

How to Manage a Traffic Study

Whether you're just starting out or have been a traffic engineer for many years, you'll eventually either have your work overseen by your supervisor or be the supervisor overseeing a younger engineer's work. That's the purpose of this Appendix – to help you know what to expect when being reviewed or to provide some guidance when assisting inexperienced new hires. The goal is to show how to facilitate that communication in an organized manner which hopefully minimizes rework if a wrong turn in the analysis occurs.

Communication is the key for both those managing a study and those being managed. It's a two-way street that requires involvement from both sides. With that in mind, here's a comprehensive list of meetings we recommend if you're new to traffic studies:

1. Internal kick-off meeting
2. Review of the existing conditions
3. Discussion of the traffic forecasts
4. Discussion of the analysis
5. Review of the analysis results and mitigation

6. Discussion of the mitigation results
7. Review of the report outline
8. Review of the draft report

These status/work meetings should be tailored to the experience level of the worker and the boss. Of course, these don't all warrant elaborate meetings. Often a five minute chat at certain points in the process can keep the study moving efficiently. Remember; don't reserve questions for check-in meetings. A thirty second question can save both hours of rework and a project budget. The adage "more is less" is particularly appropriate here.

Internal Kick-off Meeting

This meeting is of vital importance to get everyone started together. You should first review the overall project goal and schedule. Whether it's for one person or a group of ten, you should also communicate the roles and expectations for each team member. The key to this meeting is to ensure that you have presented the project tasks to everyone. All team members should know exactly who is responsible for which parts and under what timelines. You should devote the last part of this first meeting to the

next tasks and, more importantly, set the next meeting date. Key to this meeting is the supervisor breaking the project into reasonable pieces for the young engineer so he doesn't get overwhelmed.

Review of the Existing Conditions

Using the checklist from Chapter 3 in the *Traffic Study Manual*, this review meeting should ensure that you've obtained all the initial data. You'll waste considerable time and money redoing work if the existing data is inaccurate or incomplete. You should also review the site observations soon after completion. This review ensures you have recorded all relevant observations. By reviewing notes close to when they're taken, the person who completed the site examination can better remember details he didn't write down or specify enough. It's also good to ensure you've obtained and read the relevant agency policies. Depending on what those current policies are, you may need to alter the plan for the project.

Discussion of the Traffic Forecasts

Make sure you've clearly defined the different scenarios. You should check the trip generation calculations to ensure you employed the correct formulas and correct type of land uses. Then it's time to examine the different assumptions. The key items to consider are the assumptions relating to reducing the new trips to the site, the distribution of traffic and the appropriate background growth. Trip reductions could include pass-by, diverted or multi-use trips as well as any reductions for transit, bicycle or pedestrian trips. There are many options for calculating both trip distribution and background growth. Your critics will scrutinize any assumptions, so make sure your team is in agreement and that each team member understands the reasoning behind the assumptions.

Discussion of the Analysis

When it comes to the analysis, start your discussions with what type of software you'll implement and if you'll use micro-simulation. Many of today's software packages have multiple inputs from the

speed of the road to the exact types of vehicles on that road. Depending on the experience of the person entering the data, you may need to check every input, or a random subset of them, for accuracy. Calibration can be tricky depending on the site and its characteristics. Be certain to clarify any changes to the defaults and why there's need for the alteration. Again, depending on user experience, these checks may need to occur as soon as the first scenario is set up. If the first one is wrong, you'll need to change all the other scenarios. Try to catch any errors before continuing.

Once you've run the analysis, perform a check on the results. The primary question is, "Do these computer results match observations in the field?" If you are the one being supervised, you should be able to answer that question and explain why you think they match. If you are the supervisor, be sure to ask the question and insist that your employee really thinks about what the computer results were, and why they may or may not be correct.

Review of the Analysis Results and Mitigation

After you've completed all of the scenarios the first time, you can make a check of the overall results along with determining the need for mitigation. Quick methods to check results vary from software to software, but thinking through your project development will help. For instance, No Build scenarios should have similar results to existing. Build scenarios should change results more for the approaches that have more traffic being added. For mitigation, be certain to compare and contrast against any agency guidelines to determine needs. If mitigation is needed, then you have a great opportunity to have another meeting to discuss potential improvements.

Discussion of the Mitigation Results

Another check-in point could be after you have examined the initial mitigation and have determined new results. Make sure the results will be acceptable in comparison to any agency guidelines. If not, now is the time to discuss what changes to the improvements could be

made. Often you might forget the demand side of traffic operations in your rush to improve the area, so don't be shy about discussing non-roadway improvements to reduce the demand. Remember to always discuss this topic with the client before discussing it in any way that could become public.

Review of the Report Outline

Like the kick-off meeting, this is a great spot to gather the person or people who will be writing the document. Go over the purpose of the report and the primary audience. Then discuss the broad outline of the report, including the figures and any appendix material. It's also important to discuss the recommendations and conclusions of the project. Ensure the

team agrees on the conclusions and recommendations.

Review of the Draft Report

Don't ever send something out without having someone other than the primary author proofread it. If you wrote the report and your supervisor doesn't have time for a full review, ask a co-worker to read through it. He doesn't have to be a traffic engineer to give you feedback on the flow of the document and point out typos. In fact, it's usually best to have a non-engineer do a quick proofread to ensure the report is clear. If you are the supervisor, make time for a full review. This document is likely going to go out to clients with your name attached to it, so be sure you're proud of it.

As you get more familiar with your capabilities and those of your workers, you can gradually reduce your need for formal check-ins. The initial kick-off meeting should be mandatory for any project, however, no matter where you are on the learning curve. This meeting is the most effective way to set a project up for success. Remember, no matter how big your team is, whether two or twenty people, communication is essential. You may reduce formal meetings, but informal check-ins and constant communication will ensure your project stays on schedule and on budget.

Checklist: Manage a Traffic Study

1. Internal Kick-off Meeting
 - a. Project overview including overall goals
 - b. Study schedule, including setting the next internal meeting
 - c. Worker roles and expectations
 - d. Next tasks
2. Review of the Existing Conditions
 - a. Traffic counts
 - b. Site observations
 - c. Requested data, like traffic signal timing, other roadway improvements in the area, other planned development & agency policies
3. Discussion of Traffic Forecasts
 - a. Number of scenarios
 - b. Site trip generation, including any pass-by, diverted or multi-use
 - c. Site trip distribution
 - d. Background traffic growth
 - e. Reductions for transit, bicycle or walking
4. Discussion of the Analysis
 - a. Discuss which capacity analysis software to use
 - b. Decide whether to use micro-simulation software, and, if so, which
 - c. Review standard inputs
 - d. Determine if default inputs need changing
5. Review of the Analysis Results and Mitigation
 - a. Compare results versus observations
 - b. Determine need for mitigation
 - c. Discuss potential mitigation
6. Discussion of the Mitigation Results
 - a. Do the mitigation measures result in acceptable operations?
 - b. Are there additional mitigation measures needed?
7. Review of the Report Outline
 - a. Review categories
 - b. Discuss recommendations and conclusions
8. Review of the Draft Report