

I. SCOPE OF SERVICES

The following are the specific tasks for the North Metropolitan Industrial Area Connectivity Study:

A. TASK 1: PROJECT MANAGEMENT

With the input of the PMT and Project Manager, the consultant shall prepare a project management plan for the study that specifies the roles and responsibilities of the consultant, sub-consultants and other study participants, identifies specific work tasks and sub-tasks, milestones, review/comment points, and provides a timeline/schedule of work.

PMT meetings are assumed to occur bi-weekly, for a total of 24 meetings, and last approximately 1.5 hours. Decision-making, presentation of study materials and tasks by the Consultant, and updates from local agencies on ongoing related studies will occur at PMT meetings. A stakeholder chartering session will take place during the first PMT meeting.

Deliverables:

- Project Management Plan and Project timeline/schedule

B. TASK 2: PROJECT PURPOSE, GOALS AND ISSUES

The consultant will develop a clear statement of purpose and need for evaluating the transportation system in the North Metropolitan Industrial Area, including:

- Define goals and objectives for the study, defining what the study plans to accomplish.
- Identify key project issues/challenges and opportunities
- Identify the final project study area
- Define the Purpose and Need for the project, including goals and objectives that alternatives should aim to meet. Draft the Purpose and Need, using data from traffic, safety, geometric conditions, and travel shed analyses. Gather data on roadway geometric conditions that affect connectivity within the project study area. The Purpose and Need will include goals and objectives, which will inform evaluation criteria. Goals and objectives will be defined with the agencies during PMT meetings.
- Develop evaluation criteria (including the extent of environmental factors to be used in the evaluation process, economic development potential, and other relevant criteria)

Deliverables:

- White paper providing a statement of purpose and need, goals and objectives, and evaluation criteria for analysis of alternatives

C. TASK 3: PUBLIC INVOLVEMENT PROCESS

The consultant will develop the corridor study in the context of local, regional, and state

plans and policies, and with input from the PMT and key stakeholders in the North Metropolitan Industrial Area travel sheds. The consultant will identify key stakeholders who could be affected by changes in the study area's transportation system, create and implement a targeted public involvement plan which builds on prior planning and outreach efforts that do not involve large-scale public meetings to seek input and inform stakeholders about the Project. All materials will be bilingual, with interpreters provided as needed to reach identified stakeholders.

The PMT is concerned that, with the many years of ongoing outreach to communities in this area on various studies, the Project must take a proactive approach to public participation by first acknowledging the transportation needs communities have already identified, and then use the list as an outreach tool to better define and refine what mode(s) of transportation infrastructure and services would best address the needs of the communities.

Deliverables:

- Develop a Public Involvement Plan, including stakeholder identification, to guide outreach throughout the Project.
- Prepare content and distribute participation materials – e.g., newsletters, bulletins, fact sheets, graphical displays, videos, advertisements, notices, etc.
- Create web, video, and social media content that can be used by each jurisdiction
- Prepare slide presentations, and all presentation materials/graphical displays
- Develop a schedule of meetings to complete data gathering, presentation of concepts, and seek stakeholder input on project alternatives
- Develop and maintain a stakeholder mailing list
- Conducting public involvement activities in accordance with approved plan
- Document all public involvement activities in a Public Involvement Report

D. TASK 4: DATA COLLECTION AND ANALYSIS

1. Review of Relevant Local, Regional, and State Plans and Data

The consultant shall review all relevant local, regional, and state plans, including but not limited to the following, and summarize the key goals, strategies, needs, and potential project priorities that may impact the future transportation network:

Adams County

- 2012 Transportation Plan
- Welby Subarea Plan
- 2012 Comprehensive

Plan Commerce City

- Commerce City Transportation Plan

- Mile High Greyhound Park Feasibility Study
- Commerce City Economic Development Strategic Plan
- C3 Vision: Comprehensive Plan
- U.S. 85 Feasibility

Study City and County of
Denver

- Blueprint Denver (2002)
- Denver Moves (Bicycles) (2014)
- Strategic Transportation Plan (2008)
- Strategic Parking Plan (2010)
- National Western Center Master Plan (2015)
- Globeville Neighborhood Plan (2014)
- Elyria-Swansea Neighborhood Plan

(2015) Regional Transportation District (RTD)

- FasTracks North Metro Commuter Rail Line studies and operations plans
- FasTracks East Corridor studies and operations plans
- Relevant Bus Rapid Transit (BRT) plans and

studies Denver Regional Council of Governments
(DRCOG)

- MetroVision 2040
- 2040 Regional Transportation Plan
- Freight & Goods Movement planning (under development)
- Active Transportation planning (under

development) Colorado Department of Transportation
(CDOT)

- I-25 Planning Environmental Linkage Study
- I-70 East Final Environmental Impact Statement
- U.S. 36 Record of Decision
- State Freight and Passenger Rail Plan

(2012) Deliverables:

- A matrix of transportation improvements or services identified from the above studies that are within, adjacent to, or in close proximity to the study area.

2. Coordination with Ongoing Studies

The consultant shall coordinate with relevant local, regional, and state studies underway adjacent to or within the identified study area to understand how those studies may inform the outcomes of the Industrial Study. Coordination shall occur with, but is not limited to: the I-270 Planning Environmental Linkage Study, the Adams County Connection Plan, the NDCC Master Transportation Plan, Denver Moves: Transit, Denver Moves: Pedestrian and Trails, RTD's North Area Transit Extension (NATE) and update to the Blueprint Denver Plan.

3. Travel Demand Analysis

The consultant shall use the most recent Denver Regional Council of Governments (DRCOG) travel model as a starting point. The consultant shall document, analyze, and summarize demographic data and existing relevant transportation and land use data for the study area -- both current and 2040 projections -- including but not limited to:

- Population and employment
- Vehicles per household and persons per household
- Land use and economic development, including key activity centers
- Public right-of-way and roadway cross-sections and elements
- Traffic volumes on roadways and intersections within the study
 - ADT Counts
 - Entrance and exit ramp volume and classification (48 hours)
 - I-25 and 58th Avenue (4 ramps)
 - I-70 and Washington Street (4 ramps)
 - I-70 and Brighton (already exists?)
 - I-70 and York (2 ramps)
 - I-70 and Steele/Vasquez (4 ramps)
 - I-70 and Colorado (4 ramps)
 - I-70 and Dahlia (2 ramps)
 - I-70 and Monaco (2 ramps)
 - I-70 and Quebec (4 ramps)
 - Arterial classification and volume (4 locations, 48 hours)
 - Washington Street
 - South of 78th Avenue
 - South of 62nd Avenue
 - South of 51st Avenue
 - South of Arkins Court
 - Franklin Street (south of 58th)
 - York Street

- South of 78th Avenue
 - South of 66th Avenue
 - South of 58th Avenue
 - North of 48th Avenue
 - South of 40th Avenue
- Brighton Blvd
 - South of 56th Avenue
 - North of 64th Avenue
- Steele/Vasquez
 - South of 40th Avenue
 - North of 48th Avenue
- Colorado Blvd
 - South of 40th Avenue
 - North of 48th Avenue
- Dahlia Street
 - South of Smith Road
 - South of 52nd Avenue
- Holly Street
 - South of 38th Avenue
 - South of 48th Avenue
 - South of 60th Avenue
 - North of 64th Avenue
- Monaco Street
 - South of 69th Avenue
 - South of 60th Avenue
 - North of Smith Road
 - North of MLK Blvd
- Quebec Street
 - North of MLK Blvd
 - North of Smith Road
 - South of Northfield Blvd
 - North of 56th Avenue
 - North of 72nd Avenue
- MLK Blvd
 - West of York
 - East of Colorado Blvd
 - East of Monaco

- East of Quebec
 - 40th Avenue
 - West of York Street
 - East of Colorado Blvd
 - Smith Road
 - East of Dahlia Street
 - East of Quebec Street
 - 38th Avenue (east of Holly)
 - 48th Avenue (West of Holly)
 - 52nd Avenue
 - West of Vasquez
 - East of Dahlia Street
 - 58th Avenue
 - East of Washington Street
 - East of Holly Street
 - 60th Avenue (east of Holly)
 - 64th Avenue (west of Monaco)
 - 70th Avenue
 - West of Washington Street
 - East of Colorado Blvd
 - 72nd Avenue (west of Highway 2)
 - 78th Avenue (east of Washington Street)
- Intersection turning movement counts (AM and PM peak periods, including bike/ped)
 - Colorado and MLK
 - Quebec and MLK
 - Holly and MLK
 - Washington and 58th
 - Washington and 78th
 - Washington and 70th
 - York and 70th
 - York and 58th
 - Highway 6 and 70th
 - Highway 2 and 72nd
 - Quebec and Highway 2
 - Quebec and 72nd

- Quebec and 64th
- 40th and Colorado
- 48th and Colorado
- Travel Time runs (AM and PM peak periods, 6 runs in each direction)
 - Washington Street (45th to 78th)
 - Colorado Blvd (MLK to 72nd)
 - Quebec Street (MLK to 72nd)
 - MLK (York to Quebec)
 - 70th (Washington to Highway 6)
- Utility infrastructure
- Current/Future Parking availability (major destinations and transit nodes)
- Person-trip capacity analysis for all modes
- Pedestrian and bicycle activity and facilities
- Transit ridership and service
- Commercial vehicle routes
- Multimodal safety

Deliverable:

- Existing and projected conditions report summarizing the data collection and analysis results
- Map summarizing analysis, key areas of consideration, data collection

E. TASK 5: IDENTIFICATION OF TRAVEL SHED OPTIONS

The PMT desires the study process to be a creative integration of redevelopment and transportation planning in the North Metropolitan Industrial Area Connectivity Study. Based on public involvement and results of the data collection and analysis, the consultant will propose an iterative process with the PMT to:

- Identify roadway typologies
 - Inventory typical sections and general design requirements for each roadway classification from each jurisdiction and identify the current classification for each road in the study area considered for project options from jurisdiction data sources. This task will also include the identification of design standards for each jurisdiction in the study area.
- Identify initial range of possible options for improving vehicular, transit, bicycle and pedestrian travel in and through the North Metro Industrial Area
 - Participate in a Consultant workshop to identify a universe of options, including those options identified in the RFP and options

identified in the Task 4 review of plans.

- Participate in a Consultant management meeting to review universe of options and screen to a reasonable initial range of options for presentation to the PMT.
- Prepare materials to present the initial range of options to the PMT for input. Design for this task will be limited to depicting the intent of options on aerial imagery. Methods used may be fat-line sketches, outlines of areas, or similar.
- Level 1 screening of initial range of options
 - Participate in Level 1 screening of initial range of options, using evaluation criteria developed in Task 2. This screening will identify a range of Level 2 options for consideration and refinement where necessary.
- Refine criteria for identifying multimodal transportation improvement options and alternatives
 - Provide input to refine the evaluation criteria, for use during Level 2 screening
- Refine Level 2 options where necessary to provide adequate detail for Level 2 screening.
 - Identify roadway typologies to apply to Level 2 options where applicable. CH2M will refine engineering of Level 2 options requiring it.
- Level 2 screening of options
 - Completed additional traffic analysis, including levels of service at key corridors and intersections
 - Participate in Level 2 screening of options, using refined evaluation criteria. This screening will identify a range of Level 3 options for evaluation in Task 6.
- Refine Level 3 options where necessary to provide adequate detail for Task 6 Impact Analysis and Recommendations and Task 7 Costing and Implementation Plan.
 - Provide conceptual level engineering design of 10 (10) Level 3 project options requiring such design for cost estimating and/or impact analysis purposes. It is assumed for this scope of work that ten project options will be designed. The project options will consist of three large projects, three medium projects, and four smaller projects. Conceptual design of the nine project options will include the following elements:
 - Design Standards: options located completely within a single jurisdiction will comply with the jurisdiction's design standards. Options spanning multiple jurisdictions

will comply with design standards agreed to by the PMT.

- Investigation of existing overhead and underground infrastructure (utilities, storm sewer systems, etc.) will be limited to visual inspection of the option areas and available GIS information from each agency stakeholder. Survey, utility locates and potholing are not included in this scope of work.
- Typical cross sections
- Horizontal geometric layout overlaid on aerial imagery – alignments, edge of pavements, striping, sidewalks, curb and gutter, and curb ramps
- Existing utilities and drainage infrastructure if available from GIS
- Identified safety improvements
- Potential locations for MS4/water quality features for options requiring treatment
- Identify associated infrastructure requirements
- Identify potential right-of-way requirements

Deliverables:

- White paper of North Metro Industrial Area travel shed options and recommended alternatives list

F. TASK 6: IMPACT ANALYSIS AND RECOMMENDATIONS

The consultant will use the results from the options identification task and evaluate the potential impacts associated with them. Potential combinations of options for overall strategies will be developed.

The consultant will conduct a trade-off analysis (Level 3 screening) of options, including an opportunities and constraints analysis for each, with a focus on right of way, community impacts, capital costs (developed in Task 7), traffic and multimodal travel impacts, utility impacts, and related factors. The trade-off analysis will identify the final set of projects for prioritization and inclusion in the implementation plan defined in Task 7.

Conduct a preliminary environmental scan for the entire project study area to identify any critical environmental issues that inform the initial range of options and initial levels of screening.

The consultant will complete a planning-level environmental scan for Level 3 options to identify environmental resources that may be impacted by the implementation of future transportation connectivity projects, including:

- Land Use, Socioeconomics, and Community
- Properties Acquired for Right-of-Way and Displacements

- Parks and Recreation
- Air Quality
- Traffic Noise
- Historic and Archaeological Resources
- Paleontology
- Water Resources and Floodplains–
- Wetlands and Other Waters of the US
- Special Status Species
- Hazardous Materials
- Cumulative

Impacts Deliverables:

- Prepare a white paper documenting planning-level environmental scan for Level 3 options.
- White paper of alternatives analysis, impacts related to North Metro Industrial Area travel shed options
- Map sketches of alternatives and concept design: prepare map sketches of final set of projects and conceptual-level engineering design drawings for projects requiring it.

G. TASK 7: COSTING, IMPLEMENTATION STRATEGIES

Prepare conceptual level planning cost estimates for Level 3 project options. The consultant will specify the challenges and issues related to implementation of projects, including identifying likely impacts related to projects (identified as part of trade-off analysis in Task 6) and recommending strategies to minimize impacts to existing and future utility infrastructure.

The consultant should identify potential impacts and possible methods to minimize impacts from implementation of transportation improvement projects.

The consultant will develop a set of Project recommendations that could be implemented either jointly or independently over time. Identify potential phasing schedules for each project and an overall phasing and implementation plan for the final set of projects, based on costs, priorities, goals, and objectives.

Deliverables

- Planning-level (rough order of magnitude) table of costs, and recommended project phasing schedules for the ten identified projects
- White paper and spreadsheet of prioritized alternatives, costing, and implementation strategies.

H. TASK 8: DRAFT AND FINAL PROJECT REPORTS

The consultant will use the results of the white papers to prepare a report of the study

results that could support future compliance with NEPA. A draft report, including maps and images, will be provided to the PMT for review and the consultant will document feedback and responses to comments, questions and concerns, preparing a final report that incorporates responses to PMT comments.

Deliverables:

- Draft Report. Provide independent quality review of the report.
- Final Report