US 36 Toll Concession Project

Project Management Plan

Prepared by:
the Colorado High Performance Tolling Enterprise
in Consultation with:
the Colorado Department of Transportation,
the Regional Transportation District
and the Federal Highway Administration

November 29, 2013

[*page intentionally left blank*]

[*page intentionally left blank*]

1. INTRODUCTION

The US 36 Toll Concession Project was developed by the Colorado High Performance Transportation Enterprise (HPTE), the TIFIA sponsor, in partnership with the Colorado Department of Transportation (CDOT) and the Regional Transportation District (RTD). The HPTE is a government-owned business that operates as a division of CDOT. The Project is part of RTD's FasTracks Program, a multibillion dollar comprehensive transit expansion plan, in cooperation with Denver Regional Council of Governments (DRCOG); the Cities of Westminster, Boulder, and Louisville; Town of Superior; Boulder County and the City and County of Broomfield.

The US 36 Toll Concession Project will be combined with the US 36 Managed Lane/BRT Project (Phase 1), the construction of which will proceed and be concurrent with construction of the Concession project. Upon completion and acceptance of Phase 1, the Concessionaire will assume responsibilities for the maintenance and operation of infrastructure and tolling and for the TIFIA loan associated with the Phase 1 project.

HPTE is managing this Project under a Public Private Partnership delivery method.

The multimodal, toll-integrated Project includes the following elements:

- Widening of the US 36 mainline to accommodate a new buffer separated managed lane in each direction of US 36.
- Construction of 12 foot inside and outside shoulders.
- Replacement of the US 36 over Coal Creek structure.
- Widening of the westbound US 36 over South Boulder Creek bridge structure.
- Construction of retaining walls.
- Installation of Intelligent Transportation Systems.
- Construction of portions of Bikeway.
- Maintenance and Operation of US 36 Managed Lane/BRT Project by Concessionaire
- Maintenance and Operation of I-25 Managed Lanes by Concessionaire
- Construction of Diverging Diamond Interchange at McCaslin Blvd

A. STATUS OF PROJECT

Major milestones for the Project Contract are listed below. A more detailed schedule for Project milestones is provided in Section 7 of this PMP.

Completed

- Signed Record of Decision Documenting the Preferred Alternative for Improvements to the US 36 Corridor — December 24, 2009

Current and Future

- Notice to Proceed issued for Phase 1 Construction — July 20, 2012

- Issue Phase 2 Draft RFP for Industry Review July 10, 2012
- Issue Final Phase 2 RFP December 14, 2013
- Proposal Due Date March 1, 2013
- Select Preferred Proposer April 5, 2013
- Financial Close Deadline December 2013
- Open Phase I Project for Toll Collection January 2015
- Open Phase II Project for Toll Collection January 2016

B. FINANCIAL PLAN

HPTE has and maintains a Financial Plan for the Phase 1 Project. It was submitted prior to the first federal authorization for construction funds. The Plan is updated annually as required by section 1904(a) of SAFETEA-LU and the stipulations of the TIFIA loan. The Financial Plan:

- Provides the current estimate of the total cost of the Project and the remaining cost to complete the Project, identifies any significant cost changes since the previous Financial Plan, discusses reasons for and implications of the cost changes, and includes a summary table showing the history of Project Costs by major activity or category since the Base Case Financial Plan and the preceding Financial Plan.
- Provides the current schedule and implementation plan for completing the Project, including the Substantial Completion Date; identifies major milestones for each phase of the Project and compares current milestone dates with milestone dates in the Base Case Financial Plan and the preceding Financial Plan; and discusses reasons for changes in Project milestones.
- Provides current estimates of sources and uses of funds for the Project, identifies any significant funding changes since the preceding Financial Plan, discusses reasons for and implications of the funding changes, and includes a summary table showing the history of Project funding since the Base Case Financial Plan and the preceding Financial Plan.
- Provides an updated cash flow schedule showing annual cash needs versus available revenue and funding to meet those needs and identifies any potential revenue and funding shortfalls and addressing contingency measures that will or may be taken to address any shortfalls.
- Based on the updated cash flow schedule, provides projected debt service coverage ratios for any Senior Obligations and the TIFIA Loan through the Final Maturity Date.
- Provides cost containment strategies and risk mitigation plans that have been or may be implemented to address factors that are affecting or could affect the scheduled completion or financial viability of the Project.
- Provides the total value of approved changes in project design or scope, and provides a listing of each individual change valued at $2,500,000 or more, setting forth the rationale or need for the proposed change and describing the impact of such change on the Project.

- Contains, in form and substance satisfactory to the TIFIA Lender, a written narrative report on the progress of design, permitting, acquisition and construction of the Project since the Base Case Financial Plan and the preceding year's Financial Plan, describing in reasonable detail all significant activities concerning Project status including any material matters that may affect the future performance of the Borrower's obligations under this Agreement and the causes thereof.
- Complies in all respects with FHWA's Major Project Financial Plan requirements.

The Concessionaire's financing approach will include the assumption of the Phase 1 TIFIA Loan by the Concessionaire a new TIFIA Loan, Public Activity Bonds (PABs), and private equity.

The concessionaire will be responsible for the overall Project Financial Plan, including such things as debt and revenue projections. The concessionaire will prepare the Financial Plan and the annual update of the financial plan for Phase 2. Once the Phase 1 project is accepted, the concessionaire will be responsible for annual updates of a combined Phase 1 and Phase 2 financial plan.

HPTE will maintain the Supplemental Financial Plan, which includes such things state, local and federal aid sources of funding for the capital costs of the construction project.

C. Project Management Plan Purpose and Scope

This Project Management Plan (PMP) was prepared in accordance with the FHWA requirements for major projects. The PMP establishes roles, responsibilities, project management control processes, and project administration framework; and it documents how HPTE will implement and manage all elements of the Project, including the startup of the tolling operations along US 36. The PMP is a living document and will be adjusted and updated periodically.

With this PMP, HPTE defines communication channels among all stakeholders, formulates the general management methodology and organizational structure, and describes the controls required for implementation. The PMP addresses all elements of applicant staffing, organizational structure, project scope, financing, budget, schedule, document control, quality assurance and quality control, internal reporting, third-party agreements, stakeholder coordination, property acquisition, utility relocations, construction management, safety, and scope change review and analysis, final design, tolling system testing, and start-up to tolling system operation and maintenance.

HPTE prepared this PMP and is implementing and maintaining it. Additionally, the Request for Proposal (RFP) and the Contract Documents require the Concessionaire to develop various management plans to be submitted to HPTE for review and approval. These plans will define the processes and procedures that the Concessionaire will follow to assure the Concessionaire and Sub-Contractors perform in accordance with the Contract Documents and will be included in this Project Management Plan when approved or accepted by HPTE.

This PMP is a management tool that demonstrates that CDOT has evaluated management and administrative needs to successfully manage this Project.

D. US 36 Toll Concession Project Roles and Responsibilities

An Intergovernmental Agreement executed in August 2011 between CDOT, HPTE, and RTD outlines the roles and responsibilities for the implementation and operation of the managed lanes. The stakeholder groups that have a role in the design, construction, maintenance, financing, and operation of the proposed managed lane facility, along with responsibilities relating to ITS and tolling, are the following:

- **HPTE:** HPTE has the responsibility for managing the US 36 Toll Concession Project and assuring the Concessionaire abides by all the terms of the Contract. HPTE will offer the revenues from the US 36 managed lane and I-25 reversible managed lane section as the source of funds for the basis of the public private partnership in addition to the capital payments. HPTE will partner with CDOT engineering and construction staff to execute the construction project.
- **CDOT ITS:** The CDOT ITS branch will operate and maintain the existing and proposed ITS infrastructure along US 36. This includes many of the ITS elements, but will not include the tolling equipment.
- **CDOT Headquarters:** The Division of Transportation Development (DTD) and CDOT Staff Traffic and Safety are located at CDOT Headquarters. The DTD will maintain the existing permanent traffic counters. CDOT Staff Traffic and Safety, who oversees all safety programs throughout the State, will evaluate safety performance in the corridor.
- **CDOT Region 1:** HPTE accepted the Concessionaire's bid with CDOTs agreement to maintain the general purpose lanes. CDOT will provide oversight of the maintenance on the general purpose lanes. Region 1will also oversee the design and construction of the Project.
- **Regional Transportation District (RTD):** RTD is providing funding for the Project and will have specific requirements related to the use of the facility by public transit vehicles. In addition, RTD is jointly managing the project with CDOT.
- **E-470:** Through an agreement with HPTE, the E-470 Public Highway Authority currently provides back-office support to HPTE for the I-25 Express Lanes. They will have a similar role for the managed lane along US 36. In addition, they will provide and install the toll collection equipment for the managed lanes.
- **Northwest Parkway:** No direct connection between the US 36 managed lane and Northwest Parkway is proposed. As a result, the role of the Northwest Parkway will be limited.
- **Denver Regional Council of Governments (DRCOG):** DRCOG is providing a portion of the funding for the project and will be involved as the Metropolitan Planning Organization (MPO) for the project.
- **Mayors and Commissioners Coalition:** The Mayors and Commissioners Coalition include representatives from the Cities of Westminster, Broomfield, Louisville and Boulder along with the Town of Superior and Boulder County. These communities will be directly impacted by the managed lanes and their feedback and concerns will be incorporated into the concept of operations, design, and final construction.

- **36 Commuting Solutions:** This non-profit public/private partnership organization has a goal to enhance mobility along the US 36 corridor for today and the future. As a result, their input will be considered related to the concept of operations.
- **Federal Highway Administration (FHWA):** Since US 36 is part of the United States Highway System, FHWA will have input into the final design of the facility. In addition, FHWA, through the TIFIA Joint Program Office, is administering the Transportation Infrastructure Finance and Innovation Act (TIFIA) loan that is providing a significant portion of the funding for the Phase 1 project and my contribute to funding for the Concession Project.
- **Law Enforcement Agencies:** The Westminster and Broomfield Police Departments as well as the Colorado State Patrol (CSP) will have a critical role of providing enforcement along the facility to ensure safe operations and compliance with HOV occupancy requirements. The Concessionaire will enter into appropriate agreements to provide HOV and toll evasion enforcement for the managed lanes.

[page intentionally left blank]

2. PROJECT DESCRIPTION AND SCOPE OF WORK

A. PROJECT BACKGROUND AND HISTORY

1) PROJECT NEED

US 36 is a congested and rapidly growing corridor carrying between 80,000 and 100,000 daily vehicle trips. US 36 currently operates at close to 90 percent volume to capacity. Nearly 19 percent of the region's households and 23 percent of employment are located along the US 36 Corridor. Corridor employment is expected to increase by 47 percent, adding approximately 137,000 new jobs between 2010 and 2035. The corridor has the highest transit ridership in the Denver metropolitan region, with 15,000 patrons per weekday. US 36 commuters currently experience three to four hours of severe bi-directional congestion daily. The area US 36 traverses is economically diverse, with a high concentration of businesses in the renewable energy, high tech, aerospace, and biotech industries, playing an important role in the emerging national economy. Current and projected travel patterns, level of roadway congestion, and growth in population and employment indicate the need for substantial transportation improvements along US 36.

2) US 36 ENVIRONMENTAL IMPACT STATEMENT (EIS)

The US 36 Final Environmental Impact Statement (FEIS), completed in October 2009, identified a $1.3 billion Preferred Alternative, featuring a number of sustainable transportation solutions in its Ultimate Configuration:

- A new buffer-separated managed lane in each direction of US 36, providing transit, High Occupancy Vehicles (HOVs) and paying Single Occupant Vehicles (SOVs) with travel time savings of up to 25 minutes each way.
- Repair or replacement of 14 bridges, 5 of which are considered poor, and 12 miles of poor roadway surface.
- Implementation of a Bus Rapid Transit (BRT) system connecting to the regional transit and intercity rail system through Denver Union Station, the metropolitan transit hub and a TIFIA-funded project.
- Installation of Intelligent Transportation Systems (ITS) for tolling, transit information and incident management.
- Auxiliary lanes between interchanges to improve intra-corridor mobility.
- An 18-mile commuter bikeway adjacent to the highway.
- Transportation Demand Management (TDM) strategies to affect commuter behavior.

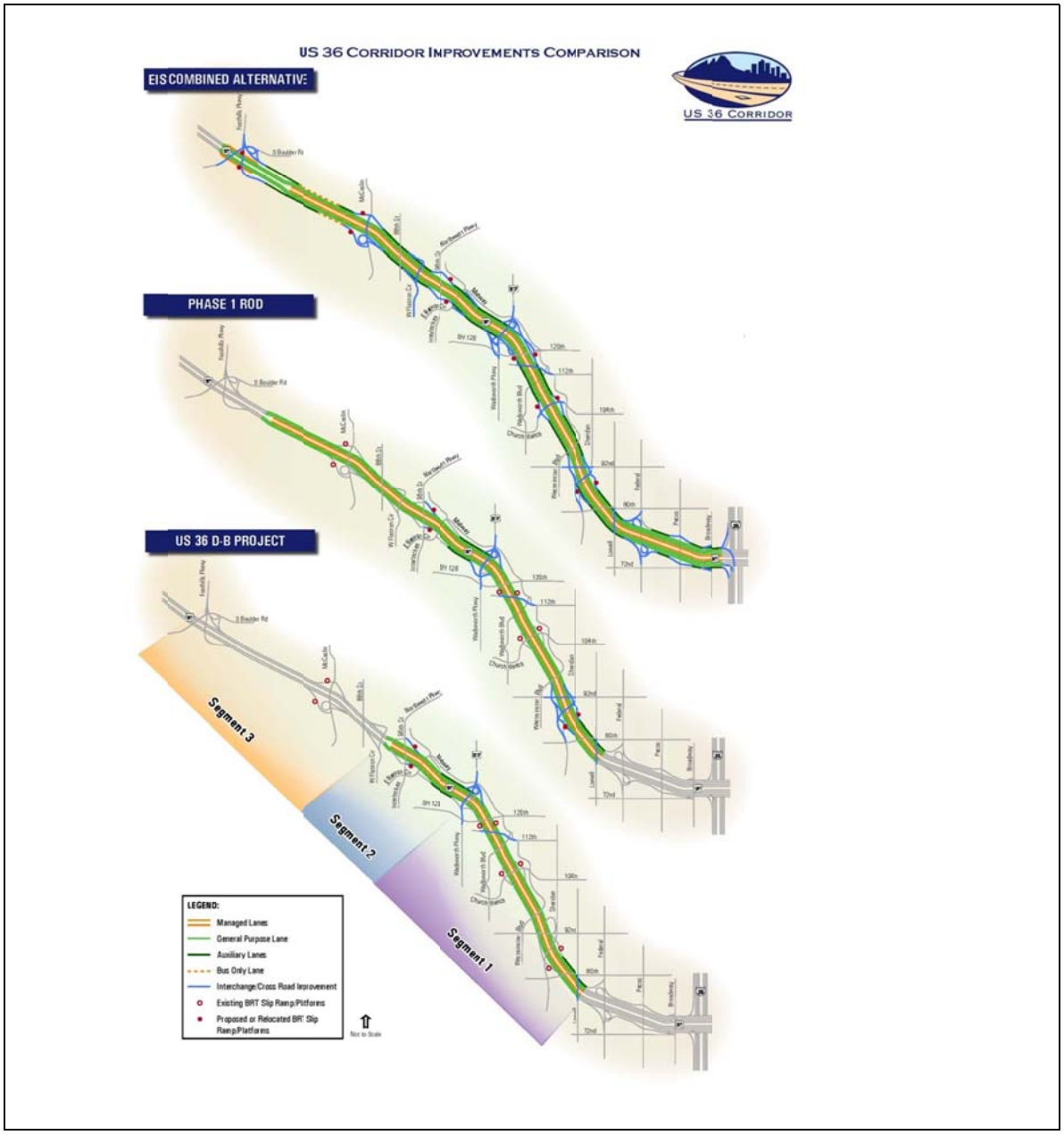
3) RECORD OF DECISION AND PHASE 1 IMPROVEMENTS

A diverse political coalition—CDOT, in partnership with RTD, the US 36 Mayors & Commissioners Coalition, Adams County, Jefferson County, City and County of Denver, Westminster, City and County of Broomfield, Town of Superior, City of Louisville and, the City and County of Boulder, and 36 Commuting Solutions, identified a first phase of improvements at an estimated cost of $550 million. This first phase includes implementation of the managed lanes, BRT service, and a commuter bikeway the full length of the US 36 Corridor.

This first phase of the Preferred Alternative was included in the 2009 Record of Decision (ROD) for the US 36 Managed Lane/BRT Project. The first ROD was signed on December 24, 2009, documenting the Preferred Alternative and selecting the first phase of the Preferred Alternative for improvements to the US 36 Corridor.

The evolution of the US 36 Phase 1 Construction Project is illustrated in this graphic.

US 36 Corridor Improvements



4) TIGER GRANT OPPORTUNITY – US 36 MANAGED LANES PROJECT

The TIGER Discretionary Grant program presented an opportunity for accelerated implementation of the first phase of US 36 improvements, delivering project benefits 20 years earlier than anticipated. CDOT, with its regional partners, submitted a segmented implementation plan for TIGER funding consideration.

In February 2010, the U.S. Department of Transportation (US DOT) awarded CDOT $10 million through the TIGER grant program as a TIFIA Challenge Grant, providing a TIFIA Loan opportunity for the Project. The $10 million grant is primarily dedicated to paying the TIFIA credit assistance charge, with the remainder allocated to eligible Project costs. Since award, HPTE, in partnership with CDOT, has diligently worked to meet the requirements of the TIGER TIFIA Challenge Grant, maximize the benefit of the funding sources, and deliver a meaningful portion of the Preferred Alternative.

The addition of a TIFIA Loan to the Project's funding sources stimulated an increase in state and local funding. The identification of the Phase 1 US 36 Managed Lane Project limits as an initial construction project from the first ROD moved the implementation of the managed lanes up 20 years.

5) US 36 MANAGED LANES/BRT DESIGN-BUILD PROJECT – PHASE 1 CONSTRUCTION

The TIFIA-supported Project, hereafter referred to as the Phase 1 Project, is a 11-mile segment of US 36 from Pecos Street to 88th Street and is currently under construction. Upon completion, this portion of US 36 will have six lanes (three in each direction), two of which will be managed lanes. The Project also includes implementation of a BRT system (part of RTD's FasTracks Program approved by voters in 2004), and the construction of a commuter bikeway that will connect to the regional Denver trail system. The Project also includes the replacement of aging infrastructure, some of which has not been upgraded since the opening of US 36 in the early 1950s.

Construction of the US 36 Managed Lane/BRT Project began on July 20, 2012 and is scheduled to be completed by July 15, 2015. Upon completion and acceptance of the Phase 1 project, the Phase 2 Concessionaire will assume certain responsibilities for the maintenance and operation of the infrastructure and tolling associated with Phase 1.

The new managed lanes associated with Phase 1 will connect to the northern terminus of the existing, reversible I-25 Express Lanes (a seven-mile section of I-25 between downtown Denver and Pecos Street on US 36). The I-25 Express Lanes, which opened in 2006, allow carpools, buses, hybrid vehicles with permits, and motorcycles to use the lanes toll-free, while SOVs pay a toll. The completion of the Phase 1 project will provide another link in the Denver metropolitan toll system, resulting in a 17-mile continuous managed lane from eastern end of Boulder County to downtown Denver. Given the connectivity between US 36 and I-25 Express Lanes, the HPTE intends to treat both facilities as a single system.

The limits of the Phase 1 project are from Pecos Street to 88th Street. Other major intersecting highways include Sheridan Boulevard, W. 104th Avenue/Church Ranch Boulevard, and Wadsworth Boulevard. The limits of the Phase 2 project are from Table Mesa Drive to the west end of the Phase 1 project. The I-25 Express Lanes which will be operated and maintained by the Concessionaire is also shown below.

US 36 Managed Lanes Project Area (Phase 1, Phase 2 and I-25 Express Lanes)

B. DESCRIPTION OF US 36 TOLL CONCESSION PROJECT (PHASE 2 CONSTRUCTION)

As explained in the introduction, the US 36 Toll Concession Project is the second major step CDOT and HPTE are undertaking to implement the initial phase of the US 36 Preferred Alternative selected in the first ROD (2009). This second construction project is referred to as Phase 2 hereafter. The US 36 Toll Concession Project is a Public Private Partnership in which the Concessionaire will design and construct the portion of the improvement to US 36 between 88th St and Foothills Parkway in Boulder. Construction of both Phase 1 and the Concession Project will occur simultaneously under different contracts. Phase 2 is scheduled to be open for toll collection by the end of 2015. Once Phase 1construction is completed and accepted, the Concessionaire will assume responsibilities for the maintenance and operation of infrastructure and tolling and for the TIFIA loan associated with the Phase 1 project.

C. PROJECT SCOPE FOR US 36 TOLL CONCESSION PROJECT

The Project scope for the US 36 Toll Concession Project (Phase 2) is described in this section.

1) BASIC CONFIGURATION

The Basic Configuration is defined as Work required as described in the US 36 Toll Concession Project Contract Documents.

Pavements and Laneage

- Reconstruct US 36 mainline with Portland Cement Concrete Pavement from east gore points of the Foothills Parkway interchange to the west limit of the Phase 1Corridor construction immediately east of 88th Street.
- Reconstruct portions of interchange ramps affected by the Phase 2 Construction work including affected bus queue-jump lanes.

Structures

- Widen the westbound US 36 structure over the South Boulder Creek and accommodate the Bikeway.
- Construct Diverging Diamond Interchange at US 36 and McCaslin.

Bikeway

- Construct continuous concrete bikeway from the Table Mesa Drive Park-n-Ride to a connection with the Bikeway constructed in Phase 1.

RTD Elements

- Construct any associated modifications to existing ramp metering to accommodate the Bus Rapid Transit/High Occupancy Vehicle (BRT/HOV) bypass lanes within the Phase 2 Construction Work limits.
- Reconstruct any existing BRT stations, platforms, or elements that are impacted by roadway improvements, and construct the relocated station elements in accordance with the RTD Bus Transit Facility Design Guidelines and Criteria.

ITS and Electronic Toll Collection (ETC) System Elements

- Accommodate ITS backbone and associated elements constructed under the Phase 1 DB Contract between the RTD Operations Center, Regen 1, Regen 2, and the US 36 (28th Street) and Colorado Avenue intersection in the City of Boulder. Connect Phase 2 elements to ITS backbone.
- Construct supporting infrastructure necessary to accommodate installation and operation of ETC system components. ETC system components will be designed and installed by the ETC System Integrator.
- Construct base Active Traffic Management (ATM) elements, including Bus on Shoulders (BOS) system and enhanced ATM elements, including lane status signs along the corridor.

Design of Future Elements

- In addition to the design of all elements constructed with the Project, provide designs for additional and future elements within the limits of the Phase 2 Construction Work.
- Prepare preliminary design and plans (30 percent level) for the ultimate roadway, Bikeway, structure, and drainage elements for US 36 from Foothills Parkway to 88th Street; the east ramps of the Foothills Parkway Interchange, the McCaslin Boulevard interchange, and any other elements which will be reconstructed in the Ultimate Configuration. Demonstrate accommodation of the Ultimate Configuration by major roadway, Bikeway, structure, and drainage elements constructed as a part of the Basic Configuration. The Ultimate Configuration of the US 36 Corridor is defined as the geometry depicted for the Preferred Alternative in the US 36 Corridor Final Environmental Impact Statement/ Section 4(f) Evaluation (EIS), as modified or supplemented by the horizontal geometry depicted in the Ultimate Configuration Model file in the Reference Documents.

2) OPERATION AND MAINTENANCE

- The Concessionaire will be responsible for operation and maintenance of the Concession Project in compliance with HPTE Service Requirements and generally as follows:

  (i) Operation of all systems and services related to the Managed Lanes;

  (ii) Routine Maintenance and Life Cycle Maintenance on the Managed Lanes;

  (iii) Life Cycle Maintenance in relation to Non-Separable Tasks on the US 36 General Purpose Lanes (on the condition that HPTE will pay an appropriate percentage share of the cost of those tasks relating to the US 36 General Purpose Lanes); and

  (iv) Snow and Ice Control Services on the Managed Lanes and the US 36 General Purpose Lanes.

- HPTE accepted the financial proposal from the Concessionaire which includes the provision of routine maintenance of the General Purpose Lanes (with HPTE to make payments to the Concessionaire of a General Purpose Lanes Routine Maintenance Fee). The proposal is less than the CDOT cost, the routine maintenance of the US 36 General Purpose Lanes will be the responsibility of the Concessionaire.

3) OPERATION AND MAINTENANCE I-25 STRUCTURES

- The Concessionaire is to be responsible for Routine Maintenance and Life Cycle Maintenance of the pavement of I-25 Managed Lanes wherever it rests on the sub-grade, and Routine Maintenance activities such as drain clearance, for structural components, but will not be responsible for Life Cycle Maintenance of the sub-grade itself, nor of any structures within it. HPTE, through CDOT, will be responsible for all such maintenance to the sub-grade and those structures apart from the Routine Maintenance which is the Concessionaire's responsibility.
- For those structures along US 36 and I-25 with a shared maintenance responsibility, the Concessionaire will be responsible for the managed lane portion of the bridge deck, the concrete barriers which separate the managed lanes from the general purpose lanes, the managed lane portion of the expansion joints, and the superstructure that supports the managed lane portion of the deck. CDOT will be responsible for maintenance of the general purpose lane portion of the bridge deck, outside barrier and bridge rail, the general purpose lane portion of the expansion joints, and the portion of the superstructure that supports the general purpose lanes. A Figure from the Contract Documents describing CDOT and Concessionaire maintenance responsibilities can be seen in the Appendix J.
- The Concessionaire is to be responsible for both Routine Maintenance and Life Cycle Maintenance in relation to the managed lanes on structure:

  (i) The bridge decks (including the pavement resting on, or forming part of, the deck); and

  (ii) The expansion joints in the bridge decks;

- The Concessionaire is not responsible for either Life Cycle Maintenance or Routine Maintenance of the bridge structures supporting the bridge decks. HPTE, through CDOT, will be responsible for those matters.
- The HPTE Service Requirements will specify the required maintenance regime for the decks of the I-25 Shared Bridges. The Concessionaire will be responsible for carrying out maintenance according to this specification on the whole of the bridge decks (including the part of those decks which carry General Purpose Lanes), For the I-25 Shared Bridge Decks such Life Cycle Maintenance activities will be treated as Non-Separable Tasks. The percentage of the cost of the Non-Separable Task borne by CDOT will vary according to the percentage of the structure which is attributable to the I-25 GP Lanes.

[*page intentionally left blank*]

3. PROJECT GOALS AND OBJECTIVES

This section documents the goals and objectives of the Project and sets forth methods for measuring whether or not they were met.

A. PROJECT GOALS

The goals listed below have been established for the Concession Project. These goals have been reformulated from the goals provided for in the RFQ based on stakeholder input, and are listed in no particular order:

- To bring about the construction of the Phase 2 Managed Lanes and the Phase 2 GP Lanes in a manner which meets CDOT and HPTE requirements in an effective and economic way;
- Once operational, to facilitate BRT programs operated by RTD;
- Once operational, to maintain average travel speeds of not less than 55 mph between Table Mesa to Broomfield Park'n'Ride and 50 mph between Broomfield Park'n'Ride to Pecos Street during Peak Periods measured over a timeframe of one (1) month
- Once operational, to maintain an average travel time of no more than 8.75 minutes between Pecos and Denver Union Station measured over a rolling period of four weeks ;
- To transfer revenue risk to the Concessionaire;
- To optimize operating and Life Cycle Maintenance costs, particularly in relation to the US 36 General Purpose Lanes ;
- To provide for the effective and economic maintenance and operation of the Managed Lanes for 50 years and for the handback of the Managed Lanes at the end of that period in a state which fulfills CDOT and HPTE requirements in relation to the residual life of the Managed Lanes at that time; and
- To minimize inconvenience to the public and maximize safety of workers and the traveling public

Each of these project goals was explicitly incorporated into the RFP. The Technical Proposal requirements were structured so that each goal was one section of the Technical Proposal. Each section had specific requirements, evaluation criteria, and a maximum number of points that could be awarded. Points were awarded according to how well the Proposers presented how they would accomplish each goal according to the stated requirements.

Because the Proposal becomes a part of the Contract Document upon acceptance, the Concessionaire is legally required to implement their proposal and fulfill their commitment made to implementing the Technical Proposal and thereby meeting the goals delineated above. During the project, the Concessionaire is required to submit Monthly Reports to CDOT which will assist CDOT in tracking the Concessionaire's progress and ultimately measure the success of the project related to meeting or exceeding the project goals.

The Concessionaire will be responsible for operation and maintenance of the Concession Project in generally as follows:

- Operation of all systems and services related to the Managed Lanes;
- Routine Maintenance and Life Cycle Maintenance on the Managed Lanes
- Life Cycle Maintenance in relation to Non-Separable Tasks on the US 36 General Purpose Lanes (on the condition that HPTE will pay an appropriate percentage share of the cost of those tasks relating to the US 36 General Purpose Lanes)
- Snow and Ice Control Services on the Managed Lanes and the US 36 General Purpose Lanes

In the Request for Proposals, HPTE requested additional financial proposal that included routine maintenance of the US 36 General Purpose lanes. HPTE subsequently accepted the financial proposal, and the Concessionaire will maintain the US 36 General Purpose lanes constructed in both Phase 1 and Phase 2. HPTE will make payments to the Concessionaire for that service and CDOT will reimburse HPTE per the terms of and IGA that has been executed between CDOT and HPTE.

The Technical Proposal evaluation matrix is below.

Criteria and Sub-Criteria	Financial Proposal A Evaluation	Financial Proposal B Evaluation	Percent of Maximum Score
Financial Criteria			
Financial Proposal	55%	55%	65%
Feasibility of Financial Proposal	10%	10%	
Technical Criteria			
Proposer's Phase 2 Construction Work Proposals and Electronic Toll Collection System Proposals	16%	20%	35%
Proposer's Service Proposals	19%	15%	
	100%	100%	

Specifics as to how both the Financial Criteria and the Technical Criteria were to be evaluated are detailed in the Request for Proposals.

B. PROJECT OBJECTIVES

The key objectives of the Project are reflected in the Purpose and Need statement from the EIS. As identified in the EIS, these are:

- Increase trip capacity.
- Expand access.
- Provide congestion relief.
- Expand mode of travel options.
- Increase efficiency of transit service.

- Update outdated highway facilities.

C. PROJECT METRICS

1) TIGER PERFORMANCE GOAL

There are certain performance metrics which were tied to the requirements of the TIGER Discretionary Grant in Phase 1. These are detailed in the table below. The methodology for collecting and measuring the data follows the table.

TIGER Performance Goal	Objective	Measure	Data needed and when to collect.	Who has the data?
To the extent possible, all data will reflect averages for US 36 from Pecos to Interlocken on the specified dates/times. In case of anomalies on any given Wednesday data will be purged. Anomalies related to incidents/explained events will be reported as such.				
Travel Time Reliability	Reduced Buffer Index in managed lane compared to Buffer Index of GP lanes pre- and post-project.	Buffer Index for managed lane post construction better than for GP lanes pre and post construction.	Baseline – collect data monthly for GP lanes 1 year before project gets started report quarterly. Comparison points: collect GP and Managed Lane data monthly with a quarterly report for 3 yrs post construction Wed AM/PM peak, EB/WB directions, and GP/managed lanes will be measured. Speeds will be collected and average travel time per 5 min period between Interlocken and Pecos for Wed peak period in each direction will be calculated for use in the Buffer index. A Buffer Index for the month will be reported for each category.	CDOT Buffer Index = (95th %tile travel time – average travel time) / average travel time. All figures in minutes. Data available from ramp meter loops. (Collect at 5 min intervals (kept for 180 days). Use speed data and convert to travel time. EB: Pecos, 104th, Sheridan, Wadsworth, and Superior (all ramps except Superior which is DTD permanent traffic counter) WB: Pecos, Federal, Sheridan, 104th and McCaslin.
	(secondarily, no decline in Buffer Index for GPs post construction compared to pre-opening)	Buffer Index for GP lanes no worse post-construction than for GP lanes pre-construction.		
	Equal or improved transit on-time performance post project over pre-project. Ultimately, we would like to see the express buses compress their schedules and still meet their on-time	% of buses operating on time post-construction is at least as high as % on-time pre-construction. Also report modifications to schedule.	Baseline – RTD already collects this data. Collect monthly report quarterly for one year before project gets started. Collect all Wednesdays am and pm Peaks EB/WB direction. (or if more easily available in	RTD Collect for B-local and B-express. Report both separately and together. Data to be reported for trips within Pecos to Interlocken/ Superior

TIGER Performance Goal	Objective	Measure	Data needed and when to collect.	Who has the data?
	performance.		different time periods from RTD – use that instead) Post-project: Collect monthly report quarterly for 3 yrs.	
Improved Speeds	Maintain minimum speed in managed lane	traffic in managed lane moves at least 45 mph at least 95% of the time except for incidents or explained events	No baseline needed – post-construction only Collect monthly for managed lanes , report quarterly for 3 yrs. Speeds measured in managed lane at all locations in travel time reliability (above)each Wednesday AM and PM Peak EB/WB. Report 95th %tile monthly speed each segment during am and pm peak hours. Frequency of sample (5 min).	CDOT
	Faster speeds in managed lane compared to GP lanes post construction.	managed lane moves at speeds greater than or equal to speeds in GP lane at least 95% of the time *am and pm peak hours* (except for incidents / explained events)	Need baseline of speeds in the current system to indicate the overall benefits of this Project. Collect monthly for GP and managed lanes , report quarterly for 3 yrs Measured and calculated the same as the managed lanes above.	CDOT
Throughput	More ADT post-construction than pre-construction.	Before and After Average Daily Vehicles all lanes (note this will capture # of vehicles, not number of trips)	Baseline -- Collect monthly for 1 year prior. Post project – collect monthly, report quarterly for 3 yrs. Managed lane/GP EB/WB between Pecos and Interlocken/ Superior. Report ADT between each segment (same as data collected for speeds above)	CDOT

a) **Current Data Collection Devices**

Within the Project corridor, travel time is collected using the Radio Frequency Identification (RFID) toll tag readers at the following approximate locations along US 36:

- *Pecos Street*
- *Sheridan Boulevard*
- *Wadsworth Boulevard*
- *Interlocken Loop*
- *McCaslin Boulevard*

Ramp meters, Automatic Traffic Recorders, and side-fire radars will be located at most on-ramps. They collect volume and detector occupancy by lane for the on-ramp and mainline, and speed on the mainline. The data will be collected in 20-seconds bin intervals, and historical data can be queried in the ramp metering database.

CDOT DTD Automatic Traffic Recorders (permanent counting stations) collect point volume, occupancy, speed, and vehicle classification. Their locations are:

- *Between Sheridan Boulevard and 104th Avenue*
- *Between Interlocken Loop and McCaslin Boulevard*

b) **Proposed Data Collection Methodology**

Data will be collected during the AM and PM peak periods in both the eastbound and westbound directions of travel and both before and after construction.

Facility performance will be measured by travel time reliability, speed, and throughput, as defined in the following paragraphs:

i **Travel Time Reliability**

Travel time will be measured both preconstruction and post-construction, and data will be collected for the AM and PM peak periods of travel in both directions of travel. Historical data from the ramp metering system will be used to define the exact duration of the peak periods.

a. Preconstruction

Preconstruction travel time will be measured using the existing toll tag travel time readers (at the locations listed previously). To accomplish this, CDOT DTD will modify their software to allow for the archiving and retrieval of the travel time data for each segment. Segments will then be aggregated to obtain travel time for the entire corridor. Though travel time data will be measured and collected continuously; it is the intent to provide travel time data coalesced in 5-minute intervals and for Wednesdays, discarding any errant or misrepresentative data. The 5-minute data will then be assembled and averaged for the daily peak period and then for monthly reporting.

b. Post-construction

Post-construction travel time will be measured the same as preconstruction; however, travel time will be collected for both the general purpose lanes and managed lanes, and the Project will be providing instrumentation along the US

36 Corridor to facilitate this data collection.

The travel time data will be used to calculate the travel time reliability using the FHWA Buffer Index calculation.

ii Speed

Travel speed will be collected and measured for the managed lanes to assess whether the traffic moves per the thresholds agreed upon by RTD and CDOT. Managed lane speed will be derived from the travel time information since the unique toll tag IDs are associated with a date and time stamp. This data will be reported in the same format as the current monthly reports generated by HPTE/E-470 for the I-25 Express Lanes facility. Speeds will be collected in 5-minute bin intervals and averaged over the peak period, and then assembled for monthly reporting. Speeds will be collected and measured both preconstruction and post-construction for comparison.

Speeds for the general purpose lanes will be collected and reported in the same manner to measure whether the managed lanes are moving faster.

iii Throughput

Throughput will measure the numbers of vehicles passing through the facility during the peak periods. The ramp meter, Automatic Traffic Recorder, and side-fire radar data at each interchange will be used to measure the number of vehicles using the facility.

These volumes will be collected in hourly bins and then assembled to report Average Daily Traffic (ADT) at the locations where data is presently being measured.

Throughput will be measured both preconstruction and post-construction.

2) CARPOOL USE

It is anticipated that the introduction of managed lanes along US 36 will lead to an increase in carpool use. Carpool use is measured as follows:

- Preconstruction:

  CDOT has the HOV lane volume data for the existing HOV lane between eastbound from Sheridan to Pecos. The existing data contains the present volume in 5-minutes bins for average weekdays (Tuesday, Wednesday, and Thursday).

- Post-Construction:

  Once the managed lanes have opened and drivers have had sufficient time to alter their driving patterns (the timeframe will be determined by the stakeholders), the HOV volumes in the managed lanes will be measured again at the same data collection point as the preconstruction. HOV volumes will be obtained by collecting the total volume in the managed lane and removing the number of toll transactions, buses, motorcycles, and ILEVs.

The HOV, or carpool use, will be defined as the total number and percent difference before and after the managed lanes.

According to the terms of the Phase 2 RFP, the Concessionaire has an option as to whether or not to pursue a new TIFIA loan. If the Concessionaire choses to do so, the Concessionaire may chose different Performance Measures for Phase 2. If the Concessionaire choses to pursue a TIFIA

loan, this Project Management Plan will be updated to include information as to the Project Metrics defined by the Concessionaire. However, the TIGER 1 reporting associated with Phase 1 will still be required.

D. COMPLEX PROJECT MANAGEMENT STRATEGIES WORKSHOP

On December 6 – 7, 2012, project team members from HPTE and CDOT attended a Project Management Strategies for Complex Projects workshop facilitated by the Federal Highway Administration, Strategic Highway Research Program, the Transportation Research Board of the National Academies and Iowa State University. During this workshop, the team members and facilitators identified specific project goals. These goals are listed in the following table and will be monitored by HPTE both during and after the construction work.

Success Factors					
Dimension:	Finance:	Context:	Technical:	Schedule	Cost
Success Factor A	Financial closure to ensure Dec 31, 2015 toll collections(financial close by Oct 4, 2013)	US 36 managed lanes are accepted by the public as well as the I-25 Express lanes are. (This will be measured by surveys, complaints and editorials)	BRT operational criteria met 95% of the time.	Tolls operating on or before Dec 31, 2015	Proposal come in at or below current HPTE capital payment
Success Factor B	Project revenues are +/- 20% of projections. (project revenue projections are consistent)	All IGAs in place by March 2013	Minimum travel speed of 45 mph during operations of managed lanes		
Success Factor C		Concessionaire makes a reasonable rate of return	Improved operations in general purpose lanes.		
Success Factor D			Improved connectivity and use of multimodal methods (i.e. bikes, bus)		
Success Factor E			Accident rates and severity during construction at		

			or below Phase 1 rates		

For this workshop, the Strategic Highway Research Program developed a Project Execution Tool Selection methodology to assist project teams in determining the best project delivery method. While these tools were presented to HPTE late in the development of the Phase 2 project, HPTE did consider most of the methods presented, as listed below

1. Define Project success by each dimension as required.

   Project success was defined by HPTE early in the process of developing the Request for Qualifications for this Public Private Partnership. These measures of success are more fully explained in Section 3 of this Project Management Plan.

2. Assemble the project team.

   To deliver this project prior to and during construction, HPTE assembled a diverse team highly experienced in the both the procurement of and construction of Public Private Partnerships and design build projects. This team includes both consulting firms and HPTE/CDOT employees. HPTE hired legal and financial consulting firms to assure project success and ensure that the Contract documents reflect HPTE's long term goals for this project.

3. Select project arrangements based on project outcomes

   HPTE chose to use the Public Private Partnership delivery method to maximize the efficiency of project design and construction and to transfer specific risk to the concessionaire. Per the terms of the contract, the Concessionaire will bear most of the risk of greater than anticipated short-term and long-term expenses and lower than anticipated revenues from tolling.

4. Prepare an early cost model and finance plan.

   In August 2011, Wilbur Smith Associates completed an Investment Grade Traffic and Revenue Study to help determine the viability of the Phase 2 project. HPTE has continued to work with Wilbur Smith to refine the Project delivery and increase make the project more attractive to a Private partner.

5. Define political action plans.

   HPTE has continually worked with Stakeholder organization to make the Phase 2 project possible and to obtain funding. Stakeholders partnered with include the Regional Transportation District (RTD), local governments, FHWA, the Denver Regional Council of Governments and various resource agencies. HPTE has also worked closely with the 36 Commuting Solutions, which is a non-profit public/private partnership organization which has a goal to enhance mobility along the US 36 corridor for today and the future

6. Incentivize critical project outcomes

   Since the Phase 2 project is HPTE's first Public Private Partnership, it is considered to be very important to HPTE and to the State of Colorado that this project will be a long term success for both HPTE and the private partner. If HPTE can demonstrate its ability to develop mutually beneficial projects, other major transportation improvements currently planned may use a similar model. For this reason, HPTE carefully considered incentives that would ensure success for both the public and private entities.

7. Develop Dispute resolution

CDOT and HPTE are using an existing dispute resolution standard that has been successful in minimizing claims and disruptions to projects. This is being successfully used in the construction of Phase 1 improvements.

8. Perform comprehensive risk analysis

   HPTE carefully considered risks and the proper allocation of risk between the public and the private partners while developing the RFP.

9. Identify critical permit issues

   Because this project has already been cleared by a Record of Decision, HPTE believes required critical permits have been well identified. In those instances where it was advantageous for HPTE to obtain the permit, HPTE did so. In other instances, the contract specifies that it is the Concessionaire's responsibility.

10. Evaluate applications of off-site fabrication

    As a design build project, the Concessionaire is free to consider this construction method.

11. Determine required level of involvement in ROW/utilites

    Prior to RFP, HPTE identified ROW required for the Phase 2 improvements and began the process of acquiring the ROW. HPTE also identified utility conflicts and requirements and developed a matrix for tracking impacts to utilities during construction.

12. Determine work package/sequence

    The project documents were developed to encourage maximum coordination between HPTE, the US 36 Phase 1 contractor and the US 36 Phase 2 Concessionaire during construction.

13. Design to budget

    As a design-build project, a maximum budget was identified that the Concessionaire must be able to construct all improvement and requirements identified in the contract.

14. Co-locate team

    CDOT is co-located with the US 36 Phase 1 contractor, and HPTE and CDOT anticipates doing the same for the Phase 2 project.

15. Establish flexible design criteria

    The contract documents ensure flexible design criteria by allowing design to applicable standards.

16. Evaluate flexible funding

    The Public Private Partnership delivery method was chosen based on an evaluation of funding and tolling revenue projections.

17. Develop finance expenditure model

    HPTE will do this to most efficiently handle available funding.

18. Establish public involvement plan

    As part of the contract, the concessionaire must develop a Public Involvement Plan in cooperation with HPTE. HPTE will be primarily responsible for informing the public and receiving public input, but the concessionaire will provide support. In addition, HPTE plans to hire outside consultants to assist with this effort, as was done during the Phase 1 construction project.

[*page intentionally left blank*]

4. PROJECT ORGANIZATIONAL CHART, ROLES, AND RESPONSIBILITIES

The Project requires managerial, technical, oversight, and decision-making coordination with and decision making among multiple funding partners and stakeholders. A current organizational chart for the Project can be found in Appendix C.

A. EXECUTIVE OVERSIGHT

The Executive Oversight Committee (EOC) provides overall policy direction, dispute resolution, and guidance to the Project Delivery Team. The primary functions of the EOC are to:

- Make policy decisions for the Project.
- Assure adequate resources are provided from each respective organization to support the Project.
- Provide support to the project team in relation to regional and national stakeholders.
- Monitor the progress of the Project.

1) EOC MEMBER ORGANIZATIONS

The member organizations of the EOC have the following roles and responsibilities on the Project:

HPTE	TIFIA sponsor and lead Project agency, assures US DOT that the Project is delivered as planned, fulfilling all prior commitments and comply with the TIFIA credit agreement, applicable regulations, and federal and state laws
CDOT Region 4	Delivery and management of the Phase 2 Construction Work; Right-of-Way acquisition; Intergovernmental Agreements and other project-related agreements with utilities and other agencies
FHWA	FHWA Colorado Division Office oversight of the Project, consistent with the Stewardship Agreement for Federal-Aid Projects; quality assurance reviews and process claims and Contract modification orders
RTD and DRCOG	Key funding partners

2) EOC MEMBERS

The EOC comprises the following individuals:

Tim Harris	CDOT Chief Engineer
Michael Cheroutes	High Performance Transportation Enterprise
Tony Divito	CDOT - Region 6 (soon to be Region 1)
Johnny Olson	CDOT - Region 4
Richard Clarke	Regional Transportation District
Shaun Cutting	Federal Highway Administration

a) **CDOT Chief Engineer – Tim Harris P.E.**

The assignment of complete responsibility for individual Construction and Design Contracts is at the administrative direction of the Chief Engineer, who is responsible for directing all CDOT activities within the Division of Engineering and Maintenance.

Tim Harris is the Chief Engineer for CDOT. Tim recently completed his 31st year of progressive engineering experience with CDOT, where he started his career in the Roadway Design Branch. He has progressed through project delivery and supervisory engineering positions, most recently serving almost five years as Regional Transportation Director for CDOT's Region 2, which includes the Pikes Peak Region of Colorado and the southeastern corner of the state.

He holds a Bachelors degree in Civil Engineering from Georgia Tech in Atlanta and is a licensed Professional Engineer in the State of Colorado. CDOT currently holds memberships with a number of professional affiliations including the American Association of State Highway Transportation Officials (AASHTO) and the Western Association of State Highway Officials (WASHTO). As Chief Engineer, Tim is a delegate in those organizations.

b) **HPTE Director – Michael Cheroutes**

HPTE Director Mike Cheroutes is an attorney with over 40 years of government and public finance experience. Prior to joining the HPTE, his work included public private partnerships for infrastructure projects in the U.S. and overseas, and complex project financings for key transportation improvements such as E-470 and Denver International Airport.

c) **CDOT Region 1 RTD – Tony DeVito, P.E.**

Tony DeVito has served as Region 1 Transportation Director since October 2008. In this role, he manages more than 400 employees located from the top of Vail Pass to the Kansas border, providing design, construction and maintenance services to CDOT customers. A professional engineer with more than 20 years of experience, Tony also participates in CDOT's executive management team, responsible for developing Department policies. Tony began his career with CDOT in 1991, gaining expertise in design, construction and traffic activities statewide. Prior to becoming Region Director, Tony was the metro Denver region's Director of Operations and Maintenance, serving as the agency's representative for the Democratic National Convention. In this position, he was responsible for coordinating road closures and traffic needs with convention staff, emergency response personnel and the secret service. A native Coloradan, Tony graduated from the Colorado School of Mines with a B.S. in Engineering. As an active community member, he has coached youth soccer and softball programs with Douglas County for the last seven years.

d) **CDOT Region 4 RTD – Johnny Olson, P.E.**

Johnny Olson has been the RTD of Region 4 since June 2010. He began his CDOT career in 1991 and worked for 18 years in various positions before leaving CDOT in 2008 to become the Vice President of the Colorado Regional Office at Bohannan Huston Inc. Prior to leaving CDOT, Mr. Olson worked in Region 4 as a Project Manager in Design and Construction and as a Resident Engineer. In 2007, he was promoted to Branch Manager of Maintenance and Operations where he oversaw 12 statewide programs. With his 20 years of experience and background in all aspects of the transportation industry, Mr. Olson brings an important outlook to the Region and leadership team.

e) RTD –Richard Clarke

Richard Clarke is the Assistant General Manager**,** Capital Programs for the Regional Transportation District (RTD) in Denver. Mr. Clarke is responsible for RTD's capital program including the FasTracks expansion program. FasTracks is a $7.4 billion, 122 mile fixed guideway program. He previously served as RTD's Project Director for the Transportation Expansion (T-REX) project. T-REX was a $1.7 billion, multi-modal (highway/Light Rail) project that included 19 miles of new LRT and 13 stations. It was completed ahead of schedule and under budget. He has previous transit project experience in Dallas, New York, Boston, Cleveland and Philadelphia. Mr. Clarke has Bachelors and Masters Degrees from the University of Pennsylvania.

f) FHWA-Colorado Division Program Delivery Team Leader – Shaun Cutting, P.E.

Shaun Cutting has over 20 years of experience with the FHWA. His experience includes involvement in some of the signature major projects in the Denver metropolitan area, including the T-REX project and the I-25 Value Express Lanes project. Mr. Cutting has also gained extensive experience in the implementation of the NEPA process in his role as the lead engineer for the C-470 Environmental Assessment; and Valley Highway, I-70 East, Northwest Corridor, and US 36 Environmental Impact Statements.

B. AGREEMENTS

1) CDOT/HPTE US 36 CONCESSION PROJECT INTRA-AGENCY AGREEMENT

The relationship between HPTE and CDOT regarding the US 36 Toll Concession Project is defined in an Intra-Agency Agreement between HPTE and CDOT. In the agreement, the two entities agree to:

- Finance, design and construct general purpose lanes and a new managed lane in each direction from 88th Street to Table Mesa drive together with associated infrastructure such as wall, bridges, ramps etcetera.
- Design and construct a diverging diamond interchange at US 36 and McCaslin Blvd.
- Operate and maintain US 36 Phase 1 and Phase 2 managed lanes and the existing I-25 Express Lanes. CDOT agreed to pay for Snow and Ice Control Services for the General Purpose Lanes in the US 36 Corridor and for routine maintenance services for the General Purpose Lanes in the US 36 Corridor
- Permit the Concessionaire to access CDOT ROW

2) FIRST AMENDMENT TO THE HPTE US 36 PROJECT INTRA-AGENCY AGREEMENT

On October 7, 2013 CDOT and HPTE amended the US 36 Concession Project Intra-Agency Agreement. In the amendment, CDOT is was agreed that:

- CDOT would make available to HPTE the sums owed to CDOT under the terms of Intergovernmental Agreements in exchange for the goods and services, such as constructed bus rapid transit lanes, bike paths, and a diamond interchange, delivered by HPTE as part of the US 36 Project.

- CDOT agreed to make available to HPTE Federal Funds in the total amount of $15,000,000.00 at such times and in such manner so as to allow HPTE to fulfill HPTE's payment obligations under the Concession Agreement.

3) CDOT/HPTE AND RTD INTERGOVERNMENTAL AGREEMENT

Because the Project is part of RTD's FasTracks Program, coordination and communication between RTD and CDOT is conducted in accordance with the terms of an IGA executed between the two agencies. The IGA establishes processes for identifying physical, safety, operational, and future transportation impacts, responsibility for funding these impacts, and procedures for coordinating and constructing the Projects.

CDOT/RTD US 36 IGA (August 2011); executed and an agreement between CDOT and E-470 for service provided in relation to the Managed Lanes and Tolling. A copy of this Agreement is included in the Appendix.

4) ADDITIONAL IGAS

The following additional IGAs are anticipated to be in place for the Project.

Agency	Subject of IGA
DRCOG	Project funding
Town of Superior	Bikeway construction and maintenance
Town of Superior	DDI Funding and pedestrian crossing
City of Louisville	DDI Funding and pedestrian crossing
City of Louisville	Bikeway construction and maintenance
City of Boulder	Bikeway maintenance Wetlands mitigation
Boulder County	Bikeway construction and maintenance Davidson Mesa Scenic Overlook
City of Boulder	Mitigation options for Ute ladies'-tresses orchid (Spiranthes diluvialis) (ULTO) and Preble's meadow jumping mouse (Zapus hudsonius preblei) (PMJM) habitat impacts
E-470 Public Highway Authority	Toll system integration

5) THIRD-PARTY AGREEMENTS

The Concessionaire is responsible for obtaining all third-party approvals required to complete the Work, except as otherwise specified in the Contract Documents. Third-party coordination and approvals are required from, but not limited to, the following agencies:

- *Local Agencies*
- *Irrigation Ditch Companies*
- *Public Utility Owners*
- *Private Utility Owners*

6) LOCAL JURISDICTIONS

Several local jurisdictions are contributing financially to the Project. CDOT has worked very closely with these agencies to incorporate specific design requirements into the Design-Build Contract that meet and support local agency goals for regional mobility and aesthetics. The stakeholders will remain involved in the design development and construction of the Project via interaction with the Concessionaire. The Concessionaire is responsible for implementing the commitments that have been made to these local jurisdictions. They are:

- *RTD*
- *DRCOG*
- *County of Boulder*
- *City of Boulder*
- *Town of Superior*
- *City of Louisville*

A list of additional stakeholders is included in Section 16 (Project Communications) of this PMP.

C. CDOT PROJECT MANAGEMENT TEAM

1) PROJECT DIRECTOR

This position reports to the EOC. The Project Director is the senior point of contact for the Project. Responsibilities include:

a. Overall responsibility for delivery of the Project on time and on budget.

b. Overseeing staffing issues and needs.

c. Serving as the senior point of contact for the Project.

d. Ensuring terms and conditions of the Contract are met by HPTE and the Concessionaire.

e. Managing the Contractual and financial matters.

f. Overseeing administration of the federal funding.

2) ASSISTANT PROJECT DIRECTOR

This position reports to the Project Director. The Assistant Project Director is primarily responsible for assisting the Project Director to carry out the responsibilities as described above.

3) EO COMPLIANCE OFFICER

The EO Compliance Officer will be responsible for assuring all Equal Employment Opportunity requirements of the contract are fulfilled.

4) DESIGN MANAGERS

The Design Managers report directly to the Project Director. Design Managers from both CDOT and RTD are charged with the overall administration of the design portion of the Project and ensuring the design conforms to the terms of the Contract. They are responsible for assuring a smooth cooperative relationship between the Concessionaire, CDOT, and RTD staff, and impacted local jurisdictions in review and approvals necessary as stipulated in the

Contract. They also coordinate with the Construction Manager to resolve design-related issues that are brought up during construction.

5) CONSTRUCTION MANAGERS

The Construction Managers report directly to the Project Director. Construction Managers from both CDOT and RTD are charged with the overall administration of the construction portion of the Project. They evaluate, process, and approve change orders, disputes, and claims. The Construction Managers also coordinate with the Design Managers both before and during construction so that the Project is built per the Contract and to the highest quality possible.

6) PROJECT PUBLIC INFORMATION (PI) LIAISON

The Project PI Liaison reports directly to the Project Director and is responsible for coordinating all Public Outreach efforts by CDOT, RTD and the Concessionaire during the life of the project.

7) RTD STAFFING

RTD provides staff to support CDOT in the management of the Project per the terms of Intergovernmental Agreement between CDOT, RTD, and HPTE dated August 2011. The following RTD staff are assigned to the project in support roles to CDOT:

a) RTD Project Manager

The RTD Project Manager provides support services to the CDOT Project Director in the overall management of the Project, as follows:

- *Provide overall project management services for the project, including the RTD elements.*
- *Assist with development of the RFP*
- *Assist with stakeholder relations*
- *Assist with the procurement process*
- *Review Concessionaire submittals*
- *Attend project meetings*
- *Review contract changes*
- *Act as a general liaison between CDOT and RTD for this project*
- *Other duties as necessary*

b) RTD Construction Manager

The RTD Construction Manager provides support services to the RTD Project Manager and assists the CDOT Construction Manager with overall construction management of the project. Responsibilities include:

- *Provide construction management services for the Project, including the RTD elements.*
- *Support the RTD Project Manager and the CDOT staff*
- *Assist with development of the RFP*
- *Assist with the procurement process*
- *Review Concessionaire submittals including schedules, pay estimates, and management plans.*
- *Provide support to the Project team on assessments*

- *Attend project meetings*
- *Review contract changes*
- *Act as a general liaison between CDOT and RTD for this project*
- *Other duties as necessary or assigned*

c) RTD Office Engineer

The RTD Office Engineer provides support services to the RTD Project Manager and assists CDOT with the overall delivery of the project, as follows:

- *Provide general engineering support to the Project team*
- *Review and track Concessionaire submittals*
- *Conduct project assessments for both design and construction activities as directed by the Project team*
- *Provide design and construction coordination support for Project team (tracking RFIs, design changes, updating plans sets, etc.)*
- *Conduct design and construction assessments as assigned by the Project team*
- *Attend project meetings*
- *Provide oversight activities for the RTD elements*
- *Other duties as necessary or assigned*

D. Operations and Back Office Support

The Concessionaire will be responsible for operating and maintaining the managed lanes on US36 and the reversible section of the managed lanes on I-25. They are also responsible for the operations and maintenance of the general purpose lanes on US36. The split of the operations and maintenance of the I-25 portion of the agreement is defined in the Contract Documents. The Concessionaire will contract directly with E470 for the back office support for collecting tolls and maintaining toll equipment.

Operations and back-office support and oversight are provided by:

- CDOT Public Information Liaison
- CDOT Environmental Manager
- Region 4 Traffic
- Region 4 Right-of-Way Manager
- Region 1 Maintenance general support for compliance with contract documents as related to general purpose lanes
- HPTE will establish an agreement with CDOT or a consultant for support for compliance with contract documents as related to the managed lanes
- CDOT Operations Engineers who have operated the I-25 Express Lanes for more than 15 years will provide general support to HPTE to assure compliance with the contract documents, advise HPTE on tolling issues based on their experience with the corridor and assure consistent application of tolling policies throughout the HPTE related tolling facilities.

- CDOT's Traffic Operations Center's ITS Engineers and Technicians who have a proven track record of operating and maintaining complex electronic systems to support highway operations. The TOC will operate the ATDM system being implemented on US 36.

E. TECHNICAL SUPPORT

Throughout the construction period, the Project will receive support from experienced CDOT and RTD engineers and construction managers; experts from other agencies; experts from CDOT's specialty units, such as environmental, traffic, and right-of-way; transit managers from RTD, and the FHWA Senior Operations Engineer.

5. PROJECT PHASES

A. FUTURE PHASES OF US 36 CORRIDOR

Phase 2 Construction work will substantially complete improvements to the US 36 corridor as described in the first Record of Decision (ROD). The Final Environmental Impact Statement (FEIS) delineated improvements to the US 36 Corridor as being accomplished in three phases, which do not coincide with the construction phases (Phase I and Phase I) described in this document. The first phase described in the FEIS and approved in the ROD (2009), which will be largely complete when work on this Phase 2 construction project is finished, included building two managed lanes one in each direction, of the US 36 corridor and replacement of certain structures. The elements of the 2009 ROD that are not completed are presented in the table below.

The second phase as envisioned in the FEIS includes construction of elements not yet approved in a ROD from west of Foothills Parkway/Table Mesa Drive interchange to east of the Wadsworth Parkway interchange. This includes climbing lanes between Foothills Parkway/Table Mesa Drive and McCaslin Boulevard; auxiliary lanes between McCaslin Boulevard and Interlocken Loop; BRT station improvements and interchange improvements at Foothills/Table Mesa Drive, Interlocken Loop and those improvements identified at Wadsworth Parkway not constructed in Phase 1 of the US 36 Managed Lanes project.

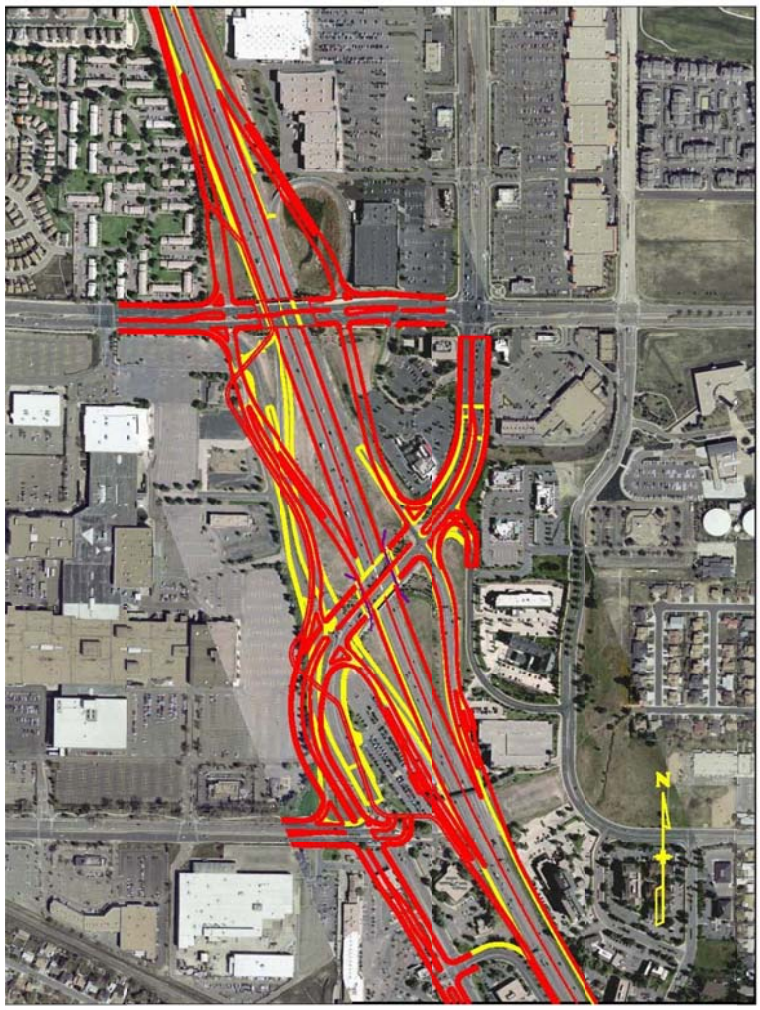
The third phase as envisioned in the FEIS includes construction of elements not yet approved in a ROD from east of the Wadsworth Parkway interchange to I-25. This includes auxiliary lanes; BRT station improvements; and interchange improvements at Federal Boulevard, Broadway/I-25, Church Ranch Boulevard/104th Avenue and Wadsworth Parkway to the ultimate configuration. At this time, CDOT does not have funding identified to complete phases 2 and 3 of the Final Environmental Impact Statement for the US 36 Corridor.

This Table describes how the Elements listed in the Record of Decision "Table 1-1 – Phase 1 Elements and Cost" that were not incorporated into Phase 1 or Phase 2 Construction Work may be implemented in the future.

Phase 1 Element (ROD Table 1-1)	Element Incorporation in US-36 Design-Build Project
Common Elements to All Segments Except the Denver Segment	
Increased bus service, including new bus service at Interlocken Boulevard to serve ConocoPhillips.	Not an element of the D-B project. ConocoPhillips has not yet re-located. If and when ConocoPhillips does relocate, RTD will evaluate business need.
Installation of signal priority as appropriate for buses	Bus queue jump lanes and signal priority modifications are being constructed at the Church Ranch interchange and separate bus ramps are being constructed at the McCaslin interchange as a part of the D-B projects.
Funding for marketing and branding of buses (costs are separate from those shown in this table).	Not an element of the D-B project. This will be implemented after analysis by RTD.
Enhancements to the BRT stations are constructed and a new service plan implemented.	Existing and new ramp BRT/bus stations are receiving some enhancements as a part of the D-B projects, including pedestrian canopies, windscreens, and information displays. New service plans will be implemented by RTD separately as appropriate
TDM elements will be implemented during construction for Phase 1.	Many TDM elements will be implemented as a part of the D-B projects.
Widen US 36 by replacing the thin shoulders and adding pavement to the outside from 80th Avenue to Sheridan	Based on poor quality of existing pavement and grade changes, majority of mainline pavement

Phase 1 Element (ROD Table 1-1)	Element Incorporation in US-36 Design-Build Project
Boulevard. Existing full depth pavement would be rehabilitated to provide more service life (hereafter called "widen mainline shoulders and rehabilitate pavement").	will be fully reconstructed. Approximately 30% of the existing pavement areas will receive a concrete pavement overlay of existing pavement.
Sound walls would be constructed in the Preferred Alternative location.	The majority of the sounds walls required will be constructed in the Preferred Alternative location.
Westminster Segment	
New/modified eastbound off-ramp and westbound on-ramp bus stations due to new interchange configuration Increased parking at existing park-n-Ride.	Sheridan interchange will only be partially reconstructed as part of D-B project. CDOT anticipates constructing full Phase 1 ROD ramp configuration and associated bus stations when justified by operational concerns. Increased parking at existing park-n-Ride will be implemented when RTD identifies a business need.
Mainline from Sheridan Boulevard to Church Ranch Boulevard/104th Avenue:	
Sound walls would be constructed in the Preferred Alternative location.	A sound wall will be constructed along the Madison Hills and Tuscany Trails subdivisions as a part of the Design-Build project. A portion of the wall will be constructed in the Preferred Alternative location, the remainder of the wall will need to be relocated with the construction of the future EB off-ramp to 92nd Avenue

Sheridan Blvd and 92nd Ave



Red Lines indicate Preferred Alternative
Yellow Lines indicate US 36 Express Lines Project Construction

The only area in Phases 1 and 2 that was constructed significantly differently than as identified in the Phase 1 ROD was at Sheridan and 92nd Ave. During RFP development and final design, it was determined that operations does not justify the greater expenditure that implementing the ROD configuration (Preferred Alternative) would entail at this time.

CDOT anticipates constructing those portions of the ROD that have not been included in the Design Build project when operational problems justify the expenditure.

6. PROCUREMENT AND CONTRACT MANAGEMENT

A. PUBLIC PRIVATE PARTNERSHIP DELIVERY

US 36 Managed Lanes Phase 2 Public Private Partnership Project – The first of its kind in the State of Colorado, this project will use innovative financing and an accelerated project delivery method to complete the last phase of the US 36 Managed Lane and could lead to a new way to fund and deliver major projects in Colorado. The procurement of a 50-year Design, Build, Operate Finance and Maintain Concessionaire Contract has been ongoing throughout 2012.

According to the FHWA, "A public-private partnership is a contractual agreement formed between public and private sector a partner, which allows more private sector participation than is traditional. The agreements usually involve a government agency contracting with a private company to renovate, construct, operate, maintain, and/or manage a facility or system," . In this project, the Public-Private-Partnership is associated with, and utilizes Design-Build procurement and tolling. Colorado does have enabling P3 legislation in place for use in transportation infrastructure projects.

The private entity or developer will design, construct, operate, maintain and finance the improvements based on the terms defined in the Concession Agreement.

The Concession Agreement will identify the work or resources, provide the project delivery method, and the method and payment schedule for reimbursement.

HPTE is hoping to realize benefits from using the Design-Build delivery method in the following areas:

- Savings of time, cost, and administrative burden;
- Improved quality without sacrificing schedule and budget;
- Reduction of risk;
- Improved coordination of efforts;
- Risk transfer from the HPTE/CDOT to the Concessionaire, including responsibility to deliver the Project within a fixed price and guaranteed completion date;
- Allocation of responsibility and risk to the parties who can best manage the processes and outcomes;
- Incentivizing the Concessionaire to provide the maximum scope content and early project delivery; and,
- Innovation in design, construction techniques, construction phasing, sequencing, risk management, traffic management, public information, and cooperative communication.

B. DESIGN-BUILD PROCUREMENT

CDOT's general procurement process can be summarized by the following activities:

- Identification of potential Design-Build project.
- Identification of project attributes (goals and risks).
- Approval authorization request.
- Team formulation.

- Scope definition.
- Base data gathering.
- Request for Proposal preparation.
- Selection of Concessionaire.

HPTE used a Two-Phase Selection procedure for this Project, guided by federal regulations and state statutes. The Two-Phase Selection procedure consists of a Request for Qualifications (RFQ) followed by a Request for Proposal (RFP).

The Award criteria options included the following: Lowest Price, adjusted low-bid (price per quality point), mets criteria and low bid, weighted criteria process, fixed price and best design, and best value. The Award of the Project was based on two elements–the "Cost" element, and the "Technical" element.

The award of the Project was based on the best value award criteria.

Key staff who participated in the oversight, development, support, and management of the Design-Build process included the Project and Assistant Project Directors, Directors, the Design and Construction Managers, Evaluation Committees, Technical Advisors, Subject Matter Experts, and Observers.

The Executive Oversight Committee oversaw the Project's Design-Build process development. They authorized and approved For Release prepared documents, such as the Letter of Interest, Request for Qualifications, and Request for Proposals. They also authorized and approved criteria and processes used to evaluate proposals.

The Technical Advisors and subject matter experts participated in the Evaluation of Qualifications, the Evaluation of Proposals, or both. The Technical Advisors and subject matter experts may have expertise in one or more technical element areas of the Project. These may include public information, quality management, traffic management, roadway design, construction methods and techniques, and safety.

C. CONTRACT ADMINISTRATION

Contract administration for the Design-Build Contract is the responsibility of HPTE. HPTE will managed the contract based on the requirements included in the Contract Documents.

Under the Design-Build approach, HPTE provides conceptual designs and focused on assessing compliance with processes and required performance results. The Design-Build concept places risks of ownership and accountability on the selected Design-Build team. These risks are further identified and defined in the submitted response to the Final Request for Proposals, which after selection and award become a portion of the Contract.

The selected Concessionaire has responsibility for Quality Control and Quality Assurance (QC/QA) for the Work, including, Design, Construction, and Materials. This QC/QA approach places the Design-Build team in full responsibility, and thereby eliminates the conflict over errors and omissions.

7. PROJECT SCHEDULE, COST, AND FUNDING

A. PROJECT SCHEDULE

Major project milestones for the Project leading to the award of the Design-Build Contract and the Project completion date are listed below. These are the anticipated dates and are subject to modification.

Milestone	Date
Issue Draft RFP for Industry Review	July 10, 2012
Return of the Confidentiality Agreement (Form 13) to HPTE	July 17, 2012
Proposer to Submit Agenda and list of Top 10 items for first one-on-one Meeting	July 20, 2012
First one-on-one Meetings	July 25-27, 2012
Proposer Questions Due (Set 1)	August 3, 2012
Submittal of Concession Agreement table of issues	August 10, 2012
E-470 Open House	August 15, 2012
Written Responses by HPTE to Proposer Questions (Set 1)	August 17, 2012
Second one-on-one Meetings	September 5-7, 2012
Proposer Questions Due (Set 2)	September 14, 2012
Issue second draft Concession Agreement	September 14, 2012
Written Responses by HPTE to Proposer Questions (Set 2)	September 28, 2012
Submittal of Concession Agreement second draft table of issues	October 1, 2012
Last Day for submission of ATC re installation of Phase 1 ETCS and/or provision of back office services by a party other than E-470.	October 19, 2012
Last Day for Alternative Technical Concepts (ATC) Submittals	November 9, 2012
Issue Final RFP	December 14, 2012
Final Responses to ATC Submittals	November 30, 2012

Proposers submit proposed model auditors for approval by HPTE	November 30, 2012
Last Day for Change to Proposer Team	December 7, 2012
Issue Final RFP (including Concession Agreement)	December 14, 2012
Proposals to be submitted for the I-25 Preventative Maintenance Program	January 9, 2013
One-on-one meetings with E-470	Week commencing January 6, 2013
Proposer Questions Due	January 10, 2013
Last Day to submit attorneys and law firms that will provide legal opinions and draft forms of legal opinion.	January 15, 2013
One-on-one meetings	January 22-24, 2013
Last Day for Alternative Technical Concepts (ATC) Submittals in relation to installation of Phase 1 ETCS and/or provision of back office services by a party other than E-470	January 25, 2013
Final Responses to ATC Submittals (save in relation to Phase 1 ETCS or back office services)	January 25, 2013
Final response to the I-25 Preventative Maintenance Program	January 25, 2013
Proposers submit proposed model auditors for approval by HPTE	January 25, 2013
Proposers submit proposed form of opinion of counsel for approval by HPTE	January 25, 2013
Written Responses by HPTE to Proposer Questions	January 30, 2013
Last Day for Change to Proposer Team	February 1, 2013
Final one-on-one Meetings	February 6-8, 2013
Final Responses to ATC Submittals for Phase 1 ETCS or back office services	February 8, 2013
Proposal Due Date	March 1, 2013
Proposal Evaluation	March 2 – March 27, 2013
Select Preferred Proposer April 5, 2013	April 5, 2013

Commercial Close	June 27, 2013
Financial Close Deadline	December, 2013
Anticipated Construction Completion Date	December 2015

1) ANNUAL UPDATE OF SCHEDULE

Under the terms of the Contract, CDOT and the Concessionaire will continually update the schedule to assure Project complete by the required date. This will include development of Recovery Schedules if any aspects of the Project delivery are falling behind schedule. This process is more fully detailed in the Contract Documents.

B. PROJECT FUNDING

CDOT and public sector bodies in the Denver area are strongly supportive of the US 36 Concession Project:

The Local Improvements Capital Payment Amount comprises $1.3 million for which HPTE has a commitment from Boulder County, and $12.5 million in relation to which HPTE has reached in-IGAs with the City of Louisville and the Town of Superior in respect of the McCaslin Interchange and the pedestrian crossing.

The amounts available to make up the HPTE Capital Payment in excess of the Local Improvement Capital Payment Amount are from funds available from CDOT, RTD and DRCOG. CDOT has already made substantial funds available for preliminary design work, for right of way acquisition, for environmental studies and for environmental mitigation projects. CDOT is also making funds available to the HPTE for project development efforts. HPTE has received commitments in principle from RTD and DRCOG and will enter into intergovernmental agreements with those bodies in relation to the contribution of funds to the Project.

HPTE has negotiated and signed intergovernmental or other formal agreements with these various sources of funding committing them to providing the designated funding.

Local Improvement Capital payment Amount will be available, and amounts up to the additional HPTE Capital Payment will be available as follows:

Funding Availability Date	**Funding Availability Date Local Improvement Capital Payment Amount**	**Additional HPTE Capital Payment Amount**	**Maximum Interim Capital Payment Amount**	**Cumulative Maximum Interim Capital Payment Amount**
From the Commencement Date	$6,190,829	$9,267,000	$15,457,829	$15,457,829
January 2014	$2,690,829	$7,400,000	$10,090,829	$25,548,658
January 2015	$4,918,342	$18,333,000	$23,251,342	$48,800,000

Totals	$13,800,000	$35,000,000	$48,800,000	

C. PROJECT FUNDING

The following Table summarizes expected expenditures for the US 36 Phase II project.

Estimated Expenditures	
Procurement and CDOT Preliminary Engineering	$3,955,000
Endangered Species Act Mitigation (Phase 2 construction project impacts)	ROW $1,300,000 Design included in above PE costs Construction $1,162,115
Wetland Mitigation (whole US36 corridor)	Design and Construction $2,950,000
Right-of-Way Acquisitions and Incidentals	$2,545,000
Utility Phase CDOT CE	Est. $900,000
Design (By Design Builder)	Est. 8% of Construction Costs
Construction Utility Phase	DB contract $120,600,000+850,000 (McCaslin underpass) CE $4,329,000 $ 9,835,538 (included in the DB Contract above)
Totals	**$137,691,115**

D. CONCESSIONAIRE FINANCE PLAN

The Concessionaire will submit as a part of its proposal a proposed plan of finance and overall financial strategy for the Project.

1) THE PROPOSED FINANCIAL PLAN SHALL PROVIDE THE FOLLOWING:

- Summary of the types and purpose of debt instruments proposed to be used including senior debt, mezzanine debt, quasi-equity finance. The financing is expected to be comprised of TIFIA, PABs and private equity;
- A letter from one rating agency providing an indicative investment grade rating;
- The Proposal shall include an opinion letter from Proposer's project finance lead or outside financial advisor indicating the proposed Financial Plan for the debt funding is achievable and sufficient to fulfill Proposer's commitments as set out in the Proposal.
- Opinion letter from the Proposer's traffic and revenue forecasting firm stating that the base case traffic projections are reasonable and the report is acceptable for use in financing the Project.

2) LENDER INFORMATION AND LENDER SUPPORT LETTERS

The Financial Plan may contain uncommitted financing. For an uncommitted Financial Plan, Proposers shall provide the following:

- Identity of primary bank Lender/underwriter and qualifications;
- Letter of support for the finance plan from the bank Lender/underwriter indicating:
  - *In principle they are willing to provide financing for the project;*
  - *They have reviewed the Concession Agreement as to form and accept it without material changes; and*
  - *Confirmation of their agreement to the terms of Proposer's Financial Plan;*
- Letter of support from the lead underwriter indicating:
  - *In principle they are willing to underwrite PABs or other capital markets debt for the project on the terms and structure in the Proposer's Financial Plan;*
  - *That the term sheets and structure of the Proposer's Financial Plan are reasonable and marketable*
- Indicative term sheets specifying:
  - *Loan or bond details;*
  - *Benchmark interest rates (e.g. LIBOR, MMD);*
  - *Margins and or spreads over the benchmark interest rates;*
  - *Loan covenants (e.g., coverage ratios, loan life and reserve requirements);*
  - *Hedging arrangements, if any; and*
  - *Arrangement or other fees;*
- Evidence of the Lender's review and acceptance, in principle, of Lender's technical, legal and insurance due diligence reports; and
- Evidence of the Lender's review and acceptance, in principle, of the Traffic & Revenue report from the Proposer's Traffic & Revenue forecasting firm.

3) EQUITY INFORMATION AND EQUITY COMMITMENT LETTERS

For each equity source, Proposers must provide:

- Identity of the equity investors. In cases where the equity is contributed by a fund, identify: (i) the date the fund was established; (ii) the total amount raised in the investment fund; (iii) the total amounts of undrawn and uncommitted funds available to be invested in the Project; (iv) confirmation that the Project is an eligible investment of the fund; (v) confirmation that the amount to be contributed does not exceed the maximum investment permitted by the fund bylaws, based on the amount raised in the investment fund as of the bid date; (vi) fund managers and general characteristics of the fund investors; and (vii) the percentage of participation;
- Letters of support or Board actions evidencing the Equity Members' commitment of the required equity for the Project;
- The amount of funds the equity investor is to commit and the timing of such equity subscription;
- Terms and conditions of the equity subscription, including dividend rights attaching to shares and/or repayment terms for shareholder loans, the extent to which funds are committed and the length of time funds will remain in the project vehicle; and
- If the total amount of equity finance (including quasi equity), is expected to change during the life of the Project, the terms and conditions of any further planned equity subscription, including the expected timing and amount, and whether this will be provided by the existing shareholders, partners or by third party investors.
- Discussion of the tax analysis assumed in financial model encompassing federal, state, local and foreign taxes including assumptions, tax structure of the special purpose vehicle, treatment of asset classes etc.
- Schedule to reach Financial Close including timing for approvals needed from HPTE/CDOT, completing the TIFIA Loan process, interaction with ratings agencies and lender credit committee/underwriting activities. The schedule shall reflect the Proposer's estimate of the Approval Date and Financial Close which may not be later than the Financial Close Deadline.

4) TIFIA REQUIREMENTS

The Phase 1 TIFIA Loan must be assumed by the Concessionaire with effect from the Phase 1 Services Commencement Date. The Concessionaire is in the process of applying for TIFIA credit assistance for the Phase 2 Construction Work in an amount up to $60 million. At financial close on the TIFIA Phase 2 loan, the concessionaire will be submitting a restated loan agreement for the Phase 1 loan because they will be assuming the TIFIA debt upon Commencement Date of the Phase 1 Managed Lanes (when the Concessionaire begins collecting toll revenue on the Phase 1 portion of the Managed lane, which is expected to be January 1, 2015).

Until the Phase 1 Commencement date, the Concessionaire will submit the Initial/Base case financial plan for Phase 2 only and HPTE will submit the annual updates for Phase 1. Once the Concessionaire takes on the Phase 1 Managed Lanes, a combined financial plan will be submitted as the annual update by the Concessionaire.

8. PROJECT REPORTING AND TRACKING

A. REPORTING

The Concessionaire will be responsible for implementing systems that track and report project progress, status, changes, and issues. Regular meetings between the Concessionaire and HPTE will allow all involved parties to be fully aware of the significant issues and actions planned as well as to mitigate any adverse impacts.

A Monthly Status Meeting attended by the Concessionaire team, CDOT, and RTD will provide a forum to discuss project costs, schedules, quality issues, compliance with federal requirements, and other status items in sufficient enough detail to allow all involved parties to be fully aware of the significant status issues and actions planned to mitigate any adverse impacts. At the meeting, the attendees review the Monthly Status Report prepared by the Concessionaire, as described in Section B below.

The results of the meeting will be reported to the Executive Oversight Committee. The Executive Oversight Committee includes all of the major stakeholders on the project so they are fully aware of the complete status of the Project and are in a position to take appropriate action to resolve issues, if necessary.

B. MONTHLY STATUS REPORTS

The Concessionaire shall submit Progress Reports to HPTE each month.

The Progress Report must include:

- Cover Sheet
- Monthly Progress Report

The Monthly Progress Report must include the following:

- Brief narrative description of progress for the Phase 2 Construction Work as a whole, including maintenance, design, and construction;
    - *Identification of start and completion dates;*
    - *Update of progress with respect to Utilities;*
    - *Identification of whether any completion and deadlines are achieved or revised during the period;*
    - *Summary of Quality Assurance and Quality Control program efforts, including results of design reviews;*
    - *Identification of problems and issues that arose during the period and remaining problems and issues to be resolved;*
    - *Summary of resolution of problems and issues raised in previous Monthly Progress Reports or resolved during the period;*
    - *Summary of Phase 2 Construction Work accidents (frequency and severity) and corrective actions taken;*
    - *Identification of critical schedule issues and proposed resolution;*
    - *Discussion of schedule variations from completion deadlines that have slipped or improved;*

- *Monthly DBE/WDP Report and tracking;*
- *Progress photographs; and*

- Certification by Concessionaire's Quality Manager.

The Concessionaire must submit a certification signed by its Quality Manager certifying that:

- All Contract Work has been checked and/or inspected by the Concessionaire's Quality Assurance and Quality Control program staff, and that all Work, except as specifically noted in the certification, conforms to the requirements of the Contract Documents.
- The Quality Management Plan, and all of the measures and procedures provided therein, are functioning properly and are being followed.
- All safety-critical Work, in conformance with the Project Safety Management Plan (PSMP) as further described in Section 20, has been reviewed and sealed by the professional engineer of responsible charge before construction begins.
- Monthly Maintenance Progress Report
  - *Monthly Maintenance Progress Reports will be required for the full term of the Concessionaire's Work-related maintenance responsibilities. These reports shall detail all maintenance Activities performed, monitored maintenance condition of existing facilities, identification of any deficiencies from minimum standards, and an action plan for correcting the deficiencies.*

C. PROGRESS STATUS MEETINGS

A Progress Status Meeting shall be conducted each time a monthly progress submittal is made. The meeting shall be used to verify, address and finalize the following:

- Actual start dates
- Actual and planned completion deadlines
- Activity percent complete
- Incorporation of Approved Change Orders
- Status of outstanding Nonconforming Work
- Work performance
- Contract Schedule, including changes from previous month's Contract Schedule
- Critical Path(s)

D. SCHEDULE MANAGEMENT

The Concessionaire must prepare, progress, revise, and submit Contract Schedules.

The Contract Schedules represent a practical plan to complete the Work before the Planned Full Services Commencement Date and convey the intent in the manner of the prosecution and progress of the Work.

The Contract Schedules must include the planned execution of the Work in accordance with the Contract Documents. The Contract Schedules shall include involvement and coordination, Utility Owners, Governmental Persons, engineers, architects, Sub-Contractors, and Suppliers in the development of the Schedules.

1) PROJECT COST

Project costs are tracked and reported through the CPM Schedule that is cost-loaded at each of the required WBS levels. Information relative to the current forecasted cost vs. the latest approved budget vs. the baseline budget is provided. Narratives, tables, and/or graphs (in a format that best displays the critical information) accompany the updated cost information. Reasons for deviation from the approved budget, impacts resulting from the deviations, and initiatives being analyzed or implemented to recover any cost overruns will be provided.

Additional information related to the Project's federal obligations and/or TIFIA disbursements for the Projects, compared to planned obligations and disbursements are also shown.

2) PROJECT QUALITY

This section summarizes the QA/QC activities from the previous month and highlights any significant items identified as being deficient in quality. Deficient items noted are accompanied by reasons and specifics concerning the deficiencies and corrective actions taken or planned. Responsibility for the corrective action is identified and the corrective actions are included in the Action Items/Outstanding Issues section of the report.

E. OTHER STATUS REPORTS

As part of the Contract Documents, the Concessionaire must also submit to CDOT the following monthly progress tracking reports:

1) MONTHLY MAINTENANCE REPORT

Monthly Maintenance Progress Reports will be required for the full term of the Concessionaire's maintenance responsibilities. These reports will detail all maintenance Activities performed, monitored maintenance condition of existing facilities, identification of any deficiencies from minimum standards, and an action plan for correcting the deficiencies.

2) MONTHLY TIFIA REPORT

The Concessionaire will be responsible for reporting to TIFIA on a monthly basis according to their loan agreement. HPTE will receive and review these reports as well.

The Concessionaire will submit the following status to HPTE in a single report:

- Project Costs expended to date as well as the preceding month and the amount of the Project Costs estimated to be required to complete the Project.
- Assessment of the overall construction progress since the date of the last report and since the beginning of the project, together with an assessment of how such progress compares to the Concessionaire's Current Initial Schedule.
- Specify the anticipated date to begin collection of toll revenue. If the Concessionaire plans to phase toll collecting facilities, the Concessionaire shall specify intermediate dates of toll collection as well as the anticipated date of final Toll collection facilities.

- Detailed description of all material problems (including but not limited to actual and anticipated cost and/or schedule overruns, if any) encountered or anticipated in connection with the construction of the Project since the date of the last report, together with an assessment of how such problems may impact the Concessionaire's Current Initial Schedule and the meeting of critical dates and a detailed description of the proposed solutions to any such problems.
- The delivery status of major equipment and the effect, if any that the anticipated delivery dates of such equipment has on the Concessionaire's Current Initial Schedule.
- Any proposed or pending Change Orders.
- Any material changes or deviations from CDOT's land procurement plans or schedule.

Per the terms of Schedule 14 of the Contract Documents, The Concessionaire recognizes that HPTE needs to be satisfied that the Project as implemented through the Contract represents good value for money throughout the Service Period and understands that HPTE will conduct a review of Actual Equity IRR on each Cash Flow Review Date. These reviews will allow HPTE to determine the Concessionaire's ability to meet its obligations with regards to debt payments, and service and maintenance as defined in the Contract.

HPTE will conduct the review in consultation with and with the participation of the Concessionaire. To this end, the Concessionaire will:

Lend reasonable assistance to HPTE in conducting such review;

Provide such information as may be reasonably requested by HPTE for the purposes of such review; and

Discuss with HPTE's Representative the actual or likely conclusions of any such

review.

Upon each Annual Update of the Base Case Financial Model the Concessionaire shall, at its cost, provide HPTE's Representative with the calculation of the Actual Equity Internal Rate of Return (IRR) using a financial model which is identical to the Base Case Financial. HPTE will evaluate the cash flow and IRR to determine the financial status of the Project, and to determine Cash Flow Sharing requirements as described in the Contract.

9. STAKEHOLDER AND INTERNAL COMMUNICATIONS

A. RTD

RTD and CDOT both have full time personnel assigned to the Contract procurement phase, and the design and construction phases of the Project. Coordination with RTD staff occurs at the Executive Oversight Committee and through integration of the staff from both organizations in the Project Management Team.

B. OTHER STAKEHOLDERS

CDOT has a strong commitment to maintaining an open line of communication with stakeholders who have an interest in the US 36 Corridor and is communicating and coordinating with them to the maximum practical extent. These stakeholders include:

- E-470
- Denver Regional Council of Governments (DRCOG)
- Mayors and Commissioners Coalition
- CSS Working Group
- 36 Commuting Solutions
- Federal Highway Administration (FHWA)
- Law Enforcement Agencies (Colorado State Patrol, Westminster, and Broomfield Police Departments).

C. INTERNAL COMMUNICATIONS

In addition to the informal contacts and meeting inherent in the Design-Build process, the following regularly scheduled meeting will be held between CDOT, RTD and the Concessionaire.

1) PROGRESS STATUS MEETING

A Progress Status Meeting shall be conducted each time a draft Monthly Invoice submittal is made. The meeting shall be used to verify, address and finalize the following:

- Actual start dates
- Actual and planned Completion Deadlines
- Earned value of Work that has been Accepted and reported in-place, based on installed quantities and Material on Hand (stockpiled Materials)
- Activity percent complete
- Incorporation of Approved Change Orders
- Verification of unit-price items, if any
- Status of outstanding Nonconforming Work

- Completion of Value Engineering Change Proposals, if any
- Work performance
- Project Schedule, including changes from previous month's Schedule
- Critical Path(s)

2) TASK FORCE MEETINGS

The Concessionaire and HPTE will hold regular Task Force Meetings for the following disciplines to facilitate "Over the Shoulder" review of the design: 1. Drainage; 2. Roadway; 3. Structures; 4. Traffic/ITS/Tolling; 5. Utilities 6. Environmental; 7. Public Involvement

As a minimum, the Concessionaire must prepare an agenda and conduct each meeting to discuss the status of the design, coordinate the design development between design disciplines, discuss constructability issues, and identify any questions associated with design requirements.

3) PROJECT SAFETY MEETINGS

The Concessionaire must conduct regularly scheduled Project Safety Meetings, tool box talks, etc., as specified in his Project Safety Management Plan.

4) DESIGN PROGRESS REVIEW MEETINGS

The Concessionaire must hold design progress review meetings at certain stages of the design development process (for example, 60 percent, 90 percent packages) and invite HPTE to attend. The design progress meetings shall be scheduled, conducted, and documented by the Concessionaire. The meetings minutes must be taken by the Concessionaire and submitted to HPTE within 5 Working Days after each meeting

5) WEEKLY COORDINATION MEETINGS

The Concessionaire will hold weekly coordination meetings with HPTE to provide Project Schedule, accomplishments, and planned activities, for the upcoming week.

6) PUBLIC INFORMATION PLAN REVIEW MEETINGS

The Concessionaire will schedule and hold PIP review meetings with HPTE to review, assess input, and/or modify the Concessionaire's PIP. These meetings will be held quarterly after the initial PIP is established and Approved by HPTE.

7) MAINTENANCE OF TRAFFIC TASK FORCE MEETINGS

Maintenance of Traffic Task Force meetings will be held to monitor the Traffic Management Plan, the Incident Management Plan and the Travel Demand Management Program. The Maintenance of Traffic Task Force will include, at a minimum, the Concessionaire's Public Information Officer, Traffic Control Supervisor, Superintendent, HPTE, RTD, 36 Commuting Solutions, and Local Agency representatives.

10. PROJECT MANAGEMENT CONTROLS

A. RISK MANAGEMENT PLAN

The Design-Build process is based on risk assessment, assignment, and allocation. Understanding and allocating risk is necessary to determine ownership and responsibility for individual tasks. Design-Build uses performance provisions that allow HPTE to assign and allocate risk to the party most capable to manage the risk.

The Risk Management Plan was developed by HPTE. It identifies how the Risk Matrix is revised regularly throughout the Project, as follows:

Standing project meetings where the Risk Matrix is reviewed

Frequency for review and update of the Risk Matrix

1) RISK MATRIX

HPTE developed the Project's Risk Matrix and will use it to identify, compare, and evaluate risk allocation over the life of the Project. As the Project nears Notice to Proceed, HPTE and RTD will further develop the Risk Matrix based on Industry Reviews into a Risk Management Plan that will fully delineate anticipated Risks and Risk Controls.

The HPTE Project Manager and the Concessionaire identify the parties responsible for developing a risk mitigation plan to address the risk. The periodic reviews ensure that the responsible party is updating the plan until the potential risk has been fully mitigated.

The Risk Management Plan is included in the Appendix F of this Project Management Plan. It:

- Identifies risks within the Project.
- Categorizes and prioritizes each risk.
- Determines the likelihood of the risks occurring.
- Identify the impact on the Project if risk does occur.
- Identifies actions to prevent the risk from occurring.
- Lists contingent actions to reduce the impact, should the risk occur.
- Schedules these actions within an acceptable timeframe.
- Delineates a method to monitor the status of each risk throughout the Project.

B. SCOPE MANAGEMENT PLAN

1) DESIGN

HPTE's Design Manager and Construction Manager will hold weekly or biweekly meetings with the Concessionaire to monitor the Project design and construction progress. The Project Director will sometimes attend these meetings, but in all cases will receive meeting minutes and a briefing from the Managers describing the results of the meeting.

On a monthly basis, the Design Manager and Construction Manager will attend a Plan Status

meeting chaired by the Project Director to report on the status of the Project and any problems and obstacles which have arisen in the previous month. Representatives from Specialty units, such as Utilities, ROW, Traffic, Hydraulics, Environmental, and the Region Business office will also attend. These individuals have a detailed knowledge of the requirements in their specialty and of the details as to how their specialty impacts the Project. The Project Director will make recommendations and/or give directions as to the best way to proceed.

The process for approving scope changes and verifying that the planned scope is actually completed will be included once the Concessionaire is under contract.

2) CONSTRUCTION

HPTE's Design Manager and Construction Manager hold weekly meetings with the Concessionaire to monitor progress. They discuss progress since the last meeting and anticipated work until the next. The Project Director may attend these meetings, but will be briefed as to the results by the Managers.

3) SCOPE CONTROLS

- Work Breakdown Structure (WBS) for Scope Identification
- Key Delivery and Interface Milestones

C. SCHEDULING CONTROLS

The Concessionaire will notify the Managers in writing at the first schedule submittal which software will be used. The Concessionaire will perform all work required so that the schedule accurately reflects the planned schedule and progress.

1) SCHEDULE CONTROLS

To manage the Schedule, the Concessionaire will submit to HPTE for Approval the following Project Schedules:

a) Preliminary Initial Schedule

The Preliminary Initial Schedule is defined as the Initial Project Schedule for the purpose of initiating Work on the Project. It will be a CPM Schedule with Activity detail for the first three months following the NTP1 and will be cost-loaded to WBS Level V.; The Preliminary Initial Schedule will conform to the Accepted WBS and include all Concessionaire-defined WBS Level IV and V Activities.

b) Original Initial Schedule

The Original Initial Schedule is defined as the Concessionaire's original plan for the Phase 2 Construction Work from NTP1 through Phase 2 Work Completion. It shall be a detailed CPM schedule with Work Activities and completion deadlines included for the full term of the Phase 2 Construction Work. The Original Initial Schedule shall be developed from the Preliminary Initial Schedule and shall conform to the Accepted WBS and include all Concessionaire defined WBS Level IV and V Activities. The Original Initial Schedule shall not change after Approval.

c) Current Initial Schedule

The Current Initial Schedule is defined as the Original Initial Schedule with cost and schedule

changes from Approved Change Orders incorporated. It shall be updated monthly with only Approved cost and schedule changes. The Current Initial Schedule will not show progress but shall maintain the original data date from the Original Initial Schedule as a baseline. The Current Initial Schedule shall be submitted to HPTE for Acceptance with each monthly Progress Report.

d) Revised Initial Schedule

The Revised Initial Schedule is defined as the Concessionaire's plan for the Phase 2 Construction Work which is current with progress to date. This Schedule shall reflect the planned execution of the Work for the remainder of the Phase 2 Construction Work along with a reallocation of the remaining resources and quantities to represent the estimate to complete the Work. The Revised Initial Schedule shall include all Approved Change Orders, Work Orders, and completion deadlines. A Revised Initial Schedule must be Approved by HPTE; such Approval shall only apply to the scheduled Work that is planned after the Revised Initial Schedule's Approval date.

The Revised Initial Schedule shall be prepared by the Concessionaire when requested by HPTE. The Concessionaire may request that HPTE review a Revised Initial Schedule at any time. However, such review will be undertaken if HPTE agrees with the need for that review.

e) Monthly Progress Schedule

The Approved Original Initial Schedule or Current Initial Schedule, shall be used as the basis to establish the Monthly Progress Schedule. It shall be updated every month to show the actual progress of Work, including Approved Change Orders and Work Orders.

The Monthly Progress Schedule shall include WBS Level VI detail for the upcoming three months of design and construction.

f) Recovery Schedule

The Recovery Schedule is defined as the Concessionaire's program and proposed plan for the recapture of lost Schedule progress and to achieve Phase 2 Work Completion by the Planned Full Services Commencement Date. The Recovery Schedule shall be based on the latest Accepted Monthly Progress Schedule and shall include equivalent detail. The Recovery Schedule shall show the proposed changes to the Schedule, include cost loading and additional detail to substantiate the recovery plan, and shall reflect all proposed changes to WBS Level V Activities through Phase 2 Construction Work completion.

g) As-Built Schedule

The last Current Initial Schedule submitted shall be identified by the Concessionaire as the As-Built Schedule. The As-Built Schedule shall reflect the exact manner in which the Concessionaire executed the Work (including start and completion dates, Activities, actual durations, sequences, and logic), and shall be signed and certified by the Concessionaire's engineer and the Concessionaire's scheduler as being a true reflection of the way in which the Work was executed at the time of Phase 2 Work Completion

D. DOCUMENT CONTROL

HPTE and RTD are using Aconex to track project Contract documentation. Aconex automates and streamlines the management of highway construction contracts by eliminating time-consuming repetitive tasks.

E. CHANGE CONTROLS

It is HPTE's and RTD's desire for the Concessionaire to have significant flexibility in determining how best to deliver the Project within the parameters established by the Contract Documents. Elements of the Contract have been identified as belonging to either Category A or Category B requirements. HPTE's Approval is required with respect to any proposed changes in the Category A and B Requirements. Changes in Category A Requirements may be submitted as Value Engineering Change Proposals (VECPs); and changes in Category B Requirements may be submitted as Category B Change Proposals (CBCPs).

1) VALUE ENGINEERING CHANGE PROPOSALS

The Concessionaire is encouraged to submit VECPs whenever it identifies potential savings. HPTE may also request the Concessionaire to develop and submit a specific VECP. The Concessionaire has the right to refuse to consider such HPTE-initiated VECPs.

a) Definition of Value Engineering Change Proposal

A VECP is a proposal developed and documented by the Concessionaire which:

- *Would modify or require a change in any of the Category A Requirements in order to be implemented (including any changes to the Basic Configuration or Temporary Configuration); and*
- *Reduces the cost of the Project without impairing essential functions or characteristics of the Project (including service life, economy of operation, ease of maintenance, desirability and safety) as determined by HPTE in its sole discretion, and provided that it is not based solely upon a change in quantities, performance or reliability or a relaxation of the Contract requirements.*

b) Required Information

At a minimum, the following information will be submitted by the Concessionaire with each VECP:

- *A statement that the submission is a VECP, a narrative description of the proposed change, the advantages and disadvantages of the proposed change and the justification for changes in function or characteristics and the effect the proposed change has on performance.*
- *Description of the existing Contract requirements, which are involved in the proposed change.*
- *Identification of the Contract requirements (with reference to specific Sections), which must be changed if the VECP is Approved.*
- *A description of any previous use or tests of the proposal and the conditions and results. If the proposal was previously submitted on another HPTE project, indicate the date, Contract number and the action taken by HPTE.*

- *Date or time by which a Change Order adopting the VECP must be issued in order to obtain the maximum cost reduction, noting any effect on the Contract Schedule.*
- *A complete cost analysis including current pricing for the existing Contract requirements compared to the Concessionaire's cost estimate of the proposed changes.*

The Concessionaire will provide any additional information requested by HPTE in a timely manner. Additional information could include results of field investigations and surveys, design computations, and field change sheets.

c) HPTE Review and Approval or Rejection of VECPs

HPTE may approve, in its sole discretion, in whole or in part, by Change Order, any VECP submitted.

d) Value Engineering Change Proposals Affecting Right-of-Way Plans

In a case where a VECP involves an adjustment to the ROW Plans (such as a proposal that additional real property be purchased to reduce construction costs), the VECP will compare:

- *The incremental reduction in costs (such as for not designing and building a wall); and*
- *The costs involved in adjusting the ROW Plans or environmental approvals (which will be based on the Concessionaire's additional costs, such as for providing real property acquisition support services, including profit, plus HPTE's additional costs, including land acquisition, appraisals, negotiation, relocation, condemnation, closing, property management, and environmental permitting, specifically including allocated costs of HPTE personnel involved in the acquisition); or (as appropriate) will compare:*

The incremental reduction in costs (if any) for not acquiring the unnecessary real property; and

The additional construction costs to be incurred.

2) CATEGORY B CHANGE PROPOSALS

The Concessionaire may submit CBCPs that, if Approved, may be implemented without any sharing of the Concessionaire's cost savings (and without any additional cost to HPTE).

a) Definition of Category B Change Proposal

A Category B Change Proposal (CBCP) is a proposal developed and documented by the Concessionaire that would modify or require a change in any of the Category B Requirements in order to be implemented that is "equal to or better than" the underlying requirement.

b) Required Information

At a minimum, the following information is to be submitted by the Concessionaire with each CBCP:

- *A statement that the submission is a CBCP, and a narrative description of the proposed change.*
- *Redline of the changes proposed to the Contract requirements that are involved in the proposed change.*

- *Description of why the proposed change is equal or better than the existing Contract requirements.*
- *Justification for changes in function or characteristics of each item, and effect of the change on the performance of the end item, as well as on the meeting of requirements contained in the Contract Documents, including environmental compliance requirements and requirements contained in Governmental Approvals if requested by HPTE.*
- *A description of any previous use or tests of the proposal and the conditions and results if requested by HPTE. If the proposal was previously submitted on another HPTE project, indicate the date, Contract number, and the action taken by HPTE.*
- *Signature on the CBCP form from Concessionaire's discipline lead, Design Manager, or Construction Manager, as applicable, and the Concessionaire's Project Manager.*

11. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Note: This section was taken from the US 36 US 36 Managed Lane/BRT Project RFP. It will be updated once NTP2 has been issued.

Per the terms of the Design-Build Contract, the Concessionaire will lead all Activities related to Quality Control (QC) and Quality Assurance (QA) for the Project. HPTE provides Independent Assurance. HPTE's Independent Assurance is the Verification of the Concessionaire's implementation of and adherence to its Quality Management Plan (QMP).

The Concessionaire's QMP will document the Concessionaire's Quality Management Program, including the Concessionaire's approach to quality policy, quality planning, Quality Control, Quality Assurance, quality improvement, quality personnel, training, and coordination with HPTE's Independent Assurance procedures. The QMP will list procedures for meeting all requirements of the Contract Documents.

A. ADMINISTRATIVE REQUIREMENTS

1) QUALITY POLICY

The QMP will include the Concessionaire's executive management written definition and endorsement of the Concessionaire's policy for quality, including objectives for quality and its commitment to quality. The QMP will delineate the procedures used by executive management to implement the Concessionaire's quality policy.

2) QUALITY PLANNING

The Concessionaire's QMP will use industry standard inspection procedures, as well as those outlined in HPTE's *Construction Manual*, *Field Materials Manual*, and *Standard Specifications for Road and Bridge Construction*.

The following elements will be addressed in the QMP:

- *Identification - Work items included in the Plan*
- *Characteristics - What characteristics of the item(s) will be inspected*
- *The QMP will include procedures to be taken for Nonconforming Work. Inspections will be performed during all phases of the Work from NTP1 to Final Acceptance to assure that the Work meets, and is being performed in accordance with, the Contract Documents.*
- *An examination of the quality of workmanship will also be conducted to confirm that all Work is being performed in accordance with all Contract requirements. Appropriate follow-up inspections, sampling, and testing of Materials will be performed as each item of Work progresses to assure consistency in workmanship, compliance with Contract requirements, (including Design and Construction Documents), and satisfactory performance of the Work in service.*
- *The Concessionaire will include in the QMP its planning methods to meet the requirements of the Contract Documents. The Concessionaire will include the Activities below in its quality planning efforts to meet the Contract Documents requirements for the Work. The Activities specified are the minimum for the QMP.*
- *Define and develop quality objectives for the Project.*

- *Identify the necessary processes, resources, and Quality Assurance personnel that are needed to assure that the Work meets the requirements of the Contract Documents, including environmental commitments, public information requirements, Maintenance of Traffic requirements, safety, project management processes, and the QMP.*
- *Ensure the compatibility of design, construction, installation, public information, inspection, and testing procedures.*
- *Develop and maintain the currency of Quality Control, Quality Assurance, and quality improvement procedures.*
- *Identify and define all measurable Contract Documents requirements.*
- *Identify construction Quality Assurance hold points for Concessionaire Quality Assurance testing and inspection and to allow HPTE the opportunity to perform its Owner Verification responsibilities.*
- *Identify, define, and implement standards of workmanship for all applicable Work features (e.g., concrete finishing).*
- *Identify, define, prepare, and maintain quality records and quality plans.*
- *Develop a procedure for preparation, control, Approval, and distribution of the QMP.*
- *Develop a procedure for Quality Assurance auditing to ensure the Concessionaire, Sub-Contractors, and Material Suppliers understand and are effectively implementing the QMP.*
- *Develop a procedure for corrective and preventative actions regarding quality compliance and implement the Quality Improvement Plan to address corrective Work.*
- *Develop a procedure and ensure the Concessionaire's executive management reviews the QMS at planned intervals to ensure its continued suitability, adequacy and effectiveness. Such reviews should include Quality Assurance/Quality Control (QA/QC) results, Owner Verification results, status of corrective/preventive actions, follow-up items from previous management reviews, changes to the QMS, and recommendations for improvement.*

3) QUALITY CONTROL

The Concessionaire will be responsible to establish, document, and implement, a Quality Control Program. The Quality Control Program will be described in the QMP and include all procedures necessary for the Concessionaire to control the quality of its production processes to meet the requirements of the Contract Documents. The Concessionaire will develop a testing and inspection schedule to control the production processes.

Construction Quality Control Activities will utilize statistical analyses of material test results, including mean, variance, range, and running averages; measurements; clearances; and interactions between QC and QA. The results of these Activities will be used by the Concessionaire to set up control charts to monitor and track variations in materials over time. The control charts and the analytical results on which they are based will be provided to HPTE as requested.

Tests or inspections performed by production or Quality Control personnel as part of the Quality Control process will not be used to satisfy the Quality Assurance requirements.

4) QUALITY ASSURANCE

The Concessionaire will be responsible to establish, document, and implement a Quality Assurance program. The Concessionaire will include in the QMP the methods and procedures by which the Work will be certified by the Concessionaire as complying with the requirements of the

Contract Documents.

Quality Assurance personnel will not participate in any Quality Control Activities and will be independent of the Quality Control personnel.

The Concessionaire will identify in the QMP all necessary resources and personnel to perform all Quality Assurance Activities required to ensure all Work meets the requirements of the Contract Documents. The QMP will identify the construction Quality Assurance hold points for Concessionaire Quality Assurance testing and inspection and will describe how the Concessionaire will notify HPTE so that it may have the opportunity to perform its Verification responsibilities.

5) QUALITY IMPROVEMENT

The Concessionaire will be responsible to establish, document, and implement a program for quality improvement. The Concessionaire will include in the QMP the methods for identifying, analyzing, evaluating, and implementing solutions to continuously improve quality. The QMP will establish and maintain specific procedures to ensure a successful Quality Improvement Program.

The QMP will establish and maintain documented procedures for planning and implementing Concessionaire quality audits to measure the effectiveness of the QMP and identify quality improvement opportunities. The Concessionaire will schedule and perform internal quality audits on the basis of the status and importance of the Activity to be audited.

Personnel that are assigned to audit Work Activities will not have direct quality responsibilities for the respective Activities they audit. The results of the audits will be recorded and reviewed with the personnel having responsibility in the area audited not later than 3 Working Days following completion of the audit.

The Concessionaire's project management personnel will timely implement the necessary corrective actions to improve any deficiencies found during the audit. The Concessionaire's follow-up Activities will ensure the implementation and effectiveness of the corrective action taken. Corrective actions will identify the root causes of deficiencies and will be developed, implemented, and tracked to prevent the recurrence of future deficiencies. Corrective actions will be monitored through review of documents, surveillance, or follow-up audits. Records of corrective actions will be kept together with the respective audit records and submitted to HPTE upon request.

The Concessionaire will consider HPTE's auditing efforts and the overall goals of the Project to determine where Concessionaire quality improvement audits will be performed.

6) QUALITY PERSONNEL

The Concessionaire's executive management will have overall responsibility for success of the QMP, and will ensure that responsibilities and authority are defined and communicated within their organization.

The Concessionaire will identify a Quality Manager for all Design Activities and a Quality Manager for all Construction Activities. The Quality Manager will be responsible for all Quality Control and Quality Assurance Activities. The Concessionaire's Quality Manager will develop and document procedures, instructions, and process controls to ensure the Work being produced by the Concessionaire meets the requirements of the Contract Documents. The Concessionaire's Quality Manager will review and approve the QMP prior to submittal to HPTE. The

Concessionaire's Quality Manager will be responsible for assuring, certifying, and providing documented evidence that the Work meets the requirements of the Contract Documents. At a minimum, the Quality Manager will report the status of the Project's quality monthly to HPTE.

All construction Quality Assurance testing personnel and Quality Control testing personnel performing concrete and hot bituminous pavement process control tests will meet the standards established in Section CP-10 of the HPTE *Field Materials Manual*.

The Concessionaire will ensure that personnel performing Work will have the education, training, skills, and experience to meet the requirements of the Contract Documents. The Concessionaire will maintain appropriate personnel records that may be examined by HPTE upon request.

7) TRAINING

The Concessionaire will establish and maintain documented procedures for identifying training needs and requirements and will provide training of all personnel performing Activities affecting quality. Personnel performing specific assigned tasks affecting quality will be trained in the specific plans, processes, and procedures as assigned in the QMP (e.g., MTIP, Concessionaire auditing procedures, etc.).

The Concessionaire will provide training to all personnel that may interface with HPTE's oversight efforts (audit process) to ensure it understands its roles and responsibilities for cooperating and responding to audits.

B. QUALITY MANAGEMENT PLAN REQUIREMENTS

The QMP will state the Concessionaire's commitment to quality and provide a clear definition of the scope of Activities and detail the methods to ensure the Work meets the requirements of the Contract Documents.

The QMP will list all deliverables to HPTE, as required by the Contract Documents and this Section.

1) CONCESSIONAIRE RESPONSIBILITY TO RESPOND TO NONCONFORMANCE NOTICES

For verification purposes, HPTE will perform assessment of the Work. These efforts do not relieve the Concessionaire of responsibility for checking all Work. HPTE will forward all assessment reports and Nonconformance Notices (NCN) (if any) to the Concessionaire. The Concessionaire will respond in writing to HPTE NCNs identified by importance (Level 1 or Level 2), through a Quality Management Oversight Database provided by HPTE. User accounts and training will be provided by HPTE for this purpose. The Concessionaire's response will identify how it proposes to remedy the Work identified as nonconforming and the date by which the remedy will be completed. The Concessionaire will describe in the QMP its approach and methodology for resolving and responding to HPTE's NCNs.

2) RESPONSIBILITY AND AUTHORITY

The Concessionaire will include in the QMP an organizational chart that illustrates a commitment to an effective quality program to ensure all Work meets the requirements of the Contract Documents. The QMP will describe the hierarchy of the Concessionaire's organization. The QMP will graphically depict the principal quality participants, showing lines of responsibility, authority, communication, and interfaces with HPTE; other involved agencies; and any other team members having a significant quality role, including Subconsultants, Sub-Contractors, and Suppliers. The Quality Manager and Quality Assurance staff will be shown on the organization

chart to report to the Concessionaire's executive management and be independent of the Concessionaire's Project Manager. The organization charts will be updated and distributed to HPTE when any changes to the organization are made.

The QMP will describe the roles and responsibilities of the Quality Manager, Quality Control and Quality Assurance staff, and other key personnel; and will describe their authority to implement quality improvements for the Project.

The Quality Manager and Quality Assurance staff will have no responsibilities in the production of the Work. The Concessionaire's Quality Manager and all Quality Control and Quality Assurance staff will have the authority to stop Work that does not comply with requirements of the Contract Documents.

The responsibilities of all personnel who manage, perform, and ensure the quality of the Work include:

- *Initiate action to prevent the occurrence of Nonconforming Work.*
- *Identify, evaluate, and document quality problems.*
- *Recommend or initiate quality improvement solutions through established organizational channels.*
- *Ensure the implementation of quality improvement solutions.*
- *When Nonconforming Work is identified, stop incorporating Work that is affected by the Nonconforming Work into the Project until the deficiency is corrected.*
- *The Concessionaire's Quality Manager will have the following responsibilities defined in the QMP:*
- *Facilitate compliance of Work with the requirements of the Contract Documents and the Approved QMP.*
- *Approve Concessionaire quality processes and procedures.*
- *Provide adequate resources and trained personnel for Quality Control and Quality Assurance Activities.*
- *Ensure the adequacy and enforcement of quality procedures, processes, inspections, and tests for all Work.*
- *Establish and implement procedures to control and ensure the Work performed by Subconsultants, Sub-Contractors, and Suppliers meet the requirements of the Contract Documents.*
- *Ensure the QMP is being implemented and report in writing regularly to the Concessionaire's executive management regarding the status of the implementation of the QMP.*
- *Ensure that quality records are properly prepared, completed, maintained, and delivered to HPTE, as required by the Contract Documents, to provide evidence of quality Activities performed and quality results achieved.*
- *Ensure that Quality Assurance staff is independent of the Concessionaire's Project Manager, and regularly reports to the Concessionaire's executive management.*
- *Continually promote awareness of the requirements of the Contract Documents throughout the Concessionaire's entire project organization.*

C. QUALITY ASSURANCE

The Concessionaire will be responsible to establish, document, and implement a Quality Assurance program. The Concessionaire will include in the QMP the methods and procedures by which the Work will be certified by the Concessionaire as complying with the requirements of the Contract Documents.

The QMP will establish procedures for procuring services. The procedure will include a review and approval process by the Concessionaire's organization for adequacy of specified technical requirements and the adherence to quality requirements. Procurement documents will contain data clearly describing the service needed. The Proposal Documents will describe how Sub-Contractors and Subconsultants are evaluated prior to award.

The QMP will describe the measures to be taken to ensure that Sub-Contractors and Subconsultants meet, implement, document, and maintain the QMS requirements.

The selection of Sub-Contractors and the type and extent of control exercised by the Concessionaire will be dependent upon the type of product or service and, where appropriate, on records of Sub-Contractors' and Subconsultants' previously demonstrated capability and performance.

1) DESIGN QUALITY ASSURANCE

The QMP will include procedures that address all elements of design, including architectural, civil, structural, geotechnical, survey, hydraulic, environmental, traffic, safety, and temporary Work. The Concessionaire will identify in the QMP all applicable computer programs to develop and check designs.

The QMP will describe how the design team schedules the design efforts, including task force meetings, design reviews, constructability reviews, design meetings, independent design checks, and a schedule for Released for Construction Documents and As-Built Documents.

The Concessionaire will identify in the QMP design input requirements. The Concessionaire will perform ongoing audits of the design input requirements. The Concessionaire will maintain an accessible, centrally controlled design manual, database, or list that contains all relevant design inputs to be used by design personnel for the Project. The Concessionaire will provide a process in the QMP to ensure that the design inputs are communicated to, and accessible by, the relevant designers responsible for incorporating design inputs into the design. The Concessionaire will include in the QMP how changes to design inputs are identified, reviewed, and Approved by authorized personnel prior to their implementation. The QMP will also include:

- Procedures to control and independently ensure that the design meets the requirements of the Contract Documents, including provisions for Subconsultant's designs and configuration management Activities.
- Procedures to identify and track Design Document deliverables.
- Procedures for approval, tracking and recording Revisions to Released for Construction Documents. The Concessionaire will have a formal procedure for comment resolution included in the QMP.
- Procedures for approval of Released for Construction Documents.

The Concessionaire's Design Quality Assurance Program will include:

a) Task Force Meetings

The Concessionaire will conduct weekly task force meetings to coordinate the design development within the Concessionaire's organizations and with HPTE and other affected agencies. As a minimum, the Concessionaire will prepare an agenda and conduct each meeting to discuss the status of the design, coordinate the design development between design disciplines, discuss constructability issues, and identify any questions associated with design requirements. The Concessionaire will take meeting minutes for all task force meetings and provide draft minutes to HPTE 4 Working Days after each meeting.

b) Design Progress Review Meetings

The Concessionaire will hold design progress review meetings at certain stages of the design development process for example, 60 percent, 90 percent packages) and invite HPTE to attend. The design progress meetings will be scheduled, conducted, and documented by the Concessionaire. The meetings minutes will be taken by the Concessionaire and submitted to HPTE within 5 Working Days after each meeting.

c) Released for Construction Documents and Revisions to Released for Construction Documents

These Documents allow the Concessionaire to initiate construction in advance. The Documents will include a MTIP. This plan will give testing quantities and frequencies, and Quality Assurance inspection hold points to confirm minimum QMP requirements have been met. The Concessionaire's Quality Manager will approve these Documents prior to release for construction. One copy of the Documents will be submitted to HPTE or made available to HPTE electronically prior to the Concessionaire beginning construction. The Concessionaire's Quality Assurance process for the Documents will be thoroughly documented in the Concessionaire's QMP.

Prior to release of Released for Construction Documents for structure construction, the following items will be required:

- The independent design check will have been completed per the current HPTE Bridge Design Manual and the original final structural design calculations will be revised and corrected based on comments from the independent design check for the structural element to be constructed.
- The Rating Package as defined in the HPTE Rating Manual will be completed prior to release of the superstructure construction drawings.

d) As-Built Documents

As-Built Documents will be submitted to HPTE for Acceptance. HPTE may audit As-Built Documents to ensure completeness and compliance with the requirements of the Contract Documents. HPTE will not Accept As-Built Documents until the Concessionaire has addressed, resolved, and incorporated, to the satisfaction of HPTE, any prior Concessionaire or HPTE comments. The Concessionaire will ensure and provide documentation to HPTE that all review comments have been addressed. The As-Built Documents submittal will include:

- All plans reflecting Released for Construction Documents or Revisions to Released for Construction Documents

- Resolution of noncompliance
- Design calculations
- Design reports
- Specifications
- Electronic CADD files, as specified elsewhere in the Contract Documents
- The Concessionaire will include in the QMP a process for a Licensed Engineer in responsible charge for the design to prepare, review, and approve all changes, including field design changes, Released for Construction Documents, and As-Built Documents. The Concessionaire will maintain a master list of approved design changes. The QMP will include a process to communicate design changes to the construction Site on a timely basis consistent with the progress of construction Activities.

The Concessionaire will include in the QMP a process for a Licensed Engineer in responsible charge for the design to prepare, review, and approve all changes, including field design changes, Released for Construction Documents, and As-Built Documents. The Concessionaire will maintain a master list of approved design changes. The QMP will include a process to communicate design changes to the construction Site on a timely basis consistent with the progress of construction Activities.

2) CONSTRUCTION QUALITY ASSURANCE

The Concessionaire will be responsible for performing and documenting all required construction QA/QC Activities necessary to control the Work. The QMP will extend to both permanent and temporary Work (erosion control, traffic control, etc.). Records of inspection and testing activities will be submitted to a HPTE-provided Quality Records Database (QRD), a secure web-based application. HPTE will provide user accounts and training. Materials test reports will also require entry of meta-data fields for analysis and comparison to HPTE Verification Test results.

As a minimum, the Concessionaire's Construction Quality Assurance Program will include the elements defined below:

a) Certification

The Concessionaire will include in the QMP a process to certify to HPTE that the Work produced meets the requirements of the Contract Documents.

b) Inspection

The Concessionaire will include in the QMP, and submit to HPTE for Approval, a MTIP that will include detailed inspection procedures to be used in cases where inspections are to serve as the basis for verifying compliance with the requirements of the Contract Documents. The Concessionaire will submit all records of inspection and testing to the HPTE-provided QRD. The Concessionaire will conduct each inspection in accordance with the Approved QMP. The Concessionaire will document whether the inspections passed or failed based on the "pass/fail criteria" established in the procedure and the requirements of the Contract Documents; (e.g., concrete depth checks on deck pours, rebar clearance/size, locations, elevations, stationing etc.). The Concessionaire will include failing inspection results, when applicable, in the inspection documentation.

c) Testing

At a minimum, the Concessionaire will follow the HPTE Field Materials Manual and its Frequency Guide Schedule for Minimum Materials Sampling, Testing, and Inspection requirements identified under the column titled "Project Verification Sampling & Testing Frequency" for all Quality Assurance tests required. The Concessionaire will document the results in the QRD and show if the test passed or failed based on the "pass/fail criteria" established in the Contract Documents. The Concessionaire will include failing tests results in the test documentation. Independent Laboratories will submit signed and certified test reports to the Concessionaire not more than 14 Working Days after completion of the tests for all tests which require an independent Laboratory. HPTE may witness any test conducted for Independent Assurance purposes. The Concessionaire will develop and maintain a current Test log for all tests required by the Contract Documents. As a minimum, the Concessionaire will document results of tests in report format. Include the following:

- Contract or Project Identification Number
- Identification of items tested
- Quantity
- Date and time test conducted
- Location of items tested
- Test procedure used
- Name of technician
- Acceptance criteria
- Results - Acceptance or rejection
- Authorized signature

d) COCs / CTRs

The Concessionaire will include in the QMP a method of handling and documenting Work/products accepted in the Work by COC or CTR.

The Concessionaire will obtain COCs / CTRs prior to incorporation in the Work and before inclusion on the Monthly Invoice (Book 2, Section 2.1.2, Cost Management), and maintain a complete log of all COCs and CTRs. The Log and all COCs / CTRs will be available for Owner Verification at any time.

The Concessionaire will include in his COC/CTR log, signed certification that all Materials represented by each COC/CTR was installed in the Work. Certification will be according to Book 2, Section 20 (Section 106.12 and 106.13), Modifications to Standard Specifications.

e) Quality Reviews

The Concessionaire's Quality Manager or designated representative will document formal reviews to verify that the Approved QMP is being effectively implemented.

3) MATERIALS TESTING AND INSPECTION PLAN (MTIP)

The QMP will include an MTIP describing all of the proposed inspections and tests procedures, including products provided by Suppliers during the manufacturing, receiving,

and installation process, to ensure the requirements of the Contract Documents are met. The MTIP will identify all inspections and tests required including, at a minimum, reference to the requirements of the Contract Documents, frequency of the inspections and tests, and the Concessionaire-developed Quality Assurance processes. Where no inspections or test standard exists in any of the HPTE manuals, the MTIP will develop criteria in writing based upon the best-available industry standard information and technology.

The MTIP will include procedures for delivery, handling, and storage of furnished products ensuring that they are properly handled and stored to prevent damage, deterioration, or theft. It will also document procedures for stored items and Materials consistent with the expected duration and type of storage, and procedures for monitoring special processes utilized in fabrication, assembly, and testing of specified products. Special processes are those requiring qualified/certified production, inspection, and test personnel to perform highly skilled Work, such as welding, brazing, soldering, non-destructive testing, machining, coating, or plating.

The MTIP will describe all Quality Assurance inspection and test Activities to be carried out including Quality Assurance hold points, and establish authority within the Concessionaire's organization for releasing Work beyond the hold point. While the Concessionaire will notify HPTE when Work has progressed to a hold point, it will be the responsibility of the Concessionaire's Quality Assurance Manager (or designee) to verify that all requirements have been met prior to allowing the Work to progress.

The MTIP will include a summary of Activity-specific Material quantities to document that the minimum sampling, testing, and inspection requirements have been met. This summary will be performed and provided to HPTE monthly. (The Concessionaire may follow the HPTE Form 250 as a minimum basis for their Materials documentation record.)

The MTIP will include processes to control, calibrate, and maintain test equipment to ensure it meets industry standards and other applicable requirements. Test equipment used by the Concessionaire will be of a quality and capacity that ensures that measurements made are to levels of accuracy and precision that are required by the test procedure. The MTIP will:

- Identify the test required and the accuracy required, and select the appropriate test equipment.
- Define procedures to calibrate all test equipment prior to initial use and at prescribed maintenance intervals against certified equipment and measurement standards of the National Institute of Standards and Technology or other similar recognized technical standards customarily accepted in the industry. Where no standard exists, the basis for calibration will be developed in writing based upon the best-available information and technology.
- Identify test equipment with a suitable indicator to show the calibration status of the test equipment.
- Maintain current calibration records for test equipment.
- Define procedures to ensure that environmental conditions are suitable for calibrating test equipment.
- Define procedures to ensure that the handling and storage of test equipment is such that the accuracy and fitness for use is maintained.

- Define procedures to safeguard test equipment, including test hardware and test software, from adjustments that would invalidate calibration settings.

4) REPORTING AND RECORD-KEEPING OF CONSTRUCTION QUALITY ASSURANCE DOCUMENTATION

The Concessionaire will maintain construction workmanship and materials quality records of all inspections and tests performed per the Approved QMP. These records will include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of Nonconforming Work and causes for rejection, etc.; proposed remedial action; and corrective actions taken. These records will cover both conforming and nonconforming Work, and will include a statement that all supplies and materials incorporated in the Work are in full compliance with the Contract Documents.

The Concessionaire's Quality Manager will ensure that quality records are properly prepared, completed, maintained, and delivered to HPTE, as required by the Contract Documents, to provide evidence of quality Activities performed and quality results achieved.

The Concessionaire will submit all Quality Assurance test measurements and test results, including failing results, and inspection records. The Concessionaire will submit test data and approved test results to HPTE using the QRD within 24 hours following the inspection or test. The responsible technician and the technician's supervisor will sign the daily test reports.

The Concessionaire's Quality Manager will also maintain a daily log of all inspections performed for both Concessionaire and Sub-Contractor operations. The daily inspection reports will identify inspections conducted, dates of inspections, results of inspections, locations and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed. The responsible technician and the technician's supervisor will sign the daily inspection reports. These daily inspection reports will document the day's events, Activities, and discussions in a format consistent with the requirements contained within HPTE's Field Materials Manual and Construction Manual.

To enhance coordination of HPTE's Independent Assurance Activities during construction, the Concessionaire will provide HPTE with a weekly look ahead of specific scheduled construction Activities designating location and planned quantities of materials to be placed, and protocols for identifying completed Work. The Concessionaire will provide HPTE with the actual construction Activities conducted during the previous week, designating location and quantities of materials that were placed.

D. NONCONFORMING WORK

The Concessionaire will include in the QMP procedures to develop and maintain a system to identify, control, remedy and report Nonconforming Work, including Nonconforming Work identified by HPTE. The QMP will include procedures to identify Nonconforming Work and to withhold progress payment requests on the monthly Invoice until the Nonconforming Work is remedied. The Concessionaire will remedy Nonconforming Work in accordance with the Approved QMP procedures. The responsibility for review and for the disposition of Nonconforming Work will be established in the QMP. The Concessionaire will identify Nonconforming Work by completing a Nonconformance Report (NCR). A NCR will include:

- Identification of Nonconforming Work, including tagging Work products
- Evaluation of the Nonconforming Work
- Recommendation for "repair" or "use as is" dispositions
- Cause of Nonconforming Work
- Proposed corrective action to prevent recurrence
- Responsibility for accomplishing corrective action
- Schedule of Work with a date of remedy completion
- Signature lines for the Quality Assurance Manager and HPTE verifying that the Nonconforming Work has been completed in accordance with the approved disposition

The Concessionaire's Engineer will approve the recommended remedy for the Nonconforming Work prior to submittal to HPTE for Acceptance. The Contactor will not perform the recommended remedy prior to Acceptance by HPTE for "repair" and "use as is" dispositions.

The Concessionaire will develop and maintain a Nonconforming Work log to track and identify the status of Nonconforming Work. An updated log will be submitted to HPTE weekly and will be used by the Concessionaire to look for Nonconforming work trends to determine if corrective actions are needed.

All NCRs will be recorded by the Concessionaire and provided to HPTE.

The Concessionaire will include in the QMP procedures for controlling the use of Nonconforming Work including the tagging of Nonconforming Work products. Nonconforming Work product tags will only be removed by the originator of NCR or the originator's supervisor, and only when the Concessionaire demonstrates to HPTE that the Nonconforming Work product meets the requirements of the Contract Documents or is Approved for use by HPTE.

1) CORRECTIVE AND PREVENTATIVE ACTION

The QMP will describe corrective and preventative action procedures that the Concessionaire will use to identify and improve processes that produce, or may produce, systemic Nonconforming Work identified by the Concessionaire or by HPTE. The Concessionaire's corrective and preventative action procedures will include:

- Methods to investigate the cause of systemic Nonconforming Work and to determine what corrective action is needed to prevent recurrence
- Methods to analyze all processes, Work operations, quality records, service reports, and HPTE audits to detect and eliminate the possibility of systemic Nonconforming Work from occurring
- Methods to prioritize corrective and preventive action efforts based upon the level of risk to the quality of the Work
- Controls to ensure that effective corrective and preventative actions are taken when the need is identified
- Methods to implement and record changes in procedures resulting from corrective and preventative actions

2) PUNCH LIST WORK

The Concessionaire will develop a Punch List and Punch List Log as required in the Contract. The Punch List and Punch List Log will be completed by Quality Control and Quality Assurance personnel. HPTE and other affected agencies will be invited by the Concessionaire to attend walks of the Work to include items on the Punch List. The Concessionaire Punch List and Punch List Log will be provided to HPTE.

E. HPTE OWNER VERIFICATION REVIEWS

HPTE's Owner Verification will use a sampling approach to assess the Concessionaire's compliance with the requirements of the Contract Documents. HPTE reviews of sampled Work for Contract compliance are defined as Verification reviews. The four types of HPTE Verification reviews are:

- Design Verification Reviews: Design Verification reviews will be performed on the products of design (drawings, specifications, and other design deliverables). Design Verification reviews are performed on an ongoing basis during the Project.
- Construction Verification Inspections: Construction Verification Inspections will be performed on construction Activities.
- Construction Verification Testing: HPTE will perform sampling and testing of Materials to validate the Concessionaire Quality Assurance testing program. Verification test results will be stored in the QRD.
- Process Audits: Process Audits will be performed on the implementation of all Contactor Work Activities, excluding design and construction. Such activities may include the requirements of the Contract Documents, such as public information, Maintenance of Traffic, environmental compliance, safety, project management processes, and meeting the requirements of the Approved QMP.

Verification reviews will entail the collection and documentation of objective evidence to determine whether the requirements of the Contract Documents have been met. The results of HPTE Verification reviews will be recorded by HPTE and will be documented within the Quality Management Oversight (QMO) database, a secure web-based application. Any NCNs identified by HPTE require a response within the QMO database.

1) HPTE VERIFICATION TESTS

HPTE will perform periodic Verification tests to ensure that the Concessionaire's Materials meet the requirements of the Contract Documents. HPTE will enter Verification test results in the Quality Records Database (QRD). HPTE will perform a statistical analysis to ensure that the Concessionaire's Quality Assurance test results correlate statistically with the HPTE Verification test results and meet the requirements of the Contract Documents. If HPTE determines that the compared test results do not correlate, HPTE will perform Independent Assurance tests to determine the cause of the differences.

2) HPTE INDEPENDENT ASSURANCE

HPTE will perform Independent Assurance reviews and tests to ensure that:

- Concessionaire Quality Assurance personnel are trained and certified and demonstrate that they understand the test procedures they are performing.
- The test equipment used by the Concessionaire Quality Assurance personnel is calibrated.
- Split sample test results correlate.

Independent Assurance test results will also be used as referee tests to assess statistically significant differences, determined by HPTE in its sole discretion, between Concessionaire Quality Assurance tests and HPTE Verification test results.

HPTE will schedule testing at frequencies as specified in the CDOT Field Materials Manual for the various materials incorporated into the Project. Following the guidelines and instructions in the "Frequency Guide Schedule for Independent Assurance Evaluation", the Region Materials Engineer will assign an individual from the Region Materials Laboratory to develop the CDOT Form #379, Project Independent Assurance Sampling Schedule. This person will determine the material items and number of tests required on every project. An initial review will be performed by the Region Materials Engineer's designee, to ensure independence between development and approval. The Region Materials Engineer, or his designee, will approve the CDOT Form #379 prior to distribution. A Copy of the "Frequency Guide Schedule for Independent Assurance Evaluation" from the 2014 CDOT Field Materials Manual is included in the Appendix

3) GOVERNMENTAL PERSON INSPECTIONS

Governmental Persons will have the right to inspect the Work, provided that the Governmental Person has jurisdiction over the Work and as required by Applicable Law.

12. ENVIRONMENTAL COMPLIANCE

The CDOT Environmental Manager is responsible for assuring HPTE's Environmental commitments are met. The Concessionaire must comply with all requirements of all applicable environmental laws, Environmental Approvals, and Governmental Approvals issued there under, whether obtained by HPTE or the Concessionaire.

The Concessionaire must submit to HPTE for Acceptance an Environmental Compliance Work Plan that specifically identifies all of the environmental compliance requirements for the Project and the Concessionaire's approach for complying with the requirements. The Environmental Compliance Work Plan includes:

1. All elements of the Construction Management Plan defined in Table D-1 of Appendix D of the *US 36 Corridor Phase 1 Record of Decision* (ROD) in the Contract Documents.
2. Description of means and methods to meet all commitments defined in the 2012 US 36 NEPA Reevaluation and 2012 US 36 Phase 2 NEPA Reevaluation.
3. Description of the process for tracking environmental commitments throughout design and construction in the Concessionaire's Document Control System (DCS).
4. Description of process for tracking environmental commitments and compliance throughout the post-construction maintenance periods.

The Concessionaire will be required to employ an Environmental Compliance Manager who will lead a field review with HPTE environmental staff to discuss environmental issues every two weeks, and has the authority to stop construction if Work activities jeopardize environmental laws, policy, or human health and safety.

A. ENVIRONMENTAL RESOURCES REQUIREMENTS

The environmental resources requirements for this project are detailed in the Contract Documents and any NEPA Reevaluations prepared for the project. The Concessionaire is responsible for any permitting and mitigation identified in the documents and required by the governing resource agencies. Environmental resources that are to be addressed include, but are not limited to:

- Air Quality
- Noise
- Historical Resources
- Paleontology
- Open Space Property
- Vegetation and Senate Bill 40 Wildlife Certification
- Visual

The Concessionaire is responsible for the requirements and conditions of the HPTE Reevaluation Form (#1399). The Form must be submitted to HPTE for Approval for changes to design, impacts, or mitigation that were not approved as a part of the ROD and and 2012 US 36 Phase 1 and Phase 2 NEPA Reevaluations. The Federal Highway Administration (FHWA) must concur with any NEPA revaluation. HPTE Approval of the reevaluation must occur before the proposed change from the ROD can be performed.

B. ENVIRONMENTAL PERMITS

The Concessionaire is responsible for obtaining all governmental and agency permits required for the Work, not otherwise obtained by HPTE, including but not limited to the environmental permits identified in the table below. The most recent specifics related to these permits are detailed in the Design-Build Contract and take precedence over anything stated in this PMP.

Table 5.2 REQUIRED ENVIRONMENTAL PERMITS	
Permits/Approvals	**Permitting Agency**
Construction Dewatering Permit	Colorado Division of Public Health and Environment (CDPHE) Water Quality Control Division
Air Pollutant Emission Notice and construction permit	CDPHE Air Pollution Control Division (APCD)
Demolition permits	CDPHE and all applicable local jurisdictions
Construction noise permit	All applicable local jurisdictions
Colorado Discharge Permit System (CDPS) Stormwater Construction Permit	CDPHE Water Quality Control Division
Subterranean Groundwater Permit	CDPHE Water Quality Control Division
Black Tailed Prairie Dog Relocation or Removal Permit	Colorado Parks and Wildlife
Prairie Dog Lethal Control Permit	City of Boulder or all other applicable local jurisdictions
Construction permits	All applicable local jurisdictions
Other local permits (stormwater, railroad, building, utility, survey, tree removal, wetland ordinances, work in parks and on trails)	Local agencies or railroad company
Letter of Approval for impacts to historic resources	State historic preservation officer
New development and redevelopment programs for MS4 Phase I and II areas	Follow requirements of local jurisdiction's MS4 permits and CDOT MS4 permit
SB 40 Certification (impacts to stream banks, stream channels, and riparian areas)	Colorado Parks and Wildlife
Construction waste material and transportation of solid wastes	CDPHE Hazardous Materials and Waste Management Division
Generation of contaminated materials during construction	CDPHE Hazardous Materials and Waste Management Division
Generation of hazardous waste per the Resource Conservation and Recovery Act (RCRA)	CDPHE Hazardous Materials and Waste Management Division

Table 5.2 REQUIRED ENVIRONMENTAL PERMITS	
Permits/Approvals	**Permitting Agency**
Stationary Source Air Quality Permit	CDPHE APCD
Section 404 Permit amendments	U.S. Army Corps of Engineers
Endangered Species Act Site Specific BA/BO	USFWS

The Concessionaire must obtain applicable permits from all directly affected Local Agencies, as required. For this project, specific permits may be required from the City of Westminster and the City and County of Boulder, and the Town of Superior.

C. WETLANDS/WATERS OF THE U.S. AND SECTION 404 PERMIT

The Phase 2 Construction Work can only impact a maximum of 6.10 acres of wetlands and 0.48 acres of waters of the U.S. for construction of the Basic Configuration elements. This maximum is based on the authorized impacts outlined in the Section 404 Permit from the U.S. Army Corps of Engineers (USACE permit no. 200380602) and anticipated impacts as documented in the2012 US 36 Phase 2 NEPA Reevaluation. The Concessionaire shall comply with the requirements and special conditions outlined in that permit (see Schedule 5A). Prior to construction, the Concessionaire shall fence off wetlands not to be impacted during construction.

The Concessionaire will be required to employ all applicable avoidance and minimization measures, strategies, and BMPs to minimize impacts and protect wetlands and waters of the U.S. to the greatest extent possible. The Concessionaire will be required to update HPTE throughout final design on the calculations of estimated and actual wetland and waters of the U.S. impacts. If at any time estimated impacts are calculated to exceed maximums in the above paragraph established for this Work, immediate consultation with HPTE must be initiated.

To ensure compliance with Wetlands requirements, the Concessionaire will be required to conduct Wetlands Field Investigations and Identifications. This effort includes the identification and marking of all wetlands and water of the US that have a potential to be impacted by Phase 2 construction work prior to construction and a functional assessment of all wetlands to be impacted. The Concessionaire will also be required to report all impacted wetlands in the previous month of construction work throughout the life of the project.

D. WILDLIFE

Specific requirements related to wildlife that may be impacted by this project are detailed in the Contract Documents. The Concessionaire is responsible to submit plans of action to HPTE for Approval for construction to avoid and/or mitigate any impacts to wildlife. Specifics in the Contract Documents include:

- Black-Tailed Prairie Dogs
- Wildlife Crossings and Wildlife Friendly BMPs
- Raptors and Migratory Birds
- Fisheries and Aquatic Resources
- Special Status and Sensitive Species

E. RECOGNIZED HAZARDOUS MATERIALS

The HPTE Environmental Manager is responsible for overseeing the Concessionaire related to activities surrounding recognized hazardous materials (RHM). Recognized hazardous materials (RHM) are defined as the presence or suspected presence of hazardous substances which may require management and/or disposal. Hazardous substances may exist on the surface or subsurface, in groundwater or surface water, or on structures to be demolished; and may be mixed with soil, water, building matrices, and/or other waste materials.

RHMs have been identified within the Project area. The Concessionaire will review the Phase I Environmental Site Assessment (October 2004), the FEIS Hazardous Materials Technical Report Addendum (April 2009), the US 36 Corridor Final Environmental Impact Statement (October 2009), and the 2012 US 36 NEPA Reevaluation (October 2011), as well as other applicable Contract Documents, for information related to the RHMs. The Concessionaire will develop a Materials Management Plan (MMP), Health and Safety Plan (HASP), and Spill Prevention Control and Countermeasures (SPCC) Plan to be submitted for approval by HPTE within 21 Days prior to NTP2. The Concessionaire will comply with all provisions set forth within the approved MMP, HASP, and SPCC.

The Concessionaire must participate in a review meeting with HPTE prior to submittal of the MMP and HASP to discuss the MMP and HASP. The Concessionaire's Environmental Manager and the Concessionaire's Safety Manager representative will be present at the meeting. The Concessionaire will incorporate modifications into the submitted MMP, HASP, and SPCC agreed to during this meeting.

The Concessionaire maintains documentation of all Activities related to the MMP and the HASP during construction and makes all such documentation available to HPTE upon request. The Concessionaire maintains records consistent with the requirements of Book 1 of the Contract Documents.

The Concessionaire must comply with all applicable requirements, including, but not limited to, all federal, state, and local laws and regulations; HPTE Standard Specifications for Road and Bridge Construction, Section 250, Environmental, Health and Safety Management for the management and disposal of the RHMs.

The Concessionaire must coordinate all remediation Activities through HPTE and must not discuss or negotiate with any regulatory agencies or third parties on behalf of HPTE. The Concessionaire must notify HPTE within 24 hours if contacted by any regulatory agencies or third parties concerning RHM associated or potentially associated with the Project.

The Concessionaire maintains documentation of all pertinent certifications of all Sub-Contractors and makes them available to HPTE upon request.

[*page intentionally left blank*]

13. RIGHT-OF-WAY

CDOT's Right-of-Way (ROW) personnel are acquiring the ROW for this Project. The anticipated ROW Acquisition Schedule is in Appendix G of this PMP and will be updated as the Project proceeds.

The CDOT Region 6 Right-of-Way Manager is responsible to assure the timely completion of all HPTE-acquired parcels as identified in the Contract Documents to minimize any adverse impacts to the Concessionaire's schedule. At the level of design completed at the issuance of this document, it has been determined that this Project will be constructed on or within existing HPTE ROW and the additional ROW being acquired.

However, if the Concessionaire thinks it is necessary, it can acquire ROW or temporary easements outside of the footprint discussed above. In the event that the Concessionaire requests additional ROW acquisition and HPTE Approves, additional acquisitions will be performed by the Concessionaire in compliance with the requirements of the Contract Documents. The Concessionaire is responsible for completion of all steps in the ROW acquisition process for Concessionaire Acquisitions, except for condemnations (if needed). The Colorado Attorney General's Office will file and prosecute all condemnations needed for Concessionaire Acquisitions.

If ROW acquisitions are approved by HPTE, the Concessionaire will be required to retain a ROW Manager. All ROW acquisitions by the Concessionaire (Concessionaire Acquisitions) must be approved by HPTE. The Concessionaire's ROW Manager is responsible for all ROW coordination and compliance requirements. The Concessionaire's ROW Manager will be qualified and approved by HPTE for both acquisition and relocation services. The Concessionaire's ROW Manager must coordinate all acquisition and relocation activities with HPTE.

A. ACQUISITION AND RELOCATION STANDARDS

All ROW acquisition and relocations for Concessionaire Acquisitions are performed in accordance with all applicable federal and state laws, including:

- The federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, including regulations promulgated pursuant to such Act, which appear at 49 CFR Part 24, as amended.
- Right of Way Requirements for Design/Build Projects, 23 CFR 710.313.
- The Colorado Relocation Assistance and Land Acquisition Policies Act, Section 24-56-101, et seq., C.R.S., as amended.
- The Colorado Eminent Domain Act, Section 38-1-101, et seq., C.R.S., as amended.
- HPTE's Right of Way Manual, as amended.
- HPTE's authority to acquire property and to acquire through eminent domain, if necessary, is set forth in Section 43-1-208, 210 and 43-3-106, C.R.S., as amended.
- If the acquisition of additional ROW by the Concessionaire is Approved by HPTE (Concessionaire Acquisitions), all appraisal, acquisition negotiation, and relocation will be done by HPTE-Approved consultants.
- All Concessionaire Acquisitions will be acquired in HPTE's name.

Some ROW for the Project will be obtained from the Regional Transportation District (RTD) by Use

and Occupancy Agreements, which function as follows:

- RTD retains title to the parcels needed for the Project.
- The Use and Occupancy define the rights and responsibilities of HPTE and RTD relevant to the Project.

B. POLICIES AND PROCEDURES

Specific policies and procedures related to appraisals, acquisitions, relocations, demolitions, construction/utility easements are detailed in the Contract Documents. The Concessionaire is responsible to report to HPTE regarding any parcels that may need to be required or to request approval to obtain easements required to construct the project.

In addition, the contract documents include provisions prohibiting the Concessionaire from entering private property without permission of the owner and provisions prohibiting coercion against displaced occupants still in occupancy. The HPTE Right-of-Way manager will be responsible for monitoring and ensuring ROW related requirements in the Contract documents.

14. SAFETY AND SECURITY

A. POLICY

The Project fully adheres to HPTE's policy regarding the safety of workers and the traveling public. These policies are more fully delineated in CDOT Policy Directive 80 and in Standard Specifications.

- The Concessionaire is solely responsible for health and safety in performance of the Work.
- Receipt of the Concessionaire's Project Safety Management Plan (PSMP) by HPTE will not impose any liability upon HPTE, nor will receipt of the Concessionaire's PSMP relieve the Concessionaire of any responsibilities under the Contract or applicable local, state, or federal safety statutes and regulations.
- The Concessionaire is responsible for Project security and public safety by maintaining a secure and safe Site.

B. SAFETY MANAGEMENT

1) PROJECT SAFETY MANAGER

The Concessionaire must have a designated Project Safety Manager responsible for the establishment, control, direction, and implementation of the Project Safety Management Plan (PSMP). The Project Safety Manager must have a high degree of program visibility and the authority to perform independent safety evaluations, and to ensure that safety issues are acted on in a timely manner.

2) PROJECT SAFETY MANAGEMENT PLAN

The Concessionaire's Project Safety Management Plan (PSMP) (HPTE Standard Specifications for Road and Bridge Construction, 107.06) must be submitted for review and acceptance prior to receiving NTP2.

During the project, the PSMP will be a living document and is required to be updated when a process, method, chemical or other Work criteria changes that affects the safety of a person or property. The updated portion of the PSMP must be submitted to HPTE for review.

The PSMP must answer the "who, what, and how" based upon the technical requirements contained within the RFP and the 12 elements identified in the CDOT Standard Specifications for Road and Bridge Construction, 107.06, which establishes administrative and technical means for accident prevention, requirements, and policy planning, management, and implementation for safety on the Project.

The objective of the PSMP is to eliminate or control accident risks to personnel, associated equipment facilities, the general public, and environment. Required activities include planning, management, hazard analyses, auditing, training, and documentation.

The Concessionaire's detailed Construction Safety Critical Plan must include an erection plan, a bridge removal plan, and a removal of portion of bridge plan, as applicable, as well as other requirements specified in Revision of 107. The detailed Construction Safety Critical Plan must be included in the Concessionaire's Project Safety Management Plan.

Project staff must be trained on the elements of the Concessionaire's accepted PSMP.

a) Safety Management Plan Requirements

The Concessionaire's SMP must include incremental updates required to reflect planned Activities. The program must be approved (signed) by a member of the Concessionaire's executive management team. The SMP must be specific to this project and include work to be performed by Sub-Contractors and measures that must be taken to control hazards.

The Concessionaire's SMP is required to:

- *Include a statement of safety and health policy.*
- *Delineate administrative responsibilities for implementing the SMP.*
- *Identify responsibilities and accountability.*
- *Require the Concessionaire to conduct a safety orientation for all employees prior to their entering the Project Site.*

C. REPORTING

1) ACCIDENT REPORTS

The Concessionaire is required to provide verbal notification and a written report to HPTE of any and all accidents whatsoever arising out of or in connection with the performance of the Work, whether on or adjacent to the Site, which cause death, personal injury or property damage. In cases of death or serious injury, verbal notification to HPTE must be immediate and under no circumstance can notification exceed four hours from time of occurrence. Verbal notification includes date and time, location, brief description, extent of property damage, and extent of injuries. A written accident report must be prepared by the Project Safety Manager and furnished to HPTE within 72 hours of the occurrence. The written accident report shall be signed and includes the date and time, individual(s) involved, affiliation(s), location, and all other pertinent data regarding the accident.

2) MONTHLY ACCIDENT SUMMARY REPORTS

The Project Safety Manager must provide a written monthly accident summary report to HPTE within 7 Days of the last day of the month. The report must include the following minimum information:

- A summary of the previous month's accident history.
- A summary, to date, of the Project's accident history.
- Copies of accident reports for the previous month.
- Copies of OSHA logs.
- Status update of corrective actions.

D. SAFETY CRITERIA

1) APPLICABLE STANDARDS

The Concessionaire will conduct all Work in accordance with the requirements in the contract. Should the requirements conflict, the most stringent requirement will apply. The Concessionaire

will meet the following requirements which must be incorporated into the Concessionaire's SMP:

- FPA 101, Life Safety Code
- Uniform Fire Code
- Local jurisdiction fire and building codes
- NFPA 70, National Electric Safety Code
- 29CFR1910, Federal Occupational Safety and Health Standards (General Industry)
- 29CFR1926 Federal Occupational Safety and Health Standards (Construction Industry)

[*page intentionally left blank*]

15. TRAFFIC MANAGEMENT

A. ROLES AND RESPONSIBILITIES

HPTE will be responsible for reviewing and approving the Concessionaire's Traffic Management Plan (TMP). The Concessionaire will be responsible to establish a plan to conduct all Work necessary to meet the requirements associated with traffic management, including provisions for the safe and efficient movement of people, goods, and services through and around the Project while minimizing impacts to local residents and business and commuters.

1) PERIODIC REPORTING

Maintenance of Traffic Task Force meetings will be held to monitor the TMP, the Incident Management Plan and the Travel Demand Management Program. The Maintenance of Traffic Task Force will include, at a minimum, the Concessionaire's Public Information Officer, Traffic Control Supervisor, Superintendent, HPTE, RTD, 36 Commuting Solutions, and Local Agency representatives.

The Concessionaire must report to HPTE monthly, at a minimum, on the status of traffic management. Exact reporting requirements will be established once the Concessionaire has submitted the Project TMP.

B. TRAFFIC OPERATIONS

1) MAINTENANCE OF TRAFFIC TASK FORCE

The Concessionaire must establish and maintain a MOT Task Force to assure proper coordination with affected agencies. The MOT Task Force will include, at a minimum, the Concessionaire's Public Information Officer, Traffic Control Supervisor, Superintendent, HPTE, RTD, US 36 Commuting Solutions, and Local Agency representatives.

The MOT Task Force will meet weekly, and will be an integrated element of the Public Information effort.

Within 14 Days after Acceptance of the MOT Task Force members, the Concessionaire must hold a Traffic Management Plan (TMP) kick-off meeting. Attendees will develop agreement upon the level of detail required for the TMP.

An initial task for the MOT Task Force will be to develop the TMP.

2) TRAFFIC MANAGEMENT PLAN (TMP)

The Concessionaire's TMP defines the strategic plan for traffic management on the Project. The TMP must be submitted to HPTE for acceptance at least 30 Days prior to NTP2. No Work that impacts traffic will be allowed to commence until the TMP is Accepted.

The TMP addresses major aspects of the Work for individual construction areas, phases, and stages. These aspects will include, but are not limited to:

- Detailed approach to the development of Traffic Control Plans (TCP) and Methods of Handling Traffic (MHT) on the Project.
- List of known or potential road, ramp, and lane closures.

- Description of the proposed detour routes including the information described below.
- An approach to Travel Demand Management (TDM) strategies
- Approach to the use of Intelligent Transportation System/Variable Message Sign (ITS/VMS) boards and traffic signals, including coordination with the affected local agency's Traffic Management Center or the HPTE Traffic Operations Center (TOC), and the Concessionaire's representative.
- Approach to PI.
- An approach to coordination and cooperation with construction being performed by projects adjacent to the Project limits.
- An approach to coordination with RTD.
- An approach to traffic access management, including restrictions, bicycles, pedestrians, and potential impacts to handicapped mobility.
- Relevant portions of the Incident Management Plan (IMP), described below.
- An approach to special event coordination.
- Typical section requirements
- Emergency requirements
- Temporary closure scenarios
- Access

3) HPTE TRAFFIC MANAGEMENT CENTER (CTMC) COORDINATION

To better inform the public about construction issues and incidents, the Concessionaire will be able to submit requests to HPTE for the for use of the CTMC VMS boards. The Concessionaire will coordinate directly with the CTMC following review by HPTE.

For after-hours operations only, the Concessionaire must coordinate directly with the HPTE Traffic Management Center (CTMC). The CTMC will be available to the Concessionaire to modify VMS messages 24 hours a day, 7 days a week.

The Concessionaire must coordinate with HPTE and the CTMC for emergencies in accordance with the Accepted Incident Management Plan.

4) INCIDENT MANAGEMENT PLAN (IMP)

The Concessionaire will be required to develop a detailed Incident Management Plan (IMP) as a companion to the TMP to manage traffic incidents and emergency operations on the Project Site. The IMP must comply with the HPTE Guidelines for Developing Traffic Incident Management Plans for Work Zones and be consistent with the existing US 36 Incident Management Plan included in the Contract Documents.

The IMP is to be submitted to HPTE for Acceptance at least 30 Days prior to NTP2. No Work that impacts traffic will commence until the IMP is Accepted.

At a minimum, the IMP must include the following components:

- Coordination with the Public Information Plan (PIP)

- Incident detection and identification
- Incident response
- Incident site management
- Incident clearance
- Dissemination of traveler information regarding incidents
- Courtesy patrol
- Emergency services notification, including local area Police Departments, the Colorado State Patrol (CSP), local area fire departments, ambulance services, and any other emergency response providers.
- Notification of local school districts about possible impacts to school bus routes, student drop-offs, and/or pedestrian facilities
- Geographic and other special constraints
- Available resources
- Operational procedures

5) TRAVEL DEMAND MANAGEMENT PROGRAM (TDM)

The Concessionaire must develop a TDM program to reduce travel demand and improve traffic operating conditions during the construction period. The Concessionaire is required to submit the TDM program to HPTE for Acceptance within 30 Days after NTP2.

The TDM program will be required to specify:

- Coordination with 36 Commuting Solutions.
- A TDM marketing plan.
- A plan to evaluate the effectiveness of the TDM program.
- Additional TDM strategies which would complement current corridor and regional strategies facilitated by 36 Commuting Solutions and DRCOG.

6) ADDITIONAL PROCEDURES

Detailed requirements for managing the following are included in the Contract Documents.

- Business and Private Access
- Maintenance of Traffic Variance Process
- Concessionaire Response Time
- Special Events
- Coordination with RTD Transit System
- Coordination with Adjacent Projects

C. DESIGN REQUIREMENTS

The Concessionaire's Professional Engineer in responsible charge of the MOT design will prepare, review, and approve field design changes; Released for Construction documents; and TCP and MHT plans.

1) TRAFFIC CONTROL PLANS

The Concessionaire must prepare a TCP to control traffic on the Project. The TCP generally describes all lane and shoulder configurations including widths, traffic control signing, pavement markings, traffic control devices, temporary signalization, construction access, emergency access, work areas, and pedestrian/bicycle requirements necessary for each construction phase.

2) METHODS OF HANDLING TRAFFIC (MHT)

The Concessionaire is required to prepare MHTs in accordance with the Project Special.

Temporary traffic signals are to be installed in conformance with standards set forth in the Contract Documents.

3) DESIGN SPEED AND POSTED SPEED

Minimum design and posted speeds for Work zones will conform to the following table:

** The Concessionaire will provide existing design and posted speed whenever it can be reasonably maintained on the local system.

Location	Design Speed (mph)	Posted Speed (mph)
36 Mainline	65	55
36 Ramps and collector distributor roads	25	25
Local Streets	25*	25*

4) MINIMUM LANE REQUIREMENTS

The Concessionaire is required to design the following items to the specifications detailed in the Contract Documents.

- Lane Restrictions
- US 36 Lane Restrictions
- Ramps and Frontage Roads
- Local Roads
- Queue Lengths During Construction
- Working Time Violations Incidents
- Interchange-Closures
- Abandonment of Roads

5) INTERCHANGE AND RAMP CLOSURES

The Concessionaire is required to follow the specifications detailed in the Contract Documents. Temporary or permanent interchange closures will not be allowed.

Interchanges

Construction at all interchanges will be consistent with the CDOT Regions 4 Lane Closure Strategy.

Temporary or permanent interchange closures will not be allowed without advance approval by HPTE.

The Concessionaire shall coordinate and develop phasing for the construction of the McCaslin Boulevard interchange, which demonstrates the ability to provide:

- Continuous (uninterrupted) signal operations,
- Unrestricted traffic movements to all quadrants of the interchange,
- Two through lanes in each direction along McCaslin Boulevard with approved off-peak lane closures only,
- Safe pedestrian accessibility across US 36, along either side of McCaslin Boulevard,
- Continuous (unrestricted) RTD bus operations, movements and pedestrian accessibility,
- Continuous access to adjacent businesses.

Ramp Closures

The CDOT Region 4 Lane Closure Strategy does not provide information for the US 36 at McCaslin Boulevard westbound on/off-ramp and eastbound on/off-ramp. The ramp closure times shall follow the mainline closure times provided in the CDOT Region 4 Lane Closure Strategy.

Detour Routes

Unless otherwise specified, only State Highways will be used for detour routes. Local Agency roadways to be used as detours must be approved by the Local Agency. All detour routes will be the shortest length possible.

Trail and Pedestrian Impacts

Existing trail systems, temporary trails, sidewalks, and pedestrian routes must be maintained at all times. The Concessionaire will be required to meet all requirements of ADA as specified in the Contract Documents.

Emergency Pullouts

The Concessionaire will provide emergency pullouts on US 36 for disabled vehicles, staging of incident management, and law enforcement vehicles when shoulder widths are less than 8 feet. Emergency pullouts will be provided between each interchange or at .5-mile spacing, whichever is less. Interchange distance will be measured from ramp gore to ramp gore in the same direction of travel. The minimum pullout length will be 150 feet, not including transitions. Transitions will be made at 15:1 or greater. The minimum pullout width will be 12 feet measured from 2 feet beyond the travel lane. The pullouts will be signed for emergency parking only, will have a paved surface, will include advance signing in compliance with the Manual on Uniform Traffic Control Devices (MUTCD), and will not be subject to ponding or other weather-related conditions that could render them unsafe or ineffective. Snow removal in emergency pullouts is the responsibility of the Concessionaire.

6) COURTESY PATROLS

The Concessionaire will provide courtesy patrols within the Project limits as part of the implementation of the IMP. Region 6 currently has an existing courtesy patrol service (Mile High Courtesy Patrol (MHCP)) that patrols between I-25 and Wadsworth Parkway from 6:30 to 9:00 AM and 3:30 to 6:30 PM, Monday through Friday. The Concessionaire will coordinate with the MHCP operator in providing service for the Project in areas and time periods as defined below. The Concessionaire's courtesy patrol will comply with all terms of the Mile High Courtesy Patrol Scope included in the Reference Documents, in performing this work.

D. CONSTRUCTION REQUIREMENTS

The Concessionaire will provide installation, maintenance, and removal of all temporary traffic control devices.

1) TEMPORARY TRAFFIC CONTROL DEVICES

a) Construction Signing

Construction signing within the Project limits and all detours will comply with CDOT *Standard Specifications*, the MUTCD and all other applicable standards.

b) Temporary Traffic Signals

Temporary traffic signals will comply with Schedule 5, Section 14, Signing, Pavement Marking, Signalization & Lighting. Upon discovery of a signal malfunction, the Concessionaire must immediately notify the entity responsible for the signal.

c) Temporary Marking Paint and Signs

The Concessionaire will be required to furnish, apply and remove temporary pavement marking paint in accordance with Standard Specifications. Temporary paint striping will meet the conformity of lines (including no overspray), dimensions, patterns, locations and details established in the Concessionaire's TCP and MHT.

- *Temporary pavement paint striping will be re-striped once a month, or as required to maintain safe traffic operations.*
- *Epoxy-based paint will not be allowed on concrete pavement surfaces for temporary striping.*
- *Hydro blasting, or other methods that do not result in scaring of permanent pavements will be used for removal of temporary striping.*

d) Glare Shields

The Concessionaire will be required to evaluate the applicability of glare shields in all crossovers and to install glare shields if warranted.

2) MAINTENANCE OF TEMPORARY TRAFFIC CONTROL DEVICES

The Concessionaire will be responsible for the maintenance of all temporary traffic control devices within the Project limits, including the local street system.

3) DETOUR PAVEMENT

The Concessionaire will provide a paved surface for all detours. Detour pavement locations will be generally described in the Concessionaire's TMP and detailed in the Accepted TCP. The Concessionaire will determine the type and thickness of pavement that will be used to accommodate existing traffic loadings.

The Concessionaire will maintain the detour pavement for the entire period that it is open to the traveling public, including all temporary approaches, accesses, crossings, and intersections with adjacent roads and streets. Detour pavements will be maintained in good operating condition devoid of potholes, uneven surfaces, and rutting. HPTE may direct the Concessionaire to repair or replace detour pavements if, in HPTE's sole discretion, detour pavements are determined to be in poor condition. Detours that use existing streets pavements will be subject to pavement repair or replacement where it is determined that the condition of the existing pavement has noticeably deteriorated over the duration of its use as a detour. The Concessionaire will obtain written approval from the affected Local Agency prior to use of any local streets for detours.

The Concessionaire will be responsible for the complete removal and disposal of all temporary detour pavement.

4) TEMPORARY LIGHTING

The Concessionaire will maintain temporary lighting at a level equivalent to existing lighting provided within the Project limits.

[*page intentionally left blank*]

16. PROJECT COMMUNICATIONS (MEDIA AND PUBLIC INFORMATION)

A. ROLES AND RESPONSIBILITIES

HPTE is responsible for reviewing and approving the Concessionaire's Public Information Plan (PIP).

B. PUBLIC INFORMATION PLAN

The Concessionaire will be required to prepare and maintain a Public Information Plan (PIP), in coordination with HPTE, to communicate information to and from the public regarding the Project. This PIP will be used for the duration of the Work by the Concessionaire to manage and implement the public information process. The Concessionaire's final PIP must be submitted to HPTE for Approval prior to NTP2.

As significant components of the PIP, there are categories of information that will be communicated and coordinated between HPTE and the Concessionaire. These are messages that communicate the following:

1) THE VISION OF THE PROJECT

Answers to questions such as why the Project is needed, what work will be done, how the Project will benefit customers, how the Project fits into the community, and how the Project fits into broader transportation plans.

2) THE PROJECT'S PROGRESS

Ongoing messages to keep people informed about how the Project is moving forward, whether it is on schedule and on budget and the status of the Project goals.

3) COPING DURING THE PROJECT WORK

Coping information helps people deal with inconveniences caused by the Project, such as details regarding detours, lane closures, closed ramps and access impacts, information resources available to people, including Transportation Demand Management (TDM) strategies, and other Activities that affect residents and businesses.

The Concessionaire's PI Officer will be required to coordinate with the HPTE Project PI Liaison to provide coping information to the public, including utilization of the checklist according to requirements of the Maintenance of Traffic section of the Contract documents.

The Concessionaire will be accessible 24 hours a day, 7 days a week, for Activities associated with public information and will have experience in this area. The Concessionaire will provide contact information, including home, fax and mobile numbers; and email addresses to HPTE for Acceptance (which may include Directors of Communication, Project Managers, and the appropriate Public Information Officer) at NTP1. The Concessionaire will hold weekly coordination meetings with HPTE to provide Project Schedule, accomplishments, and planned activities, for the upcoming week.

4) PUBLIC INFORMATION TASK FORCE

As soon as is practical after NTP1, the Concessionaire will initiate a Public Information Task Force to implement the Concessionaire's PIP and integrate with the Public Information efforts of HPTE. At a minimum, this Task Force will include the Concessionaire's PI Officer, the Concessionaire's Project Manager, and HPTE. Upon the first meeting, the Task Force will establish a regular meeting schedule.

C. PUBLIC INFORMATION PLAN UPDATES

The Concessionaire will schedule and hold PIP review meetings with HPTE to review, assess input, and/or modify the Concessionaire's PIP. These meetings will be held quarterly after the initial PIP is established and Approved by HPTE.

D. PUBLIC OPINION RESEARCH

HPTE may gather public and Stakeholder input from a variety of customer groups, primary research and other sources that will be affected by construction. HPTE may continue to conduct such formal and informal public opinion research regarding the Project to ascertain the public's sentiment. The Concessionaire will make use of this research, if available, in developing and updating the PIP quarterly. HPTE will review the PIP quarterly to ensure that it is responsive to the results of any research.

E. STAKEHOLDERS

HPTE has identified the Stakeholders listed below as audiences requiring Concessionaire outreach. The Concessionaire will describe in the PIP its approach to communicating with these stakeholders and coordinating with HPTE. The Stakeholders include, but are not limited to:

- Area residents
- Property owners and property management companies
- Commuters
- Transportation management/advocacy organizations
- The traveling public
- Commercial vehicle operators, Ports of Entry and Denver Permit Office, and Colorado Motor Carriers Association
- Local, regional, and state government officials
- Business owners, employees, and customers
- Neighborhood associations
- Emergency response agencies, such as the Colorado State Highway Patrol, and the local police departments, sheriff departments, fire departments, ambulance service providers, and hospitals
- Local community organizations

- Tourist destinations and organizations
- Delivery and courier services
- HPTE employees and other internal team members, including HPTE Headquarters, the Public Relations Office and the Government Relations Office
- Mass transit agencies/companies
- Utility owners
- School districts/universities

F. CRISIS COMMUNICATIONS

In an event of a crisis, HPTE is to be the lead agency to handle communication with the media, public, HPTE staff, etc. The Concessionaire must be available to help coordinate with HPTE and provide information necessary to respond to the crisis.

The PIP must include a crisis communications plan for the Concessionaire's response to emergencies and incidents during the Project and coordinate this approach with the Concessionaire's overall Incident Management Plan.

The Concessionaire's crisis communication approach will have to include:

- Designated staff to respond to the emergency.
- Types of potential emergencies.
- Approaches of addressing potential emergencies.
- Boilerplate messaging that includes:
    - *Cause of specific disruptions (i.e., whether construction-related or not)*
    - *Actions being taken to alleviate the problem*
    - *Impact to the public and notification procedures*

The Concessionaire must provide specific details on internal coordination and communication that occur with other Concessionaire groups, HPTE, and other Stakeholders.

G. EMERGENCY INFORMATION DISSEMINATION – TELEPHONE TREE

The Concessionaire will establish and manage an emergency response telephone tree. All appropriate personnel will be included on this telephone tree for immediate response in the event of an emergency. The telephone tree will be divided into areas of expertise so the proper people are called for specific emergency situations. HPTE, HPTE public information staff, and the Concessionaire's Engineer will be included on the telephone tree for notification of any emergency that may arise. The Concessionaire will develop and maintain a contact list of emergency service providers as part of its crisis communications approach. The Concessionaire will provide information to emergency service providers as outlined in the communication matrix.

H. DATA COLLECTION AND MANAGEMENT

The Concessionaire's PIP will include a data collection and management plan that accounts for the ongoing information needs of the Project Stakeholders. For example; residents, commuters, and most other Stakeholders will need information about the construction schedule, what roads will be affected and/or closed by construction, what efforts will be taken for noise mitigation during construction, and the hours construction will take place. Likewise, commercial vehicle operators will need specific information on any conditions that would restrict or prevent commercial vehicles from using roadways under construction. Emergency response providers will need to know if designated routes for emergency vehicles are altered. All Project Stakeholders will require reliable, accurate, accessible, and timely information on when and where construction is taking place.

1) DATA COLLECTION AND MANAGEMENT STRATEGIES APPROACH

The Concessionaire will develop a process to collect construction information to be provided to HPTE for use on the Project public web site and to HPTE for other uses.

The Concessionaire will include, as part of its data collection activities that will arise during the Project, lane and ramp closures, shoulder work, pothole repair, dust mitigation, and other maintenance work.

In all events the Concessionaire will be responsible for the accuracy and reliability of the information it forwards to HPTE as soon as it becomes available.

The Concessionaire will track changes (including changes to short-term construction-related closures, unexpected construction activities, emergency closures, and scheduled construction Activities), and report on all changes. The Concessionaire must update the construction information and make the information available to HPTE for its use.

2) INFORMATION MANAGEMENT AND REPORTING

The Concessionaire will be responsible for collecting, processing, and providing to HPTE several types of coping information that impact the Project. Outlined below are some, but not all, of the types of information necessary to inform the public regarding the Project. The Concessionaire will include the following types of information and minimum performance expectations when developing the various components of the PIP:

a) Construction Activities

- Description of the activity.
- The start of the activity.
- The end of the activity.
- Any updates to the above that will be disseminated to HPTE at weekly meetings.

b) Maintenance of Traffic

The Concessionaire will issue information to HPTE that it can use for notices regarding the Maintenance of Traffic for the entire Project for commuters, emergency services agencies, residents, and businesses within four blocks of the limits of construction, or any other stakeholders who will be impacted by the Project at least 30 Days prior to any construction in an area that affects the residents or businesses.

The Concessionaire will include, at a minimum, the following elements within the notifications:

- Residents and businesses impacted or affected.
- Proposed alternative routes and detours.
- The Concessionaire's contact for further information.
- Project public web site address for further information.

c) Commercial Vehicle Access and Restriction Information.

The Concessionaire will inform HPTE of information that it can use to inform the Colorado State Patrol, HPTE Regions, and HPTE Transport Permit Office for notification of construction events that will include at least:

- Description of the activity.
- The start of the activity.
- The end of the activity.
- Any updates to the above

d) Bicycle, Pedestrian, Handicapped Mobility, and Access.

The Concessionaire will clearly define and communicate to HPTE information that it can use to inform the public and other associated stakeholder groups its plans for maintaining bicycle access, pedestrian access, and handicapped mobility. The Concessionaire may be required to assist HPTE in the development and distribution of materials.

e) RTD Transit System

The Concessionaire will issue information to HPTE that it can use to inform the public and other associated Stakeholder groups for any impacts to the existing RTD transit system by the Project at least 30 Days prior to any construction. This information will include at a minimum:

- Description of the Activity
- The anticipated start date of the Activity
- The anticipated end date of the Activity
- RTD routes, stations, and services affected by the Activity

I. DISSEMINATION OF INFORMATION

The Concessionaire's PIP will include an approach for providing accurate information to HPTE for it to establish an effective working partnership with the Project's Stakeholders, including procedures for all public information dissemination elements (i.e., newsletters, flyers, fact sheets, faxes, e-mails, collateral materials, ads, etc.).

1) SCHEDULE FOR INFORMATION DISSEMINATION

The Concessionaire will provide construction Activity information to HPTE for review according to the following schedule:

- 30 Days prior to the beginning of the following construction Activities in any area of the Project:
  - *Bridge demolitions.*
  - *Road or ramp closures, alley and driveway access impacts, detours, and major traffic impacts lasting seven days or longer.*
- 7 Days prior to the beginning of the other remaining types of construction Activities in any area of the Project.
- As soon as known (must have at least 24 hours notice), the Concessionaire will provide HPTE with construction updates that directly impact the public (e.g., cancellation of planned closures, additional lane closures, closure removals, major traffic shifts, etc.).

2) COMMUNICATION MATRIX

As part of the Concessionaire's PIP, the Concessionaire will develop and use a communication matrix listing the stakeholders and the information tools to be used to address each group of Stakeholders' informational needs. The Concessionaire will develop a communications matrix for Stakeholder groups, and individuals and businesses with special needs, which will identify:

- The customer group(s) that require information.
- Location or region of customer group(s).
- What information is needed.
- When information is needed.
- Tools to be used for disseminated information.
- Results of information dissemination.

J. PUBLIC CONTACT

The Concessionaire will track all public contacts made from residents, businesses, and government offices, etc. At a minimum, this will include the names, addresses, email addresses, fax and phone numbers, questions, comments, concerns, date of contact, and the response provided will be documented. Reports detailing public contacts will be provided to HPTE on a monthly basis.

The Concessionaire will work with the Public Information Task Force to develop a master distribution list of contacts to be used for general public information, publications, and informational flyers/newsletters. HPTE's "govdelivery.com" system will be used as the basis for development of this list/database. This list or database will be presented to HPTE for review, prior to NTP2. Through the Concessionaire's data gathering process, the Concessionaire will assist HPTE in supplementing govdelivery.com.

K. Telephone Hotline and Email Account

The Concessionaire will implement a telephone hotline and an email address prior to NTP2 as a means of receiving community input, answering questions, and prompting possible solutions regarding Project-related activities. The hotline will be available to the public 24 hours a day, 7 days a week, and will be publicized in all Project information materials and signage throughout the Project. The hotline must be handicap-accessible and a free call for the public. Additionally, the hotline will be staffed during major construction Activities, such as bridge demolitions and special events. HPTE will provide the specific special events and game days needing hotline staffing in conjunction with the Concessionaire's major construction Activities. An immediate response is preferable for all calls, although a voice mail option is permissible. However, all voice mail messages will be replied to within 24 hours of receipt, including weekends and Holidays.

All calls and resulting actions from this hotline will be tracked and integrated into the Project's electronic database and made available to HPTE Media Relations

Media relations efforts will be initiated by HPTE, including news releases, traffic advisories, editorial, feature stories, etc.

During the Work, the Concessionaire will immediately notify HPTE of any situations involving the media, and all communication requests will be tracked by HPTE. The Concessionaire will be familiar with, and comply with, HPTE News Media Communications Guidelines, which outlines required protocol when contacted by media representatives.

L. Media Relations

Media relations efforts will be initiated by HPTE, including news releases, traffic advisories, editorial, feature stories, etc.

During the Work, the Concessionaire will immediately notify HPTE of any situations involving the media, and all communication requests will be tracked by HPTE. The Concessionaire will be familiar with, and comply with, the HPTE *News Media Communications Guidelines*, which outlines required protocol when contacted by media representatives.

M. Community and Business Relations

The Concessionaire will develop and implement community and business relation strategies that communicate coping messages to the public. Coping strategies will focus on providing the public with the information they need to make short-term and long-term decisions about how they can deal with the work with as little disruption as possible.

N. Government Relations

HPTE will develop and implement a comprehensive government relations program. The Concessionaire will assist in giving timely information to HPTE regarding construction Activities, and will participate in meetings as requested.

Throughout the Work, all communication requests received by the Concessionaire from government entities will be immediately referred to HPTE (not including those requests related to project management or coordination for City permits, or are the Concessionaire's responsibilities under the Contract Documents).

O. TOOLS FOR DISSEMINATING INFORMATION

To convey a consistent identity and message throughout the Project, the various tools for dissemination will comply with the Project branding requirements, as set forth by HPTE.

At a minimum, the Concessionaire will utilize the tools in the following Sections for information dissemination and minimum performance expectations when developing the various components of the PIP.

1) PROJECT IDENTIFICATION BOARDS AND SIGNAGE

Public information and warning signage will be maintained for the duration of the Work. All signage will be coordinated and comply with the requirements outlined in the Contract Documents. As part of the communications matrix, the Concessionaire will include signage as one of the communication tools to be used.

2) WEB SITE INFORMATION DISSEMINATION

HPTE will host the web site on HPTE server and provide use of a HPTE template to create, update, and maintain the Project public web site. The web site will be used to provide Project construction information provided by HPTE and the Concessionaire. The Concessionaire will provide, at minimum, construction information, commercial vehicle restrictions, and regular input for a community/construction calendar of events, Stakeholders use, and other relevant information for direct input onto the Project public web site. HPTE will be responsible for updating the web site.

P. PUBLIC MEETINGS AND PERSONAL CONTACT

1) PUBLIC INFORMATION MEETINGS

The Concessionaire will host at least three public meetings prior to the commencement of construction. The meetings will be held in a convenient location for community and business groups. Depending upon the Concessionaire’s proposed Traffic Control Plan (TCP), and areas impacted within each phase, other meetings may be required. The Concessionaire’s PIP will outline its approach to these construction information meetings.

Public meetings will provide construction schedules, impacts, traffic management plans, and other coping information. A member of the Concessionaire's management team or PI team, and HPTE will attend all meetings. The Concessionaire and HPTE will jointly organize and conduct, all meetings and extend invitations to appropriate participants. The Concessionaire will be responsible for invitation dissemination.

2) PERSONAL CONTACTS

A member of the Concessionaire's PI team will manage and implement door-to-door, email, and phone contact during the duration of the Work. HPTE will assist the Concessionaire with email communications and responding to phone communications. The Concessionaire will be

responsible for all door-to-door communications. These contacts will be necessary to keep the public aware of all issues pertaining to the Project, such as all road and driveway closures and utility disruptions. Contact will occur as outlined in Section 4.6.1 above and will consist of information explaining the planned Work, impacts, the expected duration of the Work, contact information, and answering questions. These contacts will be conducted within a minimum one-block radius of the Activity following the four-block radius initial notifications outlined in Section 4.5.3, above.

3) COMMUNITY FORUMS

Building on the work of earlier efforts, HPTE may hold regular community forums. These forums will comprise various stakeholder groups, including state and local government officials and staff, neighborhood members, emergency service providers and others; and they will be a forum for community representatives to provide substantive input and feedback on the Project. HPTE will arrange the meetings and set the agenda. HPTE will facilitate all community forum meetings. The Concessionaire will participate with HPTE on any community forums throughout the duration of the Work (maximum of three per quarter). The Concessionaire will provide appropriate technical staff as required.

4) TOURS OF THE DESIGN-BUILD PROJECT

The Concessionaire will provide HPTE the opportunity to give all media, businesses, government officials and residents tours of the construction areas, as HPTE deems necessary. In addition to the tours led by HPTE, a Concessionaire representative who is knowledgeable of construction activities and schedules may be requested to assist with the Project tours. The Concessionaire's representative will be able to describe the components of construction and why that activity is taking place at that time. HPTE will coordinate the tours with the Concessionaire. The Concessionaire will supply personal protective equipment, including but not limited to, hard hats, glasses, and vests on all tours led by the Concessionaire.

Q. ENVIRONMENTAL MITIGATION

In addition to the requirements of Section 5, Environmental Requirements, the Concessionaire will coordinate any mitigation requirements, as they pertain to the public, with HPTE to ensure the public is aware of and participates in those areas where their input is required.

[*page intentionally left blank*]

17. CIVIL RIGHTS PROGRAM

A. POLICY

CDOT is a direct recipient of federal dollars, HPTE is an entity within CDOT and applies all of the Civil Rights Program as if there were no difference between the entities of HPTE and CDOT.. Consequently, HPTE is charged with the responsibility to implement, monitor, and enforce federally mandated programs and Contract provisions.

The Project Director is responsible for assuring the Concessionaire complies with all civil rights requirements. In doing so, he is supported by the existing Civil Rights Program at CDOT. This includes the following:

1) CENTER FOR EQUAL OPPORTUNITY

The Center for Equal Opportunity reports directly to the Director of the Division of Human Resources and Administration. The Center for Equal Opportunity provides direct and supportive services for multiple civil rights programs and requirements, including the On-the-Job Training Program, the Disadvantaged Business Enterprise Program, Title VI, and equal opportunity compliance.

2) LABOR AND CONTRACT COMPLIANCE MANAGER

The Labor and Contract Compliance Manager is located in the Contracts and Market Analysis Branch of the Division of Engineering and Maintenance. The Labor and Contract Compliance Manager has the administrative responsibility of the Concessionaire Compliance Program. The Branch, in conjunction with the Center for Equal Opportunity, is directly responsible to the Federal Highway Administration (FHWA) for labor and Contract compliance, including statewide reporting and annual accomplishments of the program.

3) REGION CIVIL RIGHTS MANAGER/EO COMPLIANCE OFFICER

CDOT has established five engineering Regions across the state in order to decentralize many of its design, construction, and maintenance project functions. As part of this decentralization, each Region employs a Region Civil Rights Manager. In partnership with Headquarters, the Region Civil Rights Manager is responsible for the monitoring and enforcement of requirements in the areas of equal employment opportunity, labor standards, and program development and monitoring at the project level. Because of the scale of this Project, HPTE has assigned a EO Compliance Officer to fulfill the duties usually assumed by a Regional Civil Rights Manager. The EO Compliance Officer's sole duties are to assure compliance with Civil Rights related requirements in the Contract.

B. EQUAL EMPLOYMENT OPPORTUNITY

1) EQUAL EMPLOYMENT OPPORTUNITY POLICY

Under the terms of the Contract, the Concessionaire confirms that it has an equal employment opportunity policy ensuring equal employment opportunity without regard to race, color, national origin, sex, age, religion or handicap; and that it maintains no employee facilities segregated on the basis of race, color, religion or national origin. The Concessionaire must comply with HPTE's Equal Employment Opportunity Policy and the requirements set forth in the Affirmative Action

Requirements – Equal Employment Opportunity Special Provision, Materials and Labor Used, Form FHWA-47 Special Provision, Minimum Wages, Colorado, U.S. DOL Decision Nos. CO030014 and CO030015 Special Provision, On the Job Training Special Provision, and FHWA Form 1273, all in Exhibit C, Federal Requirements. This confirmation is also required of every Sub-Contractor for a Subcontract over $10,000 (including purchase orders).

2) WORKFORCE DEVELOPMENT PROGRAM

HPTE and RTD have collaborated to develop a unique initiative for this Project, which combines HPTE's federally-mandated On the Job Training (OJT) Program and RTD's Workforce Initiative Now (WIN) Program. Under this initiative, the Concessionaire must commit to meeting both professional services and skilled craft training goals. Additionally, the Concessionaire must develop a training plan, making every reasonable effort to incorporate women and minorities in the Project.

C. NON-DISCRIMINATION

1) AFFIRMATION BY THE CONCESSIONAIRE AND ALL SUB-CONTRACTORS

The Concessionaire must comply with all applicable Legal Requirements that enumerate unlawful employment practices including discrimination because of race, religion, color, gender, age, disability, or national origin, and that define actions required for affirmative action and minority/disadvantaged business programs. The Concessionaire must not discriminate against any employee or applicant for employment because of race, color, national origin, religion, sex, age or handicap. The Concessionaire must affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, national origin, religion, gender, age or handicap. Such action includes the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Concessionaire agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

The Concessionaire must include this provision in every Subcontract over $10,000 (including purchase orders), and will require that it be included in all Subcontracts over $10,000 at lower tiers, so that such provisions will be binding upon each Sub-Contractor.

2) COMPLAINT PROCESS

HPTE's Title VI complaint process is available to the public online at:

http://www.coloradodot.info/business/equal-opportunity/equal-access-programs.

D. DISADVANTAGED BUSINESS ENTERPRISE (DBE)

1) RACE-CONSCIOUS PARTICIPATION

HPTE has established a DBE Contract goal of 11 percent for this Project. The Concessionaire must meet the DBE Goal or demonstrate a good faith effort to do so in order to be awarded the Contract. Additionally, in accordance with the Contract terms, HPTE may impose sanctions for the Concessionaire's failure to meet the DBE goal on this Project or demonstrate post-award good

faith efforts to do so.

2) RACE-NEUTRAL PARTICIPATION

HPTE and RTD both administer race-neutral small business programs: HPTE Emerging Small Business (ESB) Program and RTD Small Business Enterprise (SBE) Program. As a means to generating small business participation on this Project and increasing race-neutral DBE participation, HPTE is offering a financial incentive for the Concessionaire's commitments to small business utilization on this Project.

3) SERVICES

HPTE maintains a public directory of certified DBEs and ESBs. RTD maintains a public directory of certified SBEs. Additionally, HPTE offers supportive services to both ESBs and DBEs and encourages the Concessionaire to recommend these services to ESBs and DBEs during the Project.

4) REPORTING

The Concessionaire will be required to keep such records as are necessary to determine compliance with the Contractor's equal employment opportunity obligations. The records kept by the Concessionaire will be designed to indicate:

- The number of minority and nonminority group members and women employed in each work classification on the project.
- The progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force).
- The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and
- The progress and efforts being made in securing the services of minority group Sub-Contractors or Sub-Contractors with meaningful minority and female representation among their employees.

All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State highway agency and the Federal Highway Administration. The Concessionaire will submit an annual report to the State highway agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR 1391.

[*page intentionally left blank*]

18. CLOSEOUT PLANS

A. PROJECT COMPLETION

1) NOTICE BY CONCESSIONAIRE

As a prerequisite to Segment Completion(s) or Project Completion, the Concessionaire must provide written notice to HPTE when all of the following have occurred with respect to the Project:

- The Concessionaire has completed all Work (except for Punch List items, final cleanup and other items only included in the requirements for Segment Acceptance or Final Acceptance).
- The Concessionaire has ensured that the Work has been performed in accordance with the requirements of the Contract.
- The Concessionaire has received all applicable Necessary Consents required for the for the Phase 2 Construction Work to be lawfully open to traffic.
- The Concessionaire has furnished to HPTE certifications from the Concessionaire's Design Manager, in form and substance satisfactory to HPTE, certifying that the Design Documents meet the requirements of the Contract Documents.
- The Concessionaire has furnished to HPTE certifications from the Concessionaire's Project Manager, in form and substance satisfactory to HPTE, certifying that the construction meets the requirements of the Contract Documents.
- The Concessionaire has furnished to HPTE certifications from the Concessionaire's Construction Quality Manager, in form and substance satisfactory to HPTE, certifying that there are no outstanding non-conformances other than those identified on the Punch List.
- The Concessionaire has completed the toll commissioning process described in the HPTE Phase 2 ETCS Requirements/Concessionaire's Phase 2 ETCS Proposals and the components of the Phase 2 ETCS are complete, have passed all required demonstration testing (including demonstrating successful integration of the Phase 2 ETCS with the Phase 1 ETCS and the I-25 ETCS to enable the ETCS to be operated as a single system), and including demonstrating full integration with and compatibility with the Tolling Services Provider;
- The Concessionaire has ensured that the Project is ready to be safely opened for traffic and that no further work is required for such opening which would involve any lane or shoulder closure

2) CORRECTION OF NON-CONFORMANCE

HPTE will conduct such inspections, surveys, and/or testing as HPTE deems desirable. If such inspections, surveys, and/or tests disclose that any Work does not meet the requirements of the Contract Documents, HPTE will promptly advise the Concessionaire as to Nonconforming Work (including incomplete Work) necessary to be corrected as a condition to Segment Completion or Project Completion, Nonconforming Work (including incomplete Work) which may be corrected as Punch List items and/or whether the Concessionaire will reassess the accuracy and

completeness of its notice

3) CONDITIONS TO ISSUANCE OF NOTICE OF PHASE 2 WORK COMPLETION

The Concessionaire will provide to HPTE an executed sworn Affidavit of Phase 2 Work Completion when all of the following have occurred:

- HPTE has received all Released for Construction Documents, Design Documents, As-Built Documents, ROW record maps, surveys, test data, and other deliverables required under the Contract Documents for the Segment or Project, whichever is applicable.
- All of the Concessionaire's and Sub-Contractors' personnel, supplies, equipment, waste materials, rubbish, and temporary facilities have been removed from the Site, the Concessionaire has restored and repaired all damage or injury arising from such removal to the satisfaction of HPTE, and the Site is in good working order and condition.
- The Concessionaire has furnished to HPTE certifications from the Concessionaire's Design Manager, in form and substance satisfactory to HPTE, certifying that the Design Documents meet the requirements of the Contract Documents.
- The Concessionaire has provided the Source Code and Source Code Documentation for the ETCS (as integrated to include the Phase 2 ETCS), that Source Code and Source Code Documentation has been validated so that it can be placed in escrow in accordance with Section **Error! Reference source not found.**
- The bond in support of the Concessionaire's obligations under Section 13.5 of Schedule 5 has been delivered and is in full force and effect
- The Phase 2 Work Completion Preliminary Requirements have been achieved Inspection and Issuance of Notice of Final Acceptance

4) INSPECTION AND ISSUANCE OF NOTICE OF PHASE 2 WORK COMPLETION

Within 5 Business Days after HPTE's receipt of the Affidavit of Phase 2 Work Completion, HPTE will make a final inspection, and HPTE will either issue a Notice of Phase 2 Work Completion, which shall state the date on which Phase 2 Work Completion has been achieved or notify the Concessionaire regarding any Phase 2 Work remaining to be performed. If the Phase 2 Work Completion Requirements have not been achieved then the Concessionaire shall promptly remedy the defective and/or uncompleted portions of the Phase 2 Work.

Upon HPTE's receipt of the Affidavit of Final Completion, HPTE will make final inspection and HPTE will either issue a Notice of Final Acceptance or notify the Concessionaire regarding any Work remaining to be performed

5) OPERATION AND MAINTENANCE

The operation and maintenance of the Managed Lanes and maintenance of the General Purpose Lanes as agreed by the Concession Agreement will be under the direction of the Concessionaire beginning at the Services commencement date and continuing during the Services Period provided in the Concession Agreement. The Concessionaire shall maintain the Managed Lanes and the General Purpose as agreed in the Concession Agreement (the "Maintained Elements") in a manner that provides a safe and reliable transportation system for improved mobility at current CDOT standards or better

The Concessionaire will also take responsibility for the operation and maintenance of the I-25

Managed Lanes and will provide maintenance, repair and replacement of all equipment required for the collection and enforcement of tolls in the Managed Lanes in a manner that shall ensure a continuous system operation and functionality of all Electronic Toll Collection System components.

The concessionaire will also be responsible for all routine maintenance of the I-25 Managed Lanes and the I-25 Managed Lanes portion of the Life Cycle Maintenance for the I-25 Bridge Deck Superstructure. The concessionaire will prepare and carry out the I-25 Preventative Maintenance Program for all portions the I-25 Bridge Superstructure.

HPTE plans to hire at least one full time employee to monitor and respond to the concessionaire throughout the Service Period. This employee will be responsible for coordinating between CDOT maintenance and the Concessionaire to ensure the highway is maintained in safe condition. In addition, the full time employee will be responsible for monitoring commitments the Concessionaire made during the Services Period both in their Proposals and in the various plans the contract requires them to prepare. These plans are listed and briefly explained below.

a) Operations and Maintenance Plan

- *Concessionaire must prepare a Maintenance Management Plan (MMP) that sets out how the Concessionaire will comply with HPTE's Service Requirements in accordance with the Concessionaire's Service Proposals and defines the process and procedures for the maintenance of the Maintained Elements beginning with the respective Services commencement dates.*
- *This plan will have to include the following for each maintained element for both components of the roadway/roadside and for components of the electronic toll system*
    - Performance requirements
    - Measurement procedures
    - Threshold values at which maintenance is required
    - Inspection procedures and frequencies
    - Subsequent maintenance to address noted deficiencies

b) Operations Management Plan

The Concessionaire must prepare an Operations Management Plan (MMP) explains in detail the following.

- Overview description of all facilities, systems and equipment to be operated by the Concessionaire,
- Staffing plan procedures, including staff qualifications, training and certification processes,
- Monitoring the condition and operational performance of the Managed Lanes
- Description of the parameters to be used for setting, increasing and decreasing tolls to optimize use of the Managed Lanes,
- Incident response, management and reporting,
- Traffic operations restrictions, including periods of lane closure restrictions,

- Tolling integration with other tolling entities,
- Description of how performance monitoring will be accomplished,
- Operating protocols, agreements and interactions with the various entities and agencies with interests in the Managed Lanes,
- Standard operating and communication procedures for emergency preparation, response, and recovery, including impacts from extreme weather conditions
- Planning and coordination with all affected Governmental Authorities, including emergency services,
- Liaison and coordination with the CDOT Traffic Management Centers or any other entities that may establish traffic management centers in the corridors,
- Analysis of vehicular accident patterns to identify safety issues and implement cost effective solutions to maximize safety,
- Identification, containment and disposal of Hazardous Materials spills with reports to CDOT,
- Prompt investigation of reports or complaints received from all sources,
- Detailed descriptions of the procedures, methods and protocols for opening, closing and maintaining the Managed Lanes system including the I-25 reversible lanes Automatic Gates,
- Establishment of policies and procedures for the detection and monitoring of traffic events,
- Establishment of procedures for external communication system messaging resulting in improved dissemination of information and safety,
- Establishment of guidelines and procedures for handling system failures and ensuring that all failures are properly documented,
- Staff qualifications, equipment availability, response and cleanup as a result of fuel spills or other contamination-causing events,
- How all requirements of the Intergovernmental Agreements with Denver RTD for the I-25 Managed Lanes and the US36 Managed Lanes will be addressed,
- How all requirements of the TIGER Performance Measures will be addressed for the Managed Lanes as described in Exhibit 6-1. The Concessionaire shall provide all information to HPTE for submission.

c) Quality Management Plan

- *The Concessionaire is required to prepare a Quality Management Plan that describes what quality procedures will be performed for the operations and maintenance work. This plan must have separate sections on Operations Quality Management and Maintenance Quality Management and address the following*

- Approach to quality management including a description of quality assurance and quality control functions,

- Approach to reporting relationships and responsibilities including HPTE oversight. This will also include a description of the internal process for preparing and reviewing incident reports, non-conformance reports, traffic reports and maintenance work reports, and how non-compliance issues will be documented and corrected.
- Procedures that will establish the Concessionaire's self-monitoring process and to monitor the performance of the Maintained Elements as well as the OMP services

d) Incident Response Plan

The Concessionaire is required to prepare an Incident Response Plan ("IRP") for the maintained elements that is consistent and demonstrates how they will comply with the CDOT Incident Management Plans for US 36 (US 36 Traffic Incident Management Plan – Boulder Turnpike May 2011 (and as updated to reflect the Phase 1 Corridor construction work and Phase 2 Construction Work) and follow the existing I-25 HOV/Toll Lanes Traffic Incident Management Response Manual, May 2006 for the I-25 Managed Lanes. It shall also comply with all requirements of all Intergovernmental Agreements with the Denver RTD. In the IRP, the Concessionaire shall include or address any specifics not addressed in the CDOT Incident Management Plans including:

- a description of the Concessionaire's specific responses to incidents
- the responsibility to and turnaround time for the preparation of monthly incident reports in electronic format (and as further specified in Section 1.8.2 of this Schedule 6) and submission of them to HPTE when incidents occur
- all issues associated with Hazardous Materials spills
- necessary coordination responsibilities with CDOT and third party personnel when incidents occur.

e) Transition Plan

The Concessionaire will have to assume full responsibility for all operations and designated maintenance activities for the Maintained Elements upon each Services commencement date. Prior to any of the Services commencement dates, the Concessionaire is required to prepare a comprehensive Transition Plan that clearly identifies the steps and activities necessary to coordinate with HPTE and CDOT to achieve a smooth transition of both operations and maintenance activities on the I-25 Managed Lanes, the Phase 1 Corridor and Phase 2 Corridor.

The Concessionaire must prepare the comprehensive Transition Plan as a separate document from the MMP or OMP that includes all phases of the services and submit it to HPTE for acceptance.

The Transition Plan is required to detail how the Concessionaire will transition all aspects of the Services including those aspects currently provided by others to ensure a seamless transfer of operations and maintenance services and ensure a continuous system operation and functionality of all components of the Managed Lanes and the General Purpose Lanes.

HPTE will monitor the Concessionaire's compliance with the contract and will commitments made in these Plans both by independent verification and through review of reports the concessionaire is required to submit. These required reports include a Monthly Maintenance Report detailing maintenance activity for the preceding month, an Operations Report

covering various operations topics including revenues, usage and incidents, and Annual Reports containing information on operations and maintenance activities for the year covered.

6) HANDBACK

At the end of the Service Period, the Concessionaire will return responsibility for the US 36 and I-25 Express Lanes operations, maintenance and toll collections. Prior to the handback, the concessionaire must prepare a Handback Plan which will detail handback procedures and the residual life of the infrastructure. HPTE and the Concessionaire will jointly inspect the corridors to determine the residual life and to determine any work that need to be done by the Concessionaire prior to the handback.

19. PROJECT DOCUMENTATION

A. DOCUMENT CONTROL

HPTE requires the use of Aconex on this Project because of a history of successful project management using Aconex during past major projects by our partner RTD and Phase 1 of US 36. The following items explain the usage of Aconex on the Project.

- To ensure efficient information management on the Project, Aconex will be the only recognized method of transmittal for formal project correspondence, documents and information. Where it is necessary to transmit original signed documents, these shall be acceptable forms of correspondence only when they have been issued via Aconex first.
- The Concessionaire must agree to use Aconex when communicating with HPTE and RTD on the Project. This includes use for all purposes related to Document Control and email for the duration of the Project. The Aconex system will be used by all participants engaged on this Project, including Sub-Contractors, Sub-Sub-Contractors, suppliers and their legal successors in title. It is the Concessionaire's responsibility to ensure this is the case.
- Access to the Aconex system for the Project will be provided to the Concessionaire, Sub-Contractors and Subconsultants free of charge for the duration of the Project. Once the Project is closed out, a DVD of the documentation can be provided.
- All correspondence between the Concessionaire, HPTE, RTD and their representatives to the Project will be completed within Aconex and refer to the US 36 Managed Lane Project by name along with the specific subject of the letter. All replies shall refer specifically to the prior correspondence to which it relates. Per the terms of the Contract, the Concessionaire will also use a data management application specified by HPTE. The tool chosen for this project is Aconex. Aconex will also be used by the Concessionaire for Requests for Information and all submittals.
- At the end of the Project, all records pertaining to correspondence, submittals, reviews and requests for information will be in one location and can be easily saved for future reference.

B. CORRESPONDENCE DELIVERY

The Concessionaire must use the Aconex web-based collaboration system to communicate all formal matters with HPTE, RTD, and other Consultants and Subconsultants in relation to the Project and its execution. The Concessionaire will register and transmit all drawings and documents and all amendments to documents for the Project on the Aconex web-based collaboration system.

C. SERVING NOTICES

A notice, consent, information or request that must or may be given or made to a Party under this Agreement must be delivered to that Party using the web-based collaboration system.

[*page intentionally left blank*]

20. PROJECT MANAGEMENT PLAN ENDORSEMENT

NH 0361-093
US 36 MANAGED LANES-TOLL CONCESSION PROJECT

Denver, Colorado Metropolitan Area
Project Management Plan

Submitted Pursuant to:
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
Section 1904(a)
By the

High Performance Transportation Enterprise

The High Performance Transportation Enterprise (HPTE) has developed this Project Management Plan (PMP) for Phase 2 of the US 36 Corridor improvements, in coordination with the Federal Highway Administration - Colorado Division (FHWA) and in accordance with USDOT Major Project requirements under SAFETEA-LU, Section 1904(a). The PMP provides guidelines for HPTE, FHWA and our partners to execute the delivery of this Project in a safe, timely, cost efficient, high quality, and environmentally sound manner. HPTE believes this Plan provides a sound basis upon which to achieve the above objectives, and is in compliance with FHWA's Project Management Plan Guidance, February 6, 2007.

HPTE understands this PMP is a living document and it is expected to evolve as the Project progresses through its various stages. Prior to the issuance of Notice to Proceed 1, it is the intent of HPTE to have the PMP signed by the Director of HPTE.

In accordance with the language of this PMP, I have affixed my signature and request your concurrence in moving forward with PMP implementation per your signature.

Respectfully,

Michael Cheroutes.
Director
High Performance Transportation Enterprise

12/19/13
Date

Timothy Harris
Chief Engineer
Colorado Department of Transportation

12/17/13
Date

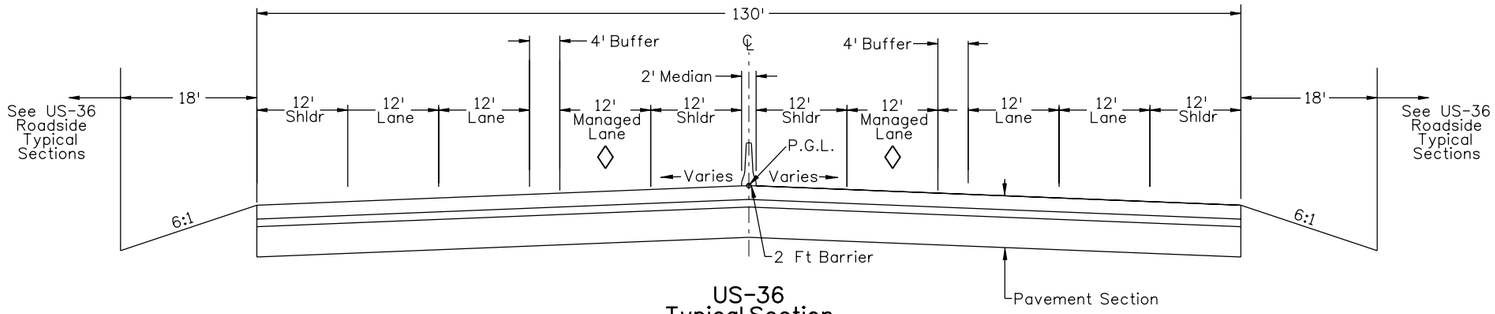
John M. Cater
Colorado Division Administrator
Federal Highway Administration

12/20/13
Date

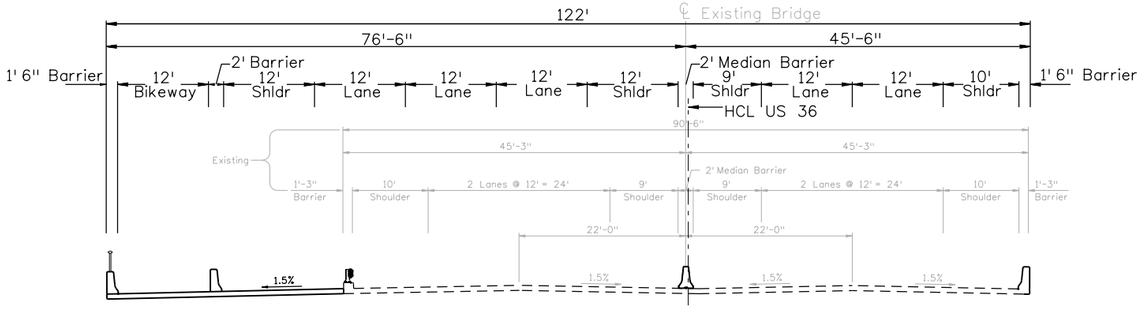
[*page intentionally left blank*]

APPENDIX A

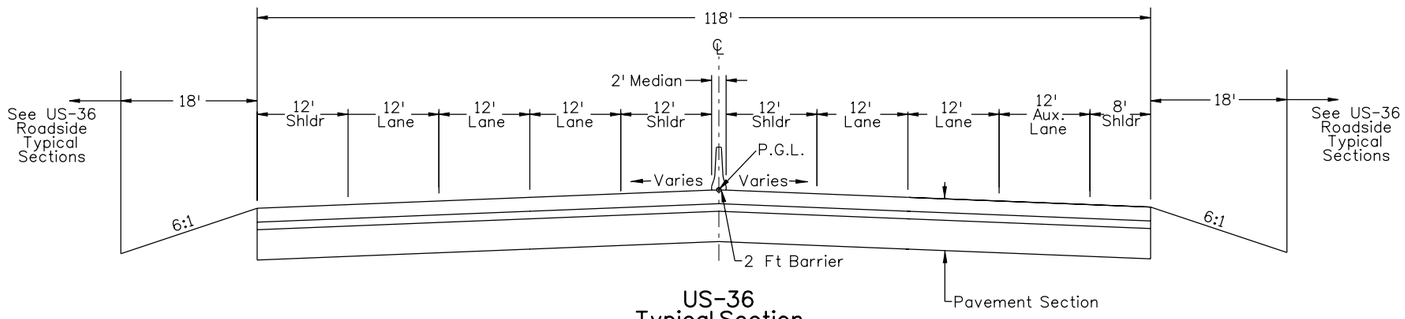
US 36 Basic Configuration Typical Sections



US-36
Typical Section
South Boulder Creek to 88th St.



US-36
Typical Section
Over South Boulder Creek



US-36
Typical Section
Foothills Pwky. to South Boulder Creek

Note: See safety edge detail for pavement construction details.

P.G.L.- Profile Grade Line

Kingem 8:16:38 AM J:_Transportation\WVXW7005.US36_Phase-2\700CADD\18907\Design\Drawings\18907_TyplSect_01_Foot-88.dgn

Print Date: 7/3/2012		Sheet Revisions			Colorado Department of Transportation	As Constructed	US-36 PHASE 2 TYPICAL SECTIONS			Project No./Code
File Name: 18907_TyplSect_01_Foot-88.dgn		Date:	Comments	Init.	1050 Lee Hill Road Boulder, CO 80302 Phone: 303-546-5660 FAX: 303-444-0751	No Revisions:				NH 0361-103
Horiz. Scale: 1:20 Vert. Scale: As Noted						Revised:	Designer:	Structure Numbers		18907
							Detailer:			
						Void:	Sheet Subset: TYP	Subset Sheets: 1 of 5		Sheet Number A2

APPENDIX B
Roadway Design Criteria

Roadway Design Criteria						
DESIGN DATA	**US 36**	**Ramps** (A)	**Wadsworth Parkway (SH 121)**	**112th Avenue** (B), (C)	**Wadsworth Boulevard** (B) (D)	**Remarks**
Roadway Classification	Freeway	-	Principal Arterial	Minor Arterial	Connector	
Location	Federal Blvd. to McCaslin Blvd.	Various	-	-	-	
Design Speed (MPH)	65 (DE-3)	45	50	40	25	
Posted Speed (MPH)	65	45	**35**	35	25	
GEOMETRIC STANDARDS						
Horizontal Geometry						
Min Radius (ft.)	1660	643	833	575	260	
Emax (%)	6%	6%	6%	4%	-	
Pivot Point	Centerline	Varies	Centerline	Centerline	Centerline	
Vertical Geometry						
Minimum Profile Grade (%)	0.5%	0.5%	0.5%	1%	1%	
Maximum Profile Grade (%)	4% (DE-4)	4%	7%	5%	7%	
Min. Rate of Vertical Curve (K) Crest	193	61	84	80	30	
Min. Rate of Vertical Curve (K) Sag	157	79	96	70	40	
Sight Distance						
Min. Stopping Sight Distance (ft)	645	360	305	305	200	
Vertical Clearance						
Below Structure (ft)	16.5	16.5	16.5	16.5	N/A	

Roadway Design Criteria						
DESIGN DATA	**US 36**	**Ramps** (A)	**Wadsworth Parkway (SH 121)**	**112th Avenue** (B), (C)	**Wadsworth Boulevard** (B) (D)	**Remarks**
Below Structure (Rail Road) (ft)	23.5	23.5	23.5	23.5	N/A	
Below Structure (Pedestrian Bridge) (ft)	17.5	17.5	17.5	17.5	N/A	
Horizontal Clearance						
CROSS SECTION						
Lanes						
Lane Widths (ft.)	12 (DE-2)	15 for single lane, 2-12 for 2-lane	12	13	10	
Managed Lane Widths	12	-	-	-	-	
Managed Lane Buffer	4 (DE-1, DE-2)	-	-	-	-	
Bike Lane Widths	-	-	4	4	-	
Parking Lane	-	-	-	-	6’	
Shoulders						
Shoulder Widths - LT/ Median (ft.)	12 (DE-1DE-2)	4	6 minimum median	-	-	
Shoulder Widths - RT/ Median (ft.)	12 (DE-2)	8	-	-	-	
Shoulder Surface	Paved	Paved	Paved	Paved	Paved	
Curb and Gutter						
Curb and Gutter Required	No	No	Yes (Northbound)	Yes	Yes	
Gutter Width - Outside (in)	-	-	24	24	24	
Gutter Width - Inside (in)	-	-	12	12	-	
Sidewalk						
Width Left (ft)	-	-	0	8	8 or 5	
Width Right (ft)	-	-	6	8	8 or 5	
Median						
Median Width (ft)	4	-		4 min.	-	
Treatment	Concrete Barrier	-	Raised	Planted Raised	-	
Intersection at Grade						

Roadway Design Criteria						
DESIGN DATA	**US 36**	**Ramps** (A)	**Wadsworth Parkway (SH 121)**	**112th Avenue** (B), (C)	**Wadsworth Boulevard** (B) (D)	**Remarks**
Min. Curb radius (ft)	-	-	-	Max 35		
Design Vehicle	WB-65	WB-65	WB-65	WB-50	WB-50	

(DE-X) See Table 13.2-1 for specific Geometric Exceptions to this criteria
(A) Ramps will meet or exceed design criteria unless noted in Exhibit 13-1A – Acceptable Minimum Criteria for Entrance and Exit Ramps
(B) City of Broomfield Standards
(C) 112th Avenue will meet or exceed design criteria unless noted in Exhibit 13-1B – Acceptable Minimum Criteria for 112th Avenue.
(D) Wadsworth Boulevard will meet or exceed design criteria unless noted in Exhibit 13-1C – Acceptable Minimum Criteria for Wadsworth Boulevard.

Exhibit 13-1A – Acceptable Minimum Criteria for Entrance and Exit Ramps					
DESIGN DATA	**Wadsworth Pkwy** Westbound on-ramp (from NB Wadsworth Pkwy)	**Wadsworth Pkwy** Westbound on-ramp (from SB Wadsworth Pkwy)	**Church Ranch Blvd** Eastbound on-ramp	**Sheridan Blvd** Westbound off-ramp	**Remarks**
Design Speed (mph)	30 to 65	30 to 65	40 to 65	75 to 30	
Controlling Vertical Curve K Value	45 (sag)	27 (crest)	61 (sag)	38 (sag)	

Exhibit 13-1B – Acceptable Minimum Criteria for 112th Avenue (Initial Condition)		
Design Data	**112th Avenue**	**Remarks**
Pivot Point	Varies	Ultimate Centerline
Min. Rate of Vertical Curve (K) Crest	44	Meets AASHTO criteria
Bike Lane Widths	4	No Bike Lane in initial condition
Lane Widths (ft.)	12	2' Shoulders also provided
Curb and Gutter Required	No	No C&G in initial condition
Sidewalk	Select locations	Sidewalk provided from the beginning of alignment to proposed bridge (LT) only in initial condition.
Median	No	No median in initial condition

Exhibit 13-1C – Acceptable Minimum Criteria for Wadsworth Boulevard		
Design Data	**Wadsworth Boulevard**	**Remarks**
Curb and Gutter Required	No	
Lane Widths	12’ and 11’	2’ shoulder also provided
Parking Lane	No	
Sidewalk	No	

Exhibit 13-1D – Acceptable Minimum Criteria for Lowell Boulevard and Turnpike Drive Per City of Westminster			
DESIGN DATA	**Lowell Boulevard**	**Turnpike Drive**	**Remarks**
Design Speed (MPH)	35	35	
Posted Speed (MPH)	30	30	
GEOMETRIC STANDARDS			
Horizontal Geometry			
Min Radius (ft.)	N/A	512	
Emax (%)	Normal Crown	Normal Crown	
Vertical Geometry			
Minimum Profile Grade (%)	1.33%	1.14%	
Maximum Profile Grade (%)	6.27%	3.40%	
Min. Rate of Vertical Curve (K) Crest	-	19	
Min. Rate of Vertical Curve (K) Sag	42	56	
Sight Distance			
Min. Stopping Sight Distance (ft)	232	260	
Vertical Clearance			
Below Structure (ft)	14.5	N/A	Per City of Westminster
Horizontal Clearance			
CROSS SECTION			
Lanes			
Lane Widths (ft.)	12	12	
Bike Lane Widths	N/A	N/A	
Curb and Gutter			
Curb and Gutter Required	Yes	Yes	
Gutter Width - Outside (in)	24	24	
Sidewalk			
Width Left (ft)	10	8	
Width Right (ft)	10	N/A	
Intersection at Grade			

Exhibit 13-1D – Acceptable Minimum Criteria for Lowell Boulevard and Turnpike Drive Per City of Westminster			
DESIGN DATA	**Lowell Boulevard**	**Turnpike Drive**	**Remarks**
Min. Curb radius (ft)	22.5	25	
Design Vehicle	SU-30	SU-30	

Exhibit 13-2 – Bikeway Design Criteria			
Element	**Final Bikeway Criteria**	**Source***	**Interim Bikeway Criteria****
Bikeway Width	12’	FEIS (AASHTO Bike Design Guide page 35-36 recommends 10’ for two way path with 8’ minimum under specifically defined conditions)	10’ desirable, 8’ minimum where ROW or topography constrained
Bikeway Shoulder Width (Clear Zones)	3’	FEIS (AASHTO Bike Design Guide page 35 specifies 2’ minimum and 3’ desirable with a max slope of 1:6)	2’ minimum
Bikeway Material	6” Depth Concrete	FEIS	6” Depth Concrete
Minimum separation from edge of nearest US 36 travel lane to edge of concrete bike path that requires no barrier between US 36 and bike path	30’	FEIS	30’
Minimum separation from edge of on/off ramp travel lanes to edge of concrete bike path	Varies	AASHTO Clear zone requirements for the ramp design speed will be applied. If the path is located within the clear zone, barrier separation will be provided	Same as Final
Cross Slope/Superelevation	2% Max	ADA Requirements	2% Max
Vertical Clearance to overhead obstructions	10’	AASHTO Bike Design Guide Page 55 (10’ was shown in exhibits at EIS public meetings)	8’ minimum
Underpass width	14’	AASHTO Bike Design Guide Page 55 (recommended minimum 10’ path width + 2’ clear zone on each side- this width was also shown in exhibits at EIS public meetings)	12’ minimum
Desirable Minimum Horizontal Curvature Radii	100’	AASHTO Bike Design Guide Page 38 (based on 15 deg lean angle and 20mph design speed)	36’ minimum (based on 15 deg lean angle and 12 mph design speed)
Maximum Desirable Grade	5%	AASHTO Bike Design Guide Page 39	5%

Exhibit 13-2 – Bikeway Design Criteria			
Element	**Final Bikeway Criteria**	**Source***	**Interim Bikeway Criteria****
Maximum Grade	ADA Compliant	ADA Requirements	6-11% based on length: AASHTO Bike Design Guide Page 39
Minimum Stopping Sight Distance	See Figure 19 page 42	AASHTO Bike Design Guide Page 42	Same as Final
Minimum Length of Crest Vertical Curve	See Table 3 page 44	AASHTO Bike Design Guide Page 44	Same as Final
Minimum Lateral Clearance for Horizontal Curves	See Table 4 page 46	AASHTO Bike Design Guide Page 46	Same as Final
Minimum Rail Height on Structures	42”	AASHTO Bike Design Guide Page 55	42”

*Source: *US 36 Corridor Final Environmental Impact Statement* and AASHTO *Guide for the Development of Bicycle Facilities* (1999).

** Interim criteria are based on minimum AASHTO standards.

APPENDIX C

Organizational Chart

US 36 Managed Lane Toll Concession Project Organizational Chart

CHOOSE YOUR MOVE

US 36 EXPRESS LANES PROJECT

CORE Staff

HPTE Project Director
Michael Cheroutes

Project Manager
Mark Gosselin - Asst. Director
Kathy Young - Legal Support

Operations and Maintenance

Enterprise Specialist
Nicholas J Farber, JD

O & M Manager
TBD

EOC
Tim Harris
Anthony DeVito
Johnny Olson
Mike Cheroutes
Richard Clark - RTD
Shaun Cutting - FHWA

Administrative Support
TBD

RTD D/B Manager
Nadine Lee

Quality Oversight/Audit
Jeff Clevenger

Public Information
Kristi Estes
Liz Viscardi

Functional Lead/Coordination
Mark Talvitie

Functional Leaders

Pre-Construction Project Manager & Technical Support Services
Bob Hays

Construction Manager
Scott Rees
Shawn Albert

Project Contract Management & Support Services
Shawn Albert

Full Time Support Staff

Utilities
Ron Dickey

Environmental
Tim Buntrock

Traffic/ITS/Tolling
Ali Imansepahi

Drainage
Justin Werdel

Roadway
Dave Kosmiski

ROW Acquisition/ Relocation
Marla
Bob Grube

Segment Leads
Chad Reich- Roadway
Monte Malik - Structures

Assessment Team
Tony Meneghetti
VACANT

Owner Verification Testing (OVT) Consultant
Yen & Associates

Project Controls
Janie Valdez

Civil Rights Compliance
Janie Valdez

Project Contracts
Shawn Albert

Scheduling
Steve Clevenger

Part Time Support Staff

Materials/GeoTech
Masoud Ghaeli
Jan Chang

Roadway
R-6 TBD
R-4 TBD

ROW Appraisals
Allen Torrey

ROW Acquisition/ Relocation
Bob Grube
Penny Clemons
Lisa Gerondale

Structures
Andrew Pott
Beth Tosti

Traffic
Steve Hersey
Leela Rajasekar

Tolling/TIFIA
Pamela Bailey Scott
Scott Thomas

Safety
TBD

Business Office
Kathy Paulmeno

Insurance
Tracy Smith

Communications/ Outreach
Mindy Crane
Herman Stockinger
Angie Drumm

KEY:
CDOT Employees
Jacobs Employees
RTD Employees
Others

DRAFT 1/31/2013

APPENDIX D

CDOT/RTD/ US 36 IGA
August 2011

US 36 MANAGED LANE PROJECT – SEGMENTS 1 AND 2
August 2011
CDOT, HPTE, and RTD

INTERGOVERNMENTAL AGREEMENT

THIS INTERGOVERNMENTAL AGREEMENT made this 30th day of August 20__, by and between the State of Colorado for the use and benefit of the Colorado High Performance Transportation Enterprise (HPTE), a division of the Colorado Department of Transportation (CDOT), CDOT, an executive agency of the State of Colorado, and the Regional Transportation District (RTD) a political subdivision of the State of Colorado, 1600 Blake Street, Denver, CO 80202, FEIN: 840597392, and hereinafter collectively referred to as the "Parties."

RECITALS

1. RTD's FasTracks Plan (FasTracks), approved by voters in 2004, includes funding for a Bus Rapid Transit (BRT) along US 36 connecting the existing I-25 HOV lane with managed lanes for buses and autos to Table Mesa in Boulder, Colorado (US 36 Project).

2. RTD and CDOT jointly prepared an Environmental Impact Statement (EIS) under the direction of the Federal Highway and Federal Transit Administrations (FHWA and FTA) for the US 36 Project. A Record of Decision (ROD) was signed by FHWA on December 22, 2009 and FTA on December 22, 2009.

3. RTD, CDOT and HPTE previously entered into an Intergovernmental Agreement dated May 31, 2006 and amended on June 1, 2011 (the I-25 HOV Agreement) for the use of revenues from the managed lane facility on I-25 and, with the authorization of FHWA and FTA, wish to provide for the integration and long term funding and operation of managed lane facilities on US 36 and I-25 and to address the dedication of certain revenues for that purpose.

4. The ROD provides for phased implementation of managed lanes on US 36. RTD, CDOT and HPTE desire to provide for the design, construction, funding and operation of the US 36 Managed Lane Project – Segments 1 and 2 ("Project"), which is a subset of Phase 1 of the ROD, pursuant to the terms and conditions set forth below.

CONDITIONS

A. STATUS OF THE PARTIES

1. The recitals set forth above are incorporated herein by reference.

2. HPTE has applied for a loan from the United Stated Department of Transportation pursuant to the Transportation Infrastructure Financing and Innovation Act (TIFIA) that if awarded will provide sufficient available funds to construct the Project. The Project will

extend from the terminus of the existing managed lanes on US 36 at approximately Pecos Boulevard to Interlocken Boulevard in Broomfield, or further if funds allow, as depicted on **Exhibit A** attached.

3. HPTE was created and authorized pursuant 43-4-806 C.R.S. as amended, in order to finance managed lanes such as those planned for the Project. HPTE will enter into a Master Trust Indenture, dated as of September 1, 2011 ("MTI"), and a TIFIA Loan Agreement, dated as of September 1, 2011 ("Loan Agreement"), relating to the financing of the Project.

4. Pursuant to 43-4-806(i(c)(iii)) C.R.S. as amended, HPTE may contract with other governmental agencies to support HPTE functions.

5. RTD is responsible for developing, maintaining and operating a mass transportation system within the District, pursuant to Sections 32-9-106 and 32-9-107, et seq., C.R.S. as amended.

6. CDOT is a state agency authorized pursuant to 43-1-105 C.R.S. as amended, to plan, develop, construct, coordinate, and promote an integrated transportation system in cooperation with federal, regional, local and other state agencies.

B. ORDER OF PRECEDENCE

In the event of conflicts or inconsistencies between this Intergovernmental Agreement (IGA) and its exhibits, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

1. This IGA
2. Exhibit A – US 36 Project Map
3 The I-25 IGA
4. Exhibit B – RTD BRT Project Elements
5. Exhibit C - Concept of Operations for the US 36 Managed Lane
6. Exhibit D - Tolling and Use Policy
7. Exhibit E - Emergency Operations Procedures Manual
8. Exhibit F - RTD Staffing Plan
9. Exhibit G - ITS/Communications Systems Responsibility Requirements
10. Exhibit H – Performance Measures

C. CONSTRUCTION OF THE PHASE I PROJECT

I. CDOT RESPONSIBILITIES

1. CDOT will contract for the design and construction of the Project as generally described in the EIS and approved in the ROD. CDOT will ensure that the BRT elements

including Communications infrastructure and Queue Jumps described in **Exhibit B** attached and required by RTD for operation of the BRT system are included in the Scope of Work for the Project.

2. CDOT will coordinate the procurement process for the design and construction of the Project including preparation of RFP), evaluation criteria, scopes of work, reference documents, and review of all proposer submittals with HPTE and RTD. RTD and HPTE will have the opportunity to review all submittals in coordination with CDOT within the time allowed by the procurement schedule. The parties will agree on the prioritization of Additional Requested Project Elements in the RFP and in the evaluation of proposals. All Parties must approve the RFP prior to publication.

3. CDOT will award a contract for the design and construction of civil and Intelligent Transportation System ("ITS") elements of the Project in forms agreed upon by the Parties. Any contracts for the Project will name RTD and HPTE as third party beneficiaries of the Project. All contracts will require that RTD and HPTE be indemnified and insured to the same extent and in the same amounts as CDOT for all work performed on the Project. CDOT will include the RTD Communications Improvements and Queue Jump Elements specified on **Exhibit B** in contracts awarded for the Project. HPTE has entered into a separate agreement with E-470 Public Highway Authority to manage and maintain tolling customer accounts and perform toll violations processing once the Project is completed.

4. CDOT will provide the Parties with all documents, specifications, and requirements for any equipment required for installation of the elements included in **Exhibit B** to ensure compatibility with all BRT Communications Equipment.

5. CDOT will ensure that TIFIA loan requirements, as they relate to terms and conditions to be included in contracts for the design and construction of the Project, are met.

6. CDOT will be responsible for acquiring all rights of way necessary for the US 36 Project and for compliance with the Uniform Federal Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C.4601, et seq.) requirements.

7. CDOT will be responsible for ensuring compliance with Federal Disadvantaged Business Enterprise requirements in contracts for the Phase I Project. RTD's Workforce Initiative Now (WIN) program as it has been described in the Federal Transit Administration's Innovative Workforce Development Grant Program, and as approved by FHWA, will be included in any contracts awarded for the Phase I Project.

8. CDOT with RTD will provide design and construction management for the Project, and will ensure that all Parties have equal opportunity to participate in construction meetings, and safety meetings and to receive all contractor submittals, test reports, inspection reports, approvals, rejections and other contract and performance documents. CDOT will pay the Contractor(s) for approved work only after written concurrence from the RTD Project Manager.

9. CDOT will maintain all Project documents and make them available for inspection and review by RTD, HPTE and all federal agencies with an interest in the Project for a period of not less than 3 years from completion of the Project.

10. CDOT will ensure that any changes including but not limited to change orders, amendments, schedule adjustments, approved equals, to any contracts awarded for the Project are approved by RTD Project Manager before signing.

11. CDOT will issue final acceptance of work performed under contracts issued for the Project only after it has obtained approvals from RTD.

12. CDOT will require that as built drawings are delivered to RTD in accordance with the US 36 Phase I contract documents.

13. CDOT will designate a Project Director who will serve as liaison to RTD and HPTE who will have primary responsibility for all functions required of CDOT under this agreement except payment of financial obligations and receipt of notices.

II. RTD RESPONSIBILITIES

1. RTD will provide specific design requirements to CDOT for the Communications and Infrastructure and Queue Jumps to be included in the Project 30 days prior to the release of the Project Request for Proposal or as agreed to by both CDOT and RTD.

2. RTD will timely review all plans specifications and other documents submitted to it by CDOT or HPTE for the design and construction of the Project and provide written comments within Project schedule time frames.

3. RTD will designate a Project Manager who will serve as liaison to CDOT and HPTE who will have primary responsibility for all functions required of RTD under this agreement except payment of financial obligations and receipt of notices.

RTD will also designate additional staff as shown in **Exhibit F**. The fully burdened salary rate for the RTD staff assigned to the project are included as part of the original financial commitment from RTD to HPTE and CDOT for the Phase I project. The RTD staff and support costs for this first phase of the US 36 Project are a maximum of $2.3 million which will be reimbursed as Project costs in the amounts shown in **Exhibit F** on an annual basis on presentation of an invoice from RTD to CDOT.

RTD will assign the Deputy Assistant General Manager of Capital Programs as the RTD representative on the Executive Oversight Committee ("EOC"), with full participation in all EOC decision-making aspects of the Project.

4. RTD will inspect all RTD required improvements including those identified in **Exhibit B** to ensure compliance with plans and specifications.

5. RTD will endeavor to support CDOT and HPTE as necessary to obtain a TIFIA loan for the Project, to comply with federal requirements related to any aspect of the Project including EIS and ROD compliance, grant requirements if any are used, TIFIA loan requirements, and any other federal or state requirements necessary for implementation of the Project as a part of the US 36 Project as it was defined in the ROD.

6. RTD will support CDOT and HPTE in integration of the existing North I-25 HOV lane with the US 36 Project, however CDOT and HPTE must ensure the Project does not cause a violation of the level of service requirements of the existing North I-25 HOV lane and the policies and requirements outlined in the Tolling Exhibit, attached as **Exhibit D**.

7. RTD will pay $30 million per year, on or before December 31, 2011, 2012, 2013 and 2014 for a total amount of not more than $120 million for the Project. Payment by RTD shall be subject to annual appropriation by the RTD Board of Directors, and such payments will be included in the annual budget presented by RTD staff to the Board for adoption in November effective January 1 of the following calendar year. Payments will be made for design and construction of the US 36 Project. Contractor default, delay or suspension of the Project or non-payment of the Contractor for any reason in any calendar year will result in a proportional reduction in payments made for construction in that year based on the approved Project schedule and milestones, unless modified by change orders approved by RTD as required by Section I.8. above. CDOT or HPTE shall invoice RTD no later than November 1 of each of those calendar years and shall provide a progress report showing percentage of completed work for the year compared to percentage completion of all work required under contract documents, along with all contractor invoices for the year as back-up. Any delay of invoicing shall result in an equal delay of payment. If payments are delayed, CDOT or HPTE may invoice RTD in 2015 for remaining amounts owed.

RTD will also pay a total of $1.85 million in 2012 for the inclusion of the construction of civil improvements at interchange ramps at Church Ranch and Interlocken as depicted in **Exhibit B**.

8. RTD will be responsible for the operation of all BRT elements on the corridor including elements described in **Exhibit B**. CDOT shall transfer to RTD on final acceptance of the US 36 Project ownership of the fiber optic conduits, cabling, control cabinets and Programmable Information Display System elements specified in **Exhibit B** and assign all warranties associated with such elements to RTD.

9. RTD will provide use (including training and technical support) of Aconex and the RTD Quality Management Oversight (QMO) and RTD Quality Records Database (QRD) programs to CDOT and the Contractor for the duration of the Project. Upon completion of the Project, RTD will provide all quality records from the QMO and QRD to CDOT in a format agreed to by both Parties.

III. HPTE RESPONSIBILITIES

1. HPTE has prepared and submitted a budget and financial plan for the Project for the TIFIA loan agreement and project financing.

HPTE will be responsible for the administration of the TIFIA loan including all accounting, reporting, preparation of draws and other required submittals, document retention, and any and all reporting required thereunder. HPTE will make available to other parties at no cost copies of all TIFIA loan documentation including reports and draw requests.

2. HPTE will be responsible for the contracting for, supervision of and enforcement of all tolling requirements in the managed lanes of the Project.

IV. ADJUSTMENTS TO PROJECT SCOPE AND BUDGET

1. Positive or negative adjustments to the Project may be required due to change in loan amounts, timing of loans, interest rates, bids above or below estimate, or unanticipated events or conditions. Any material adjustments change in the Project budget will be noticed to the Parties through the (monthly) reporting. The Parties' Project Managers shall meet as needed to address changes to the budget that involve changes to the **Exhibit B** work or that require additional funding. Any material adjustments to Project scope or adjustments to budget requiring additional funds for the Parties that the Project Managers recommend will not be adopted unless the governing bodies of the Parties or there designated executives approve such changes and authorize funding.

D. OPERATION OF THE PROJECT

All Parties shall comply with the terms and procedures described in the Emergency Operations Procedures Manual appended hereto as Exhibit E.

I. HPTE RESPONSIBILITIES

1. HPTE shall be responsible for the operation of all tolling equipments and implementation of all tolling requirements on the Project. HPTE shall be responsible for continuing to develop with concurrence of the Parties and monitoring the Concept of Operations Plan appended hereto as **Exhibit C**.

2. HPTE shall be responsible for ensuring that tolling requirements for the Project coordinate with tolling requirements for the existing North I-25 Project and are more fully described in **Exhibit D**. The toll rates for a through trip between US 36/Flatirons and Denver shall not be less than RTD Regional fares during the Peak Period.

3. HPTE shall be responsible for use of and accounting for all revenues for the Project as required by its Master Trust Indenture (MTI) and not withstanding any amendment to the MTI will provide for the following:

- Toll collection cost provided costs are reasonable for the work and meet requirements of the MTI.
- Fees to toll enforcement contractor providing administrative and other services to facility.
- Loan repayment to USDOT (TIFIA), subject to the priorities of the MTI.

- Payment to CDOT Region 6 for services provided for maintenance of the Project consistent with the MTI.
- Creation of a Project Renewal and Replacement Account outlined in terms of the MTI.
- Creation of a System Surplus Fund out of US 36 Project Revenues only and not I-25 Project Revenues for use to complete Phase II of the US 36 Managed Lanes and then for use as described herein.

Any Existing I-25 Express Lanes Excess Revenues (as defined in the MTI dated September 1, 2011) in the I-25 Express Lanes Surplus Account (as defined in the MTI) shall be used as required by the I-25 HOV Agreement. Any Pledged Revenues (as defined in the MTI) in the System Surplus Account (as defined in the MTI) shall be used as required by the MTI; provided that no permitted use under State law then in effect, including for transit purposes in the US 36 corridor, may be made without the consent of RTD.

The TIFIA Loan Agreement dated September 1, 2011 between HPTE and the United States Department of Transportation and the MTI provide that certain revenues from the US 36 Managed Lanes Project, Phase I may be used to complete Phase II of the Project. The Parties agree that all construction of and use of the Phase II Project shall be subject to terms of Exhibits C, D and E and shall include additional compatible BRT elements designed to create a seamless BRT system for both phases. Award of any contract for the Phase II shall require an amendment to this IGA and approval of the Phase II contract by the Parties.

After completion of Phase II of the Project RTD consents to use of surplus revenues for prepayment of the TIFIA loan as provided in the MTI. Any surplus revenues after the TIFIA loan is prepaid will be used based on agreement of the Parties.

4. HPTE shall obtain audits of financial statements as performed by the State Auditor or an independent accounting firm selected and overseen by the State Auditor as required by the MTI. If requested HPTE shall allow any of the Parties, the Federal Transit Administration, the General Accounting Office or any entity under contract to any of them or any other agency of the federal government with oversight over the Managed Lanes to audit the Managed Lanes Facility finances and/or performance with cooperation of HPTE staff at no expense on not more than an annual basis.

5. HPTE shall collect performance data and shall make data available to the Parties monthly. HPTE shall report to RTD quarterly on bus travel times for the measurement area, revenues; vehicle usage by time; accidents; and HOV versus HOT Lane use.

6. HPTE will be responsible for the maintenance of the Managed Lanes portion of the Project except for the RTD Communications Infrastructure and associated station improvements as described in **Exhibit B** and the ITS/Tolling Infrastructure as outlined in **Exhibit G**. HPTE will present an annual proposed budget to RTD for review and comment at least 60 days prior to the start of each HPTE budget year

a. HPTE maintenance responsibilities shall include routine maintenance including but not limited to pavement patching, guard rail repair, barrier separation repair, sweeping, lighting and all other necessary maintenance for operation of the Express Lanes Facility. Snow removal shall be implemented according to the same standards as on all interstate highways maintained by CDOT. RTD and HPTE shall designate emergency maintenance contact personnel on an annual basis. Contact will be made during those events when maintenance performed on the Managed Lanes is not performed as required to maintain safe operations. If HPTE is unable to respond RTD may assume maintenance responsibility for that event. Additional emergency contacts for incident management shall also be designated on an annual basis. All designations shall be by notice pursuant to Notice provisions below.

b. Planned major maintenance which will be agreed upon by the parties as part of annual budget and 6 year capital program presented by HPTE to RTD.

Maintenance funds shall be set aside in a reserve fund maintained by HPTE as described in the original MTI. HPTE will not modify Operation and Maintenance Fund requirements of the MTI without agreement from the Parties.

II. CDOT RESPONSIBILITIES

CDOT will be responsible for the maintenance of the buffer, general purpose lanes and outside shoulder as shown in **Exhibit A.**

III. RTD RESPONSIBILITIES

1. RTD shall be responsible for implementation of the BRT elements shown in **Exhibit B**. RTD may, within its sole discretion, oversee the implementation of additional BRT elements through savings or in coordination with other services provided to service US 36 transit riders.

2. RTD will responsible for maintenance of its Communications Infrastructure and associated station improvements as described in **Exhibits B, and G, and I**.

3. RTD will report to the Parties information on bus travel times obtained from RTD's Automatic Vehicle Locator system provided CDOT and or HPTE informs RTD of the data points, days and times of days for which it wants RTD to collect information. RTD will also provide the information designated as their responsibility under **Exhibit H**. For other data points and times not ordinarily collected by RTD in the normal course of business the Parties shall confer on reasonable periods and frequencies for data collection.

E. USE OF THE MANAGED LANES

All vehicles may use the Managed Lanes under the following conditions:

1. Single occupancy vehicles will be allowed in the Managed Lanes at the toll rates established by HPTE to manage congestion and comply with the requirements of the MTI and this IGA.

2. Vehicles with two or more occupants will be allowed free of charge on the Managed Lanes HOV subject to the provisions of the MTI. Contracts will be entered into and funds provided in the operating budget to properly enforce the occupancy requirements.

3. RTD Buses, RTD ADA vehicles, and RTD contractor operated buses and ADA vehicles ("RTD Buses") will be allowed to use the Managed Lanes without any charge. All designated RTD Buses will be equipped by HPTE, at HPTE's cost, with transponders. Other RTD vehicles may use the Managed Lanes as described in **Exhibit D**.

4. If Managed Lane use exceeds projections and creates congestion on I-25 HOV lane in the such that travel times for RTD Buses fall below target travel times specified in the existing North I-25 HOV IGA Parties will meet and confer on the existing North I-25 Toll Rates and if necessary the US 36 lanes per Section (D)(I)(2) above.

5. CDOT, RTD and HPTE agree that RTD's funding is reasonably related to the overall cost of providing BRT infrastructure on the Project specified in Exhibit B and RTD's right to use the Managed Lanes in perpetuity as provided above. Although ownership of the Managed Lanes will not reside with RTD, RTD's financial contribution to the Project shall not be deemed a local grant to HPTE nor a part of the State's fiscal year spending limitation as described in Article X Section 20 of the Colorado Constitution. Rather, RTD's funds represent payment for BRT infrastructure and its perpetual interest in and right to on-going preferential use of the Managed Lanes for BRT service. Notwithstanding the foregoing, the Parties recognize and acknowledge that RTD's funds are eligible as local matching funds with respect to federal funds used for the Project.

Notwithstanding any other provisions of this IGA, neither payment of funds for construction or maintenance shall be deemed a grant by any of the parties to one another.

F. TERM

This IGA shall be effective on the date shown above. The term of this contract shall continue in perpetuity until amended in writing by the Parties.

G. TERMINATION PROVISIONS

This IGA may be terminated as follows:

Termination for Cause. If, through any cause, one of the Parties should fail to fulfill, in a timely and proper manner, its material obligations under this IGA, the non-violating Parties shall thereupon have the right to terminate this contract for cause by giving written notice to the defaulting party of its intent to terminate and at least thirty (30) days opportunity to cure the default or show cause why termination is otherwise not appropriate. In the event of termination, all finished or unfinished documents, data, studies, surveys, drawings, maps,

models, reports or other material prepared by the defaulting party under this IGA or required under the audit provisions shall be exchanged as required to complete audit and closeout. CDOT acknowledges that once RTD has paid all funds due under this IGA for construction of the managed lanes RTD will have fulfilled its material obligations and this agreement may not be terminated as to RTD's right's hereunder. CDOT and HPTE shall be limited to damages and or injunctive relief against RTD to require fulfillment of remaining obligations.

If after such termination it is determined, for any reason, that the defaulting party was not in default or that the defaulting party's action/inaction was excusable, such termination shall be treated as a termination for convenience, and the rights and obligations of the Parties shall be the same as if the contract had been terminated for convenience, as described herein.

H. LEGAL AUTHORITY

RTD, CDOT and HPTE warrant that they possess the legal authority to enter into this IGA and that they have taken all actions required by their procedures, by-laws, and/or applicable law to exercise that authority, and to lawfully authorize their undersigned signatory to execute this IGA and to bind each party to its terms. The person(s) executing this contract on behalf of each party warrants that such person(s) has full authorization to execute this IGA.

I. REPRESENTATIVES AND NOTICE

All communications relating to the day-to-day activities for the work shall be exchanged between the Project Managers designated by CDOT, HPTE and RTD. All communication, notices, and correspondence shall be addressed to the individuals identified below. Either party may from time to time designate in writing new or substitute representatives.

If to CDOT:

John Schwab
US 36 Project Director
200 S. Holly Street
Denver CO 80222

If to RTD:

Rick Clarke
Assistant General Manager for Capital Programs
RTD-FasTracks
1560 Broadway, Suite 700
Denver CO 80202

If to HPTE:

Michael Cheroutes
Director, HPTE
Colorado Department of Transportation
4201 E. Arkansas Ave.
Denver, CO 80222

J. SUCCESSORS

Except as herein otherwise provided, this contract shall inure to the benefit of and be binding upon the Parties hereto and their respective successor's government entities. No Party may assign its rights to any other person or entity without written authorization of the Parties. Any contractors for the design construction operation or maintenance of the Project shall be managed by the Party responsible for that aspect of performance designated above.

K. THIRD PARTY BENEFICIARIES

It is expressly understood and agreed that the enforcement of the terms and conditions of this IGA and all rights of action relating to such enforcement, shall be strictly reserved to CDOT, HPTE, and RTD. Nothing contained in this contract shall give or allow any claim or right of action whatsoever by any other third person. It is the express intention of the Parties that any such person or entity, other than CDOT, HPTE, and RTD receiving services or benefits under this contract shall be deemed an incidental beneficiary only.

L. GOVERNMENTAL IMMUNITY

Notwithstanding any other provision of this IGA to the contrary, no term or condition of this IGA shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, § 24-10-101, et seq., C.R.S., as now or hereafter amended. The Parties understand and agree that liability for claims for injuries to persons or property arising out of negligence of HPTE of Colorado, RTD or any of their departments, institutions, agencies, boards, officials and employees is controlled and limited by the provisions of § 24-10-101, et seq., C.R.S., as now or hereafter amended as to CDOT/HPTE and the risk management statutes, §§ 24-30-1501, et seq., C.R.S., as now or hereafter amended.

M. SEVERABILITY

To the extent that this IGA may be executed and performance of the obligations of the Parties may be accomplished within the intent of the contract, the terms of this IGA are severable, and should any term or provision hereof be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other term or provision hereof.

N. WAIVER

The waiver of any breach of a term, provision, or requirement of this IGA shall not be construed or deemed as a waiver of any subsequent breach of such term, provision, or requirement, or of any other term, provision or requirement.

O. ENTIRE UNDERSTANDING

This IGA is intended as the complete integration of all understandings between the Parties. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any

force or affect whatsoever, unless embodied herein by writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a writing executed and approved by the Parties.

P. SURVIVAL OF CONTRACT TERMS

Notwithstanding anything herein to the contrary, the Parties understand and agree that all terms and conditions of this IGA and the exhibits and attachments hereto which may require continued performance, compliance or effect beyond the termination date of the IGA shall survive such termination date and shall be enforceable by the parties as provided herein in the event of such failure to perform or comply by HPTE, CDOT, or RTD.

Q. MODIFICATION AND AMENDMENT

This IGA is subject to such modifications as may be required by changes in federal or State law, or their implementing regulations. Any such required modification shall automatically be incorporated into and be part of this IGA on the effective date of such change as if fully set forth herein.

The Parties may expand, revise or adjust the exhibits attached hereto by the initialing of substitute exhibits by all Parties without other action to effect such amendments to exhibits. On substitution, they shall be incorporated herein with the same effect as previous forms of exhibits.

Except as provided above, no modification of this contract shall be effective unless agreed to in writing by the Parties in an amendment to this IGA that is properly executed and approved in accordance with applicable law.

R. DISPUTES

Any provision of this agreement requiring concurrence, approval, agreement, or authorization (agreement) by any or all of the Parties, and for which agreement is not given within the time specified shall be resolved pursuant to this section. The Parties shall resolve disputes regarding all items in this IGA at the lowest staff level possible. The escalation process shall be:

- Project Director for CDOT and Project Manager for RTD
- CDOT Executive Director, RTD General Manager and HPTE Director
- RTD Board of Directors, CDOT Transportation Commission and HPTE Board of Directors

Resolution of any dispute that may result in loss of federal funds that may be used for the Project or request for return of funds by any federal agency including Federal Transit Administration or Federal Highway Administration shall require concurrence by the

appropriate federal agency(ies) in addition to RTD and CDOT and shall not be binding until concurrence is obtained.

THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT

REGIONAL TRANSPORTATION DISTRICT

By: _____
Phillip A. Washington
General Manager

Approved as to legal form for RTD:

By: _____

HIGH PERFORMANCE TRANSPORTATION ENTERPRISE:

By: _____
Michael Cheroutes
Director

COLORADO DEPARTMENT OF TRANSPORTATION

By: _____
Donald Hunt
Executive Director

APPENDIX E

CDOT/E-470 IGA

June 2011

Routing# 11HTC 33423
SAP 331000430

INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN THE STATE OF COLORADO DEPARTMENT OF TRANSPORTATION HIGH PERFORMANCE TRANSPORTATION ENTERPRISE AND E-470 PUBLIC HIGHWAY AUTHORITY AMENDING AND RESTATING DECEMBER 13, 2005 INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN THE COLORADO TOLLING ENTERPRISE AND E-470 PUBLIC HIGHWAY AUTHORITY

TABLE OF CONTENTS

1. PARTIES

This Intergovernmental Agreement (herinafter called "Contract") is entered into by and between E-470 PUBLIC HIGHWAY AUTHORITY (hereinafter called "E-470"), and the STATE OF COLORADO, for the use and benefit of the Department of Transportation, High Performance Transportation Enterprise (hereinafter called the "State" or "HPTE"). E-470 and the State hereby agree to the following terms and conditions.

2. RECITALS

A. Authority, Appropriation, and Approval

The High Performance Transportation Enterprise (referenced herein as "HPTE" or the "State") was created under C.R.S., Sections 43-4-801 *et seq.* in order to finance, construct, operate and regulate and maintain a system of tolled highways for the state of Colorado and HPTE is the successor entity to the Colorado Tolling Enterprise.

The E-470 Public Highway Authority ("E-470") was created pursuant to the Public Highway Authority Law, Sections 43-4-501 *et seq.*, C.R.S. and is empowered to finance, construct, operate and/or maintain all or a portion of a beltway or other transportation improvements in the Denver metropolitan region.

Pursuant to Section 43-4-806, C.R.S., HPTE is empowered to contract with local agencies to provide maintenance of highways that are part of the state highway system. Pursuant to Section 43-4-506(1)(c), C.R.S., E-470 is empowered to enter into contracts and agreements such as the Contract. Pursuant to Section 29-1-203, C.R.S., the Parties are both authorized to enter into intergovernmental agreements such as the Contract.

As the Parties are both public entities, all Contract funds have been budgeted, appropriated and otherwise made available and a sufficient unencumbered balance thereof remains available for payment. Required approvals, clearance and coordination, to the extent applicable, have been accomplished from and with appropriate agencies.

Through a review of capabilities and rates, the State selected E-470 to provide services outlined in **Exhibit A** to the State.

B. Consideration

The Parties enter into this Contract in consideration of the mutual promises and covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged as adequate to support this Contract.

C. Purpose

The Parties have entered into this Contract to specify the terms and conditions under which E-470 and E-470's operations E-470 will continue to maintain and provide "back-office" operation of HPTE's Express Lanes including establishing, managing and maintaining customer accounts and performing toll violations processing for the same using E-470's toll collection system ("TCS"), all according to the Section 5, Statement of Services Performed/Statement of Work Provided.

D. References

All references in this Contract to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

3. DEFINITIONS

The following terms as used herein shall be construed and interpreted as follows:

A. Budget

"Budget" means the budget for the Services and Work described in a Task Order.

B. Contract

"Contract" means this intergovernmental agreement between HPTE and E-470, its terms and conditions, attached exhibits, documents incorporated by reference under the terms of this Contract, and any future modifying agreements, exhibits, attachments or references incorporated herein pursuant to Colorado State law, Fiscal Rules, and State Controller Policies.

C. Contract Funds

"Contract Funds" means funds available for payment by the State to E-470 pursuant to this Contract and the Task Orders.

D. Evaluation

"Evaluation" means the process of examining E-470's Services and Work and rating it based on criteria established in **§6** and **Exhibit B.**

E. Exhibits and other Attachments

The following are attached hereto and incorporated by reference herein: **Exhibit A** (Statement of Services and Work), **Exhibit** B (Performance Standards), **Exhibit C** (Cost Allocation), and **Exhibit D** (Form of Task Order).

F. Managed Lanes

"Managed Lanes" means the electronic tolled lanes and HOV lanes which are or will be a part of HTPE's tolled or managed lane facilities and which are subject to Task Orders to be issued hereunder.

G. Party or Parties

"Party" means the State or E-470 and "Parties" means both the State and E-470.

H. Review

"Review" means examining E-470's Work to ensure that it is adequate, accurate, correct and in accordance with the criteria established in **§6** and **Exhibit A.**

I. Services

"Services" means those actions to be performed by E-470 in accordance with the Scope of Services and Work attached as **Exhibit A.**

J. Task

"Task" shall be those specific elements of the Services or Work which E-470 will perfrom pursuant to the Parties's specific agreement as documented in a signed Task Order.

K. Task Order

"Task Order" means a task order issued under this Contract pursuant to the process set out in **§6(D)**.

L. Work

"Work" means the physical elements of work including system integration and associated physical task and activities which E-470 shall perform as directed in a Task Order and in accordance with Exhibit A to fulfill its obligations under this Contract, Exhibit A, and each Task Order, including the performance of the Services and delivery of the Work Product.

M. Work Product

"Work Product" means the tangible or intangible results of E-470's Work, including, but not limited to, software, research, reports, studies, data, photographs, negatives or other finished or unfinished documents, drawings, models, surveys maps, materials, or work product of any type, including drafts.

4. TERM and TERMINATION

The Parties' respective performances shall commence on the latter of the date it is signed by representatives of HPTE, E-470, and the Colorado State Controller or his designee or July 1, 2011, "Effective Date". This Contract shall terminate on June 30, 2016 unless sooner terminated or further extended as specified in Section 5(B).

A. Early Termination

1. **Termination for Convenience.** In addition to other methods of termination, either Party may terminate this Contract at any time upon delivery of six (6) months written notice to the other Party, except to the extent a shorter or longer termination period is set forth in any Task Order issued hereunder.

2. **Termination for Cause.** If either Party shall fail to fulfill its obligations under this Contract, or if either Party shall default upon a term or condition of this Contract, the non-defaulting party shall have the right to terminate this Contract for cause by giving written notice of intent to terminate to the defaulting Party. For a period of ten (10) days after the date of the notice of intent to terminate, the defaulting Party shall have the opportunity to cure the default. Upon expiration of the ten (10) day period, if the default is not cured to the satisfaction of the non-defaulting Party then the non-defaulting Party shall deliver a notice of termination which shall be effective to terminate this Contract as the of the date thereof.

5. STATEMENT OF SERVICES PROVIDED AND WORK PERFORMED

A. Timing of Completion of Services or Work

E-470 shall complete the Services or Work and its other obligations as described herein and in **Exhibit A** or any delivery dates established in Task Orders. The State shall not be liable to compensate Contractor for any E-470 Work performed prior to the Effective Date or after the termination of this Contract. Likewise, E-470 shall have no obligation to perform further Services or Work upon termination.

B. Nature of Services and Work

E-470 shall provide the Services as particular described in **Exhibit A** (the "Scope of Services and Work") To the extent elements of physical work are needed in conjunction with the Services or in addition to the Services those elements of Work shall be provided in accordance with **Exhibit B** (Performance Standards).

E-470 shall provide Services and/or Work in accordance with approved Task Orders, using the Contract Funds and without increasing the maximum amount payable hereunder by the State.

C. No State Employees

E-470 shall perform Services or provide Work hereunder through its staff or its operations contractor. All persons performing Work under this Contract shall be E-470's employee(s) or E-470 contractors and shall not be employees of the State for any purpose as a result of this Contract.

D. Task Orders

Performance of all Services and/or Work under this Contract shall be accomplished pursuant to Task Orders which shall be in a form substantially similar to that attached hereto as **Exhibit D**. Each Task Order shall contain a not-to-exceed-amount and the State's financial obligation under such Task Order shall be limited to such amount. In any give year during the term of this Contract, the cumulative annual amount of all Task Orders shall not, in any event, exceed the amount budgeted by HPTE for such year for this Contract.

As specific tasks (items of Services or Work) are identified, the Parties shall agree on Task Order-specific statements of services and/or work and Task Order compensation. These items shall be documented in a Task Order which, following the parties' agreement thereto, shall be issued by the State.

Tasks shall be defined and ordered by agreement of the Parties based on the cost allocations established in **Exhibit C**. Immediately upon the execution of this Contract, the State shall

issue its first Task Order ("Task Order 1") for all Services described in **Exhibit A.** Changes to any provision hereunder, including, but not limited to the methodology of cost allocation established in **Exhibit C**, shall require a written amendment signed by the State Controller or designee and E-470, which amendment will be a Contract amendment and not a Task Order.

Task Orders issued hereunder shall be processed as follows. First, the State shall specify the desired Services and any requirements. E-470 shall propose a price using the methodology established in **Exhibit C**. The proposal shall be in a form acceptable to the State and include all pertinent information such as a Statement of Work, proposed time of performance, estimated number of hours, material costs, etc. Once the Parties agree regarding the foregoing, they shall prepare and execute a Task Order in a form substantially similar to that attached hereto as **Exhibit D**. Each Task Order shall contain a not-to-exceed-amount and the State's financial obligation under such Task Order shall be limited to such amount.

Performance of the obligations set forth in the Task Order are subject to the provisions of this Contract. E-470 will, as appropriate for the items of Work, warrant in the relevant Task Order that it will successfully complete its obligations under that Task Order within the time and for the price stated in the said Task Order. The State is not obligated to perform its obligations under the Task Order until the State Controller or designee approves it.

E-470's proposal shall be signed by a representative of E-470 who is authorized to contractually bind E-470 and shall constitute a firm offer to provide the Work on the basis set forth in the proposal. The State's issuance of a Task Order based on E-470's proposal shall constitute an acceptance of E-470's proposal and no further signature shall be required on the part of E-470.

6. REIMBURSEMENT

E-470, in the spirit of governmental cooperation, is not marking up for profit its actual costs for providing general back-office services to process the State's Express Lane tolls. E-470 is passing through to the State the State's proportional share of the E-470's toll and violations processing costs. These costs are those associated with processing the State's Express Lane tolls and toll violations. The State understands that these costs are to be born by the State in order that the transactions do not become a cost burden to E-470. Accordingly, the State will reimburse E-470 for costs incurred in processing the State's Express Lane toll transactions and violations as outlined in Section 6(B) and Exhibit C. .

A. Maximum Amount

The cumulative not-to-exceed amount which shall be reimbursed to E-470 by the State for all Task Orders issued pursuant to this Contract is $3,000,000 (three million dollars). The State's financial obligation is limited to this maximum amount and the State shall not issue Task Orders resulting in a cumulative amount in excess thereof. Increases or decreases to the not-to-exceed Contract amount set forth in this Section require a Contract amendment approved by the Parties.

B. Cost Reimbursement

The amounts and methods of cost reimbursement to E-470 for Services and Work are outlined in Exhibit C.

i. Interest

The State shall fully reimburse E-470 in accordance with each E-470 invoice within forty-five (45) days of receipt thereof if the amount invoiced appear to be accurate and

in accordance with the Contract. Uncontested amounts not reimbursed to E-470 by the State within forty-five (45) days shall bear interest on the unpaid balance beginning on the 46th day at a rate not to exceed one percent per month until paid in full; provided, however, that interest shall not accrue on unpaid amounts that are subject to a good faith dispute. E-470 shall invoice the State separately for accrued interest on delinquent amounts. The separate interest billing shall reference the delinquent reimbursement the number of days' interest to be paid and the interest rate.

ii. Available Funds-Contingency-Termination

The State is prohibited by law from making commitments beyond the term of the State's current fiscal year. Therefore, E-470's cost reimbursement beyond the State's current Fiscal Year is contingent upon the continuing availability of State appropriations as provided in the Colorado Special Provisions. Reimbursement to E-470s pursuant to this Contract shall be made only from available funds encumbered for a Task Order and the State's liability for such reimbursements shall be limited to the amount remaining of such encumbered funds. If State funds are not appropriated, or otherwise become unavailable to fund any Task Order, either E-470 or the State may terminate this Contract immediately, in whole or in part, without further liability in accordance with the provisions hereof.

iii. Erroneous Reimbursement

Reimbursements made to E-470 which the Parties agree were erroneous or otherwise in excess of the Contract's specifications, may be offset against the next reimbursement made to E-470.

C. Use of Funds

Contract Funds shall be used only for eligible fees and costs identified in a Task Order and/or in the budget for such Task Order.

7. E-470 REPORTING

E-470 shall provide daily transactional activity reports, including associated transactional revenue for the previous day's Express Lane transactions. E-470 will provide specific reporting as outlined in the relevant Task Order.

8. E-470 RECORDS

A. Maintenance

E-470 shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work or the delivery of Services hereunder. E-470 shall maintain such records until the last to occur of: **(i)** a period of three years after the date this Contract expires or is sooner terminated, or **(ii)** final payment is made hereunder, or **(iii)** the resolution of any pending Contract matters, or **(iv)** if an audit is occurring, or E-470 has received notice that an audit is pending, until such audit has been completed and its findings have been resolved (collectively, the "Record Retention Period").

B. Inspection

E-470 shall permit the State, to audit, inspect or examine E-470's records related to this Contract during the Term of this Contract to assure compliance with the terms hereof or to evaluate performance hereunder.

.

9. CONFIDENTIAL INFORMATION-STATE RECORDS

E-470 and the State shall comply with the provisions on this **§9** if either Party becomes privy to confidential information in connection with its performance hereunder. Confidential information includes, but is not necessarily limited to, any state records, personnel records, and information concerning individuals. Such information shall not include information required to be disclosed pursuant to the Colorado Open Records Act, CRS §24-72-101, et seq.

A. Confidentiality

E-470 and the State shall keep all State and E-470 records and information confidential at all times and comply with all laws and regulations concerning confidentiality of information. Any request or demand by a third party for State or E-470 records and information in the possession of E-470 or the State shall be immediately forwarded to principal representative of the Party to whom the requested information relates.

B. Notification

E-470 and the State shall each notify their agent, employees, Subcontractors and assigns who may come into contact with State or E-470 records and confidential information that each is subject to the confidentiality requirements set forth herein, and shall provide each with a written explanation of such requirements before permitting them to access such records and information.

C. Use, Security, and Retention

E-470 shall follow its cyber security policy and ensure confidentiality of all State records and other confidential information wherever located.

10. INSURANCE

E-470 affirms that it maintains insurance as set forth in **Exhibit E** and agrees to maintain the same or similar insurance during the term of this Contract.

11. REMEDIES

The State, in its sole discretion, may exercise the following remedy in addition to other remedies available to it:

Withhold payment to E-470 until corrections in a specific item of E-470's Work, as described in a specific Task Order, are satisfactorily made and completed.

12. NOTICES and REPRESENTATIVES

Each individual identified below is the principal representative of the designating Party. All notices required to be given hereunder shall be hand delivered with receipt required or sent by certified or registered mail to such Party's principal representative at the address set forth below. In addition to, but not in lieu of a hard-copy notice, notice also may be sent by e-mail to the e-mail addresses, if any, set forth below. Either Party may from time to time designate by written notice substitute addresses or persons to whom such notices shall be sent. Unless otherwise provided herein, all notices shall be effective upon receipt.

A. State:

Michael Cheroutes
Director of HPTE
Colorado Department of Transportation, HQ
4201 East Arkansas Ave.
Denver, CO 80222
303-757-9607
Michael.Cheroutes@dot.state.co.us

B. E-470:

John McCuskey
Executive Director
E-470 Public Highway Authority
22470 6th Parkway, Suite 100 Aurora, Colorado 80018
jmccuskey@e-470.com

13. GOVERNMENTAL IMMUNITY

Liability for claims for injuries to persons or property arising from the negligence of the E-470 or the State of Colorado, its departments, institutions, agencies, boards, officials, and employees is controlled and limited by the provisions of the Governmental Immunity Act §24-10-101, et seq. and the risk management statutes, CRS §24-30-1501, et seq., as amended.

14. STATEWIDE CONTRACT MANAGEMENT SYSTEM

If the maximum amount payable to Contractor under this Contract is $100,000 or greater, either on the Effective Date or at anytime thereafter, this **§19** applies.

To the extent that CRS §24-102-205, §24-102-206, §24-103-601, §24-103.5-101 and §24-105-102, concerning the monitoring of vendor performance on state contracts and inclusion of contract performance information in a statewide contract management system, are applicable by their terms, E-470 agrees to abide by their terms.

15. GENERAL PROVISIONS

A. Amendment and Modification

This Contract may be amended through a Task Order or a formal amendment in writing signed by both Parties.

B. Binding Effect

All provisions herein contained, including the benefits and burdens, shall extend to and be binding upon the Parties' respective legal representatives, successors, and assigns.

C. Captions

The captions and headings in this Contract are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions.

D. Counterparts

This Contract may be executed in multiple identical original counterparts, all of which shall constitute one agreement.

E. Entire Understanding

This Contract represents the complete integration of all understandings between the Parties and all prior representations and understandings, oral or written, are merged herein. Prior or contemporaneous additions, deletions, or other changes hereto shall not have any force or affect whatsoever, unless embodied herein.

F. Jurisdiction and Venue

All suits or actions related to this Contract shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. Order of Precedence

The provisions of this Contract shall govern the relationship of the State and E-470. In the event of conflicts or inconsistencies between this Contract and its exhibits and attachments, including, but not limited to, those provided by E-470, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

i. The provisions of the main body of this Contract,
ii. Any Signed Task Order.
iii. Exhibit A – Statement of Services,
iv. Exhibit B – Performance Standards,
v. Exhibit C –Cost Reimbursement.

H. Severability

Provided this Contract can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof, provided that the Parties can continue to perform their obligations under this Contract in accordance with its intent.

I. Survival of Certain Contract Terms

Notwithstanding anything herein to the contrary, provisions of this Contract requiring continued performance, compliance, or effect after termination hereof, shall survive such termination and shall be enforceable by the State if E-470 fails to perform or comply as required.

J. Third Party Beneficiaries

Enforcement of this Contract and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Contract are incidental to the Contract, and do not create any rights for such third parties.

K. Waiver

Waiver of any breach under a term, provision, or requirement of this Contract, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.

16. COLORADO SPECIAL PROVISIONS

The Special Provisions apply to all Contracts except where noted in italics.

A. CONTROLLER'S APPROVAL. CRS §24-30-202 (1).

This Contract shall not be valid until it has been approved by the Colorado State Controller or designee.

B. FUND AVAILABILITY. CRS §24-30-202(5.5).

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. GOVERNMENTAL IMMUNITY.

No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. §§1346(b) and 2671 et seq., as applicable now or hereafter amended.

D. INDEPENDENT CONTRACTOR

E-470 shall perform its duties hereunder as an independent contractor. Neither E-470 nor any agent, employee or contractor of E-470 shall be deemed to be an agent, employee or contractor of the State. E-470 and its employees, contractors and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for E-470 or any of its agents or employees. Unemployment insurance benefits shall be available to Contractor and its employees and agents only if such coverage is made available by Contractor or a third party. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Contract. Contractor shall not have authorization, express or implied, to bind the State to any contract, liability or understanding, except as expressly set forth herein. Contractor shall **(a)** provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, **(b)** provide proof thereof when requested by the State, and **(c)** be solely responsible for its acts and those of its employees and agents.

E. COMPLIANCE WITH LAW.

E-470 shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. CHOICE OF LAW.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this Contract, to the extent capable of execution.

G. BINDING ARBITRATION PROHIBITED.

The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this contact or incorporated herein by reference shall be null and void.

H. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00.

State or other public funds payable under this Contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. E-470 hereby certifies and warrants that, during the term of this Contract and any extensions, E-470 has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that E-470 is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Contract, including, without limitation, immediate termination of this Contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. EMPLOYEE FINANCIAL INTEREST. CRS §§24-18-201 and 24-50-507.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Contract. E-470 has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of E-470's services and E-470 shall not employ any person having such known interests.

J. VENDOR OFFSET. CRS §§24-30-202 (1) and 24-30-202.4.

[***Not Applicable to intergovernmental agreements***] Subject to CRS §24-30-202.4 (3.5), the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in CRS §39-21-101, et seq.; (c) unpaid loans due to the Student Loan Division of the Department of Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e) other unpaid debts owing to the State as a result of final agency determination or judicial action.

K. PUBLIC CONTRACTS FOR SERVICES. CRS §8-17.5-101.

[Not Applicable to Agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental Agreements, or information technology services or products and services] Contractor certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who shall perform work under this Contract and shall confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Contract, through participation in the E-Verify Program or the State program established pursuant to CRS §8-17.5-102(5)(c), Contractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract. Contractor (a) shall not use E-Verify Program or State program procedures to undertake pre-employment screening of job applicants while this Contract is being performed, (b) shall notify the subcontractor and the contracting State agency within three days if Contractor has actual knowledge that a subcontractor is employing or contracting with an illegal alien for work under this Contract, (c) shall terminate the subcontract if a subcontractor does not stop employing or contracting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Contractor participates in the State program, Contractor shall deliver to the contracting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Contractor

has examined the legal work status of such employee, and shall comply with all of the other requirements of the State program. If Contractor fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the contracting State agency, institution of higher education or political subdivision may terminate this Contract for breach and, if so terminated, Contractor shall be liable for damages.

L. PUBLIC CONTRACTS WITH NATURAL PERSONS. CRS §24-76.5-101. E-470, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she **(a)** is a citizen or otherwise lawfully present in the United States pursuant to federal law, **(b)** shall comply with the provisions of CRS §24-76.5-101 et seq., and **(c)** has produced one form of identification required by CRS §24-76.5-103 prior to the effective date of this Contract.

SPs Effective 1/1/09

THE REST OF THIS PAGE INTENTIONALLY LEFT BLANK

17. SIGNATURE PAGE

THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT

*** Person(s) signing for E-470 hereby swear and affirm that they are authorized to act on E-470's behalf and acknowledge that the State is relying on their representation to that effect.**

E-470 PUBLIC HIGHWAY AUTHORITY

By: John D McCarthy
Name of Authorized Individual

Executive Director
Official Title of Authorized Individual

*Signature

Date: 6-21-11

STATE OF COLORADO
John W. Hickenlooper GOVERNOR
Department of Colorado

By Michael Cheroutes, HPTE Director

Date: 6/23/11

APPROVED AS TO FORM:

ICENOGLE | SEAVER | POGUE
A Professional Corporation

Tamara R. Seaver
General Counsel

Director of Finance

DATE APPROVED BY THE BOARD OF DIRECTORS: June 9, 2011

LEGAL REVIEW
John W. Suthers, Attorney General

By: Kathryn E. Young
Signature - Assistant Attorney General

Date: 6-28-11

ALL CONTRACTS REQUIRE APPROVAL by the STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. E-470 is not authorized to begin performance until such time. If E-470 begins performing prior thereto, the State of Colorado is not obligated to pay E-470 for such performance or for any work product and/or services provided hereunder.

STATE CONTROLLER
David J. McDermott, CPA

By: Robert Jaros
Colorado Department of Transportation

Date: 6-29-11

Exhibit A
Scope of Services and Work

As applicable, all Services and work will be performed according to the business rules for toll charges, violations and operational hours for the Express Lanes mutually agreed to by the Parties.

Services:

1) General

The E-470 Public Highway Authority (E-470) will maintain and operate the Colorado High Performance Transportation Enterprise's (HPTE) Express Lanes in locations described in specific Task Orders issued under the Contract as well as provide and manage customer account establishment billing functions and violation processing using E-470's Toll Collection System (TCS), all subject to reimbursement from HPTE in accordance with the Contract. E-470 may perform the all Services directly or through its operations contractor.

2) Management

a) E-470 will employ (directly or through its contractor) management staff to oversee all obligations of this Statement of Services and Work.
b) E-470 will manage and maintain the TCS software used for electronic toll collection and violation processing in the Express Lanes.

3) Lane Maintenance

E-470 will employ (directly or through its operations contractor) a toll system technician who will be responsible for maintaining the lane equipment and system hardware needed to operate the electronic toll collection equipment in HPTE's Express Lanes. The costs of all such equipment, including but not limited to: vehicles, hand tools, uniforms, insurance, fuel, lane equipment, rental equipment and similar expenses will be billed to HPTE in accordance with the Contract.

The Technician will:

- Perform regular maintenance inspections;
- Perform preventative maintenance functions;
- Repair equipment problems within his technical skills level;
- Coordinate the repair solution for other equipment problems;
- Notify HPTE and E-470 when new equipment is needed;
- Price new equipment;
- Procure new equipment using the Equipment Procedures;
- Install new equipment as necessary;
- Coordinate lane closures and repair functions with CDOT;
- Notify HPTE and E-470 of incidents requiring a toll adjustment for customers;
- Perform emergency on-call duties.

4) Customer Account Maintenance

E-470 will maintain all EXpressToll and License Plate Toll accounts in its Customer Service Center. Customers using the Express Lanes will be charged the proper toll via their account. Account data will be used by Customer Service Representatives who will utilize the TCS software. Job functions include:

- Working with customers on the phone, in person or via the internet regarding new and existing account updates, payments, violations and other information;
- Processing customer requests for new or additional transponders and transponder accessories;
- Processing mail and e-mail from customers;
- Payment processing.

No data from a customer's account will be released except under E-470's policy regarding criminal investigation or court ordered information.

5) Transaction Processing

E-470 will maintain and operate the HPTE's Express Lanes on I-25 and other locations designated by Task Orders as well as provide and manage customer account establishment, billing functions and violation processing using E-470's TCS. During all phases of these services may be provided by, E-470 directly or through is operations contractor. More specifically:

a) EXpressToll Transactions

E-470, using toll collection equipment installed at the Express Lanes, will capture active transponders in vehicles and post the transactions to valid EXpressToll accounts in the TCS. Payment to HPTE will occur the following business day after the transaction has been posted to a valid EXpressToll account. Business rules affecting this process may be modified, changed and improved from time to time by E-470. HPTE will be notified of these changes.

b) License Plate Toll Transactions

E-470, using toll collection equipment installed at the Express Lanes, will capture photographs of license plates when a valid transponder is not detected in a vehicle, the image will be reviewed either electronically using optical character recognition (OCR) or by a person. If the license plate is not already associated with an account in the TCS, registered owner information will be obtained and an account will be established. Once the account is established, or if there was already an existing account, the transactions will be posted to the account in the TCS. License Plate Toll transactions will be billed once a month on the anniversary date (date of establishment) of the account. Payment to HPTE will occur the following business day after payment is posted to an LPT account for invoiced transactions. Business rules affecting this process may be modified, changed and improved from time to time by E-470. HPTE will be notified of these changes.

c) Hybrid Vehicle Lane Usage

E-470, using its TCS program installed at the Express Lanes, will capture and post lane usage information for hybrid vehicles equipped with transponders and traveling in the Express Lanes.

d) Non-Revenue Transaction Posting

E-470, using its TCS program installed at the Express Lanes, will capture and post all valid non-revenue vehicles. Business rules affecting this process may be modified, changed and improved from time to time. HPTE will be notified of these changes by E-470.

6) Violation Processing

E-470 will process all toll violations that occur in the HPTE Express Lanes. Transactions that are not paid after the first or second License Plate Toll bill and have not responded to collections efforts for 90-days will become violations. These transactions will be aggregated and sent on a civil penalty notice in accordance with applicable state law.

Violations not resolved within the allowed time frame will be further processed for legal action through the administrative hearing process discussed below.

7) Funds Transfer to HPTE

E-470 will transfer funds to HPTE only for those transactions that have been posted to a customer's EXpressToll account or have a valid License Plate Toll payment. Transactions which E-470 is not able to post to an EXpressToll account will not be paid to HPTE by E-470. Automated clearing house (ACH) transfers will be made for those previous day's collections not already paid. All effort will be made to make payments on each business day. When payment cannot be made on a regular business day, E-470 shall notify HPTE and provide the circumstances for the delay.

Violation payments will be paid to HPTE by means of (ACH) transfer only when funds are received by E-470 for such violations in the Express Lanes. E-470 shall not be responsible for payment to HPTE for violation fees and tolls that are billed to the violator, but not paid.

8) Reimbursement

E-470 shall be reimbursed for all of the costs assocated with the Services. E-470 shall bill reimburseable sums to HPTE monthly in accordance with the Contract. HPTE's Reimbursement obligation will be a direct cost pass-through calculated by formula, based upon E-470's costs associated with the Services described in Exhibit C. E-470's cost formulas may, from time-to-time, be adjusted by E-470 based on changes in E-470's actual costs. E-470's operations contractor's overhead and profit will be included in all cost allocations as such are components of cost to E-470. E-470 Services may include charges for

personnel involved in the Express Lane support operation. All of E-470's invoices will be supported with such back-up material as is directed in the relevent Task Order. Management fees will be assessed in proportion to EXpressToll Service Center usage by E-470, HPTE, the Northwest Parkway and other future users. HPTE shall not unreasonably withhold payment to E-470, as provided in the Contract. Reimbursement for services shall include:

a) Back Office Service (image processing, bills mailed, EXpressToll Account Usage, and Customer service.
b) Toll System Technician

9) Administrative Law Court

E-470 shall establish, organize and operate an administrative adjudicative system for the determination of alleged toll evasion violations in the Express Lanes. Such system shall be consistent with statutory requirements, constitutional protections of due process, the PHA Law, and such rules and policies as may be adopted by E-470.

E-470 shall retain one or more impartial administrative hearing officers which may be state-employed administrative law judges or independent administrative law judges who will conduct hearings and render decisions based upon evidence presented at the hearings. E-470 shall establish and maintain hearing facilities in the nature of a courtroom(s) for the conduct of toll enforcement hearings.

E-470 shall recover the costs of administering and operating its toll evasion and administrative adjudication process by assessing fees set out in rules and policies as adopted by E-470's Board. HPTE shall also reimburse E-470 for HPTE's proportional share of administrating the administrative court process, with such reimbursement provided as described in Exhibit C.

10) Audit and Special Requests for Data

HPTE may audit E-470's Toll Collection System functions and reports performed under this Contract. E-470 may bill HPTE for all research requests regarding special or historical data or information related to any HPTE audit request.

Work:

1) Equipment and Software Changes on Existing Facilities

HPTE shall pay for equipment and software changes to existing facilities in accordance with the following steps:

a) When equipment is needed, either party may notify the other in writing;
b) When new equipment or a software change is required, the initiating party will furnish the cost estimate for the material and installation to the other party;

c) If HPTE approves of the equipment procurement and installation, HPTE will authorize the equipment purchase or installation through the use of a Task Order.
d) Installation costs will be paid as described in Exhibit C.

2) Implementation and Installation

E-470 will install and implement toll collection equipment on any new HOV or managed lane facility for HPTE. Each implementation and installation will be authorized by HPTE through the use of a Task Order. Costs for this work will be applied as described in Exhibit C.

3) Business Rule Changes

Business rules for toll charges, violations and operational hours for the Express Lanes are established by HPTE with concurrence by E-470 and all as relative to the existing TCS capabilities. HPTE may make special requests applicable solely to the HPTE lanes that may require specialized code or software changes. These requests should be submitted to E-470 for approval and, if approved, E-470 will develop and implement these changes. HPTE will reimburse to E-470 all costs associated with the development and implemenation of these changes.

Exhibit B
Performance Standards

Rating possibilities are "Above Standard," "Standard," or "Below Standard."

1) Quality Measures:

   E-470 shall provide quality Services pursuant to terms of this Contract.

2) Timeliness Measures:

   E-470 shall submit reports in a timely manner as set forth in each Task Order.

3) Pricing Measures:

   E-470 shall adhere to the pricing agreed upon in the Contract.

4) Business Relationship Measures:

   E-470 shall maintain a consistently professional attitude and open lines of communication.

5) Specific Requirements Included in Scope of Work:

   E-470 shall maintain all requirements as outlined in the Scope of Services and Work, **Exhibit A**.

Exhibit C
Cost Reimbursement

Reimbursement for Services included in Task Orders:

1) Back Office Service

HPTE's Reimbursement rate will be a direct cost pass-through from E-470's operations contractor based upon the four back office functions (image processing, bills mailed, account usage and customer service). E-470's operations contractor's management fees, overhead and profit will be included in all cost allocations as such are components of cost to E-470. The rate will be calculated annually on June 1st for the fiscal year starting annually on July 1st. It will be based on actual monthly costs for the previous 12 month period, beginning in June ending in May, for the four areas of back office services.

a) Image Processing

E-470 will combine all costs associated with image review for each month and divide that sum by the total number of images processed during that month to come up with a per image cost for that month. A twelve month average will be calculated to determine the amount charged per image processed for the upcoming fiscal year. Each image processed during the fiscal period for HPTE will be charged the per image rate. This amount will be included on a monthly invoice to HPTE.

b) Bills Mailed

E-470 will combine all costs associated with mailing bills for each month and divide that sum by the total number of bills mailed during that month to come up with a per bill cost for that month. A twelve month average will be calculated to determine the amount charged per bill mailed for the upcoming fiscal year. Each bill mailed during the fiscal period that contains only HPTE transactions will pay 100% of the per bill cost, if there are transactions for more than one agency HPTE will be charged 50% of the per bill rate. This amount will be included on a monthly invoice to HPTE.

c) EXpressToll Account Usage

E-470 will combine all costs associated to account usage for each month and divide that sum by the total number of active EXpressToll accounts in the TCS during that month to come up with an EXpressToll account usage charge for that month. A twelve month average will be calculated to determine the amount charged per EXpressToll account used for the upcoming fiscal year. Each EXpressToll account used during the fiscal period that contains only HPTE transactions will pay 100% of the EXpressToll account usage rate, if there are transactions for more than one agency HPTE will be charged 50% of the EXpressToll account usage rate. This amount will be included on a monthly invoice to HPTE.

d) Customer Service

E-470 will combine all costs associated to customer service for each month and divide that sum by the total number of accounts with activity during that month to come up with the customer service charge for that month. A twelve month average will be calculated to determine the amount charged for customer service for the upcoming fiscal year. Each account used during the fiscal period that contains only HPTE transactions will pay 100% of the customer service rate, if there are transactions for more than one agency HPTE will be charged 50% of the customer service rate. This amount will be included on a monthly invoice to HPTE.

2) Toll System Technician

All costs associated with work performed by the toll system technician will be reimbursed to E-470 by HPTE. Labor costs will include those paid to an E-470 employee or a subcontractor of E-470 to perform the work of the toll system technician. They will include salary and burden for the technician. Additionally, the costs of all such equipment, including but not limited to: vehicles, hand tools, uniforms, insurance, fuel, lane equipment, rental equipment and similar expenses will be billed to HPTE each month.

Reimbursement for Work included in Task Orders:

1) Equipment and Software Changes

a) Equipment

E-470 will request reimbursement for all costs associated with procuring and installing new equipment. These costs include but shall not be limited to:

i) Costs paid by E-470 for new equipment (including all costs associated with shipping and handling)
ii) Labor and burden for E-470 employees based on hours worked on the HPTE job
iii) Equipment rental
iv) Miscellaneous parts and supplies for installation
v) Any other costs directly associated with procurement and installation

b) Software Changes

E-470 will request reimbursement for all costs associated with developing and implementing software changes. These costs include but shall not be limited to:

i) Requirements gathering
ii) Design
iii) Development, testing and deployment
iv) Any other costs directly associated with software changes

Exhibit D
Sample Task Order

Date:	State Fiscal Year:	Task Order Letter #	Routing #

In accordance with Section Section Ref of the original Contract routing number ROUTING # between the State of Colorado, Department of Transportation, and E-470 name beginning _____ and ending on _____, the provisions of the Contract and any amendments thereto affected by this Task Order are modified as follows:

1) **Task Order Description.** E-470 shall perform the name of task as follows:

_____

_____

2) **Reimbursement Amount.** The maximum amount reimbursable to E-470 by the State for performance of this Task Order is _____.

3) **Performance Period.** E-470 shall complete its obligations under this Task Order by_____.

4) **Effective Date.** The effective date hereof is upon approval of the State Controller.

THE PARTIES HERETO HAVE EXECUTED THIS TASK ORDER

*** Persons signing for E-470 hereby swear and affirm that they are authorized to act on E-470's behalf and acknowledge that the State is relying on their representations to that effect.**

E-470	STATE OF COLORADO John W. Hickenlooper GOVERNOR
By: _____ Name of Authorized Individual	Department of Transportation
Title: _____ Official Title of Authorized Individual	By: _____ (For) , Donald E. Hunt, Executive Director
	Date: _____

ALL CONTRACTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. E-470 is not authorized to begin performance until such time. If E-470 begins performing prior thereto, the State of Colorado is not obligated to reimburse E-470 for any Work performed and/or Services provided hereunder.

STATE CONTROLLER
David J. McDermott, CPA

By: _____
Department of Transportation

Date: _____

Exhibit E
Insurance

OP ID: BD

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 01/19/11

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Olympus Insurance Agency PO Box 65608 Salt Lake City, UT 84165-0608 F. David Child, Jr. 801-486-1373 801-485-6943	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS: PRODUCER CUSTOMER ID #: E470060
INSURED E 470 Public Hwy Authority 22470 East 6th Parkway #100 Aurora, CO 80018	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: Scottsdale Indemnity INSURER B: National Casualty Company INSURER C: Illinois Union Insurance Co. INSURER D: INSURER E: INSURER F:

COVERAGES — CERTIFICATE NUMBER: — REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY / PRO-JECT / LOC			PEI0005638	12/31/10	12/31/11	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Emp Ben.	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS			WAI0002386	12/31/10	12/31/11	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	UMBRELLA LIAB / OCCUR EXCESS LIAB / CLAIMS-MADE DEDUCTIBLE X RETENTION $ 10,000			UMO0033030	12/31/10	12/31/11	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $ 10,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N N/A If yes, describe under DESCRIPTION OF OPERATIONS below						WC STATU-TORY LIMITS / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $
C	Privacy/Network SL			G24872038 002	12/31/10	12/31/11	Occ. Agg	1,000,000 5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER	CANCELLATION
PROOFOF Proof of Insurance	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE F. David Child, Jr.

ACORD 25 (2009/09) — The ACORD name and logo are registered marks of ACORD

APPENDIX F

Risk Management Plan

US 36 Toll Concession Project
Phase 2 - US 36 Reconstruction
(88th Avenue to Table Mesa Drive)

Risk Management Plan

Prepared by:
the High Performance Transportation Enterprise
in Consultation with:
the Colorado Department of Transportation
the Regional Transportation District
and the Federal Highway Administration

November 4, 2013

[*page intentionally left blank*]

1. PURPOSE

This document describes how Risk Management will be structured and performed on this project. The risk management plan includes methodology, roles and responsibilities, budgeting, timing, risk categories, definitions of risk probability and impact, probability and impact matrix, reporting formats, and tracking.

Approved By:

_____ _____

Michael Cheroutes, Project Director Date

2. INTRODUCTION

The US 36 Toll Concession Project was developed by the Colorado High Performance Transportation Enterprise (HPTE), the TIFIA sponsor, in partnership with the Colorado Department of Transportation (CDOT) and the Regional Transportation District (RTD). The HPTE is a government-owned business that operates as a division of CDOT. The Project is part of RTD's FasTracks Program, a multibillion dollar comprehensive transit expansion plan, in cooperation with Denver Regional Council of Governments (DRCOG); the Cities of Westminster, Boulder, and Louisville; Town of Superior; and Boulder County.

The US 36 Toll Concession Project will be combined with the US 36 Managed Lane/BRT Project (Phase 1), the construction of which will proceed and be concurrent with construction of the Concession project. Upon completion and acceptance of Phase 1, the Concessionaire will assume responsibilities for the maintenance and operation of infrastructure and tolling and for the TIFIA loan associated with the Phase 1 project.

HPTE is managing this Project under a Public Private Partnership delivery method.

The multimodal, toll-integrated Project includes the following elements:

- Widening of the US 36 mainline to accommodate a new buffer separated managed lane in each direction of US 36.
- Construction of 12 foot inside and outside shoulders.
- Replacement of the US 36 over Coal Creek structure.
- Widening of the westbound US 36 over South Boulder Creek bridge structure.
- Construction of retaining walls.
- Installation of Intelligent Transportation Systems.
- Construction of portions of Bikeway.
- Maintenance and Operation of US 36 Managed Lane/BRT Project by Concessionaire
- Maintenance and Operation of I-25 Managed Lanes by Concessionaire
- Construction of Diverging Diamond Interchange at McCaslin Blvd

3. RISK MANAGEMENT PLAN

The Public Private Partnership/Design Build Operate Maintain process is based on risk assessment, assignment, and allocation. Understanding and allocating risk is necessary to determine ownership and responsibility for individual tasks. Design-Build uses performance provisions that allow CDOT to assign and allocate risk to the party most capable to manage the risk. Table 1 defines the allocation of project risk between CDOT and the Design-Build contractor.

TABLE 1: Allocation of Risk

DESIGN-BUILD RISKS		OWNER	DESIGN-BUILDER
DESIGN			
1	Definition of scope	X	
2	Project definition	X	
3	Establishing performance requirement		X
4	Preliminary survey/base map	X	
5	Geotechnical investigation-based on preliminary design in RFP	X	
6	Geotechnical investigation-based on proposal		X
7	Establish/define initial subsurface conditions	X	
8	Initial project geotechnical analysis/report-based on preliminary design	X	
9	Proposal-specific geotechnical analysis/report		X
10	Plan conformance with regulations/guidelines/RFP/proposal		X
11	Plan accuracy		X
12	Design criteria	X	
13	Conformance to design criteria		X
14	Design review process	X	X
15	Owner review time	X	
16	Design quality control		X
17	Design quality assurance		X
18	Changes in scope	X	
19	Constructability of design		X
20	Efficacy of design		X
21	Contaminated materials	X	X
RIGHT-OF-WAY as Identified in the RFP			
22	Establishing ROW limits	X	
23	Access hearings/findings and order	X	
24	ROW plan approval	X	
25	Appraisal/review	X	
26	Establish just compensation	X	

27	Acquire right-of-way	**X**	
28	Construction easements	**NA**	
29	Permanent easements	**X**	
30	Condemnation	**X**	
31	Complete relocation	**X**	
32	Take possession	**X**	
33	Certification	**X**	
34	Additional ROW purchase due to alignment change	**NA**	
RIGHT-OF-WAY –Additional ROW required by the Contractor			
35	Establishing ROW limits		**X**
36	Access hearings/findings and order		**X**
37	ROW plan approval	**X**	
38	Appraisal/review		**X**
39	Establish just compensation		**X**
40	Acquire right-of-way		**X**
41	Construction easements		**X**
42	Permanent easements		**X**
43	Condemnation	**X**	
44	Complete relocation		**X**
45	Take possession		**X**
46	Certification		**X**
47	Additional ROW purchase due to alignment change		**X**
ENVIRONMENTAL			
48	Define initial project environmental impacts	**X**	
49	Define parameters for impacts	**X**	
50	Environmental investigation	**X**	
51	Environmental permits		**X**
52	Environmental mitigation	**X**	**X**
53	Environmental compliance		**X**
54	Known hazardous waste-mitigation		**NA**
55	Unknown/undefined hazardous waste-mitigation	**X**	**X**
56	Obtain environmental approvals-construction related		**X**

UTILITY RELOCATION, LOCAL AGENCY PERMIT, THIRD PARTY, PUBLIC			
57	Identification of initial local agency impacts	**X**	
58	Obtaining initial local agency permits		**X**
59	Establishing initial local agency requirements		**X**
60	Establishing final/actual local agency impacts		**X**
61	Modifications to existing local agency permits		**X**
62	Identification of initial utility impacts in RFP	**X**	
63	Identification of initial utility impacts from preliminary design		**X**
64	Establish initial utility locations/conditions	**X**	
65	Defining required utility relocations in RFP	**X**	
66	Defining required utility relocations from preliminary design	**X**	
67	Relocation of utilities before contract	**NA**	
68	Relocation of utilities under agreement during contract		**X**
69	Execute agreement with private utility	**X**	
70	Executed agreement with public utility	**X**	
71	Damage to utilities under construction		**X**
72	Payment to utility owners		**X**
73	Verification of utility locations/conditions		**X**
74	Coordination with utility relocation efforts during contract		**X**
75	Unforeseen delays due to utility owner and third party		**X**
76	Utility/third-party delays resulting from proposal/modified design		**X**
77	Betterment to utility		**X**
78	Other work/coordination		**X**

79	Third-party agreements (Federal, local, private, etc.)	**X**	
80	Coordinating with third parties under agreement		**X**
81	Coordination/collection for third-party betterments		**X**
82	Coordination with other projects		**X**
83	Coordination with adjacent property owners		**X**
84	Performance of utility work		**X**
85	Coordinating with other government agencies (FHWA, etc.)	**X**	**X**
86	Community relations	**X**	**X**
87	Public safety	**X**	**X**
CONSTRUCTION			
88	Disadvantaged business enterprise compliance		**X**
89	Safety/safety QA		**X**
90	Construction quality/workmanship		**X**
91	Schedule		**X**
92	Materials quality		**X**
93	Materials documentation		**X**
94	Material availability		**X**
95	Initial performance requirements of QA plan		**X**
96	Final construction/materials QC/QA plan		**X**
97	Construction/materials QA		**X**
98	Construction QC		**X**
99	Construction QA procedural compliance auditing		**X**
100	Construction independent assurance (IA) testing/inspection	**X**	
101	Construction staking		**X**
102	Erosion control		**X**
103	Spill prevention		**X**
104	Accidents within work zone/liability		**X**
105	Third-party damages		**X**

106	Operations and maintenance during construction		X
107	Maintenance under construction-new features		X
108	Maintenance under construction-existing features		X
109	Extraordinary maintenance		X
110	Maintenance of traffic		X
111	Damage to utilities under construction		X
112	Falsework		X
113	Shop drawings		X
114	Equipment failure/breakdown		X
115	Work methods		X
116	Early construction/at-risk construction		X
117	Community relations	X	X
118	Performance of defined mitigation measures		X
119	Warranty		X
FORCE MAJEURE/ACTS OF GOD			
120	Strikes/labor disputes-onsite labor		X
121	Ordinary weather condition		X
122	Extraordinary weather condition	X	
123	Tornado/earthquake	X	
124	Epidemic, terrorism, rebellion, war, riot, sabotage	X	
125	Archaeological, paleontological discovery	X	X
126	Suspension of any environmental approval	X	
127	Changes in law	X	
128	Lawsuit against project	X	
129	Storm/flooding		X
130	Fire or other physical damage		X
DIFFERING SITE CONDITIONS/CHANGED CONDITIONS			
131	Changed conditions	X	X
132	Differing site conditions	X	X
0peration and Maintenance			
133	Maintenance after construction		X

134	Operations after construction		**X**
COMPLETION AND WARRANTY			
135	Establishment/definition of any risk pool		**X**
136	Long-term ownership/final responsibility		**X**
137	Insurance		**X**

4. ROLES AND RESPONSIBILITIES

1) PROJECT DIRECTOR RESPONSIBILITIES INCLUDE:

- Incorporate the resources and time required to execute the Risk Management Plan in the project budget and schedule
- Develop, distribute and implement this Risk Management Plan
- Develop and update the Risk Register with the support of the Project Team and incorporate it into the work plan
- Coordinate with the risk owners to monitor risks and implement risk response strategies

2) PROJECT MANAGER RESPONSIBILITIES INCLUDE:

- Support the Project Manager in developing and updating the Risk Management Plan and the Risk Register
- Maintain updates to the Risk Management Plan and the Risk Register

3) PROJECT TEAM RESPONSIBILITIES INCLUDE:

- Identify the risk and describe it
- Assess the probability that a risk will occur and specify the criteria used to assess the probability
- Assess the impact of risks on project cost, time, scope, and quality objectives, and specify the criteria used to assess the impact
- Help identify the risk owners and assist in developing the risk response strategies (Project Team members may be assigned as "Risk Owner")
- Perform the risk response steps assigned
- Assist the PM in activities associated with Risk Monitoring and Control

4) RISK OWNER RESPONSIBILITIES INCLUDE:

- Develop and/or update the assigned risk response strategy
- Monitor the risk assigned and inform PM of any threats or opportunities to the project. This includes monitoring the risk trigger and informing the PM, if the risk becomes a real event.

Risks will be discussed and evaluated during the monthly Progress Status Meetings required per the contract. Risk will also be evaluated throughout the life of the project by CDOT personnel.

If needed, the Matrix will be updated based on these meetings. The Project Director will review all changes to the Risk Matrix and direct project personnel as to the proper response.

5. FHWA COST ESTIMATE REVIEW

Prior to the Record of Decision, CDOT participated in an FHWA Cost Estimate Review. The subject of this review was primarily the first phase of the US 36 improvements described in the Final Environmental Impact Statement. The US 36 Managed Lanes Project is the first project which will be constructed under the umbrella of the Record of Decision published in December of 2009, and includes only a portion of the improvements cleared in the ROD.

During the CER, FHWA and CDOT identified threats and opportunities as they pertained to the improvements delineated in the ROD. Table 2 lists the threats and opportunities identified and mitigation measures for each.

TABLE 2: Threats and Opportunities identified during FHWA CER

THREATS AND OPPORTUNITIES IDENTIFIED DURING US 36 COST ESTIMATE REVIEW		
	THREATS	
1	Time	CDOT has significantly accelerated the schedule ahead of that anticipated in the CER
2	Funding	CDOT has pursued and obtained non-traditional funding for this project, including TIGER grants, TIFIA loans, and contributions from Local Agencies and RTD.
3	Scheduling and Phasing	See 1 above
4	Sizing of Contracts will Affect Competition	CDOT maximized the size of the project with available resources to take advantage of economies of scale during construction
5	Potential Environmental Regulation Change	By accelerating the schedule, CDOT has minimized the probability of extensive changes in Environmental regulations occurring during this project.
6	Utilities	Prior to the RFP, CDOT conducted and extensive survey to identify existing utilities and project impacts on the utilities.

7	Market Conditions (Other Major Construction Projects)	By accelerating the schedule, CDOT has avoided conflicts with other Major Highway projects expected during the life of the ROD(North I-25, I-70 East and West)
8	Material Availability & Prices	Due to the short term nature of this project, CDOT does not expect this to be an appreciable risk
9	ROW Cost Changes due to Growth & Development in Corridor	This risk has been mitigated by refining the EIS design and eliminating many of the previously anticipated ROW impact. The accelerated schedule also allows CDOT to acquire the properties prior to development.
10	Viability of Project over 50+ years	This project enhances the viability of construction the EIS improvements by construction this Phase to accommodate Ultimate Condition and demonstrating the benefits of the Managed Lane concept in the corridor.
	OPPORTUNITIES	
11	Time	See 1 above
12	Scheduling & Packaging	NA
13	Project Delivery Methods	CDOT is employing the Design Build delivery method to maximize efficiency and accelerated project delivery
14	Advance Right of Way Purchase	CDOT will purchase ROW identified the RFP prior to construction on that ROW. CDOT is purchasing all ROW required for Ultimate storm water detention facilities at this time.

15	Practical Design	CDOT believes the Design Build process inherently include Practical Design elements.
16	Context Sensitive Solutions	Design will include consideration of CSS

6. RISK MATRIX

CDOT developed the Project's Risk Matrix and will use it to identify, compare, and evaluate risk allocation over the life of the Project. As the Project nears Notice to Proceed, CDOT and RTD will further develop the Risk Matrix based on Industry Reviews into a Risk Management Plan that will fully delineate anticipated Risks and Risk Controls.

The CDOT Project Manager and the Contractor identify the parties responsible for developing a risk mitigation plan to address the risk. The periodic reviews ensure that the responsible party is updating the plan until the potential risk has been fully mitigated.

Risks are removed from the matrix when:

The risk is so insignificant it no longer is worthy of monitoring

The identified risk has occurred and been successfully resolved.

CDOT adds a risk to the matrix when:

. A risk is identified that will adversely impact the success of the project

An opportunity has been identified that would positively impact the success of the project.

The Risk Matrix is included in Table 3. The Risk Matrix:.

- Categorizes and prioritizes each risk.
- Determines the likelihood of the risks occurring.
- Identify the impact on the Project if risk does occur.
- Identifies mitigation measures to lessen the risk.

US 36 Toll Concession Project Risk Matrix

RISK A SSESSMENT
Low (Green)
Minimum impact. Minimum oversight needed
Moderate (Yellow)
Some disruption. Additional management attention may be needed.
High (Red)
Unacceptable. Major disruption likely. Priority management attention required

Assessment Guide

Probability \ Impact	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Level	Description of Impact
1	Minimal or no impact and/or Cost
2	Additional resources required; able to meet
3	Minor slip in key milestones; not able to meet need date
4	Major slip in key milestone or critical path impacted
5	Can't achieve key team or major program milestone

Level	Probability
1	Remote
2	Unlikely
3	Likely
4	Highly Likely
5	Near Certainty

US 36 TOLL CONCESSION PROJECT RISK MATRIX

	PROJECT MANAGEMENT RISKS	Potential consequences	Probability	Impact	Risk	Mitigation strategy
1	Scheduling	Schedule impact	4	3	12	The Concessionaire is required to submit for approval a series of schedules with each invoice. If the Concessionaire is behind schedule, a recovery schedule is required to be prepared and submitted
2	Industry experience, extent of	Cost, schedule, quality impacts	2	3	6	HPTE extensively reviewed Proposals and the Design Build (DB) experience of each bidder.
3	Key Personnel Experience	General Project Impacts	2	3	6	HPTE extensively reviewed Proposals and the experience of each bidder's Key personnel. HPTE has the right to review the qualifications and character of each individual to be assigned to a key position. If key personnel leave, Concessionaire must replace with person with equivalent expertise and experience.

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
4	DBE Goal, plan for implementation of	Schedule impact, Liquidated damages	2	2	4	The Concessionaire must facilitate and incorporate participation by small businesses throughout the Project, ensuring that DBEs shall have an equal opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. HPTE will continually monitor the Concessionaires DBE effort.
5	Safety Management	Safety	2	4	8	Concessionaire is required to submit both a Safety Management Plan and a Health and Safety Plan (HASP). The Concessionaire is also required to conduct regular Safety meetings. HPTE will monitor.
6	Deliverables	Schedule delay	2	2	4	All deliverables will be reviewed and approved or excepted per the contract documents
7	Change Orders, extent of	Schedule delay, increased costs.	5	3	15	All change orders will be evaluated per Part 6 of Schedule 21 of the contract documents
8	Local agency coordination, effectiveness of	Time schedules	2	3	6	Concessionaire is required to submit a Project Management Plan which will detail expected extent and means of coordination with Local Agencies.
9	Unplanned work that must be accommodated	Cost Schedule	3	4	12	Requirement for allowing change orders are delineated on the contract documents. HPTE will review all change order requests.
	QUALITY MANAGEMENT	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
10	Concessionaire QA, performance of	Quality, cost and schedule impacts	2	4	8	The Concessionaire must develop a Quality Management Plan (QMP) that documents the Concessionaire's commitment to quality, and all quality requirements of the Contract. The QMP must be approved by HPTE
11	Timely/accurate documentation, performance of	Quality, cost and schedule impacts	2	4	8	HPTE will use a data base to track and record all results from materials tests
12	Non-conformances, timely/effective handling of	Quality, cost and schedule impacts	4	2	8	The QMP is required to include procedures to be taken for Nonconforming Work.
13	Top-down accountability for QA	Quality, cost and schedule impacts	2	2	4	The QMP shall state the Concessionaire's commitment to quality and provide a clear definition of the scope of Activities and detail the methods to ensure the Work meets the requirements of the Contract Documents

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
	Corrrection of Non-Conformance	Quality, cost and schedule impacts			0	HPTE will conduct an inspection of the work and Concessionaire us required to correct nonconforming work
14	QMP development/implementation, reliability of	Quality, cost and schedule impacts	2	2	4	HPTE will monitor development and implementation of QMP
	SITE CONDITIONS RISK	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
15	Cultural/archaeological/heritage	Construction costs, schedule	2	4	8	Final design plans for grading and drainage shall be submitted to HPTE for review 21 days prior to Released for Construction. HPTE will determine the impact and the scope of paleontological construction monitoring that will be required. To date, no paleontolgical impacts during Phase 1 construction
16	Site Conditions	Unknown site conditions can increase costs and impact schedule	2	3	6	The Concessionaire is resposible for the condition of site and may not make a claim against HPTE in relation to site conditions, but may initiate a change order process to be compensated for additional costs and losses arising from differing site conditions.
17	Coordination with Phase 1 Work	Construction costs, schedule	2	3	6	The Concessionaire must coordinate with Phase 1 Contractor, HPTE is responsible to inform Concessionaire of all Change Orders from Phase 1 project.
18	Geotechnical and ground/soil conditions	Construction costs, schedule	2	3	6	HPTE completed a Geotechnical Investigation of US 36 for Phase 2. The Concessionaire is required to submit all Geotechnical Investigation to HPTE for acceptance.
19	Soil/air/water pollution- Unknow pre-existing	Construction costs, schedule	2	4	8	HPTE isresponsible, for and shall reimburse the Concessionaire for all claims relating to: (i) the existence of HPTE Hazardous Substances Circumstances ; or (ii) bodily injury (including death) to persons, damage to property or environmental removal or response costs, in each case arising out of HPTE Hazardous Substances Circumstances to the extent that such amounts cannot be mitigated, reduced or avoided by reasonable steps taken by the Concessionaire

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
20	Delays caused by agencies other than the State (Local agencies)		2	3	6	HPTE has obtained IGAs withLocal Agencies to mitigate this risk
	FORCE MAJEURE RISK	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
21	Force Majeure events	Construction costs, schedule, revenue loss	2	5	10	HPTE and Concessionaire share responisiblity for Force Majeure events
	REVENUE/FINANCING RISK	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
22	Availability of Road	Revenue loss	4	5	20	If the concessionaire fails to complete work on schedule, HPTE may impose liquidated damages of up to $1,095,000 and claim a share of up to $5,475,000 in Toll Revenues
23	Financing Risk	Cost, Schedule	2	5	10	The Concessionaire is solely responsible for obtaining and repaying all financing necessary for the project at its own risk and cost
24	Volume Risk	Revenue loss	2	4	8	Concessionaire must accept all risk related to actual traffic volumes
25	Change in Law	Cost, Schedule, Revenue Loss	4	2	8	Concessionaire may initiate a change order to compensate for loss due to changes in law
	O&M RISK	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
26	Inadequate maintenance or deficient operations	Revenue loss, loss of public support	2	4	8	The Concessionaire must prepare various plans for maintanence and operations management for HPTE acceptance. HPTE has right to audit concessionaire's compliance with these plans.
27	Deficient safety related performance	Cost	2	4	8	The Concessionaire is solely responsible for safey of any design it performs to implement Phase 2 work and services. HPTE has right to step in if it believes safety is compromised
28	Claims during work and service	Cost	4	4	16	The Concessionaire must carry insurance against losses direing the Construction and Services phase of the Contract
29	Emergency Closure of Managed Lanes	Revenue loss	4	3	12	The Concessionaire and HPTE will share risk of Revenue loss for closures of Managed Lanes depending on frequency and duration of closure
30	Tolling Violations	Revenue loss	5	2	10	The Concessionaire has the right to collect and retain Civil Penalties for tolling violations
	DEFAULT/ TERMINATION OF CONTRACT RISK	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
31	Handback requirements	Cost	10	1	10	Concessionaire must prepare a Handback Plan to define method of handback. Residual life inspections will be conducted by HPTE to define terms of Handback
32	Concessionaire Default	Cost, Schedule	2	10	20	HPTE is entitled to compensation in case the Concessionaire defaults.
	PUBLIC INVOLVEMENT	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
33	PI coordination of Concessionaires/HPTE PIO's	Project delays due to lack of notification.	2	2	4	HPTE is responsible for all Public notification activities. The Concessionaire is required to support HPTE. The Concessionaire is required to submit an Public Information Plan. HPTE will monitor.
34	Multiple local agencies, addressing	Adverse impacts to public goodwill	2	2	4	HPTE is responsible for all Public notification activities. The Concessionaire is required to support HPTE. The Concessionaire is required to submit an Public Information Plan. HPTE will monitor.
35	Emergency Response, adequacy of	Adverse impacts to public goodwill, safety. HPTE liability	5	3	15	The Concessionaire is required to prepare an Incident Management Plan. HPTE will monitor.
36	Local business coordination, adequacy of	Adverse impacts to public goodwill	2	2	4	HPTE is responsible for all Public notification activities. The Concessionaire is required to support HPTE. The Concessionaire is required to submit an Public Information Plan. HPTE will monitor.
37	Community interaction, adequacy of	Adverse impacts to public goodwill	2	3	6	HPTE is responsible for all Public notification activities. The Concessionaire is required to support HPTE. The Concessionaire is required to submit an Public Information Plan. HPTE will monitor.
38	Concessionaire Public Information commitment	Adverse impacts to Public Information effort.	2	3	6	Concessionaire is required to have a full time Public Information Officer on staff for this project.
39	Public meeting management, adequacy of	Adverse impacts to public goodwill, adversely impact usage of managed lanes	2	4	8	The Concessionaire is required to assist HPTE in all Public meetings with display materials and personnel
	ENVIRONMENTAL	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
40	Permit acquisition, timeliness of	Closing out the storm water permits are often the final outstanding tasks for a project.	4	3	12	Per contract documents, Concessionaire is responsible for obtaining all required permits. HPTE will supervise

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
41	Wetland Mitigation approach: use Boulder site versus off site banking	This will be handled as a separate project.	1	1	1	Agreement has been finalized
42	Ute ladies'-tresses orchid (Spiranthes diluvialis) (ULTO) and Preble's meadow jumping mouse (Zapus hudsonius preblei) (PMJM) habitat impacts	Risk associated will delay in schedule. Prairie dog management must occur before areas can be disturbed.	2	2	4	HPTE and City of Boulder have IGA to acquire and maintain property to mitigate impacts to ULTO and PMJM
43	Risk of impacting more wetlands than allotted by 404 permit (delay from coordination with USACE and update of permit)	The project team will need to impact less than its pro rata share(approx. 6.1 acres) of the wetland impacts permitted by the USACE for the entire preferred alternative (21 acres).	2	2	4	Concessionaire is responsible. HPTE Environmental will supervise. Concessionaire must report previous month's Wetlands Impact in Environmental Compliance Work Plan
44	Prairie Dog mitigation, addressing	Risk associated will delay in schedule. Prairie dog management must occur before areas can be disturbed.	2	2	4	The Concessionaire is responsible for complying with the regulations, guidelines, and requirements associated with Black-Tailed Praire Dogs. When there are conflicting policies, the most stringent policy shall be followed. HPTE Environmental will supervise.
45	HPTE Hazardous Substances Circumstances	Schedule, Cost			0	HPTE will be responsible for and will reimburse the Concessionaire for all claims in connection with HPTE Hazardous Substances Circumstances provided those claims cannot be mitigated by the Concessionaire.
46	Noise (Constr/permanent mitigation), implementation of	Risk associated with local agency approval/acceptance of wall alignment and material. Throw away mitigation potentially exists in one area.	3	2	6	HPTE performed a preliminary noise analysis with abatement recommendations as part of the Record of Decision. No noise mitigation is required for the Phase 2 Construction Work based on the horizontal and vertical design of US 36 as shown in the plans. . Locations of changes to the vertical alignment of more than 5 feet, or in horizontal alignment that result in the approximate halving of the distance between the nearest through centerline of travel and existing sensitive receiver from what is shown in the plans in the Reference Documents, will require a new noise analysis by the Concessionaire if a noise-sensitive receiver is present within the study zone. HPTE Environmental will supervise.

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
47	Coordination with Colorado Division of Wildlife on SB40 Certification (potential delay in schedule)	Risk of extended delays to schedule from SB40 coordination on fisheries and aquatic habitat approach	2	2	4	Concessionaire is responsible for preparing the SB 40 Certification application package on behalf of HPTE. HPTE will approve package and submit to Colorado Parks and Wildlife.
48	Migratory Birds/(nesting), mitigation of	Failure to remove nests before protected season could cause delays.	2	2	4	The Concessionaire shall comply with the Migratory Bird Treaty Act (MBTA) at all times. HPTE Environmental will monitor.
	THIRD PARTY AGREEMENTS	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
49	Timely completion/schedule considerations	Schedule delay	4	1	4	Coordination between HPTE, the Concessionaire and third parties
50	Coordination of PI,MOT,detour routing, closures	Schedule delay	2	2	4	Prior to NTP2, Concessionaire must develop a Traffic Management Plan.
51	Irrigation Ditch design review & acceptance - timely	potential delay from unresponsive Irrigation Ditch	4	2	8	Per Contract documents, Concessionaire must coordinate with irrigation companies on all design issues.
52	Irrigation Ditch agreement process	potential delay from unresponsive Irrigation Ditch	4	2	8	Concessionaire required to support HPTE in contract execution.
53	Irrigation Ditch construction coordination	potential delay from unresponsive Irrigation Ditch	2	2	4	Per Contract documents, Concessionaire must coordinate with irrigation companies on all construction coordination issues.
	UTILITIES	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
54	Unidentified Utility	Discovery of utility during construction that was not identified in the Utility Data	4	3	12	Prior to RFP, HPTE conducted extensive survey of existing utilities in the corridor. Concessionaire is also required to conduct an independent survey of all utilities.
55	Utility relocation design - timely schedule	Potential delay for completion of utility relocation design by Private Utility	3	2	6	Concessionaire required to coordinate with Utility companies to establish design schedule
56	Utility relocation construction - timely schedule	Potential delay for completion of utility relocation construction by Private Utility	3	3	9	Concessionaire required to coordinate with Utility companies to establish construction schedule
57	Utility Betterments - Public Utility	Potential delay/added cost for added work requested by Public Utility	1	2	2	Requesting Utility will be responsible for cost of Betterments
58	Requested Relocations - Private Utility	Potential delay/added cost for added work requested by Private Utility	1	2	2	Requesting Utility will be responsible for cost of relocations
	ROW	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
59	Property access, requirements for (permanent acquisition parcels - fee, PE)	Assumption: This entry reflects meeting scheduled date of possession of permanent ROW parcels and Concessionaire obtaining possession of parcels over baseline Concessionaire needs to obtain. The cost factor is twofold, if possession is not timely obtained, schedule delays could mean increased construction costs, also if ROW impacts are greater than baseline, acquisition of additional ROW parcels will lead to increased acquisition costs, possibly significant increases.	2	3.5	7	The best mitigation for this factor is early identification of any ROW parcels needed over baseline. HPTE has identified ROW needs and is aquiring ROW based on that identification. If Concessionaire determines additional ROW is needed, the Concessionaire will have responsibility to obtain.
60	Property access, requirements for (temporary construction easements)	Temporary construction easements will be defined in the ROW plans. If the Concessionaire determines that additional temporary construction easements are needed for the Work, the Concessionaire shall be responsible to define, value, negotiate, and pay for the acquisition of such temporary construction easements.	2	5	10	If temporary construction easements are defined early, risks to schedule, costs and performance is lower.
61	Acquisition management, effectiveness of (permanent acquisition parcels - fee, PE)	Schedule impacts, increased costs	4	3	12	The best mitigation for acquisition management is timely identification by engineering of need for additional parcels, completion of competent design before initiation of ROW plans development and proven past success in timely and effective ROW plans preparation, appraisal, and acquisition negotiation.
62	Acquisition management, effectiveness of (temporary construction easements)	Schedule impacts, increased costs	3	4	12	The best mitigation for acquisition management is timely identification by engineering of need for temporary construction easements, completion of competent design before initiation of ROW plans development and proven past success in timely and effective ROW plans preparation, valuation, and acquisition negotiation.
63	Construction staging, consideration of	Schedule impacts, increased costs	1	1	1	The design build Concessionaire can use HPTE and RTD ROW for construction staging (there is an ample supply in the corridor) and it will be responsible for negotiating agreements with private landowners for construction staging, however the design build Concessionaire will not be constrained by HPTE and FHWA appraisal acquisition requirements in negotiating staging agreements. As a result, this factor is not a relevant risk to be quantified.

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
64	Restoration/property protection measures, implementation of	This is a very difficult risk factor to analyze because it is a function of the number and extent of temporary construction easements that will be needed. The assumption is that no additional temporary construction easements will be needed for the level of design established for the RFP. If only a few TCEs are needed, for a short period of time, protection and restoration should not be a significant impact on schedule, cost or performance. Greater numbers of TCEs to be used for longer periods of time will equate to more significant project impacts for this risk factor.	3	4	12	The best mitigation is timely identification by engineering of need for additional parcels, completion of competent design before initiation of ROW plans development and proven past success in timely and effective ROW plans preparation, appraisal, and acquisition negotiation.
	PAVEMENT	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
65	Design Criteria assumptions, determination of	There is always some risk in every assumption, but it is very minimal if standard practices are followed.	2	2	4	Standard practices will be followed
66	Material availability, consideration of	This mostly affects the subgrade material and it's availability. The risk should be low for the HPTE specified subgrade material. If the Concessionaire proposes using "better" material, a source of that material has most likely already been identified.	2	2	4	
67	Use of Alternative alignments	The impacts to ROW, drainage, and environmental would be greater than those for pavement.	2	2	4	Mitigated in preliminary design and reviews
	EARTHWORK	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
68	Sub excavation (stabilization)	This risk originates from the "uncertainty" regarding the initial pavement / soil investigation. No matter how thoroughly the investigation is conducted, there will also be variations of the existing soil. The risk to the Concessionaire occurs if there are pockets of undesirable soil underneath the pavement section that needs to be replaced. This could incur some cost and possibly delays. The risk to HPTE arrives in the form of increased future risk if the subex / stabilization is not conducted correctly.	4	3	12	The Concessionaire is required to submit a Quality Management Plan (QMP) to HPTE. The QMP will include a Material Testing & Inspection Plan that include will the appropriate criteria, tests, and inspection requirements. The Concessionaire is required to sub-ex 2' of material for all roadway sections. HPTE will monitor implementation
	DRAINAGE	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
69	All existing storm sewer, cross culverts, and irrigation structures are planned to be removed and replaced.	Inferior material remains on the site	1	3	3	All drainage features will be removed and replaced per contract documents
70	Identifying all drainage easements or takes for outfalls and ditches	Unforeseen work, permitting. Could lead to additional features or schedule delay.	2	4	8	Surveyed all drainage features on project before RFP. Required Concessionaire to
71	LOMR/CLOMR process and floodplain permits	Potential schedule delay due to approval process	2	4	8	Concessionaire responsible for LOMR/CLOMR process per contract documents
72	Floodplian Modeling Regulatory Risk - Risk that floodplain modeling will require greater than anticipated effort due to inconsistencies in floodplain modeling or changes to base floodplain model	Potential schedule delay due to approval process	4	4	16	Work with Boulder County, FEMA and Concessionaire to dtermine acceptable procedures to model floodplains in the project area
73	Designing Coal Creek crossing such that it is not throw away. Looking at split flow options. Floodplain concerns. Bike path crossing. Wildlife crossing.	Throw-away wasted recourses.	2	2	4	Build to ultimate width

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
74	Conveying the need to the Concessionaire that drainage must be planned out and designed for the ULTIMATE condition. All systems that are constructed as part of this project must be able to utilized in the future	Throw-away, future removal costs. Duplication of design effort	2	3	6	Required Concessionaire to build to ultimate width per contract documents
75	All detention and water quality ponds must be sized for the ultimate condition. There may be some latitude for portions of throw away PWQ as part of this project.	Throw-away, future removal costs. Duplication of design effort	2	3	6	Required Concessionaire to build to ultimate conditions per contract documents
76	Coordination with R6 environmental on approval of Concessionaire proposed PWQ items.	Schedule impact.	2	2	4	Coordination between R6 Hydraulics and Environmental units and the Concessionaire. Review of Concessionaires preliminary design and water quality reports for each segment prior to RFC.
77	Timing of drainage reports with phases	Schedule impact.	2	2	4	Concessionaire responsible for submittals. Cot responsible for timely review.
78	Timing of water quality reports with phases	Schedule impact.	2	2	4	Concessionaire responsible for submittals. HPTE responsible for timely review.
79	Need Master Drainage Report with 30% plans	Schedule impact.	2	2	4	Concessionaire responsible for submittals. HPTE responsible for timely review.
80	Need Master Water Quality Report with 30% plans	Schedule impact.	2	2	4	Concessionaire responsible for submittals. HPTE responsible for timely review.
81	Drainage design criteria ambiguity	Schedule and cost impacts.	2	4	8	Concessionaire reviewed design criteria prior to submittal of proposals. Any changes will go through Change Order process.
82	For Detention/PWQ - groundwater elevations unknown & contaminated soil unknown	Mitigation costs/ Schedule impacts	2	5	10	Per contract documents, Concessionaire shall determine groundwater elevations and presence of contaminated soils at all pond locations and mitigate.
83	HPTE Pipe Material Selection Policy	FHWA withdraws funding for items in question.	2	2	4	Contract documents require Concessionaire to comply with HPTE Pipe Material Selection Policy
84	Removing onsite flow from offsite flows and conveying to PWQ facilities.	Non-compliance with MS-4 Permit. HPTE required to pay fines.	2	4	8	Concessionaire required to submit drainage reports prior to RFC. HPTE will review.
85	Describe process of land purchase for Airport Creek Ponds. HPTE to purchase, then give back a portion to Broomfield that encompasses the new outlet channel from regional pond. By doing this, Broomfield would qualify for maintenance of the channel from UDFCD.	HPTE will be required to maintain channel.	2	2	4	Concessionaire will be required to involve UDFCD in review and acceptance.
	ROADWAY	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
86	Level of design completion	Cost impacts, schedule delay.	4	3	12	Design Build project deliver method will mitigate design risk. The Concessionaire is responsible for both design and construction. Must submit plans to HPTE prior to RFC.

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
87	Design criteria, safety performance function (SPF)	Changes in criteria could cause delays, cost impact.	2	2	4	Concessionaire reviewed design criteria prior to submittal of proposals. Any changes will go through Change Order process.
88	Change to Basic Configuration, timely appr of changes	Cost impacts, schedule delay.	2	5	10	Changes will be made per contract documents.
	STRUCTURES	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
89	Urban Design Classifications, use of	Cost impacts	2	2	4	The Concessionaire must develop a corridor Aesthetic Treatment Plan. HPTE will monitor compliance with the plan.
90	Phasing requirements, impacts due to	Phasing requirement increase cost of structures	3	3	9	DB Concessionaire is responsible for all Structure design and construction phasing issue. HPTE will monitor.
91	Demolition requirements, consideration of	Safety, Cost Impacts	2	5	10	The Concessionaire must submit a bridge removal plan to HPTE. The Plan must detail procedures, sequences, and all features required to perform the removal in a safe and controlled manner. The Bridge Removal Plan is required to provide complete details of the bridge removal process
92	Geotechnical, lack of HPTE info	Cost Impacts, schedule delay	2	3	6	Prior to RFP, HPTE conducted extensive survey of soil conditions in the corridor. Concessionaire is also required to conduct an independent soil survey. All geotechnical investigations by the Concessionaire shall be documented in a geotechnical investigation report and submitted to HPTE
93	Bridge/ Bridge Deck rehab, estimated versus actual	Increased Cost	4	2	8	HPTE and the Concessionaire will jointly inspect decks to determine extent of repairs required. If it appears that the damaged deck areas are going to exceed the assumed 40 percent deck area, the Concessionaire is required to produce a detailed Bridge Deck Condition Report, to be submitted to HPTE for Acceptance
	MOT	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
94	Quality coord, field vs. design	Cost Impact, Schedule delay	4	2	8	The Concessionaire shall conduct all Work necessary to meet the requirements associated with Maintenance of Traffic (MOT), including provisions for the safe and efficient movement of people, goods, and services through and around the Project while minimizing impacts to local residents and business and commuters. the Concessionaire will also establish a MOT task force with representatives from the various stakeholders to coordinate MOT related issues.
95	Local agency coordination	Cost Impact, Schedule delay	3	2	6	MOT Task Force - See 94 above
96	Phasing, planning of	Cost Impact, Schedule delay	3	3	9	Concessionaire is responsible for all phasing planning and implementation. The Concessionaire must submit a Traffic Management Plan to HPTE prior to NTP2. HPTE will monitor implementation.
97	Speed reductions, consideration of	Cost Impact, Schedule delay	3	2	6	Concessionaire is responsible for all phasing planning and implementation. The Concessionaire must submit a Traffic Management Plan to HPTE prior to NTP2. HPTE will monitor implementation.
98	Lane/shoulder width, consideration of reductions	Cost Impact, Schedule delay	3	2	6	Concessionaire is responsible for all phasing planning and implementation. The Concessionaire must submit a Traffic Management Plan to HPTE prior to NTP2. HPTE will monitor implementation.
99	Min lane requirements, reduction of	Cost Impact, Schedule delay	1	2	2	Concessionaire is responsible for all phasing planning and implementation. The Concessionaire must submit a Traffic Management Plan to HPTE prior to NTP2. HPTE will monitor implementation.
100	Detours, off-site loading	Cost Impact, Schedule delay	4	3	12	Concessionaire is responsible for all phasing planning and implementation. The Concessionaire must submit a Traffic Management Plan to HPTE prior to NTP2. HPTE will monitor implementation.
101	RTD access, mgmt. of	Cost Impact, Schedule delay	3	2	6	Concessionaire is responsible for all phasing planning and implementation. The Concessionaire must submit a Traffic Management Plan to HPTE prior to NTP2. HPTE will monitor implementation.
102	Business/private access, mtce of	Cost Impact, Schedule delay	3	2	6	The Concessionaire is required to construct connecting roads, driveways, or curb cuts to provide access to property parcels where existing accesses have been disturbed or modified.

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
103	Incident management plan implementation	Cost Impact, Schedule delay	3	3	9	Concessionaire is responsible for preparing and implementing an Incident Management Plan. The Concessionaire must submit this in conjunction with the Traffic Management Plan to HPTE prior to NTP2. HPTE will monitor implementation.
104	Safety amenities, adequacy of	Cost Impact, Schedule delay	4	2	8	Concessionaire is responsible for all phasing planning and implementation. The Concessionaire must submit a Traffic Management Plan to HPTE prior to NTP2. HPTE will monitor implementation.
	MAINTENANCE DURING CONSTRUCTION	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
105	Construction Maintenance	Cost impacts, safety concerns, schedule delay	5	3	15	The Concessionaire is required to Submit a Maintenance Level of Service Plan. The Plan will define the Concessionaire's complete strategy for the implementation, coordination, scheduling, and monitoring of maintenance Activities during the Project. HPTE will review and monitor.
106	Snow Revmoval	Traffic Concerns, Public Goodwill	5	2	10	HPTE will be responsible for snow removal in all active lanes, the Concessionaire will be responsible for lanes closed to traffic and behind all temporary barrier.
107	Working Time Violations	Traffic Impacts	4	3	12	HPTE will charge Concessionaire lane rental fees is Concessionaire does not open lanes as agreed to in the contract documents
108	Concessionaire Responsiveness in repairs	Impact traffic and operations	2	2	4	HPTE will be responsible for highway maintenance until NTP2. After NTP2, the Concessionaire will be responsible. If the Concessionaire does not perform these duties per the contract documents, HPTE forces will, and HPTE will charge the Concessionaire.
	ITS AND TOLLING	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
109	Survey	Survey has not been completed for all ITS elements, both within the corridor and the additional ITS infrastructure (fiber/conduit and devices) outside the corridor that is required. Additional survey would provide better information for the D/B Concessionaire. Installation element could conflict with other utilities and infrastructure	2	2	4	Per contract documents, Concessionaire must locate ITS infrastructure in the field. ITS Task force will coordinate ITS design issues.
110	Use of existing conduit	Damaged conduit will need to be replaced and brought up to HPTE standards.	3	2	6	Concessionaire required to repair all existing conduit
111	Toll tag procurement	The toll tags for this project need to be the "switchable" type utilizing the "6C" protocol. E-470's current tag provider, Sirit-Federal Signal, does not currently manufacture such tags.	2	3	6	Collect tolls with exist technology

US 36 TOLL CONCESSION PROJECT RISK MATRIX						
112	Fiber allocations and IP addressing	HPTE ITS will be providing fiber allocation and IP addressing to the D/B Concessionaire. Therefore, they will become a critical path element of the overall construction.	1	1	1	HPTE responsible
113	Toll system integrator	The toll equipment and integration is being contracted separately from the D/B contract. Therefore, the two schedules need to be closely integrated and coordination of civil infrastructure elements needs to be identified in sufficient detail.	2	2	4	Extensive review of RFP documents and contracts for both project. Both Concessionaires will be required to coordinate with each other and HPTE ITS.
114	Full-color DMS	Currently, full-color Dynamic Message Signs (DMS) have been specified, however, there has been recent mention of Active Traffic Management (ATM) being desired. Full-color DMS would be critical for any future ATM applications.	3	1	3	Driver needs to be developed. HPTE ITS is process of developing. Expected completion Summer 2014
115	FIPI vs. open specifications	There are several ITS and tolling devices that could be FIPI items, if desired. However, there is a trade off between allowing for free market solutions versus using equipment known to be functional. In the case of roadside detection devices this proved to be a costly modification in TREX afterwards. Decisions need to be made as to what equipment will be prescribed.	1	2	2	Concessionaire will be encouraged to use COTS products
116	Full-color DMS	Several of the ITS and tolling equipment will require new software drivers or changes to existing software applications. These include the side-fire radar detectors, travel time indicators, potentially the variable toll message signs, and others. The Tolling Integrator will be on the critical path for delivery and testing and acceptance of certain system elements. For example, travel time cannot be checked for accuracy until the equipment is integrated with the HPTE ITS software (CTMS) and recording real data.	3	3	9	Driver needs to be developed. Tolling integrator is process of developing. Expected completion Summer 2014
117	Software integration and drivers	Several of the ITS and tolling equipment will require new software drivers or changes to existing software applications. These include the side-fire radar detectors, travel time indicators, potentially the variable toll message signs, and others. A decision needs to be made as to whether HPTE and/or the Tolling Integrator will be required to make software changes or if the D/B will be responsible for these items. If HPTE or the Tolling Integrator are responsible, then they will be on the critical path for delivery and testing and acceptance of certain system elements. For example, travel time cannot be checked for accuracy until the equipment is integrated with the HPTE ITS software (CTMS) and recording real data.	2	2	4	HPTE ITS and the Tolling Integrator will be jointly responsible. They will coordinate with Concessionaire

APPENDIX G

Right-of-Way Schedule
And
Steps of the CDOT Right-of-Way Acquisition Process

APPENDIX G

RIGHT-OF-WAY SCHEDULE

CDOT Parcel #	Segment	Owner	Access Date
1	E	Superior Rock Creek, LLC	09/18/13
2	E	South Boulder and Coal Creek	09/18/13
3	E	Schuck Holdings, LLC	09/18/13
4	E	County of Boulder	09/18/13
5, 5A	E	Biella Family Limited Partnership	09/18/13
6, 6B, PE-6	E	Town of Superior	09/18/13
7, 7A,	E	FFI Co Coal Creek LLC	09/18/13
8, 8D, 8E, 8F	E	City of Louisville	09/18/13
9	E	Portercare Adv. Health Systems	09/18/13
10, PE10	E	Superior Plaza, LLC.	09/18/13
13, PE-13	E	Superior 128, LLC.	09/18/13
8A, 8B, 8C	F	City of Louisville	10/25/13
11, 11A, 11B, 11C, 11D, 11E, 11F, 11G, 11H, 11I, 11J 11K, 11L, 11M, 11N, 11O	F	City of Boulder	10/25/13
TE-11, TE-11A, TE-11B, TE-11C, TE-11D, TE-11E, TE-11F, TE-11G, TE-11H, TE-11I, TE-11J	F	City of Boulder	10/25/13
12, TE-12, TE-12A	F	Regents of the University of Colorado	10/25/13

STEPS OF THE CDOT RIGHT OF WAY ACQUISITION PROCESS, ENTITY RESPONSIBLE FOR COMPLETION OF EACH STEP, AND APPROXIMATE TIME FRAMES

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approximate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Survey	Concessionaire	Variable depending on scope 2-4 weeks for smaller surveys, 2-4 months for larger surveys	CDOT Region 6 Survey Unit	2-3 weeks from submission	This is only survey of property boundary and topography needed for development of ROW Plans
Delivery of Engineering Design of Improvements Requiring ROW Completed to a Sufficient Level to Ensure that Location, Size and Shape of ROW Parcels Will Not Change as Design is Advanced	Concessionaire	Variable depending on scope of improve-ments to be designed	CDOT Design Review Team and CDOT Region 6 ROW Manager	Variable depending on scope of improve-ments designed	Completion of sufficient design to this level is a common cause of delay in the ROW Plans development process

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approximate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Appraisal and Appraisal Review	Appraisal: Concessionaire Appraisal Review: CDOT	6-8 weeks per appraisal per landowner 1-2 weeks to review an appraisal	CDOT	1-2 weeks to review an appraisal	If the estimated value of the acquisition is $5,000 or less, a value finding can be prepared by a real estate specialist and an appraisal/appraisal review is not needed. All requests for valuation by a value finding vs. an appraisal must be Approved by CDOT.

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approximate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Acquisition Negotiation	Concessionaire	4-6 weeks for the initial negotiation. 2 weeks for a final offer letter. 2 weeks for a last and final offer letter, if given. At least 3 months from submission of request for condemnation to completing immediate possession hearing.	CDOT must review and Approve certain administrative settlements. Concessionaire shall be delegated the same administrative settlement authority as the "Region" as set forth in Section 10.2.1 of the CDOT ROW Manual. CDOT Region 6 shall be delegated the same administrative settlement authority as "Central Office" as set forth in Section 10.2.2 of the CDOT ROW Manual.	2-4 Days to review and Approve backup documentation of completed acquisition negotiations	Concessionaire cannot use duress or coercion in acquisition negotiations

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approximate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Condemnation	Colorado Attorney General's Office	At least three months to file a condemnation petition, serve it on the parties, set and hold an immediate possession hearing. Valuation trials can take a year or more from the date of filing the condemnation petition.			All offers to purchase must be made in CDOT's name, so the Attorney General's Office is properly authorized to represent the CDOT as the condemning authority in the condemnation proceeding,
Certification that Acquisition was completed in compliance with State and Federal Requirements	Concessionaire		CDOT Region 6 ROW Manager		

APPENDIX H

CDOT – HPTE
INTRA-AGENCY AGREEMENT

HPTE US36 CONCESSION PROJECT
INTRA-AGENCY AGREEMENT

THIS AGREEMENT, made this 27th day of June, 2013 by and between the STATE OF COLORADO for the use and benefit of THE COLORADO DEPARTMENT OF TRANSPORTATION, hereinafter referred to as "CDOT", and the COLORADO HIGH PERFORMANCE TRANSPORTATION ENTERPRISE, a government-owned business and a division of CDOT, hereinafter referred to as the "Enterprise or HPTE."

FACTUAL RECITALS:

1. CDOT is an agency of the State of Colorado; and

2. The Transportation Commission of Colorado is the budgetary and policy making body for CDOT with all powers and duties granted by the General Assembly pursuant to C.R.S. 43-1-106; and

3. The Enterprise was authorized and created pursuant to C.R.S. 43-4-806(1) and (2); and

4. The Enterprise has entered into an agreement, dated June 27, 2013 ("Concession Agreement") with Plenary Roads Denver ("Concessionaire") to: (1) finance, design and construct (and reconstruct where appropriate) the general purpose lanes and a new managed lane in each direction ("US36 Phase 2 Managed Lanes") on U.S. 36 between 88th Street and Table Mesa Drive ("US 36 Phase 2 Corridor"), together with associated roadways, bridges, access ramps, pavement replacement , sound and retaining walls, bikeways, and ITS improvements; (2) design and construct a diverging diamond interchange at McCaslin Boulevard and US36 ("McCaslin Interchange"); (3) operate and maintain (a) the US36 Phase 2 Managed Lanes, (b) the CDOT/HPTE constructed managed lane in each direction ("US 36 Phase 1 Managed Lanes") now being designed and constructed on that portion of US 36 from Pecos Boulevard to 88th Street (the "US 36 Phase 1 Corridor"), and (c) the existing I-25 Express Lanes ("I 25 Managed Lanes") on that portion of I-25 from the 20th Street exit to Pecos Boulevard, to the extent and all as more specifically described in the Concession Agreement; and (4) permit the Concessionaire access to the lands owned by the State of Colorado to complete the work described in the preceding sections.

5. The work described above in Recital No. 4 is collectively referred to in this Agreement as the "Project" and all other defined terms used in this Agreement have the meanings provided in this Agreement or in the Concession Agreement; and

6. Under the terms of the Concession Agreement, the Concessionaire is also required to perform snow and ice removal services for the McCaslin Interchange, and snow and ice removal services and

routine maintenance services for the general purpose lanes in the US 36 Phase 1 Corridor and the US 36 Phase 2 Corridor (collectively the "US 36 Corridor"), for which the Concessionaire is to be compensated by the HPTE which will in turn be reimbursed for those expenses related to the general purpose lanes by CDOT; and

7. CDOT and HPTE have agreed to enter into this Agreement to provide certain additional assurances and agreements, as further described below; and

8. By a resolution passed on February 21, 2013, for the purposes of 42-4-1012(1)(a), C.R.S., the Transportation Commission designated the Managed Lanes as preferential lanes for vehicles that carry a number of persons to be specified in the agreement to be made between HPTE and the Concessionaire; and

9. This Agreement is executed under the authority of Sections 29-1-203, 43-1-110, and 43-4-806(4) C.R.S., as amended and no other filings, consents or approvals are required.

NOW, THEREFORE, IN CONSIDERATION OF THE FOREGOING FACTUAL RECITALS, IT IS HEREBY AGREED AS FOLLOWS:

I. CDOT GENERAL PURPOSE LANES PAYMENT OBLIGATIONS

A. CDOT agrees, subject to annual allocation by the Transportation Commission, to pay (i) for Snow and Ice Control Services for the General Purposes Lanes in the US 36 Corridor and (ii) for Routine Maintenance services for the General Purpose Lanes in the US 36 Corridor and (iii) for its obligations in relation to those Non-Separable Tasks that may occur from time to time, in each case in the amounts and at the times necessary for HPTE to meet its payment obligations in accordance with the Concession Agreement ("CDOT Service Funding Obligations"). Such payments will be made to HPTE for remittance in a timely manner to the Concessionaire or, at the direction of HPTE, such payments will be made directly to the Concessionaire in in accordance with the Concession Agreement.

B. In order for CDOT to timely budget for the CDOT Service Funding Obligations, on or before September 15 of the immediately preceding fiscal year, the Enterprise shall determine, in consultation with Concessionaire, the amounts and schedule of CDOT Service Funding Obligations for any fiscal year and shall notify the Executive Director of CDOT ("Executive Director") in writing of such requirements. Amounts sufficient to pay such CDOT Service Funding Obligations for the succeeding fiscal year shall be included by the Executive Director in the annual operation and maintenance budget request submitted to the Transportation Commission for an allocation of moneys in the state highway fund for such purpose.

C. Moneys allocated by the Transportation Commission for the payment of CDOT Service Funding

Obligations shall be transferred timely to the appropriate subaccount in the Enterprise's special revenue fund, established pursuant to Section 43-4-806(3)(a), C.R.S., and shall be used by the Enterprise to satisfy the CDOT Service Funding Obligations, as they become due.

II. CDOT BACKUP LOAN OBLIGATIONS

A. The Concession Agreement, attached hereto as Exhibit A, contains obligations of HPTE to pay the Concessionaire various amounts and sums upon the occurrence (and following the occurrence of) certain events and in respect of several other matters, as more fully described therein (the "HPTE Payment Obligations").

B. The Transportation Commission has reviewed the Concession Agreement and is aware of the HPTE Payment Obligation Events. On or before September 15 of the immediately preceding fiscal year, the Enterprise shall estimate whether and in what maximum amount it may be necessary for the Enterprise to request that CDOT provide financial support to fulfill an HPTE Payment Obligation Event in any fiscal year, it being understood that any such financial support shall be in the form of a loan from CDOT to the Enterprise ("CDOT Backup Loan" or simply "Loan"). The Enterprise shall notify the Executive Director in writing as to the estimated maximum amount, if any, that is expected to be payable in the succeeding fiscal year, and such maximum amount ("CDOT Backup Loan Set Aside") shall be included in the budget request to the Transportation Commission for an allocation of moneys in the state highway fund for such purpose.

C. The Enterprise may also, at any time during any fiscal year, notify the Executive Director in writing that the Enterprise desires that CDOT make Loans for projected HPTE Payment Obligation Events in an amount that exceeds any CDOT Backup Loan Set Aside that the Transportation Commission has previously allocated for such fiscal year. In such event, the Executive Director shall submit a supplemental budget request to the Transportation Commission at its next regularly scheduled meeting for an allocation or supplemental allocation of moneys in the state highway fund for the purpose of making Loans to the Enterprise in such fiscal year in an amount equal to the amount set forth in the notice delivered by the Enterprise to the Executive Director pursuant to Section II.B.

D. Moneys allocated by the Transportation Commission to make Loans shall be transferred to the Enterprise's separate account established for the Project in the Enterprise's operating fund, pursuant to 43-4-806(4), C.R.S., and shall be used by the Enterprise to satisfy the HPTE Payment Obligation Events, as they become due.

E. Notwithstanding any other provision hereof: (a) CDOT and HPTE agree and acknowledge that

the Transportation Commission has no obligation to allocate funds to make Loans in any fiscal year and the decision whether or not to allocate funds, and the amount, if any, of funds allocated, to make Loans in any fiscal year shall be made annually at the sole and absolute discretion of the Transportation Commission; (b) prior to allocating any funds to make Loans in any fiscal year, CDOT shall determine that such authority exists in the law and that a sufficient unencumbered balance remains available in Fund 400 for Loans in an amount equal to the amount of funds so allocated; and (c) once an allocation by the Transportation Commission has been made, Loans shall be made up to the amounts requested by the Enterprise as set forth above.

F. All Loans shall be authorized by and subject to a separate Transportation Commission Resolution and shall be evidenced by separate Loan agreements in substantially the form attached hereto as Exhibit B ("Loan Agreement"), with terms consistent with the terms contained herein. In particular, having regard to the intent of the parties that the Loans shall be repaid from the revenues generated by the Project after the Concession Agreement has terminated (unless HPTE should have funds from any source to enable it to prepay the Loans in accordance with terms permitting such prepayment) CDOT shall determine a reasonable repayment schedule for each Loan after consultation with HPTE, provided that no repayment of any interest or principal on any Loan shall fall due before the later of (a) the date when Services Period ends and (b) the date on which HPTE has fully paid all amounts under or in connection with the Concession Agreement which arise out of HPTE Payment Obligation Events.

III. CDOT PERFORMANCE OBLIGATIONS

CDOT and the Transportation Commission have reviewed the Concession Agreement and are aware that the Enterprise has undertaken certain obligations thereunder to cause or ensure that CDOT (a) will perform certain acts, take certain action, and provide certain services and (b) will refrain from performing certain other acts ("CDOT Performance Obligations"). CDOT enters into this Agreement in consideration of the benefits it is receiving including, but not limited to, the reconstruction of the General Purpose lanes of the US 36 Phase 2 Corridor and other transportation improvements, and hereby agrees to take any and all action, and to refrain from taking any action (as the case may be) necessary to satisfy the CDOT Performance Obligations in the manner and as otherwise required by the Concession Agreement.

IV. HPTE LICENSE

CDOT agrees and acknowledges that for the Concessionaire to complete its obligations under the

Concession Agreement, the Concessionaire will require a formal right of access for appropriate use to the relevant land owned by the State of Colorado. CDOT is receiving significant value (consideration) from the agreement between HPTE and the Concessionaire, inasmuch as it will receive the benefit of the reconstruction of the US 36 general purpose lanes. Accordingly, it is in CDOT's interest that CDOT should provide, and CDOT hereby Provides, to the HPTE, for the Contract Period a non-exclusive license over, under, upon and in the Site and the Managed Lanes (as those terms are defined in the Concession Agreement). The period for which this license is provided for the different parts of the Site and the Managed Lanes shall be for the same duration as the period of the license provided by HPTE for those parts of the Site and the Managed Lanes under the Concession Agreement. CDOT acknowledges and agrees that HPTE may sublicense the license provided in this Article IV to the Concessionaire (with the right for the Concessionaire to give sub-sublicenses), and to any other party as may be permitted by and in accordance with the Concession Agreement.

Subject to the terms of the Concession Agreement, CDOT reserves the right of use, occupancy and ownership over, under, upon and in the lands described in the preceding paragraph.

CDOT agrees that it shall not transfer or purport to assign, convey, transfer, dispose of, alienate or create any Encumbrance in, or purport to transfer or dispose of, alienate or create any Encumbrance in the land comprising the Site or the Managed Lanes while the Concessionaire is permitted to use the same under the terms of the Concession Agreement. Further, CDOT agrees to defend its title or real property interest to the Site and the Managed Lanes, subject to rights held by third parties as disclosed in the Disclosed Data and Permitted Encumbrances, as well as the license provided to HPTE under this Agreement against any person claiming any interest adverse to CDOT apart from the owners of rights held by third parties as disclosed in the Disclosed Data and Permitted Encumbrances in relation to those rights and Permitted Encumbrances only.

V. DEFAULTS, TERMINATION AND REMEDIES

A. If the Enterprise fails to repay any Loan in accordance with the applicable Loan Agreement and upon notice to the Enterprise and failure by the Enterprise to cure within thirty (30) days thereof, CDOT may, at its option: (a) terminate its commitment to make future Loans hereunder; (b) declare the entire principal amount of all Loans then outstanding immediately due and payable; (c) take any other appropriate legal action.

B. Notwithstanding the exercise of any of the remedies above, the Enterprise shall not be relieved of liability to CDOT for any damages sustained by CDOT by virtue of any breach of this Agreement by the Enterprise.

VI. GENERAL PROVISIONS

A. This Agreement is subject to such modifications as may be required by changes in federal or State law, or their implementing regulations. Any such required modification shall automatically be incorporated into and be part of this Agreement on the effective date of such change as if fully set forth herein. Except as specifically provided otherwise herein, no modification of this Agreement shall be effective unless agreed to in writing by both parties in an amendment to this Agreement that is properly executed and approved in accordance with applicable law.

B. The terms of this Agreement are severable, and should any term or provision hereof be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other term or provision hereof. The waiver of any breach of a term hereof shall not be construed as a waiver of any other term, or the same term upon subsequent breach.

C. Except as herein otherwise provided, this Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

D. It is expressly understood and agreed that the enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the parties hereto, and nothing contained in this Agreement shall give or allow any such claim or right of action by the Concessionaire or any other or third person on such Agreement.

E. The Enterprise shall maintain all books, documents, papers, accounting records and other evidence pertaining to project or any cost incurred for the term of the Concession Agreement, and if requested by CDOT, make such materials available to CDOT for three years after the termination of the Concession Agreement.

F. No term or condition of this Agreement shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions for the parties, of the Colorado Governmental Immunity Act, Section 24-10-101 et seq. C.R.S. or the Federal Tort Claims Act, 28 U.S.C. 2671 et seq. as applicable, as now or hereafter amended.

G. At all times during the performance of this Agreement, the Enterprise shall strictly adhere to all applicable federal and state laws, rules, and regulations that have been or may hereafter be established,

including, but not limited to state and federal laws respecting discrimination and unfair employment practices.

H. The laws of the State of Colorado and rules and regulations issued pursuant thereto shall be applied in the interpretation, execution, and enforcement of this Agreement. Any provision of this Agreement, whether or not incorporated herein by reference, which provides for arbitration by any extra-judicial body or person or which is otherwise in conflict with said laws, rules, and regulations shall be considered null and void. Nothing contained in any provision incorporated herein by reference which purports to negate this or any other special provision in whole or in part shall be valid or enforceable or available in any action at law whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision will not invalidate the remainder of this Agreement to the extent that the Agreement is capable of execution.

I. The signatories aver that to their knowledge, no employee of the State of Colorado has any personal or beneficial interest whatsoever in the service or property described herein.

J. This Agreement shall be effective as of the date of the Contract Date.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

STATE OF COLORADO
JOHN HICKENLOOPER, Governor

By _____
DONALD HUNT
Executive Director
DEPARTMENT OF TRANSPORTATION

COLORADO HIGH PERFORMANCE
TRANSPORTATION ENTERPRISE

By _____
MICHAEL CHEROUTES
HPTE Director

APPROVED:
JOHN SUTHERS
Attorney General

By _____
First Assistant Attorney General

EXHIBIT A

CONCESSION AGREEMENT

Concession Agreement attached in full to original, but omitted from this copy to reduce volume of copy documentation

EXHIBIT B

CDOT- HPTE SEPARATE LOAN AGREEMENT

THIS LOAN AGREEMENT, made this __ day of _____, 20___ by and between the State of Colorado for the use and benefit of THE COLORADO DEPARTMENT OF TRANSPORTATION, hereinafter referred to as the "Lender", and the COLORADO HIGH PERFORMANCE TRANSPORTATION ENTERPRISE, hereinafter referred to as the "Borrower", entered into pursuant to the Master Intra-Agency Agreement dated as of _____, 2013 between Lender and Borrower (the "Master Loan Agreement").

FACTUAL RECITALS:

1. The Colorado Department of Transportation, the Lender, is an agency of the State of Colorado;

2. The Colorado High Performance Transportation Enterprise, the Borrower, was authorized and created pursuant to C.R.S. 43-4-806(1) and (2) as a government-owned business, a TABOR-exempt enterprise and a division of CDOT charged with aggressively pursuing innovative means of financing surface transportation projects;

3. The Transportation Commission of Colorado is the budgetary and policy-making body of the Lender and may, pursuant to C.R.S. 43-4-806(4), authorize the transfer of money from the state highway fund to the Borrower to defray expenses of the Borrower and, notwithstanding any state fiscal rule or generally accepted accounting principle that could otherwise be interpreted to require a contrary conclusion, such a transfer by the Lender to the Borrower shall constitute a loan and shall not be considered a grant for purposes of section 20(2)(d) of article X of the state constitution;

4. The Borrower entered into an agreement dated _____, 2013 ("Concession Agreement") with Plenary Roads Denver ("Concessionaire") to: (1) finance, design and construct (and reconstruct where appropriate) the general purpose lanes and a new managed lane in each direction ("US36 Phase 2 Managed Lanes") on U.S. 36 between 88th Street and Table Mesa Drive ("US 36 Phase 2 Corridor"), together with associated roadways, bridges, access ramps, pavement replacement , sound and retaining walls, bikeways, and ITS improvements; (2) design and construct a diverging diamond interchange at McCaslin Boulevard and US36 ("McCaslin Interchange"); (3) operate and maintain (a) the US36 Phase 2 Managed Lanes, (b) the CDOT/HPTE constructed managed lane in each direction ("US 36 Phase 1 Managed Lanes") now being designed and constructed on that portion of US 36 from Pecos Boulevard to

88th Street (the "US 36 Phase 1 Corridor"), and (c) the existing I-25 Express Lanes ("I 25 Managed Lanes") on that portion of I-25 from the 20th Street exit to Pecos Boulevard, to the extent and all as more specifically described in the Concession Agreement; and (4) permit the Concessionaire access to the lands owned by the State of Colorado to complete the work described in the preceding sections.

5. The Concession Agreement contains obligations to HPTE to pay the Concessionaire various amounts and sums upon the occurrence (and following the occurrence of) certain events and in respect of several other matters ("Borrower Payment Obligation Events").

6. The Borrower has requested a loan from the Lender in the amount of $[Requested Amount] for Borrower Payment Obligation Events because [description of why Payment Obligation Event arose].

7. The Transportation Commission has approved this loan request and authorized the Lender to make a loan to the Borrower in the amount of $[Principal Amount];

8. Authority exists in the law and a sufficient unencumbered balance thereof remains available in Fund 400 to lend to the Borrower;

9. By Resolution # TC-____, on _____, 2013, the Transportation Commission approved the HPTE-CDOT Intra-Agency agreement approved by the Transportation Commission and the HPTE Board of Directors ("HPTE-CDOT Agreement"); and

10. This Agreement is executed under the authority of Section 43-4-806(4), as amended, and by resolution of the HPTE Board.

NOW, THEREFORE, IT IS HEREBY AGREED THAT:

ARTICLE I
LOAN AND CLOSING

Section 1.01. Loan and Promissory Note. Pursuant to the terms of the HPTE-CDOT Agreement and this Agreement, the Lender hereby agrees to loan $[Principal Amount] (the "principal amount of the Loan") to the Borrower and the Borrower agrees to pay the Lender the principal amount of the Loan plus interest on the terms described herein (collectively, the "Loan"). The Borrower's obligation to pay the Lender the principal of and interest on the Loan is evidenced by a promissory note (the "Note") in the form attached as Attachment 1.

Section 1.02. Closing. The Lender shall deliver the principal amount of the Loan to the Borrower, by means of a transfer immediately available funds into the HPTE Operating Fund on a date mutually agreed to by the Borrower and the Lender (such date is referred to as the "Closing Date").

ARTICLE II

LOAN OBLIGATIONS

Section 2.01. Principal and Interest Payments. The Borrower shall pay to the Lender the principal amount of the Loan plus accrued interest in accordance with Section 2.07 or the Borrower may make prepayments in accordance with Section 2.05 hereof (a "Prepayment Date").

Section 2.02. Lender Invoice and Reports. The Lender shall forward an invoice, that includes the amount of principal and interest that shall be due, to the Borrower at least thirty days before the next scheduled payment is due.

Section 2.03. Interest. Interest shall accrue on the principal amount of the Loan from the Closing Date through the day preceding the Maturity Date or Prepayment Date at the Interest Rate (defined below), computed on the basis of a 360-day year of twelve 30-day months.

Section 2.04. Interest Rate. "Interest Rate" means the rate of interest established and adopted by resolution by the Colorado Transportation Commission pursuant to 2 CCR 605-1, Rule V (2).

Section 2.05. Optional Prepayment. The Borrower, at its option, may prepay the Loan in whole by paying the Lender the outstanding principal amount or a portion of the Loan, plus accrued interest to the Prepayment Date as selected by the Borrower.

Section 2.06. Resource Pledge for Repayment. The Borrower's obligation to pay the principal and interest on the Loan and any other amounts payable by the Borrower hereunder (the "Loan Obligations") are extraordinary limited obligations of the Borrower payable with the [Repayment Source(s)] (Repayment Source(s)).

Section 2.07. Repayment Schedule. The Borrower shall make equal installments of $[Payment Amount] to the Lender each [Payment Period] beginning [First Payment Due Date], and each [Payment Period] thereafter for [Number of Payments] consecutive [Payment Periods], provided that no payment shall fall due until a date (the "Concession Agreement Obligation End Date") which is the later of the last day of the Services Period (as defined in the Concession Agreement) and the date that the Borrower has discharged or performed all of its payment obligations to the Concessionaire under the Concession Agreement. If any payment under this Loan Agreement would have fallen due prior to the Concession Agreement Obligation End Date it shall continue to accrue interest, and will become due 14 days after the Concession Agreement Obligation End Date.

Section 2.08. Remittance. All loan payments shall be made payable to the Colorado Department of Transportation, and sent to the Lender's accounting branch at 4201 East Arkansas Avenue, Rm. 212, Denver, CO 80222, or to such other place or person as may be designated by the Lender in writing.

ARTICLE III

DEFAULT AND TERMINATION

Section 3.01. Event of Default. Borrow default ("Event of Default") is governed by Section IV of the Master Loan Agreement.

Section 3.02. Remedies. Lender's remedies against a Borrower Event of Default are governed by Section IV of the Master Loan Agreement.

Section 3.03. Remedies Neither Exclusive Nor Waved. No remedy under Section 3.02 hereof is intended to be exclusive, and each such remedy shall be cumulative and in addition to the other remedies. No delay or failure to exercise any remedy shall be construed to be a waiver of an Event of Default.

Section 3.04. Waivers. The Lender may waive any Event of Default and its consequences. No wavier of any Event of Default shall extend to or affect any subsequent or any other then existing Event of Default.

ARTICLE IV

TERMINATION

Section 4.01. Subject to the terms of the Master Loan Agreement, this Agreement may be terminated as follows:

(a) Termination for Cause. If, through any cause, the Borrower shall fail to fulfill, in a timely and proper manner, its obligations under this Agreement, or if the Borrower shall violate any of the covenants, agreements, or stipulations of this Agreement, the Lender shall thereupon have the right to terminate this Agreement for cause by giving written notice to the Borrower of its intent to terminate and at least thirty (30) days opportunity to cure the default or show cause why termination is otherwise not appropriate. In the event of termination, the Borrower shall return any funds that have been disbursed to the Borrower as part of the Loan and any accrued interest thereon within 45 days of the date of termination. Notwithstanding above, the Borrower shall not be relieved of liability to the Lender for any damages sustained by the Lender by virtue of any breach of this Agreement by the Borrower.

(b) Termination Due to Loss of Funding. The parties hereto expressly recognize that the Loan is made to the Borrower with State funds which are available to the Lender for the purposes of making a loan for the purposes described herein, and therefore, the Borrower expressly understands and agrees that all its rights, demands and claims to a loan arising under this Agreement are contingent upon availability of such funds to the Lender. In the event that such funds or any part thereof are not available to the Lender, the Lender may immediately terminate or amend this Agreement.

[Signature page to follow]

IN WITNESS WHEREOF, the parties hereto have executed this agreement the day and year first above written.

APPROVED:
JOHN W. SUTHERS
Attorney General

By: _____
Assistant Attorney General

STATE OF COLORADO
JOHN HICKENLOOPER, Governor

By: _____
Executive Director
DEPARTMENT OF TRANSPORTATION

ATTEST: (SEAL)

By: _____

COLORADO HIGH PERFORMANCE
TRANSPORTATION ENTERPRISE

By: _____

Federal Employer Identification Number:
[FEIN]

ALL AGREEMENTS MUST BE APPROVED BY THE STATE CONTROLLER

CRS24-30-202 requires that the State Controller approve all agreements. This Agreement is not valid until the State Controller, or such assistant as he may delegate, has signed it. The contractor is not authorized to begin performance until this Agreement is signed and dated below. If performance begins prior to the date below, the State of Colorado may not be obligated to pay for the goods and/or services provided.

DAVID J. MC DERMOTT, CPA
State Controller

By: _____
LILIYA GERSHMAN
Department Controller

Date: _____

Attachment 1

NOTE

$_____

_____

For VALUE RECEIVED, THE COLORADO HIGH PERFORMANCE TRANSPORTATION ENTERPRISE_____ (the "Maker") subject to and in accordance with a Loan Agreement dated the [ ] day of [ ] [20__] promises to pay to Colorado Department of Transportation (the "Holder") the principal sum of $_____ with interest from date at the rate of _____% per annum on the balance from time to time remaining unpaid. The said principal and interest shall be payable in lawful money of the United States of America at 4201 East Arkansas Avenue, Rm. 212, Denver, CO 80222 or at such place as may hereafter be designated by written notice from the Holder to the Maker hereof, on the date and in the manner following:

The Maker shall make equal installments of $_____to the Lender each _____ beginning _____, and each _____ thereafter for _____ consecutive _____ [*or replace by reference to the agreed repayment schedule*].

By:_____

Attest:_____

FIRST AMENDMENT TO
HPTE US36 CONCESSION PROJECT
INTRA-AGENCY AGREEMENT

THIS FIRST AMENDMENT ("Amendment") is made this 17th day of October, 2013 by and between the STATE OF COLORADO for the use and benefit of THE COLORADO DEPARTMENT OF TRANSPORTATION, hereinafter referred to as "CDOT", and the COLORADO HIGH PERFORMANCE TRANSPORTATION ENTERPRISE, a government-owned business and a division of CDOT, hereinafter referred to as the "Enterprise" or "HPTE."

FACTUAL RECITALS

A. CDOT and HPTE entered into that certain HPTE US36 Concession Project Intra-Agency Agreement dated June 27, 2013 ("Original Agreement"), pursuant to which CDOT agreed (among other things) to perform the CDOT Service Funding Obligations, provide for a CDOT Backup Loan to HPTE, and fulfill the CDOT Performance Obligations, all relating to the Concession Agreement and the US 36 Project. All capitalized terms used in this Amendment but not otherwise defined in this Amendment shall have the meaning for such terms as set forth in the Original Agreement.

B. Pursuant to the Concession Agreement, HPTE is required to make certain payments ("Required Payments") to the Concessionaire. HPTE intends to fund a portion of the Required Payments with monies ("Local Contributions") to be received by CDOT for goods or services provided pursuant to the following intergovernmental agreements (collectively, the "Intergovernmental Agreements"):

- US 36 Concession Project Intergovernmental Agreement dated June 13, 2013, between HPTE, CDOT, and the Regional Transportation District (RTD contributing funds in return for construction of bus rapid transit lane);
- Contract dated June 11, 2013, between CDOT and the City of Louisville (Louisville contributing funds in return for construction of box culvert under US 36);
- Contract dated March 1, 2013, between CDOT and the City of Louisville (Louisville contributing funds in return for construction of diamond interchange at US 36 and McCaslin Blvd);
- Intergovernmental Agreement dated March 4, 2013, between CDOT and the Town of Superior (Superior contributing funds in return for construction of diamond interchange at US 36 and McCaslin Blvd);
- Intergovernmental Agreement dated June 14, 2013, between CDOT and the Town of Superior (Superior contributing funds for construction of pedestrian/bike underpass); and
- Contract dated April 24, 2013, between CDOT and Boulder County (Boulder County contributing funds for construction of bike path).

C. HPTE intends to also fund a portion of the Required Payments with federal highway funds (STP Metro and CMAQ) allocated for the US 36 Concession Project by the Denver Regional Council of Governments ("Federal Funds").

D. CDOT and HPTE wish to amend the Original Agreement to provide for the obligation of CDOT to make available to HPTE the Local Contributions and the Federal Funds, subject to the terms and conditions set forth below.

E. CDOT entered into the Original Agreement and enters into this Amendment in consideration of the benefits it is receiving including, but not limited to, the reconstruction of the General Purpose lanes of the US 36 Phase 2 Corridor and other transportation improvements.

F. This Amendment is executed under the authority of Section 29-1-203, C.R.S., as amended.

NOW, THEREFORE, IN CONSIDERATION OF THE FOREGOING FACTUAL RECITALS, IT IS HEREBY AGREED AS FOLLOWS:

1. Local Contributions. At present, CDOT will receive Local Contributions in an amount totaling approximately $30 million (such amount may increase or decrease pursuant to the Intergovernmental Agreements). CDOT agrees to make available to HPTE the sums owed to CDOT under the Intergovernmental Agreements in the amounts and at the times when such funds are made to CDOT.. It is understood that the Local Contributions are not Grants as defined in Section 24-77-102, C.R.S. but are rather being made in exchange for the goods or services, such as constructed bus rapid transit lanes, bike paths, and a diamond interchange, delivered by HPTE as part of the US 36 Project.

2. Federal Funds. CDOT further agrees to make available to HPTE the Federal Funds in the total amount of $15,000,000.00 at such times and in such a manner so as to allow HPTE to timely fulfill HPTE's payment obligations under the Concession Agreement and any amendment thereto. CDOT's consideration for entering into this Amendment is the benefits it is receiving including, but not limited to, the reconstruction of the General Purpose lanes of the US 36 Phase 2 Corridor and other transportation improvements. Therefore, HPTE's use of the Federal Funds is not a Grant as defined in Section 24-77-102, C.R.S., but instead is a fee for goods and services. It is further understood that the Federal Funds are not Grants as defined in Section 24-77-102, C.R.S. but are rather federal funds excepted from the definition of Grants.

3. General Provisions. With the exception of those terms and conditions specifically modified and amended herein, the Original Contract shall remain in full force and effect in accordance with all of its terms and provisions. In the event of any conflict between the terms and provisions of the Original Agreement and the term and provisions of this Amendment, the terms and provisions of this Amendment shall supersede and control. This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, and all of such counterparts shall constitute one agreement.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

STATE OF COLORADO
JOHN HICKENLOOPER, Governor

By _____
DONALD HUNT
Executive Director
DEPARTMENT OF TRANSPORTATION

COLORADO HIGH PERFORMANCE
TRANSPORTATION ENTERPRISE

By _____
MICHAEL CHEROUTES
HPTE Director

APPROVED:
JOHN SUTHERS
Attorney General

By _____
First Assistant Attorney General

APPENDIX I

INDEPENDENT ASSURANCE EVALUATION

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

ITEM	DESCRIPTION	TYPE OF TEST REQUIRED	MINIMUM SAMPLING FREQUENCY	FORM #	REMARKS
203	EMBANKMENT	% Compaction	1 per 100 000 cu yds (75 000 m^3), or a fraction thereof greater than 25 000 cu yds. None required if plan quantity is less than 25 000 cu yds (20 000 m^3).	212	Use the same location for % Compaction. Verify curve selection.
206	STRUCTURE BACKFILL (Class I)	Gradation % Compaction	1 per 10 000 cu yds (7500 m^3), or a fraction thereof greater than 1 000 cu yds. None required if plan quantity is less than 1 000 cu yds (750 m^3).	6	Split the gradation sample. Use the same location for % Compaction. Verify curve selection.
206	STRUCTURE BACKFILL (Class II)	% Compaction	1 per 10 000 cu yds (7500 m^3), or a fraction thereof greater than 1 000 cu yds. None required if plan quantity is less than 1 000 cu yds (750 m^3).	212	Use the same location for % Compaction. Verify curve selection.
206	FILTER MATERIAL	Gradation	1 per 2 000 cu yds. (1500 m^3), or a fraction thereof greater than 200 cu yds. None required if plan quantity is less than 1 000 cu yds (750 m^3).	6	Split the gradation sample.
304	AGGREGATE BASE COURSE	Gradation % Compaction	1 per 20 000 tons (20 000 t), (10 000 cu. yds.) or a fraction thereof greater than 2 000 tons (2 000 t), (1 000 cu. yds.). None required if plan quantity is less than 10 000 tons (10 000 t), (5 000 cu. yds.).	6	Split the gradation sample. Use the same location for % Compaction. Verify curve selection.
306	RECONDITIONING	% Compaction	1 per 50 000 sq yds. (40 000 m^2), or a fraction thereof greater than 5 000 sq yds. (4 000 m^2). None required if plan quantity is less than 25 000 sq yds. (20 000 m^2).	212	Use the same location for % Compaction. Verify curve selection.

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

ITEM	DESCRIPTION	TYPE OF TEST REQUIRED	MINIMUM SAMPLING FREQUENCY	FORM #	REMARKS
307	LIME TREATED SUB-GRADE	% Compaction	1 per 50 000 sq yds. (42 000 m^2), or a fraction thereof greater than 5 000 sq yds. (4 200 m^2). None required if plan quantity is less than 25 000 sq yds. (20 000 m^2).	212	Use the same location for % Compaction. Verify curve selection.
308	PORTLAND CEMENT TREATED BASE [Project Special]	Gradation % Compaction	1 per 50 000 tons (50 000 t) or a fraction thereof greater than 5 000 tons (5 000 t). None required if plan quantity is less than 5 000 tons (5000 t).	6	Split the gradation sample. Use the same location for % Compaction. Verify curve selection.
310	PROCESS ASPHALT MAT [Project Special]	% Compaction	1 per Project or as determined by the RME.	69	Use the same location for % Compaction. Verify curve selection.
403	HOT MIX ASPHALT - GRADATION ACCEPTANCE **PROJECT Basis**	% Asphalt Maximum Specific Gravity Gradation % Compaction Joint Density	1 per 10 000 tons (10 000 t), or a fraction thereof greater than 2 500 tons (2 500 t). None required if plan quantity is less than 2 500 tons (2 500 t).	360 &/or 58 and 6 69	Split the sample. Use the same location for % Compaction. Take an adjacent core for joint density.
403	HOT MIX ASPHALT - GRADATION ACCEPTANCE **SYSTEM Basis**	% Asphalt Maximum Specific Gravity Gradation % Compaction Joint Density	1 per 25 000 tons (25 000 t), or a fraction thereof greater than 2 500 tons (2 500 t), and perform at a minimum one IA every two months on each HMA project tester and their equipment. None required if plan quantity is less than 2 500 tons (2 500 t).	360 &/or 58 and 6 69	Split the sample. Use the same location for % Compaction. Take an adjacent core for joint density.

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

ITEM	DESCRIPTION	TYPE OF TEST REQUIRED	MINIMUM SAMPLING FREQUENCY	FORM #	REMARKS
403	HOT MIX ASPHALT - VOIDS ACCEPTANCE **PROJECT Basis**	% Asphalt Maximum Specific Gravity Hveem Stability Air Voids Voids in Mineral Aggregate % Compaction Joint Density	1 per 10 000 tons (10 000 t), or a fraction thereof greater than 2 500 tons (2 500 t). None required if plan quantity is less than 2 500 tons (2 500 t).	360 &/or 58 69	Split the sample. Use the same location for % Compaction. Take an adjacent core for joint density.
403	HOT MIX ASPHALT - VOIDS ACCEPTANCE **SYSTEM Basis**	% Asphalt Maximum Specific Gravity Hveem Stability Air Voids Voids in Mineral Aggregate % Compaction Joint Density	1 per 25 000 tons (25 000 t), or a fraction thereof greater than 2 500 tons (2 500 t), and perform at a minimum one IA every two months on each HMA project tester and their equipment. None required if plan quantity is less than 2 500 tons (2 500 t).	360 &/or 58 69	Split the sample. Use the same location for % Compaction. Take an adjacent core for joint density.
405	HOT-IN-PLACE RECYCLE	% Compaction Maximum Specific Gravity	1 per 50 000 sq yds. (40 000 m^2), or a fraction thereof greater than 5 000 sq yds. (4 000 m^2). None required if plan quantity is less than 25 000 sq yds. (20 000 m^2)	69	Use the same location for % Compaction. Split the HMA sample.
406	COLD ASPHALT PAVEMENT (RECYCLE)	% Compaction	1 per 50 000 sq yds. (40 000 m^2), or a fraction thereof greater than 5 000 sq yds. (4 000 m^2). None required if plan quantity is less than 25 000 sq yds. (20 000 m^2).	69	Use the same location for % Compaction.

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

ITEM	DESCRIPTION	TYPE OF TEST REQUIRED	MINIMUM SAMPLING FREQUENCY	FORM #	REMARKS
403/ 411	ASPHALT CEMENT & BITUMINOUS MATERIAL	Determined by Central Laboratory	Asphalt Cement / Performance Graded Binder & Emulsion for Chip Seal Coats and Cold-In-Place Recycling: Project acceptance sampling will be witnessed by the Region IA Tester, and documented on CDOT Form #411. **Project Basis:** 1 per 20 000 tons (20 000 t), or a fraction thereof greater than 2 500 tons (2 500 t) per binder type. None required if plan quantity is less than 2 500 tons (2 500 t). **System Basis:** A minimum of one per two months per tester or one per binder grade. None required if plan quantity is less than 2 500 tons (2 500 t).	67 &/or 411	
409	SEAL COAT MATERIAL - AGGREGATE	Gradation	1 per 5 000 tons (5 000 t), or a fraction thereof greater than 500 tons (500 t). None required if plan quantity is less than 1 200 tons (1 200 t). 1 per 285 000 sq yds (230 000 m^2). None required if plan quantity is less than 62 500 sq yds (50 000 m^2).	6	Split the gradation sample.

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

ITEM	DESCRIPTION	TYPE OF TEST REQUIRED	MINIMUM SAMPLING FREQUENCY	FORM #	REMARKS
412	PORTLAND CEMENT CONCRETE PAVEMENT **(Compressive Strength Alternative)**	Compressive Strength Slump Air Content Sand Equivalent	1 set of cylinders per 50 000 sq yds. (40,000 m^2), or a fraction thereof greater than 5 000 sq yds. (4 000 m^2) for all thicknesses. None required if total plan quantity for all thicknesses is less than 5 000 sq yds. (4 000 m^2).	82 &/or 192	May use the same sampling container or a split sample. Split the sand equivalent sample.
	(Flexural Strength Alternative)	Flexural Strength	1 set of beams per 50 000 sq yds. (40,000 m^2), or a fraction thereof greater than 5 000 sq yds. (4 000 m^2) for all thicknesses. None required if total plan quantity for all thicknesses is less than 5 000 sq yds. (4 000 m^2).	157, 82 &/or 192	May use the same sampling container or a split sample.
503	DRILLED CAISSONS	Compressive Strength Slump	1 set of cylinders per 2 000 cu yds. (1 500 m^3), or a fraction thereof greater than 200 cu yds (150 m^3). None required if plan quantity is less than 500 cu yds. (380 m^3).	82 &/or 192	May use the same sampling container or a split sample.
601	STRUCTURAL CONCRETE	Compressive Strength Slump Air Content	1 per 2 000 cu yds. (1 500 m^3), or fraction thereof greater than 500 cu yds for each Class. No tests required if the quantity is less than 500 cu yds for each class. Exception: 1 test minimum if the total quantity of all classes is greater than 500 cu yds (380m^3).	82 &/or 192	May use the same sampling container or a split sample.

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

ITEM	DESCRIPTION	TYPE OF TEST REQUIRED	MINIMUM SAMPLING FREQUENCY	REMARKS
606	GUARDRAIL (Cast In-Place)	Compressive Strength Slump Air Content	1 per 10 000 linear feet (3000 m) or a fraction thereof greater than 1 000 linear feet (300 m). None required if plan quantity for all classes is less than 3 000 linear feet (900 m).	May use the same sampling container or a split sample.
608	SIDEWALKS (Concrete)	Compressive Strength Slump Air Content	1 per 10 000 sq yds. (8 000 m^2), or a fraction thereof greater than 1 000 sq yds. (800 m^2). None required if total plan quantity for all classes and for all thicknesses is less than 3 000 sq yds. (2 500 m^2)	May use the same sampling container or a split sample.
	(HMA)	AC Content Gradation	1 per project. None required if total plan quantity is less than 2 500 tons (2 500 t).	Split the HMA sample.
609	CURB AND GUTTER (Concrete)	Compressive Strength Slump Air Content	1 per project. None required if plan quantity is less than 10 000 linear ft. (3 000 m).	May use the same sampling container or a split sample.
	(HMA)	AC Content Gradation	1 per project. None required if total plan quantity is less than 2 500 tons (2 500 t).	Split the HMA sample.
618	PRESTRESSED CONCRETE UNITS (Cast In-Place)	Compressive Strength Slump Air Content	1 per 2 000 cu yds. (1 500 m^3), or a fraction thereof greater than 200 cu yds. (150 m^3). None required if plan quantity is less than 500 cu yds. (380 m^3).	May use the same sampling container or a split sample.

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

NOTE 1 - When all Items subject to Independent Assurance Sampling on a particular project have quantities less than the minimums set forth in the (QA) Frequency Guide Schedule for Minimum Materials Sampling, Testing, and Inspection, no IA Samples are required. However, on such projects the Region Materials Engineer will fill in the heading on a CDOT Form #379 and write across the face of this form a statement to the effect that "*No independent assurance samples were taken because of the small quantities involved*." This will fulfill Independent Assurance requirements on this project.

NOTE 2 - Independent Assurance testing should be accomplished by the same method used for Quality Acceptance (QA) at the Point of Verification or Acceptance listed for each Item in the (QA) Frequency Guide Schedule for Minimum Materials Sampling, Testing, and Inspection in the Field Materials Manual. Sampling shall be accomplished using CDOT approved sampling methods outlined in the FMM. All samples shall be split with the field tester (QA) and run independently by personnel who have no direct responsibility for Quality Assurance or Verification sampling and testing for the project.

NOTE 3 - Refer to the CDOT Independent Assurance Manual for specific item testing information and techniques.

TABLE IA – 1, Comparison Precision Guide

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

Element	Type of Test	Minor Difference	Significant Difference
Gradation	Sieve Analysis per CP 31 Nominal Maximum 1-1/2" to # 8 #16 to #50 #100 Sieve Analysis per CP 31 #200 **NOTE: # 200 (Item 409 per CP 31B)**	 ≤ 1% ≤ 5% ≤ 4% ≤ 3% ≤ 3% ≤ 0.5%	 > 1% > 5% > 4% > 3% > 3% > 0.5%
Asphalt Content	Asphalt Content Gauge per CP 85 Ignition Method per CP-L 5120 Asphalt Content Gauge vs. Ignition Method	≤ 0.20% ≤ 0.35% ≤ 0.35%	> 0.20% > 0.35% ≤ 0.35%
Maximum Specific Gravity	Flask per CP 51	≤ 0.019	> 0.019
Asphalt Compaction	M/D Gauge per CP 81 Cores per CP 44	≤ 2.0% ≤ 2.0%	> 2.0% > 2.0%
Asphalt Compaction at Longitudinal Joints	M/D Gauge per CP 81 Cores per CP 44	≤ 2.0% ≤ 2.0%	> 2.0% > 2.0%
Air Voids	Per CP-L 5115	≤ 1.2%	> 1.2%
Voids in Mineral Aggregate	Per CP 48	≤ 1.2%	> 1.2%
Hveem Stability	Per CP-L 5106	≤ 7	> 7

FREQUENCY SCHEDULE for INDEPENDENT ASSURANCE EVALUATION

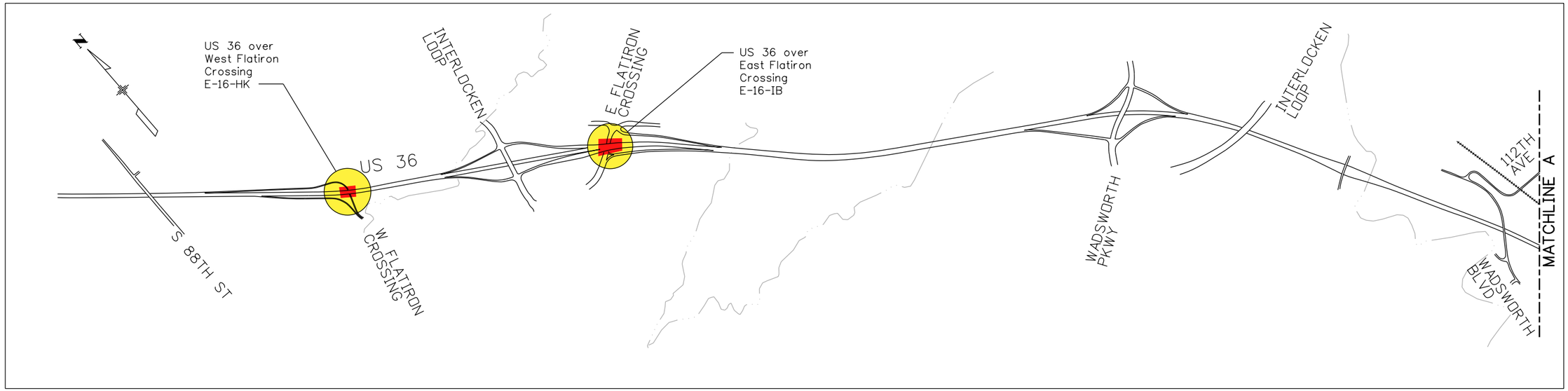
TABLE IA – 1, Comparison Precision Guide (continued)

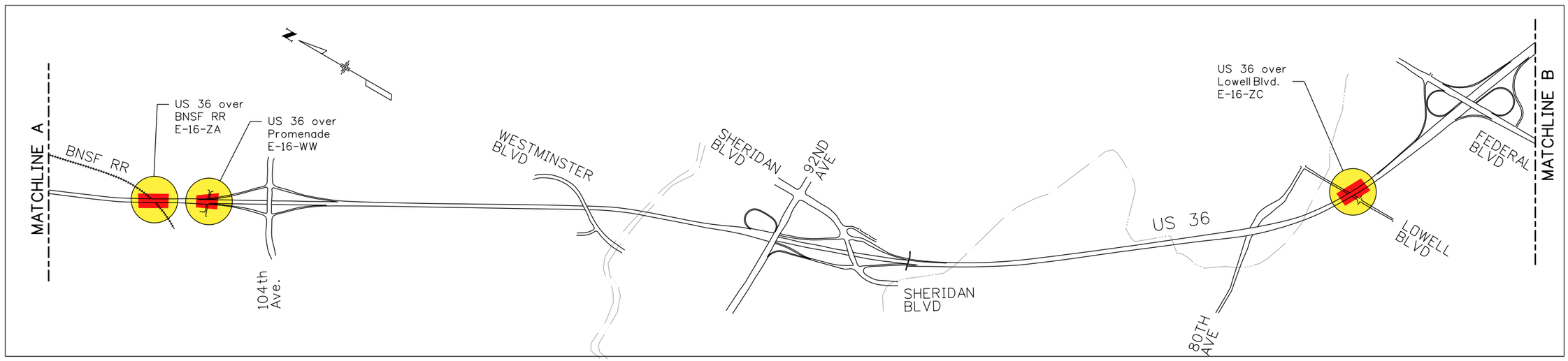
Element	Type of Test	Minor Difference	Significant Difference
Sand Equivalent	Sand Equivalent per CP 37	≤ 5 points	> 5 points
Slump	Cone per AASHTO T 119	≤ 1/2"	> 1/2"
Air Content	Air Meter per AASHTO T 152	≤ 0.5%	> 0.5%
Compressive Strength	Compressive Strength per ASTM C 39	Average QA within ±10% of average IA	Average QA test result >10% of average IA test result
Flexural Strength	Flexural Strength per AASHTO T 97	Average QA within ±10% of average IA	Average QA test result >10% of average IA test result
Soil Compaction	M/D Gauge per CP 80	≤ 2.0%	> 2.0%
Aggregate Base Compaction	M/D Gauge per CP 80	≤ 2.0%	> 2.0%

NOTE: Data based on Empirical Bayesian Statistics and is subject to change as the database increases. Table 1 was revised for the 2007 FMM based on data from the 2003, 2004, and 2005 construction season.

APPENDIX J

US 36/I-25 Bridge Maintenance Responsibilities





KEY

100% CONCESSIONAIRE

SHARED CDOT/
CONCESSIONAIRE

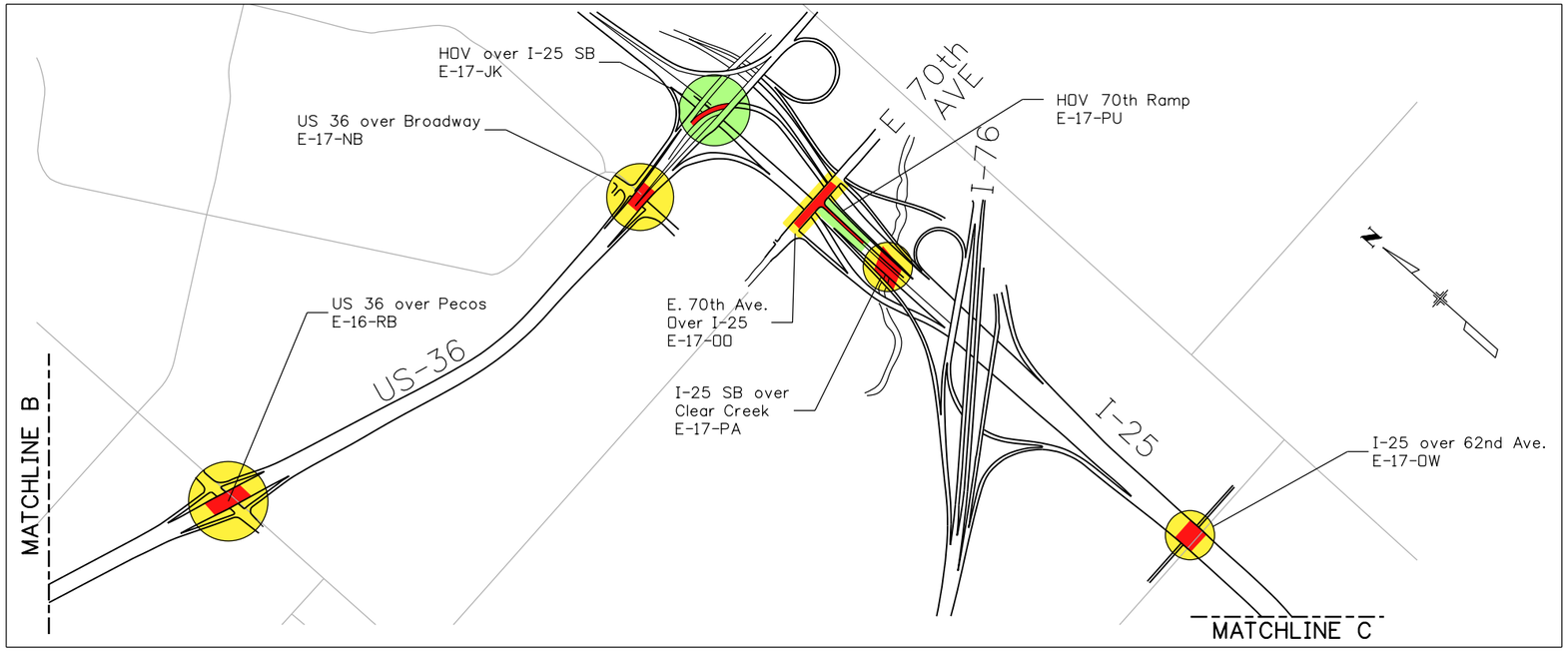
ALL OTHER STRUCTURES ARE CDOT

0 ONE MILE 1

collinsbd 1:49:00 PM J:_Transportation\WVXW7005.US36_Phase-2\700CADD\18907\Bridge\Drawings\18907BRG_36-PROJECT LOCATION PLAN.dgn

Print Date: 9/19/2012	Sheet Revisions	Colorado Department of Transportation	As Constructed
File Name: 18907BRG_36-PROJECT LOCATION PLAN.dgn	Date: / Comments / Init.	1050 Lee Hill Road Boulder, CO 80302 Phone: 303-546-5660 FAX: 303-444-0751	No Revisions:
Horiz. Scale: 1:2000 Vert. Scale: As Noted			Revised:
			Void:

US 36 MANAGED LANES TOLL CONCESSION PROJECT US 36 MANAGED LANES LOCATION PLAN			Project No./Code
Designer:	Structure Numbers		NH 0361-103
Detailer:			18907
Sheet Subset:	Subset Sheets:		Sheet Number FIG. 6-12



KEY

100% CONCESSIONAIRE

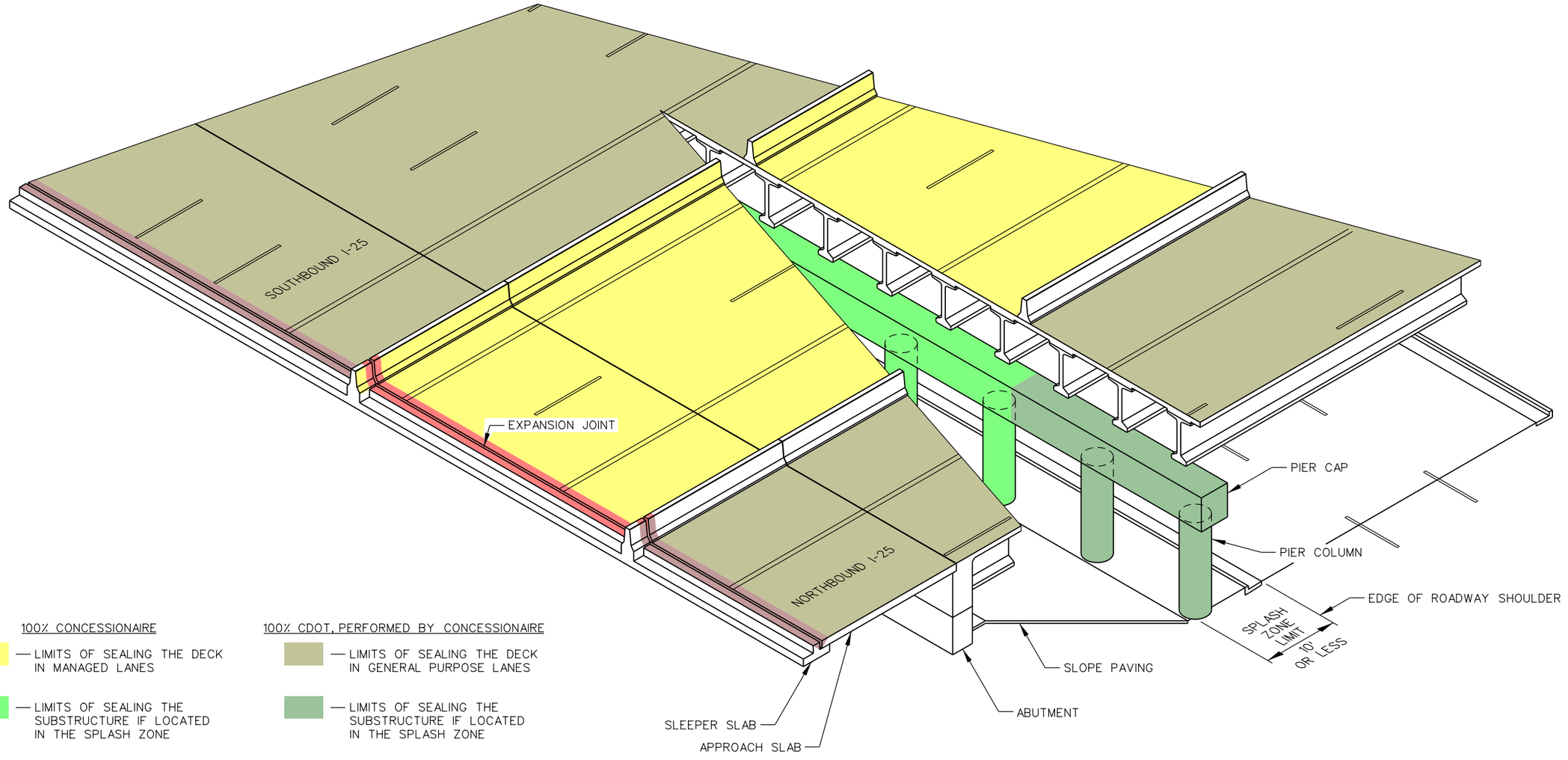
SHARED CDOT/ CONCESSIONAIRE

ALL OTHER STRUCTURES ARE CDOT

Print Date: 9/19/2012	Sheet Revisions			Colorado Department of Transportation	As Constructed
File Name: 18907BRG_PROJECT LOCATION PLAN.dgn	Date:	Comments	Init.	1050 Lee Hill Road Boulder, CO 80302 Phone: 303-546-5660 FAX: 303-444-0751	No Revisions:
Horiz. Scale: 1:1600 Vert. Scale: As Noted					Revised:
					Void:

US 36 MANAGED LANES TOLL CONCESSION PROJECT I-25 MANAGED LANES LOCATION PLAN			Project No./Code
Designer:	Structure Numbers		NH 0361-103
Detailer:			18907
Sheet Subset:	Subset Sheets:		Sheet Number FIG. 6-13

collinsbd 1:50:14 PM J:_Transportation\WVXW7005.US36_Phase-2\700CADD\18907\Bridge\Drawings\18907BRG_PROJECT LOCATION PLAN.dgn



collinsbd 1:54:57 PM J:_Transportation\WVXW7005.US36_Phase-2\700CADD\18907\Bridge\Drawings\18907BRG_MANAGED LANES EXHIBIT.dgn

Print Date: 9/19/2012
File Name: 18907BRG_MANAGED LANES EXHIBIT.dgn
Horiz. Scale: 1:15 Vert. Scale: As Noted

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
DEPARTMENT OF TRANSPORTATION
1050 Lee Hill Road
Boulder, CO 80302
Phone: 303-546-5660 FAX: 303-444-0751

As Constructed
No Revisions:
Revised:
Void:

US 36 MANAGED LANES
TOLL CONCESSION PROJECT
MANAGED LANES MAINTENANCE EXHIBIT

Designer: B. TOSTI
Detailer: B. COLLINS
Sheet Subset: BRIDGE
Structure Numbers:
Subset Sheets:

Project No./Code
NH 0361-103
18907
Sheet Number FIG. 6-14