RFRP # 11/12-011

Coordinated Pre-Preemption of Traffic Signals to Enhance railroad Grade Crossing Safety in Urban Areas and Estimation of Train Impacts to Arterial Travel Time Delay

Technical Questions and Responses

Question: On page 8 (second sentence last paragraph) of the RFP, it references to intersections along the corridor. Are these intersections known for the study (i.e. already selected sites) or will this be the responsibility of the research team to determine the locations of the intersections for research along the rail corridor?

Response: The locations will be in Broward County, Florida. The number and location of these crossings will be proposed by the research team and approved by FDOT and Broward County staff.

Question: Is the research team responsible for surveying all of the other signal software packages currently used in Florida besides the Naztec's ATMS.now package?

Response: A qualitative analysis of other signal software platforms that are used in Florida is expected. This analysis is to provide the Department guidance on how well the strategy developed by the research team can be transferred to other softwares and systems.

Question: How do we access the current Naztec's ATMS.now software manuals and other technical details related to it? Is it allowed to ask FDOT to provide this information during the proposal writing period? And if not, will it be allowed for the research team to contact the company that developed this software directly?

Response: The Department will not be providing the user’s manual. It is recommended that the research team coordinate with any private entity necessary during the proposal period and research project duration.

Question: Can you clarify the difference between Objectives #1 and #4? It seems that Objective#1 is general to types of railroad pre-emption currently used in Florida but Objective#4 is specific about implementing pre-emption through ATMS.now. Is the purpose a comparison between other software used in different parts of

Florida and ATMS.now software? Or is it possible that other software may provide better pre-emption than ATMS.now?

Response: Activity 1 is to fully understand and document the existing conditions. Currently, the railroad pre-emption is initiated by devices maintained by the railroad agencies. When the railroad devices detect a train, the railroad forces the railroad gates and signals into pre-emption. ATMS.Now is overridden by the railroad system. One of the objectives of this research is to investigate whether or not the signal system software can be aware of nearby grade crossing pre-emption events and use this knowledge to pre-empt the railroad pre-emption. Activity 4 is to document this process.

Question: Please explain more on the definition of "the control section". In the last paragraph of the Activity 4 in the Addendum 1, the control section is defined as "consisting of three adjacent signalized grade crossings"; however, in the Activity 7, the control section is presented as "including at signalized intersections adjacent to the signalized intersections at control section's grade crossings". Does the control section include the signalized grade crossings only or should it include both the signalized grade crossings and the signalized intersection closest to the grade crossings to east and west as well?

Response: Activities 4 and 7 are separate but not exclusive activities. Activity 4 is focused on the development of a pre-premeption process and plan. Activity 7 is focused on the impacts to the network resulting from the proposed plan for pre-premption and the associated strategies to recover from the pre-preemption defined in activity 6.

Question: As described in the Activity 6 of the Addendum 1, "the developed strategies will be calibrated through simulation", could FDOT clarify and elaborate more on the expectation of the simulation task and the scope of the simulations? If the microscopic-simulation will be conducted, will FDOT provide the potential proposer with the current signal timing plans adjacent to the rail corridor?

Response: The signal timing patterns for the selected study area will be provided to the research team once the study area is defined by the team. FDOT is interested in estimating the performance impacts resulting from pre-premption and how well the team's proposed strategies improve the conditions. It is anticipated that a simulation to establish a baseline of network performance (under existing conditions), a simulation to establish the performance with pre-premption and a simulation to determine the benefits of the strategies proposed by the research team to improve the network operations.

Question: From the District 4 TSM&O network map, the ATMS.now platform has been installed only at 6 arterial roads so far. Does FDOT plan to install more in Broward County in the nearly future? If yes, does the project need to consider the preemption implementation on these planned arterials or just these corridors having ATMS.now installed only?

Response: FDOT does not maintain a map for ATMS.now deployment. Broward County has been and will continue to install ATMS.Now countywide. FDOT does have a map for ATMS projects in Broward County but these do not include installation of the ATMS.now signal software.

It is expected that as part of the Team's evaluation criteria for corridor selection will include the presence of ATMS.now at the signalized intersections.

Question: My only question is whether we should have information from Railroad companies (about preemption and train schedules) to put in the proposal or the requirement is made just for the post-award process?

Response: The inclusion of railroad pre-emption, train schedule or other information in the technical proposal is at the discretion of the proposer.