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President’s Message

By Pat Marnell, ITE Western District President



“If more of us valued food and cheer and song above hoarded gold, it would be a merrier world.”

-Thorin Oakenshield in J.R.R. Tolkien’s The Hobbit

Fall is my favorite season. In Oregon, that means the return of the rainy season. For many, that might not be a selling point, but I love the rainy, blustery, and sometimes foggy days of November in the Willamette Valley.

This has been a busy and challenging year for many people. For whatever reason, it feels like in 2025 the “amps were turned to eleven” on tension. I hope that over the Thanksgiving holiday, you all will find time to take a break from the stresses of the world — to simply enjoy time with friends and family, maybe watch a football game, or take a nap in a recliner after one too many helpings of stuffing. No matter what kind of year you’re having, remember that for both the good times and the bad times, nothing lasts forever (not even cold [November Rain](#)).

Looking ahead to 2026, I’m excited to see how the students at the University of California, Irvine (UCI) host the [Student Leadership Summit](#) from January 23–25. I’m sure they’ll do a great job. I’m also looking forward to seeing Josh McNeil step into the role of Western District President. I have no doubt that under his leadership, and with the support of Cameron Shew and Tony Henderson, the Western District will continue to thrive.

It was amazing to see so many of you in Long Beach for the Annual Meeting. We had over 525 attendees, and thanks to the hard work of everyone on the LAC, it was an incredible event — truly the highlight of my year. I hope to see many new and familiar faces at the [2026 Annual Meeting in Bellevue, WA](#).

In September, the Western District Board met for our Fall Executive Committee Meeting to plan for the upcoming year. As many of you already know, **Tony Henderson** has been elected as the incoming 2026 Secretary-Treasurer. **William Andrews** was appointed as the Student Funding & Initiatives Committee (SFIC) Chair and outgoing SFIC Chair, **Kayla Fleskes-Lane**, deserves major kudos for her leadership over the past years. I’m also pleased to announce the reappointment of **Cathy Leong** as District LAC Chair, **Giancarlo Ganddini** as Publicity Chair, and **Ryan Zellers** as WesternITE Advertising Chair.

2026 ITE Western District Annual Meeting
Bellvue, WA - June 28- July 1

Annual Board Meeting Highlights

By Cameron Shew, Western District Secretary-Treasurer

This year's Western District Summer Board Meeting was held on Sunday, June 29th, at the Westin Long Beach. Board members, committee chairs, and section representatives gathered to review district activities, finances, and upcoming initiatives. President Patrick Marnell led the meeting with Vice President Joshua McNeill, Secretary-Treasurer Cameron Shew, Immediate Past President Doug Smith, and International Directors Peter Koonce and Kimberly Leung in attendance. District Administrator Dalene Whitlock provided organizational updates, including the reorganization of the Central California Section as a chapter under the Northern California Section. ITE International President Karen Aspelin discussed key initiatives, such as the newly released Trip Generation Manual 12th Edition, ITE Safety Roadmap and Action Plan, and ITE Brand Evolution, which is entering its implementation phase.

Committee updates were provided by Career Guidance Committee Chair Henry Hammel, Public Relations Committee Chair Giancarlo Ganddini, Student Funding and Initiatives Committee Chair Kayla Fleskes-Lane, Technical Committee Chair Edith Victoria, District LAC Committee Chair Cathy Le-

ong, Advertising Manager Ryan Zellers, and Website Manager Kezia Suwandhaputra. Highlights included the largest-ever Student Leadership Summit at UCLA, young professional and mentorship programs, budget adjustments for fiscal year 2025–2026, and contracts for future Annual Meetings. The Board approved increased student connections grant funding, adopted new annual meeting registration rates effective in 2028, and approved changes to travel and election policies. Starting in 2026, District elections will be shifted to after the Annual Meeting, allowing members the opportunity to engage with candidates during the meeting.

Section representatives from Alaska, Central California, Central Coast, Hawaii, Northern California, Oregon, Riverside-San Bernardino, San Diego, San Francisco Bay Area, Southern California, and Washington shared updates on successful technical events, student chapter activities, and membership engagement efforts across the District.

The next Winter Board Meeting will be held in Irvine on January 23rd, 2026.

Annual Business Meeting Highlights

By Cameron Shew, Western District Secretary-Treasurer

The 2025 Western District Annual Business Meeting was held on Tuesday, July 1st. District President Patrick Marnell called the meeting to order following lunch, beginning with a moment of silence for deceased members Bill Dietrich, Ernest Flores, and James Schmidt.

Vice President Josh McNeill introduced the Committee Chairs and Section Representatives before the presentation of Western District Awards. Awards were presented by Student Funding and Initiatives Committee Chair Kayla Fleskes-Lane, Technical Committee Chair Edith Victoria, and Career Guidance Committee Chair Henry Hammel, recognizing achievements across student chapters, sections, technical projects, and individual contributions.

President Patrick Marnell convened the Teller's Committee for the final call for ballots, and delivered the State of the District Address highlighting the year's accomplishments and district initiatives. Western District membership has grown by 160 members to over 3,700 total, making it the largest ITE district by geography and membership. Pat emphasized the importance of engaging younger members and student members, and encouraging attendees to "nudge" future leaders to get involved. He also called for volunteers for roles including

Social Media Manager and WesternITE Editorial Committee members. Other highlights included the district's strong financial health with a balanced budget and a healthy Student Endowment Fund, ongoing ITE rebranding efforts to create a unified organizational identity, and opportunities for members to develop leadership skills through programs such as Leadership ITE.

Long Beach LAC Chair Sowmya Chandrasekhar and her committee were recognized for their hard work organizing a very successful Annual Meeting. The Annual Business Meeting concluded with the election results: Josh McNeill was elected President, Cameron Shew was elected Vice President, and Tony Henderson was elected Secretary-Treasurer. The meeting was adjourned at 1:25 PM.

Career Guidance Corner

By Sophia Tan, Badge Program Manager

The 2025 Explore ITE Badge Program concluded this May, offering young professionals an exciting way to grow their careers through a series of engaging challenges. This year's requirements included attending an ITE section meeting and choosing two out of three options: a social event, a professional development event, or a volunteering opportunity.

Participants shared highlights such as building new connections at ITE socials, discovering emerging trends through webinars, and inspiring future transportation professionals by speaking to high school students.

Those who completed the program earned this year's exclusive Long Beach themed pin. Congratulations to everyone who participated!

If you're interested in expanding your career horizons in the upcoming year, the 2026 Badge Program is now live! Visit <https://westernite.org/badge-recognition-program/> to join in and start your challenge!



2025 Annual Meeting Award Winners

Award	2025 Recipient
Section/Chapter Activities Awards	Large – Oregon (advanced to international) Small - Hawaii
Section/Chapter Momentum Award	Hawaii
Student Paper Award	Infrastructure Systems Integrating Train Control and Autonomous / Connected Vehicles for Enhanced Grade Crossing Safety, Alex Wang and Drew Ferrante (USC)
Outstanding Technical Paper Award	Next-Generation Transit Signal Priority with Advanced Arrival Time Prediction and Custom Traffic Signal Control Logic, Mark Haines (PBOT)
Transportation Achievement Awards Recognition	Complete Streets: MOVE Culver City Program - City of Culver City Safety: I-5 over 26th Avenue Bridge Replacement - Oregon Department of Transportation Planning: Hill Crest Focused Plan - City of San Diego Traffic Engineering: 362nd Paved Shoulders & Safety Improvements Project - Clackamas County
Transportation Project of the Year	I-5 over 26th Avenue Bridge Replacement, Robert J DeVassie (ODOT)
Student Chapter Award	UCLA
Student Chapter Award Honorable Mention	Cal Poly San Luis Obispo
Student Chapter Momentum Award	UC Berkeley
Student Travel Scholarships	Rebecca Riley (Gonzaga) & Alberto Laureano-Rumbo (Cal Poly Pomona)
Traffic Bowl Award	University of Washington
James H. Kell Student Competition	"Student RFP: Cal Poly SLO 1st Place – Maggi Benson – SLO 2nd Place – Justin Xu – UCLA 3rd Place – Pawat Potisuk – OSU 4th Place – Rebecca Riley – Gonzaga"
Student Chapter Annual Meeting Award	Cal Poly SLO
Outstanding Transportation Educator	Dr. Hisham Jashami, Oregon State University
Outstanding Student Award: Undergraduate	Brandon Ng, UC Davis
"Outstanding Student Award: Graduate"	Jonah Lorica, University of Washington
Mentor Award	Kimberly Leung
Young Professional Achievement Award	Eileen Chai (2025 District Rising Star!)
Individual Achievement Award	David Hurwitz
Lifetime Achievement Award	Jenny Grote
Best Annual Meeting Best Paper Award	Jonathan Howard "The Rotor Turbo – a New Spin on Roundabouts in California"
Annual Meeting Best Paper by a Young Professional Award	Jianyuan (William) Xu "Exploring the Use of Probe Vehicle Telematics Data for Freeway Detector Speed Accuracy Check"
Student Chapter Annual Meeting Award	Cal Poly SLO
Student Regional Travel Scholarships	Rebecca Riley (Gonzaga) & Alberto Laureano-Rumbo (Cal Poly Pomona)

2025 Best Paper

The District's Best Paper Award is one of the most prestigious presented each year. The winning paper is presented here.

The Rotor Turbo – a New Spin on Roundabouts in California

Jonathan Howard, PE

See the [website](#) for abstract and references

Introduction

Being the first to build a new geometric design comes with many challenges, but also the potential to find key solutions. Traditional multi-lane roundabouts have proven to be an imperfect solution that is challenging for drivers to negotiate often resulting in a higher frequency of minor crashes (1). Multi-lane roundabouts are very difficult to design especially when trying to balance the need for features that reduce crash rates against the need to control entry speeds (2). Therefore, more solutions are needed, and the international experience with Turbo Roundabout design has shown that it could be one such solution to providing improved operations and safety through the use of design elements such as raised dividers between lanes to force drivers to comply with lane usage (3). Turbo Roundabouts may work in Europe, but how does the Turbo Roundabout perform in California, with Californian drivers?

California's first Turbo Roundabout is located at the Junction of Routes 25 and 156 near Hollister, California. This roundabout is actually a Rotor Turbo, which is the largest and most complex type of Turbo Roundabout design which also allows for the highest capacity (Figure 1). The roundabout opened in March 2024 and has been in operation for a little over a year at time of writing. This paper attempts to provide an overview of how the roundabout is performing and includes anecdotes and observations from the field on how traffic is navigating the roundabout. The roundabout is still new and, while it is possible to draw some preliminary conclusions about the roundabout's effectiveness in

operation, there are significant limitations to the data currently available. In particular, traffic data from the first few months of operation does not necessarily reflect typical driver behavior as drivers were still learning how to drive through the roundabout.

Basics of Turbo Roundabouts

Turbo Roundabouts offer a solution to many of the safety and operational challenges common to multi-lane roundabouts. The key design innovation that allows a Turbo Roundabout to improve lane keeping throughout the roundabout is the addition of mountable raised concrete lane divider curbs. These lane dividers start in advance of the entry to the roundabout and continue through to their respective exits with short gaps along the circulatory roadway to allow for side street access. The lanes are laid out in a spiral pattern with each lane starting at one entry and then spiraling outward to exit at a downstream leg (1, 3, 4). The Turbo Roundabout design concept originated in the Netherlands as a solution to the safety and operational challenges present at multi-lane roundabouts in the Netherlands (1).

The use of raised lane dividers at Turbo Roundabouts also allow for simplified fastest path speed control as the raised lane dividers discourage drivers from cutting across lanes through the roundabout (2, 3). Another significant design variation is that Dutch Turbo Roundabouts place the entries at right angles (radial) to the circulatory roadway. Engineers from the Netherlands note that this design concept improves yielding behaviors and allows for excellent view

angles at the entries. The improved view angles with the Dutch radial entry design makes it easier for drivers to see oncoming traffic and find a gap—especially for drivers in the rightmost lanes where it appears to help increase the capacity of the roundabout (1, 3). Extensive signage is used to alert drivers to the roundabout and assist drivers in selecting the appropriate lane ahead of the entry. Correct lane choice in advance of the roundabout is crucial as drivers are not easily able to change lanes in the roundabout due to the presence of raised lane dividers (1).

Site Specific Challenges

The Junction of Routes 25 and 156 operated as a traffic signal prior to conversion to the present Rotor Turbo design (Figure 1). The former signalized intersection was identified for conversion to a roundabout to improve safety as a result of crashes caused by drivers running a red light—often resulting in severe injuries and some fatalities. Because the original intersection was built with a 50-degree skew angle, a traditional multi-lane roundabout would have been very problematic to design and build as the high skew angle would result in significant path overlap concerns and realigning the highway was not practical. Therefore, the Turbo Roundabout design concept was preferred as it provides an effective solution that would allow a roundabout to be built within the existing Right of Way and operate at lower speeds without path overlaps.

This intersection sees heavy traffic volumes on both highways with most traffic passing straight through the intersection. Route 25 is a major commuter

corridor for the region while Route 156 is a significant interregional freight corridor with traffic forecasted to grow at 1-2% per year for both highways. Because of the current traffic demands and expected future growth, traffic studies identified that the larger and more complex Rotor Turbo roundabout design would be necessary at this location based on the available Dutch capacity models and microsimulation models (5, 6). The Rotor Turbo roundabout has three entry lanes and two exiting lanes on every approach to the intersection with a new spiral lane being added at each approach.

Applying the Turbo Roundabout

Design in California Designing and building a Turbo Roundabout in California presented a number of concerns and challenges to overcome, including the added challenge of having to design the more complex Rotor Turbo. The primary challenge was adjusting the design to accommodate American design vehicles. Being situated on a key interregional freight corridor, this roundabout was designed to accommodate the standard interstate truck as defined by the Surface Transportation Assistance Act of 1982 (STAA). This is the typical design vehicle seen on freight corridors but requires more space than typical European design vehicles. The decision to design the roundabout to have vehicles staying within their respective lane was based on multiple reasons—the foremost being that it is typical of Dutch design practice, but also that it would reduce driver confusion. Having trucks stay in their respective lane would reduce the potential for sideswipe crashes and would reduce wear and tear on lane dividers.

The design team opted to follow Dutch design guidance and incorporated the radial entry design typical of Dutch Turbo Roundabouts to maximize the safety and operational benefits of the design based on Dutch research (3). Routes 25 and 156 have posted speed limits of 55



Figure 1. Before (top) and After (bottom) Views of the Route 25-Route 156 Intersection

mph in the vicinity of the intersection. Chicanes were considered for the approaches to the roundabout, but right-of-way constraints made it impractical to build chicanes. Therefore, the design incorporated features to increase the conspicuity of the roundabout and encourage drivers to reduce their speed on approach including lengthening the splitter islands to create a median on each approach as well as increased illumination at night. The design of the roundabout also creates a break in sight lines and paths of travel for traffic through the intersection which, when combined with the raised lane dividers and spiral roadway, strongly encourages traffic to slow down as they discern how to negotiate the roundabout and find a gap in circulating traffic.

There are a few additional design and constructability challenges that are unique to building a Rotor Turbo round-

about that would not be applicable to a typical Turbo Roundabout. There was no easy way during construction to provide space to build the raised lane dividers while maintaining traffic flow due to how the Rotor Turbo design both adds and removes a lane at each approach. During construction, the contractor typically kept only the middle lane open with both the left- and right-most lanes closed as part of their construction zone. The issue for the Rotor Turbo was that because the middle circulating lane spirals outward to become the outside circulating lane at every approach, the contractor had to direct traffic to change lanes within the circulatory roadway. This led to driver confusion for the first month after opening with drivers changing lanes because drivers had essentially been trained during construction to drive it incorrectly

Traffic Data

The intersection operates well with minimal queuing despite heavy traffic loads. The intersection regularly handles over 50,000 Average Daily Traffic (ADT) on most days with some weekends seeing 55,000 ADT. The intersection sees a significant proportion of freight traffic with trucks and heavy vehicles accounting for 9.5% of daily traffic on a typical weekday. Most of the freight traffic is on Route 156 with trucks accounting for 13% of traffic on Route 156 versus 6.2% of traffic on Route 25. Most traffic passes straight through on both routes (82%) with only 8.9% of traffic making left turns and 9.1% turning right. Traffic is split fairly evenly between the two highways with Route 25 typically carrying about 26,000 ADT and Route 156 about 24,000 ADT. During peak hours the intersection handles hourly volumes over 3,600 vehicles per hour (vph) typically with trucks accounting for 6.1% of peak hour traffic. Given the minimal queuing and observed delays, there does appear to be significant slack capacity available at the roundabout, indicating that it should be able to effectively handle increased traffic demands over time.

Speeds are typically low throughout the intersection even for circulating and exiting traffic due to the raised lane dividers which restrict a driver’s fastest path. Traffic tends to follow the fastest path within their respective lanes which limits their speed to about 19-20 mph. This is reflected in the data where circulating traffic speeds are typically about 20.6 mph although there is some variance between highways. Circulating speeds for Route 25 traffic are typically about 18.8 mph while Route 156 traffic circulates at about 22.4 mph near the Route 25 entries which is likely due to the high skew angle of the intersection which results in very little separation (less than 100 feet) between the Route 156 entry and the downstream Route 25 entry. Entry fastest path speeds are limited to

about 19-23 mph due to the raised lane dividers, although entry speeds are typically lower during daytime operations with entry speeds being about 17 mph on average. The combination of low entry and low circulating speeds results in a minimal speed differential between entering and circulating traffic streams making it easier for traffic to identify and accept gaps.

Gap Acceptance

A gap acceptance analysis was performed for the intersection using recorded video data to estimate the critical gap for traffic entering the roundabout. This analysis focused on collecting data on gaps which is useful for calibrating microsimulation models such as VISSIM since microsimulation tools are more practical at this time for modelling Turbo Roundabouts due to limited data for Turbo Roundabouts in operation in the US. Additionally, the high proportion of trucks and large vehicles passing through the intersection makes it much more practical to model actual driver behavior based on gap, especially since the headway between an 80-footlong semi-truck and the next trailing vehicle may be 10 seconds but the gap between vehicles is only 3 seconds. This differs slightly from the HCM methodology by focusing on the gap or the time difference between the back of the leading vehicle and the front of the trailing vehicle in the same traffic stream as shown in Figure 2 (7, 8). This is also more reflective of actual driver behavior, as drivers typically make decisions based on the actual gap between vehicles rather than based on the headway. Note that microsimulation tools use car-following models to determine the follow-up headway and queuing behaviors (7, 8).

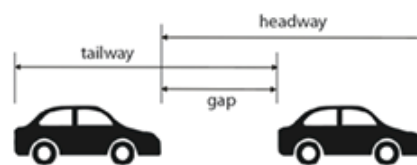


Figure 2. Headway vs. Gap Comparison

In general, drivers in the #2 and #3 lane tend to accept shorter gaps and it was observed on several occasions where a vehicle in the #1 lane will wait while a vehicle in the adjacent lanes will accept the gap and enter the roundabout. As shown in Table 1, the critical gap for traffic in the #1 lane is about 3.79 seconds while the critical gap for the #2 lane is about 3.61 seconds. There is a trend where lanes further to the right at an entry have shorter critical gaps where the critical gap reduces by about 0.2 seconds for each lane further to the right.

Table 1. Critical Gap by Entry Lane for Passenger Cars.

Cars Only	#1 Lane	#2 Lane	#3 Lane
Critical Gap (s)	3.79	3.61	3.41

Data was also collected for the behaviors of freight vehicles. Data for heavy vehicles using the #1 and #3 lane is very limited as trucks typically use the #2 lane, therefore, the data presented in Table 2 is only for traffic in the #2 lane. Drivers of cars towing trailers tended to have a gap acceptance behavior similar to that of single-unit trucks, with both needing gaps of about 3.8 seconds. The drivers of semi-trucks tended to need longer gaps with a critical gap of 4.7 seconds. However, in a manner of speaking the drivers of semi-trucks tend to “force” a gap in the circulating traffic stream by causing circulating traffic to slow or stop while the rear portion of the semitruck clears the entry of the roundabout. Essentially, drivers of semi-trucks would accept gaps that are long enough for circulating traffic to see and react to the truck, but not necessarily long enough for the truck to fully clear the entry. This behavior appears to allow traffic to keep flowing through the roundabout but does occasionally result in circulating traffic stopping very briefly to wait for a truck to clear before moving again.

Table 2. Critical Gaps for Heavy Vehicles by Type for the #2 (middle) Entry Lane

Vehicle Type	Critical Gap (s)
Car Towing a Trailer	3.78
Single-Unit Truck	3.86
Semi-Truck	4.70

Observations from the Field

California’s first Turbo Roundabout has been in operation for a little over a year at time of writing making it possible to provide some anecdotal observations on the operation of the roundabout. While it is possible to draw some conclusions about the roundabout’s effectiveness in operation, it is still too early to adequately draw conclusions about the safety performance of this roundabout design in comparison to other roundabouts as data is still limited and some drivers are likely still learning how to drive through the roundabout with some encountering the roundabout for the first time. Typical practice for safety evaluations is to wait until at least 3 years of collision data is available. This allows the safety analysis to draw more realistic conclusions about typical operations and avoid having the driver learning period in the first few months after opening skew the results.

Driver Behavior

A public information campaign was conducted when the roundabout opened including outreach via local news outlets and providing a tutorial video on how to navigate through the roundabout, nonetheless, it is useful to see how well drivers can understand and navigate through the roundabout in practice. In general, drivers observe the lane-change restriction and do not cross over the raised lane dividers when present. However, drivers will occasionally change lanes in front of the entries to the roundabout where it is not possible to have a raised lane divider. This is most likely due to the lane striping in front of the entries as the striping used there closely resembles the permis-

sible lane change striping commonly seen on multilane streets and highways. While drivers do occasionally make lane changes where there are short gaps in the raised lane dividers, this does not appear to lead to any crashes and drivers appear to watch out for traffic in adjacent lanes. This is very different from more traditional multi-lane roundabout designs where drivers frequently encroach on adjacent lanes leading to lane-change crashes. For comparison, a more traditional multilane roundabout nearby at the junction of Routes 1 and 68 sees such a high frequency of errant lane changes and crashes in the circulatory roadway during peak hours that traffic rarely uses the left lane even to avoid waiting in a queue. Drivers at the Rotor Turbo are willing to make use of both through lanes at the roundabout with traffic distribution between lanes being close to even during peak hours helping to maximize throughput and minimize delay.

Radial Entries

The Rotor Turbo does deviate slightly from Dutch design practice and introduces a small amount of deflection at the entries (see Figure 4). Anecdotal evidence seems to indicate no concerns with the Dutch-style right-angle entry configuration for the entries to the roundabout, although it is still too soon to draw clear conclusions on the efficacy of this design approach. Radial entry design is different from traditional modern roundabout design practice where entry deflection is strongly preferred, although some re-

searchers have indicated that reducing the phi angle and “squaring up” the entries at roundabouts can improve compliance and yielding behavior (9, 10). Having the entry lane enter the roundabout at a right-angle to the circulating lane significantly shortens the crossing distance for the entry meaning that entering traffic requires less time to clear the circulatory roadway. The raised lane dividers limit circulating speeds to about 20 mph on average resulting in a very low speed differential between entering and circulating traffic thereby making it easier to observe and accept gaps. The current evidence in the field seems to agree with the findings of researchers from the Netherlands (3).

Signs and Pavement Markings

A major consideration for Turbo roundabouts is signage and pavement markings as they help drivers quickly assess how they need to negotiate the roundabout. The inclusion of raised lane dividers makes it essential for drivers to choose the appropriate lane when approaching the intersection. Therefore, overhead guide signs were added on



Figure 3. Configuration of Overhead Signs Installed at the Rotor Turbo.

each approach to the roundabout with additional route shield pavement markings installed at key decision points within the roundabout to assist drivers in selecting the correct lane for their desired path of travel as shown in Figures 3 and 4 (1, 3).

Because the overhead sign structures were placed upstream of the start of the #3 lane on every approach, the designers decided to only provide signage for the #1 and #2 lanes as can be seen in Figure 3. This design decision appears to

contribute to driver confusion as some drivers occasionally enter the right-turn only #3 lane when they intended to proceed straight and therefore have to change lanes to the #2 lane. Evidence in the field indicates that it is much more



Figure 4. Overhead view of the pavement markings at the roundabout.

important to include signage about all lanes at the entry on the overhead sign structure to minimize driver confusion.

Pavement markings are a blend of Dutch and MUTCD pavement markings, including some of the optional pavement markings from the MUTCD while also omitting some mandatory MUTCD markings for multi-lane roundabouts. For example, the Rotor Turbo only provides the “shark teeth” yield line markings on the entry but not the circulating edge line extension. Observations in the field seem to indicate that drivers at the Rotor Turbo do not understand that the “shark teeth” denote the point where drivers are supposed to wait when yielding to circulating traffic. Instead, drivers frequently encroach on the circulatory roadway when yielding to traffic with some drivers appearing to mistake the lane line extensions within the circulatory roadway for the point of yielding. The installation of a circulating edge line combined with the “YIELD” word pavement marking would most likely be more effective at communicat-

ing to drivers where they should wait when yielding to traffic.

The dashed white pavement markings installed at the entries to denote the lane line extensions between the ends of the raised lane dividers are much closer in appearance to the permissible lane change striping typical of multi-lane roadways in California instead of lane line extensions in an intersection (Figure 4). This appears to contribute to driver confusion with some drivers mistaking the markings for lane change zones

while others occasionally confuse the lane line extensions for yield/limit lines. This sometimes results in drivers in both the circulatory roadway and the entry lanes occasionally stopping at the dashed lane line extensions to yield to traffic.

The roundabout also does not provide the lane use arrow pavement markings within the circulatory roadway, which does not help unfamiliar drivers discern which direction of travel is intended within the circulatory roadway. There have been a few instances, especially at opening, where confused left-turning drivers would make their left turn at the entry to the roundabout and proceed to go the wrong way in the circulatory roadway. The inclusion of directional arrows within the circulatory roadway most likely would reduce or prevent the occurrence of these errant maneuvers. Updating the roundabout signage based on MUTCD 11th edition guidance and switching out the R6-4b chevron arrow signs for R6-1 “ONE WAY” signs most likely would further reduce driver confu-

sion (12). It should be noted that errant left-turn maneuvers have also been observed by the author at modern roundabouts despite the significant deflection at the entry to modern roundabouts sometimes resulting in head-on crashes indicating that increasing deflection at entry would not address this issue.

Conclusion

The Turbo Roundabout design promises the potential for significant advantages over more traditional multi-lane roundabout designs. Preliminary analysis of California’s first Turbo Roundabout in operation indicates that the design can operate effectively even under very heavy traffic loads with over 50,000 ADT and 3,600 vph during the peak hour. The raised lane dividers and spiral lane configuration of Rotor Turbo is effective at reducing vehicle speeds throughout the intersection and improving lane keeping—reducing the occurrence of errant maneuvers within the circulatory roadway. The raised lane dividers also appear to encourage drivers to make use of all available lanes due to the good lane keeping behavior which helps to increase the capacity of the Rotor Turbo roundabout relative to a more traditional multi-lane roundabout. Being the first to build a Rotor Turbo in California came with numerous design details to resolve and based on field observations there is potentially room for some improvements to the signage and markings at the roundabout, nonetheless, the data shows that the roundabout is meeting its intended goals of improving operations and safety.

Committee Updates

District Local Arrangements Committee (LAC)

By Cathy Leong, PE, Committee Chair

The District LAC Committee continues to assist the local LACs for upcoming annual meetings with advance meeting planning. Planning continues for the 2026 Annual Meeting in Bellevue, WA from June 28 - July 1, 2026 with the Call for Abstracts expected to go out this month. In addition, the District continues to coordinate with the Mountain District on our joint meeting in Reno, NV in 2027. Finally, we are happy to announce that the 2028 Annual Meeting will be held at the Hyatt Regency San Francisco and the 2029 Annual Meeting will be held at the Hilton San Diego Bayfront. The dates of those meetings have been posted on the [District's website](#).

Student Funding & Initiatives Committee (SFIC)

By William Andrews, Committee Chair

The Student Funding and Initiatives Committee (SFIC) wrapped up another successful Western District Annual Meeting, welcoming over 70 student attendees from across the District. The SFIC hosted two new workshops designed to help student leaders reflect on lessons learned over the past year and plan for even greater success next year. The Student Chapter Award was presented to UCLA. Cal Poly SLO represented the District at the International Meeting and won the International Student Chapter Award. UC Berkeley hosted a brand-new conference, the Interdistrict Transportation Competition, which had over 150 students from 12 schools attending from both the Western and Mountain Districts and won the Student Chapter Momentum Award. Last but not least, the University of Washington won this year's Traffic Bowl and represented the District in the International Traffic Bowl.

Each year the SFIC awards over \$15,000 to send students the Annual Meeting, foster new student chapters, and create deeper connections between student chapters. These initiatives are made possible through the generosity of donors to the Student Endowment Fund. To learn more about the Endowment Fund or to make a donation, please visit <https://westernite.org/student-endowment-fund/>.

Section and Chapter

Updates *Alaska Section*

by Colin Singleton, Section Representative

The Alaska Section enjoyed several opportunities to connect this summer and fall. In June, section president, Colin Singleton, enjoyed seeing ITE Western District board members in person and making new friends at the Western District Conference in Long Beach. In July, our section's event committee brought back our Annual Summer BBQ featuring great food, corn hole, and sharing tips on the Alaskan summer tradition of dipnetting. In September, we were happy to have Western District President, Pat Marnell, share some words our monthly section luncheon and then join us for happy hour that evening at a local brewery.



Hawaii Section

by Keoni Wasano, Secretary-Treasurer

The Hawaii Section was well represented at the ITE Western District Annual Meeting in Long Beach, CA. Members made the most of their visit by exploring local attractions, from taco trucks and Disneyland to a Dodgers game, while also celebrating both a Section Award and a Momentum Award.

In August, we hosted our annual Technical Solutions event, "PedPalooza – LPIs and Exclusive Pedestrian Phases". This hybrid session featured a presentation on leading pedestrian intervals and exclusive pedestrian phasing, followed by a hands-on training on Accessible Pedestrian Signals. We also shared an instructional video after the event, demonstrating how to implement these solutions in ATC traffic signal controllers. The event was a great opportunity to collabo-



rate with public agency leaders from Portland and Phoenix, alongside industry representatives from Polara and Econo-lite.

Our September meeting highlighted a City and County of Honolulu Complete Streets project focused on installing high-visibility transit-priority lanes. Project managers discussed the King Street and Kūhio Avenue bus lane projects, including key design considerations, operational strategies, and observed impacts.

In support of the University of Hawaii Student Section, several professionals volunteered at a Resume Workshop. Students from sophomore through graduate levels refined their resumes and received valuable interview preparation.

We wrapped up 2025 with an in-person Annual Meeting and Social at the Outrigger Canoe Club, featuring special guest Kimberly Leung, ITE Western District International Director. It was a wonderful opportunity to reconnect with students and colleagues and to celebrate another successful year together.

The 2025 Section Officers are Michelle Lindsey (President), Joel Thomas (Vice-President), Joshua Ramelb (Secretary-Treasurer), and Keoni Wasano (Past President).

San Diego Section

By Jonathan Sanchez, Section Representative

ITE Western District Annual Meeting (June 29 – July 2, 2025):

Members of the ITE San Diego Section attended the ITE Western District Annual Meeting held in Long Beach, California, where the Section was well-represented by professionals and students. The conference featured multiple technical sessions, student competitions, and networking events, providing valuable opportunities for member engagement, professional development, and regional coordination among Southern California chapters.

Summer Social Picnic and Cornhole Tournament (August 9, 2025):

The ITE SD Section hosted its annual summer social and cornhole tournament at Liberty Station in San Diego. The event attracted more than 70 professionals, students, and sponsors, providing an excellent networking opportunity for members across public and private sectors.

Virtual Luncheon (August 28, 2025):

ITE San Diego hosted a free virtual luncheon featuring David Zelenok, who presented “Transportation & Utility Fragility: 34 Lessons and Real Resiliency.” Drawing on his extensive experience in public works and emergency operations, David

shared key takeaways and actionable insights for enhancing infrastructure resilience in the face of natural disasters and large-scale emergencies. The session was highly attended and well-received, offering members valuable professional development focused on resiliency and emergency response within transportation systems.

Annual Golf Tournament (September 12, 2025):

Held at Twin Oaks Golf Course in San Marcos, the annual tournament drew over 100 participants. The event served as one of the Section’s largest fundraisers of the year, supporting student scholarships and future section programming.

Monthly Luncheon (September 18, 2025):

The September luncheon was held at the City of El Cajon and focused on Complete Streets Implementation in Southern California, featuring Matt Capuzzi, from Capuzzi Consulting Group who discussed best practices, lessons learned, and design challenges in implementing multimodal corridors.

San Francisco Bay Section

By Charmine Solla, Section Representative

The San Francisco Bay Area (SF Bay) Section would like to congratulate fellow Section members Kimberly Leung for her election as International Director and Tony Henderson on his election as Western District Secretary.

The SF Bay Section kicked off the summer with the 2nd Annual San Francisco Bike Ride, a joint event with organizations Young Professionals in Transportation (YPT), ITS CA, and the Conference of Minority Transportation Officials (COMTO). Participants biked from the Mission District and ended in Golden Gate Park.

In August, the Section held a Technical Session on the Bay Area Rapid Transit (BART) Approach to Public Outreach presented by Alicia Trost, Chief Communications Officer at BART.



She discussed public-facing campaigns she has spearheaded at the agency, such as the paper ticket fashion show, anime mascots, special Valentine's Day and Star Wars Day excursion trains, and others.

In September, members participated in the End of Summer SF Bay Area ITE BBQ and Happy Hour sponsored by Sandis. The Happy Hour was held in Oakland and included food, drinks, and great times.

The SF Bay Section held a technical session, in Walnut Creek, on AB 130 & SB 131: Housing, Land Use, and the Environment presented by ESA Senior Principal Planner, Darcy Kremin and Fehr & Peers Principal, Matt Goynes. During this lively session, Darcy and Matt unpacked what has changed, what is still unclear, and how these shifts may impact projects and left us with practical strategies for staying informed and adapting to the evolving regulatory environment.

SF Bay Area ITE is excited to have re-launched our Annual Awards Program. The Annual Awards Program honors organizations and individuals that had demonstrated innovative concepts, persevered through complex transportation projects or programs, or contributed to improving transportation safety and efficiency.

Recipients chosen at the Section level will be automatically nominated for the 2026 awards at the Western District level. Nomination deadline is November 14, 2025.

The Section is still looking for sponsors for the ITE SF Bay Area Awards Ceremony in December, where we celebrate the year's achievements and awardees.

Washington Section

By LisaRene Schilperoort, Section Representative

Before taking a short summer break, the Washington Section wrapped up June with our annual ITE Golf Tournament. Since resuming activities in September, we've hosted a kick-off meeting featuring a presentation from Seattle DOT and a technical session on the Safety Action Plan in Everett, Washington. Up next are our Safety Conference and Student Career Prep Night. We look forward to connecting with everyone in the coming months!

Our current officers are:

- President – Lawrence Guan
- Vice President – Pratik Srivastava
- Secretary/Treasurer – Brian Kellogg
- Immediate Past President – LisaRene Schilperoort

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