High Speed Rail Corridor from Tulsa to Oklahoma City

Environmental Impact Statement Scope of Services

A National Environmental Policy Act (NEPA), as amended, compliant Environmental Impact Statement (EIS) for the Tulsa – Oklahoma City corridor will be prepared. The proposed project consists of expanding rail service to include high-speed passenger rail service between Tulsa and Oklahoma City. The EIS will build upon the September 2009 Tier 1 Environmental Assessment. The Federal Railroad Administration (FRA) is the federal lead agency and the Oklahoma Department of Transportation (ODOT) is the state lead agency. The project may include new trackage and improvements largely within the railroad right-of-way and several new rail stations.

1. Project Management/Administration

This task includes project management activities including communication, coordination and documentation. The Project Manager will coordinate the activities of the various tasks, and ensure that the project schedule and budget are met. Project administration activities, including administration of the contract, and the preparation and submission of invoices and progress reports, are included in this task.

2. Project Controls

ODOT will monitor and maintain task schedules and budgets, and percent completes for invoices. An accurate and up-to-date project file will be maintained as an important task of the NEPA process to maintain efficient filing of all information for this project. All NEPA documents will be included in an administrative record. To ensure that a comprehensive and accessible record is maintained for the schedule, a system of internal controls will be established. An internal control system will be established to coordinate and track contract terms and technical tasks, budgets, schedules and deliverables. Copies of all technical reports, correspondence, meeting summaries, invoices, and other project related documents will be kept in the project files. An electronic filing system will be established for all incoming and outgoing emails. Additionally, hard copies of emails and their attachments that contain data, direction and/or decisions, and any other important project information will be filed in the appropriate technical file. Telephone conversations in which decisions, direction, and pertinent project information is discussed will be documented in a memorandum and retained in the files.

3. Quality Assurance/Quality Control

ODOT will develop a Quality Assurance/Quality Control (QA/QC) Plan and will perform QA/QC consistent with the plan.

4. Scoping

A Notice of Intent (NOI) will be published in the Federal Register. ODOT will coordinate with the FRA, freight rail operators, regulatory and resource agencies, and other key stakeholders early in preparing the draft Environmental Impact Statement (DEIS). Twelve in person meetings and three formal scoping

meetings are assumed for scoping purposes. A “scoping” technical memorandum will be prepared summarizing the agency and stakeholder coordination and comments.

5. Agency Coordination

Local, state, and federal agencies will be coordinated with throughout the EIS process, starting with scoping. Early and continuous agency coordination is a key to project success. A technical advisory committee will be formed to review relative project information at key milestones for agency review and input. Key milestones include scoping, after existing data is developed, once analysis is conducted, during avoidance, minimization, and mitigation efforts, prior to the draft EIS being released, after comments have been received on the EIS, and before the Record of Decision (ROD) is published.

6. Meetings

Up to 25 meetings will be held with special interest groups – rotaries, neighborhood associations, community groups, special interest groups, etc. to keep them informed regarding the project.

7. Executive Summary

An executive summary of the EIS will be prepared as a stand-alone document.

8. Purpose and Need

The Purpose and Need presented in the September 2009 EA will be refined and included in the EIS. The Purpose and Need documents the need for the project, how the project is intended to serve that need, and criteria for evaluating the alternatives in serving that need. A history of any preliminary studies conducted to date will be described and used to identify and describe the purpose, need, goals and objectives of the proposed intercity high-speed passenger rail service.

9. Alternatives Description and Evaluation

The September 2009 EA identified the Turnpike Alignment as being selected as the preferred corridor. The preferred corridor begins in Oklahoma City, at the Santa Fe Station in the Bricktown area, and then uses the abandoned Missouri, Kansas, and Texas Railroad right-of-way extending from the western edge of Harter Yard, north to the I-44 terminus, which is approximately 12 miles. The rail line would then proceed parallel to I-44 on new alignment to the north approximately 75 miles. Near Sapulpa, the rail line will cross I-44 on new alignment and connect to the existing BNSF track to 19 miles into Tulsa to Union Station on existing alignment. The proposed project also includes an Oklahoma City station platform and facility, Oklahoma City high speed rail refueling and layover facility, Edmond park and ride facility, Tulsa layover facility, and Tulsa depot rehabilitation. The EIS will analyze the No-Build Alternative and the Turnpike Alignment. Although a substantial amount of engineering has been completed, additional engineering is anticipated once the detailed environmental analyses commences to ensure that potential impacts are avoided, minimized, or mitigated to the greatest extent possible. In addition, right-of entry will be required for properties along the alignment to allow the analysts access to conduct surveys, etc.

10. Land Use

The September 2009 EA land use data will be updated, as appropriate. Recent aerial photography of the corridor will be reviewed and local land use plans and existing/proposed land use maps will be collected and reviewed to reaffirm the project's conformance with local land use plans. GIS will be used to map existing land use. Planned changes in general land use adjacent to the corridor will be discussed as reported in approved local planning documents. These data and analysis will provide the baseline for evaluating indirect and cumulative land use effects

11. Farmland

The proposed project could affect approximately 905 farmland acres protected under the Farmland Preservation Policy Act (FPPA). GIS will be used to map soil types and calculate total acres of farmland required for proposed additional right-of-way in conjunction with the Land Use and ROW/Displacements subtasks. Form AD-1006 will be completed and submitted to the Natural Resource Conservation Service for coordination on prime farmland impacts.

12. Right-of-way and Displacements

The proposed project could potentially affect 41 residences and 27 commercial establishments. Residential, business and other land use displaced as a result of the project will be confirmed by using aerial photography acquired for the Land Use subtask. GIS will be used to calculate the quantity and type of land use to be acquired for additional proposed right-of-way.

13. Social/Economic

Existing socioeconomic conditions within the project area will be updated. Population data will be updated using US Census Bureau data, including 2000 decennial census data, American Community Survey recent year county/city estimates, and local level, recent year, census-based estimates from a private source. Locations and conditions of community facilities, local communities and neighborhoods adjacent to the corridor will be researched from available sources and maps. Existing conditions of areas likely to experience the most significant right-of-way impacts will be described in greater detail than areas experiencing low levels of impact, which will be described generally.

A regional economic profile of areas affected by the project will be developed. The profile will focus on areas surrounding proposed new stations. Existing planning studies and other secondary sources will be reviewed and used to develop a qualitative discussion of the economic impacts of the project. This discussion will be general due to the size of the project area, and will be speculative, due to the fact that for most of the proposed stations there is currently no passenger rail service. Localized social and economic impacts of business and residential impacts will be discussed.

The September 2009 EA identified ten parks that may be affected by the proposed project, which would be addressed in the Section 4(f)/Section 6(f) section of the EIS. Impacts on community facilities will be discussed, including, but not limited to: schools, churches, parks, libraries, emergency services, hospitals and utilities. Transportation projects often affect community facilities. Where rail usage is significantly increased along an at-grade corridor, the reduction in auto access could increase emergency response

times. Impacts on the physical, social and economic cohesion of communities and neighborhoods will also be discussed.

14. Environmental Justice

The September 2009 EA identified corridor area tracts in Oklahoma County (35% minority) with minority populations ranging from 68 percent to 97 percent, which exceed 50 percent and would reasonably considered "meaningfully greater" than the county percentage, and tracts with median household income below the federal poverty level. Further analysis of the impacts on the human population in these areas will be conducted to determine if there are disproportionately high and adverse impacts on minority and/or low-income populations. The 2000 US Census data and 2009 local area estimates available from a private source will be used to identify Environmental Justice (EJ) and disadvantaged populations within the project area. These populations will be mapped by census tract. Mapping will separately examine minority and low-income percentages by tract. Where the Census tract percentages exceed the surrounding county's average percentages, these areas will be considered EJ areas.

Impacts to EJ and disadvantaged populations will be determined for the feasible alternatives. This impact assessment will determine if the impacts to these populations are disproportionately higher compared to impacts to other populations. Information from scoping and public meetings will also be used to identify the presence of EJ populations and to help assess the magnitude of potential impacts. The results of analyses of effects on the human environment in general, including Displacements, Social and Economic, Noise, Visual, etc. will need to be taken into consideration in determining adverse impacts on minority and low-income populations.

In addition, a qualitative analysis will be provided explaining that in many cities and towns, residences that are immediately adjacent to active freight rail lines are traditionally more likely to have lower values, and to house lower-income individuals. In this project, impacts are disproportionately likely to fall on residences that are adjacent to rail lines, and for this reason, some EJ impact may occur, even in tracts that are not determined to be EJ areas. Facilities and resources that may be important to EJ populations and would be potentially affected by the proposed alternatives will also be identified in this qualitative analysis.

15. Noise and Vibration

A noise study will be completed along the proposed 106 mile high speed rail transit corridor connecting Oklahoma City and Tulsa. The impact assessment will be completed utilizing the procedures and methodologies described in the 2005 FRA guidelines for high speed transit systems. At locations where future build noise exposure levels are projected to exceed FRA impact limits, the feasibility and reasonableness of noise barriers will be evaluated for their cost and acoustic effectiveness in accordance with ODOT noise abatement policy guidelines. The abatement analysis will be limited to residential areas where sufficient existing housing density occurs to warrant mitigation consideration. The noise analysis findings will be summarized in a noise technical report. A description of the noise study tasks elements are outlined below.

Site Selection: The project corridor will be surveyed and build design plans of the proposed high speed rail alignment will be reviewed to identify representative noise sensitive land uses. Noise sites will be selected based upon their sensitivity to transit noise as described in the Table 3-2 of the FRA High Speed Ground Transportation Manual (October 2005). It is anticipated that approximately 15 noise measurement/impact assessment sites will be selected to provide adequate geographic coverage within the project limits.

Data Collection and Review: Existing noise levels at each of the 15 representative noise monitoring sites will be recorded in units of one-hour equivalent noise level [Leq (1-hr) dBA] continuously for a minimum duration of 24 hours to determine the day-night noise level (Ldn). At locations where property access is not provided, day-night noise levels will be determined following the procedures outlined in Appendix "B" of the FRA manual. Noise monitoring will be performed using state-of-the-art sound calibrated noise meters which have annual calibration certificates on file.

Design Year Noise Levels: Future noise levels from high speed rail operations will be estimated utilizing the FRA methodology at each of the representative sites identified in the project study area corridor. The noise impact assessment will identify the degree or severity of the noise impact. Operational data for completing the high speed rail alternative includes: vehicle type, vehicle length, number of cars, hourly headways, and travel speeds at various fixed train stop points along the entire length of the study area corridor. The noise impact assessment will identify the degree or severity of the noise impact in accordance with impact threshold provided in Table 3-1 of the FRA manual.

Vibration Impact Assessment: Vibration impact assessment will be completed at representative vibration sensitive buildings identified along the project study area corridor. It is assumed that no vibration measurements will be required. It is anticipated that approximately 15 vibration assessment locations will be identified for impact assessment. Some vibration assessment sites may be noise impact assessment sites, others may be historic or other non-noise sensitive properties identified within the project study area. The vibration impact assessment will be completed in conformance with the impact criteria and analysis procedure described in Chapters 7 and 8 of the FRA manual.

Abatement Analysis: A noise abatement analysis will be complete at noise impacted communities with a sufficiently high existing residential housing density to warrant mitigation consideration. The noise abatement analysis will focus on identifying residential areas where noise barriers may be cost and acoustically effective in reducing or eliminating high speed noise impacts in accordance with Oklahoma DOT noise abatement policy guidelines. The feasibility and reasonableness of each evaluated noise barrier will be documented and described in detail in the noise technical report and will include information showing the approximate height, length, total cost and cost per benefited dwelling.

Noise Tech Report: The noise analysis findings will be summarized for incorporation into the EIS document. Summary tables of all noise monitoring data, future high speed rail noise and vibration level estimates, identification of all noise and vibration impacts and investigated mitigation measures as described in the above tasks will be included in the environmental documentation. In addition, a separate stand alone Noise Technical Report will be prepared which will include similar information as

provided in the EIS but in greater detail. The technical report will include: information such as existing noise measurement survey data, vibration and noise calculations, noise barrier cost and acoustic effectiveness analysis and graphic illustrations of all investigated noise barriers on project design plans. Written responses to review comments on issues or questions concerning noise and vibration analysis findings in either the Noise Technical Report or EIS will be provided. Data needs that are required to complete noise and vibration impact assessment will be coordinated.

16. Air Quality

Issues

The methodology that follows describes the technical approach to assess the potential air quality impacts as a result of the high speed rail operations in Oklahoma, Lincoln, Creek, and Tulsa Counties. While diesel train emissions may be off-set by decreases in regional roadway VMT and vehicular congestion, the project elements that could adversely affect local air quality levels along the project corridor include increases from the additional:

- Diesel locomotive emissions along the corridor
- Idling and moving locomotive emissions near stations
- Emissions from locomotive operations and associated service at maintenance and/or storage facilities.
- Vehicles near station locations.

The potential impacts of these emissions, both on a regional and local level, will be addressed as follows.

Potential Regional Impacts (Mesoscale Analysis): While the proposed project would increase diesel locomotive emissions, these increases are expected to be off-set by decreases in regional mobile source VMT. An analysis will be conducted that would estimate the changes that the project would have on regional air quality, including annual emissions of criteria pollutants, air toxics, and greenhouse gases (GHG).

Locomotive emissions will be estimated using EPA's NONROAD emission factors for diesel locomotives and mobile source criteria emission factors will be estimated using the latest EPA emission factor algorithm (currently either MOVES2010 or MOBILE6.2, as directed by the local agencies). GHG emission factors for on road mobile sources will be calculated using EPA's MOVES2010 model, with national average data, if no local information is available. Train and on road vehicle miles per hour (VMT), and vehicle hours per hour (VHT), along with the power requirements for the operation of the train (maintenance facilities, stations, etc.) estimated by the project's engineers will be used in these calculations. Emissions from electrical power requirements for the stations will be based on information from EPA's e-grid database.

It is currently assumed that no changes in the number of plane trips are predicted due to the project. Therefore no estimate of plane emission burdens will be calculated. It is currently assumed that no changes (relocation, change in schedule, etc.) in existing train service will occur due to the project.

Potential Local Impacts (Microscale Analyses): The project will increase diesel emissions at or along: the rail right-of-way, stations, at-grade crossings, maintenance and storage yards, and will have construction impacts.

The project will increase diesel emissions along the train tracks. An analysis will therefore be conducted, using EPA's NONROAD emission factors for diesel locomotives and EPA's AERMOD dispersion model, to

estimate the potential impacts of these emissions at potential sensitive land uses (residences, playgrounds, etc.) near the rail line.

Analyses will be conducted along up to three rail sections and pollutant concentrations would be estimated at several distances from the rail right-of-way (ROW). The number of sensitive land uses located in areas that would affected by increased pollutant levels, if any, will be identified.

The project would increase local vehicular (automobile) traffic near the proposed station locations. As such, an analysis will be conducted to estimate carbon monoxide (CO) levels near affected stations and parking facilities using EPA's CAL3QHC dispersion model, and a determination will be made as to whether these increases would cause significant air quality impacts. Two stations will be considered.

The project may increase vehicular delays at existing at-grade crossings and/or add vehicular delays at new crossing. A mobile source analysis will be conducted using EPA's CAL3QHC dispersion model to estimate the CO levels near the traffic routes that would be affected. Two at grade crossings will be considered.

The additional trains associated with this action will increase maintenance and storage requirements and possible increases in train operations at these yards. Pollutant levels at nearby sensitive land uses, if any, may be affected. A stationary source dispersion analysis will be conducted to estimate nitrogen dioxide and particulate levels using EPA's AERMOD dispersion model. Up to one yard will be evaluated. This yard will be selected for analysis based on the number of trains idling and moving around the site and the location of nearby sensitive land uses.

Construction-related effects of the project would be limited to short-term increased fugitive dust and mobile-source emissions during construction. State and local regulations regarding dust control and other air quality emission reduction controls would likely be followed. These issues will be qualitatively discussed.

17. Water Quality

As identified in the September 2009 EA, the proposed project would affect water quality during construction and operation of the high speed rail. The EIS water quality analysis will include specific locations and water resources mitigation measures.

18. Waters of the U.S. and Wetlands

A review of secondary source information detailing the location of wetlands, waterways, scenic rivers, floodplains, coastal waters, water quality and other ecological resources, including state and federally listed threatened and endangered species was conducted within the project area.

The September 2009 EA identified potential wetlands using NWI maps. During the EIS phase, the wetland areas will be field verified, analyzed, and delineated. Coordination with the U.S. Army Corps of Engineers will be completed. Fill and dredge material amounts will be estimated and construction activities evaluated to determine the appropriate Clean Water Act Section 404 permit application. This includes avoidance, minimization, and mitigation determinations. If mitigation is required, coordination with the US Army Corps of Engineers will help guide the mitigation. .

19. Floodplains

Floodplains and floodways mapped by the Federal Emergency Management Agency (FEMA) within the project area will be identified. Impacts to the FEMA 100-year floodplains and floodways by the feasible alternatives will be determined and measures to avoid, minimize, and/or mitigate will be determined.

20. Threatened and Endangered Species (and other biological resources)

Endangered or threatened species including their habitat occur within the project area. These species include the Interior Least Tern, Piping Plover, Whooping Crane, and American Burying Beetle. An Interior Least Tern has a nesting area near the Arkansas River in Zink Lake. Surveys will be conducted to identify the exact areas of habitats and species. Coordination with the U.S. Fish and Wildlife Service will also be conducted.

21. Permits and Certifications

Permits or certifications will be required, depending on the nature of the impact. A list of the required permits and certifications will be documented. Some of these permits/certifications may be obtained during the design phase of project development, and others may be obtained during the construction and operation phases. The following permits and certifications, and others, may be required for this project:

- Section 402, Clean Water Act
- Sections 401/404, Clean Water Act
- Section 9, Rivers and Harbors Act
- Section 10, Rivers and Harbors Act

22. Cultural Resources

In accordance with the Section 106 of the National Historic Preservation Act, Executive Order 11593, architectural historians will identify significant historic architectural properties so that project planning can be undertaken to minimize impacts to any such resources. Close coordination with the Oklahoma State Historic Preservation Office (SHPO) and FRA, as well as other consulting parties including local governmental agencies, will be maintained. Specific cultural resources concerns of the SHPO and other consulting parties will be identified and addressed as part of the cultural resources component of the project. All work will be completed by architectural historians who meet or exceed the Secretary of the Interior's Professional Qualifications Standards.

The project will be evaluated with respect to Section 106 of the National Historic Preservation Act of 1966 (as amended) and Section 4(f) requirements to consider impacts to historic resources for federally funded or licensed undertakings. To determine if built resources are historic, they must be listed in or eligible for listing in the National Register of Historic Places (NRHP) using established criteria. As part of this undertaking, resources constructed prior to 1964 will be evaluated as part of historic assessments. This will allow the study to remain valid throughout planning and construction phases and to encompass resources more than fifty years of age, which is the standard age for evaluating resources under Section 106.

Data Collection: Architectural historians will review relevant state files to verify properties listed in the Tier 1 EA and identify any additional properties within the project corridor that have been listed in the NRHP. This task will also be completed for those NRHP-listed properties with the appropriate local agency, along with any other properties being evaluated or studied for listing in the NRHP, and that have been designated, evaluated, or studied by state or local agencies for their historic significance. NRHP files available at the SHPO will be accessed and relevant materials, including historic boundaries, will be collected. Files at the offices Tulsa and Oklahoma City's respective historic preservation commissions will also be reviewed and relevant information collected. Additional file review and data collection will be conducted as needed.

Intensive-Level Research: Architectural historians will conduct intensive-level research on the project corridor and detailed research, as necessary, on properties built prior to 1965 that have not been listed in the NRHP. Historic properties may include individual properties or groups of properties, such as residential neighborhoods or commercial property clusters. Research will generally be conducted at public research repositories including public and university libraries, state archives, and historical societies. Public property records will be reviewed as necessary. Research will include literature search and review, photographic and cartographic research and review, demographic and statistical research and analysis, and, as necessary, personal interviews. Additional background research will be conducted as needed.

Delineate Area of Potential Effects (APE): An initial Area of Potential Effects (APE) was not suggested in the Tier 1 EA, although historic properties and resources built before 1965 that are "within the corridor" were identified. Architectural historians will define, review, and refine, if warranted, the project's APE, the area within which the proposed project has the potential to affect historic properties. The proposed APE will be coordinated with the SHPO. Professional architectural historians will evaluate proposed project activity, including land acquisition and construction, and potential project effects to historic properties. Potential project effects may include, but are not limited to, impacts related to property acquisition, visibility, noise, vibration, and property access. Utilizing this analysis, architectural historians will develop and delineate a project APE that encompasses all possible project impacts. Detailed, GIS-based mapping will be used to evaluate, develop, and delineate the project APE.

Intensive-level Field Survey and Photographic Documentation: Architectural historians will conduct an intensive-level field survey of the project's APE to identify, document, and evaluate all properties built prior to 1965. NRHP-listed properties, including individually listed properties and historic districts, will be field reviewed to determine if existing documentation remains adequate and/or valid, per instructions from the SHPO. NRHP-listed properties will be photographed to document their state at the time of review. All properties built prior to 1964 and not listed in the NRHP will be documented. Based on research and field review, properties may be documented individually or in groups (i.e., districts). Documentation will include field evaluation and notation, and digital photography (no 35mm photography included). This scope assumes no more than 20 previously NRHP-listed properties and no more than 100 properties that will require documentation and evaluation. Please note that for potential historic districts with boundaries extending beyond the APE, only resources within the APE will

be evaluated. Per safety requirements, the presence of at least two staff people will be necessary during all field work.

Complete Survey Forms and Determinations of Eligibility: Architectural historians will document and evaluate all properties previously not evaluated for NRHP eligibility on appropriate forms per SHPO instructions. All properties will be evaluated for eligibility for listing in the NRHP, using established professional criteria and considerations set forth in *How to Apply the National Register Criteria for Evaluation (U.S. Department of the Interior, National Park Service, 2002)*. Properties that are not listed in but appear to be eligible for the NRHP will be documented and recommended as such, and concurrence with determinations of eligibility will be requested from the SHPO. Architectural historians will follow SHPO requirements using appropriate survey forms to document and evaluate resources that have not previously been evaluated. Architectural historians will only document previously evaluated resources if substantial changes to the property that would change previous determinations of eligibility have occurred.

Accompanying documentation will include relevant photographs and mapping. All forms and supporting documentation will be submitted for review by the SHPO. This task assumes that no more than 100 previously undocumented properties will be evaluated, and no more than 10 previously evaluated properties require amendments or updates. In addition, this task assumes timely responses by the SHPO to queries, requests for concurrence on Determinations of Eligibility, and other relevant, project-related correspondence.

Cultural Resources Survey Report: Architectural historians will complete an architectural history technical report that will document in detail the project methodology and all eligibility and effects findings. Each property documented and its NRHP status will be listed. NRHP-listed and NRHP-eligible properties will be described. Potential project effects to each NRHP-listed and NRHP-eligible property, or the lack thereof, will be documented. The report will also include substantial historic context on the project corridor and surrounding neighborhoods as appropriate; relevant architectural styles and buildings types; significant people; and associated historic events. The report will include all relevant mapping and photography, as well as any other supporting materials. Appendices will be attached as necessary.

Evaluate Project Effects to NRHP-listed and Eligible Properties and Complete Effects Report: Architectural historians will evaluate potential project effects to all NRHP-listed and NRHP-eligible properties identified through the process outlined above. Proposed project activity and its potential to directly and/or indirectly affect NRHP-listed or eligible properties will be evaluated per the criteria of adverse effect set forth in Section 106 regulations. Potential project effects may include, but are not limited to, impacts related to property acquisition, visibility, noise, vibration, and property access. This scope assumes no more than 100 NRHP-listed and/or NRHP-eligible properties will require evaluation under this task. (This number includes previously evaluated properties as well.) An effects report will describe the findings of this task. This task assumes timely responses by the SHPO to queries, requests for concurrence on Determinations of Eligibility, and other relevant, project-related correspondence.

Agency Coordination/Public Involvement/Consultation: Per Section 106 requirements, architectural historians will identify and coordinate contact with potential consulting and interested parties to the Section 106 process, including the SHPO. Consulting parties may include government agencies, private organizations, and neighborhood groups that have a demonstrable interest in historic properties in the project area. Due to the project's length and location within urban areas, and the probability of a large number of potential consulting and interested parties, this scope assumes the coordination effort will be significant. Architectural historians will also participate as needed with the NEPA public involvement effort.

Separate from the Section 106 process, architectural historians will prepare all necessary documentation for submission to local historic preservation commissions to apply for and receive a permit for the greater project. This process is required by local ordinance and ensures that all construction within local historic districts meets established design guidelines. This task assumes no more than six meetings of any type, including public and agency meetings. A historic resources technical report will be prepared.

Develop Mitigation Documents: Architectural historians will work with consulting parties to develop any mitigation documents required as a result of adverse effects. As appropriate, a Programmatic Agreement or Memorandum of Agreement will be written according to Section 106 standards. This task includes up to five meetings with consulting parties to discuss mitigation and issues related to their execution. Please note that this task does not include completion of any mitigation stipulations.

23. Tribal Consultation and Traditional Cultural Properties (TCP)

Tribal consultation will be performed, as the Tier 1 EA indicates there are multiple tribal properties on the Turnpike alignment. These consultations will assume multiple meetings with multiple tribes, as well as individual owners. The time allocated to tribal consultation will also be used to elucidate TCPs (in addition to records search and field work). The TCP documentation will be provided in technical memorandums.

Filed work will focus on areas likely to contain archaeological resources in coordination with the Oklahoma State Archaeological Survey.

This task also assumes one DOE/FOE (determination of eligibility/finding of effect) and SHPO/OAS acceptance on the first submittal.

24. Hazardous Waste

The EA focused on identifying the 21 potential sites within the railroad corridor with identified contamination. Contamination may be within the corridor, having been released there as part of the historic railroad operations, or migrating into the corridor from an adjacent or nearby site. The EIS will also evaluate the risk posed by nearby contamination and not just those within the corridor. A likely risk that needs to be addressed prior to construction is contaminated soil before placing ballast required to widen the railroad. This may cause risk of dermal contact by construction workers; risk that contaminated soil could be excavated and improperly disposed with assumption that is suitable for use as clean fill; and risk of the assumption of liability created by the acquisition of the property.

This task will update and review the EDR report of the railroad corridor to comply with ASTM Method 1527-05 (pursuant to the ASTM standards, a prior governmental and tribal records search is presumed valid for 180 days). This task will also identify environmental risks posed by facilities based on: proximity to railroad corridor; whether acquisition of property will be required for improvements; likely contamination that may be present based on the information in the database; common distance to which suspected contaminants migrate; and the likely medium (soil, groundwater, surface water, dust, etc.) containing contaminants, and the possible pathways and receptors of contaminant migration

A review of aerial photography is available on Google Earth and Bing. Gathering of additional site-specific public information will be necessary, (e.g. documentation in Oklahoma Department of Environmental Quality files) regarding medium and high-risk properties identified in the government database. For some sites, a comprehensive Phase I environmental site assessment and Phase II testing might be recommended. Also, a site visit to evaluate the conditions of the facilities which may pose a material risk to the construction or use of the railroad corridor will be necessary. A report will be prepared of the necessary work described above.

There are a few assumptions and limitations regarding this task. It is assumed that to estimate the costs, six individual properties will need further intensive evaluation through the completion of Phase I environmental site assessments completed in accordance with ASTM standard E 1527-05. Access for the properties within the railroad corridor is also assumed.

Based on the information gathered, common knowledge about the types of contamination commonly associated with various industrial and commercial operations, and the knowledge gathered through investigating the nature and extent of contamination on other properties, an opinion about the likelihood that contamination is or is not on a property or within a particular segment of the railroad corridor will be given. Contaminants may be hidden in subsurface materials, having been intentionally covered, or because they were covered by foliage, water, snow, concrete, asphalt, or other materials. They may not be present in predictable locations. A logical assessment program with reasonable time and cost limits to reduce, but not eliminate, the risk of later discovering previously unknown contamination will be formulated. More extensive data gathering, exploration or testing could reduce the probability of finding contamination, if present; however, even after extensive exploration, ODOT will be unable to say with total certainty that no recognized environmental conditions are within a given segment of the corridor.

An appropriate inquiry into possible conditions indicative of releases within the corridor or on adjacent properties will be conducted. This inquiry will not be an exhaustive assessment. A point exists at which the cost of the information obtained or the time required to gather it outweighs the usefulness of the information and may be a material detriment to project completion. ODOT will balance the cost and time to complete its work with the need to reduce uncertainty about unknown conditions, by obtaining additional information.

No warranty can be made that conditions observed and reported will be representative of areas not observed. Data collected for this report should be used only for the purposes stated in the report, and not for reasons other than those intended.

25. Visual and Aesthetic Resources

An analysis of visual and aesthetic resources will be completed for the Oklahoma City to Tulsa HSIPR project. It will focus on applying visual quality criteria to establish distinct landscape units and define their quality, describe the general location of resident and transient viewers, and identify viewshed limits as the basis for the impact assessment. Impacts will be assessed for resident and transient viewers with mitigation recommendations provided where increased levels of impact are anticipated.

A review of prior studies indicates that the Turnpike Corridor (the preferred HSIPR alternative) will involve considerable grading and vegetation removal as "[t]he original turnpike alignment was designed using essentially a straight line with little regard for the local topography" (Carter Burgess, 2002). Furthermore, the proposed project may require "…extensive improvements including excavation, embankment, bridging and tunneling" (Carter Burgess, 2002). The following scope of work, consequently, presumes some level of adverse impact along the existing Turner Turnpike in regards to the proposed alternative. The following activities will be completed for the visual and aesthetic resources efforts.

Project Area Regional Conditions: The regional landscape character of the project area will be described in general, including basic variations in the landscape. The discussion will focus on important geo-morphological and topographical features, watersheds, vegetation regimes and primary built features in the landscape. The latter will include consideration of existing communities, transportation features and other key visual features.

Landscape Units and Visual Quality: Distinct landscape units will be determined by terrain, common landscape features (including water resources), and spatial continuity in land use/cover. The units are typically unified in their overall visual character, density of development, and predominant land use features. Localized features will be noted in urban districts which smaller but homogenous combinations of land uses and natural resources are identified. The visual quality of each unit will be described, and specific high quality or unique views will be identified. Representative photographs will be provided.

Viewers: Viewers along the project corridor will be identified, resident and transient. A wide range of "viewers" are expected for the Oklahoma High Speed Rail project, including motorists using the Turner Turnpike, state routes and local roads; residents of rural farmsteads; and suburban and urban residents in both Oklahoma City and Tulsa.

In addition, other residents will be considered who live outside the viewshed of the project but may view the project in their regular travels through the area, or from their place of employment. The Turner Turnpike will be of particular interest, as it parallels most of the central portion of the Turnpike Alternative.

Viewsheds: The potential 'seen' area of Turnpike Alternative as a function of existing topographic conditions, vegetation and built elements within the landscape will be described. The viewshed is the surface area visible to and from a given point or collection of points. The edge of the viewshed for the project area will be defined to represent the limit of the view from the Turnpike Alternative, as well as the perimeter from which the proposed project facilities can be viewed.

Impact Analysis: The notable visual intrusions or degradations may occur during construction and operation of the Turnpike Alternative and ancillary facilities and will be described Particular attention will be given to circumstances where visible facility elements, or changes in existing natural features (vegetation and terrain) may conflict with, or degrade the integrity of existing views/conditions. The impact analysis will also document the potential visual incompatibility of the Turnpike Alternative facilities relative to the existing visual character and sensitive surrounding uses.

Preliminary concept sketches/renderings, or photographic examples that respond to the issues or alternative design concepts will be prepared. As an iterative process, it is assumed that several cycles of the concept-review-revision may be required (up to three). Computer-generated illustrations or sketches based on existing files will be used to illustrate visual impacts and possible mitigating design solutions (up to 6 illustrations will be prepared).

26. Section 4(f) and 6(f) Properties – (Public Parks, Recreation Areas, Wildlife Refuges; Significant Historic Sites)

The September 2009 EA stated that Section 4(f) and Section 6(f) issues will require further investigation during project level Tier 2 analysis including consultation with property owners to determine eligibility and proper action. Available information from public entities (cities, counties, states, etc.), maps, and the National Park Service's LWCF grant webpage will be used to confirm and update the identification of public parks, recreation areas and wildlife refuges undertaken in the September 2009 EA. The presence of significant historic properties will be determined by reviewing the results of the Section 106 historic and archeological studies conducted for this EIS. Impacts to any Section 4(f) or 6(f) property potentially affected will be documented, and a preliminary determination of 4(f) impact provided, taking into consideration regulatory provisions for de minimis 4(f) impacts and established programmatic agreements. GIS will be used for overlay mapping of any 4(f) or 6(f) properties subject to potential use by the proposed alternatives.

27. Public Health and Safety

Safety refers to the prevention of accidents to passengers or employees. In rail transit, system safety is typically governed by the configuration of the alignment (i.e. mixed traffic) and by the type of control system (fully, partly, or non-automated). The system safety documentation will be reviewed to extract the appropriate information appropriate for the EIS. Proposed grade crossings will be evaluated according to ODOT, FRA, and any other appropriate agency or entity with authority or jurisdiction to ensure safe surface or grade separated operation.

Public security refers to the prevention of acts defined as unlawful, criminal or intended to harm another person or damage property. This also refers to freedom from threats or uncertainty about the

likelihood of such acts. Crime statistics, if available, will be cited to provide an estimate of the degree of security that is offered to the patron in relation to general background criminal activity levels. Design mitigations to reduce the likelihood of criminal activity will be identified. The security impact based on technology-dependent factors and based on other factors such as station conceptual layouts will be identified and documented in the EIS.

28. Indirect and Cumulative Impacts

Indirect and cumulative impacts will be assessed and documented in the EIS. This assessment of indirect and cumulative impacts will focus on potential development at stations and known major development projects (private and public) in combination with the rail project. Economic development data will be utilized from existing documentation. No new economic development potential studies will be conducted. This section will address the potential for station area development impacts related to land use plan compatibility, loss of or disruption of neighborhoods, environmental justice (from data gathered for the socioeconomic impacts), known historic resources within 1/4-mile of stations (from existing GIS or other data bases), known sensitive natural resources within 1/4-miles of stations (from existing GIS or other data bases), and traffic congestion (based on traffic impact at station findings prepared under other tasks). It is expected that the impacts will be described in non-numeric terms. The amount of detail in the assessment will depend upon the detail of the economic development data available.

29. Construction Impacts

ODOT will develop a construction scenario, detailing typical construction techniques, equipment and timing, and construction staging areas that will be used to evaluate construction impacts and mitigation measures. Graphics will be used to assist in the description of the project construction activities and impact, where appropriate. The results of this assessment will be documented in the EIS.

30. Mapping and GIS

ODOT will build upon the existing project specific geographic information system (GIS) to illustrate data collection and analysis. ESRI's ArcGIS software products will be used. Information collected to conduct the analysis will cover the project area for the rail corridor alignment developed. Except in the case of raster images, the data will be stored in shapefile format in the appropriate zone.

The following information has already been or will be collected from various sources and reviewed for the project, as well as for public display purposes:

- Rail Lines
- Major Roads
- Other Hydrologic Features (Major Lakes and Rivers) – United States Geological Survey (USGS)
- Political Boundaries (State, County and Municipal) - ODOT
- Aerial Photography

- Ground and Surface Water Resources
- Watershed boundaries
- Floodplains – Federal Emergency Management Agency (FEMA)
- Wetlands – U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory; Additional sources include existing projects and studies within the project area and field review.
- Threatened and Endangered Species
- Farmland –United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Farmland Information Center
- Land Use – land uses within the project area will be obtained from state agencies and local jurisdiction planning documents. Aerial photography will also be utilized to determine land uses.
- Parks and Recreation/Wildlife Refuge – USFWS
- Socioeconomics – U.S. Census Bureau
- Environmental Justice – U.S. Census Bureau
- Cultural Resources – Historic and archaeological resources Contaminated Sites & Hazardous
- Soils Constraints – USDA NRCS
- Public Health & Safety – ODOT, Federal Railroad Administration (FRA), public utility companies
- Parking – existing plans, local planning departments, and aerial photography

31. Draft EIS Document

A draft EIS will be prepared. The draft EIS will include project history; purpose and need; public involvement and agency coordination activities; feasible alternatives considered; results of environmental field studies; impacts of the feasible alternatives; proposed mitigation; and Section 4(f) evaluations. Each category of technical studies will be summarized in the EIS. A discussion of methodology used to identify issues, an analysis of environmental impacts of each alternative, and a list of mitigation measures to address environmental impacts will be presented in the document. It is assumed that a matrix will be produced summarizing the impacts. The FRA will review and approve the EIS before it is finalized. The EIS will be distributed to agencies, placed in libraries, and accessed on the ODOT website.

A Notice of Availability will be prepared and published in the Federal Register. It will include the locations and times of the public hearings to be conducted, where to send comments, and the deadline for submitting comments.

32. Final EIS Document

The comments received on the draft EIS will be reviewed and responses prepared. Also, where appropriate the draft EIS will be revised/refined as a result of comments received. Once the FRA approves the final EIS it will be distributed to agencies, elected officials, and citizens that provided substantial comments on the draft EIS.

33. Record of Decision

A Record of Decision will be prepared and published in the Federal Register. This will finalize the environmental process.

34. Public Involvement and Public Relations Strategy

The public involvement and public relations strategy include the following key objectives.

Meet and Exceed Public Involvement Requirements of NEPA: This will be achieved by coordinating activities and public hearings and meetings with the entire NEPA process, including scoping, project meetings, and public hearings.

Meet ODOT Public Participation Guidelines: These guidelines are established through previous outreach initiatives undertaken by ODOT, including but not limited to building awareness with traditional (hearings, briefings) and innovative (social media, traveling information booth) public relations/outreach techniques. These techniques utilize a variety of tools to communicate with and receive input from the public, including public hearings, workshops, meetings, traveling information booths, press releases, fact sheets, newsletters, social media, mailing and e-mail lists, presentations and surveys.

Piggyback on the Positive FRA and US DOT Public Support Efforts: The national and statewide public support for high speed/passenger rail can be found through FRA and the US DOT resources.

Outreach to Individual Groups: Public outreach will include individual groups, organizations and others already identified as affected or interested by the proposed project, including commuters. It is important to work with select known supporters to garner public statements of support, which would be used in printed materials, press releases, audio/video and other public forums and presentations.

Address Arguments from Opposition: It is important to address arguments from opposition and to be prepared to address criticisms in a public forum. No inaccurate fact or comment should go unanswered, whether positive or negative.

Targeted Media Interaction: There should be targeted interaction with the media in the form of background briefings, addressing issues of inaccuracy or exaggeration and continuous dialogue. The objective should be that if any one opposition group has the "ear" of a reporter, the project team will too.

Provide New Information to the Public First: The public should be made aware of any new information regarding the project, specifically first inform known stakeholders. ODOT is prepared to use a project website, e-mails, door to door, phone calls, and social media.

Transparency: Having transparency in all we say and with all the information we have is important, even if there is bad news for a particular group or individual. We must be forthright and transparent.

Public Involvement/Outreach Strategies

There are five Public Involvement/Outreach Strategies including:

1. Conducting a Series of Workshops/Public Hearings and Stakeholder Meetings and Interviews
2. Creating and Maintaining Communication Vehicles
3. Implementing a Media Relations Strategy
4. Developing One-Page Documents that Identify Clear Benefits of the Rail Service
5. Conduct survey of existing Heartland users

Five strategies during public involvement and outreach will be used.

Conduct a Series of workshops/public hearings and stakeholder meetings and interviews: This will include holding briefings with individuals, groups, organizations and others already identified as affected or interested at key points prior to the public hearings, and as needed throughout the process as issues warrant. It is necessary to identify real and perceived affected individuals, groups, organizations, gathered from previous study efforts, and through new stakeholder interviews. To identify these groups, ODOT can meet people at their homes and at affected sites. ODOT will listen to their concerns, look for compromises, and be responsive with good and bad news. ODOT will have ROW/real estate staff be available and ready to talk about the process.

ODOT will hold scoping meetings in Oklahoma City, Chandler, Bristow and Tulsa at the beginning of the EIS, public meetings during the draft EIS preparation, and public hearings when the draft EIS is released for public review (minimum of 12 meetings). Reasonable notice will be given to the public, indicating the availability of explanatory information and information indicating compliance with NEPA requirements. The workshops/hearings will be in an open house format with boards, comment form tables, public comment recorders, and project staffing for specific topic areas. Opportunities will be available for participants to testify with a certified court reporter. All hearings will be accessible to people with disabilities, and interpreters will be available.

We will offer follow-up presentations to local governments, planning organizations and community or business groups. After the meetings, we will attach all hearing/workshop information boards to the project website as soon as practicable, in addition to sending notices of these postings via social media and contact distribution lists.

Create and Maintain Communication Vehicles: All updated information about the public involvement process and project progress will be placed on the ODOT website project page. This effort will also include utilizing social media by capitalizing on the large national and regional social media following for HSR and passenger rail, and grassroots advocacy efforts.

Other communication vehicles include a mailing/e-mail list that will be maintained to keep interested public participants involved and up-to-date. Comment forms will be available online, and at meetings for the public. Press releases and social media press releases will be sent in a timely manner. Brochure or one-page fact sheet/handouts will also be available in an e-format for easy dissemination via e-mail. The initiation and use of a traveling information booth will be available at targeting local governments/libraries and other public facilities to house a poster board and some informational handouts and comment forms to further build awareness of the EIS effort. This traveling information booth could be used at community events – fairs, rodeos, etc. The booths would be in place for a

determined period of time around the time of the public hearings and would come down at the end of the public comment period.

Create a Media Relations Strategy: Will identify talking points and prepare project team for questions, and developing responses. This will include a constant communication with individual reporters. Media outreach about the EIS would only be conducted after meetings/briefings take place with individuals, groups, organizations and others already identified as affected or interested in the project/process. There will be a backup media relations strategy in the case of media being tipped off by any opponents during the initial stakeholder outreach process.

Develop One-page Documents that Identify Clear Benefits of Rail Service: These one-page documents will include topics such as: increased travel alternatives due to HSR; improved travel times due to HSR; the Heartland Flyer success story as an example and complimentary HSR/passenger rail efforts underway in nearby states; a discussion about less reliance on foreign oil; any near-term and long-term economic benefits; and job creation, both direct and indirect.

Conduct a survey of existing Heartland riders: This survey will determine what works, what needs improvement and determine what riders are wanting so ridership can be increased on the Oklahoma to Tulsa passenger line.