



## What is CATS?

The Community-engaged and Transformational Scholarship (CATS) program is an initiative to facilitate large-scale meaningful and impactful partnerships between Montana State University and surrounding communities through course-based project collaborations. The initiative delivers a simple model to:

- match community identified needs and community driven projects to university capacity and expertise
- provide students with valuable opportunities to apply their skills in real contexts while making positive impacts in local communities
- work within existing institutional structures using an “opt-in” framework for engagement, and
- make new ideas and energy available to partners to solve pressing community-based needs.

CATS has established a partnership with the City of Bozeman and the Downtown Bozeman Partnership for the 2020-2021 academic year. A list of initial project proposals is provided below. Faculty interested in learning more about specific projects that may fit within their courses’ learning objectives during the 2020-2021 academic year, should contact the CATS coordinator, Susan Gallagher, at the Western Transportation Institute:

Email: [sgallagher@montana.edu](mailto:sgallagher@montana.edu); Phone: 994-6559

For more information about CATS and to see past project descriptions, visit: <http://wrtwc.org/partnerships/cats/>

## Initial Project Proposals for Academic Year 2020-2021

### Downtown Bozeman Improvement Plan Implementation Projects (Downtown Bozeman Partnership):

The Downtown Plan can be viewed and downloaded here: <https://downtownbozeman.org/downtown-plans>

#### **Enliven Downtown’s Alleys**

*Project Description:* Like the 2009 Downtown Plan, the 2019 version calls for a variety of improvements to downtown’s alleys. Recognizing the multi-use importance of the alleys, the Plan calls for implementing pedestrian-scale lighting, incorporating public art murals, installing seasonal green elements, and considering stormwater upgrades. Initial concepts for improving the alleys can be found on pages 78-81 of the Downtown Plan.

#### **Celebrate Bozeman Creek**

*Project Description:* Another long-standing goal of every downtown plan has been to invest in Bozeman Creek as a unique, celebrated public amenity. Pages 130-133 of the Downtown Plan suggest numerous opportunities to enhance Bozeman Creek by creating improved aquatic habitat, public education, pocket parks, and floodplain areas.

### **Develop Comprehensive Downtown Building and Land Use Inventory**

*Project Description:* Pages 58-59 in the downtown plan discuss planning for growth in the downtown core and calls for 400+ additional housing units by 2045 and 250k-350K+ of new office space. Currently there is no quantitative data of square footage amounts for downtown buildings and their designated uses. The DBP would like data compiled by floor/by building of square footage amounts and their designated uses layered in the city's GIS database.

### **Transform Soroptomist Park**

*Project Description:* The Downtown Plan calls for Soroptomist Park to be transformed into functional urban plaza. The new park would provide a much-needed public spaces for daily use and a wide range of special events. Initial concepts for the transformed park can be found on pages 126-129 of the Downtown Plan. A public parking lot at the corner of South Rouse and East Babcock is adjacent to the park and borders Bozeman Creek, it has been discussed to move Soroptomist Park to the current location of the parking lot and incorporate aspects of Bozeman Creek into the park. This project lends itself to the development of multiple concepts involving interdisciplinary coordination.

### **City of Bozeman Projects**

#### **Bozeman Local Housing Trends Calculation Tool**

*Project Description:* The purpose of this project is to construct a repeatable tracking system to identify how Bozeman's local housing conditions are moving in relation to national trends. The project would utilize public agency reported data where possible going back 20 or more years and would be designed in such a way that the system can be updated annually or, preferably, quarterly if data available. The tool would assist City planners in projecting needs and developing policies related to, for example, affordable housing needs, etc. A repeatable tracking system is needed to see if Bozeman's local housing conditions are in sync with national trends or indicative of conditions where more control can be applied at the local level.

Students would assist in developing a housing trends calculator tool, which would be capable of displaying: 1) correlated trend lines showing Bozeman and national cost of living indices; 2) correlated trend lines showing wage change for Bozeman and national cost of living indexes; and c) correlated trend lines showing change in average rental and purchase price of homes nationally and in Bozeman.

#### **City Smart Bozemanite 2.0: A course on city government and your role as a resident**

*Project Description:* In 2007 when the City of Bozeman Neighborhoods Program was created, a three week course was designed to provide Bozeman residents with basic information on how City processes work and how they can stay informed and involved in community decision-making. The course, titled "City-Smart Bozemanite," was planned as a





three-course series and focused on the City's Unified Development Code, the long-range planning process and 2020 Bozeman Community Plan, and Transportation Planning.

The program was not carried forward and made available to citizens on a regular or annual basis. Currently in the City of Bozeman, there is a need to inform residents on processes related to growth and development in the Bozeman area so that they can contribute in meaningful ways to city processes and decision-making.

The purpose of this project is to create a course outline and curriculum for a Civic Academy that can be replicable from year to year with varying topics and as issues in the Bozeman area shift. Students will help to develop a curriculum, course schedule, and outline of topics for a new City Smart Bozemanite course.

### **College Street Pedestrian Crossing Data**

*Project Description:* During the 2019-2020 academic year, two Honors Design Thinking class teams began exploring potential improvements to the pedestrian experience on College Street between 8<sup>th</sup> and 11<sup>th</sup> Avenues. Students collected stakeholder input from students, business owners, engineers at the City of Bozeman and Western Transportation Institute. Data on current pedestrian behavior was provided by the HORT 494 class, looking at similar issues around walkability and placemaking on this corridor.

The proposed project seeks students to organize and implement a pilot project to install temporary crosswalks at 9th street, 10th street, and the path that leads to the main entrance of Joe's Parkway from the alley between Langford Hall and Culbertson Hall. Data collection efforts are also needed to observe and record pedestrian, cyclist, and driver behavior as well as business patronage and mode choice at adjacent businesses to inform locations of permanent crosswalk installation. The students will refine the existing data collection plan, and plan for crosswalk implementation in coordination with City Engineering and City Streets. The ideal timeline is for Spring semester, 2021.

### **City Board Onboarding Program:**

*Project Description:* The City of Bozeman has a number of Citizen Advisory Boards (CABs) made up of Bozeman residents that gather input on a variety of topics and make recommendations to the City Commission on policy, projects, or programs. When new board members join a CAB, the City Clerk provides one-on-one orientation to them to inform them of the requirements of board membership. This process is inefficient and inconsistent and based on dated guidance.

The City would like to create a consistent on-boarding tool for CAB members, perhaps using an online learning management system. The project could include research of tools or processes that other communities use and/or a survey of board members to better understand what information or training would have been helpful to them. Students will help to create an on-boarding training program and content for online implementation.



### **Interactive Urban Design Manual Website:**

*Project Description:* The Planning Division has a code requirement for an Urban Design Manual that was adopted in the spring of 2018. The Planning Division seeks different MSU departments to utilize web editing, graphic design, and/or GIS skills to create this manual while also providing the opportunity for real world work and a portfolio that will be utilized by Planners and the local design community. The City would like to produce the Urban Design Manual in the form of an interactive website that breaks down each standard but uses simple graphics and photos to display best practices and examples.

The purpose of this project is to develop a manual that can be used by Planners and the local design community. The content will be based on design requirements within the Bozeman Municipal Code (BMC) Unified Development Code: [Article 5 - Project Design](#); [Article 4 - Community Design](#); [Article 3 - Zoning Districts and Land Uses](#). Using a provided layout, students will generate content using best examples (both local and global) that highlight the BMC and encourages creative design in the community.

### **Parking Citations & Community Service Pilot Project:**

*Project Description:* Spring semester 2020, an MSU Honors 'Design Thinking' class started the work necessary to develop, and 'pilot' a project that would allow students at MSU to perform community service hours in order to waive parking fines. The students were able to complete significant foundational work to prepare for implementation of a pilot project, however, the COVID response forced them to abandon further work on the project.

The City of Bozeman (Parking) would like to have a second group of students pick up where the earlier group left off, and implement a 'pilot' of the community service hours for parking fines concept. This would require students to do some marketing of the program through MSU channels, to student groups, and across MSU Offices and organizations. Students would also work to develop and maintain relationships and ensure expectations and tracking of community service with partner organizations who have agreed to take on student volunteers looking to log hours instead of paying citations. The students would be expected to refine the existing documents, create outreach and advertising materials and processes, implement a 60-day pilot project, and provide a comprehensive report/analysis that summarizes project results and recommendations for further refinement.

### **Water Treatment Process Optimization**

*Project Description:* There is a need to decrease the costs and optimize the use of chemicals for residuals handling while also improving the quality of water discharged to Bozeman Creek. The water treatment plant is nearing the capacity of its drying beds for sludge handling and should there be a large forest fire or landslide event in our watersheds, we will require additional chemicals as well as residuals treatment capabilities.





The purpose of this project is to design solutions for identifying optimal chemical doses. The project would involve process optimization for the gravity thickener, and dissolved air flotation (DAF) optimization. The feasibility of alternate solids handling equipment would also be investigated. The goal is to determine how to get the biggest bang for the buck.