



MEMORANDUM

TO: Mayor and Council

FROM: Michael L. Personett, Acting Director *MLP*
Watershed Protection Department

DATE: December 11, 2017

SUBJECT: Review of Environmental Protection Measures for the TxDOT MoPac Intersections Project

The City of Austin has an Interlocal Agreement (ILA) with the Texas Department of Transportation (TxDOT) relating to the relocation of water and wastewater infrastructure for the TxDOT MoPac Intersections Project. Council considered an amendment to this agreement at its November 9, 2017 meeting. Speakers representing the Save our Springs Alliance expressed concerns about potential hydrogeological and water quality impacts associated with the excavation of underpasses at MoPac South and Slaughter Lane and LaCrosse Avenue. Council postponed further action on amending the ILA until its December 14, 2017 meeting (Consent Item No. 44) and requested staff to assess the adequacy of environmental protection measures for the project. This memorandum summarizes the results of the assessment conducted by staff of the Watershed Protection Department (WPD) and the reviews of the project by the Barton Springs Edwards Aquifer Conservation District (BSEACD) and the US Fish & Wildlife Service (USFWS).

WPD has reviewed the construction plans, the Water Pollution Abatement Plan (WPAP), and met with TxDOT staff. Our findings demonstrate both temporary and permanent environmental protection measures for the MoPac Intersections Project meet and, in some cases exceed, TxDOT standards and Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program requirements. Importantly, our findings are consistent with both the BSEACD and USFWS. The BSEACD review found the project exceeds requirements for four of five “key management areas” addressed in a consent decree with TxDOT and meets requirements for the fifth. The USFWS found TxDOT’s prior determination that the project may affect, but is not likely to adversely affect, the listed endangered species “well supported.”

It is important to note the MoPac Intersections Project is included in the Capitol Area Metropolitan Planning Organization’s (CAMPO) 2040 Regional Transportation Plan and in the current and previous

CAMPO Transportation Improvement Program. The project is located entirely within an existing TxDOT right-of-way which encompasses the existing MoPac South roadway and the existing at-grade intersections at Slaughter Lane and LaCrosse Avenue. The project has received all required approvals and clearances, is fully funded from state and federal sources, and is ready to proceed to construction. Finally, because this is a state project to be constructed entirely within an existing TxDOT right-of-way, the project is not subject to the City of Austin's Land Development Code, associated criteria manuals, or other City of Austin requirements pertaining to environmental protection. However, as a result of our recent meeting with TxDOT, WPD staff have been invited to provide input and technical assistance prior to and during construction.

WPD Review of Environmental Protection Measures

WPD first became aware of the MoPac Intersections Project in 2013 during the initial scoping for the environmental assessment (EA) of the Central Texas Regional Mobility Authority's (CTRMA) MoPac South Project. At that time, WPD and Austin Transportation Department (ATD) staff met with representatives of the TxDOT Austin District. At the meeting, City staff discussed concerns about the preferred alternative to construct underpasses rather than overpasses at Slaughter Lane and LaCrosse Avenue.

As a result of the initial meeting, TxDOT agreed to undertake an expanded assessment of hydrogeological conditions in and around the project area. Zara Environmental, a firm with extensive experience with local karst conditions, was contracted to perform the assessment. Zara Environmental produced two reports related to the MoPac Intersections Project. One report, released in 2014, concluded the Intersections Project poses low risk for significant hydrogeological connections that could adversely affect water quality, quantity, and protected species. This conclusion was based on the length of known caves in the area, a low hydraulic gradient from the construction area to the caves, proposed Best Management Practices (BMP) for the treatment of storm water and BMPs that extend hydrographs and thus improve recharge to the aquifer. A subsequent report from Zara, issued in 2015, focused on surface runoff towards known karst features in proximity to the project and indicated storm water management BMPs will be implemented to protect all downstream and down gradient karst features.

In response to the Council request, WPD completed a review of the construction plan sets, specifications, and the Water Pollution Abatement Plan (WPAP) to evaluate the nature of environmental protection measures to be provided during and after construction of the Intersections Project. Additionally, City staff met with TxDOT project management and engineering staff on November 15, 2017 to present questions and gain a better understanding of environmental protection measures not readily evident in the documentation.

In terms of regulatory requirements, the baseline level of required environmental control and protection for the Intersections Project is compliance with TCEQ Edwards Aquifer Protection Program rules. The project plan set appears to meet and, in some instances exceed, compliance requirements. Our review focused on four categories of environmental controls: 1) environmental compliance

management; 2) karst void mitigation; 3) temporary construction controls; and 4) permanent post-construction controls.

Environmental Compliance Manager – TxDOT has stated they will have a full-time Project Manager on-site as well as a full-time Environmental Compliance Manager. This is in addition to construction management and environmental compliance personnel to be provided by the contractor. This level of environmental compliance oversight is atypical for TxDOT projects and represents a significant exceedance of TCEQ requirements. TxDOT indicated the Environmental Compliance Manager will work within the chain of command with the TxDOT Project Manager and TxDOT Environmental Coordinator and not directly with the contractor. This is similar to what is being provided for the SH 45 SW project where CTRMA has contracted with a firm to provide a full-time Environmental Compliance Manager who functions independently of the construction contractor.

Karst Void Mitigation - Construction plans and specifications provide construction details and notes directing the contractor on how to proceed if a karst feature (e.g., void or cave) is encountered. In addition to specific construction details, the contractor is directed to notify the TxDOT Project Manager, Environmental Compliance Manager, TCEQ and City of Austin if a void is encountered. As a result of discussions with TxDOT staff, it was agreed WPD professional geologist, David Johns, P.G., will serve as the City of Austin contact. Additionally, WPD has recommended the construction contractor employ a “downhole” video camera when boring for bridge piers to identify significant voids in these difficult to monitor excavations. Adding the City of Austin as a contact and agreeing to “downhole” video to check borings for voids exceeds TCEQ requirements.

Temporary Construction Controls - The plan sets and specifications contain standard erosion and sedimentation controls such as silt fences and bio-logs for perimeter control, rock berms for concentrated flow and dewatering bags for removing sediment from sump dewatering. While not as robust as the temporary controls being used for the SH45 SW project, TxDOT agreed to include David Johns, P.G., in the Pre-Construction Environmental Meeting to discuss areas where reinforced measures are appropriate such as creek crossings. TxDOT agreed both BSEACD and WPD staff could weigh in on adaptive management techniques before and during construction to ensure erosion and sedimentation controls are functioning properly, particularly following significant rainfall events. This will require onsite inspection.

Permanent Water Quality Controls – Project plans and permits show a suite of storm water quality controls that, in combination, will exceed the 80% Total Suspended Solids (TSS) removal requirement of the TCEQ Edwards Aquifer Protection Program rules. Controls demonstrated by TCEQ calculations to remove 80% of TSS include: Vegetated Filter Strips, Permeable Friction Course and retrofit of the existing Vertical Sand Filters. In addition to those controls, the project includes seven (7) batch detention ponds functioning primarily as Hazardous Material Traps but also providing extended detention resulting in TSS removal greater than 80%.

Barton Springs Edwards Aquifer Conservation District Review

In 1990, the BSEACD and TxDOT (then the Texas State Department of Highways and Public Transportation) entered into a consent decree under the supervision of a Federal District Court that provides for certain environmental protection measures for MoPac South and for SH 45 SW. BSEACD staff reviewed construction plan sets and the WPAP to assess conformance with the consent decree requirements and from the perspective of the Design Guidelines and Goals adopted by their Board of Directors for the SH 45 SW project. While not approving or disapproving of the project, comments provided by BSEACD to TxDOT in September 2016 indicate that four of five “key management areas” exceed requirements of the consent decree and that the fifth meets requirements. The five key management areas are: hazardous materials traps, storm water basins/treatment, annual inspection and maintenance, construction erosion controls, and construction observation. BSEACD also provided comments and recommendations on various technical matters, as well as construction management and long-term monitoring.

US Fish and Wildlife Service Review

In response to a request by TxDOT for “informal consultation,” the USFWS also conducted a review and assessment of documentation provided by TxDOT for the MoPac Intersections Project. The request was for USFWS concurrence that the project “may affect, but is not likely to adversely affect” the golden-cheeked warbler, the Barton Springs salamander, and the Austin Blind salamander. In a response dated June 23, 2017, the USFWS stated its belief that TxDOT’s determination that the project may affect, but is not likely to adversely affect the listed endangered species, is “well supported.” Of note is that this finding was based on the same project design elements, temporary and permanent environmental protection measures, and environmental compliance management procedures that were the focus of both WPD’s current assessment and that of the BSEACD.

If you have any questions with regard to this assessment, or require supporting documentation, please contact Mr. Chuck Lesniak at (512) 974-2600 or at chuck.lesniak@austintexas.gov.

cc: Elaine Hart, Interim City Manager
Joe Pantaloni, Interim Assistant City Manager
Robert Goode, Assistant City Manager
Richard Mendoza, Director, Public Works Department
Greg Meszaros, Director, Austin Water