

The seal of the City of White House, Tennessee, is a circular emblem. It features a central illustration of a large, two-story white house with a porch, situated on a green lawn. The house is surrounded by trees and a fence. The seal is bordered by a purple ring containing the text "WHITE HOUSE" at the top and "1835" at the bottom. Two stars are positioned on the left and right sides of the ring.

# Residential Traffic Calming Program

Policies • Procedures • Resources

City of White House TN

# Numbers You Should Know

## **Public Services Department:**

(615) 672-3654

## **Planning & Codes Department:**

(615) 672-4350

## **Police Department:**

(615) 672-4903

## **Engineering Services:**

(615) 672-4350

## **City Website:**

**[WhiteHouseTN.GOV/home](http://WhiteHouseTN.GOV/home)**

# City of White House TN

## 2021 Transportation Advisory Committee (TAC) Members

*City Administrator*

*Planning & Codes Director*

*Public Services Director*

*Chief of Police*

*Fire Chief*

*City Engineer*

*Public Works Manager*



# City of White House TN

## Residential Traffic Calming Program

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## Mission Statement

The Residential Traffic Calming Program is designed to coordinate the collaboration of City Staff and citizens, in an effort to produce effective traffic calming throughout White House's neighborhoods.

The Residential Traffic Calming (RTC) Program focuses on local transportation issues such as cut-through traffic and speeding vehicles on local neighborhood streets. The Information and tools presented in this document will be applicable on most roadways in an effort to reduce traffic speeds and volume while balancing multiple uses. Local roadways are defined as a street that provides direct access into residential neighborhoods to connect individual homes to collector and arterial streets. The RTC program outlines a variety of traffic calming measures to improve the quality of life in local residential neighborhoods. The program provides opportunities for residents to work closely with the City staff to identify traffic issues and concerns, and determine appropriate solutions.



### **The objectives for the RTC Program are:**

1. *Establish a single point of contact for residents concerned about traffic calming issues.*
2. *Increase awareness on the part of residents and drivers about their obligation to be good neighbors when driving through residential neighborhoods.*
3. *Enhance pedestrian, bicycle and vehicle safety on neighborhood streets.*
4. *Increase the quality of life for residents, including reduced traffic noise, decreased air pollution, etc.*

# Background

As the City of White House develops, its traffic characteristics change. Initially, traffic through White House primarily consisted of commuting trips, but as the population increases, trips for shopping, taking children to and from schools add to the traffic flow. Also, the number of vehicles increases as students reach driving age. Further, wide, straight, non-impeded streets and apparent “short-cuts” through a residential area tend to attract motorists in increasing numbers and soon the streets exceed acceptable levels for a desirable community.

The volume of traffic on residential streets in White House has increased significantly over the last several years. An increased frequency of accidents, higher noise levels, added air pollution and difficult driving and parking circumstances for residents are all possible undesirable consequences of this additional traffic.

White House is hardly unique in this situation. In Hendersonville, city traffic engineers have implemented digital speeds signs and rumble strips. In Nashville, data collection is used to determine how each neighborhood is scored and the implementation of road narrowing “pinch points”, medians, and street cushions (humps) have been utilized. Clearly, traffic intrusion is a problem which impacts diverse groups of citizens, and has prompted a variety of responses at the local government level.

In White House, concerns from traffic intrusion to residential areas have been recognized. To date, these concerns have been addressed on a case-by-case basis with response tailored to address the specific concerns noted in a resident’s complaint. Typical responses have included traffic engineering measures, i.e., speed limit signage, radar signs and roadway striping. Additionally, the City of White House Police Department has responded with focused enforcement activities on residential streets as requested.



In May 2021, the City of White House initiated a Residential Traffic Calming (RTC) Program to address community concerns over traffic intrusion into residential areas. This program includes a preliminary set of guidelines and procedures which were developed based upon review of the experiences of other cities, discussions thru the City's Public Services Department and corresponding internal agencies.

The **Residential Traffic Calming** concept can be considered an extension of the cities commitment to listen and understand policies aimed at reducing traffic on residential streets, and segregating through and local traffic via functional roadways.



The Residential Traffic Calming includes a combination of some or all of the following elements:

1. Special signage to indicate to motorists that they are leaving arterial roadways and entering residential streets.
2. Additional speed limit signage on residential streets.
3. Traffic control devices utilized to discourage through traffic from using residential streets.
4. Increased code enforcement, with emphasis placed on residential streets.
5. Information programs to educate motorists of proper etiquette for driving in residential areas.



Perhaps the first step in mitigating the problems associated with increased traffic is to realize the streets are not only for vehicular traffic but are also used for running, bicycling, walking, City services (i.e., ambulances and fire engines) and parking.



The Program presented in this document has a primary goal; to identify traffic control solutions applicable to both existing and new streets in the City. These solutions can be implemented with many different techniques or “tools” that achieve a cost-effective benefit to the public in any particular situation. A City process is available for the public and Transportation Advisory Committee to participate in evaluating and implementing traffic calming solutions.

The primary principle guiding the program is to alleviate problems in such a way that street usage will be modified so that all of the activities that take place within a residential area can do so with increased safety and convenience.

It may be possible to maximize mobility while decreasing costs. By maximizing mobility there will be savings in time, operating costs, and energy while minimizing negative social and environmental impacts.

Efficiency can be enhanced by diverting traffic from residential streets to collector streets and arterial.



Definitions of traffic calming may vary but they all share the goal of reducing vehicle speeds, improving safety, and enhancing quality of life. Traffic Calming involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and/or cut-through volumes, in the interest of street safety, livability and other public purposes.

Traffic calming measures can be separated into two groups based on the main impact intended.

Volume control measures are primarily used to address cut-through traffic problems by blocking certain movements, thereby diverting traffic to streets better able to handle it.



Speed control measures are primarily used to address speeding problems by changing vertical (speed humps) or horizontal (roundabouts) alignment, or narrowing the roadway. The distinction between the two types of measures is not as clear as their names suggest, since speed control measures frequently divert traffic to alternate routes, and volume control measures usually slow traffic.

# Residential Traffic Calming

Included in the RTC Program is a Traffic Calming Tool Kit. The tool kit provides residents with an overview of mitigation measures. Issues such as cost, effectiveness, anticipated effect, and a description of each measure are outlined in the tool kit. The City of White House Residential Traffic Calming Toolkit is designed to enhance communication and understanding between the City and its residents.

## **Citizen Involvement**

The RTC Toolkit provides both the City and its residents with several methods of addressing individual residential traffic concerns. Citizen involvement plays an important role in identifying problems and is greatly encouraged. Residents who have traffic concerns are invited to provide input to the Public Services Department.

## **City of White House Staff**

1. Review and respond to residential traffic calming requests.
2. Conduct appropriate traffic and warrant studies.
3. Recommend appropriate traffic calming options to the Transportation Advisory Committee, Board of Mayor Alderman and Citizens
4. Maintain RTC log sheet
5. Initiate implementation of approved traffic calming measures.
6. Provide as needed program status reports to the Transportation Advisory Committee
7. Provide a process for citizen feedback.

## **Transportation Advisory Board**

1. Review, revise and/or update the RTC Program policies and procedures.
2. Review all traffic calming requests and options.
3. Provide recommendations to the City Board of Mayor and Aldermen regarding traffic calming measures.
4. Review and recommend traffic calming standards and policies for future residential development.

### **City of White House Board of Mayor Alderman**

1. Review and approve/deny the Policies and Procedures for the RTC Program
2. Review, approve, or deny complex or controversial traffic calming options.
3. Provide an appeal process for denied traffic calming requests.
4. Allocate resources and funding guidance.

## **The Three E's**

Neighborhoods can rely on the Three E's, Education, Engineering, and Enforcement, as their prime resource for traffic calming.

### **Education**

By providing the City of White House residents with information in various ways, City staff can assist residents to make informed preliminary decisions about their neighborhoods.



Informed individuals can better assess the degree of traffic calming required to combat traffic concerns, influence driver behavior and promote community building through respect for one's neighborhood. Informed residents can then collaborate their efforts with engineers and planners to ensure that the proposed traffic mitigation tool is an effective and feasible improvement.

### **Engineering**

Traffic calming can include the development and implementation of a variety of new physical features and traffic calming strategies. There is an assortment of engineering options that can improve the traffic situations around residential neighborhoods. These types of improvements require collaboration between residents, elected officials, and City staff.



Engineering applications are often constrained by standard engineering policies, budgetary resources and community acceptance.

**Enforcement**

Communities can rely on the Police Department to enforce traffic control measures and target identified areas. Additional enforcement can significantly increase the awareness of traffic related problems, particularly speeding.



# How It Works

The RTC is to a two-phase program. Phase I focuses on informing, educating residents, and data collection regarding traffic calming features and providing the neighborhood with tools for resolution and documentation of traffic problems. Phase 1 measures should be thoroughly explored for approval or denial before implementing Phase II.

*If the request is not warranted in phase I, residents can appeal in phase II of the process.* Then more restrictive physical devices can be considered for recommendation and implementation. Phase II addresses problems that require permanent and more costly traffic control solutions.

All recommendations included in Phase I and/or Phase II must be consistent with the City's overall transportation network and with nationally recognized standard traffic engineering safety practices and procedures, specifically the Institute of Transportation Engineers (ITE) and the Federal Manual on Uniform Traffic Control Devices (MUTCD).

## **Steps for Implementation of Phase I**

### **Phase I**

Phase I involves the collaboration of City staff and neighbors to identify specific concerns, establish goals and objectives, define criteria for "success", and develop a Neighborhood Mitigation Plan with measures for implementation.

Phase I measures take advantage of relatively low cost and proven traffic control measures to address the needs of the Residential Traffic Calming Plan.

- › Examples of Phase I measures include, but are not limited, to the following:  
Neighborhood Information Plan – targeted distribution of educational materials regarding traffic safety issues, and data collection.
- › Radar signs – deployment of a portable, unmanned, digital signs with a radar and a speed limit sign to alert drivers of their speed.

- Passive Traffic Controls – installation of warning or guide signs. (*HOA Only*)
- Traditional Police Enforcement of existing speed limits and other vehicle code violations
- Pavement Markings – improve the condition of existing roadway markings or modification or installation of new markings to assist vehicle drivers. (*If warranted*)

Each neighborhood participating in the program must begin with Phase I. The public education provided in Phase I may enable residents to distinguish between real and perceived speeding problems, and begin the discovery process necessary for change.

The following is a step-by-step approach to implementing Phase I of the RTC program.

**Step 1: Identification Process**

- Verbally Identify residents specific traffic concerns
- Distribute and discuss program materials
- Create neighborhood boundary
- Review previously implemented traffic control measures
- Establish goals and objectives of the neighborhood
- Define criteria for success
- Establish a neighborhood committee to work closely with TAC members and staff throughout the entire process.

**Step 2: Roadside Survey**

- Prepare existing conditions diagram, noting appropriate signage and pavement markings, etc.
- Validation of posted speed limit
- Deployment of radar speed trailer/signs
- Review accident history
- Observe pedestrian and bicycle activity and surrounding environmental factors (i.e., schools, parks, etc.)

### Step 3: Evaluation Process

- › City staff, with assistance from the Residential Traffic Calming Committee, will present the results of the data gathering, analyses, and effectiveness of Phase I measures to the petitioner.

### Step 4: Appeal Process or Implementation if Warranted



## **Phase II**

Phase II will start the appeal process when measures are denied when it is concluded that Phase I measures were not warranted, or practical. In Phase II, the Residential Traffic Calming Plan may be modified to include more restrictive physical devices on local streets. A written request must be submitted with supporting documentation.

Phase II measures are typically more costly and permanent. Consequently, each project will have a budget, and maybe subject to the review and approval from other committees, and the City Board of Mayor Alderman.

Examples of Phase II measures include, but are not limited to the following:

- Speed Humps
- Traffic Circles
- Chokers
- Median Barriers

According to the 2016 Tennessee Vehicle Code, most of the restrictive measures proposed under Phase II can only be implemented by ordinance or resolution by the City's Board of Mayor Alderman. Phase II measures may also generate potentially significant physical impacts on the surrounding environments, and may involve environmental review, as required by the Tennessee Department of Environmental Conservation.

On rare occasions, Phase II measures will be installed on a temporary basis for a trial period of six to twelve months. Based on their effectiveness, recommendations can be made to proceed further with the traffic calming measures in progress



### **Steps for Implementation of Phase II Measures**

#### **Step 1: Neighborhood Consensus / Appeal Process**

Residents will present a revised Residential Traffic Calming Plan with recommended Phase II measures to the neighborhood. A staff prepared petition package would need to be circulated throughout the Project Street by the Residential Traffic Calming Committee. At a minimum, 75% of the households along the Project Street must sign the petition (A written request must be submitted with supporting documentation) in support of the Phase II measures. Once the petition package has been completed, the process moves forward.

#### **Step 2: Data Collection**

A thorough analysis is initiated by staff. Among other tasks, the analysis involves collecting and analyzing traffic volumes, vehicle speeds, traffic accident history, neighborhood citation history, pedestrian volume, and other key data. Information and input will also be solicited from the City of White House Fire and Police Department.

#### **Step 3: Warrant Analysis**

Many Phase II measures will require justification prior to implementation. The justification process usually requires satisfaction of a 'warrant', i.e., the warrant will outline the conditions which indicate an effective traffic control measure. The warrant may require minimum traffic volumes, minimum vehicle speeds, qualifying accident history, and moderate pedestrian activity.



The warrant analysis will use the data collected to determine whether or not the minimum warrant criteria is met for the proposed Phase II measure. If the warrant is met, then the process will move forward to step 4.

#### Step 4: Multiple Consensus Process

Once the Phase II mitigation measure completes the preceding steps, the final proposal is presented to the neighborhood and any other affected groups to gain approval. At a minimum, the proposal must be reviewed and/or approved by the following groups:

- Residents
- City Staff
- TAC



# Overview of Transportation Network

City of White House streets are components of a greater transportation network designed to facilitate pedestrians, vehicles, and a mix of other uses. The design of a street is usually determined by the different demands that each transportation mode requires. Within White House, each street is specifically classified to accommodate certain traffic volumes and speeds in conjunction with the principle uses.

Street classifications define the function of each street and the standard to which it should be designed and used. Many factors determine a street's classification, including: travel demand, right-of-way, required street width, maintenance costs, access needs, safety, preservation or property, adjacent land uses, and connections to the greater transportation network. Basically, there are three functional classifications for the streets and roadways of the City of White House:

## **Local Streets**

The function of local streets in the City's transportation network is to provide direct access into residential neighborhoods and to provide travel within neighborhoods. The usual speed limit for local streets is 20 mph. Much of the emphasis of the Residential Traffic Calming Program will apply to the local streets. However, all recommended mitigation measures will be evaluated for their consistency with standard traffic engineering, safety standards and practices on a case-by-case basis, and some recommendations may not be acceptable including but not limited to TDOT and county roads.

## **Collector Streets**

The function of collector streets is to carry traffic between local streets and arterial streets. Collector streets are designed to carry higher volumes of traffic, serve greater uses, and accommodate higher vehicle speeds. The City's collector streets can carry up to 6,480 ADT (Average Daily Traffic). Speeds on collector streets can vary from 30 mph to 40 mph. Because of their vital role as traffic connectors in the City's transportation network, many of the measures in the Residential Traffic Calming Program Toolkit will not be applicable to collector streets.

### **Arterial Streets**

The function of arterial streets and roadways is to carry larger volumes of traffic at relatively higher speeds, with minimal delay. Most collector streets connect with arterial roadways, as they direct traffic through the network. Arterial streets in City of White House carry up to 16,700 ADT, and are crucial to circulation throughout the City. Speed limits on arterial roadways in City are typically set between 35 mph and 45 mph. Arterial streets are generally not suitable for Residential Traffic Calming applications. Currently there are two designated arterial roadways within the City: Hwy 31 and SR-76.

### **Highway/Interstate and Interchanges**

The function of highways and interchanges is to connect the City White House transportation network to the greater regional transportation system. Interstate 65 and the interchanges at State Road 76 provide for travel to and from the rest of the Nashville Area and beyond. Freeways and interchanges are maintained by the State (TDOT) and are unavailable for Residential Traffic Calming measures.

### **Speed Limits**

Speed limits for collector and arterial roadways are established based upon recognized engineering criteria related to roadway design.

Some of the criteria includes:

- street width
- lane width
- sight distance
- the 85th percentile speed (critical speed)
- amount, location and type of driveways
- parking supply and demand
- accident history
- vertical/horizontal alignment

Changing conditions may require a review of posted speed limits. By State statute, local streets, as defined by the vehicle code, have a Prima Facie speed limit for School zones. Prima Facie means that unless otherwise posted, the prevailing speed limit within residential school zone is 15 mph.

When evaluating speed limits for local streets the following criteria are considered:

- sight distance
- street width and usage
- availability of sidewalks or walkways
- existence of horizontal and vertical grades
- residential frontages
- existence of on-street parking
- close proximity to sources of pedestrian usage such as schools and parks

### **Stop Signs**

The City of White House does not install Stop Signs as part of the RTC Program. The Federal Manual on Uniform Traffic Control Devices (MUTCD) which is the recognized authority, states that ‘Stop Signs shall not be used for speed control.’ It has been the City’s experience that unwarranted stop signs do not make effective traffic calming devices for the following reasons:

- Drivers generally tend to make up the time lost at an unwarranted stop sign by speeding up between signs.
- Stop signs also increase the noise and pollution level in a neighborhood from cars decelerating to stop, then accelerating.
- Drivers tend to run unwarranted stop signs once they notice no traffic in the opposing directions.

Stop signs are installed at locations where right-of-way assignment is required due to a large number of vehicles entering the intersection from all directions. The following is a procedural list for stop sign traffic control:

1. Resident’s request for right-of-way management.

2. Analysis is performed, which includes traffic volume counts, pedestrian volume, accident history, sight distance and on-site observations.
3. If the intersection meets necessary requirements (warrants), then stop sign traffic control is usually recommended.
4. Recommendations for the installation of stop signs at unwarranted locations would need to be forwarded to the Transportation Advisory Committee and, ultimately to Board of Mayor Alderman for final approval.

### **Parking Restrictions**

The City of White House does not implement Parking Restrictions based on the following criteria: **(Not Applicable)**

1. Safety issues regarding traffic congestion or emergency vehicle access.
2. Visibility at intersections or driveways.
3. Parking management on public streets

Parking restrictions are installed either in the form of:

1. Red Curb or No Parking Signage– 24 hours per day, 7 days a week.
2. Time Limitations – Generally signs display time periods when parking is restricted along roadways.

It is important to ensure parking problems are not transferred onto other streets. Prior to installing parking restrictions on any street, an analysis is conducted for safety considerations. There is an assessment of overall parking demand for the surrounding area, and all parking restriction recommendations are forwarded to the Board of Mayor Alderman for approval.  
**(Parking Restrictions Segment is for Informational Purposes Only)**

### **Speed Display Signs**

Speed Display Signs are proven to be effective in alerting drivers of their traveling speeds. Such devices can be used:

1. On roadways near school zones where speed limits drop from 45 mph to 25 mph.
2. Neighborhoods where speed enforcement is the best alternative in managing traffic problems.
3. On any street where benefits of this device could be reaped by all users.

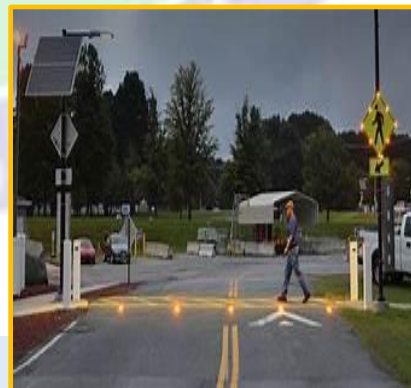
The advantage of Speed Display Signs is that unlike the tools found within the RTC Toolkit, which are generally not feasible for collector and arterial roadways, Speed Display Signs are a tool for arterial and collector roadways.



### **In-pavement Lighted Crosswalks**

This device consists of lights which are embedded in the pavement and are very bright. They can be activated either by the pedestrian, or passively through detection. When coupled with correct signage and markings, this can be effective at increasing pedestrian visibility. Ideal locations include areas that attract a high number of pedestrian traffic, such as in front of a restaurant or walking path, such as our Greenway. Key considerations in determining the effectiveness of In-Pavement Lighting include:

1. Location analysis.
2. Street geometrics.
3. Longevity
3. Traffic conditions (Volume, speed and visibility).



### **Speed Humps**

Speed humps are not practical mitigation measures on all streets and roadways. Generally, speed humps are designed for local neighborhood roadways with specific traffic volumes, vehicle speeds and residential frontages.



### **Traffic Diversion**

Traffic calming tools implemented in one area of the City, may have consequences that extend to other areas of the City, through traffic diversion or transference of the problem. For example, implementing turn restrictions onto one local street may divert additional traffic onto other local streets. In order to effectively manage traffic patterns throughout the City, and to ensure that



there is not a transferring of a problem from one location to another, it is important to initiate a petition and public hearing process.

The Transportation Advisory Committee adheres to a guiding policy that any traffic calming improvement shall not be considered if more than 10 percent of the traffic on a street will be diverted onto another neighborhood street.

Petitions ensure that affected residents understand the impacts of the traffic calming measure being advocated for implementation. Public notices and public meetings ensure that all residents that use the City's circulation system have equal access to information and, the users are given a chance to express their interests and concerns regarding proposed traffic calming measures.

### **Petition Process**

The RTC Program petition process for gaining consensus on Phase II mitigation measures require that all residents in the affected area understand the benefits and consequences of installing proposed traffic calming features. As such, the petition package consists of a full-page petition letter which must be signed by **each** resident on the Project Street. This petition letter, once signed by the resident, states that they understand the process, proposed traffic calming feature and agree to move forward with the request. The petition is distributed by the original requester to all residences defined within the project street. Residents along the project street will be able to review the proposed traffic calming feature(s) and decide whether to sign the petition or not. The petition must be returned to the City via mail or in person by each resident within 60 days.

Once all the petitions are received by the City, or the 60 day time period has passed, City staff will begin to review the petition for 75% acceptance, and will proceed to the next step.

### **Neighborhood Boundary**

A neighborhood boundary will be determined by City staff for each traffic calming request based on the specific characteristics of each neighborhood. This neighborhood boundary will be used to work with the property owners within this area to determine appropriate traffic calming solutions. Since the traffic pattern of each neighborhood is unique, each neighborhood will be evaluated on a case-by-case basis to determine the boundary of the traffic calming study area. It is important to make the study area small enough so that consensus can be achieved. However, it must be large enough to address and identify the source of the traffic problem. At minimum the neighborhood boundary will be a 1,000 feet boundary around the Project Street.



### **First Neighborhood Meeting**

All residents and property owners within a neighborhood boundary will be invited to attend the initial neighborhood meeting.

The purpose of the first meeting is to listen to the concerns of the neighborhood, discuss the RTC Program and process and the advantages and disadvantages of various traffic calming measures. It will be an educational meeting, both for the public to learn about the traffic calming process and its implications, and for staff to learn about the concerns of the public. Depending upon the size of the neighborhood, the City may request that the residents identify a Neighborhood Traffic Calming Committee or a contact person in order to coordinate the future outreach efforts within the neighborhood.

### **Moratorium Period**

City policy requires a 24-month moratorium period between the date an original application for traffic calming was denied and re-application for traffic calming on a particular street. This policy is a reflection of recognized traffic engineering practices which state that generally, traffic patterns do not change in less than two years. Exceptions to this moratorium period include changes in roadway conditions, new neighborhood development, and/or other changes that may alter traffic patterns in that location. For example, if City staff conducts an analysis and evaluation of a local street for speed hump installation, with a conclusion that the speed humps are not warranted, then residents cannot bring another petition in for speed humps within the 24-month time period.

# City of White House RTC Tool Kit

**This section highlights various techniques and measures designed to support traffic calming in neighborhoods. It is critical that the resources provided in the tool kit be used in an effort to understand the entire traffic calming process, including its positive and negative effects. Each page describes the traffic calming tool and provides guidance on how to use it properly to improve safety, access, mobility, and the quality of life for the whole neighborhood.**

**Keeping in mind the streets accommodate a variety of activities, the City strives to implement tools that will benefit all users. Improvements are not successful if they simply transfer the problem to another street. Therefore, it is important to work with City staff to perform appropriate traffic studies and test possible solutions.**

# Evaluation Legend

\$ - \$\$ - \$\$\$ - \$\$\$\$



**COST** Tools are marked with 1-to-4-dollar signs to indicate their cost. A single \$ indicates the tool is below \$100. While 4 indicate \$\$\$\$ that the tool is greater than \$40,000

**TIME** Tools will be marked by these three symbols indicate the time involved in installing the proposed measure. 🕒 Indicates minimal time, usually under 6 months. While 🕒 would designate anywhere from 6 months to 24 months. A 🕒 would signify longer lengths of time, potentially 24 to 60 months.

**IMPACT** Its important to evaluate overall feasibility, in addition to the specific criterion when considering traffic calming measures. These symbols will help guide you in determining the overall impact of a measure on the immediate environment

**EMERGENCY RESPONSE** First responders, such as Fire and Police, may have problems with tools marked by this symbol. Many physical tools can increase the emergency vehicle response time. A fire department representative will work with neighborhoods through the development process to avoid such problems.

**BICYCLE SAFETY** Consideration should be given to whether the proposed application of this tool will increase danger to bicyclists. Bicycle symbol with a red circle indicates increased safety risk.

**PEDESTRIAN SAFETY** Consideration should be given to whether the proposed mitigation measure will increase pedestrian safety. Pedestrian symbols with red circles indicate increased safety risk.

**TEMPORARY TOOL** This symbol indicates that the proposed tool can be installed on a temporary basis. Upon its proven effectiveness, consecutive steps can be taken.

## CHOKERS



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**Definition:** Chokers are curb extensions at mid-block that narrow a street by widening the sidewalk or planting strip.

Two lanes of travel are maintained, and bike lanes are placed on the outside of the choker.

**Advantages:**

1. Traffic is slowed at intersections.
2. Crossing distance is reduced for Pedestrian/Bicyclists at intersections.
3. No impact on emergency services.
4. Neck Downs.

**Disadvantages:**

1. Cannot be used on narrow streets due to fire department minimums.
2. May reduce number of on-street parking stalls.
3. Landscape maintenance



## DEVIATIONS

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**Definitions:** Deviations redraw the path of travel so that the street is not straight. This is done through the installation of offset curb extensions, forming S-shaped curves.

**Advantages:**

1. Accepted by public as speed control devices.
2. Aesthetically pleasing.
3. Reduce vehicle speed without impacting emergency response time.

**Disadvantages:**

1. Expensive to install.
2. Creates significant changes to property frontage.
3. Requires maintenance of landscaping.
4. Eliminates on-street parking.



# DIVERTERS



**Definition:** Diverters are barriers placed across four-legged intersections, interrupting through traffic flow. These barriers can be used to create a maze-like effect in a neighborhood.

**Advantages:**

1. Can eliminate cut-through traffic

**Disadvantages:**

1. Increases response time for emergency vehicles.
2. Transfers traffic onto other local streets.
3. Vehicles can turn at higher speeds because there is no opposing traffic.
4. May increase trip length for local residents.



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# EDUCATION

**Definition:** Activities that change people's perceptions and help alter driver behavior are most preferred. Meetings and workshops with neighbors and City staff can help implement and direct RTC applications.



Most traffic problems are a result of human behavior. Through outreach programs and neighborhood watch programs, all residents can play a big part in spreading the information.

## Advantages:

1. Education can be flexible in duration.
2. Everyone can afford it.



## Disadvantages:

1. May be difficult to measure its effectiveness.
2. May take time to be effective.



# FORCED TURN BARRIERS



**Definition:** Forced turn barriers are traffic islands installed to prevent or ensure certain turning movements at intersections



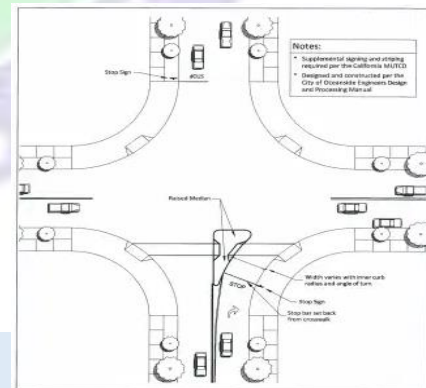
### Advantages:

- 1. Reduces cut-through traffic.
- 2. Changes driving patterns.



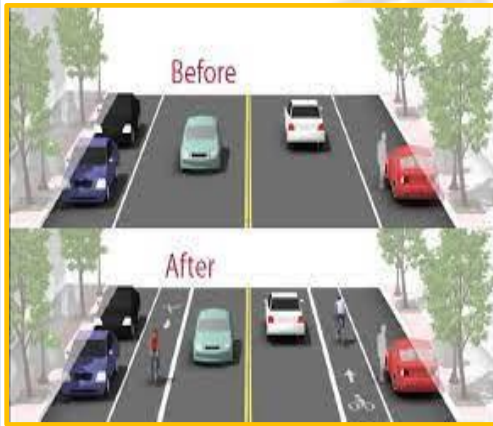
### Disadvantages:

- 1. Increases response time for emergency vehicles.
- 2. May increase trip length for residents.





## LANE NARROWING



**Definition:** Lane narrowing physically restricts the final width of a lane between nine to eleven feet, while expanding sidewalks and landscaped areas.

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### Advantages:

1. Good for pedestrians and bicyclists due to shorter crossing distance.
2. Slows traffic without significant impact on first responders.
3. Most effective on streets where excessive speed in primary due to street width.

### Disadvantages:

1. Eliminates on-street parking stalls.
2. Eliminates bicycle lane.
3. May increase accidents, as opposing traffic is brought closer.



# MEDIANS



**Definition:** Medians are traffic islands, installed to prevent or ensure turning movements at intersections. They also provide for separation between opposing lanes of traffic

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## **Advantages:**

1. Can eliminate cut-through traffic.
2. Changes driving patterns.
3. Increases pedestrian safety for crossing streets.

## **Disadvantages:**

1. Increases response time for emergency vehicles.
2. Transfers traffic to other local streets.
3. Increases trip length for local residents.



## NECK DOWNS



**Definition:** Neckdowns are the physical reduction of road width at intersections. They are similar to Bulb-outs at intersections.

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### Advantages:

1. Reduces vehicle speeds as motorists approach intersections.
2. Reduces crossing distance for pedestrians and bicyclists.



### Disadvantages:

1. Cannot be used on streets with established bike lanes. Neck-downs do not accommodate bicycle crossing at intersections.
2. Can eliminate some on-street parking



# ONE WAY STREETS



**Definition:** One-way streets change the operation of a roadway, by restricting its flow.

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## **Advantages:**

1. Street tends to be safer because there is no friction from opposing traffic.
2. Creates more on-street parking.
3. Increases pedestrian safety.



## **Disadvantages:**

1. Increases response time for emergency vehicles.
2. Can lead to increased vehicle speeds.
3. Requires collaboration of other traffic measures.
4. Needs to be paired with other one-way streets.



# MOBILE RADAR

**Definition:** This is a mobile radar display sign that informs drivers of their traveling speeds.

## Advantages:

1. Passive informational tool.
2. No impact on emergency services.

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## Disadvantages:

1. Cannot be used on narrow streets due to fire department minimums.
2. May reduce number of street parking stalls.



## POP UP CROSSWALK



**Definition:** Pop-ups are reflective bollards that serve as barriers for crosswalks. When a pedestrian/bicyclist initiates the crosswalk signal, the pop-ups are activated: they rise to a height of 3 feet, and remain there until the crosswalk is clear.

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### Advantages:

1. Traffic is restricted from turning/through movements until barriers subside.
2. Pedestrians/Bicyclist safety is greatly improved.
3. There is no negative impact on emergency vehicles.



### Disadvantages:

1. Most effective in areas with combination of high pedestrian activity and high traffic volume



# RAISED CROSSWALKS



**Definition:** A raised crosswalk is a speed hump designed as a pedestrian crossing.

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## Advantages:

1. Channelizes pedestrian crossings.
2. Makes pedestrians more visible.
3. Effective in reducing speeds - though not to the extent of a speed hump.

## Disadvantages:

1. Materials can be expensive.
2. May cause motorists to speed-up after crosswalk.
3. Increases response for emergency vehicles.



# RAISED INTERSECTIONS



**Definition:** Raised intersections are raised plateaus at intersections.

The plateau is generally 4 inches higher than the surrounding road surface.

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## Advantages:

1. Traffic is slowed at intersections.
2. Visibility is increased for Pedestrians/Bicyclist at intersections.
3. Less impact on emergency response time as compared to speed humps.



## Disadvantages:

1. Expensive to install.
2. Increase's response time for emergency vehicles.





# RUMBLE STRIPS



**Definition:** Rumble strips are patterned sections of rough pavement which alert motorists of changes in their environment.

## Advantages:

1. Alerts drivers of their speed and their travel environment.
2. Can be used in conjunction with many other mitigation measures, such as speed humps

## Disadvantages:

1. May not be successful alone.
2. Increases noise in neighborhoods.
3. Increased maintenance
4. Uncomfortable for motorcyclists and bicyclists
5. Eyesore to the community



# SPEED HUMPS



**Definition:** Speed humps are waved-shaped paved or mounted humps in the street. The height of the speed hump determines how fast it can be navigated without causing discomfort to the driver. Discomfort increases as the speed over the hump increases.

## Advantages:

1. Slows traffic immediately.
2. Self-enforcing

## Disadvantages:

1. Greatly increases response time for emergency vehicles.
2. Motorists tend to speed up between humps.
3. Increases noise and pollution in neighborhood



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## SPEED LIMIT SIGNS



**Definition:** Signs that inform drivers of the maximum safe driving speed under normal conditions.



### Advantages:



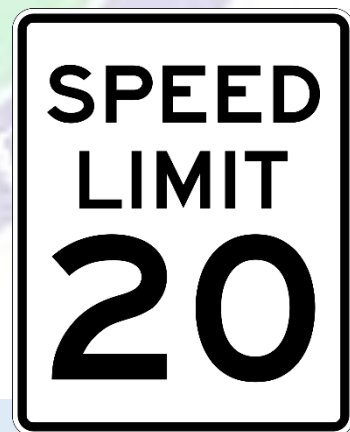
1. Inexpensive and quick to install.
2. Clear presentation of information.
3. Can test its effectiveness



### Disadvantages:



1. Neighborhoods may not like the visual aesthetics.
2. Requires behavior change.
3. May lose its effectiveness over time.
4. Not in my yard



## STOPS SIGNS



**Definition:** Red octagonal sign displaying the word “STOP”. Stop signs are used to designate the right-of-way at intersections. They are never used for speed control.

### Advantages:

1. May reduce cut-through traffic.
2. Low maintenance.

### Disadvantages:

1. Drivers speed up between stops.
2. Increase's noise and pollution in neighborhood.
3. Stop signs do not decrease average speeds.
4. Excessive use of stop signs renders them ineffective.
5. Can cause accidents when not expected or needed



## STREET CLOSURE



**Definition:** Street closed to motor vehicles using planters, bollards or barriers. Pedestrian and bicycle access is maintained.

### **Advantages:**

1. Eliminates cut-through traffic.

### **Disadvantages:**

1. Significantly increases response time for first responders.
2. Increase's trip length for local residents.
3. May increase traffic volumes on neighboring streets.

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# STRIPPING AND MARKINGS

**Definition:** A low cost, low maintenance traffic flow and traffic speed modifier.



### Advantages:

1. Passive control.
2. Low cost.
3. No impact on emergency response time.



### Disadvantages:

1. Paint and striping can be hazardous to bicyclist during rainy conditions.
2. Passive control may not be effective.



## TRADITIONAL ENFORCEMENT



**Definition:** Sporadic monitoring of speeding and other violations by police.

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**Advantages:**

1. Serves to inform public that speeding is an undesirable behavior for which there will consequences.



**Disadvantages:**

1. Effect is not permanent.
2. Enforcement is an expensive tool.



## TRAFFIC CIRCLES



**Definition:** Traffic circles are raised circular areas placed in an existing intersection. Drivers travel in a counter-clockwise direction around circles. Traditional circles are “yield upon entry”, meaning that cars in the circle have the right-of-way and cars entering the circle must wait to do so until the path is clear. When a traffic circle is placed in an intersection, no automobile can travel in a straight path.

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### Advantages:

1. Reprioritizes traffic to increase accessibility for local residents.



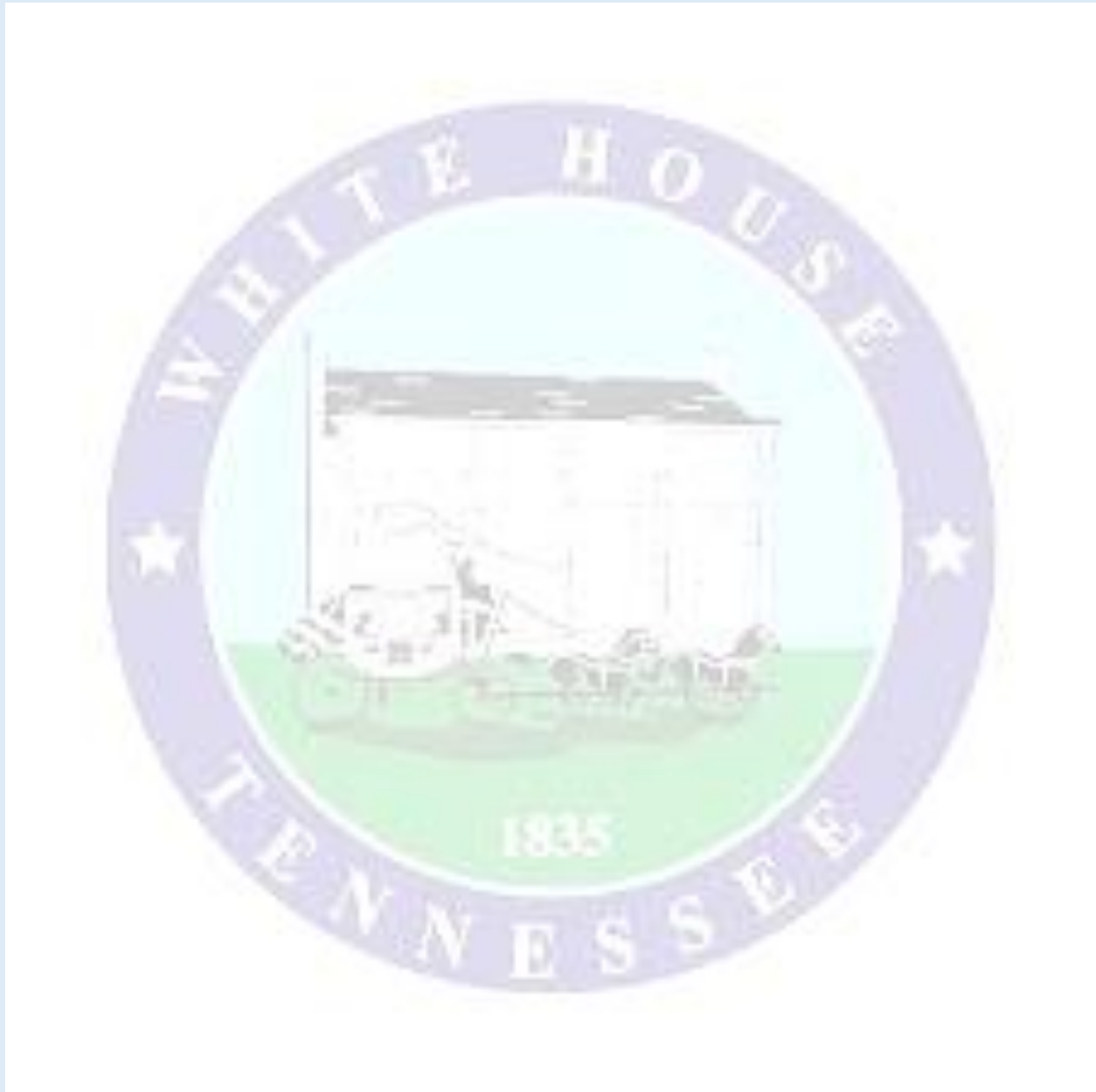
### Disadvantages:

1. May make pedestrian/bicycle crossing confusing
2. May create short cuts





# Appendix





## CITY OF WHITE HOUSE

725 Industrial Drive · White House, TN 37188

Public Services Department

**PHASE I APPLICATION FOR TRAFFIC CALMING DATA COLLECTION**  
 (PLEASE TYPE OR PRINT IN INK) (PLEASE COMPLETE ITEMS 1 -11 IN THEIR ENTIRETY)

<b>Applicant Information</b>	1. Name:		2. Date:	
	3. Physical Address:			
	4. Telephone No.		5. Cell No.	6. Email
	7. Mailing Address (if different than physical Address)		8. Applicant Signature	
<b>Type and Location</b>	9. What type of traffic issues are being encountered?			
	10. Name of Street Where Traffic Concerns are Being Observed:			
<b>Comments</b>	11. Comments: (Attach additional sheets / supporting documentation if needed)			

<b>This section to be completed by Public Works Department</b>	12. Date Application Received:		13. Received By:	
	14. Street Classification:		15. Street Width: <span style="float: right;">Feet</span>	
	<input type="checkbox"/> Local Arterial <input type="checkbox"/> Residential Collector <input type="checkbox"/> Other		16. Street Length: <span style="float: right;">Feet</span>	
	17. To be considered for traffic calming measures, the street should meet the criteria listed in the most recently adopted Traffic Calming Policy. <ul style="list-style-type: none"> <li>Distribution of Educational Materials</li> <li>Data Collection (When Available)</li> <li>Traditional Police Enforcement</li> <li>Present Data to Residents of the City's findings.</li> </ul>			
18. <input type="checkbox"/> Approved based on Data Collection <input type="checkbox"/> Denied based on Data Collection				
Signature of Public Services Director or his/her designee: _____ <div style="text-align: right;">Date: _____</div>				



**CITY OF WHITE HOUSE**

725 Industrial Drive · White House, TN 37188  
Public Services Department

**PHASE II APPLICATION FOR TRAFFIC CALMING MEASURES**  
(PLEASE TYPE OR PRINT IN INK) (PLEASE COMPLETE ITEMS 1 -11 IN THEIR ENTIRETY)

<b>Applicant Information</b>	1. Name:	2. Date:	
	3. Physical Address:		
	4. Telephone No.	5. Cell No.	6. Email
	7. Mailing Address (if different than physical Address)		8. Applicant Signature
<b>Type and Location</b>	9. Type of Calming Device Requested: (Specify)		
	10. Name of Street Where Traffic Calming Device is Requested:		
<b>Comments</b>	11. Comments: (Attach additional sheets / supporting documentation if needed)		
<b>Neighborhood Consensus</b>	12. Must have petition documentation of at least 75% of households along the project street.		

<b>This section to be completed by Public Works Department</b>	13. Date Application Received:	14. Received By:
	15. Street Classification: <input type="checkbox"/> Local Residential <input type="checkbox"/> Local Residential Collector <input type="checkbox"/> Other	16. Street Width: _____ Feet
		17. Street Length: _____ Feet
	18. To be considered for traffic calming measures, the street should meet the criteria listed in the most recently adopted Traffic Calming Policy: <input type="checkbox"/> This street meets the criteria listed in the most recently adopted Traffic Calming Policy <input type="checkbox"/> This street does not meet the criteria listed in the most recently adopted Traffic Calming Policy. <input type="checkbox"/> Petition turned in with 75% of residents that live on the street. <input type="checkbox"/> Data collection from Phase 1 on file. <input type="checkbox"/> Warrant Analysis documentation from Phase 1 on file <input type="checkbox"/> Explanation of non-compliance issues:  Signature of Public Services Director or his/her designee: _____ Date: _____	
<b>Recommendation to approve specified traffic calming measures</b>	City of White House Police Chief _____ Date: _____ City of White House Fire Chief _____ Date: _____ City of White House Public Services Director _____ Date: _____  Following approval by the Police Chief, Fire Chief, and Public Services Director, this recommendation shall be submitted to the City Administrator for presentation to Board of Mayor and Aldermen.	

City of White House  
Residential Traffic Calming Program  
Petition Traffic Calming Analysis

Dear Petitioner,

The City of White House has received your petition for Traffic Calming Analysis.

In order for the City of White House to consider the proposal for the Transportation Services Division will conduct an analysis. The data collected will be presented to the Transportation Advisory Committee for further consideration and recommendation(s).

By signing the petition, you are stating that you understand the proposal presented and support the City's efforts to begin the process for determining the feasibility and applicability of recommendations.

If you have any further questions regarding the petition process please contact the Public Services Director at 615-672-3654.

Sincerely,

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Public Services Director

## CITY OF WHITE HOUSE TRANSPORTATION ADVISORY COMMITTEE GUIDELINES AND BY-LAWS

### **ARTICLE I: NAME**

A. The name of this group shall be the City of White House Transportation Advisory Committee (hereinafter referred to as “Committee”).

### **ARTICLE II: HISTORY**

A. The Committee was established by the City Administrator in May 2021.

### **ARTICLE III: PURPOSE**

A. The purpose of the Committee is to provide ongoing input to the City of White House on the provision and delivery of transportation issues affecting the City of White House.

### **ARTICLE IV: CHARGE**

A. The Committee’s main objectives are to:

1. Review and provide recommendation(s) on all transportation related complaints, comments, or suggestions.
2. Review and provide comments and recommendations on the City’s General Plan circulation elements and specific plans.
3. Review and provide recommendations for Board of Mayor and Aldermen on local, state, and federal transportation legislation affecting White House.
4. Establish an annual project study list to address specific issues.
5. Other matters as referred to Committee from Board of Mayor and Aldermen.

### **ARTICLE V: MEMBERSHIPS**

A. The members will consist of City Administrator, Planning & Codes Director, Public Services Director, Chief of Police, Fire Chief, City Engineer, and Public Works Manager.

## **ARTICLE VI: COMMITTEE ORGANIZATION**

A. Meetings are to be held as needed.

B. Quorum: A majority of voting members in good standing shall constitute a quorum for the purpose of action on any issue or agenda item.

C. Members shall notify the Chair or staff in the event of an anticipated absence from a regularly scheduled meeting. Three absences in any twelve-month period shall constitute voluntary resignation from the Committee.

The resigned position will be announced publicly and filled under the appointment process. Attendance records will be maintained by staff.

D. Meetings shall follow the Tennessee Open Meetings Act, the General Assembly declared it to be "the public policy of the state that the formation of public policy and decisions is public business and shall not be conducted in secret." T.C.A. § 8-44-101.

1. Agendas: A written agenda shall be developed by the Chair and the staff, and shall be delivered to all Committee members at least 72 hours in advance of the Committee meeting.

2. Minutes: Written summary minutes shall be recorded by the staff, typed and issued to all Committee members for their approval.

3. Written Correspondence/Verbal Communication: All written official correspondence and verbal communication on behalf of the Committee or any Committee member that is directed to any outside agency, organization or person shall have the consent of the Committee.

E. Officers: The Committee shall elect a Chair and a Vice Chair from among its members. Term of office is two years.

a. Chair: Shall preside at all meetings of the Committee; decide on all points of order; appoint sub-committee membership; follow up on work of sub-committees; represent Committee to the Board of Mayor and Aldermen; call special meetings; coordinate agenda preparation with staff; encourage active participation of members.

b. Vice-Chair: Shall preside at all meetings in the absence of the Chair.

F. Staff: Shall record all activities of the Committee and keep written summary minutes of all Committee meetings; record attendance; arrange for filling vacancies; prepare agenda in consultation with Chair; provide information necessary for Committee work; assure compliance with applicable laws; lend professional expertise; track time spent on Committee work.

**ARTICLE VII: POWERS OF COMMITTEE:**

- A. Committee members may recommend and the Committee establish sub-committees as deemed necessary. Appointment of sub-committee members will be made by the Chair. Sub-committees may consist of persons not on the Advisory Committee, and may be of any size. Sub-committee Chair will be elected by the sub-committee membership. Sub-committees will be appointed either for single task force assignments or as an ongoing standing sub-committee. Sub-committees are for the sole purpose of researching, reviewing, or providing overall policy direction on programs, facilities, or services prior to being presented to the full Committee.
- B. Committee will submit recommendations to the Board of Mayor and Aldermen in writing, as approved by a majority of the Committee.
- C. Committee shall establish annual goals and action plan consistent with Board of Mayor and Aldermen policies and direction.

**ARTICLE VIII: AMENDMENTS**

- A. Any proposed amendment to these bylaws must be approved by a majority vote of the Committee, and approved by the Board of Mayor and Aldermen by Resolution.