

## UPWARDS for the Future Network

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### MONDAY, APRIL 14

- MON 9-11:00AM**
  - Breakfast
  - UPWARDS Networking and Mingle
  - Graduate Student poster competition  
\*All at Alumni and Friends Center
- MON 11-2:00PM**
  - Travel to Micron by bus
  - Lunch at Micron
  - Micron Campus tour
  - Micron Fab Construction tour

*Security screening will be required to visit Micron. More information to come.*
- MON 2-2:30PM**
  - Bus back from Micron
    - Drop off at Boise State Campus
- MON 3-4:00PM**
  - Boise State University campus tour

### TUESDAY, APRIL 15

- TUES 8:00AM**
  - Dave Estrada/Mone't Sawyer - ANML 2D materials and characterization
    - (RSVP will be needed)**
- TUES 9:00-10AM**
  - Tech Talk** with Hanna Paddubrouskaya, Senior Research Scientist of Tokyo Electron
    - What equipment supplier companies are all about: services, expectations, collaboration on projects, project management
- TUES AM**
  - Micron Virtual Reality Demo
- TUES 1:00PM**
  - Joint session on materials modeling (Lan Li and Eric Jankowski)
- TUES 2-3:00PM**
  - Tech Talk** with Christopher Lattin of Tokyo Electron
    - Intellectual Property
    - (RSVP will be needed)**
- TUES 3-4:00PM**
  - Tech Talk with Christopher Lattin of Tokyo Electron
    - \*Extra if needed
- TUES 5-7:00PM**
  - Chips & Salsa Event at AFC
    - Graduate Student Showcase
    - Keynote Speakers

### WEDNESDAY, APRIL 16

- WED 10:00AM**
  - Reliability Workshop, joint seminar with Professor Alam (Purdue University)
- WED 1:00PM**
  - ALD with Dr. Elton Graunard
    - (RSVP will be needed)**
- WED 1:00PM**
  - Electrical Characterization with Dr. Kurtis Cantley
    - (RSVP will be needed)**
- WED 1:00PM**
  - Coffee & Chips: Women Brewing Innovation in Semiconductors with Nancy Glenn and Dr. Amy Fleischer
- WED 2-3:00PM**
  - Tech Talk** with Jeffrey Shearer of Tokyo Electron
    - Dry Etch
- WED 3-4:00PM**
  - Tech Talk** Emma Danielyan, Process Engineer of Tokyo Electron
    - Family/Work/Life Balance

### THURSDAY, APRIL 17TH

- THURS 9:00AM**
  - KLayout and EBL using SEM with Dr. Karthik Srinivasan
    - (RSVP will be needed)**
- THURS 12:00PM**
  - Seminar on circuits for sensors and biomedical applications with Dr. Ben Johnson
- THURS 1:30PM**
  - Surface Science Lab - EBL pattern and 2D materials characterization with Dr. Paul Davis and Dr. Corey Efaw
    - (RSVP will be needed)**



# MORE INFO

## ADDRESSES

- **Administration Building:** 1910 W University Drive
- **Alumni and Friends Center:** 1173 W University Drive
- **The SUB:** 1700 W University Drive
- **MCMR:** 1435 W University Drive
- **Micron Headquarters:** 8000 S. Federal Way

## ADDITIONAL INFORMATION ON SESSIONS

### **Session with Dr. Karthik Srinivasan**

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- A three-hour demo on EBL, which will include demonstrations of spin-coating, exposure, development, and inspection. Time permitting, a quick overview of using KLayout to create mask designs may be included. Students will learn issues with over- and under-exposure, dose vs resist thickness considerations, and more broadly the tricks to get an SEM to double up as an EBL. This session can accommodate 12 students total in two groups (6 each with a TA) that will rotate between the IML and SEM.

### **Session with Dr. Paul Davis and Corey Efaw**

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- The SSL will provide a workshop on AFM characterization for semiconductor applications that includes:
  - Basic AFM topography of semiconductor-relevant samples (e.g., device structures, thin film deposits, etc.) for thickness, surface roughness, and critical dimension measurements
  - Electrical SPM modes (e.g., CAFM/TUNA, KPFM, SCM) for characterizing semiconductor materials and devices
  - AFM-IR for detecting residual photoresist or evaluating area selective deposition (ASD) processes
  - AFM image processing and data analysis
- This session can accommodate 8-12 students total (rotating among the 4 stations outlined above in groups of 2-3).

### **Session with Dr. David Estrada and Mone't Sawyer**

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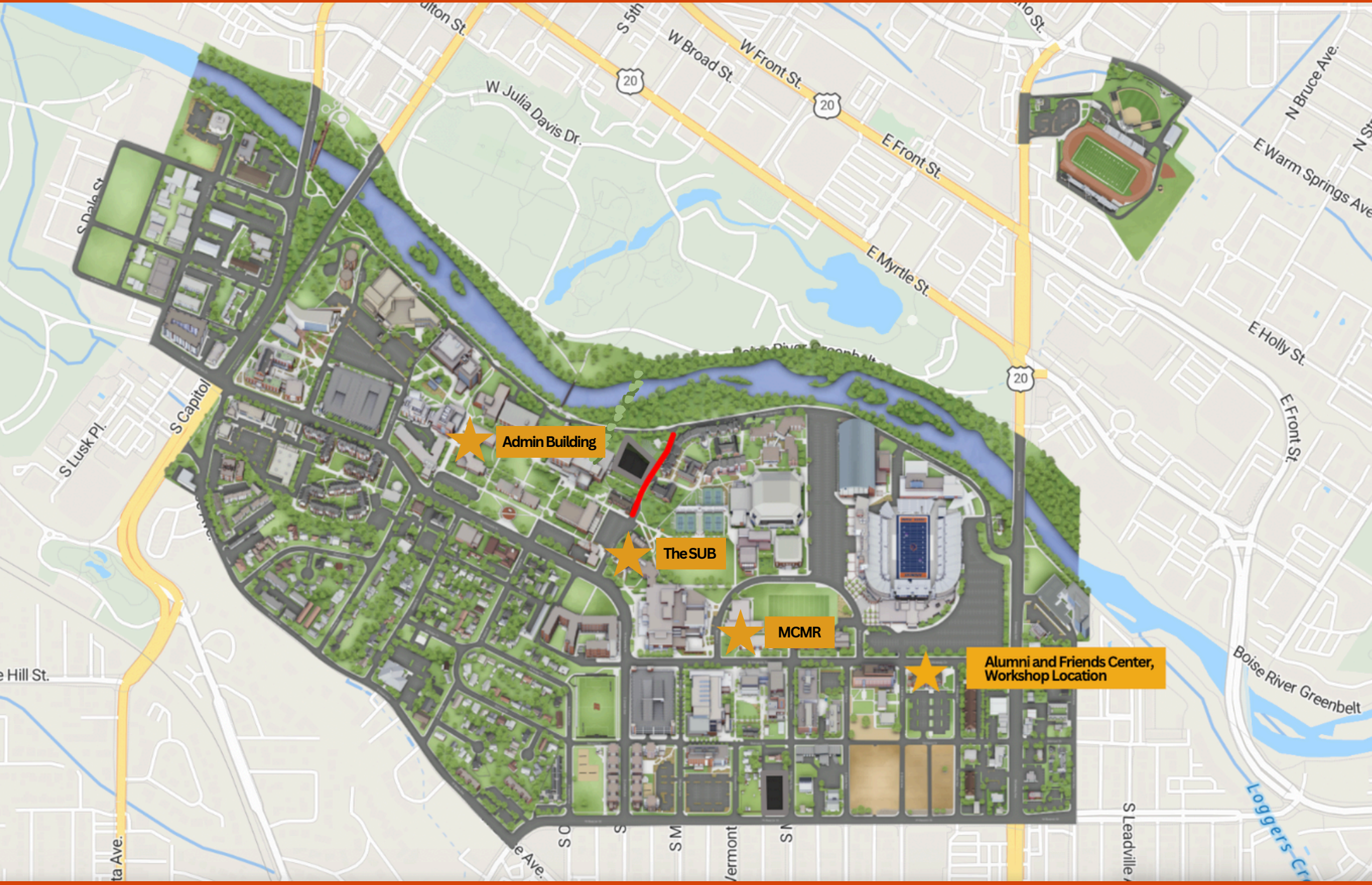
- CVD of 2D materials and characterization. Students would learn the fundamentals of CVD of graphene on copper and transfer to arbitrary substrates. They could then use optical microscopy (transmitted light, reflected light, DIC, and phase contrast) to image, UV-Vis for transmittance, and Raman Spectroscopy to characterize layer number.

### **Session with Dr. Kurtis Cantley**

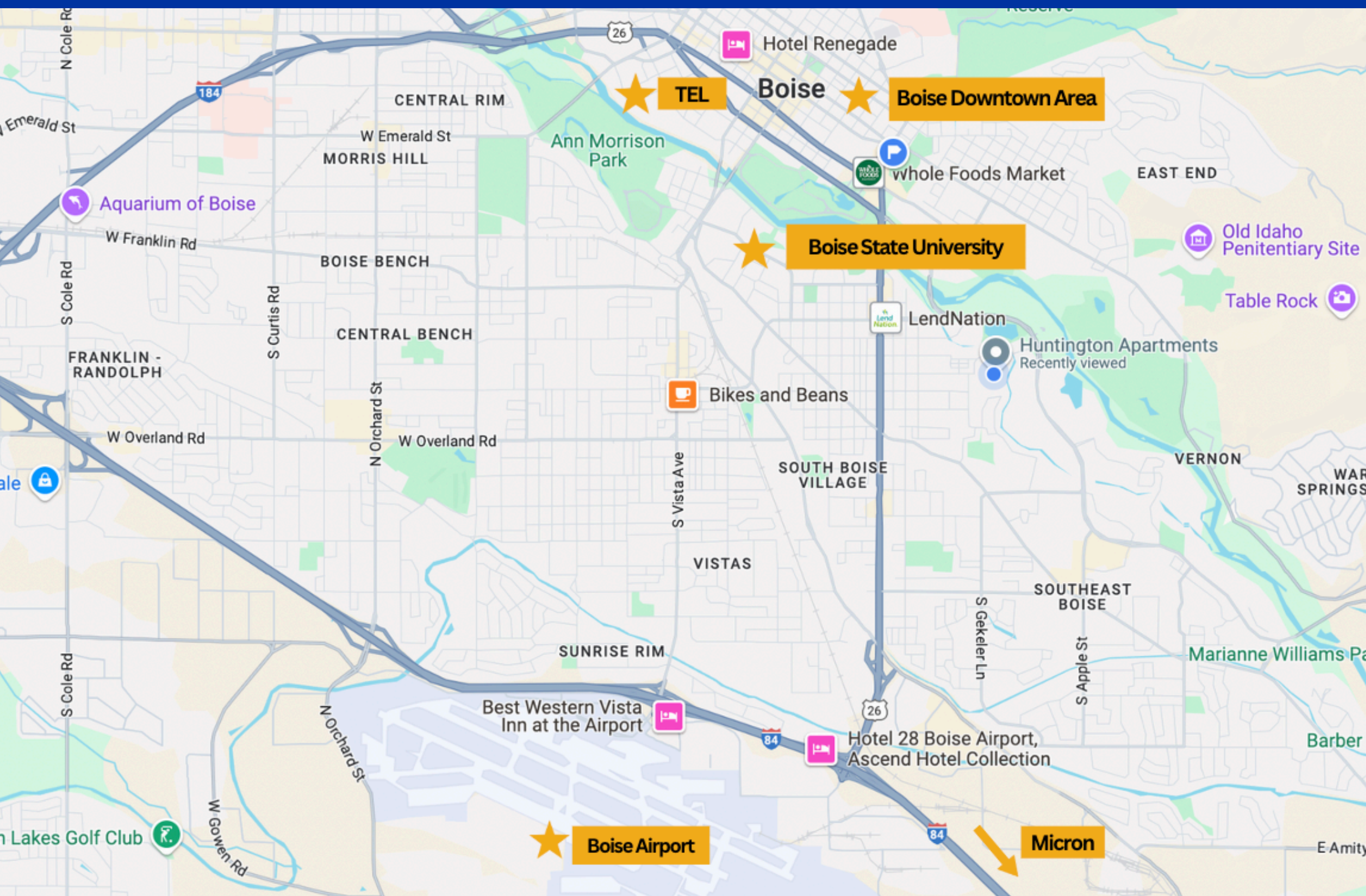
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- In this activity, students will be trained to use a wafer microprobe station to connect electrical characterization equipment to devices on a silicon substrate. They will then learn to set up a semiconductor parameter analyzer to perform electrical measurements on diodes, MOS capacitors, and MOSFETs.

# BOISE STATE CAMPUS MAP

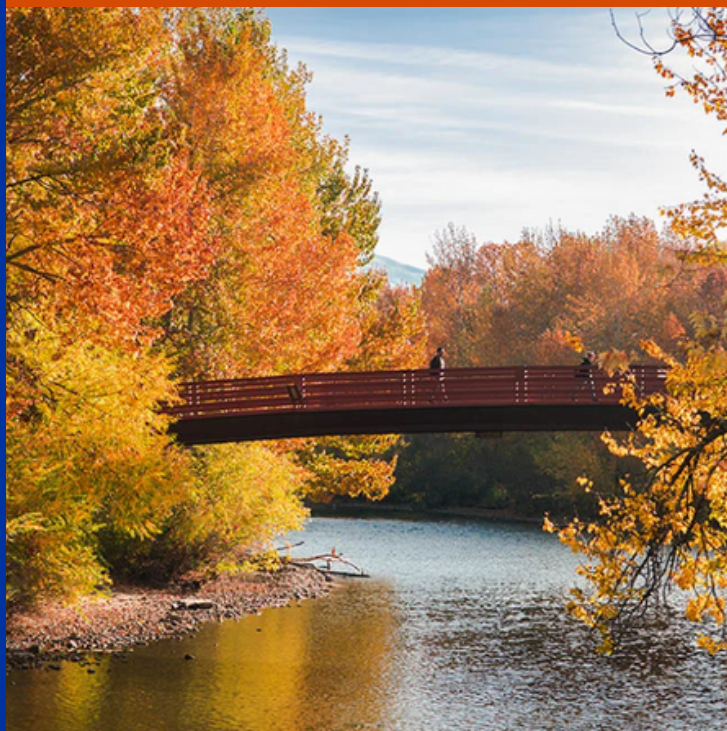


# CITY OF BOISE MAP



# OTHER INFO

## WHAT TO DO IN BOISE



### OUTDOOR ACTIVITIES

- **Boise River Greenbelt:** A scenic 25-mile pathway along the river, perfect for walking, biking, or birdwatching.
- **Table Rock Hike:** This short yet intense hike gets you above the city with views of the Owyhee Mountains in the distance. Allow 2 hours to hike.
- **Camel's Back Park:** A park in a fun neighborhood that has tennis courts, shops and restaurants, and a great (short) hike that gives stunning views of the city.



### RESTAURANTS

- **Basque Block:** Did you know the largest Basque community outside of the European region is in Boise? Check out this area and restaurants like Leku Ona, Bar Gernika, and Bardenay.
- **8th Street:** The hub of Boise's thriving dining scene is on this lively pedestrian-only street filled with restaurants and bars.
- **Barbacoa:** If you're looking for a restaurant unique to Boise, check out Barbacoa! Close to the hotel, it is a one-of-a-kind experience.



### CULTURE AND ATTRACTIONS

- **Anne Frank Memorial:** Visit the Wassmuth Center's memorial to Anne Frank, the only Human Rights memorial in the United States.
- **Basque Block:** A unique cultural district with restaurants, a museum, and festivals celebrating Boise's Basque heritage.
- **Idaho State Penitentiary:** A fascinating (and spooky!) look at Idaho's Wild West prison history. It is located near the start of the Table Rock hike.

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