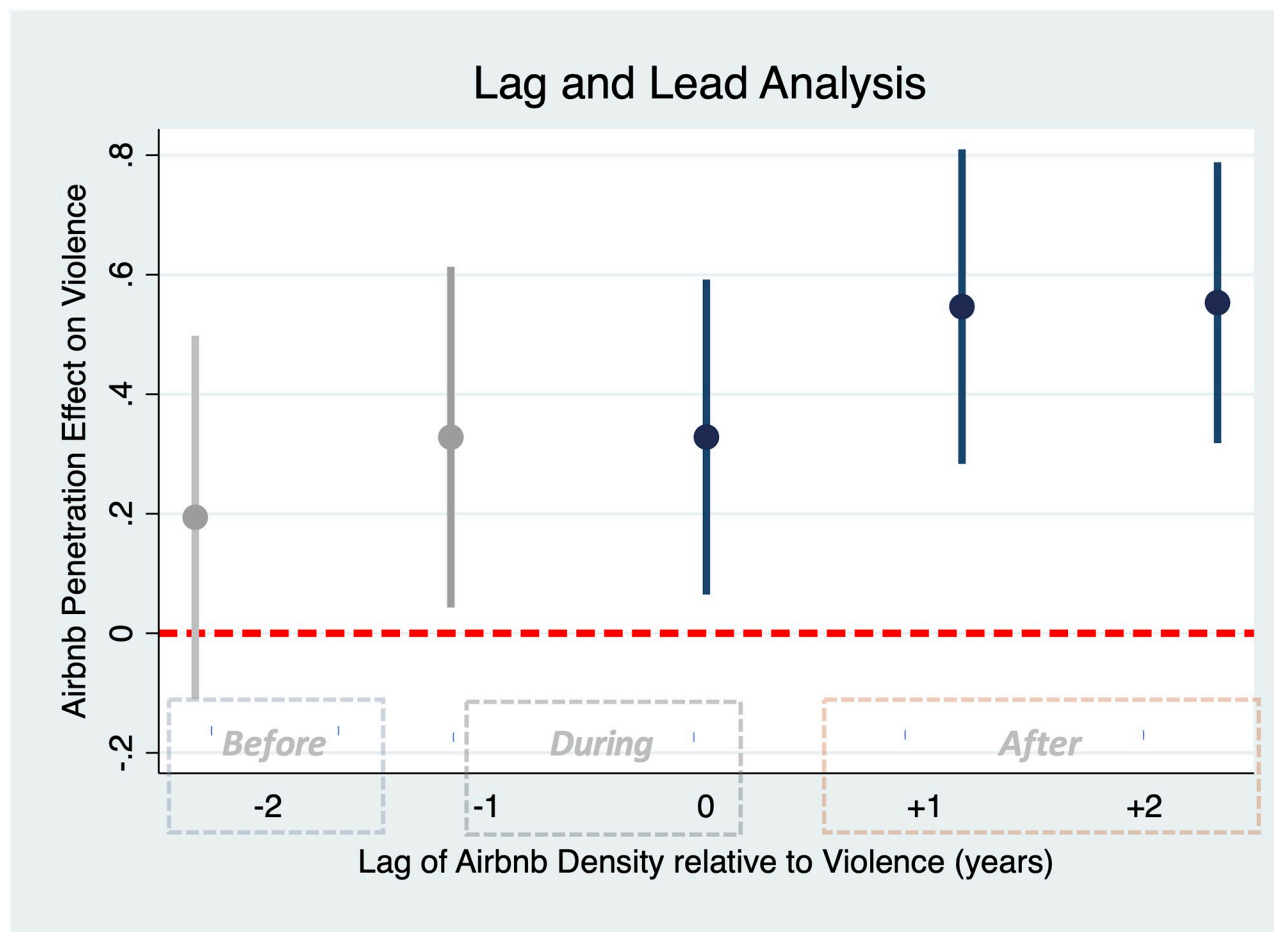
<https://doi.org/10.1371/journal.pone.0253315.t003>

If the increase in crime rate is driven by changes in social organization, we expect to see the effect to persist and possibly strengthen over a more extended period of time. To further test the validity of this mechanism, we repeated the previous analysis, this time with a two-year lag on independent variables.

Results of the two-year lagged analysis are in general agreement with those with one-year lag in terms of the impact of Airbnb penetration on events of violence. Moreover, Airbnb penetration not only predicted increased violence at this time scale, but also showed a moderate impact on events of private conflict ( $\beta = 0.097$ ,  $p < 0.05$ ), an effect that was not present in the one-year lagged analysis. The effects of Airbnb usage and density also concurred with the one-year lagged analysis (Table 3).

## Robustness checks

The intent here has been to test whether Airbnb activity in a neighborhood impacts crime, but there is an alternative reverse effect interpretation to our results that need to be considered: That crime leads to Airbnb listings, possibly by deterring property owners from renting long-term or living there themselves—could be true. Rejecting the reverse causality in the DID models is often carried out by testing the pre-treatment parallel trends. However, directly applying the standard tests for parallel trends, such as event-study analysis, is not possible here, because on the one hand, the treatment variable (Airbnb Presence) is both continuous and staggered which makes event-study analysis less reliable and difficult to interpret. On the other hand, our data starts from 2011 where Airbnb had already been present in many neighborhoods (See the Section on *Measuring Airbnb Presence*), preventing us from reliably transforming the treatment into a binary variable that could be used in subsequent event-study analysis (similar to [35]). Because of these reasons and to confirm the direction of causality, we took two additional steps. In the first step, we reran our models with the Airbnb measures from one and two



**Fig 4. Result of the lag and lead analysis.** The figure shows the DID regression coefficients and the corresponding standard errors for the effect of Airbnb density on violence, before, during, and after the effect. Results confirm the direction of causality from Airbnb penetration on violent crimes and show that Airbnb penetration has a significant positive effect on violence, especially with a time delay, but the opposite is not true, as evident from the non-significant effect of a 2-year lead in Airbnb penetration on criminal activities. Complete results are presented in the SI document.

<https://doi.org/10.1371/journal.pone.0253315.g004>

years after the year of the crime measures (See the Methods section.). This method follows the logic of Granger Causality and was popularized by [36] in assessing the impact of unjust dismissal doctrine on outsourcing. Moreover, a recent work by Schmidheiny and Siegloch [37] shows that the event-study analysis and a version of the lag/lead model are equivalent for the case of DID with discrete treatments.

Fig 4 shows a graphical representation of the DID regression coefficients and associated error bars for violent crimes for different time lags (-2 years to +2 years) of Airbnb penetration measure (Full results reported in the SI). The coefficient for two years prior to the treatment (the two-year lead) saw no significant effect on crime, suggesting that with sufficient lead time, these results are consistent with an interpretation of Airbnb's presence impacting crime and not the reverse.

The one-year lead model still showed an effect of Airbnb penetration on violence, though attenuated relative. This is not entirely surprising since first of all, the treatment variable is continuous, which—unlike [36]—makes it challenging to clearly separate the treatment year from the immediate prior year (the year with one year lead). Moreover, that crime data are aggregated at a yearly basis and our model cannot differentiate between criminal activities at

the beginning and end of the year. These reason suggests that due to the resolution and continuous nature of the data, the one year lead is colinear with the zero lead year and can be interpreted, in part, as a period *during* treatment, as marked in the figure. Thus, we need to consider the coefficient for two years prior to the treatment to be able to reject the possibility of reverse causality.

A second and related concern could be the potential bias due to omitted variables. Though the DID models control for the initial conditions of neighborhoods, they do not necessarily control for trends in these variables that parallel the increases in both Airbnb presence and crime. For example, there is some evidence that gentrifying neighborhoods experience increases in certain types of crime [38], and Airbnb listings have also been associated with gentrification [39]. To address this concern and as the second robustness check steps, we reran the models incorporating shifts in four demographic factors—percentage Black residents, percentage Hispanic residents, median income, and homeownership rate—that are often correlated with crime (and are in our data) or believed to be correlated with short-term rentals (e.g., resident-owners are less likely to put their homes up for short-term rental on a regular basis as they live there). We did this by assigning indicators from American Community Survey's five-year estimates for 2009–2013 to data for 2011–2013, and estimates for 2014–2018 to data for 2014–2017. This is consistent with guidance to not include overlapping estimates in a single analysis [40]. These models did not impact any of the significant effects from the original set of models, indicating our findings were robust to shifts in demographics.

## Discussion and conclusion

This study tested the hypothesis that the arrival and growth of Airbnb, or home-sharing platforms in general, may increase crime and disorder in neighborhoods, focusing specifically on private conflict, public social disorder, and violence. We find that the answer is rather nuanced. Airbnb prevalence in a neighborhood appears to be associated with increases in violence, but not with public social disorder or private conflict. Interestingly, the effect on violence was only consistent visible for the measure of Airbnb penetration—or the extent to which buildings in the neighborhood have one or more listings (and for the measure of density, or the listings per household in the two-year lags). It was never present for overall usage, or the estimated quantity of Airbnb guests. Further, the effect of penetration on violence appears to emerge and strengthen over multiple years.

The specific findings suggest that the impacts of short-term rentals on crime are not a consequence of attracting tourists themselves. Instead, the results point to the possibility that the large-scale conversion of housing units into short-term rentals undermines a neighborhood's social organization, and in turn its natural ability of a neighborhood to counteract and discourage crime, specifically violent crime. Further, the lagged effects suggest a long-term erosion of the social organization, which would stand in contrast to the more immediate impacts that the presence of tourists would be expected to have. We of course have not directly tested whether social organization is indeed the intervening variable, but it seems clear that the issue is not the tourists themselves but something about how the extreme transience of a short-term rental unit fails to contribute to critical neighborhood social dynamics. We do note that the effects were exclusively on public violence, apart from penetration predicting higher private conflict in the two-year lag. This observation might be for a few reasons. First, social organization is often argued to be particularly important for managing behaviors in public spaces relative to private ones [18]. In addition, public social disorder as measured here, which includes public drunkenness, panhandling, and loitering, is heavily concentrated in Boston's

commercial districts. Thus, such events may be unlikely in residential neighborhoods even with the erosion of social organization. The lack of effects on social disorder, especially drunkenness, might also be taken as additional evidence that tourists staying in short-term rentals are not systematically bringing nuisances to the neighborhood.

The results have important practical implications. To our knowledge, this paper is the first study to robustly test this particular externality of Airbnb at the neighborhood level. Airbnb-related crimes are viewed as a possible consequence of the home-sharing platform because the costs of these incidents are not addressed by the transactions between Airbnb hosts and guests. Instead, these costs are shouldered by increased expenditures for law enforcement and disturbances to neighbors. It is striking to see that the issue is not the visitors themselves but the conversion of units into short-term rentals. In a certain light, this observation is analogous to the effect of Airbnb on housing prices [31, 41–43]. In the one case, Airbnb has removed material capital from the market, raising prices for renters; in the other, Airbnb removes social capital from the neighborhood in the form of stable households, weakening the associated community dynamics.

The apparent unimportance of the tourists themselves might come as something of a surprise given the conceptual and empirical support for the impacts of tourism on crime. It suggests multiple potential explanations. First, although Airbnb has seen notable growth, it might not bring a sufficient quantity of tourists to a neighborhood to have a sustained impact. If there are only a handful of tourists in a neighborhood, the opportunity might not be rich enough to attract predatory crime. Given that we do not expect that other cities have markedly higher Airbnb presence than Boston, we believe this interpretation is extensible to other locales. Second, Airbnb travelers may behave differently in “true” tourist areas than when in the residential neighborhood they are staying in, which in turn could mean that they are less likely to be disorderly or to call attention to themselves as suitable targets.

We note two limitations to our research that call for future studies. First, we have tested this hypothesis in a single city, owing to the availability of both Airbnb listings and 911 dispatches for Boston. Future studies should replicate this analysis in other cities, especially those of different sizes or demographic makeup. Second, we examined a single, hypothesized negative externality of short-term rentals. It does not on its own tell the whole story. Airbnb might have other impacts on neighborhoods—both good and bad. These other relationships require further empirical investigation. Currently, a number of papers have explored how urban planners and policy-makers could respond to potential externalities imposed by Airbnb on urban neighborhoods [44–46], and such efforts will be better informed as we better understand the multifaceted impacts Airbnb can have.

## Supporting information

### S1 File.

(PDF)

### S1 Data. Airbnb and crime data.

(CSV)

## Acknowledgments

The authors would like to thank the students in the Multi-AGent Intelligent Complex Systems Lab (MAGICS Lab) and the members of the Boston Area Research Initiative (BARI) for their comments on this research.



## Author Contributions

**Conceptualization:** Daniel T. O'Brien, Babak Heydari.

**Data curation:** Laiyang Ke.

**Formal analysis:** Babak Heydari.

**Funding acquisition:** Daniel T. O'Brien, Babak Heydari.

**Investigation:** Laiyang Ke, Daniel T. O'Brien, Babak Heydari.

**Methodology:** Babak Heydari.

**Supervision:** Daniel T. O'Brien, Babak Heydari.

**Visualization:** Laiyang Ke.

**Writing – original draft:** Daniel T. O'Brien, Babak Heydari.

**Writing – review & editing:** Daniel T. O'Brien, Babak Heydari.

## References

1. Shapley L. S. & Shubik M. On the core of an economic system with externalities. *The American Economic Review* 59, 678–684, <https://www.jstor.org/stable/1813240> (1969).
2. Walker, R. Airbnb pits neighbor against neighbor in tourist-friendly new orleans. *The New York Times* <http://nyti.ms/21QHSYv> (2016).
3. Brown, K. V. How criminals use uber, tinder and airbnb. *Splinter*. <https://splinternews.com/how-criminals-use-uber-tinder-and-airbnb-1793853427> (2015).
4. Xu Y.-H., Pennington-Gray L. & Kim J. The sharing economy: a geographically weighted regression approach to examine crime and the shared lodging sector. *Journal of travel research* 58, 1193–1208, (2019). <https://doi.org/10.1177/0047287518797197>
5. Cohen L. E. & Felson M. Social change and crime rate trends: A routine activity approach. *American sociological review* 588–608, (1979). <https://doi.org/10.2307/2094589>
6. Ryan C. Crime, violence, terrorism and tourism: an accidental or intrinsic relationship? *Tourism Management* 14, 173–183, (1993). [https://doi.org/10.1016/0261-5177\(93\)90018-G](https://doi.org/10.1016/0261-5177(93)90018-G)
7. Brunt P., Mawby R. & Hambly Z. Tourist victimisation and the fear of crime on holiday. *Tourism Management* 21, 417–424, (2000). [https://doi.org/10.1016/S0261-5177\(99\)00084-9](https://doi.org/10.1016/S0261-5177(99)00084-9)
8. Biagi B. & Detotto C. Crime as tourism externality. *Regional Studies* 48, 693–709, (2014). <https://doi.org/10.1080/00343404.2011.649005>
9. De Albuquerque K. & McElroy J. Tourism and crime in the caribbean. *Annals of tourism research* 26, 968–984, (1999). [https://doi.org/10.1016/S0160-7383\(99\)00031-6](https://doi.org/10.1016/S0160-7383(99)00031-6)
10. Stults B. J. & Hasbrouck M. The effect of commuting on city-level crime rates. *Journal of Quantitative Criminology* 31, 331–350, (2015). <https://doi.org/10.1007/s10940-015-9251-z>
11. Farley J. E. Suburbanization and central-city crime rates: New evidence and a reinterpretation. *American journal of sociology* 93, 688–700, (1987). <https://doi.org/10.1086/228793>
12. Schiebler S. A., Crotts J. C., Hollinger R. C. et al. Florida tourists' vulnerability to crime. *Tourism, crime and international security issues* 37–50, [https://popcenter.asu.edu/sites/default/files/problems/crimes\\_against\\_tourists/PDFs/Schiebler\\_Crotts\\_&Hollinger\\_1996.pdf](https://popcenter.asu.edu/sites/default/files/problems/crimes_against_tourists/PDFs/Schiebler_Crotts_&Hollinger_1996.pdf) (1996).
13. Harper D. W Jr. et al. Comparing tourists crime victimization. *Annals of Tourism Research* 28, 1053–1056, (2001). [https://doi.org/10.1016/S0160-7383\(01\)00016-0](https://doi.org/10.1016/S0160-7383(01)00016-0)
14. Boivin R. & Felson M. Crimes by visitors versus crimes by residents: The influence of visitor inflows. *Journal of Quantitative Criminology* 34, 465–480, (2018). <https://doi.org/10.1007/s10940-017-9341-1>
15. Caplan J. M. & Kennedy L. W. *Risk terrain modeling compendium* ( Rutgers Center on Public Security, 2011).
16. Sampson R. J. & Groves W. B. Community structure and crime: Testing social-disorganization theory. *American journal of sociology* 94, 774–802 (1989). <https://doi.org/10.1086/229068>
17. Kawachi I., Kennedy B. P. & Wilkinson R. G. Crime: social disorganization and relative deprivation. *Social science & medicine* 48, 719–731 (1999). [https://doi.org/10.1016/S0277-9536\(98\)00400-6](https://doi.org/10.1016/S0277-9536(98)00400-6)



18. Sampson R. J. *Great American city: Chicago and the enduring neighborhood effect* ( University of Chicago Press, 2012).
19. Coleman J. S. Social capital in the creation of human capital. *American journal of sociology* 94, S95–S120 (1988). <https://doi.org/10.1086/228943>
20. Kennedy B. P., Kawachi I., Prothrow-Stith D., Lochner K. & Gupta V. Social capital, income inequality, and firearm violent crime. *Social science & medicine* 47, 7–17 (1998). [https://doi.org/10.1016/S0277-9536\(98\)00097-5](https://doi.org/10.1016/S0277-9536(98)00097-5) PMID: 9683374
21. Hirschfield A. & Bowers K. J. The effect of social cohesion on levels of recorded crime in disadvantaged areas. *Urban Studies* 34, 1275–1295 (1997). <https://doi.org/10.1080/0042098975637>
22. Gianetto D. A. & Heydari B. Network modularity is essential for evolution of cooperation under uncertainty. *Scientific reports* 5, 9340 (2015). <https://doi.org/10.1038/srep09340> PMID: 25849737
23. Mosleh M. & Heydari B. Fair topologies: Community structures and network hubs drive emergence of fairness norms. *Scientific reports* 7, 1–9 (2017). <https://doi.org/10.1038/s41598-017-01876-0> PMID: 28578403
24. Heydari B., Heydari P. & Mosleh M. Not all bridges connect: integration in multi-community networks. *The Journal of Mathematical Sociology* 1–22 (2019).
25. Gianetto D. A. & Heydari B. Sparse cliques trump scale-free networks in coordination and competition. *Scientific reports* 6, 21870 (2016). <https://doi.org/10.1038/srep21870> PMID: 26899456
26. Heydari B., Mosleh M. & Dalili K. Efficient network structures with separable heterogeneous connection costs. *Economics Letters* 134, 82–85 (2015). <https://doi.org/10.1016/j.econlet.2015.06.014>
27. Han, W. & Wang, X. Does home sharing impact crime rate? a tale of two cities. [https://aisel.aisnet.org/icits2019/sustainable\\_is/sustainable\\_is/6/](https://aisel.aisnet.org/icits2019/sustainable_is/sustainable_is/6/) (2019).
28. Koster H., van Ommeren J. & Volkhausen N. Short-term rentals and the housing market: Quasi-experimental evidence from airbnb in los angeles. (2018).
29. Schild, J. *Unintended Consequences of the Sharing Economy: Airbnb's Role in Tourism Gentrification*. Ph.D. thesis, Indiana University (2019).
30. Alyakoob, M. & Rahman, M. S. Shared prosperity (or lack thereof) in the sharing economy. *Available at SSRN 3180278* <https://dx.doi.org/10.2139/ssrn.3180278> (2019).
31. Horn K. & Merante M. Is home sharing driving up rents? evidence from airbnb in boston. *Journal of Housing Economics* 38, 14–24, (2017). <https://doi.org/10.1016/j.jhe.2017.08.002>
32. Wegmann J. & Jiao J. Taming airbnb: Toward guiding principles for local regulation of urban vacation rentals based on empirical results from five us cities. *Land Use Policy* 69, 494–501, (2017). <https://doi.org/10.1016/j.landusepol.2017.09.025>
33. Angrist J. D. & Pischke J.-S. *Mostly harmless econometrics: An empiricist's companion* ( Princeton university press, 2008).
34. Granger C. W. Investigating causal relations by econometric models and cross-spectral methods. *Econometrica: journal of the Econometric Society* 424–438 (1969). <https://doi.org/10.2307/1912791>
35. Abouk R. & Heydari B. The immediate effect of covid-19 policies on social-distancing behavior in the united states. *Public Health Reports* 136, 245–252 (2021). <https://doi.org/10.1177/0033354920976575> PMID: 33400622
36. Autor D. H. Outsourcing at will: The contribution of unjust dismissal doctrine to the growth of employment outsourcing. *Journal of labor economics* 21, 1–42 (2003). <https://doi.org/10.1086/344122>
37. Schmidheiny, K. & Siegloch, S. On event study designs and distributed-lag models: Equivalence, generalization and practical implications. (2019).
38. Papachristos Andrew V. S C. M. S. M. L., & Fugiero M. A. More coffee, less crime? the relationship between gentrification and neighborhood crime rates in chicago, 1991 to 2005. *City Community* 10, 215–240 (2011). <https://doi.org/10.1111/j.1540-6040.2011.01371.x>
39. Wachsmuth D. & Weisler A. Airbnb and the rent gap: gentrification through the sharing economy. *Environment and Planning A: Economy and Space* 50, 1147–1170 (2018). <https://doi.org/10.1177/0308518X18778038>
40. on the Functionality, P., Usability of Data from the American Community Survey, Citro C. F. & Kalton G. *Using the American Community Survey: benefits and challenges* ( National Research Council, 2007).
41. Sheppard, S., Udell, A. et al. Do airbnb properties affect house prices. *Williams College Department of Economics Working Papers* 3 (2016).
42. Segú, M. et al. Do short-term rent platforms affect rents? evidence from airbnb in barcelona. Tech. Rep., University Library of Munich, Germany (2018).

43. Barron K., Kung E. & Proserpio D. The sharing economy and housing affordability: Evidence from Airbnb. *SSRN Electronic Journal* (2018).
44. Gurrán N. & Phibbs P. When tourists move in: how should urban planners respond to airbnb? *Journal of the American planning association* 83, 80–92, (2017). <https://doi.org/10.1080/01944363.2016.1249011>
45. Espinosa T. P. The cost of sharing and the common law: How to address the negative externalities of home-sharing. *Chap. L. Rev.* 19, 597, <https://heinonline.org/HOL/LandingPage?handle=hein.journals/chlr19&div=30&id=&page=> (2016).
46. Nieuwland S. & van Melik R. Regulating airbnb: how cities deal with perceived negative externalities of short-term rentals. *Current Issues in Tourism* 1–15, <https://doi.org/10.1080/13683500.2018.1504899> (2018).

## Application for Public Hearing

LOCATION INFORMATION		
Address: 21 w. Grand Ave		
City: Fox Lak, IL 60020	State: IL	Zip: 60020
PIN(S): 05-09-221-001, 05-09-221-002, 05-09-221-003		
Legal Description (Found on Plat of Survey): lots 15, 16 and 17 in Tracts Second Subdivision on Astakee Lake, being S subdivision in the southwest quarter of the Northeast Quarter of Section 9, Township 48 North, Range 9 East of the Third Principal Meridian, according to the Plat thereof recorded October 16, 1928 as of document No. 326183, in book "P" of Plats, Page 35, in Lake County, Illinois		
PROPERTY DESCRIPTION		
Existing Zoning: 10C	Existing Use: Apartment above The Coffee Shop	
Surrounding Zoning: 10C	Surrounding Use: Apartments and businesses.	
Lot Size (SQ FT): 22,500		
PETITIONER INFORMATION		
Name: Peter Jablonski		
Address: 28772 N Washington ave		
City: Wauconda, IL 60084	State:	Zip:
Phone: 8473612561	Email Address: thecoffeeshopfoxlake@gmail.com	
Petitioner is: <input checked="" type="checkbox"/> Property Owner <input type="checkbox"/> Lessee <input type="checkbox"/> Contract Purchaser		
PROPERTY OWNER INFORMATION		
Name: Red-tailed Enterprises LLC		
Address: 28772 N. Washington ave		
City: Wauconda	State: IL	Zip: 60084
Phone: 847-361-2561	Email Address: RedTailedEnterprises@gmail.com	
REQUESTED ACTIONS		
I would like to make this unit a short-term Rental.		
REQUIRED SIGNATURES		

The undersigned states under oath that they are the Legal Owner / Contract Purchaser / Lessee of record as described in this application. The statements made in foregoing application are true in substance and fact.

Signature:

Date:

7/6/23



STATE OF ILLINOIS }

COUNTY OF LAKE } SS.

BEFORE THE PLANNING &  
ZONING COMMISSION VILLAGE  
OF FOX LAKE

TO: HONORABLE CHAIRPERSON  
AND MEMBERS OF THE  
PLANNING & ZONING  
COMMISSION

PETITION FOR SPECIAL USE

\* NOW comes Peter Jablonski

\* owner of the following described real estate, to wit: 05-09-221-001

\* Address, PIN and Legal Description:

21 W. Grand Ave Fox Lake, IL 60020 05-09-221-001  
Lots 15, 16 and 17 in Tyreds Subdivision on Pistakee Lake, Being Subdivision in  
the Southwest in the Southwest Quarter of the Northeast Quarter of Section 2, Township  
45 North Range 9 of the Third Principal Meridian. According to the Plat thereof  
recorded October 16, 1928 as of Document NO. 326183 in book "F" of Plats page 35 in Lake County 24120  
The property is presently zoned under the Village Ordinance as  
and the property is currently used as

The Petitioner plans on using the property for Short-term Rental property and requests the  
following: Short-term rental license

The Petitioner stated the following in support of their request:

I will operate the property in  
a professional manner. I have plenty of Rental experience in the single  
family market.

WHEREFORE, your Petitioner requests that your Honorable Body, pursuant to your rules and regulations, will  
hold a public hearing as provided for by the Statutes and as a reason of said hearing recommended to the Village  
Board of Trustees, that the Village of Fox Lake Zoning Ordinance be so amended to grant the Petitioner's  
request.

Common Address of Property:

PIN(S): 05-09-221-001, 05-09-221-002 - 05-09-221-003

~~05-09-221-001, 05-09-221-002~~, depose and say that the above statements are true and  
correct to the best of my knowledge and belief. I agree to be present in person or by representation when this  
petition is heard before the Plan Commission.

Dated this 11 Day of July, 2023.

SIGNATURE OF PETITIONER

Subscribed and sworn to before me

Dated this 11th day of July, 2023.

K. Lynn Carpenter  
NOTARY PUBLIC

OFFICIAL SEAL  
KIMBERLY LYNN CARPENTER  
NOTARY PUBLIC, STATE OF ILLINOIS  
My Commission Expires 9/29/26



# SHORT-TERM RENTAL AGREEMENT

## I. The Parties

This Short-Term Rental Agreement ("Agreement") made on August 7 2023 is between the following:

One (1) individual(s) known as Blank Blank with a mailing address of \_\_\_\_\_ ("Tenant(s)")

## AND

A business entity known as Red-tailed Enterprises, LLC with a mailing address of 28772 N. Washington Ave, Wauconda, Illinois, 60084 ("Landlord").

Landlord and Tenant(s) ("Parties") agree to the following terms and conditions:

## II. The Property

The Tenant(s) agrees to rent the residential dwelling described as a(n) apartment with a mailing address of 21 w. Grand ave , Fox Lake, Illinois, 60020 ("Property"). The Property consists of 2 bedroom(s) and has 1 bathroom(s).

## III. Furnishings

The Property shall be furnished by the Landlord. Landlord shall provide the following furnishings as part of this Agreement:

Bedroom Set(s) - Including but not limited to beds, pillows, sheets, nightstands, and lighting fixtures.

Dining Room Set(s) - Including but not limited to tables, chairs, and other items that complete a dining room set.

Kitchenware - Including but not limited to pots, pans, utensils, cleaning supplies, and other everyday items that complete a kitchen set.

Living Room Set(s) - Including but not limited to couches, chairs, sofas, televisions, desks, and other common living room items.

## IV. Parking

The Landlord shall provide parking as part of this Agreement in the form of 2 parking space(s). There shall be no fee for the parking space(s).

## V. Period and Guests

The total amount of individuals allowed to stay at the Property for any period will be limited to 4 people. In addition, the Tenant(s) are allowed to have a total number of 4 Guests on the Property.



## **VI. Start and End Dates**

The term of this Agreement shall begin August 7 2023 and end on August 14 2023 ("Rental Period").

The Tenant(s) shall be allowed to check-in at 03:00 PM and check-out at 12:00 PM.

## **VII. Rent**

The rent due by the Tenant(s) to the Landlord shall be in the amount of \$0.00 for the entire Rental Period.

## **VIII. Security Deposit**

The Tenant(s) shall be obligated to pay a Security Deposit in the amount of \$0.00. Upon termination of this Agreement, Landlord shall return the Security Deposit within a reasonable amount of time or in accordance with State law, whichever is longest.

## **IX. Pets**

Tenant(s) shall be allowed to have dogs, cats, with no weight limit. In addition, there shall be a set number of 1 pets on the Property. Pets shall be allowed on the Property for a fee of \$0.00 which is refundable at the end of this Agreement under the condition that the pet has not caused any stains, permanent odors, or damage that could negatively impact the value of the Property.

## **X. Fees, Taxes, and Deposit**

The Tenant(s) shall not be responsible for any other fee(s) unless otherwise mentioned herein.

## **XI. Termination**

Landlord has the right to inspect the premises with prior notice in accordance with applicable State laws. Should the Tenant(s) violate any of the terms of this agreement, the rental period shall be terminated immediately in accordance with State law. Tenant(s) waive all rights to process if they fail to vacate the premises upon termination of the rental period. Tenant(s) shall vacate the premises at the expiration time and date of this agreement.

## **XII. Utilities**

The Landlord shall be responsible for providing the following utilities: Cable / Satellite TV, Electricity, Internet, Oil / Gas, Trash Collection, Water and Sewer, and all other utilities to be paid by the Tenant(s).

## **XIII. Maintenance and Repairs**

The Tenant(s) shall maintain the premises in a good, clean, and ready to rent condition, and use the premises only in a careful and lawful manner. Tenant(s) shall leave the premises in a ready to rent condition at the expiration of the rental agreement, defined by the Landlord as being immediately habitable by the next tenants. Landlord shall pay for maintenance and repairs should the premises be left in a lesser condition.

Tenant(s) agree that the Landlord shall deduct from the Security Deposit prior to refund if tenants cause damage to the premises or its furnishings.

#### **XIV. Trash**

Landlord does not have any trash removal requirements for the Tenant(s).

#### **XV. Subletting**

Tenant(s) shall not be allowed to sublet the Property. If Landlord does allow the Tenant(s) the right to sublet, an amendment must be signed by both Landlord and Tenant(s) and shall be attached to this Agreement.

#### **XVI. Quiet Enjoyment**

The Tenants shall behave in a civilized manner and shall be good neighbors respecting the rights of the surrounding property owners. The Tenants shall not create noise or disturbances likely to disturb or annoy the surrounding property owners. Creating a disturbance of the above nature shall be grounds for immediate termination of this agreement and Tenants shall then immediately vacate the premises.

Any and all noise must be kept to a minimum each night beginning at 9 PM

#### **XVII. Smoking**

Any and all forms of smoking shall not be permitted inside the Property. All smoking activities MUST occur outside.

#### **XVIII. Landlord's Liability**

The Tenants and Tenants' Guests shall hereby indemnify and hold harmless the Landlord against any and all claims of personal injury or property damage or loss arising from use of the premises regardless of the nature of the accident, injury or loss. Tenant(s) expressly recognize that any insurance for property damage or loss which the Landlord may maintain on the property does not cover the personal property of Tenant(s), and that Tenant(s) should purchase their own insurance for Tenant(s) and Guest(s) if such coverage is desired.

#### **XIX. Attorney's Fees**

Tenants agree to pay all reasonable costs, attorney's fees and expenses that shall be made or incurred by Landlord enforcing this agreement.

#### **XX. Use of Property**

Tenant(s) expressly acknowledge and agree that this Agreement is for transient occupancy of the Property, and that Tenant(s) do not intend to make the property a residence or household.

#### **XXI. Shortened Stays and Conditions**



There shall be no refunds of rents due to shortened stays or ruined expectations because of weather conditions.

## **XXII. Showings**

If the property should go on the MARKET FOR SALE, it may be shown to qualified buyers during the stay of the Tenant(s). Every effort will be made to schedule the showing at a convenient time and not interrupt the day-to-day activities of the Tenant(s). Tenant(s) shall allow reasonable viewings of the Property during standard hours.

## **XXIII. Firearms**

Only legally owned and permitted firearms shall be allowed on the premises in accordance with State and local laws.

## **XXIV. Fireworks**

The Parties agree that Fireworks and other hazardous materials may not be used in or around the Property.

## **XXV. Illegal Use**

Tenant(s) shall use the property for legal purposes only and other use, such as but not limited to, illegal drug use, abuse of any person, harboring fugitives, etc. shall cause termination of this Agreement with no refund of rents or deposits.

## **XXVI. Fire Alarms**

If the Property has fire alarms the Tenant(s) must notify the Landlord without delay if a fire alarm “chirps” or has a low battery condition.

## **XXVII. Keys**

There shall be a total number of 1 keys given to the Tenant(s) at the time of possession. If Tenant(s) should lose any of the keys, there shall not be a penalty of fee applied.

## **XXVIII. Possessions**

Valuable items left behind by Tenant(s) will be held with every reasonable effort made to contact in order for a safe return. If items are not claimed for longer than 6 months they shall become the property of the Landlord. Landlord shall not be held liable for the condition of said items left by the Tenant(s).

## **XXIX. Notice**

In the event written notice is required the Parties shall be recognized by the mailing addresses set forth in Section I of this Agreement.

## **XXX. Landlord's Contact**

In the event the Landlord needs to be contacted immediately, the Tenant(s) shall use the following:

E-Mail: redtailedenterprises@gmail.com

Telephone: (847) 361-2561

### **XXXI. Governing Law**

This agreement is governed under the laws in the State where the Property is located.

### **XXXIII. Lead-Based Disclosure**

It is acknowledged by the Parties that a Lead-Based Paint Disclosure is not required per federal law.

### **XXXIV. Severability**

In the event any provision or part of this Agreement is found to be invalid or unenforceable, only that particular provision or part so found, and not the entire Agreement, will be inoperative.

### **XXXV. Entire Agreement**

This Agreement together with any attached addendums or disclosures shall supersede any and all other prior understandings and agreements, either oral or in writing, between the parties with respect to the subject matter hereof and shall constitute the sole and only agreements between the parties with respect to the said Property. All prior negotiations and agreements between the parties with respect to the Property hereof are merged into this Agreement. Each party to this Agreement acknowledges that no representations, inducements, promises, or agreements, orally or otherwise, have been made by any party or by anyone acting on behalf of any party, which are not embodied in this Agreement and that any agreement, statement or promise that is not contained in this Agreement shall not be valid or binding or of any force or effect.

## **SIGNATURE AREA**

**Tenant's Signature** \_\_\_\_\_ **Date** \_\_\_\_\_  
Blank Blank

**Landlord's Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

Peter Jablonski acting as Member on behalf of Red-tailed Enterprises, LLC. Peter Jablonski declares with their above-signature that they hold the legal power and authority to act in the presence of Red-tailed Enterprises, LLC.