



MEMORANDUM

January 21, 2012

TO: Board of Mayor and Alderman

FROM: Eric Stuckey, City Administrator *ES*
Vernon Gerth, ACA-Community and Economic Development

SUBJECT: Traffic Appeals - Discussion of the Building and Streets Standards Board of Appeals technical expertise for considering appeals of the City Engineer's interpretation of the City's Transportation & Street Technical Standards and U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD).

Purpose

The purpose of this discussion is to consider the technical expertise of the Building and Street Standards Board of Appeals in rendering decisions on traffic-related issues in the event someone decides to appeal a decision of our City Engineer's interpretation of the City's adopted Transportation & Street Technical Standards and U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD).

Background

Traffic signals and other traffic-related design decisions have significant impact on the efficiency and safety of the City's major street network and it is therefore essential that the impact of these decisions be thoroughly evaluated before a new signal or other element is approved, designed, and installed. The City of Franklin's Transportation & Street Technical Standards and Manual on Uniform Traffic Control Devices provide criteria for determining when traffic signals and other traffic design elements are justified.

For example, the criteria or warrants as commonly known provide a nationally-recognized, systematic method to evaluate the need for traffic signals. An engineering study is required for all proposed traffic signal installations. The study, prepared by a licensed traffic engineer, takes into consideration the needs of pedestrians as well as vehicular traffic and includes a plethora of information and data. Examples of key decisions affecting traffic signal system design include:

- Intersection geometrics (lanes, sight distance, grade, etc.)
- Determination of traffic signal operational mode
- Selection of left turn treatments
- Selection of the traffic signal phasing plan
- Determination of detection needs
- Development of traffic signal timing parameters
- Development of the timing plan(s) for arterial coordination
- Determination of preemption needs
- Location and configuration of all traffic signal displays
- Location and configuration of the controller and cabinet
- Selection of type and location of traffic signal support poles
- Determination of necessary traffic signing



- Location of stop lines and crosswalks
- Determination of wiring, conduit and pull box needs

In late 2010, the Board of Mayor and Alderman combined all of the City's "technical" Boards of Appeals into the Building and Street Standards Board of Appeals. The Building and Streets Standards Board of the Appeals is comprised of nine (9) licensed professional engineers, architects, and related industry experts to consider and render directions on the City's adopted building, fire, life safety code-related issues, and roadway technical standards. They are also residents of the county and community. This Board considered only two items in 2011.

The City's Transportation & Street Technical Standards and Manual on Uniform Traffic Control Devices place the responsibility for interpretation with the City Engineer and affords anyone the opportunity to appeal the City Engineers decisions to the Building and Streets Standards Board of the Appeals.

Benefits and Financial Impact

When installed under conditions that justify installation, traffic signals can:

- Interrupt extremely heavy flows to permit the crossing of minor movements that could not otherwise move safely through an intersection.
- Increase the traffic handling capacity of an intersection.
- Reduce certain types of accidents, most notably right-angle (broadside) collisions.

Conversely, unwarranted or inappropriately placed traffic signals can:

- Increase overall travel times by adding stops and delay for through traffic.
- Cause the diversion of traffic onto residential streets to avoid the signal.
- Cause a significant increase in rear-ends collisions.

A modern traffic signal can cost in the vicinity of \$150,000, which includes a signal controller, signal heads, vehicle detectors, and signal poles and supports.

Recommendation

Staff realizes that difficult deliberations may precede the decision to install a new traffic signal/other traffic design element and strongly believe that nationally-recognized criteria and road network planning should serve as the basis for determining the location and activation of traffic signals. Staff recommends the Building and Streets Standards Board of Appeals remain the appointed body when considering appeals of staffs interpretation of the City's adopted technical standards which include our Transportation & Street Technical Standards and Manual on Uniform Traffic Control Devices.

Additionally, staff recommends the Building and Streets Standards Board of Appeals, at their next meeting, adopt by-laws that require the Board member(s) whose appointment pertains to a professional license/certification and area of expertise be present at hearings on items within this area of expertise to provide "expert" input on the subject matter being discussed.