Project Title: C-05-06 : Documentation of Semi-Permanent High Mast Lighting for Construction

PIN: R020-68-881
Responsible Unit: Traffic Engineering & Highway Safety Division
Project Manager: Clements, David J.; Hosley, Rochelle

Project Goal:
Document the tower lighting plan currently being used on the I-90 construction project in Albany. Develop proposed guidance for use on future projects.

Actions Proposed:
The contractor on this project is using high mast lighting in place of typical portable light plants. This is the first time NYSDOT has used this technique. It has drawn the attention of FHWA and other state DOT's. The researcher on this project should document the use of this lighting to date. Specifically, the researcher should:

- Document the current lighting on I-90 as a base case for future reference including why lighting is needed and the current lighting requirements and Department Policy. (including costs analysis, productivity, safety, light levels, and worker and driver satisfaction)
- Optimize the high mast lighting design to save money and maximize driver and worker safety. (Develop general design criteria for similar future projects. Note that although future projects will have common elements, each project will be different. The criteria should include a list of warrants to consider when putting a project with this type of lighting in project contract documents).
- Identify and document other potential impacts of the high mast lighting and the characteristics of fixed lighting vs. mobile lighting – placement, number of fixtures, quality of lighting, flexibility, light pollution, non-breakaway towers in the clear zone compared to gas tanks/gas-powered generators along the roadside, etc.
- Make recommendations and develop guidelines for NYSDOT to follow for other construction projects.

Anticipated Work Products and Accomplishments:
Produce a technical report that can be used by NYSDOT, FHWA, AASHTO and TRB to assist designers in deciding on where, when and how to use fixed lighting on construction projects and when this method should be offered, required or prohibited.

Proposed Budget: $35,000