



Request for Proposals 2022 Student Projects – STEM Outreach

Submittals Due: Friday, December 17, 2021 by 5 PM Pacific Time

Only Student Chapters from Alaska, Washington, Oregon, Hawaii and California are Eligible.

Background

The Western District Board of Directors has approved up to \$4,000 to be awarded to the student chapters (\$1,000 each for up to four chapters) to advance Science, Technology, Engineering, and Math (STEM) outreach to high school and middle school students. It is recommended that the student chapters incorporate this effort into their current transportation course work, where possible, as a lab assignment or mini-capstone project. Student chapters are encouraged to review the STEM resources provided by ITE International as they prepare their Responses.

<https://www.ite.org/technical-resources/councils/transportation-education-council/science-technology-engineering-and-math-stem-resources/>

Purpose of STEM Outreach Project

- To introduce high school and middle school students to transportation planning/engineering as a career path.
- To expose high school and middle school students to basic transportation planning/engineering concepts.
- To increase collaboration with local high schools, middle schools, and STEM outreach organizations.
- To facilitate ITE Student Chapter activity and student mentoring by transportation professionals.
- To approximate a real-world RFP selection process common in transportation engineering and planning.
- To provide funds to student chapters that may be used to offset travel costs for students to attend ITE meetings, which help them to better understand the transportation profession by meeting a wide range of working members.

Requested Scope of Services

The ITE Western District requests innovative project proposals from student chapters on programs or tools to effectively engage high school or middle school students with transportation planning/engineering focused STEM outreach. This effort should be undertaken in and by groups within the Western District (Alaska, Washington, Oregon, Hawaii and California). Student chapter projects should be scaled to take approximately 80 person-hours of effort.

No specific format for the STEM outreach projects is required. Innovative, unique and novel proposals will be scored well. When considering a potential project the student chapter should ask themselves “What would have engaged me as a middle or high school student? What would have made me excited to pursue a career in transportation?”

All proposals must include a project summary report of 5-10 pages and at least one other deliverable to be defined by the proposer.

The students may wish to consider projects such as:

- Partner with local schools to run one of [ITE International’s STEM activities](#) with multiple classes of middle school students.



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- Develop a new in-class STEM activity for high school physics classes focused on distracted driving and stopping distances. Then partner with a local school to pilot that activity with a group of students over a virtual meeting platform.
- Develop a series of short on-line video lessons about transportation planning/engineering targeted at high school or middle school students.
- Partner with a local STEM outreach organization to organize a half-day workshop for students interested in transportation planning/engineering delivered during one of the local school's spring breaks.
- Other innovative, unique and novel proposals from student chapters.

Grant Schedule

The following schedule shows the required deadlines for submission of materials. Proposers shall specify a schedule in their proposals that will accommodate their individual end-of-semester/ quarter schedule while students are in school, avoiding complications in coordination associated with the departure of student participants at the end of the school year.

RFP Issued:	November 5, 2021
Proposals Due:	December 17, 2021
Selection of Grant Awards:	January 14, 2021
Student Chapters Project Development and Execution:	As shown in the proposal
<u>Student Chapters Submit Draft Summary Report:</u>	<u>As shown in the proposal</u>
Committee Completes Review of Draft Project:.....	Within three weeks of submittal
<u>Student Chapters Submit Final Summary Report:</u>	<u>Within two weeks of receiving Committee feedback – must be before school is out for summer (or explained in proposal)</u>
District Payment to Student Chapters	Within 2 weeks of completion of <u>all</u> tasks Identified above

Proposals shall be sent **by the professional mentor** to Patrick Marnell, Technical Committee Chair via email (patrick.marnell@q-free.com) in .pdf format by 5:00 PM Pacific Time on Friday, December 17, 2021.

Requirements of this RFP

Grants of \$1,000 each will be considered for a STEM outreach project that requires approximately 80 hours of effort. Only one grant will be given to any submitting group, as the Western District intends to spread the STEM outreach fund to as many student chapters as possible. Each proposal shall be no more than three pages in length on 8.5" x 11" paper with a minimum 10-point font, and shall include the following:

- 1. Project Proposal Scope:** This section will summarize the project initiative to be undertaken. The proposal must include a summary of the specific activities that will be conducted. The proposal must indicate what deliverables will be included in their scope of work. All proposals must include a project summary report of 5-10 pages and at least one other deliverable to be defined by the proposer.



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2. **Mentoring:** This section will identify the student chapter’s mentor for the project. The mentor will provide oversight, assistance, quality control and mentoring to students with the STEM outreach effort. While involving an active or retired ITE member as a mentor is preferred (higher scoring), it is not mandatory. In this section, proposers must also identify the chapter’s faculty support person.
3. **Schedule:** A schedule for the project must include specific dates for each of the underlined milestones listed in the “Grant Schedule” section above in this RFP and all project deliverables. All work should be completed on or before the end of the school year.
4. **Level of Effort:** A brief summary of the level of effort anticipated in terms of number of hours and people. State how the project effort would be coordinated with transportation course work and how outreach will be done.
5. **Key Personnel:** State the name, address, phone number, and email address of the following persons:
 - **Professional Mentor** – The professional member should be a working or retired transportation professional. The professional mentor may not be primarily employed as a faculty member of the student chapter’s University (an adjunct professor would be allowed). If you need help identifying a Professional mentor, please reach out to your local ITE Section.
 - **Faculty Support**– A member of the Student Chapter’s school faculty advisor.
 - **Student Project Manager** – A single student identified as the Student Chapter’s project manager. The Student Chapter Project Manager will be responsible for all aspects of project delivery. The Student Chapter Project Manager will coordinate work done by other student participants and reviews by the Professional Mentor.

The Student Project Manager’s responsibilities shall include, but are not limited to:

- Host a monthly project check-in meeting to inform the ITE Western District’s Project Manager of project progress. (The Technical Committee Chair will appoint a member of the committee to serve as Western District’s Project Manager for each project.)
 - Meetings should be scheduled for 30 minutes but are often expected last less than 30 minutes.
 - The Student Project Manager shall provide a simple agenda at least 48 hours prior to each meeting.
- The Student Project Manager shall provide a monthly progress report using the approved format. (See attached progress report format)
- The Student Project Manager shall direct the work of other student chapter member to complete the project and coordinate reviews of draft deliverables with the Professional Mentor.

The Student Project Manager will need to remain in contact with the ITE Western District for coordination until August 1, 2022, and will need to send updates to the review committee regarding his/her address, phone number, and email address if changes occur during this time. Any changes in the designated key personnel must be approved by the ITE Western District Technical Chair.

6. **Project Partners (optional):** If the proposed project includes partnering with local schools, STEM outreach organizations, or other groups, this section will identify those planned partners. Student chapters should



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indicate what level of outreach has occurred to these group (if any) and what commitments (if any) have been made to date.

- 7. Agreement to Hold Harmless:** It is required to state the agreement to hold harmless clause in the RFP response.
- 8. Cover Letter (optional):** A cover letter may be submitted in front of the proposal. The cover letter shall not exceed one page and does not count as part of the three-page limit noted above.

The guidelines above were developed to minimize student chapter effort in submitting a proposal for a grant. Questions or clarifications should be directed to Patrick Marnell (patrick.marnell@q-free.com).

Proposal Evaluation

Proposals will be evaluated in the following manner:

- 1. Pass/Fail Criteria:**
 - Proposal must be sent by the Professional Mentor and received by the submission deadline.
 - Proposal must not exceed three-page limit (cover letter does not count towards page limit).
 - Proposal must state all three key personnel with addresses, phone numbers, and email addresses.
 - Proposal must include the agreement to hold harmless.
 - Proposal must include a schedule that meets required deadlines.
 - Proposing student chapter must be from the ITE Western District.

Responses that do not all of meet the above criteria will be deemed non-responsive.

2. Scope of Services (40 points)

Scoring will be based upon the relevance/need/uniqueness of the project proposed, how well the project is outlined, and how applicable the project is to STEM outreach to middle or high school students. This section should identify and describe all project deliverables. Deliverables may include written STEM outreach plans, delivered STEM outreach activities (virtual or in person), online videos, summary reports, or other materials as described in the proposal.

Clarity as to what project deliverables are proposed and the methods proposed to produce the deliverables is paramount.

3. Mentoring/Project Management (25 points)

Scoring will be based upon inclusion of the professional mentor and faculty members in the proposal and the demonstration of teamwork. Please include how you propose to complete a review process of quality control. This section should also describe how the grant money would be used. Proposals that use funds for travel to ITE meetings and/or use funds for student recruitment will be given highest scores.



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In this section of the proposal, students shall also provide their work schedule including specific dates for each of the proposed project deliverable and underlined milestones listed in the “Grant Schedule” section above in this RFP.

4. Effort/Resources (35 points)

Scoring will be based upon how the effort matches within the anticipated level of services (approximately 80 person hours per \$1,000 grant). Proposals that most demonstrate how the project is integrated into transportation course work (through lab exercises, mini-capstone course projects or homework) or ITE Student Chapter activities are encouraged and will be given the highest number of points.

Any Student Chapter that received a grant award in a prior year and failed to complete the project will receive a 15-point deduction for up to two years. This penalty may be waved at the discretion of the ITE Western District Technical Chair due to extenuating circumstances, such as COVID-19 restrictions.

Evaluation Committee and Selection

Proposals will be reviewed and scored by the following individuals. None of these individuals may be used as mentors.

- Yi-Min Ha, Kittelson and Associates
- Sowmya Chandrasekhar, Kimley-Horn
- Yilun Xu, DKS Associates
- Patrick Marnell, Q-Free / ITE Western District Technical Committee Chair

The highest scoring proposals will be awarded grants, up to the total combined maximum of \$4,000. If less than four proposals are received or if the evaluation committee finds that some proposals are not in the best interests of the ITE Western District, fewer than \$4,000 in grants may be awarded. **The District strongly recommends use of these funds for the Student Chapter’s ITE related activities and attendance at the District’s 2022 Annual Meeting in Palm Springs, CA.**

Required Hold Harmless and Copyright Transfer

As the ITE Western District is a small non-profit group, it is important that it is held harmless from any liability or negligence associated with the efforts of this proposal and project. Successful proposers will own their data, deliverables, and summary work. The ITE Western District will only request a copyright transfer to allow publication and/or republication of information, but will not own the data, deliverables, or summary work nor be responsible for the conduct or presentation of STEM outreach events. Therefore, it is required that the proposer include the following statement – exactly as worded below -- in their proposals.

“The <name of group> holds harmless and indemnifies the ITE Western District from any and all liability associated with the conduct and completion of this proposal, STEM outreach projects and associated activity.”



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Successful proposers will be required to sign the Copyright Transfer that allows the ITE Western District to publish the deliverables completed as part of this effort. The proposer will own the information and have all rights to their work, but by signing the transfer they are giving the ITE Western District the ability to publish this information. This form is not required to be submitted with the proposal, but will be required if and when the student chapter is selected.

Tips for a Successful Project

- Reach out to project partners early in the process. Engage them in a professional fashion and respond promptly to any questions.
- Brainstorm with your chapter about:
 - What type of project you want to do?
 - What scale of project you can accomplish in approximately 80 person-hours?
 - What could go wrong with your proposed project and how you would address the problems?
- Ask your professional mentor and faculty advisor to give you comments on your project ideas.
- Bring up any problems with your ITE Western District Project Manager at or before your monthly check-in meeting.
- Have your mentor review your deliverables prior to final submittal.