

**EXHIBIT B**  
**SCOPE OF SERVICES**  
**Central Yavapai Metropolitan Planning Organization**  
**Planning Level Corridor Studies**  
**February 8, 2008**

This Document describes the scope of services, which Civiltec Engineering, Inc. in association with HDR (hereinafter called “CONSULTANT” will provide the Central Yavapai Metropolitan Planning Organization (CYMPO) under contract with their fiscal authority, the City of Prescott (hereinafter called “CITY”). In general these services include the necessary consultation and preparation of two planning level Corridor Studies for the SR169-Fain Road Corridor and Chino Valley Extension Corridor. Each Corridor Study will include the items identified herein. The corridors will be analyzed, organized, and processed together, yet final documents will consist of two separate reports. **The purpose of this scope is to define alternate locations for two fully access controlled corridors in accordance with the recommendations in the CYMPO Regional Transportation Study.**

CYMPO is seeking to enhance transportation systems within their service area as a necessary component to growth planning and economic viability. The project services scope has been divided into 9 phases:

**Phase 1** services will include *data collection and preliminary professional services.*

**Phase 2** services will include elements associated with the *public outreach program.*

**Phase 3** services will include the identification of the *impacts of other studies, TAZ analysis and level of service issues.*

**Phase 4** services will include development of *initial alternatives.*

**Phase 5** services will include performing *travel demand modeling and traffic operations analyses.*

**Phase 6** services will include refinement and development of *preferred alternatives.*

**Phase 7** services will include development of *final completion documents.*

**Phase 8** services will include project-wide *project management*

**Phase 9** services will include *general administrative services.*

**CONSULTANT** will perform the following scope of services more particularly described as follows:

### **Phase 1 – Data Collection and Preliminary Professional Services**

**1.1 – Research –** This task includes scoping services which generally include research and gathering of record data from member agencies, utility companies, existing topographic data from local, state, and federal agencies, pertinent reports and notes of discussions. Assemble library of all CYMPO and related transportation reports.

**1.2 – Environmental Feasibility Analysis –** the Environmental Feasibility Analysis (EFA) will define existing conditions associated with environmental issues through agency coordination letters, map and database reviews, literature reviews, and a windshield survey. The primary work product for the EFA will be the location of the found sensitive areas on the project mapping. It will also include a written summary in the final report of the process, a contact list and brief description of the findings to support the project mapping.

The objective of the EFA is to describe the social, economic, and environmental character of the study area and identify potential “fatal flaws”, obstacles and issues associated with the study area.

The following topics will be covered:

- Topography
- Vegetation
- Biology (expected general species)
- Threatened, Endangered, and Sensitive Species (no Endangered Species Act Section 7 consultation would occur)
- Wildlife movement corridors
- Floodplains, water quality, waters of the U.S. No Section 401, 402, or 404 permits will be obtained
- Noise (note land uses and receptors
  - no monitoring or modeling)
- Air Quality (attainment/non-attainment
  - no monitoring or modeling)
- Hazardous materials (Preliminary initial site assessment)
- 4(f) resources will be described (no actual evaluation)
- Land use - Socioeconomics (employment etc.)
- Title VI / Environmental Justice
- Right-of-way (existing)
- Utilities
- Cultural Resources (A Class I survey, literature search only). Determination of effect or eligibility for cultural resource sites would not occur unless information was existing.
- Relocations (residential, commercial) in accordance with the UNIFORM ACT
- Historic/Prehistoric Resources (provide recommendations for Class II representative sample survey or Class III intensive field survey)

**1.3** – Survey, photography, aerial mosaics, mapping, and contours – This task includes field surveying services for aerial mapping control points, development of accurate high-altitude rectified aerial photography mosaics, and development of base mapping which is comprised of said aerial photography and contour mapping from USGS and other sources. Two areas to be photographed will generally correspond to the 169-Fain area and the Chino Valley Extension area. The 169-Fain area will be approximately 4 miles wide, and 12.5 miles long. The Chino Valley Extension area will be approximately 4 miles wide and 16 miles long.

Project coordinate datum to be Arizona State Plane Coordinate System based upon the geocentric North American Datum of 1983 (NAD '83) for horizontal datum control, and NAVD '88 for Vertical datum control.

Aerial photography will be rectified color photographs based on the aforementioned control, with a photographic scale of 1:20,000.

**1.4** – Public, Landowner, and interagency Plan development – Develop approach strategies in accordance with SAFETEA-LU for involvement of participating agencies, partnering agencies, public, and landowners. Generate map showing ownership of parcels by use of County GIS data.

**1.5** – Drainage - This task includes preparation of conceptual hydrology studies identifying drainage basin characteristics, concept level flowpath locations, rainfall-runoff relationships of contributory drainage basins upstream of the corridors. Methods used will include analysis of existing FEMA Flood Insurance Studies, Flood Insurance Rate Maps, and agency Area Drainage Master Plans. ADWR State Standards (regression equations) and WMS Hydrologic software will also be utilized to generate concept level peak flows and topwidth data for major watercourses.

**1.6** – This task includes preparation of a White Paper encapsulating issues of Phase 1.

## **Phase 2 – Workshops and Public Outreach Program**

**2.1** – CYMPO participating agency and partnering meetings – This task includes organizing and holding up to a total of 12 CYMPO agency and partnering workshop meetings on a once-per-month basis with CYMPO TAC members and partnering agencies combined as necessary. These meetings will cover issues such as alternatives development, evaluations, land owner and public input data (from meetings covered in task 2.2), selection of 2 or 3 most viable alternatives, comment review and critical issue identification, preferred alternative selection, and other pertinent information.

**2.2** – Public and Land Owner meetings – Public and Land Owner meetings to take place at planned intervals after Agency meetings. Includes coordinating, organizing and attending 2 Public and Land Owner meetings. coordination of public meetings, invitation letter distributions, advertisements in the *Daily Courier*, *Chino Valley Review*, *Prescott Valley Tribune*, and *Big Bug News* is included, handout and exhibit preparation, web site development, and inquiry management. Summary reports and briefs for newspaper publications and others will also be considered in this phase. (Consultant will coordinate with CYMPO Administrator; however, consultant (or subconsultant) will be responsible for all aspects of the public outreach and meetings, such as but not limited to: securing meeting locations, displays, notices/ invitations, meeting materials and press publications.

1. Discuss Purpose and Need, findings from scoping process, known issues and concerns, gather public issues and concerns.
2. Show up to 3 refined alternatives and those alternatives that have the highest probability of being screened from further consideration.

**2.3** – SAFETEA–LU coordination – Includes proper notifications of agency stakeholders in accordance with the ongoing consultation portion of the long range Transportation Planning process for CYMPO. Refinement of existing CYMPO methodology matrix which is comprised of contact personnel, submittal requirements, review time windows, technical communication information, and other important communication components. Agencies to be notified and communicated with are:

- Bureau of Land Management
- Arizona State Land Department
- Arizona State Historic Preservation Office
- Arizona Game and Fish Department
- Arizona Department of Environmental Quality (air)
- Arizona Department of Water Resources
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Services
- USFS – Prescott National Forest
- Federal Highway Administration
- Environmental Protection Agency

- Others to be identified

**2.4** – Website development – This task involves development of Corridor Study web pages utilizing the CYMPO website. The Corridor Study web pages will include public outreach contact information, public meeting notices, handouts and questionnaires, exhibits, presentation slides, imagery of alternatives, and final report. Consultant will supply digital web page information to CYMPO for inclusion in their website.

**2.5** - Newsletters (8-1/2 x 11) – Write and design up to 3 newsletters for distribution at public meetings, and to provide to CYMPO for availability to the general public upon request. CYMPO will distribute newsletters at normally scheduled meetings and through electronic distribution.

**2.6** – This task includes preparation of a White Paper encapsulating issues of Phase 2.

### **Phase 3 - Sensitivity analysis and Model refinement**

Both the SR 169 Connector and Chino Valley Extension are defined in the CYMPO 2030 Transportation Plan as future 4-lane roadways with fully controlled access.

**3.1** - An evaluation of the long term transportation plans provided by the bqAZ Study and I-17 Study will be made to determine the potential impacts on the CYMPO 2030 roadway network. Included in this evaluation will be a limited scope sensitivity analysis for the CYMPO area.

**3.2** – The travel demand forecast model provided by the CYMPO will be inspected to see how the roadway networks for which volume data has been provided is connected to the traffic analysis zones (TAZ). It is expected that some refinement to the TAZ boundaries, road network and centroid connector configuration will be needed in order to prepare recommendations. The CYMPO travel demand forecast software (TransCad ) will be used to provide reports on the expected level of service for the study corridors and limited sections of those corridors that are connected to them (SR 169, Fain Rd, Glassford Hill/Outer Loop and SR 89, SR69 from south of Prescott Valley to Dewey-Humboldt.).

**3.3** - We will facilitate two (2) meetings (as needed) with CYMPO representatives to review and receive travel demand software files and discuss implementation.

**3.4** - This task includes preparation of a White Paper with results of evaluation of the bqAZ Study and I-17 Study as they relate to the CYMPO 2030 roadway network, and travel demand forecast model output.

## **Phase 4 – Initial Alternatives**

**4.1** – Map environmental constraining areas – utilize for avoidance approach.

**4.2** –Corridor layouts – Planning level design of initial corridor alternatives, roughly ½ mile wide will be identified. This process would include laying out a wide range of alternatives, include engineering overviews (no plans but line and grade, drainage issues, topographic issues, and other cost drivers will be considered), results of environmental overview, land use and planning overview issues, lot split existence, connection point considerations, access management considerations, transportation planning needs, land owner consideration, public issues and concerns, Participating Agency input, and Partnering Agency input. This task includes laying out 3 or 4 initial corridor alignments per each study.

**4.3**– Evaluate Alignments – utilize both quantitative and qualitative measurements to evaluate the benefits and shortcomings (or deficiencies) of the various alignments. Typical measures of qualitative criteria are land ownership concerns, engineering feasibility, environmental impacts, transportation effectiveness, and other concerns. Typical measures of quantitative criteria are design and construction costs, maintenance and operations costs, and other economically related criteria.

**4.4** – Determine most viable options - Using evaluation techniques listed above, public input, member agency input and Participate Agency input, CYMPO will direct the Consultant as to the 2 or 3 most feasible alternatives for the final alternatives study phase.

**4.5** – Right-of-Way acquisition strategies – develop strategic planning approach for early right-of-way acquisition abilities. Consider value of utilization of non-federal funding; however, compliance with the UNIFORM ACT will be followed with the pretense that federal funding may have the potential to be utilized.

**4.6** – This task includes preparation of a White Paper encapsulating issues of Phase 4.

## **Phase 5 – Travel Demand Modeling and Traffic Operations Analysis**

**5.1** – The travel demand modeling task is proposed to occur at two phases in this study. This modeling task is to be limited in nature. The first time will be during the *Sensitivity analysis and Model refinement* phase of work. The second time will be during the *Refinement of the Preferred Alternative* phase of work. The importance of the first phase of modeling work is to perform a peer review of the model, develop an understanding of the defined TAZ (traffic analysis zone) structure corresponds to the roadway network, consider a sensitivity analysis of the CYMPO area and the external region, and make CYMPO approved adjustments accordingly for this study. The second time provides the opportunity to refine the TAZ boundaries, roadway network, and centroid of the connector system and preferred roadway system. This step allows us to refine the travel demand model and subsequent traffic forecast for each roadway segment between planned intersections and interchanges.

**5.2** – The traffic operations task will occur at four phases in the study. It will also be limited in nature. The four phases are the sensitivity analysis and model refinement phase, initial alternative development phase, refinement phase and preferred alternative phase. The first three phases of operational evaluation will not be based on volume data, rather engineering experience, judgment and industry “rules of thumb” will be applied in order to develop alternatives. Where appropriate, areas of concern will be identified, which will include potential mitigation measures such as turn lanes, auxiliary lanes, ramp braids, frontage roads and/or collector distributor (CD) roads. The Consultant will use the CYMPO model data for guidance during the refinement of the preferred alternative. This will include incorporating the traffic forecast data into traffic operations software of CYMPO’s choice (SYNCHRO is recommended).

**5.3** – This task includes preparation of a White Paper encapsulating issues of Phase 5.

## **Phase 6 – Refine and develop Preferred Alternatives**

**6.1** – This task includes development of preferred corridor alternatives using a width of approximately ½ mile. Identification of planning level access needs will be included in this task.

**6.2** – This task includes planning level studies of corridor alignment particulars which include concepts taking into account general engineering considerations such as design speed, grade, and drainage issues.

**6.3** – This task includes preparation of a White Paper encapsulating issues of Phase 6.

## **Phase 7 – Final Completion Documents**

**7.1** – This task covers preparation of two final CYMPO corridor studies. One study will encompass the corridor for SR 169-Fain Road, and the other study for the Chino Valley Extension corridor. Both studies will be finished simultaneously, and be delivered in text and supporting imagery in 11 x 17 bound booklets. Booklets will contain white paper reports for each defined category in the appendices.

**7.2** – This task covers preparation of planning level aerial base mapping with selected corridors superimposed thereon. This mapping will be based upon general engineering considerations such as design speed, grade, and drainage issues.

## **Phase 8 – Project Management**

**8.1** – This task includes day-to-day general project management. Coordination tasks include: attendance of a reasonable number of individual meetings with member agencies, CYMPO TAC and Board, meetings with City and Town officials, Tribal officials, ADOT, FHWA, Flood Control, Planning & Zoning, BLM, and ASLD, and other representative agencies; and, coordination with other local studies.

## **Phase 9 – General Administrative services**

**9.1** – This task includes general administration services, reproduction services, mileage and reimbursables.