

## Colorado High-Performance Transportation Enterprise FY 2018-19 Year End Report

Updated as of December 31, 2019

### Express Lane Corridors: Ongoing Management and Implementation

SCOPE OF WORK DESCRIPTION	FINAL TASKS COMPLETED
<p>CDOT has tasked HPTE with providing congestion management strategies in critical corridors in the Denver metro area. HPTE will accomplish congestion management for CDOT through the implementation and ongoing management of Managed Lane corridors, which for the purposes of this Scope of Work (SOW) are defined as sections of the interstate and state highway system that have both tolled Express Lanes and General Purpose (GP) lanes operating side by side. HPTE’s congestion management strategies for CDOT are:</p> <ul style="list-style-type: none"> <li>● Providing ongoing toll rate adjustment sensitivity analysis and recommendations in order to provide a more reliable travel time across all lanes in the corridor, general purpose and express lanes. Corridors in operation that will be actively monitored by HPTE to ensure that optimal congestion management is being achieved include: I-25 North U.S.36 to 120th and the I-70 Eastbound Mountain Express Lane.</li> <li>● For Express Lanes Corridors opening in the Fiscal Year 2020 (including C470: I-25 to Wadsworth and I-25 North 120th to E-470/Northwest Parkway (Segment III), HPTE’s Tolling Services Specialist will work with external tolling operations experts and financial advisors to develop a toll rate setting strategy that achieves the goal of providing a reliable travel time across all lanes on the corridor, ensuring that congestion management is being achieved. Analysis and recommendations will be provided to CDOT and the HPTE Board in order to set toll rates to achieve reliable travel time and congestion management.</li> <li>● Leading the development of Standard Operating Procedures (SOPs) and Traffic Incident Management Plans (TIMs) for</li> </ul>	<p>HPTE staff continued to oversee the installation and testing of the tolling equipment on the C-470 Project in anticipation of Tolling “Go Live”. Work commenced on the related software updates to the CTMS software used by the Traffic Operations Center staff. HPTE Staff attended Requirements Meetings to design new reports that will be used to monitor the C-470 Express Lanes operations. All of these efforts are still ongoing.</p> <p>HPTE completed the Proposal Review phase of an industry-first joint procurement with the E-470 Public Highway Authority that allowed HPTE to join onto E-470’s Request for Proposal (RFP) for a Next Generation Roadside Toll Collection System. The final RFP was published in June 2019 and three Proposals were received in September 2019. HPTE staff reviewed each Proposal and performed reference checks by phone as well as performing site visits to several of the reference projects listed in the Proposals. HPTE Staff traveled to Atlanta, GA to visit the State Road and Tollway Authority (SRTA) and to Chicago, IL to visit the Illinois Tollway Authority in November, 2019. HPTE staff published their preferred vendor rankings in December, 2019 and has begun contract negotiations with the vendor that staff ranked number one. The contract negotiations are still ongoing and HPTE hopes to have the new vendor under contract by the end of 2020.</p> <p>HPTE provided ongoing subject matter expertise to CDOT through its Major Projects Manager and Tolling Operations Manager at CDOT project meetings to ensure that tolling elements were incorporated as part of the design for the following CDOT Express Lane projects:</p> <ul style="list-style-type: none"> <li>● I-25 Segment 3</li> <li>● C-470</li> <li>● WB PPSL</li> <li>● I-25 South (Gap)</li> <li>● I-25 Segments 7 &amp; 8</li> <li>● I-25 North Segments 5 &amp; 6</li> </ul> <p>Areas of work included: development of SOPs, TIMs, GO Live plans, Concept of Operations including General Purpose Lanes, Strategies for Operations and Maintenance Strategies for all ITS equipment on joint CDOT-HPTE projects.</p>

all Managed Lane corridors prior to tolling commencement. SOPs describes all activities and steps that will need to be followed by Department staff in order to ensure efficient transit operations compliance with all Federal requirements for safety and successful tolling operations. TIMs establishes the processes to detect, respond to and clear all traffic incidents with the goal of restoring traffic flow throughout the corridor. By HPTE establishing SOPs and TIMs, this will assist CDOT with congestion and traffic management for corridors that have GP and Express Lanes. An example of an incident that will be included in a TIM, is how an accident in the general purpose lane would require traffic be diverted into the tolled Express Lanes in order to restore traffic flow in the corridor and ensure safety of incident response teams.

- Exploring options for delivering general maintenance and snow and ice control services on the C-470 I-25 to Wadsworth corridor. With additional lane miles being added to C-470, CDOT has identified that it does not have the resources to maintain the additional lane miles. CDOT’s Division of Highway Maintenance (DHM) has requested that HPTE to solicit the private market for ideas, explore the feasibility of options for general maintenance and snow and ice removal, and implement a solution.

These activities will require close and ongoing coordination with the Federal Highway Administration (FHWA), E470 Public Highway Authority, and CDOT regional staff including traffic safety, incident management and maintenance. To accomplish these tasks, HPTE will provide in-house expertise to CDOT through its Tolling Services Specialist and Major Projects Manager as well outside industry expertise for operation related issues as needed.

In July and August, 2019, HPTE staff worked with CDOT Human Resources to convert the PDQ for HPTE's vacant Program Management III, Major Projects position into a PDQ for a new Program Management II, HPTE Tolling Operations Supervisor position. This new position was posted within CDOT in August, 2019 with potential candidate interviews and the successful candidate selected in September, 2019. The new HPTE Tolling Operations Supervisor is located in the Golden Traffic Operations Center campus and is a liaison between HPTE and CDOT Traffic Operators and RTS and ITS staff assigned to the I-70 Mountain Express Lane (MEXL) and I-25 North Segment 2 Express Lanes.

In September 2019, in collaboration with the Division of Highway Maintenance and CDOT Region 1, HPTE released a Letter of Interest for routine and life cycle maintenance on the C-470 Express Lane corridor. This is a pilot program to explore the use of third party maintenance contracts for maintaining expanded Express Lane highways where a higher level of service (LOS) is required. Five companies expressed interest in the potential contract. HPTE plans to release a Request for Qualifications in the spring of 2020 and a Request for Proposals that includes performance based maintenance standards in the Summer of 2020.

HPTE Staff is working with CDOT Region 1 to finalize the MEXL Annual Report for 2017/2018 and 2018/2019 Operating Years for FHWA using the new guidelines. These new guidelines require CDOT Region one to provide an annual safety analysis of the MEXL corridor to be included in the MEXL Annual Reports. This safety analysis consists of feedback from emergency responders on the safety and operations of the facility during the operating year being reported on. The new FHWA guidelines also require CDOT to certify the MEXL Annual Report in addition to HPTE certifying the report.

The United States Department of Transportation issued memorandum HOTM-1 for the Expiration of Exemption for Low Emission and Energy-Efficient Vehicles (LEEEVS) in High Occupancy Vehicle Lanes (Hybrid Exemption Program) on August 26, 2019. This exemption expired September 31, 2019. HPTE staff worked with FHWA, CDOT and E-470 staff to implement the "graceful expiration" program with May 31, 2020 as the exemption expiration date. The plan consists of public outreach emails to participants in the Hybrid Exemption Program as well as to those on the program's waiting list. The CDOT website for the Hybrid Exemption Program was also used to communicate to the public.

**Public-Private Partnerships**

SCOPE OF WORK DESCRIPTION	FINAL TASKS COMPLETED
<p>As P3 authority and contracting entity within the Department, HPTE will continue to oversee and manage the concession agreements for U.S.36 and the Central 70 Project on behalf of CDOT. Key tasks assigned to HPTE from CDOT for U.S.36 will include:</p> <ul style="list-style-type: none"> <li>● Working with Region 1 maintenance staff and the CDOT budget team to develop the annual budget request for routine maintenance and snow and ice removal costs for the CDOT owned GP lanes on corridor by September 13, 2019 as required by the U.S.36 CDOT/HPTE Intra-Agency Agreement (IAA).</li> <li>● Providing in house expertise through its Major Projects Manager who will work closely with Plenary Roads Denver (PRD) and CDOT Region 1 to develop a strategic plan for complying with CDOT’s early works requirements under the concession agreement. These requirements are the responsibility of CDOT to ensure that its assets were of a certain condition when leased to Plenary Roads Denver.</li> <li>● Supporting CDOT with any operational, service, or contractual issues or questions that arise in or relate to the General Purpose lanes on the corridor.</li> </ul> <p>Key tasks assigned to HPTE from CDOT on the Central 70 Project will include:</p> <ul style="list-style-type: none"> <li>● Providing transportation demand management (TDM) services for residents, businesses, and commuters to reduce travel and relieve congestion along the corridor during construction.</li> <li>● Providing in-house expertise to the CDOT Central 70 Project Manager through its Tolling Services Specialist and Major Projects Manager as well outside industry expertise for contractual questions related to</li> </ul>	<p>HPTE staff worked closely with Region 1 and the Division of Operations and Maintenance to develop the FY21 Routine Maintenance and Snow and Ice Removal costs budget. As a result of this work, the cost was budgeted in the final CDOT FY21 annual budget.</p> <p>HPTE continues as the subject matter expert on the CDOT Initial Works Requirements outlined in the concession agreement, working with CDOT Region 1, Plenary Roads Denver and CDOT Management to develop a plan and strategy for CDOT to comply with its obligations. A change order request was approved for Plenary to deliver the work and funding was put in place for the work by May 2019.</p> <p>Plenary’s Contractor, Millstone-Weber, performed approximately 1,500 feet of high priority portland cement concrete pavement (PCCP) repairs on westbound US 36 from Pecos St. to Federal Blvd. This included traffic control, sawing and removal of damaged concrete, subgrade compaction and pouring and finishing new PCCP. Due to constrained working hours, operations were completed on a nightly basis using an approved high-early concrete mix.</p> <p>HPTE has also worked with Plenary and CDOT Staff Bridge to complete Initial Works recommendations for the 20th St. viaduct and final plans for remaining Initial Works PCCP repairs on the US 36 corridor.</p> <p>HPTE continued to hold monthly Operations Coordination meetings with CDOT, Plenary, local stakeholders and engineering support consultants to discuss any operations and maintenance issues that need to be addressed on the project. On an ongoing basis, HPTE works closely with engineering support consultants LS Gallegos and HDR to ensure that all general maintenance and snow and ice removal performance criteria are met per the Concession Agreement.</p> <p>HPTE has worked closely with the Central 70 Project Team and CDOT Maintenance to evaluate Jorgenson’s (the Kiewit Meridian Partners O&amp;M Subcontractor) Snow and Ice Removal Plan and to coordinate resource logistics before major forecasted storms. HPTE has had a presence in Central 70 O&amp;M Task force meetings during design and into construction and has worked with the project team to ensure compliance with the Project Agreement. HPTE also continues to work closely with the Northeast Transportation Connections on their Transportation Demand</p>

<p>construction and other issues as needed.</p> <ul style="list-style-type: none"> <li>To comply with the training requirement from the U.S.36 Legislative Audit and to promote CDOT and HPTE projects to the infrastructure industry. HPTE will travel to conferences, trainings, and project related meetings. Please see Exhibit A for a full list of out of state travel that HPTE is proposing starting on July 1, 2019.</li> </ul>	<p>Management (TDM) contract on the Central 70 Project. Progress reports on the TDM being done have been provided regularly to HPTE staff and the HPTE Board of Directors.</p>
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**Innovative Finance and Project Development**

SCOPE OF WORK DESCRIPTION	FINAL TASKS COMPLETED
<p>On Managed Lane corridor projects where HPTE has or will secure financing to accelerate project delivery; CDOT has tasked HPTE to serve as its financial manager for projects where HPTE debt has been issued. Key tasks assigned to HPTE include:</p> <ul style="list-style-type: none"> <li>On behalf of CDOT, HPTE will also continue to address findings from the U.S.36 Legislative Audit for better document control on large projects by providing specialized document management services through Aconex.</li> <li>HPTE will oversee the cash flows for the C-470 project, including processing the remaining disbursements for the TIFIA Loan which will continue throughout most of the 2019-20 fiscal year. The process for disbursement includes collecting all necessary documentation from CDOT Project staff and providing it to the FHWA Division Office. By securing financing on behalf of the Department, HPTE has provided a direct benefit to CDOT by accelerating the completion and delivery of the C-470 Project. In exchange for accelerating project delivery, CDOT is compensating HPTE for ensuring proper oversight of the funds and complying with all ongoing reporting requirements to lenders and bondholders.</li> </ul>	<p>On behalf of CDOT, HPTE successfully renegotiated a licensing contract with Oracle for their project documentation software called Aconex. HPTE has provided Aconex for use on US 36, Central 70, C-470 and I-25 North. The database houses all project related documents, tracks correspondence between the project owner and contractors, and notifies project team members about outstanding deadlines. In August, two weeks before construction began, the I-25 South Gap project approached HPTE about using Aconex. HPTE was able to quickly negotiate a contract amendment with Oracle and provided the I-25 South Gap with an Aconex template in time for the start of construction.</p> <p>Over the past twelve months HPTE has continued to monitor projects under construction that have an element of HPTE financing attached to them. The HPTE Major Projects Manager and the HPTE Head of Innovative Project Delivery regularly attended construction progress meetings on the C470, the I-25 South Gap Project, and the I-25 North Segment 3 Project.</p> <p>On the C470 Project, HPTE worked closely with the Project team, Executive Management, the Attorney General’s Office, and outside counsel to assist to closely monitor the construction schedule of the Project to help ensure the project is completed according to the terms set forth in the TIFIA Loan Agreement and Master Trust Indenture.</p> <p>On the I-25 North Segment 3 Project, HPTE worked with the CDOT Construction team and E-470 team to coordinate final civil construction activities needed to begin electronic tolling equipment installation; lane closures needed for tolling equipment installation and integration; and the public information and outreach program for the opening of the Express Lane for testing.</p>

- HPTE will oversee cash flows for the I-25 North 120th to E470/Northwest Parkway (Segment III) project. By securing financing on behalf of the Department, HPTE has provided a direct benefit to CDOT by accelerating the completion and delivery of the I-25 North Segment III project. In exchange for accelerating project delivery, CDOT is compensating HPTE for ensuring proper oversight of the funds and complying with all ongoing reporting requirements to lenders.
- CDOT has requested that project financing for a portion of the I-25 North Johnstown to Ft. Collins be secured in fiscal year 2019-20 to assist CDOT with meeting critical project timelines. At CDOT’s request, HPTE will engage with lenders to finance a portion of the I-25 North Johnstown to Ft. Collins project as well as manage the project cash flows once financial close has been reached.

On active construction projects with financing include C-470 and I-25 North Segment III, HPTE’s Major Projects Manager will continue to monitor construction progress to ensure schedules communicated to lenders remain accurate. Providing project expertise and advice is critical to CDOT as they have financial responsibilities under existing HPTE loan agreements and Intra-Agency Agreements between CDOT and HPTE to pay for any costs related to the delay in the opening of the corridor and/or toll commencement.

In order to reduce the risk that CDOT will have to incur these costs, HPTE will provide ongoing expertise and advice to CDOT in the following areas: material change orders (including changes to the project schedule), changes affecting lenders and project cash flow, changes that have the potential to affect debt repayment or are above 10 percent of the total cost of the project.

On all large, innovatively financed projects with the Department, CDOT has provided credit support to HPTE. Failure to complete required processes or reporting on innovative financing

HPTE continues to work with CDOT Region 1 and FHWA to process disbursement requests on the C470 TIFIA loan in order to provide reimbursement to CDOT.

HPTE also continues to oversee the development and submission of the required monthly construction report per the bond indenture as well as keep the C470 Rating Agencies (Fitch and DBRS) abreast of the construction progress on the C470 Project, and assisted them with their rating surveillance, which has remained at BBB, but with a negative outlook because of construction delays.

Over the course of the past six months, HPTE has held eight geographically diverse meetings with Chambers of Commerce to discuss how Express Lanes might be integrated on corridors across the state. We also continued to coordinate with agency partners, and public information officers to distribute information about the Express Lanes Master Plan.

HPTE also put together four telephone town halls across the state. The telephone town halls were conducted on July 9th and 10th, and reached more than 5,100 participants. Lastly, on November 13th HPTE held its final Express Lanes Master Plan Workshop, where we presented the initial finding of the study and sought input from stakeholders its results.

<p>projects could jeopardize the Department’s ability to complete future projects or future borrowings. CDOT has given responsibility to HPTE for completing any additional reporting and monitoring as required by existing loan agreements and Intra-Agency Agreements between CDOT and HPTE so the Department stays in compliance with all laws and contracts.</p>	
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**Project Development**

WORK DESCRIPTION	TASKS COMPLETED
<p>HPTE will continue to serve as a think-tank within the Department; exploring big picture ideas for innovative projects brought forth by CDOT. For FY 2019-20 HPTE will provide strategic advisory work in the following key areas per CDOT’s request:</p> <ul style="list-style-type: none"> <li>● Finalizing phase 1 of the CDOT park and ride study with the Division of Transit and Rail (DTR), the recommendations of which will help Bustang users better access parking when using the CDOT transit service. HPTE will also begin phase 2 of this project, which will help CDOT consider the concept of using park and rides as mobility hubs.</li> <li>● Partnering with CDOT, the City and County of Denver, Broncos Stadium District and West Colfax Business District to explore the redevelopment of the Federal and Colfax intersection. Specifically, CDOT has requested HPTE’s support in exploring how it could receive fair market value for the land and while transfer its asset ownership responsibility through a partnership with a private entity.</li> <li>● CDOT is currently drafting Statewide Managed Lanes Guidelines as a result of a Transportation Commission (TC) policy directive. As the tolling entity and Express Lanes experts within the Department, CDOT has tasked HPTE with drafting the Concept of Operations (ConOps) plan for all current and future</li> </ul>	<p>In September, HPTE finalized its parking study for the DTR, by recommending a preferred strategy of management for CDOT to consider. After legal review it was determined that HPTE could charge for parking on CDOT lots, but that we could not enforce penalties for parking violators. HPTE discussed the legislative roadblocks it is currently facing to implementing a pay for parking system with CDOT and suggested some alternative paths forward.</p> <p>On behalf of CDOT, HPTE continues to work with the City and County of Denver, the Broncos, and their consultants regarding the Federal and Colfax interchange. Over the past six months we have met with the Broncos twice to discuss how we could potentially partner, and with the city numerous times to discuss their needs and how they planned to spend their allocated funds on the project. HPTE staff also sat on a City of Denver RFP evaluation panel for a city contract to determine drainage and zoning on the interchange.</p> <p>HPTE recently issued a notice to proceed on the Express Lanes Concept of Operations. A kickoff meeting will be taking place early in 2020.</p>

<p>Managed Lane corridors which utilize tolled Express Lanes for congestion management. A ConOps plan will outline how a Managed Lane Corridor would be designed (e.g.: location and frequency ingress and egress points) to ensure that the tolled Express Lane and General Purpose lane function together so the corridor operates safely and that optimal congestion management can be achieved.</p> <p>HPTE will also continue to provide assistance to CDOT in other areas as needed. Key areas include: The RoadX program through its current IAA, assessing financial feasibility of rapid speed technologies and any other necessary corridor development work and/or general advising on P3 or innovative finance projects.</p>	
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**Public Outreach and Communications**

WORK DESCRIPTION	TASKS COMPLETED
<p>On both U.S.36 and Central 70, HPTE will coordinate with CDOT Region 1 staff and CDOT’s Communications Office on all stakeholder outreach efforts. To ensure comprehensive public outreach and education for corridors with Express Lanes and general purpose lanes, Public-Private Partnerships (P3) projects including U.S.36 and Central 70, and to comply with the U.S.36 Legislative Audit. CDOT tasks HPTE with the following key areas of work:</p> <ul style="list-style-type: none"> <li>● Conduct telephone town halls, public meetings and stakeholder outreach as required by the Transparency Policy</li> <li>● Conduct surveys to gauge public sentiment and attitude towards corridors with Managed Lanes, or future projects that may include Managed Lanes.</li> <li>● Maintain current and updated information on project websites regarding project status and public participation activities and events.</li> </ul>	<p>HPTE continued ongoing education efforts and outreach on Express Lanes to the public by attending and supporting project meetings and education campaigns.</p> <p>The HPTE communications team led outreach activities to inform the hybrid program participants (2,000 people) and hybrid owners on the waitlist to get into the program (more than 1700 people) about the Hybrid Exemption Program ending Sept. 30, 2019. HPTE worked closely with E-470, FHWA, Colorado Automobile Dealers Association (CADA) and partners to get the information out to program participants and auto dealerships that sell hybrid vehicles. Outreach activities included website updates, emails sent out to program participants, people on the waitlist and CADA, developing a list of potential FAQs, responding to questions about the program via phone and email.</p> <p>HPTE ran a VMS campaign with safety messages displayed on US 36, I-25 and I-70. The team worked closely with CDOT to coordinate the approach and timing of displaying the messages. HPTE created an infographic of the safety outreach to show the frequency and effectiveness of the safety outreach.</p>

<ul style="list-style-type: none"> <li>• High Occupancy Vehicle (HOV) and motorcycle policies fall under the purview of the CDOT TC. HPTE will coordinate with the CDOT Public Information Office on updating transponder and HOV policy, motorcycle transponder policy, and HOV carpooling technology, so that CDOT can accomplish its policy goals set by the TC.</li> <li>• Conduct ongoing public and legislative outreach for corridors with express lanes and general purpose lanes</li> <li>• Conduct training for internal staff and for local stakeholders</li> </ul>	<p>HPTE worked closely with CDOT and Powersports Dealers Association (PDAC) to get information out about motorcycle safety via a press release, variable message sign (VMS) messages and social media posts.</p> <p>HPTE redesigned and launched the new HPTE website. The new website is more user-friendly and makes it easier to organize and find information.</p> <p>HPTE continued the education campaign about Express Lanes benefits “When it matters most” and launched the “How to use Express Lanes” campaign. The I-70 Mountain benefits campaign was the second phase of the “When it matters most” overarching campaign. The first phase of the campaign ran in September and October 2018 and targeted the I-25 North and US 36 corridors. The second phase of the “When it matters most” campaign was specific to the I-70 Mountain corridor and encouraged drivers to try the Express Lane, as well as highlighted the specific benefits that it’s a choice and can be a reliable tool when you really need it. The campaign ran in February and March 2019, and included digital banner ads, social media, resort media, such as chairlift panels in Vail, Breckenridge, Copper Mountain, Keystone, as well as digital chairlift panel ads, digital ads at food halls, lodges and ticket booths at the Winter Park Resort. The outreach also included social media posts and information distributed through partners, such as Go I-70.</p> <p>The second phase of the campaign generated more than 27 million impressions.</p> <p>The “How to use” campaign focused on explaining the rules for using Express Lanes and keeping drivers safe with a humorous approach to headlines in order to grab attention paired with a tagline that educates in a simple way. The campaign focused on highlighting common violations, such as not entering and exiting at the designated locations, weaving in and out of the Express Lanes and speeding. The campaign ran in September and October of 2019 and included digital billboards, bus panels, online banners including Pandora, social media, as well as live traffic radio reads.</p> <p>Both campaigns generated more than 37 million impressions.</p>
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**Travel**

WORK DESCRIPTION	TASKS COMPLETED
<p>To comply with the training requirement from the US 36 Legislative Audit and to promote HPTE’s projects to the infrastructure finance industry, HPTE will travel to conferences, trainings, and project related meetings. The Out of State Travel (OOST) plan is approved annually as part of HPTE budget and any changes to OOST will be discussed with CDOT. Please see Exhibit A for a full list of out of state travel that HPTE is contemplating starting on July 1, 2018.</p>	<p>In the last six months the HPTE has attended the Infrastructure Law Forum, and the Associate for the Management and Operations of Transportation Infrastructure Assets (AMOTIA) annual meeting. At the AMOTIA meeting, we spoke about the upcoming C470 O&amp;M procurement, and received valuable insight from the industry.</p>

HPTE Staff Position	Hours per Week	Total Annual Hours	Percent Complete
<b>HPTE Director</b>	10	480	50
<b>Head of Innovative Project Delivery</b>	30	1,440	50
<b>Major Projects Manager</b>	25	1,200	50
<b>Tolling Operations Manager</b>	15	720	50
<b>Budget &amp; Special Projects Manager</b>	20	960	50
<b>Communications Specialist</b>	5	240	50
<b>Program Assistant</b>	10	480	50
<b>Administrative Assistant</b>	5	240	50
<b>Total</b>	<b>120</b>	<b>5,760</b>	