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Final Report

The Development of Hartford's Neighborhood Traffic Calming Master Plan

July 2005

Prepared for the Department of Public Works, City of Hartford, Hartford, Connecticut, USA

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Disclaimer: *The contents of this report represents the knowledge, experience, and expertise of the citizens of Hartford, the City of Hartford and Urban Engineers and authors in providing ideas and concepts to improve safety, access, mobility, and livability through traffic calming and traffic management strategies. This report does not constitute a standard, specification, or regulation, and is not intended to be used as a basis for establishing civil liability. This report presents concepts that can be developed for construction through proper and sound engineering. Adherence to the principles found in this report can lead to an overall improvement in neighborhood traffic safety.*

The Urban Engineers team prepared this report for the City of Hartford. For more information on details found in this report contact the Urban Engineers Project Director, 1010 Wethersfield Avenue, Hartford, CT 06114, (860) 296-0700. *This project was funded by the City of Hartford.*

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A few words from Urban Engineers…

Development of this master plan was a very ambitious undertaking by the City of Hartford. We know of no other city in the country that has approached traffic calming from a citywide perspective the way Hartford has. Tackling the entire city at one time demonstrates that Hartford's leadership is courageous, innovative and resolved to making Hartford a more livable city. Development of a master plan would not have been possible without the involvement of Hartford residents, community organizations and the business community who participated so vibrantly and energetically by sharing concerns and offering solutions.

The master plan represents a beginning – a first step. Because it is a comprehensive plan for all the city's residential neighborhoods, implementation will take many years. But the good news is that the City has already started experimenting with traffic calming devices and recommendations, even before the final master plan had been published. Hartford's Department of Public Works has re-striped several of the city's major arteries to reduce driver confusion, speed and add a bike lane where there was room, built two trial roundabouts, installed a traffic chicane by changing parking patterns and changed the rush hour one-way reversible lanes on Asylum Avenue to two way traffic– a pattern that had existed since 1958. These changes in Hartford streets are an indication the City does not intend for this plan to gather dust on a shelf. It is fully committed to calm traffic in city neighborhoods.

As you look through the master plan there are several things you should keep in mind.

- ✓ The master plan was developed largely through a community workshop or charrette process. Participants learned about a wide range of tools that can be used to calm traffic and then applied them to conditions in their neighborhoods. Accompanying the master plan is a report that documents the history of the plan's development including a traffic calming primer, neighborhood descriptions and characteristics, charrette minutes, photographs, sketches and other pertinent information that helped mold the plan.

- ✓ The master plan can be a dynamic document. While the plan takes a comprehensive approach to traffic calming, conditions within the City are in constant change. It is expected the plan will provide an approach for slowing

traffic that, in time, may evolve into standards that can be transferred to streets that may not have a particular device recommended in the master plan. On streets that are recommended for calming, devices may also be modified to reflect experience gained from earlier deployments. Any changes made, however, should be done with care, so the issue being addressed is not transferred to another street.

- ✓ Not all requests or suggestions made by the stakeholders were included in the master plan. Traffic calming recommendations were evaluated by factors such as whether the cost far outweighed the benefit, if the device was perceived as needed by the majority of stakeholders or whether or not the traffic calming treatment could be practically engineered.

- ✓ Farmington Avenue and a section of Park Street and New Park Avenue underwent an extensive community involvement process before this project began. This resulted in concept plans that complemented the master plan. Therefore, Urban Engineers - with the consent of the affected neighborhoods - "adopted" these concepts into the master plan.

- ✓ Some of the devices shown in the master plan have never been used in Hartford and will take some getting used to when first implemented. Examples include roundabouts, parking chicanes and raised intersections. Education, practice and patience will help overcome the challenge of getting used to these new features that will become a part of Hartford.

- ✓ All the traffic calming devices will not be built at one time. That would be too disruptive and too costly. Rather, building the traffic calming devices is expected to be done as opportunities that will facilitate construction arise, such new development projects, planned major street reconstruction or when special funding becomes available. It is important to point out that street resurfacing only affords opportunities for re-striping and does not usually present an opportunity to deploy major improvements.

- ✓ The City of Hartford commonly uses high material standards for street construction. In recognition, materials proposed for the construction of traffic calming devices are consistent with these high standards. Less costly alternative do exist for some of the materials. In such cases, the designer

should carefully weigh the cost savings, budget and project scope and character to determine the appropriate construction materials.

For Urban Engineers, it has been a privilege and an honor for us to have been a part of this project. Now, however, the “baton” must be passed – from Urban Engineers to the City and to the many people who volunteered to help move the plan forward. And so, it is with some sadness that we let go of this project but we do so knowing that it is being handed over to a remarkable group of people who will make certain of its full success.

The Urban Engineers Team
July 2005

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ES Executive Summary

Development of Hartford's Neighborhood Traffic Calming Master Plan

Hartford's citywide policy on traffic calming goes back to when urban areas of the United States were facing traffic operational and safety related challenges and to when street networks were perceived to be narrow and people wanted to reach their destinations in a hurry. The US Congress, concerned about motor vehicle fatalities that in 1970 had almost reached 53,000[1], tried to solve these challenges by funding programs such as TOPICS (Traffic Operations Improvements to Increase Capacity and Safety).

In the early 1970's, the City of Hartford (City) took advantage of the TOPICS program to conduct an extensive study that helped identify capacity and safety related deficiencies at various locations. Improvement projects were then implemented which prepared the City of Hartford to efficiently handle its traffic growth well into the 1980's. This came at a time when Hartford was experiencing a significant building boom that resulted from actual and projected growth of the insurance and finance business sectors. This triggered an increase in jobs and a moderate growth of the City's population. In the early '90s, corporate mergers and takeovers resulted in job losses and stagnation in employment for the area. A direct result of this economic turn was a reduction in police manpower, an increase in crime and a necessary redirection of police resources from traffic enforcement. Eventually, motorists perceived that motor vehicle violations had little consequence; therefore, violations increased.

Hartford's traffic engineer was called upon to solve these problems. He was asked by the public to install stop signs, make streets one way, ban left and right turns, etc. The public also demanded the installation of speed bumps, devices that first appeared in private lots. But the speeding and cut through

[1]USDOT Bureau of Transportation Statistics, Motor Vehicle Safety Data, Internet Site http://www.bts.gov/publications/national_transportation_statistics/2004/html/table_02_17.html,

traffic persisted. It was clear that the City had to find a way to encourage traffic from neighborhood streets onto arterial and collector streets. To that end, the City of Hartford became one of the pioneer cities to develop and implement a neighborhood traffic plan in its Asylum Hill area that prohibited through traffic from traversing the neighborhood. This project was undertaken primarily to help reduce crime in the neighborhood and was implemented using federal crime prevention funds.

When public requests to resolve traffic problems continued to flood Hartford's traffic engineers' office, the City decided to adopt a policy on speed hump installation. The Department of Public Works set aside a small amount of funding to implement their installation. However, it quickly became apparent that these isolated and scattered installations would send traffic onto adjoining streets shifting problems from one location to another. What the City needed was to study each and every block for traffic operations, safety and quality of life perspectives. These studies would involve extensive date collection for each of the City's 714 city blocks. Once collected, data (such as traffic volumes and crash reports) would have to be analyzed so that problem areas could be identified. A detailed and comprehensive long range implementation plan would then have to be developed to resolve these problems. This plan could include a variety of traffic calming devices and techniques.

The City also recognized that planning for and conducting the study should not be done in isolation. Rather, it should be done in cooperation with the City's neighborhoods and must include consensus building and community outreach. Otherwise, without the "buy-in" of residents and businesses, any implementation plan would be doomed to fail.

Efforts by the City administration and the Department of Public Works resulted in the allocation of $500,000 for preparation of a citywide traffic calming plan.

The Department of Public Works, working with the City's Department of Finance and its citizens, selected Urban Engineers as the project consultant, who was then retained to develop a traffic calming master plan for the City's fourteen residential neighborhoods. In doing so, it is believed that Hartford

became the first city to approach traffic calming from a citywide perspective. Tackling the entire city at one time demonstrates that Hartford's leadership is courageous, innovative and resolved to making Hartford a more livable city. The master plan serves as a blueprint showing traffic calming improvements that can help slow speeding vehicles, reduce cut-through traffic, and better manage traffic on non-residential streets. This report describes the "bottom to top" or grassroots community process that was used to develop the traffic calming master plan. To the extent practically possible, the recommendations contained within the master plan are a direct result of input received from Hartford's residents and other stakeholders from within the community.

Traffic calming is a transportation specialty that serves to minimize high-speed and high-volume traffic in communities. Traffic calming measures considered for the Hartford master plan included intersection treatments, such as curb extensions, roundabouts, raised intersections, and modified intersections, as well as mid-block treatments, including road diets, speed tables, chicanes, and medians. When developing the plan, the working Urban Engineers applied these treatments holistically, taking care not to simply move problems from one location to another. Thus, when measures are proposed for one street, solutions should be applied to nearby streets equally.

The traffic calming master plan was developed through a process that began when the City of Hartford hired its consultant in August of 2002. The first step of this process involved collecting traffic data, including volumes, speeds, and crash records. This data was later used to validate concerns identified by neighborhood stakeholders. Urban Engineers then familiarized itself with each neighborhood through a series of site inspections. Photographs were collected, measurements were taken, and existing relevant studies were reviewed. Urban Engineers then conducted five focus groups for stakeholders with unique traffic-related concerns and needs. Focus groups were held with emergency service providers, senior citizens, transit authorities, merchants, and persons with disabilities. Next, Urban Engineers conducted a citywide kick-off "charrette" or workshop open to anyone with an interest in the project. The purpose of the kick-off charrette was to provide attendees with background information about the project, demonstrate how

Urban Engineers would work with the neighborhoods, and to discuss the proposed project schedule.

Each of Hartford's residential neighborhoods then hosted a highly interactive "opening charrette" for all residents with an interest in traffic calming. The fourteen neighborhoods included Asylum Hill, Barry Square, Behind the Rocks, Blue Hills, Clay Arsenal, Frog Hollow, Northeast, Parkville, Sheldon Charter Oak, South End, South Green, South West, Upper Albany, and the West End. The opening charrettes began with a presentation designed to familiarize the attendees with traffic calming. Residents were then led through a series of activities where they identified common values and prioritized traffic-related issues. Following these activities the attendees were divided into groups of six to eight people and each group received a map of the neighborhood. Using information on traffic calming techniques, and working from their established priorities, they discussed, and then selected tools to address the needs of their neighborhood. Following the design session, each group reported their suggestions to Urban Engineers and fellow neighborhood residents.

Based on suggestions from the opening charrette, as well as a review of existing plans and traffic data, Urban Engineers developed a system-wide set of traffic calming solutions and prepared conceptual maps showing its recommendations for each neighborhood. Although the maps closely reflected the residents' suggestions, not all requests were included in the final plan. All suggestions were evaluated by factors such as whether the cost far outweighed the benefit, if the device was perceived as needed by the majority of stakeholders or whether or not the traffic calming treatment could be practically engineered. It should be noted that Farmington Avenue and a section of Park Street and New Park Avenue underwent an extensive community involvement process before this project began. This resulted in concept plans that complemented the neighborhood plans. Therefore, Urban Engineers - with the consent of the affected neighborhoods - "adopted" these concepts into the neighborhood plans.

The neighborhood maps were presented to each neighborhood during a "closing charrette." The closing charrettes gave residents an opportunity to view the neighborhood plans that they helped build, and to recommend any

changes or additions. Comments from the closing charrettes were recorded and appropriately incorporated into the neighborhood plans. The individual neighborhood plans were then combined into a single document. This document serves as the actual master plan and is layered on an AutoCAD document furnished to Urban Engineers by the City. It was designed so that a user could easily find a street of interest and look up the type of traffic calming device, if any, proposed for that street. A summary of the devices proposed for deployment in each neighborhood can be found in Exhibit *i*.

All the traffic calming devices shown in the master plan will not be built at one time. To do so would be too disruptive and too costly. Rather, traffic calming plan implementation is expected to be done as opportunities arise. These types of opportunities will occur when streets are reconstructed, when new developments requiring changes in the street are proposed and when other objectives require spending funds in different city neighborhoods. Some of the funding is expected to come directly from or through the State. Cost estimates, therefore, were developed using methods consistent with those prescribed by the State of Connecticut Department of Transportation. Costs for the traffic claming treatments vary due to differences in the quality of materials and landscaping. Therefore high-end and low-end options were developed with the total estimated low-end cost for the entire master plan being $31 million and the total estimated high-end cost for the entire master plan being $44 million. These estimates include the approximately $16.4 million associated with the implementation of the Farmington Avenue and Parkville Plans. If these costs are excluded from the estimate, the low-end and high-end construction costs for the master plan become $14.6 million and $27.6 million, respectively. Incorporating traffic calming into scheduled construction projects and routine maintenance may reduce these costs. At some locations the City may choose to implement traffic calming devices as a stand-alone project. In these situations the City may attempt to fund the project through several potential sources including federal and state grants, local general funds, and development impact fees. Urban Engineers identified several funding programs that the City may wish to apply to for funding.

The City started experimenting with traffic calming devices and recommendations, even before the final master plan was published. Several

of the city's major arteries were re-striped to reduce driver confusion and slow traveling speeds. Bicycle lanes were installed on streets wide

City of Hartford, Connecticut
Master Traffic Calming
Estimate of Probable Construction Cost for Overall Project

Neighborhood	Mountable Granite Curb Roundabout [RB]	Granite Curb Extension [CE]	Road Diet [RD](feet)	Enhanced Cross Walk [EC]	Raised Cross Walk or Speed Table [ST]	Raised Intersection [RI]	Street Closure [SC]	Parking Chicane [PC] (# of 300' segments)	Intersection Realignment [IR] (see note #2)	Granite Curb Median [MI] with Landscaping	Raised Crosswalk [RC]	Cost Summary
Asylum Hill	0	3	0	7	1	1	3	0	0	1	0	
Barry Square	3	20	8,780	1	3	0	0	0	0	0	0	
Behind the Rocks	5	42	6,930	0	20	3	1	0	1	8	0	
Blue Hills	12	58	3,510	15	5	3	0	0	1	0	0	
Clay Arsenal	3	36	5,490	14	2	2	0	0	0	0	1	
Frog Hollow	0	49	0	15	0	0	0	4	1	3	0	
North East	6	96	22,900	13	22	6	0	0	0	0	0	
Parkville	1	18	3,810	0	0	2	0	18	0	0	0	
Sheldon Charter Oak	4	27	8,390	2	2	2	0	3	0	0	0	
South End	6	37	16,920	0	4	1	0	0	1	0	1	
South Green	0	9	5,070	4	2	1	0	0	0	0	0	
South West	5	31	7,680	0	3	1	0	0	0	0	0	
Upper Albany	2	99	5,080	0	0	2	0	29	0	0	0	
West End	6	21	3,050	9	24	5	0	9	0	6	0	
Farmington Avenue Plan												$12,000,000
Parkville Plan												$4,400,000
City Wide Totals	**53**	**546**	**97,610**	**80**	**88**	**29**	**4**	**63**	**4**	**18**	**2**	

Exhibit i: Summary of Recommended Devices by Neighborhood

enough to accommodate them. These “road diets” have reduced vehicle speeds by up to 6 miles per hour. The Department of Public Works has also built two trial mini-roundabouts, installed two traffic chicanes by changing parking patterns, re-timed traffic signals, and changed the rush hour one-way reversible lanes on Asylum Avenue to two way traffic—a pattern that has existed since 1958.

Chapter
1

Introduction and Background

In the early '80s, Hartford experienced a significant building boom that resulted from actual and projected growth of the insurance and finance business sectors. This triggered an increase in jobs and a moderate growth of the City's population. The City responded to this growth by better managing its existing transportation system rather than adding any more physical capacity to it. In the early '90s, many corporate mergers and takeovers resulted in job losses and stagnation in employment for the area. A direct result of this economic turn was a reduction in police manpower and an increase in crime necessitating police enforcement resources to be redirected away from traffic enforcement. Eventually, motorists perceived that motor vehicle violations had little consequence; therefore, violations increased.

Today, with speeding vehicles and cut-through traffic on residential streets, Hartford's residents are experiencing a deteriorating quality of life. To reverse this trend the City must be made livable. The public has demanded that City leaders develop a blueprint that would help reduce local neighborhood cut-through traffic, reduce speeding, and keep non-residential traffic on non-residential streets. Responding to this demand, the City's leaders initiated development of a citywide neighborhood traffic calming plan – the first of its kind in the United States.

This plan shows street improvements that can help slow speeding vehicles in each neighborhood, reduce cut-through traffic, and better manage traffic on non-residential streets. The plan calls for an environment in which pedestrians, vehicles, and bicycles can travel with increased safety by:

- developing traffic calming techniques that are designed to slow traffic to the desired speed limits

- enhancing the character and physical environment of the neighborhoods
- creating pedestrian and bicycle access and street crossings
- discouraging traffic from cutting through residential areas

This report describes the process that was used to develop the traffic calming master plan for the City of Hartford. It is important to note that, to the extent practically possible, the recommendations contained within the master plan are a direct result of community input. In other words, this plan was developed by Hartford's residents and other stakeholders from within the community. This community-based approach allows the neighborhood challenges to be more accurately identified by those who know the issues best. It also generates more support for the plan once the plan is developed. Urban Engineers, Inc., the consultant hired by the City to develop the plan, along with Urban Engineers, played the role of a facilitator and provided, wherever appropriate, necessary engineering services.

Development of the master plan began in August 2002. Urban Engineers was given two years to complete the project. Exhibit 1 shows a timeline with all of the major milestones that were met during the development of the plan.

Date	Activity
9/10/02	Project kickoff workshop
9/13/02	Emergency service provider focus group
11/19/02	Barry Square/South End opening charrette
11/19/02	Senior citizen focus group
11/20/02	Asylum Hill opening charrette
11/20/02	Transit focus group
11/21/02	West End opening charrette
11/22/02	Merchant focus group
11/25/02	Barry Square, South End, West End walking audits
1/21/03	Upper Albany opening charrette
1/22/02	Asylum Hill closing charrette
1/23/03	Blue Hills opening charrette
1/27/03	Northeast opening charrette
1/28/03	Disability focus group
1/28/03	Northeast opening charrette
3/18/03	Barry Square/South End interim stakeholder meeting
4/3/03	West End interim stakeholder meeting
4/8/03	Frog Hollow opening charrette
4/8/03	Sheldon Charter Oak opening charrette
4/9/03	Parkville opening charrette
4/10/03	West End closing meeting
4/14/03	Upper Albany closing charrette
4/30/03	Blue Hills interim stakeholder meeting
5/29/03	Asylum Hill steering committee
6/16/03	South Green opening charrette
6/17/03	Blue Hills closing charrette
6/17/03	Northeast closing charrette
6/18/03	Parkville closing charrette
6/21/03	Behind the Rocks/South West opening charrette
6/23/03	Clay Arsenal opening charrette
6/24/03	Barry Square/South End closing charrette
7/22/03	North Beacon/Fern roundabout debriefing
9/15/03	Clay Arsenal closing charrette
9/17/03	Frog Hollow closing charrette
9/18/03	Behind the Rocks/South West closing charrette
9/18/03	South Green/Charter Oak closing charrette
1/20/04	Behind the Rocks/South West interim stakeholder meeting
1/20/04	West End follow up meeting
8/20/04	Draft report and master plan submitted to City staff
6/30/05	Final report and master plan submitted to City staff

Exhibit 1: Project Milestones

Chapter
2

Traffic Calming Overview

Three years before development of the master plan was started, the City of Hartford prepared a report that acknowledged issues and challenges with neighborhood traffic. This report served as the impetus for creating a citywide plan. The September 1999 report observed that "traffic problems on residential streets are many and they are varied"[2] and went on to discuss the more common traffic issues faced by Hartford's neighborhoods. These issues were identified as:

Traffic Safety: Accidents, or the concern that results from observing close calls or near misses, is quite often a problem in residential areas. This concern is typically expressed by a demand for safer streets especially if these streets serve as primary pedestrian routes for school children.

Traffic Speed: High-speed vehicles on residential streets, even if there are not many, threaten the quality of life and safety of residents. Roadway characteristics may encourage motorists to speed. Examples of such characteristics include straight and wide sections of roadway, and a lack of vegetation giving the roadway an "open" look. Also, main thoroughfares with many intersections can be hazardous since the minor side streets are typically stop sign controlled and the main street traffic is not. The lack of traffic control on main thoroughfares for a mile or more encourages motorists to travel at a self-described "comfortable" speed that usually exceeds the posted limits. This can reduce the number of safe opportunities for minor side street traffic to safely turn into or cross the main street.

Traffic Volumes: Residents frequently express their concern for safety by referring to large volumes of vehicles using residential streets.

[2] Department of Public Works, Neighborhood Traffic Issues, Final Report, City of Hartford, CT September, 1999

Residents also sometimes cite that many vehicles driving along local streets do not live in the area, but rather are "cutting through" small streets to avoid congestion on more major arterials. The argument that this through traffic has no place on small local streets is heard by policy makers and traffic engineering professionals often.

Traffic Source: When cut-through traffic occurs on residential streets, such traffic can influence the perception that there is a high traffic volume on the street even if traffic volumes are relatively low.

Traffic Composition: Trucks, buses and other oversized vehicles may present noise, vibration, and air quality problems on residential streets. This can adversely affect the quality of neighborhood life.

Reduction of Street Activities and Social Activities: When the volume, speed, and presence of vehicles increases on residential streets, activities such as walking, jogging, biking and children playing in front yards is often reduced due to fear of accidents or injury.

Impacts on Land Use: Traffic that is excessive, noisy, or threatening may lead to increased residential turnover. Also, streets that are readily accessible may have higher crime rates, although such accessibility is desirable for emergency vehicles.

Appearance, Identity, and Maintenance: The appearance of a residential area can be negatively impacted by the presence of high traffic volumes, speeding vehicles, and oversized vehicles. This can also affect real estate values and tax revenues.

Traffic calming is a transportation specialty that serves to minimize high-speed and high-volume traffic in communities. Traffic calming strategies can include active or passive techniques[3]. Active techniques (or strategies) concentrate on physical changes to streets and street networks. Passive techniques include the installation of traffic signs, signals and markings. Passive techniques differ from active techniques in that they can be easily violated since they do not provide a physical restriction, and their success

[3]Buckhurst Fish & Jacquermart Inc.,Traffic Calming Study, City of Stamford, CT February, 1997

relies on traditional enforcement policies and public awareness campaigns. These are often difficult to apply for prolonged periods of time.

Traffic calming is quickly evolving into a new, independent technology with accompanying standards and practices[4]. Traffic calming employs various measures principally to slow traffic in general and also to discourage traffic from cutting through residential side streets. It is also used to create a greater harmony between traffic and neighborhoods -- a greater balance among vehicles, pedestrians, and communities.

In addition to slowing traffic, traffic calming measures can also dissuade motorists from electing certain routes (because of the presence of traffic calming devices) in favor of routes that can more adequately accommodate higher traffic volumes.

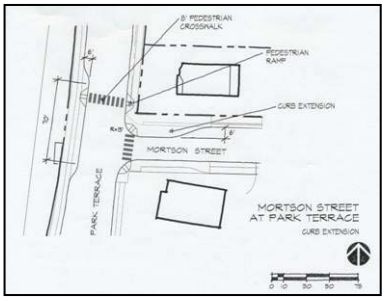
Traffic calming measures installed along and within certain streets in Hartford may potentially reduce the negative impacts and common problems that have some residents concerned.

Traffic calming measures considered for the Hartford master plan are described below. They are described as they pertain to intersection and to mid-block treatments. When developing the plan, Urban Engineers applied these treatments holistically taking care not to simply move the problem from one location to another. Thus, when measures are proposed for one street, solution should be applied to nearby streets with similar use.

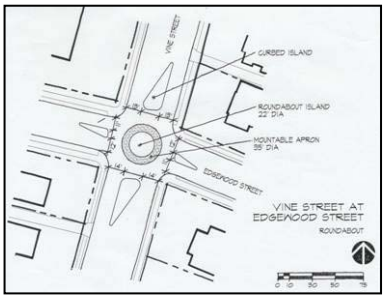
Intersection Treatments

Generally, if cost is not a factor, it is easier and more effective to place traffic calming features at intersections: there is more room; this is where most conflicts occur, where the pedestrian needs the greatest support and where there are the fewest private property concerns. The following intersection treatments were considered for Hartford streets:

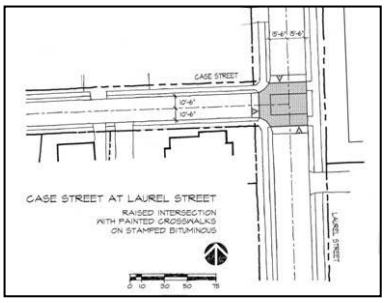
[4] Coleman, M., and Hartnett, S. Traffic Calming Techniques and Management, The World Wide Web, http://www.engr.washington.edu/~uw-epp/Transpeed/trc.html. Located April 15, 1998. Last modified unknown.



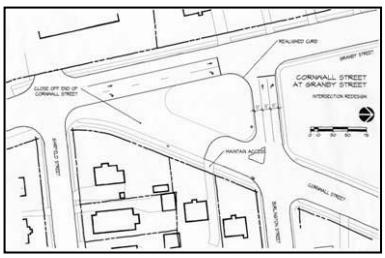
Curb Extensions: Curb extensions, also know as bulbouts, extend the sidewalk or curb line into the street, reducing the street pavement width. Curb extensions can be applied at intersections or mid-block. They can improve pedestrian safety by reducing the distance pedestrians have to walk in order to cross a street. They also can improve the visibility of a pedestrian who can see an oncoming car more easily. Curb extensions may reduce vehicle speeds by narrowing travel lanes and discouraging high speed turns. Curb extensions also protect on street parking by providing physical barriers to keep vehicles in travel lanes and serve to eliminate parking at street corners.



Roundabouts: Roundabouts are circular, raised islands located at centers of intersections. Approaches to a roundabout are always controlled by YIELD signs and a splitter island that "forces" approaching traffic to bear to the right as it enters the intersection. These splitter islands can be raised or painted islands. Traffic enters and circulates within roundabouts in a counterclockwise direction and exits by turning right onto the desired street. Although it can be difficult to retrofit a roundabout to fit in an existing intersection's geometry, roundabouts offer several benefits. They increase safety by virtually eliminating the more severe types of right-angle or T-bone type accidents. When properly designed, roundabouts also force vehicles to slow down significantly as they travel through the intersection. Roundabouts can also provide an aesthetic benefit to a neighborhood through landscaping opportunities to residents or neighborhood groups who may "adopt" these devices and plant them with low-growing shrubs and flowers.



Raised Intersections: Raised intersections physically raise the street to sidewalk height. Vehicle ramps are provided on each of the intersection approaches. The change in grade slows motorists to 15-20 mph. Raised intersections often take advantage of colorized asphalt or concrete. They fit in many narrow roadways and are especially helpful around schools, parks and other areas where pedestrians are present.

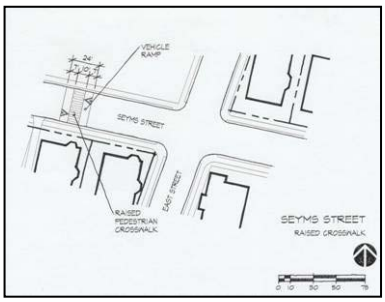


Modified Intersections: Modified intersections take back unwarranted asphalt, usually returning it to green space. Often motorists turn too fast when curb radii are unnecessarily wide. Modifying an intersection can improve sight distance and can create small parks or create a gateway appearance.

Mid-Block Treatments

It often becomes necessary to use mid-block treatments when blocks are overly long and straight, making them conducive to speeding.

Road Diet: A road diet is a technique which involves reducing the number of travel lanes on a roadway. The area gained from the removed travel lanes may be used to provide on street parking or bike lanes. Reducing the number of travel lanes on a road prevents drivers from passing and thus allows the prudent driver to set the speed. Road diets may also involve narrowing the width of the existing lanes. Narrower lanes cause drivers to feel less comfortable driving at excessive speeds. Often, the road diet includes a median left turn lane which allows drivers to make a left turn without obstructing through traffic.



Speed Tables: Speed tables are essentially flat-topped speed humps. Speed tables have three parts: a ramp up, a flat top section, and ramp down. They are more pleasant to drive over than speed bumps. Speed tables also do not produce as much vehicle noise. They effectively reduce the speeds of a wider range of vehicle types than bumps. However, speed tables should not be used on bus routes or prime emergency response routes. Speed tables can be a good solution at school crossings and parks. They can be marked as crosswalks or constructed out of concrete pavers.

Chicanes: A chicane is a series of raised islands which alternate from one side of the street to the other forcing drivers to navigate an S-shaped curve. Chicanes can be applied to longer sections of roads than most tools. A variation of this treatment is the parking chicane. Parking chicanes use parked vehicles and raised or painted islands to provide the deflection. Parking chicanes are perhaps one of the most economical types of traffic calming treatment because little construction is required. However, their success is contingent upon a street with a high parking demand.

Medians: Medians are raised islands located near centers of roadways. Medians can reduce vehicle speeds by creating horizontal deflection in travel

ways, visually tightening the roadway, and using up excess pavement width. Medians may include landscaping which allows motorists to gauge their speed against tall vertical features. They may be combined with pedestrian crossings, in order to provide refuge for the pedestrian and alert the motorist. In some cases, medians reduce access to some driveways so care must be taken so that such impacts are minimized.

Chapter
3

The Hartford Process

In August 2002, the City of Hartford hired Urban Engineers, Inc. to develop a comprehensive traffic calming plan through a process designed to engage the community in identifying problems and solutions to concerns about speeding and traffic safety. Fourteen of Hartford's residential neighborhoods were identified by the City as neighborhoods that would benefit from traffic calming. They were Asylum Hill, Barry Square, Behind the Rocks, Blue Hills, Clay Arsenal, Frog Hollow, Northeast, Parkville, Sheldon Charter Oak, South End, South Green, South West, Upper Albany, and the West End. Three neighborhoods, North Meadows, South Meadows and Downtown, were not included in the assignment. In the case of the former two neighborhoods, their commercial and industrial nature precluded them from any residential-type of traffic calming. In the case of the latter, much ongoing work in Downtown (renovations to the Civic Center, widening of Asylum Street, the reopening of Temple Street, development of the College Park campus, etc) already incorporated or planned to incorporate many traffic calming elements. Some residents of SoDo (South Downtown) did make it a point to participate in community traffic calming charrettes.

The process itself was approached as follows:

Step 1: Data Collection

Prior to entering a neighborhood, Urban Engineers gathered traffic volume, speed and accident records and tabulated the data, creating a baseline of information, which – once the public interaction process began - helped validate concerns that stakeholders identified. Additional data was collected as needed. A summary of this data can be found in Appendix A.

Step 2: Neighborhood Orientation

Urban Engineers was oriented to each neighborhood through a walking audit and site inspection. This process was complemented by personal exchanges with area residents, photographs, and a windshield audit of all principal streets in the neighborhood. Urban Engineers measured street widths, estimated block lengths, observed motorist behaviors, conducted impromptu interviews, gathered available maps and generated new ones. Bicycle routes were identified through meetings with staff from the City's Planning Department and Department of Public Works. Relevant studies conducted by others were also collected.

Step 3: Focus Groups

Urban Engineers conducted five focus groups for stakeholders with unique concerns and needs. Focus groups were held with emergency service providers, senior citizens, transit authorities, merchants, and persons with disabilities. Minutes from each of these focus groups are appended to the report while a summary of each focus group sessions follows below.

Emergency Service Providers: From the onset of this project, Urban Engineers was cognizant of concerns by residents and emergency personnel (fire, police and ambulance) that traffic calming devices may negatively impact emergency response times. To address this, Urban Engineers met with emergency responders in the early stages of planning. Representatives from the City's fire department, police department, and ambulance service providers met to discuss the impact of traffic calming on emergency response. During this focus group session, emergency responders expressed concerns with delays experienced at stop controls, congested intersections, and locations where motorists park too close to intersections. Emergency responders also expressed their desire for minimal interruptions on arterial and collector streets and, as well as on local streets.

Senior Citizens: The senior citizen focus group involved many residents of the Immanuel House community located on Woodland Street. The senior citizens requested that Urban Engineers take into consideration the slower walking speeds of elderly pedestrians, as well as vision and hearing

limitations that some seniors may have. Additionally, the senior citizens expressed concern about crossing Woodland Street where they felt there was a speeding problem.

Transit Authorities: This focus group included representatives from the Connecticut Transit, Connecticut Department of Transportation, Greater Hartford Transit District, All Aboard and the Capitol Region Council of Governments. Salient points that emerged from this focus group were that the plan should provide a greater sense of importance for bicycles and pedestrians and that the plan should help pedestrians get to bus stops more easily.

Merchants: During this focus group, the major issues that concerned merchants were speeding, the need for higher visibility crosswalks, illegal parking and not enough legal on-street parking and the lack of traffic enforcement.

Persons with Disabilities: By far, the strongest concern expressed at this focus group was for visually impaired persons crossing a roundabout-equipped arterial road. It was pointed out by Urban Engineers that several other tools can be combined with a roundabout to improve the yielding percentage of vehicles, including: flat top speed tables, pulsing lights, advance pavement markers, and rumble strips on the exiting areas.

Step 4: Kick-Off Charrette

A citywide Kick-Off "charrette" or workshop was held for anyone with an interest in the project. During this charrette, approximately sixty-five attendees learned about the project, how it was going to be conducted in the fourteen neighborhoods and what the proposed schedule was. Urban Engineers presented information on traffic calming techniques, explaining where and why they are used. Through a number of interactive tasks, attendees got a taste of how Urban Engineers would work with each neighborhood to develop their own solutions. Those in attendance represented all but one of the project neighborhoods. Minutes from this charrette can be found in Appendix B.

Step 5: Opening Charrettes

Public process has been broken in America for a number of years. Town development, roadway, and traffic calming projects are sometimes halted due to a failure of stakeholders to participate, to cooperate with one another, or to take ownership of the problems and solutions that affect them the most.

To overcome this challenge, Urban Engineers used an inventive and more effective public process that was developed by an Urban Engineers team member and that specifically relates to streets, traffic management, walking, bicycling, and safety. This new process places high levels of trust in the public, and was designed to make citizens and other key stakeholders the designers and owners of their own neighborhood plan.

Each neighborhood hosted an "opening charrette" for all residents with an interest in traffic calming. The public participated in a two and a half hour evening session that included host introductions and a 40-minute traffic calming orientation presentation by Urban Engineers. Residents were led through a series of activities where they learned to collaborate and discovered the common values that they hold. They identified key traffic calming issues for their neighborhood and set priorities for treatments. Following the priorities setting, citizens worked in groups of six to eight people around a table with maps of their neighborhood. Using information on traffic calming techniques, and working from their established priorities, they discussed, and then selected tools to address the needs in their neighborhood. Following the design session, each table reported out their findings. Consensus is achieved, and key comments are entered in the consultant recordings of the event.

Additional input was received from residents through Urban Engineers' traffic calming website, *www.hartfordtrafficcalming.com*. Input was encouraged through the entire master plan development not only through the website but through write-ins, phone calls and one on one office and field meetings. Urban Engineers tried to make sure that anyone who had a traffic-related concern that could be addressed by traffic calming was heard and included in the process.

Step 6: Engineering

Based on the suggestions from the charrette and a review of existing neighborhood plans, Urban Engineers developed a system-wide set of solutions to the speeding and volume concerns, prepared conceptual drawings for specific locations, and selected tools for enhanced illustrated drawings. Location evaluations of each device were conducted through field observations and data collection to determine the feasibility of installing a particular type of traffic calming measure. Staff considered impacts to storm water drainage, handicap access, maneuverability of buses and emergency

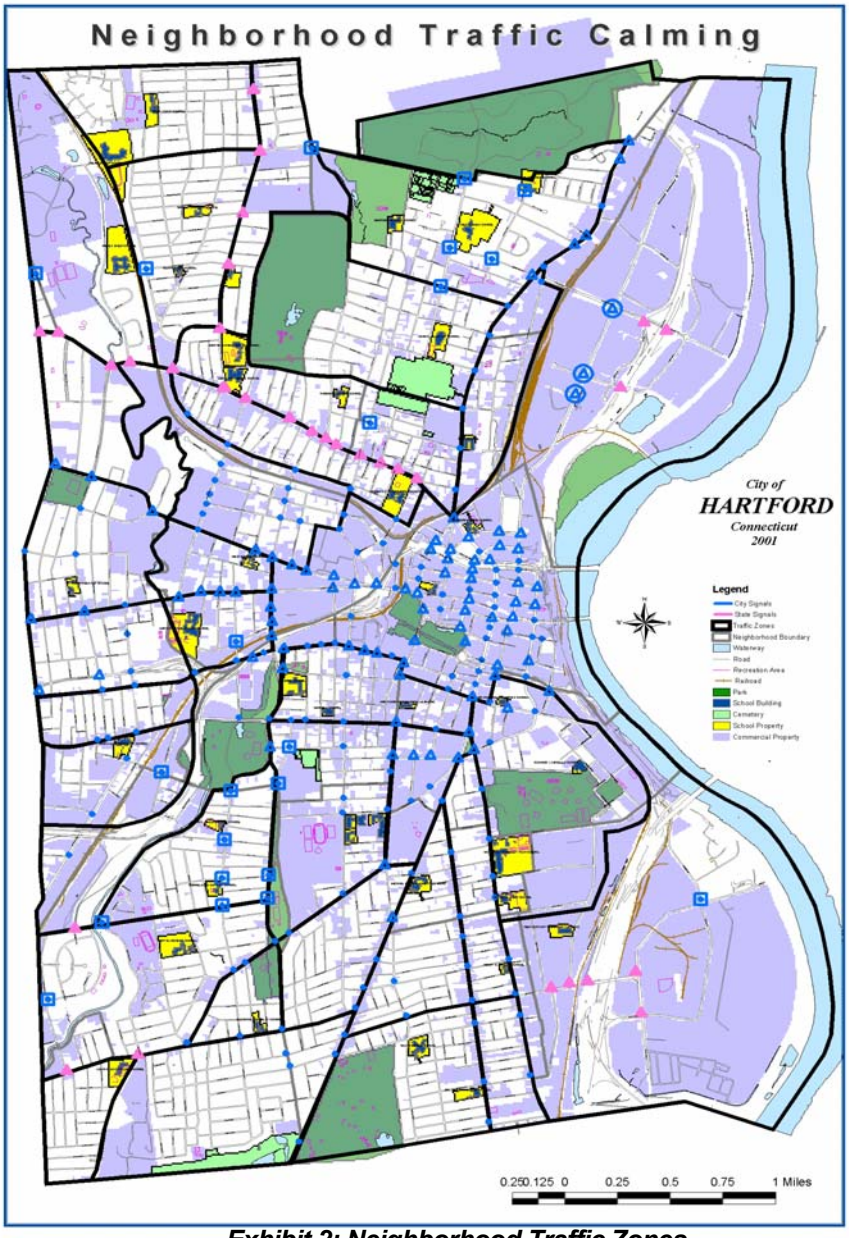


Exhibit 2: Neighborhood Traffic Zones

vehicles, snow plows and garbage trucks along with other issues that may impact or be impacted by proposed construction. To check that a traffic calming measure proposed for a particular location did not inadvertently shift traffic problems from one residential street to another, we undertook a *holistic* approach that simultaneously considered impacts to the residential streets located within a designated Neighborhood Traffic Zones (NTZ) – a manageable area within a neighborhood bounded by a certain land use, arterial or geographic feature. The heavy black lines in Exhibit 2 designate the boundaries of these NTZ's.

Step 7: Closing Charrettes

Each neighborhood hosted a "closing charrette" at which Urban Engineers presented its plan for the neighborhood. Residents were presented with a system-wide map showing the recommended traffic calming treatments. These treatments reflected appropriate comments made by participants at the opening charrettes. Comments were received and incorporated into the final version of this report, which include the final conceptual design map, and recommend implementation priorities. Minutes of all charrettes are included in Appendix B.

Step 8: Plan Development

Following the conclusion of the closing charrettes, Urban Engineers began developing the master plan which consisted of transcribing the suggested neighborhood plans into a single document. This document served as the actual master plan and is layered on an AutoCAD document furnished to Urban Engineers by the City. It was designed so that a user can easily find a street of interest and look up the type of traffic calming device, if any, proposed for that street. It was also designed so that City staff could convert the document into a GIS (Geographic Based Information) system already in use by the City.

During this process it was helpful, in many cases, to develop sketches of certain locations to better illustrate the proposed improvements. While these sketches are conceptual in nature and not intended to represent the final

design of the improvements, they were useful in conveying information to interested parties. These sketches are included in Appendix C.

Chapter
4

Neighborhood Plans

At the conclusion of the public process, the suggested plans developed during each neighborhood charrette were refined so that they included appropriate neighborhood feedback and applied any lessons learned during the period that several devices were tested on local streets. The result was a collection of maps showing recommended devices for each neighborhood. Associated with each map is a profile of the neighborhood. Each profile was reviewed by the City of Hartford's Planning Department. The neighborhoods shown in Exhibit 4 are presented in alphabetical order on the following page.

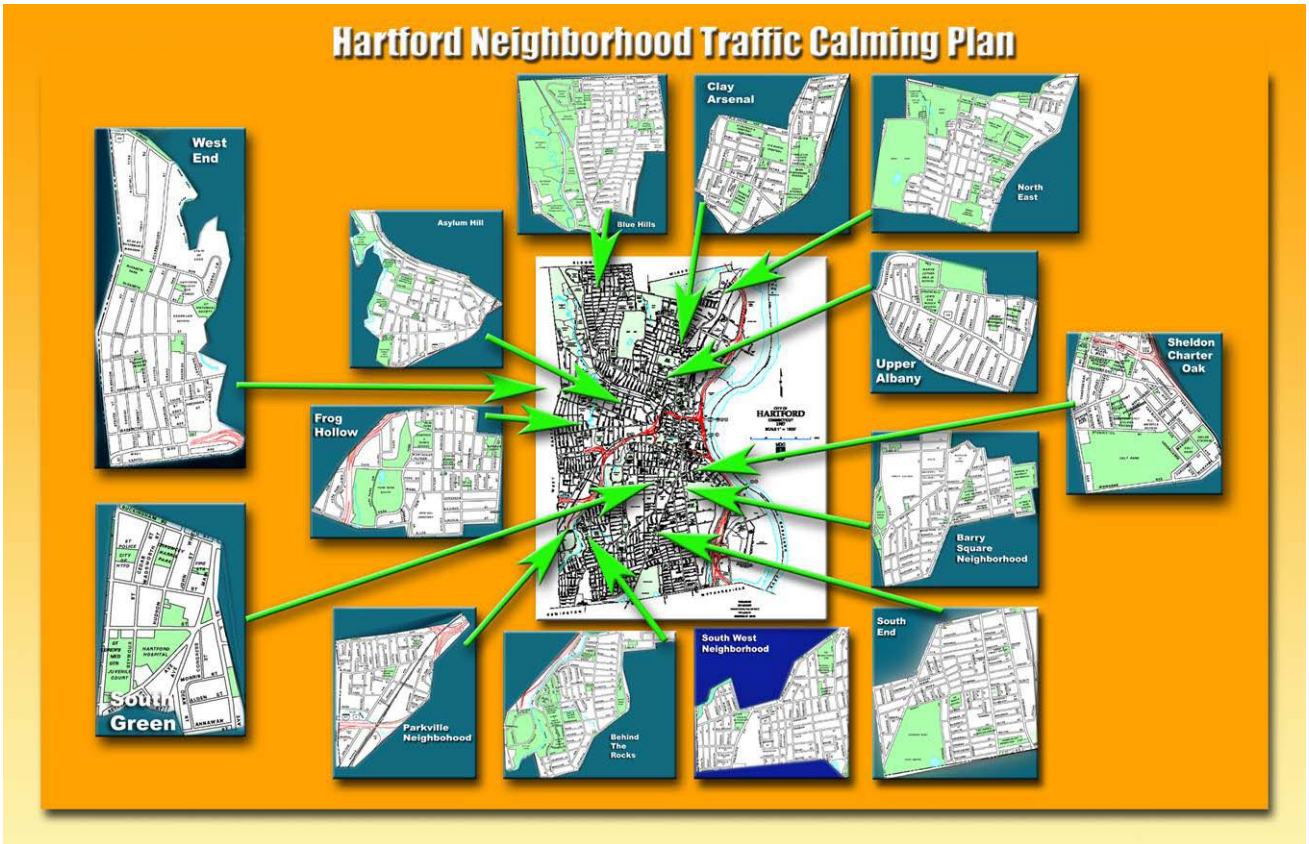
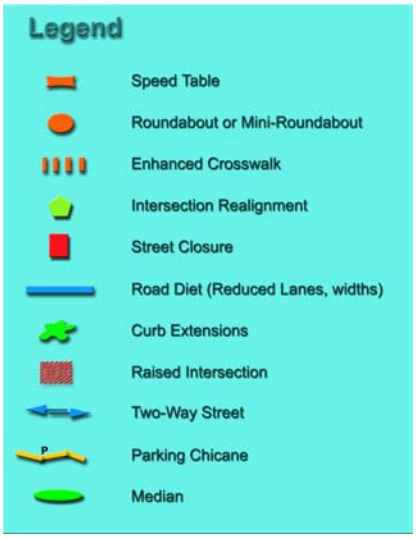
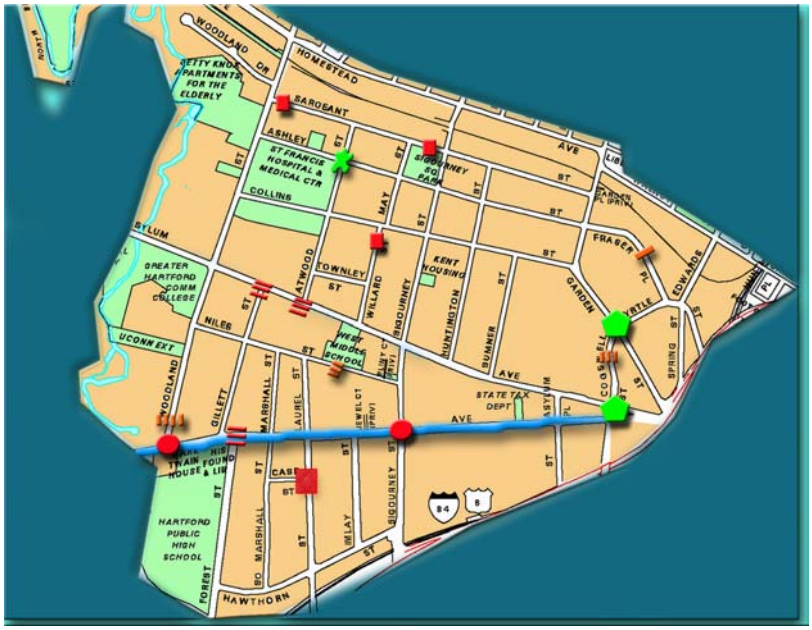


Exhibit 4: Neighborhood Locations

Asylum Hill





Location: Asylum Hill is centrally located, directly west of downtown Hartford, and east of the West End neighborhood. Natural and man-made boundaries, I-84, the Griffin Rail line and the north branch of the Park River, define much of this neighborhood's borders.

Neighborhood Characteristics: Asylum Hill derives its name from geography and history. It rises up from downtown and the lower lying Connecticut River flood plain. It was the home of the first institution for educating the deaf in the country, the American Asylum for the Education and Instruction of Deaf and Dumb (now American School for the Deaf), where sign language was developed. In the early 1900's Asylum Hill was an established residential area with spacious Victorian style homes inhabited by many prominent citizens. By mid century the face of the neighborhood began a dramatic change, as the headquarters of major insurance companies, Aetna Life and Casualty and The Hartford Insurance Group, as well as many smaller insurance companies grew. To make room for employee housing, blocks and blocks of single family homes were replaced with brick box apartment buildings not suited for families, though today many families occupy these dwellings. The 615-acre neighborhood has a mix of uses – high

density residential and one and two family houses, condos, large offices with surface parking and garages, churches, schools and a hospital. About 10,500 people live in Asylum Hill neighborhood.

Important Features: Large financial institutions and a regional hospital have a large presence in Asylum Hill. They employ 20,000 people who travel to and from work through the neighborhood, creating large amounts of rush hour traffic. Asylum Hill is home to major cultural institutions. There are seven churches, two public schools, including a high school, several arts institutions – Hartford Conservatory, Hartford Symphony, Connecticut Opera and the Hartford Children's Theater. The Mark Twain House, a national historic landmark and the Harriet Beecher Stowe Center are in Asylum Hill and CPTV, Connecticut Public Television, recently built a state-of-the-art headquarters on Asylum Avenue. The neighborhood has two major east-west arteries, Farmington and Asylum Avenues, that are major routes connecting downtown Hartford to it western suburbs. Woodland Street is also a busy north-south artery, bringing many vehicles from I-84 to St. Francis Hospital.

Neighborhood Plans and Projects: In 2002 two significant traffic studies, initiated by community groups and resulting in strategic plans and recommendations, were completed. Catherine Johnson, an architect and town planner, developed a traffic study as recommended in the Asylum Hill Neighborhood Strategic Plan for revitalization, primarily for streets extending from Sargeant Street southward to Niles Street. This study included recommendations for installing traffic calming measures and changing traffic patterns. Project for Public Spaces developed a corridor plan for Farmington Avenue that called for a re-design of the travel lanes and streetscape, to make the avenue more pedestrian friendly while improving traffic flow. Recommendations from these studies were reviewed and many were incorporated into the Hartford traffic calming plan.

Neighborhood Traffic Calming Plan Development: During the November 20, 2002 opening charrette, Asylum Hill residents agreed that heightened safety and beauty, and slower vehicle speeds are improvements they would like to see in their neighborhood. Several residents stated that they had trouble crossing Farmington Avenue and Asylum Avenue due to speeding

drivers who failed to yield to pedestrians, and vehicles parked too close to intersections. The crossing on Woodland Street, north of Farmington Avenue was a primary concern for senior citizens residing at Immanuel House. Many residents of Immanuel House have experienced difficulty crossing Woodland Street to get to a church located on the opposite side of the street. Many of the senior citizens feel that the crosswalk is unsafe. Residents feel that the alternating direction lane designations on Asylum Avenue are confusing and dangerous. They would prefer typical two way flow. Other key issues discussed at the opening charrette included driver and pedestrian safety at the intersection of Farmington Avenue and Asylum Avenue, speeding on Laurel Street, speeding on Fraser Place, a need for parking enforcement on Huntington Street, school crossings on Niles Street, and re-opening street closures which resident feel are unattractive.

A closing charrette was conducted on January 22, 2003. Asylum Hill residents were presented with a preliminary draft of the neighborhood plan. Residents requested several additions including improved signal timings, and relocating Hartford Association for Retarded Citizens (H.A.R.C.) bus stops so that they would not obstruct through traffic on Asylum Avenue. Street closures were again discussed at this meeting, however no consensus was reached as to whether they should be re-opened or remain closed. The residents in attendance then voted on what level of landscaping they would like the traffic calming device to feature. They selected an intermediate level of landscaping which would be visually attractive yet easily maintained. A steering committee was formed by those interested in guiding the plan through the implementation stage and beyond. The neighborhood stakeholders agreed that Urban Engineers had their approval to move forward with the plan.

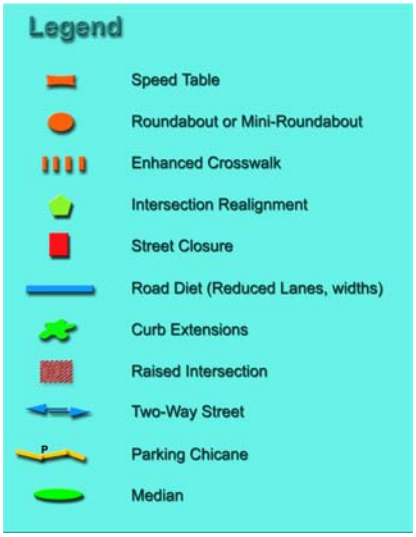
A follow-up meeting with members of the neighborhood steering committee was held on May 28, 2003. A revised draft of the Asylum Hill plan was presented and discussed. The steering committee requested additional crosswalks on Asylum Avenue. Street closures were discussed but no decision was made at the meeting as to whether they should be re-opened. (Note: subsequent to the meeting, a petition was received by Urban Engineers on March 31, 2004 that was signed by twelve Ashley Street residents requesting that the Ashley Street be reopened). The committee

asked that Urban Engineers take the downtown circulator route into consideration, and ensure that the plan does not interfere with emergency routes.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Asylum Hill neighborhood:

1. Adopt the Farmington Avenue plan developed by the Farmington Avenue Alliance. The plan calls for lane reductions and landscaping along the avenue. Roundabouts are recommended at Woodland Street and Sigourney Street. Raised crosswalks and speed tables are to be included at the intersection of Farmington Avenue and Forest Street. Also, the section of Asylum Avenue between Spring Street and Garden Street should be made a one way westbound street at all times, with east bound traffic turning right onto Broad and left onto Farmington.
2. Study the alternating direction of travel lanes on Asylum Avenue to determine whether or not the street can accommodate two-way traffic at all times.
3. Place midblock crossings on Woodland Street in front of the church, Niles Street in front of West Middle School, on Cogswell Street, and on Asylum Avenue at the intersections of Gillett Street and Atwood Street.
4. Beautify the Sargeant Street and Willard Street closures.
5. Install a raised intersection on Laurel Street at Case Street.
6. Use speed tables on Fraser Place.
7. Modify the intersection of Garden Street and Cogswell/Myrtle Street with a median island, curb extensions, and lane re-striping.
8. Remove the curb extension on the eastside of Willard Street at Asylum Avenue to allow H.A.R.C. vans turning into Wyllys Street to do so more easily.
9. Replace the street closure on Ashley Street with curb extensions.

Barry Square



Location: The Barry Square neighborhood (for the purpose of this plan) is located in the south section of Hartford. It overlaps the official city boundaries of the Frog Hollow South and South Green neighborhoods and does not contain a portion of Maple Avenue and side streets between Maple, Fairfield and White Street. The neighborhood is bounded on the north by Vernon, Broad, Lincoln, Washington, Retreat, Essex, Maple, Franklin, Annawan, Wethersfield and Wawarme, on the east by Ledyard, the south by Meadow, Barker, Maple and White and the west by Fairfield and Summit.

Neighborhood Characteristics: Barry Square is a neighborhood with many large, wide streets that have a high traffic volume that connect to mostly low-density residential side streets. The major streets, Broad, Fairfield, Washington/Webster and Maple go north/south; New Britain Avenue is an east/west artery. Fairfield Avenue is entirely residential, with spacious homes. Maple and New Britain Avenues are largely commercial, with shops, a post office and restaurants that serve the neighborhood. Washington/Webster and

Broad Streets have large institutions, the Institute of Living, Learning Corridor and Trinity College. The neighborhood is named for a prominent public space, Barry Square, where six neighborhood streets converge (Webster, Maple, Bond, Campfield, Mountford and King). There are two public district schools (Michael D. Fox and Bulkeley High School) as well as a parochial elementary school (St. Augustine's), four magnet schools at the Learning Corridor and Trinity College. Barry Square does not have a public park. Open space is limited to Old South Cemetery on Maple Avenue and a triangular open area at Barry Square. The neighborhood has two churches, branch library, entertainment venues such as the Webster Theater and Polo Club and emerging unique small businesses such as a bread factory and vegetarian juice bar and restaurant.

Important Features: Barry Square, with its post office, shops, Campfield Avenue Library Branch, St. Augustine's Church and Webster Theater serves as a bustling anchor for the Barry Square neighborhood. Area institutions take up a lot of land area but, with walls and fences around their campuses, are not physically well knit into the community. The Institute of Living is one of the first mental health centers in the country and first Connecticut hospital. An 1823 era Institute building still stands on beautifully landscaped grounds. Trinity College is an elite private school established in 1823 that has been at its present location since 1876. The newest neighborhood institution built in the late 1990's, the Learning Corridor, is a public educational center for students in the region, with four schools ranging from pre-school through high school.

Neighborhood Plans and Projects: The Maple Avenue Neighborhood Revitalization Zone Plan which encompasses most of the Barry Square neighborhood promotes mixed-use development along commercial streets, better design to create a sense of place and gateways at arrival points along the major corridors, traffic calming measures on residential streets, shared parking, upgrading streetscapes to encourage walking and redevelopment of strategic sites. These sites included Barry Square, Trinity Plaza (as a potential skating and retail facility near the corner of Broad Street and New Britain Avenue), Broad and Maple and the Greenberg-Beatman site on Maple, between Bushnell and Otis.

Neighborhood Traffic Calming Plan Development: The Barry Square opening charrette was held in conjunction with the South End opening charrette on November 19, 2002. Residents of both neighborhoods stated that their primary goals were to create a peaceful, safe, clean, and friendly community. Speeding and noise throughout the neighborhood were identified as the community's top two concerns. They also feel that the Barry Square intersection (Maple Avenue at Campfield Avenue) is confusing and difficult to cross. Drivers speed through the Roxbury Street and Henry Street intersection without having to stop. Residents were concerned with Maple Avenue because the lane configuration allowed vehicles to pass on the right, encouraged speeding, and created parking problems. Similar problems were observed on Franklin Avenue and Wethersfield Avenue. Residents feel that adding bicycle lanes where possible would improve the neighborhood. Some members of the community are unhappy with one way designations on certain streets because they divert traffic elsewhere. Cut through traffic is a concern on Barker Street. Drivers speed and run stop signs on West Preston. Finally, residents would like the entire neighborhood to become more pedestrian friendly.

A group of Barry Square stakeholders attended a walking audit on November 23, 2002. The group visited key locations such as the Barry Square intersection and Maple Avenue. At the Barry Square intersection the residents discussed possible treatments intended to improve pedestrian safety, reduce speeding, and beautify the area. On Maple Avenue the group discussed reducing the number of lanes and participated in a demonstration highlighting the benefits of curb extensions on Webster Street.

An interim meeting was held on March 18, 2003 in order to gain feedback from stakeholders prior to the closing charrette. Among the issues discussed was the Barry Square intersection. Urban Engineers considered several treatments for the intersection, some that were very expensive. Residents at the interim meeting indicated that their most significant concern for that intersection is the pedestrian crossing on Maple Avenue. They believe that placing a curb extension on the median between Maple Avenue and Campfield Avenue is a suitable improvement. The curb extension could enhance pedestrian safety as well as discourage wide turns. The interim

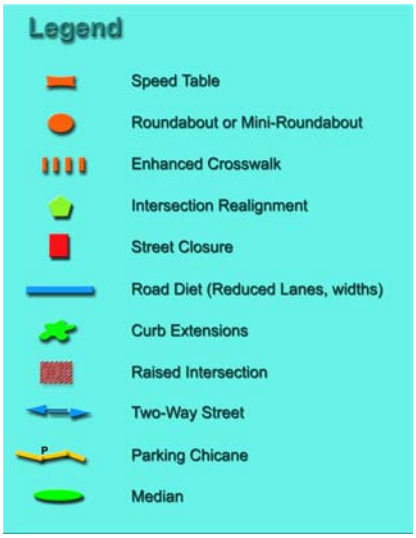
meeting attendees also had several questions about roundabouts which were answered by Urban Engineers.

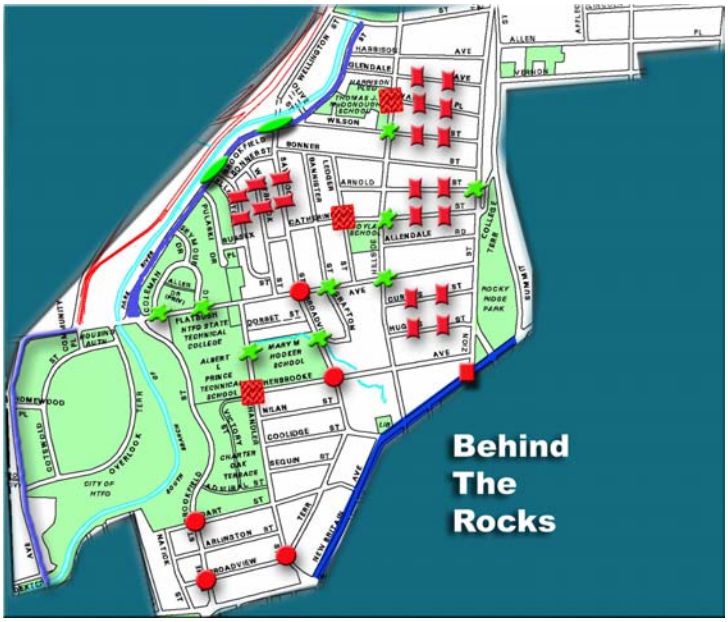
The Barry Square neighborhood traffic calming plan was presented at the June 24, 2003 closing charrette. No new additions to the plan were requested. Residents discussed concerns such as financing the treatments, incorporating traffic calming into other projects, and maintenance issues. The attendees were unanimously in favor of an intermediate level of landscaping (landscaping that is aesthetically appealing but easily maintained.) Residents were asked to sign up for a steering committee. The Barry Square residents agreed that Urban Engineers should move forward with this plan.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Barry Square neighborhood:

1. Place Maple Avenue, Franklin Avenue, and Wethersfield Avenue on road diets featuring a two-lane roadway divided by a shared median left turn lane and featuring on street parking on either side.
2. Install curb extensions on the south side of Maple Avenue at the Barry Square intersection.
3. Realign the intersection of Maple Avenue and Douglas Street.
4. Use roundabouts on Roxbury Street at Henry Street and Newbury Street.
5. Place curb extensions on West Preston Street at Newbury Street and at Maple Avenue.
6. Install speed tables on Barker Street.
7. Install curb extensions at the intersection of Retreat Avenue and Essex Street.
8. Install curb extensions at the intersection of Webster Street and Crown Street.

Behind the Rocks





Location: The Behind the Rocks neighborhood is located in the southwestern section of the city. It is bounded on the north by Hamilton Street, Zion Street on the east, New Britain Avenue, Clermont Street and the South Branch of the Park River on the south, and the Town of West Hartford and railroad on the west.

Neighborhood Characteristics: The 790-acre neighborhood has mostly single, two and three family homes. Many of the single-family homes are small capes, built in the 1920's. Charter Oak Terrace, once the city's largest housing complex, and Rice Heights have been torn down and replaced with suburban style, single family and duplex housing. Behind the Rocks gets its name from an elevated trap rock ridge found at its northern boundary near Trinity College that extends southward through Hyland Park. From this high point the neighborhood slopes downward, ending at the south branch of the Park River. Prone to seasonal flooding, the Park River was rerouted by the Army Corps of Engineers into a concrete channel that is, along with the flood plain area that surrounds it, fenced off from the neighborhood by a chain link fence and I-84 exit ramps. Behind the Rocks has three public elementary schools (Thomas J. McDonough, Mary M. Hooker, and Moylan) and one regional high school, Albert L. Prince Technical School, two churches located

on Zion Street and New Britain Avenue and one park, Rocky Ridge Park. The Goodwin Branch of the Hartford Public Library is located next to St. Lawrence O'Toole Church and is presently undergoing renovations and expansion. There is one small cluster of shops in the neighborhood on New Britain Avenue near Hillside and a few stores scattered along Hillside Avenue and Zion Streets. Major streets are Zion Street and Hillside Avenue, north/south routes and New Britain and Flatbush Avenues, east/west routes.

Important Features: The rocky outcrop that rises up along Zion Street and Rocky Ridge Park is a significant natural feature and neighborhood landmark. Except for Avery Heights in the South West neighborhood, no other area of the city has such striking elevation or exposed rock. In contrast, the Park River is hidden from view and inaccessible to the public. These areas provide the neighborhood's only open space. The Park River also runs next to the A, B, and C sections of the former Charter Oak Terrace Housing Project. Although vacant for several years, this land will be redeveloped for industry and retail uses, creating a significant change in the neighborhood.

Neighborhood Plans and Projects: The Behind the Rocks neighborhood is one of two city neighborhoods that opted not to be designated as a Neighborhood Revitalization Zone. While there is no strategic plan for the neighborhood, there are major development plans proposed for Behind the Rocks. Station area planning for transit-oriented development is underway at Flatbush Avenue, one of six Hartford station stops for the New Britain/Hartford busway. D Section of Charter Oak Terrace and Rice Heights housing project were converted into low-density detached residences and duplexes. Part of the former Rice Heights site is reserved for the construction of a magnet school. The remaining public housing land will be used for industry, a Jobs Corps facility, Walmart and chain restaurants. The community and state environmental agencies are working on plans to create nature trails and access along the south branch of the Park River.

Neighborhood Traffic Calming Plan Development: An opening charrette for the Behind the Rocks and South West neighborhoods was held on June 21, 2003. The residents identified speeding and cut through traffic on Saybrooke Street as their number one concern. Behind the Rocks residents are concerned with speeding problems on Catherine Street and other East-

West running roads between Hillside Avenue and Zion Street. Stop sign running and speeding were identified as issues at the intersection of Broadview Terrace, Stone Street, and Chandler Street. Several residents also agreed that speeding is a problem on Hillside Avenue.

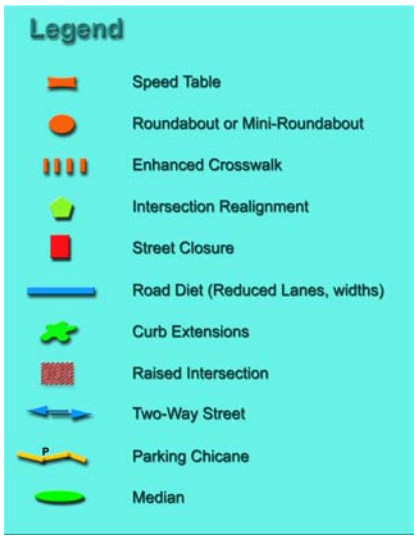
The closing charrette was conducted on September 18, 2003. Residents asked Urban Engineers to calm traffic on the streets near the McDonough and Hooker Schools. Closing charrette attendees indicated that the intersection of Zion Street and Fairfield Avenue feels unsafe and should be improved. Speeding and cut through traffic were concerns for Grafton Street. Drivers make quick turns from Flatbush Avenue and Broadview Terrace onto Grafton. Speeding at the intersection of Flatbush Avenue and Broadview Terrace is also a concern. Several residents signed on to become members of the steering committee. The residents agreed that Urban Engineers has their approval to consider the issues discussed at this charrette and move forward with the Behind the Rocks traffic calming plan.

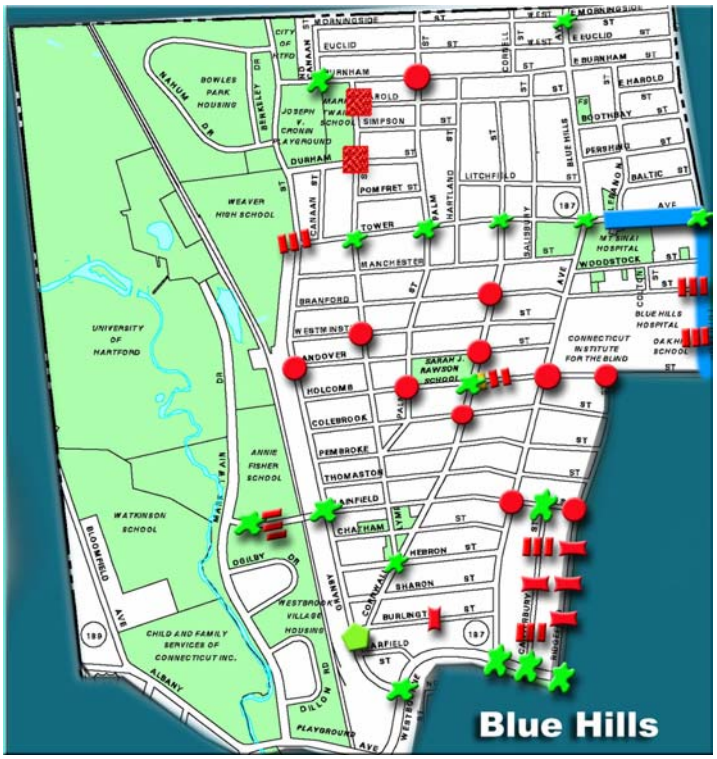
Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Behind the Rocks neighborhood:

1. Place New Britain Avenue from White Street to Summit Street on a road diet with two travel lanes and a median turn lane.
2. Place raised intersections near the McDonough, Hooker, and Moylan Schools.
3. Modify the intersection of Brookfield Street and Saybrooke Street by adding median islands and curb extensions. Similar treatments should be used at the intersection of Brookfield and Ellington.
4. Place Brookfield Street on a road diet with narrower travel lanes and two bike lanes.
5. Install speed tables on Catherine Street and other East-West running streets between Hillside Avenue and Zion Street.
6. Place a street closure at the intersection of Zion Street and New Britain Avenue.
7. Install speed tables on Saybrooke Street, Westbrook Street and Ellington Street.

8. Use curb extensions on Chandler Street between Hooker School and Prince Technical School.
9. Construct curb extensions on Zion Street at Arnold Street and at intersections along Hillside Avenue.
10. Install roundabouts on Broadview Terrace at the following intersections: Flatbush Avenue, Sherbrooke Avenue, Dart Street, and Stone Street.
11. Place Newfield Avenue on a road diet.
12. Install curb extensions on Flatbush Avenue and on Broadview Terrace.

Blue Hills





Location: The Blue Hills neighborhood is located in the northwest corner of Hartford. It is bordered to the north by the Town of Bloomfield, to the east by Coventry Street and Keney Park, to the south by Westbourne Parkway and to the west by Albany and Bloomfield Avenues.

Neighborhood Characteristics: Blue Hills is primarily a residential neighborhood complemented with major institutions – schools, churches, a university, a hospital and other health care facilities, child and family treatment program and public parks. As one of the last neighborhoods in Hartford to develop, it has a suburban, post World War II style, with predominately low-density housing and two public housing complexes. Blue Hills has the highest rate of owner-occupied housing than any other neighborhood in the City of Hartford. Schools are a major presence in the neighborhood. There are three public district elementary schools (Rawson, Mark Twain and Annie Fisher) and two charter schools (Breakthrough Charter School and Jumoke Academy), a high school (Weaver High School), a school for people with blindness, visual impairment and other physical and mental disabilities (Connecticut Institute for the Blind/Oak Hill), and a major university (University of Hartford's main campus and other facilities). Cronin Park, Blue Hills Recreation Center, Northwest Boys and Girls Club and Keney Park offer recreation. Of the 11 churches in the neighborhood, all but two are located on Blue Hills Avenue. There are few commercial areas in Blue Hills and most businesses are located along a three-block area at the Blue Hills Avenue commercial strip near the Bloomfield town line. Blue Hills Avenue, also known as State Route 187, offers a mix of convenience shopping – hair salons, banks, bakery, grocery stores, gas station, business and commercial services and private clinics. Blue Hills Avenue is the neighborhood's busiest road, with numerous churches, businesses, library branch, fire station and St. Francis Care/Mt. Sinai Campus at and near the commercial strip. It is also lined with two-family homes, giving the street a residential rather than commercial flavor. Other major streets than run somewhat parallel to Blue Hills Avenue but are significantly less traveled, are Lyme, Cornwall, Coventry and Granby.

Important Features: The most notable features of Blue Hills are its residential character and numerous civic spaces. Most of the streets are tree-lined with well-maintained single and two-family homes. It is less densely settled than its adjacent neighborhoods of Upper Albany and Northeast. St. Justin's Church and Firehouse No 16. on Blue Hills Avenue are cultural landmarks with notable architecture and historic importance. The transformation of the vacant Thomas Cadillac Building on Westbourne Parkway into a performing arts center of the University of Hartford will add

activity to the neighborhood. Keney Park, located at the east boundary of Blue Hills adds a rustic character to the area.

Neighborhood Plans and Projects: Priority projects of the Blue Hills neighborhood are the development of the Thomas Cadillac site, improvements or redevelopment by the Hartford Housing Authority of the two moderate income housing projects, Westbrook Village and Bowles Park, and streetscape and business development of the Blue Hills Avenue commercial district. The proposed Blue Hills Avenue Streetscape improvements will help beautify the area and improve public safety.

Neighborhood Traffic Calming Plan Development: On January 23, 2003 residents of the Blue Hills community attended their neighborhood charrette. Residents were asked to summarize the qualities important to their community. They identified the friendly neighbors, their homes, safety, quiet, and good schools. The stakeholders at the opening charrette also identified key traffic problems that they would like to see addressed. The top concern was for parking and safety improvements to be made near the Martin Luther King Jr. School. They also asked Urban Engineers to reduce speeding and improve pedestrian safety at the intersection of Tower Avenue and Blue Hills Avenue. Speeding all along Tower Avenue, Blue Hills Avenue, and Coventry Street were concerns as well. The residents would like to see improvements made to the crossings on Plainfield Street at Granby Street, and Tower Avenue at Granby Street, both of which are located near schools. Other concerns include stop sign running on Palm Street at Burnham Street, speeding on Burlington Street, accidents and speeding on Granby Street at Andover Street, speeding on Ridgefield Street and Canterbury Street, and stop sign running at the intersection of Cornwall Street and Lyme Street.

An interim meeting was held on April 30, 2003 and a preliminary draft of the neighborhood plan was presented. Residents contributed helpful ideas including improving the pedestrian crossings near Mount Sinai Hospital and along Blue Hills Avenue near the town line. Residents also reported a sight distance problem at the intersection of Blue Hills Avenue and Burlington Street. Citizens who attended the interim meeting expressed a desire to see treatments other than roundabouts used on Tower Avenue.

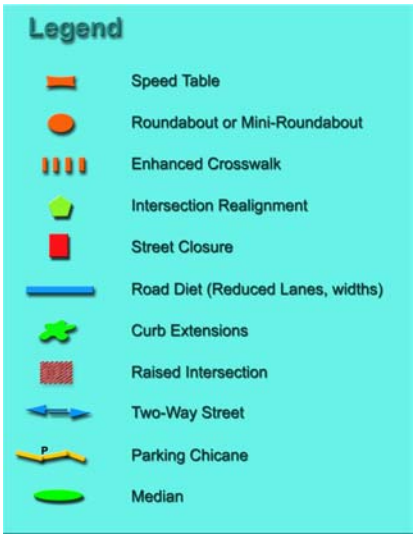
Urban Engineers received more feedback at the June 17, 2003 closing charrette. Residents requested treatment for the intersection of Plainfield Street and Cornwall Street. The intersection is located near a school and drivers tend to run the stop signs. Also, residents reported observing accidents at the intersection of Tower Avenue and Palm Street. They would like to see a treatment placed at the intersection in order to improve safety. Residents discussed other issues with Urban Engineers such as financing the treatments and a time frame for installation. The majority of the residents voted to utilize moderate levels of landscaping for the traffic calming treatments. Finally, the group agreed that Urban Engineers has their approval to review the plan based on their comments and move forward.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Blue Hills neighborhood:

1. Install curb extensions on the Westbourne Parkway.
2. Place Tower Avenue on a road diet from Blue Hills Avenue to Main Street. Install curb extensions at Tower and Blue Hills Avenue. Also install curb extensions at Tower Avenue intersections west of Blue Hills Avenue.
3. Create a park and neighborhood gateway by modifying the intersection of Cornwall Street and Granby Street.
4. Place Coventry Street on a road diet from Tower Avenue to Holcomb Street and add two new crosswalks.
5. Install roundabouts at intersections on Ridgefield Street, Blue Hills Avenue, Cornwall Street, Palm Street, Lyme Street, and Granby Street.
6. Install curb extensions at the intersection of Granby Street and Plainfield Street.
7. Place curb extensions and an enhanced crosswalk on Plainfield Street in front of Annie Fisher School.
8. Use an enhanced crosswalk on Tower Avenue at Granby Street, in front of Weaver High School.
9. Construct curb extensions and enhanced crosswalks at the intersection of Cornwall Street and Holcomb Street.
10. Install raised intersections on Plainfield Street at Cornwall Street.

11. Use curb extensions at the intersection of North Canaan Street and Burnham Street.
12. Add curb extensions, crosswalks, and a speed table on Canterbury Street.
13. Install speed tables on Ridgefield Street.
14. Install curb extensions at the intersection of Blue Hills Avenue and East Morningside Street.

Clay Arsenal



Location: The Clay Arsenal neighborhood is located just north of downtown beginning at the junction of Main Street and Albany Avenue. It is bordered on the north by Mahl Avenue and Sanford Street, on the east by Windsor Street, on the south and Walnut and Homestead Avenue, and on the west by Irving and Enfield Streets.

Neighborhood Characteristics: Clay Arsenal is one of Hartford's oldest neighborhoods. The area east of Main Street has been known as the Arsenal for 200 years, where a state arsenal was built near Main and Pavilion Streets. With the construction of the Hartford/Springfield Railroad in 1844, the area developed from rural farmland into a residential neighborhood with many multi-family housing units on small lots. In recent years there has been a slight increase in population as new single and two-family homes have been built on vacant lots. Still, many of the older, pre-World War II, 3 to 6 unit apartment buildings remain. Clay Arsenal has a large number of community, religious and educational facilities and services. It has four daycare centers, 20 churches, an elementary school (SAND), middle school (Thomas Quirk Middle School), community health facility, two cemeteries, library branch, fire station and public housing. Four major streets, Albany, Walnut/Homestead, Main and Windsor run in an east/west or north/south direction through the neighborhood. Many housing or large institutional uses such as schools and other public facilities are located along these heavily traveled streets. Retail establishments are located mostly on Albany Avenue and commercial and industrial buildings are found on Homestead Avenue and Windsor Street, adjacent to the rail yards.

Important Features: While there has been abandonment and loss of buildings in Clay Arsenal, much of its architectural heritage as one of Hartford's oldest neighborhoods remains. The Clay Hill Historic District and seven individual properties are listed on the National Register of Historic Places. Union Baptist Church and the Old North Cemetery are on Connecticut's Freedom Trail, a designation that celebrates the contributions of African American citizens. The final resting place of noted Hudson River School artist Frederick Church and creator of America's parks, Frederick Law Olmsted, is in the heart of Clay Arsenal at Old North Cemetery. Churches, found on nearly every street corner, provide a strong foundation to the neighborhood, offering daycare and social services as well as spiritual programs.

Neighborhood Projects and Plans: The 2001 NRZ Strategic Plan of the Clay Arsenal Revitalization Association identified several development parcels for potential commercial and residential projects. One commercial project has been constructed at Main and Pavilion Streets. ConnDOT and

the City of Hartford are planning to improve the Route 44 corridor (Albany Avenue) including the section in Clay Arsenal based on work that was done by the Capitol Region Council of Governments (CRCOG). The later plans include the realignment of the intersection at Main and Albany Avenue, streetscape and pedestrian walk improvements, landscaping and new traffic signals.

Neighborhood Traffic Calming Plan Development: At the June 23, 2003 opening charrette for the Clay Arsenal neighborhood residents identified the streets around Julio Lozada Park as an area in need of traffic calming. Seyms Street was reported to have a speeding problem. Residents identified the intersection of Seyms Street and East Street as a location where stop signs are frequently ignored. Another issue raised at the charrette was that pedestrians have difficulty crossing both Main Street and Albany Avenue due to the width of the roads and the speeds at which vehicles travel. Residents reported speeding problems on Mather Street, Pliny Street, and on Brook Street.

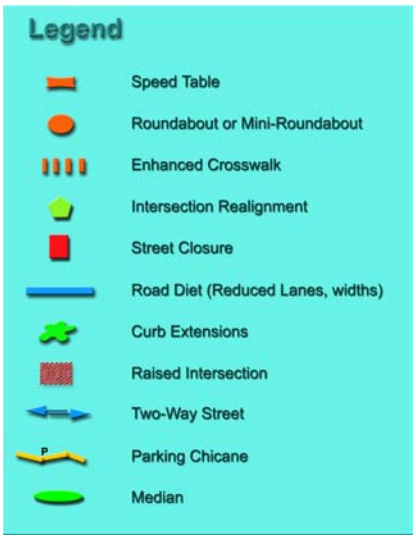
The Clay Arsenal closing charrette was held on September 15, 2003. Those who attended requested that improvements be made to the crossing at the intersection of Main Street and Mather Street. The intersection is located in front of the SAND School. They would also like to see traffic calming used to slow vehicles on Edwards Street, which is used for picking up and dropping of students attending Quirk Middle School.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Clay Arsenal neighborhood:

1. Install a speed table/raised crosswalk on Seyms Street, in front of Lozada Park.
2. Install a roundabout at the intersection of Seyms Street and East Street.
3. Implement a road diet on Center Street.
4. Place Main Street on a road diet and install curb extensions at key intersections including Mather Street and Mahl Avenue.
5. Paint clearly defined crosswalks at the intersection of Main Street and Mather Street in front of SAND school.

6. Place curb extensions on Albany Avenue at the Brook Street, Garden Street, and Irving Street intersections.
7. Place raised intersections on Garden Street at Mather Street and F.D. Oates Avenue.
8. Install speed tables on Edwards Street in front of Quirk Middle School.
9. Use curb extensions on Pliny Street and at the intersection of Mahl Avenue and Bethel Street.
10. Place curb extensions at the intersection of Edward Street and Walnut Street, and on Guilford Street at Brook Street.

Frog Hollow



Location: The Frog Hollow neighborhood is located immediately south of the center of Hartford. Its boundaries (for the purposes of this plan) are I-84, Flower Street, Capitol Avenue, Oak and Russ Streets to the north, Washington Street on the east, Lincoln, Allen Place, Summit and Hamilton Streets on the south and Pope Park Highway No. 4 and I-84 on the west.

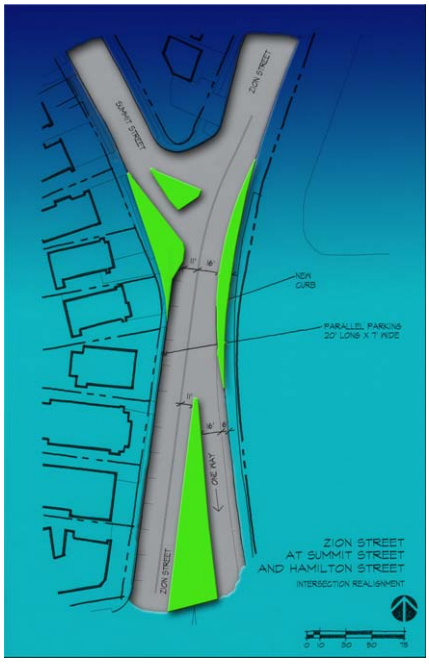
Neighborhood Characteristics: The Frog Hollow neighborhood was mostly built between 1885 and 1910 as a densely developed residential area for factory and skilled-workers. Residential units were predominately brick, multi-family. Many were 3-story buildings, divided horizontally into flats, creating 6

living units. Little space was provided for off-street parking as people could walk or take streetcars to work, shopping, church and social activities. Commercial buildings were constructed in scale with the residential structures. Many had storefronts on ground level with apartments on upper floors. Park Street has a wide range of retail shops – pharmacy, clothing, furniture, jewelry, music, florist, gifts, restaurants, and bakery – that serve the neighborhood. As the neighborhood developed, Frog Hollow residents built churches and parochial schools, synagogues and ethnic social clubs. Much of the housing stock and community institutions date from Frog Hollow's early development though use of the structures has changed. State government offices replaced manufacturing companies on the north side of Capitol Avenue. Many of the houses on streets near Superior Court on Washington Street (Grand, Russ, Hungerford and Oak) have been converted into offices for lawyers. The neighborhood has two public elementary schools (Dominick P. Burns, Maria C. Sanchez), a courthouse, juvenile detention facility, four churches, a library, post office, firehouse, large public park (Pope Park) and Zion Hill Cemetery. Four major streets carry heavy traffic volumes. East/west routes are Capitol Avenue and Park Street, north/south routes are Washington and Broad Streets.

Important Features: Major features of Frog Hollow are Pope Park, Park Street and its historic districts. Alexander Pope, an early twentieth century industrialist who produced bicycles and automobiles, employing many from the nearby Frog Hollow neighborhood, donated Pope Park as a means to improve the health of his workers. Surrounding the park is a restored row of "perfect sixes" brick apartment buildings. These are typical of much of the residential construction of the neighborhood, where the many of the streets are listed on the National Register of Historic Places. Columbia Street and the lower end of Park Terrace have a unique cluster of attached housing. Park Street is the city's prime Latino shopping district featuring a marketplace, El Mercado. Additionally there is a large presence of government institutions in Frog Hollow. Prominent state office buildings, including the State Capitol, State Library, Legislative Office Building, State Armory and Hartford District Courthouse, as well as numerous office buildings that house state agencies are either located within Frog Hollow or on its neighborhood boundary.

Neighborhood Plans and Projects: Park Street is undergoing a multi-million dollar streetscape improvement that will include the creation of bump-outs at street corners to improve safety, new sidewalks, landscaping and façade upgrades. Traffic improvements are planned near Trinity College and Broad Streets. Pope Park has a new master plan that recommends closing Pope Park Drive, a roadway that travels in a north/south direction through the park. The New Britain/Hartford busway project is planning station stops on the edge of Frog Hollow at Sigourney Street and the Legislative Office Building.

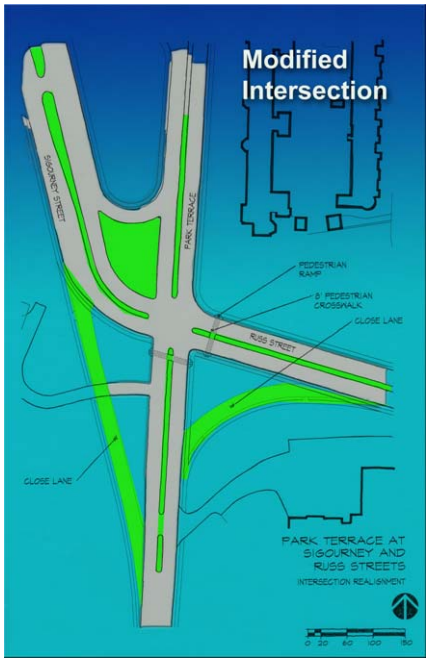
Neighborhood Traffic Calming Plan Development: Frog Hollow residents who attended the April 8, 2003 charrette told Urban Engineers that the qualities they value most in their neighborhood are safety, diversity, and the parks. General issues brought up by the Frog Hollow group include illegal parking, congestion during peak hours, a lack of landscaping, and speeding throughout the neighborhood. The Frog Hollow community asked Urban Engineers to address several specific issues including Park Terrace which is very difficult for pedestrians to cross. Residents felt that Park Street can also be difficult to cross, especially in front of Sanchez School. The intersections of Zion Street and Ward Street, Park Terrace and Russ Street, and Zion Street and Summit Street are perceived as dangerous because they are too wide. Speeding was identified as a problem on Putnam Street, from Park Street to Russ Street. Sight distance is a concern at the intersections where Affleck Street meets Jefferson Street, Madison Street, Lincoln Street, and Allen Place. Vehicles frequently park too close to these intersections.



Residents identified additional issues that they would like to see addressed in the plan during the September 16, 2003 closing charrette. They feel that several intersections on Broad Street suffer from the same sight distance problems as those on Affleck Street and should be studied. The Frog Hollow group believes that addressing the problems at the Broad Street intersections should be a top priority. Sight distance is also an issue at the intersection of Hamilton Street and Hillside Avenue. Residents reported that Lafayette Square is difficult to cross because of its width. They also felt that vehicles speed on Madison Street and Lincoln Street. Several of the stakeholders in attendance discussed other concerns with Urban Engineers, such as the impact that traffic calming will have on street maintenance and emergency

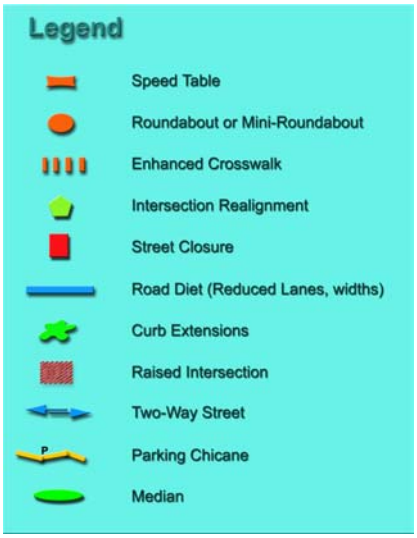
response and how the treatments will be funded. A majority of the charrette attendees believed that the traffic calming treatments should include attractive landscaping as opposed to plain asphalt. The Frog Hollow group then agreed that Urban Engineers has their approval to study the issues discussed at this meeting and continue their work on the neighborhood plan.

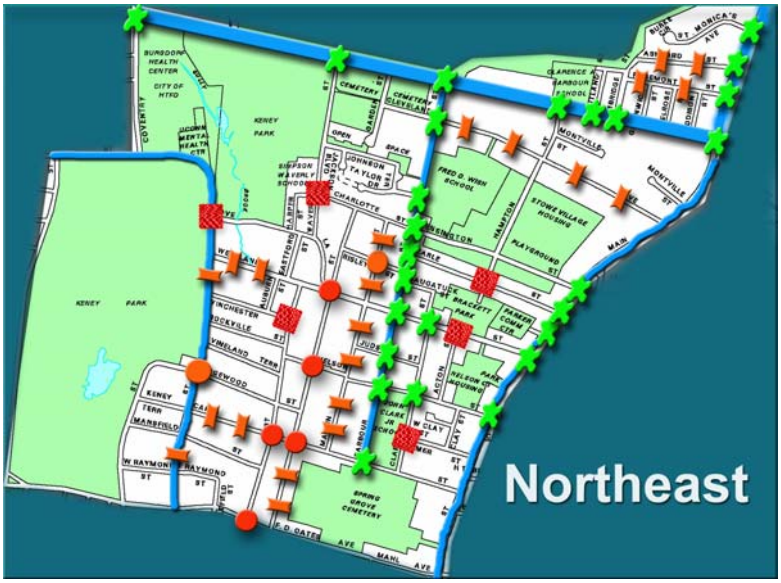
Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Frog Hollow neighborhood:



1. Install curb extensions, pocket parking, lane reductions and crosswalks as recommended in the "Picture it Better Together" plan.
2. Build curb extensions at several Broad Street and Babcock Street intersections.
3. Build curb extensions on Park Terrace.
4. Modify the intersection of Zion Street, Summit Street, and Hamilton Street as shown. Use curb extensions and median islands to narrow the intersection.
5. Modify the intersection of Park Terrace, Sigourney Street, and Russ Street as shown. The section of Sigourney Street south of Russ Street should be closed and planted with grass. The lane currently used for right turns from Park Terrace to Russ Street should also be closed.
6. Implement a parking chicane on Putnam Street from Park Street to Russ Street.
7. Install curb extensions on Ward Street at Zion Street, and on Ward Street at Broad Street.
8. Install curb extensions and enhanced crosswalks on Park Terrace at Mortson Street.

Northeast





Location: The Northeast neighborhood is located in the northeast section of Hartford. It is bounded by the Windsor town line on the north, the railroad line on the east, Sanford and Greenfield Streets on the south and Keney Park along Ridgefield and Coventry Streets on the west.

Neighborhood Characteristics: The 1,350-acre neighborhood, geographically the largest in Hartford, first developed along the railroad spine and Main Street, a major route between downtown and the Town of Windsor. As industries sprang up next to the rail line, multifamily residences were built in the areas between Main Street and Keney Park. Residential patterns were dense, but not crowded as large tracts of open space including several cemeteries and Keney Park, were nearby. Age and deterioration has taken its toll on older housing stock. The neighborhood's density has been reduced in recent years as many older, multi-family buildings were demolished, making way for new two and three-family homes. There has been tremendous investment in housing rehabilitation and construction of cooperative and other subsidized housing units. The demolition of 598-unit Stowe Village public housing complex and its replacement with 50 duplex homes, and a new proposed subdivision to add six duplexes and 35 detached single-family homes has transformed the Northeast neighborhood. Commercial areas are spread out. There are larger stores, such as a West Indian grocery store and Star Hardware on Main Street, and a strip mall

shopping center on Barbour Street. But neighbors also shop at numerous convenience stores located on street corners or buy from street vendors. Main Street, with its high speed and traffic volume, does not have clustered retail development, where shoppers walk between stores. Five elementary schools (John C. Clark, Fred D. Wish, Thirman L. Milner, Simpson Waverly and Barbour) serve the neighborhood. Public recreational areas include Keney and Brackett Parks and Kelvin Anderson Community Center. There are several churches on the main corridors as well as on residential streets. Architecturally prominent churches are St. Michael's Roman Catholic Church and Metropolitan AME Zion Church, which is listed on the National Register of Historic Places.

Important Features: The most dominant feature of the neighborhood is Keney Park. At 628 acres, it is the largest park in Hartford and offers a range of recreational facilities. Designed by the Frederick Law Olmsted firm, the park is heavily wooded, especially where it borders city streets, offering a refuge from the noise of the city. Its open areas are maintained for cricket, baseball fields and meadow. The park has several playgrounds, basketball and tennis courts, a public golf course, an outdoor pool and indoor meeting rooms.

Neighborhood Plans and Projects: The Northeast Neighborhood Revitalization Association Strategic Plan (2001), propose several housing rehabilitation projects, including deconstruction of Stowe Village into low density housing, new housing by Habitat for Humanity, St Monica's and the Community Builders Neighborhood Revitalization Initiative. Also cited in the plan were potential retail expansion projects on North Main Street.

Neighborhood Traffic Calming Plan Development: The Northeast Neighborhood opening charrette was held on January 27, 2003. Residents identified several priorities including speeding on Martin Street, Tower Avenue, and Main Street. Members of the senior citizen community have trouble crossing Main Street at Saint Monica's Avenue. Residents were frustrated with the bus traffic on North Main Street. Other speeding problems were reported on Capen Street, Barbour Street, Vine Street, F.D. Oates Avenue, Westland Street, and on Clark Street in front of J.C. Clark School. Many drivers ignore the stop sign at the intersection of Clark Street and

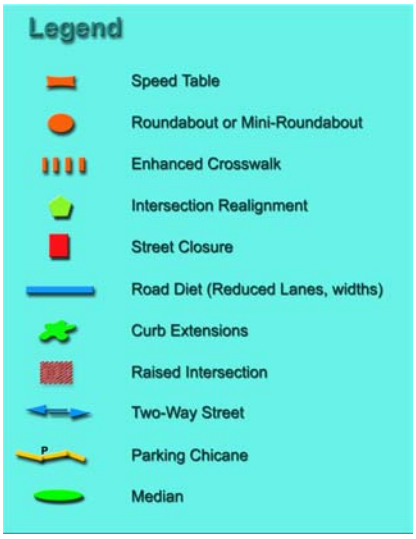
Elmer Street. Northeast residents feel that the intersection of Garden Street, Love Lane, and Westland Street is confusing and have observed accidents at this location. Also, drivers ignore the stop sign at the intersection of Hampton Street and Earle Street.

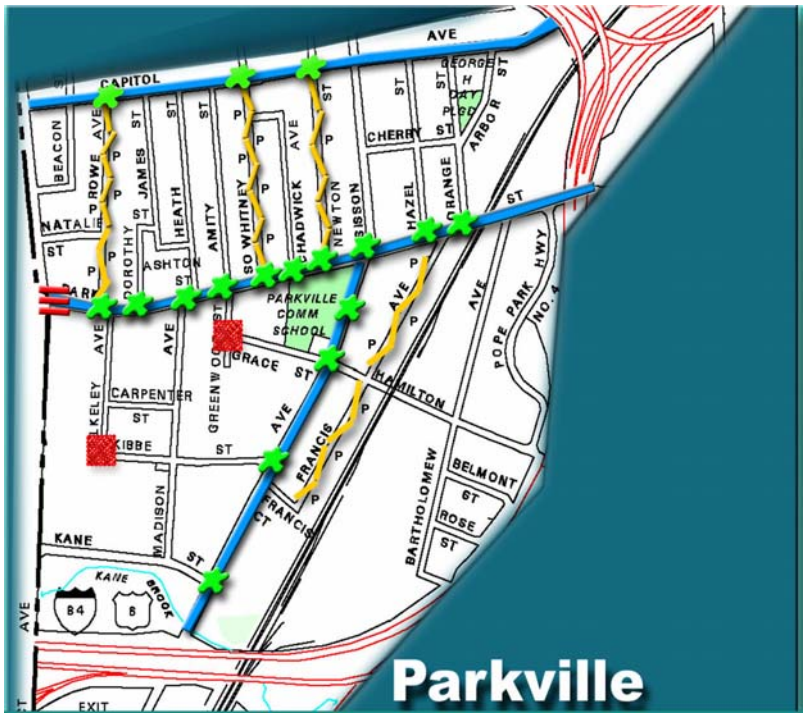
Several additional concerns were discussed at the September 15, 2003 closing charrette. Residents report a high number of accidents at the intersection of Westland Street and Barbour Street. Residents also identified a speeding problem on Enfield Street, where they would like to see more traffic calming treatments utilized. Rosemont Street and Addison Street are used as shortcuts between North Main Street and Tower Avenue. The Northeast charrette attendees agreed that Urban Engineers has their permission to continue developing this plan.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Northeast neighborhood:

1. Place Tower Avenue and Main Street on a road diets. The streets should have two travel lanes and a median turn lane. The Main Street road diet includes a bus lane.
2. Build curb extensions and improve crosswalk markings at many intersections on Tower Avenue and Main Street.
3. Install speed tables and a roundabout on Martin Street.
4. Install a raised intersection at the intersection of Clark Street and Elmer Street, in front of J.C. Clark School. Additional raised intersections should be placed at the intersections of Earle and Hampton, Charlotte and Waverly, Westland and Acton, Enfield and Winchester, and Vine Street and Love Lane.
5. Build curb extensions on Barbour Street and Clark Street.
6. Place speed tables on Garden Street, Westland Street, Capen Street, Cleveland Avenue, Ashford Street, and Rosemont Street.
7. Place Vine Street on a road diet by narrowing the lanes and adding bike lanes.
8. Use roundabouts on Garden Street, Enfield Street, and Vine Street.

Parkville





Location: The Parkville neighborhood is located on the central west side of the city, between north and south end sections of the city. It is bordered by Capitol Avenue on the north, I-84 and Pope Park on the east, Behind the Rocks neighborhood on the south and West Hartford on the west.

Neighborhood Characteristics: Parkville is one of the smallest city neighborhoods. About 6,000 people live in a 330-acre area, in nearly 3% of the total land area of Hartford. Parkville traditionally has been an ethnically diverse, working class neighborhood. Much of its housing is multi-unit, with apartment buildings and two and three-family homes. The neighborhood was developed in the late nineteenth, early twentieth century as fields and farms made way for manufacturing. Large industrial and manufacturing plants, such as the Royal Typewriter factory and the Pope Manufacturing Company, were erected in Parkville, close to workers and a railroad line. The neighborhood's manufacturing base eroded after World War II, as happened elsewhere in the northeast. Today about a third of the neighborhood is used for business and industry, many located in the old factories clustered around the rail line. Some of the factories house offices and artistically creative industries. The

industrial corridor along New Park Avenue is making a resurgence as a shopping district as chain stores in nearby West Hartford have been attracted to its available space and highway access. In Hartford on New Park Avenue a new Stop and Shop and the city's only multiplex cinema have been constructed. Parkville has four major arteries that carry high volumes of traffic, Capitol, New Park and Prospect Avenue and Park Street. Although Capitol has a high degree of residences, these streets are commercial corridors, especially Park Street. Parkville does not have large public facilities, beyond its community school. Despite its name, it has the least amount of dedicated parkland in the city. Parkville got its name from its location at the convergence of the north and south branches of the Park River.

Important Features: Parkville's Park Street is considered one of the most vibrant neighborhood shopping streets in Hartford. Its storefronts are located next to the sidewalk and not interrupted with front parking lots. Park Street has an eclectic mix of businesses that reflect the fabric of the neighborhood – including Portuguese, Vietnamese, Cambodian, Caribbean, and Brazilian shops and restaurants. These stores provide goods for the people who live there such as groceries, furniture, pharmacy, bakeries, eateries, a print shop, laundry, fish market, salons and post office. The Parkville Community School in Hartford is more than an elementary school. With an active senior center and public library branch, the school is an important center of neighborhood life for people of all ages. Next to the school is a large gothic-style Roman Catholic Church, Our Lady of Sorrows, as well as a closed parochial school, rectory and residence for the LaSallette Order – all a testimony to the large role of the church in the development of Parkville. Real Art Ways, an avant garde cinema and art gallery located in a retrofitted factory building on Arbor Street, has brought a growing urbane crowd into the neighborhood for nightly entertainment.

Neighborhood Plans and Projects: The Parkville community has been involved in developing an urban design and transportation plan for Park Street as part of a "Picture it Better Together" project sponsored by the city and Capitol Region Council of Governments. This plan would reorganize travel lanes and parking, create bike lanes and plant trees along Park Street.

Parkville will have two station stops when the New Britain/Hartford busway is built.

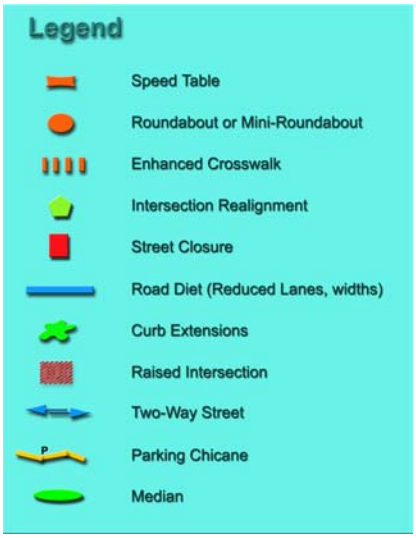
Neighborhood Traffic Calming Plan Development: At the April 9, 2003 opening charrette Parkville residents told Urban Engineers that they are proud of their neighborhood's sense of community and its numerous businesses and restaurants. The residents have requested curb extensions on Park Street in order to create pocket parking. They stated that vehicles park too close to the intersections. They also feel that the intersection of Park Street, New Park Avenue, and Sisson Avenue is dangerous because it is wide and skewed. Speeding was identified as a problem on Newton Street. Residents would also like to see a crosswalk placed in front of the senior center on Newton Street. Grace Street is used as a shortcut and the intersection of Grace and Greenwood Street has poor sight lines. Speeding is a concern on New Park Avenue, Francis Avenue, and Rowe Avenue.

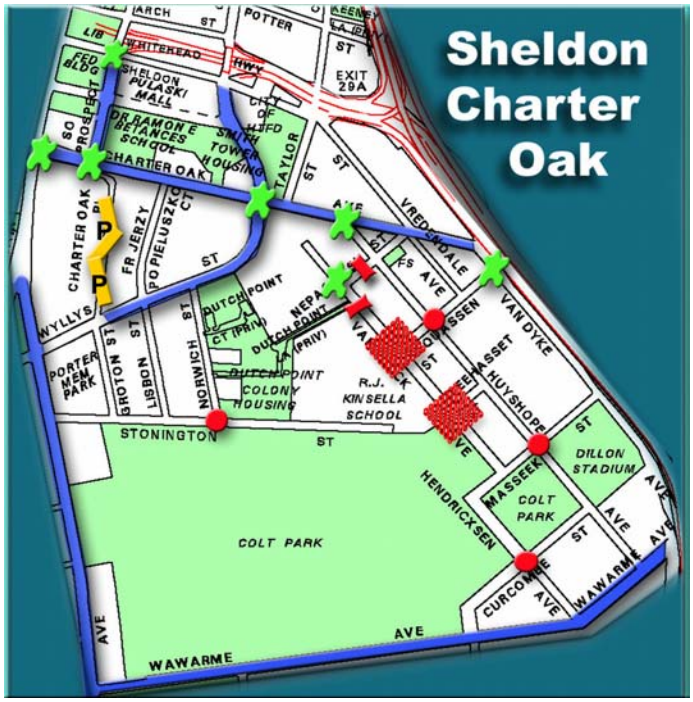
The Parkville closing charrette was conducted on June 18, 2003. Those who attended the charrette were in favor of adopting the draft plan without revisions. Residents discussed issues such as handicap access, emergency access, and the time frame for implementation with Urban Engineers.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Parkville neighborhood:

1. Adopt the Picture it Better Together Plan for Park Street and New Park Avenue. Park and New Park will be rebuilt with two lanes, curb extensions, brick crosswalks, and bike lanes.
2. Implement parking chicanes on Rowe Avenue, South Whitney Street, Newton Street, and Francis Avenue.
3. Reduce lane widths on Capitol Avenue and build curb extensions.
4. Construct raised intersection on Grace at Greenwood and Kibbe at Bulkeley.

Sheldon – Charter Oak





Location: The Sheldon Charter Oak neighborhood is located on the eastern edge of Hartford, directly south of downtown Hartford. It extends from the Connecticut River and is bounded on the north by the Whitehead Highway, on the east by I-91 and the River, the south by Wawarme Avenue, and Wethersfield Avenue and Main Street on the west.

Neighborhood Characteristics: Sheldon Charter Oak was the point of landing and settlement for the first Dutch settlers to Hartford. Settlement and development patterns have been closely connected to the river beginning with farming of adjacent fertile flood plains and the construction of the Colt Firearms factory that used the river to transport goods. Of all the neighborhoods included in development of the master traffic calming plan, it is the only neighborhood that will have a direct link to the Connecticut River once the Riverfront Recapture project is completed. The neighborhood has the largest percentage of nationally significant structures in Hartford (21 of 29), and derives its name from an historically prominent event – the hiding of the Connecticut Charter in 1687 that was one of the colonies' first acts of rebellion against England. Nearly one third of the 335-acre neighborhood is

city parkland, including Colt Park, Dillon Stadium, Porter Park and Pulaski Mall. There are few retail services other than convenience stores. Much of the housing is publicly subsidized, notably the Dutch Point Housing Project, which will be replaced by townhouses for mixed income residents. Other residential housing includes loft apartments at the former Colt Firearms factory, Huyshope Avenue condominiums and upscale units in restored homes and apartments on Charter Oak Place. Sheldon Charter Oak has two public elementary schools (Betances and Kinsella) and one parochial school (St. Cyril & St. Methodius), four churches, central branch of the Hartford Public Library, federal building, several office complexes and the Colt Factory campus. Five major streets bring heavy traffic through the neighborhood, Main Street, Wethersfield Avenue, Charter Oak Avenue, Wyllys Street and Columbus Boulevard.

Important Features: The neighborhood has a large number of historical buildings of all architectural styles and uses. They include a number of structures related to Coltsville, the factory and village built by Samuel and Elizabeth Colt, as well as the Colt grounds that became a public park. Historic buildings of note are: The Church and Parish House of the Good Shepherd, Armsmear, Potsdam Village, Charter Oak Cultural Center (formerly Temple Beth Israel), Capewell Horsenail Factory, Atlantic Screw Works, Butler-McCook House, Amos Bull House, and Polish National Home. Colt Park, comprising 20% of the neighborhood's land area, is a significant feature. Additionally, Sheldon Charter Oak's location next door to the Adriaen's Landing project and the central business district will have an impact on the neighborhood's future development.

Neighborhood Plans and Projects: The Sheldon Charter Oak Neighborhood Revitalization Zone Strategic Plan (2000) cites a need to enhance pedestrian safety and address parking and traffic issues as the city's redevelopment plans for adjacent areas such as Adriaen's Landing progress. In 2001 the Huyshoppe and Van Dyke Avenues Corridor Study developed a master plan to improve pedestrian crossings and amenities and reduce speeds. Other neighborhood projects and proposals are: the revision of Dutch Point Housing which will be rebuilt using a new street configuration; the Wyllys Street Development Zone; including the Capewell Property, an

abandoned former manufacturing complex and the renovation of Charter Oak Avenue as a gateway.

Neighborhood Traffic Calming Plan Development: The Sheldon Charter Oak opening charrette was held on April 15, 2003. Those who attended indicated that they enjoy living in the neighborhood because of its location, diversity, and history. However, they would like to see several traffic related improvements. The residents feel that Main Street is too wide making it difficult to cross and conducive to speeding. The intersection of Charter Oak Avenue, South Prospect Street, and Charter Oak Place is also very wide and difficult to cross. Many vehicles park too close to the intersection. Speeding was identified as a problem on Wyllys Street, Charter Oak Place, Huyshope Avenue, and Stonington Street. Residents also reported that the intersection of Van Block Avenue and Nepaquash Street is a location where drivers speed.

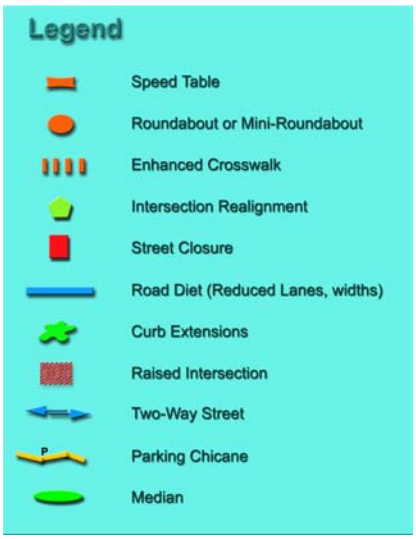
The community voiced a few additional concerns during the closing charrette on September 17, 2003. Residents identified South Prospect Street as a road that is used as a shortcut. The heavy traffic makes it difficult for drivers to pull out of driveways. Residents asked that diagonal parking be incorporated into the plans for Charter Oak Avenue and Wyllys Street if possible. After discussing issues such the project timeline, maintenance, and applying a holistic approach, the Sheldon Charter Oak residents agreed that they would prefer moderate levels of landscaping used on the treatments. The landscaping should be aesthetic yet easily maintained. Residents signed up to be part of the steering committee which will guide the plan through its implementation stage. The attendees then agreed that Urban Engineers has their approval to move forward with this plan.

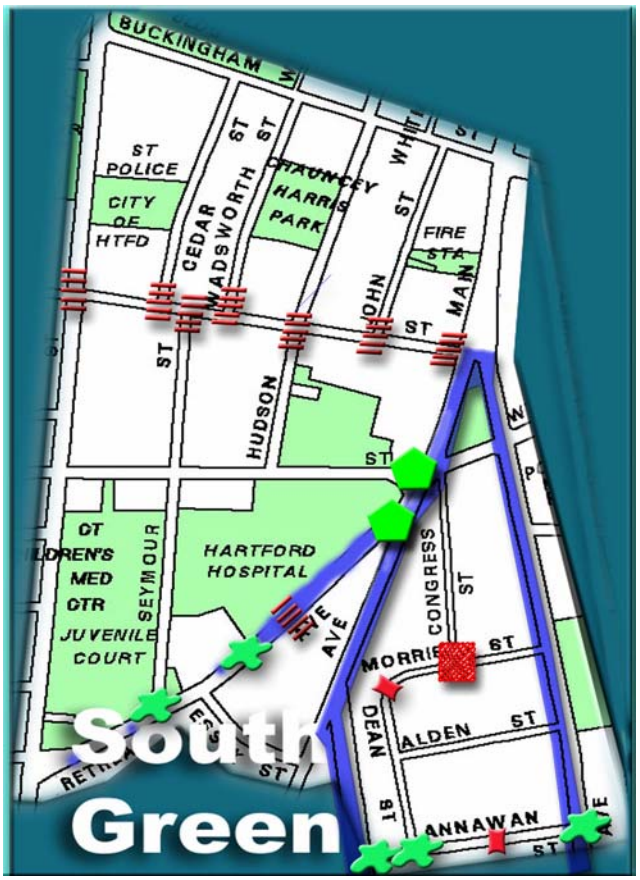
Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Parkville neighborhood:

1. Install curb extensions at the intersection of Charter Oak Avenue, South Prospect Street, and Charter Oak Place.
2. Use a parking chicane on Charter Oak Place.

3. Place Wawarme Avenue, Wyllys Street, Charter Oak Avenue, and South Prospect Street on road diets. Reduce the number of lanes and lane widths. Add bike lanes where there is sufficient width.
4. Build roundabouts on Huyshope at Masseek, Huyshope at Sesquassen, Hendricxsen at Curcombe, and Stonington at Norwich.
5. Add a curb extension at the intersection of Van Block Avenue and Nepaquash Street by and add speed tables on either approach.
6. Install curb extensions along Charter Oak Avenue and at the intersection of South Prospect and Sheldon Street.

South Green





Location: The South Green neighborhood (for the purposes of this plan) is located directly south of the central business district. It is bounded by Buckingham Street to the north, Wethersfield Avenue to the east, Annawan, Essex and Retreat Avenue to the south and Washington Street to the west.

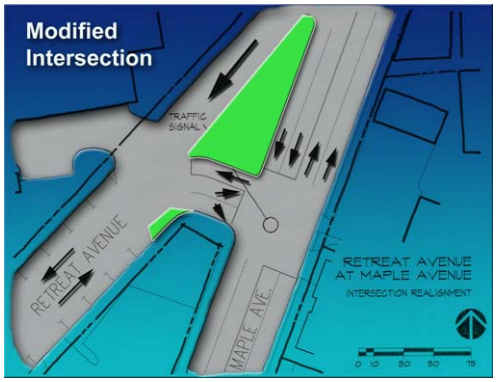
In addition, the South Green neighborhood overlaps with the South Downtown neighborhood as it shares the block and side streets between Buckingham and Park Streets.

Neighborhood Characteristics: The South Green neighborhood is a mixed use neighborhood with many housing types, retail and major institutions. Its housing includes single-family homes, condominiums, duplexes, small multi-family residences and multi-story apartment buildings. Most of the people who live in South Green are tenants as home ownership is around 15%. Except for the Maple Avenue Mews condominium complex, most of the residential and many of the commercial buildings were constructed in the early 1900's. Retail uses are concentrated around Barnard Park, Main and Park Streets. Institutions and government buildings occupy much of the neighborhood, including Hartford Hospital, the Connecticut Children's Medical Center, state office buildings and employee parking lots. Barnard Park, a 1.7-acre triangular-shaped green located at the convergence of six major roads, had its origins as a holding pen for animals in colonial times. Major north/south streets are Washington, Main, Wethersfield and Maple; east/west streets are Buckingham and Park.

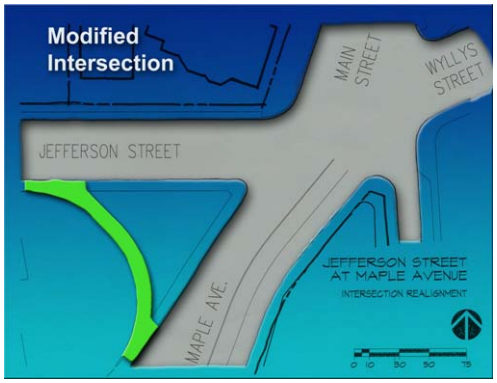
Important Features: Hartford Hospital, the Connecticut Children's Medical Center and accessory medical facilities are a significant feature of the South Green neighborhood. The traffic these facilities generate impacts the area beyond their physical footprint. The hospitals and offices are self-contained so they generate little street life. Barnard Park's strategic location at the intersections of most of the neighborhood's major streets provides a focal point for the neighborhood. Congress Street, with its well-preserved row of Italianate brick apartment buildings along a partly cobblestone street, is one of Hartford's best architectural examples of a bygone era.

Neighborhood Plans and Projects: The South Green Neighborhood Revitalization Zone (NRZ) Strategic Plan (1999) recommended a range of activities to improve the neighborhood. They included: upgrading the facilities of Barnard Park, many which have been implemented, improving streetscape of Franklin and Wethersfield Avenues, major city arteries that originate at or near Barnard Park, and improving housing. In 2001 the South Green NRZ developed a more detailed strategic plan for two key areas of the

neighborhood: the corner of Park Street and Main Street, and the C-Town supermarket property and adjacent surroundings. This plan outlined development criteria for specific parcels that would enhance existing architecture and infill vacant land.



Neighborhood Traffic Calming Plan Development: The South Green opening charrette was held on June 16, 2003. Residents agreed that speeding, parking, and lack of landscaping are problems that affect the entire neighborhood. Specific streets that they would like to see addressed include Maple Avenue, Franklin Avenue, and Wethersfield Avenue. The group agreed that these streets have too many lanes, which encourages drivers to speed. Annawan is used as a shortcut between Wethersfield Avenue and Franklin Avenue. The side streets that intersect Franklin Avenue have poor visibility. Residents feel that the intersections where Maple Avenue, Retreat Avenue, Jefferson Street, and Wyllys Street meet are confusing and dangerous. Accidents have been observed at the intersection of Washington Street and Retreat Avenue.



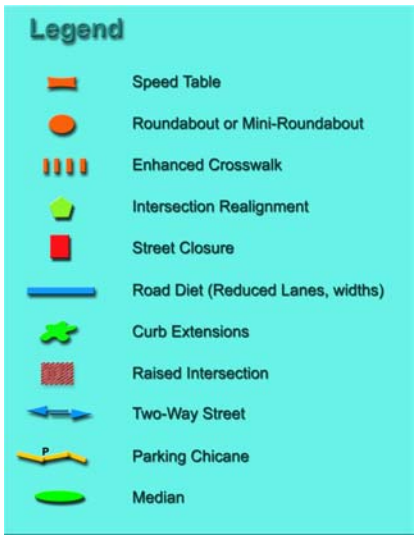
The South Green closing charrette was combined with the Sheldon Charter Oak Closing charrette and held on September 17, 2003. At the closing residents identified Buckingham Street as an area that could be made more pedestrian friendly. Residents discussed some of the issues mentioned under the Sheldon Charter Oak meeting summary and decided that they favored a moderate level of landscaping. Urban Engineers received permission from the residents to move forward with this plan.

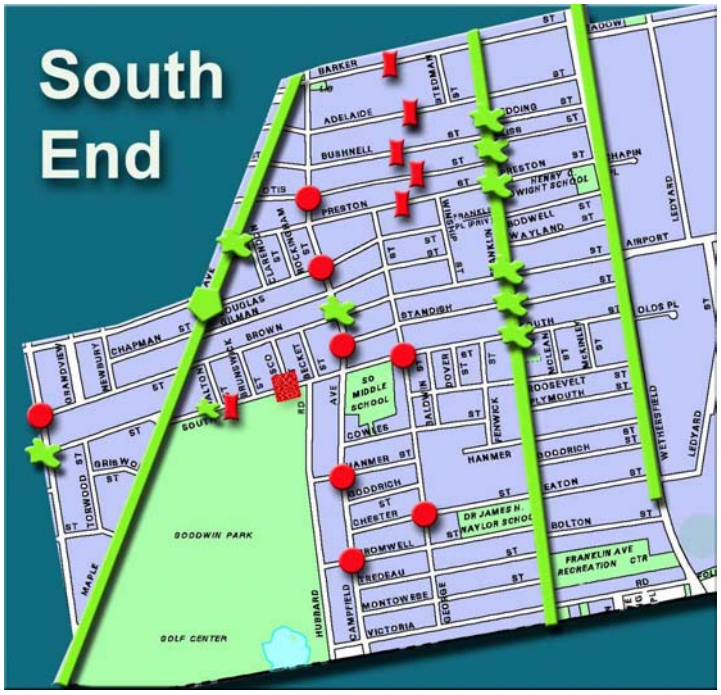
Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the South Green neighborhood:

1. Place Maple Avenue, Franklin Avenue, and Wethersfield Avenue on road diets. Make these streets two lane roadways with median turn lanes.
2. Install a speed table and curb extensions on Annawan Street.
3. Modify the intersection of Maple Avenue and Retreat Avenue as shown.
4. Modify the intersection of Main, Wyllys, Jefferson, and Maple as shown. The channelized turns from Jefferson to Maple are eliminated.

5. Eliminate signal control on the northbound Washington Street right turn onto Retreat Avenue. Improve lane markings at the intersection and enforce parking regulations on Washington.
6. Place enhanced crosswalks at all Park Street intersections.
7. Place Retreat Avenue on a road diet. Install curb extensions and a high visibility crosswalk.
8. Build a raised intersection at the intersection of Morris Street and Congress Street.
9. Remove the stop signs on Morris and Dean and replace them with a speed table.

South End





Location: The South End neighborhood boundaries are Barker, Maple and White Streets to the north, the Town of Wethersfield to the south, Wethersfield Avenue to the east and Fairfield Avenue to the west.

Neighborhood Characteristics: The South End neighborhood rapidly grew after World War I when commercial activity developed along Wethersfield and Franklin Avenues and side streets were created and subdivided for residences. Multi-family dwellings, many constructed with brick, are clustered

towards the northern section of the neighborhood and along the avenues. Single-family homes are found in the southern and western sections of the South End. About 11,000 people live in the 725-acre neighborhood. The majority of residents are renters. In recent years, elderly households have been turning over to young families. Two major streets, Franklin and Wethersfield, run parallel from the edge of downtown Hartford to the Wethersfield town line in a north/south direction. Franklin Avenue, known as "Little Italy," is lined with shops, restaurants and bakeries that attract people from other parts of the city and region. Wethersfield Avenue has become an auto-oriented commercial strip; gas stations, car washes and auto parts stores form the businesses core. Other streets that carry less traffic but also run parallel to these grand avenues are Campfield Avenue and George Street. The South End has two public elementary schools (Dr. James H. Naylor and Henry Dwight School) and one public middle school, Dr. Bellizi Middle School. Most schools in the southern section of the city are at capacity or overcrowded. St Luke's Church is located on Bolton Street and abuts the Mary J. Caruso Gables Elderly Housing complex, which extends to Eaton Street. The Campfield Branch of the Hartford Public Library is located on the northwest corner of the neighborhood. Goodwin Park offers a range of outdoor recreational facilities including a 9 and 18-hole golf course

Important Features: Goodwin Park is a significant feature of the South End neighborhood. About 150 of the park's 237 acres are in Hartford. The remaining 85 acres are in the Town of Wethersfield. It was designed as a classic Olmsted park, with a large open meadow surrounded by woods where the park borders city streets. Goodwin Park offers expansive views as much of it is maintained as a golf course. Active recreational facilities such as basketball courts, a playground, pool and exercise course line the perimeter of the park along Maple Avenue and South Streets. In winter the golf course hills are popular sledding spots. A second notable attraction in the South End is Franklin Avenue, known for its Italian and international bakeries, shops and restaurants.

Neighborhood Plans and Projects: The South End Neighborhood Revitalization Zone Revitalization Plan identified a need to improve both the residential quality of the neighborhood and the appearance and function of the commercial areas. Some strategies listed were to restrict parking in front

of commercial buildings to increase safety for pedestrians, provide more off-street parking and construct intersection curb bump-outs at key intersections along Franklin Avenue such as at Franklin and South, Franklin and Brown. Encouraging balanced modes of transport was also noted as a key direction. Development projects being planned in the southeast section of the neighborhood include expansion of the Metzner Recreation Center at Columbus Park and a proposal to develop 990-1000 Wethersfield Avenue (as a restaurant/concert venue) just outside its southeast boundary.

Neighborhood Traffic Calming Plan Development: Residents of the South End attended an opening charrette along with residents of Barry Square on November 19, 2002. General concerns for the neighborhoods included speeding, noise, problems associated with one way streets, and a lack of bike lanes. Residents felt that Maple Avenue, Franklin Avenue, and Wethersfield Avenue were conducive to speeding. The intersection of Wethersfield Avenue and Airport Road is perceived to be dangerous because drivers park too close to the intersection or speed through it. Many drivers are using Preston Street, Barker Street, and Brownell Street as shortcuts between Franklin Avenue and Maple Avenue. The intersection of Campfield Avenue and Douglas Street is a concern due to speeding and stop sign running.

During the November 23, 2002 walking audit residents had the opportunity to see how a roundabout could be used to make the intersection of Campfield Avenue and Douglas Street safer and quieter. Residents also asked Urban Engineers to take a closer look at the section of South Street north of Goodwin Park. The group explained that speeding is a problem in that area. Pedestrian safety is important here because children cross South Street in order to reach the park.

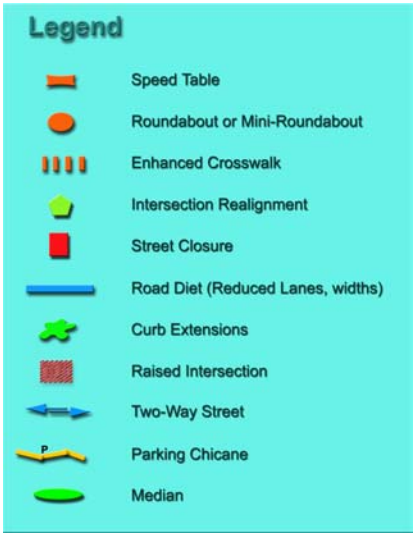
During a March 18, 2003 interim meeting neighborhood residents previewed a draft version of the South End plan and discussed issues such as the speeding problems on Wethersfield, Maple, and Franklin Avenues in more detail. The closing charrette was held on June 24, 2003. The residents who attended did not request any additions to the plan. Issues such as finances, construction, and maintenance were discussed. Then the residents agreed that they would like to see intermediate levels of landscaping used on traffic

calming devices. They gave Urban Engineers permission to move forward with the South End plan. A group of citizens volunteered to form a steering committee and see the plan through implementation.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the South Green neighborhood:

1. Place Maple Avenue, Franklin Avenue and Wethersfield Avenue on road diets. Reduce the number of travel lanes to two and include a median turn lane.
2. Revise the lane configurations at the intersection of Wethersfield Avenue and Airport Avenue.
3. Install speed tables on Barker Street, Adelaide Street, Bushnell Street, Otis Street, and Preston Street.
4. Build roundabouts at several intersections on Campfield Avenue.
5. Construct a raised intersection on South Street near Casco Street.
6. Install a speed table and curb extensions at the intersection of South Street and Dalton Street.
7. Install curb extensions at many intersections on Franklin Avenue.
8. Realign the intersection of Maple Avenue and Douglas Street.
9. Build roundabouts on George at Cromwell, George at South, and Fairfield at Freeman.
10. Use curb extensions on Maple at Preston, Campfield at Brown, and Fairfield at Linmoore.

South West



Location: The South West neighborhood is located in the southwest corner of Hartford. It is bounded by New Britain Avenue, Clermont Street and the Park River to the north, Fairfield Avenue on the east, the Town of Newington and the Town of Wethersfield on the south, and the Town of West Hartford on the west.

Neighborhood Characteristics: The 635-acre South West neighborhood is a predominantly residential area. Except for two clusters of retail shops along New Britain Avenue and a monument business next to Cedar Hill Cemetery, the rest of South West has mostly single family and multi-family homes. Residential development began after World War I and continued through the 1940's. By the 1990's many of the South West homeowners were elderly. In recent years the older population has been replaced with young families creating pressures for space on the schools. The area's two public neighborhood elementary schools, Louis W. Batchelder and Eleanor B. Kennelly, like most schools in the southern section of the city, are either at capacity or overcrowded. South West has one small park, Hyland Park, that

serves a home for Little League. The neighborhood has a small playground, Forster Heights and is close to Goodwin Park, a 237-acre city park with golf courses. South West has four churches located on Oliver Street, Avery Road, Newfield and Fairfield Avenues, and Avery Heights, a large residential facility for senior citizens that offers several levels of care and other services for the elderly. Major streets are New Britain Avenue and White Street, east/west routes and Fairfield and Hillside Avenues, north/south routes.

Important Features: Quiet streets, modest, well-kept homes are a key feature of the South West neighborhood. Many of streets in the southern section of the neighborhood are one-way or don't lead to major destinations. Near the Newington and Wethersfield town lines are Goodwin Park and the entrance to Cedar Hill Cemetery. This cemetery, where many of Hartford's famous citizens such as J. P. Morgan and Katherine Hepburn were laid to rest, was designed in the 1800's as a country burial ground with winding drives and specimen trees. The cemetery is a recreational resource for the neighborhood. Next to Cedar Hill Cemetery is St. George Greek Orthodox Cathedral of Connecticut, a blond Byzantine style church.

Neighborhood Plans and Projects: The South West neighborhood is one of two city neighborhoods that opted not to be designated as a Neighborhood Revitalization Zone. There is no Neighborhood Revitalization Zone (NRZ) strategic plan for the neighborhood.

Neighborhood Traffic Calming Plan Development: An opening charrette was conducted on June 21, 2003 for the South West and Behind the Rocks neighborhoods. Traffic concerns for the South West community include the New Britain Avenue signals which revert to flashing operation at 10:00 PM. Residents feel the flashing operation begins too early and creates congestion at the intersection. Members of the South West community also feel that the signal at the intersection of New Britain Avenue and Hillside Avenue is not timed properly because the Hillside Avenue approach does not receive sufficient green time. Speeding is a problem along Hillside Avenue. The intersection of White Street and Fairfield Avenue is perceived as being dangerous for both vehicles and pedestrians to cross. The area around Kennelly School should be made more pedestrian friendly. Residents stated

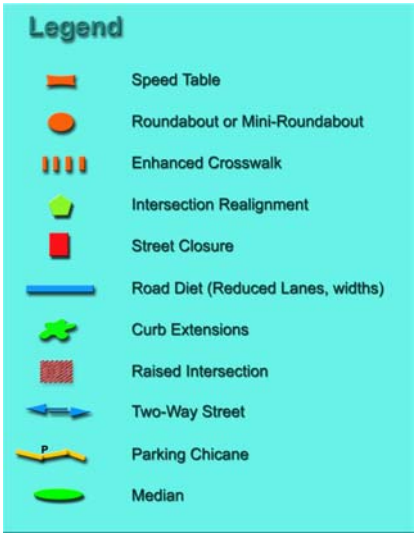
that it is difficult to make left turns at the intersection of Fairfield Avenue, New Britain Avenue, and Summit Street.

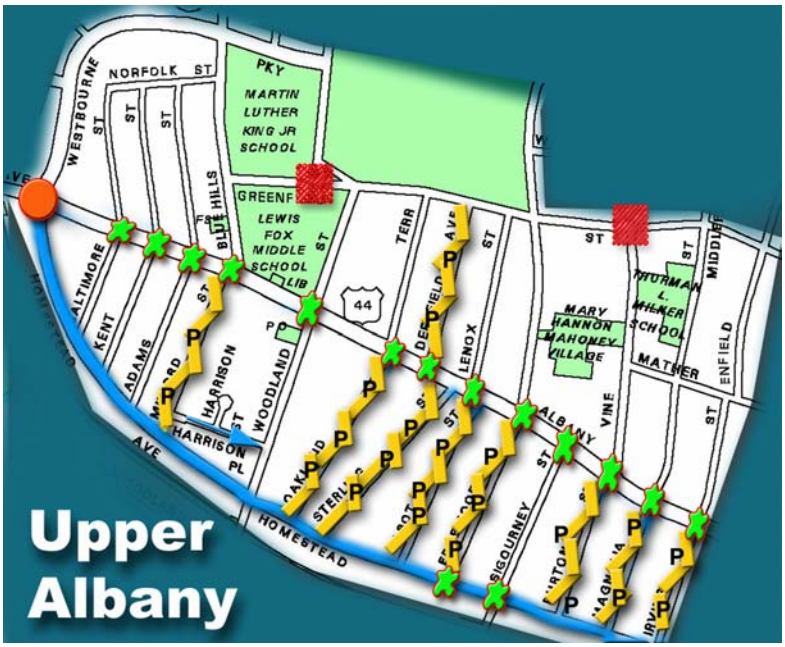
A closing charrette was held on September 18, 2003. Several new issues were brought to Urban Engineers' attention including the intersection of New Britain Avenue and White Street. Residents believe that the intersection is poorly designed and confusing. It is also difficult for pedestrians to cross. Some of the attendees volunteered to be part of the steering committee. Residents gave Urban Engineers permission to move forward with the plan based on their recommendations.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the South West neighborhood:

1. Delay the conversion of New Britain Avenue signal to flashing operation until midnight rather than 10:00 P.M.
2. Provide extra green time for the Hillside Avenue approach at the New Britain Avenue-Hillside Avenue intersection.
3. Install roundabouts and curb extensions on Hillside Avenue.
4. Provide curb extensions at several White Street intersections including the Fairfield Avenue and New Britain Avenue intersections.
5. Construct a raised intersection on White Street at Monroe Street, in front of Kennelly School.
6. Close the Zion Street approach at the intersection of Fairfield, New Britain and Zion.
7. Install speed tables on Freeman Street and on Cumberland Street.
8. Use roundabouts on Roger at Princeton and on Harvard at Linmoore.
9. Place curb extensions at the intersection of Oliver and Roger, and at the intersection of Freeman and Fairfield.

Upper Albany





Location: The Upper Albany neighborhood is located in the north end of Hartford, north of Asylum Hill, south of Blue Hills and Northeast neighborhoods and west of Clay/Arsenal. Westbourne Parkway, Keney Park and Greenfield Streets make up its boundary to the north, Enfield and Irving Streets to the east, the Griffin rail line (just south of Homestead Avenue) to the south and west.

Neighborhood Characteristics: Upper Albany gets its name from it most dominant feature, Albany Avenue. The neighborhood was known as the Street Car City before mass transit gave way to buses and privately owned vehicles. Albany Avenue, also known as Route 44, is a federal and state road that connects Hartford with Albany, New York. Route 44 carries significant commuter traffic between the downtown and western suburbs. The avenue is like a spine with densely built residential streets extending one block on each side. The avenue is a commercial corridor, with shops that serve the immediate neighborhood and national chain restaurants as well as local enterprises like Scott's Jamaican bakery. Business on the avenue is diverse, with over 40 kinds of services offered. Around 80% of residents live in multi-

family houses and apartment buildings and do not own their homes. Upper Albany, with 307 acres and less than 3% of the city's land area, is one of the city's smallest neighborhoods. In addition to its commercial corridor and residential streets, the neighborhood has one industrial zone that stretches along Homestead Avenue and abuts the railroad. Many of the industrial buildings are vacant. One notable exception is the Smith-Worthington Saddlery Company that advertises as "saddle makers since Washington was President." Social services are readily available in Upper Albany. Several Caribbean societies are based in Upper Albany. A dozen churches are located in the neighborhood as well as schools, arts center, a branch library, fire station and post office.

Important Features: A key focal point of Upper Albany is the area surrounding the intersection of Albany Avenue and Woodland Streets. Within a one block area in each direction are two large schools – Fox Middle and Martin Luther King, the south entrance to Keney Park, two major churches, a shopping center, post office, Colin Bennett building and Artists Collective, a community and regional arts center with state of the art facilities. Enhancement of this core is a critical aim of the Route 44 corridor improvement plan.

Neighborhood Plans and Projects: The western gateway to Upper Albany, at the intersection of Albany, Homestead and Westbourne Parkway, will be transformed when the University of Hartford completes renovation of the former Thomas Cadillac complex into a performing arts center. Transportation improvements for this location and the rest of Albany Avenue in Hartford will be implemented as part of the Capitol Region Council of Governments Route 44 Improvement Plan. Recommendations of the plan include: traffic calming, reducing street widths, transit improvements, signal timing adjustments, landscaping, parking, sidewalk and drainage improvements. A busway along the Griffin railroad line is being studied. The Main Street program, a business preservation and revitalization organization is working to improve the commercial climate of Albany Avenue. The City of Hartford has adopted a Sigourney/Homestead Redevelopment Plan that would expand business zones on Homestead Avenue.

Neighborhood Traffic Calming Plan Development: The Upper Albany opening charrette was held on January 21, 2003. During the first activity residents identified diversity, culture, and a sense of community as qualities that make their neighborhood unique. Residents then identified their concerns for the neighborhood. The top concern for Upper Albany residents was Albany Avenue. The group indicated that speeding is a major concern on the street especially at intersections such as Blue Hills Avenue, Woodland Street, Homestead Avenue, and Vine Street. Vehicles park too close to many of these intersections which makes it difficult for drivers to get a clear view. It's also difficult for pedestrians to cross Albany Avenue. Residents are concerned about heavy traffic near the Martin Luther King Jr., Lewis Fox, and Milner Schools. Residents would like to see improvements made to Homestead Avenue to make it more pedestrian friendly. Speeding is a problem on some of the one way streets between Albany Avenue and Homestead Avenue.

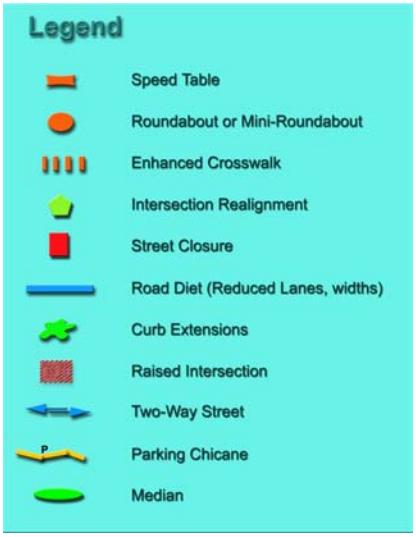
A closing charrette was held on April 14, 2003. Additional concerns discussed at the closing include speeding on Enfield Street and on the Westbourne Parkway. Residents reported problems with speeding and congestion in the area of Norfolk Street, Baltimore Street, Kent Street, and Adams Street. Drivers use these streets as shortcuts between Blue Hills Avenue and Albany Avenue. Residents would like a study to be done to see if reversing the directions of the one way designations would alleviate some of the traffic on these residential streets. The Upper Albany group agreed that they prefer moderate landscaping that is easily maintained. Later on, residents may choose to adopt the treatments and provide more aesthetic landscaping. Several residents volunteered to be part of the steering committee. The group gave Urban Engineers its approval to continue work on this plan.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the Upper Albany neighborhood:

1. Revise Albany Avenue signal progressions to discourage speeding.
2. Install curb extensions on all Albany Avenue intersections.

3. Build raised intersections on Greenfield Street in front of the Martin Luther King, Lewis, and Milner Schools.
4. Place Homestead Avenue on a road diet and add curb extensions at Edgewood Street, and Sigourney Street.
5. Implement parking chicanes on many North-South running streets between Albany and Homestead.
6. Study the one way traffic patterns on Baltimore, Kent, Adams, and Norfolk to see if cut through traffic can be discouraged.
7. Install an aesthetic roundabout at the intersection of Albany and Homestead that can serve as a gateway to the neighborhood.
8. Reverse the direction of the one way signs on Harrison Place.

West End



Location: The West End neighborhood is located in the west central section of the city. The north branch of the Park River is both its northern and eastern boundary; Capitol Avenue and the West Hartford town line along Prospect Avenue comprise the southern and western edges of the neighborhood.

Neighborhood Characteristics: The majority of the neighborhood is residential. High and medium density apartment buildings are clustered in the south section of the neighborhood, on and near the area's commercial corridor, Farmington Avenue. Two thirds of the West End's 650-acre land area has low-density housing, most of which was built before 1930, with styles ranging from old mansions to smaller Victorian era cottages. Most of the housing in the West End, including a high density 1920's era Clemens Place complex of 46 buildings, is on tree-lined streets and in a National Register of Historic Places District. The West End's diverse housing stock, suitable for a wide spectrum of ages, income and lifestyle, has resulted in a very diverse population of about 8,500. The neighborhood's commercial corridor, Farmington Avenue, caters to automobile oriented shopping and fast food restaurants but in recent years has spawned local pubs and eating establishments, a trend likely to continue. Farmington Avenue is not a comfortable street for walking or window shopping. Pedestrians walk within three feet of moving traffic, with no barrier such as parking, between them and fast moving vehicles. Other major streets in the West End are Asylum, Prospect, Sisson and Capitol Avenues and West Boulevard. Most of these streets carry heavy commuter traffic between downtown Hartford and its western suburbs.

Important Features: The West End's most dominant feature is its stock of single and multi-family homes. Houses are generally spacious and well maintained with interesting and varied architecture. The neighborhood also has large public institutions and facilities. The University of Connecticut Law School is situated on a sprawling campus with gothic style buildings. Hartford Seminary and Hartford College for Woman are on each side of the Law School creating a nearly continuous stretch of public land use between Asylum and Farmington Avenue. A few blocks away is Noah Webster

School, the neighborhood's kindergarten through eighth grade school, and Elizabeth Park, a city park noted for its gardens. The park's Rose Garden, built in 1904, has over 12,000 rose bushes and attracts visitors from around the globe. Elizabeth Park is widely used by West End neighbors for strolling and active play on its fields, courts and playground.

Neighborhood Plans and Projects: Two significant plans have been developed for the West End, the West End NRZ Strategic Plan (2001) and the Farmington Avenue plan created by the Farmington Avenue Alliance. Both plans identified the need to support physical improvements that shift the focus from a vehicle-dominated neighborhood environment to one that is pedestrian friendly. Priority needs outlined were crosswalk improvements, changes in signalization and/or timing, traffic calming and streetscape upgrades. Projects underway in the neighborhood include the development of upscale townhouses on the 16-acre Goodwin estate, conversion of the Kingswood Oxford middle school on Prospect Avenue to a larger public middle school in West Hartford on the town border and the implementation of the Farmington Avenue plan, a streetscape and road redesign project.

Neighborhood Traffic Calming Plan Development: The West End neighborhood opening charrette was held on November 21, 2002 and was attended by over 100 West End residents. Those who attended indicated that a sense of community, safety, and quiet are qualities that they value. The group identified many traffic issues they would like to see addressed in order to improve their neighborhood. Residents are concerned that the lack of crosswalks on Farmington Avenue makes it difficult for pedestrians to cross. Speeding, heavy volumes, and pedestrian safety are issues on Whitney Street, especially near the Noah Webster School. Speeding is a problem on long blocks such as those found on Scarborough, Kenyon, Girard, Evergreen, and North Beacon. Drivers ignore the four-way stop at the intersection of South Whitney Street and Warrenton Avenue and at the intersection of Fern and Girard. Traffic often gets backed up at the intersection of Asylum Avenue and Prospect Avenue. Drivers exiting the UConn Law School parking lot speed, making the area dangerous for pedestrians. Some intersections are perceived as being dangerous, including North Beacon Street at Cone Street and Terry Road at Westerly Terrace.

A walking audit was conducted on November 23, 2002 with a group of West End residents interested in learning more about traffic calming. Several new issues were discussed during the walking audit. Residents who live on Prospect Avenue feel that there is a serious speed problem on their street which should be addressed. Speeding is also a concern at the intersection of Farmington Avenue and Whitney Street, where drivers frequently run red lights and do not yield to pedestrians. Drivers park too close to the intersection of Tremont Street and Cone Street. The intersection of Cone Street and Oxford Street is too wide and some drivers ignore the stop signs.

An interim meeting was held on April 4, 2003 at the West End Civic Association. The stakeholders who attended brought additional problems to Urban Engineers' attention. Drivers speed and run stop signs at the intersection of Kenyon Street and Fern Street. Residents feel that the intersection of Capitol Avenue, West Boulevard, and Prospect Avenue is dangerous and accident prone. They are concerned with speeding on Sherman Street. Also, the intersection of Warrenton and Prospect has poor sight distance and is difficult for pedestrians to cross. Urban Engineers resolved to examine these issues and re-evaluate the plan.

At the April 10, 2003 closing charrette residents expressed some general concerns associated with the traffic calming project. They want to be sure that traffic claming will not have a negative impact on historical areas. They also want to avoid moving problems from one street to another. The group also had questions on how the treatments will be financed and whether placing traffic calming treatments on state roads would be a problem. Urban Engineers answered these questions and took the community's concerns into consideration. Many residents signed up to be part of a steering committee and guide the plan through its implementation stage. Residents were in favor of adopting the version of the plan that was presented at the closing charrette.

Based on the community's feedback, along with sound engineering judgment, the following suggestions have been made for the West End neighborhood:

1. Adopt the Farmington Avenue plan which includes a road diet with raised medians, bike lanes, curb extensions, crosswalks, and a roundabout at Sisson Avenue.
2. Implement a parking chicane on Whitney Street.
3. Build a raised crosswalk at the intersection of Whitney and Cone, next to Noah Webster School.
4. Install speed tables on long blocks on Kenyon, Girard, Sherman, Tremont, Oxford, and Beacon.
5. Install raised intersections at the intersections on South Whitney at Warrenton, Oxford at Warrenton, Evergreen at Gray, Whitney at Cone, Oxford at Elizabeth, and Terry at Westerly Terrace.
6. Place Scarborough Street on a road diet.
7. Put a speed table on Elizabeth Street in front of the UConn Law School.
8. Use roundabouts at intersections on Elizabeth, Fern, and Cone.
9. Build raised median islands along Prospect Avenue.
10. Install curb extensions on Prospect at Warrenton and Prospect at West Boulevard/Capitol Avenue.
11. Place enhanced crosswalks on Sisson Ave. in front of the senior center.

Chapter
5

Implementation

The City will continue to implement additional traffic calming treatments based on the master plan as opportunities arise. Conditions within the City are in constant change, however, requiring that the plan be updated to reflect appropriate changes and experiences gained. Elements of the plan may evolve into standards that could be transferred to streets that may not yet have a particular device recommended within the plan. Devices shown in the plan may also be modified to reflect experience gained from earlier deployments. Any changes made, however, should be done with care, so the issue being address is not transferred to another street or neighborhood. Furthermore, whenever a recommended device is being considered for deployment, or if changes are to be made to a particular street, the Traffic Calming Committee representing that neighborhood should be engaged. These committees are comprised of individuals who volunteered their involvement during the closing charrettes. Urban Engineers suggests that these committees engage the City in a proactive dialogue and, through regularly held meetings, monitor the progress of the master plan's deployment. These committees, along with the expertise of the City's professionals and with the support of the City's policymakers, should function jointly to ensure the execution of the master plan. Those individuals who volunteered to serve on the Traffic Calming Committee are listed in Appendix E.

As of July 2005 the City of Hartford had implemented six road diets, two parking chicanes, and two roundabouts. Road diets were installed on Wethersfield Avenue, Maple Avenue, Franklin Avenue, Tower Avenue, North Main Street, and Capitol Avenue. Automatic traffic recorders were used to collect speed data on these streets prior to and after the implementation of the road diets. The data collected seemed to indicate that the road diets lead

to reductions in the 85th speed percentile[4] of up to 6 mph. Bicycle lanes were installed on streets wide enough to accommodate them. Parking chicanes were installed on Whitney Street and Charter Oak Place. A temporary roundabout was installed and later removed at the intersection of North Beacon Street and Fern Street. A meeting was held with West End residents in the immediate area surrounding the intersection to discuss their perceptions of the roundabout. Reactions to the roundabout were mixed. Another roundabout was later installed at the intersection of Cornwall Street and Colebrook Street, where it remains today and appears to be operating efficiently. The City also re-timed traffic signals, and changed the rush hour one-way reversible lanes on Asylum Avenue to two way traffic—a pattern that has existed since 1958.

Implementation of the rest of the plan will take several years, continued commitment from the City and thoughtful participation by the community. In time, Hartford's streets will become more walkable, traffic speeds will subside and the quality of life in the neighborhoods will improve.

Cost

Some of the funding for the construction of the recommended traffic calming treatments may come directly from or through the State. Cost estimates, therefore, were developed using methods consistent with those prescribed by the State of Connecticut Department of Transportation. The estimates for each treatment include the cost of construction materials, necessary removals and repairs, signage, landscaping, clearing and grubbing, mobilization, maintenance and protection of traffic, construction staking, two-year inflation, contingencies and incidentals.

Development of the cost estimates were based on the assumption that high quality materials and landscaping will be incorporated into the treatments. However, because budget restrictions may limit the City's ability to use such materials, Urban Engineers identified items which may be deducted from the probable construction cost, providing a more economical alternative. These economical alternatives may be less durable than the higher cost versions and provide fewer aesthetic benefits to the neighborhoods. It is anticipated

4 The 85th percentile speed is the speed at which 85% of the vehicles are traveling at or under

City of Hartford, Connecticut
Master Traffic Calming
Estimate of Probable Construction Cost for Overall Project

Neighborhood	Mountable Granite Curb Roundabout [RB]	Granite Curb Extension [CE]	Road Diet [RD](feet)	Enhanced Cross Walk [EC]	Raised Cross Walk or Speed Table [ST]	Raised Intersection [RI]	Street Closure [SC]	Parking Chicane [PC] (# of 300' segments)	Intersection Realignment [IR] (see note #2)	Granite Curb Median [MI] with Landscaping	Raised Crosswalk [RC]	Cost Summary
Asylum Hill	0	3	0	7	1	1	3	0	0	1	0	
Barry Square	3	20	8,780	1	3	0	0	0	0	0	0	
Behind the Rocks	5	42	6,930	0	20	3	1	0	1	8	0	
Blue Hills	12	58	3,510	15	5	3	0	0	1	0	0	
Clay Arsenal	3	36	5,490	14	2	2	0	0	0	0	1	
Frog Hollow	0	49	0	15	0	0	0	4	1	3	0	
North East	6	96	22,900	13	22	6	0	0	0	0	0	
Parkville	1	18	3,810	0	0	2	0	18	0	0	0	
Sheldon Charter Oak	4	27	8,390	2	2	2	0	3	0	0	0	
South End	6	37	16,920	0	4	1	0	0	1	0	1	
South Green	0	9	5,070	4	2	1	0	0	0	0	0	
South West	5	31	7,680	0	3	1	0	0	0	0	0	
Upper Albany	2	99	5,080	0	0	2	0	29	0	0	0	
West End	6	21	3,050	9	24	5	0	9	0	6	0	
Farmington Avenue Plan												$12,000,000
Parkville Plan												$4,400,000
City Wide Totals	**53**	**546**	**97,610**	**80**	**88**	**29**	**4**	**63**	**4**	**18**	**2**	
"High-End" Unit Cost per Device (See Estimate)	**$142,740**	**$14,190**	**$5.33**	**$18,615**	**$42,723**	**$141,444**	**$17,700**	**$15,838**	**$196,526**	**$24,261**	**$42,723**	
Total "High-End" Cost per Device City Wide	**$7,565,220**	**$7,747,740**	**$520,261**	**$1,489,200**	**$3,759,624**	**$4,101,876**	**$70,800**	**$997,794**	**$786,104**	**$436,698**	**$85,446**	**$43,960,763**
"Low-End" Unit Cost per Device (See Estimate)	**$75,261**	**N/A**	**N/A**	**$1,221**	**$4,959**	**$24,719**	**$9,277**	**$1,645**	**$131,679**	**$4,685**	**$4,959**	
Total "Low-End" Cost per Device City Wide	**$3,988,833**	**$7,747,740**	**$520,261**	**$97,680**	**$436,392**	**$716,851**	**$37,108**	**$103,635**	**$526,716**	**$84,330**	**$9,918**	**$30,669,464**

Notes and Assumptions:

1. For information on the proposed materials and methods of construction for each device, see the construction details and the individual estimated cost for that device.
2. The geometry and work necessary to realign each intersection mary vary greatly. The cost shown above is based on realigning the Main,Retreat and Maple Ave. Intersection, as such, the actual cost to complete all intersection realignments may vary significantly based on differing field conditions.
3. Where no suitable "Low End" unit cost is available, the "High End" unit cost is to be used.
4. Due to differing field conditions, the estimated costs shown above have been based on certain assumptions and therefore may, or may not accurately reflect anticipated costs at every location, please see the individual estimates for further information.
5. The cost eastimate for the Farmington Avenue Plan is taken from The Farmington Avenue Joint Committee's "A New Farmington Avenue," March 15, 2002.
6. The cost eastimate for the Parkville Plan is taken from "Parkville Picture it Better Together," prepared by Milone & MacBroon, Inc., January, 2002.

Exhibit 3: Overall Cost Estimate

It should be noted that the estimateIt should be noted that the estimated construction costs are conceptual. Although contingencies are included in the estimates, costs may change as designs progress. Field observations were made in order to confirm that these treatments could be installed in the recommended locations. However, further investigation should be conducted in order to determine whether any underground utilities or drainage would impact installation of these treatments. In a typical design process, this is done when the preliminary design process begins. Drainage modifications will increase the cost of construction.

Construction costs may be reduced by incorporating traffic calming into scheduled construction projects and routine maintenance. For example, a road diet was incorporated into previously scheduled resurfacing and re-striping on Maple Avenue at no additional cost. The City's road reconstruction projects should include elements of the traffic calming master plan wherever possible. Urban also recommends that the City of Hartford appoint an administrator to coordinate upcoming construction projects for opportunities to incorporate traffic calming. It should be noted that while easily implementable treatments such as road diets and parking chicanes can be incorporated into resurfacing projects, treatments that involve more complicated construction are more likely to be incorporated into road reconstruction projects. At some locations the City may choose to implement traffic calming devices as a stand-alone project. In these situations the City may attempt to fund the project through several potential sources including federal and state grants, local general funds, and development impact fees.

Urban has identified several federal funding programs to which the City may apply for funding for the implementation of traffic calming treatments. Federal-aid highway funds for individual programs are apportioned by formulas using factors relevant to the particular program. The major Federal-aid programs are described in the ConnDOT 2003-2005 Statewide Transportation Improvement Program and summarized below along with the federal and state funding ratios for each program.

National Highway System (80/20)

National Highway System (NHS) funds can be used for any type of improvement (new lanes, reconstruction, resurfacing, etc.) on roadways

designed as part of the NHS. These include all the Interstate routes, as well as other freeways and specially designated "principal arterials" such as US 44.

Funds can be used for transit projects, ridesharing projects, or any other type of project in the travel corridor served by a NHS road, as long as it improves travel in the corridor. Funds can be transferred to some of the Surface Transportation Programs. The funding ratio for the NHS program is 80 percent federal funds to be matched by 20 percent state funds.

Congestion Mitigation and Air Quality Program (80/20)

Congestion Mitigation and Air Quality (CMAQ) is a program to address congestion and air quality problems. Funds must be used for projects that reduce congestion and air quality problems caused by vehicular emissions. In determining project eligibility under these criteria, priority should be given to implementing those projects and programs that are included in an approved State Implementation Plan as a Transportation Control Measure and will have air quality benefits. All CMAQ-funded projects and programs require an assessment and documentation of air quality benefits by the State. Many CMAQ projects can qualify for 100 percent federal funding.

High Priority Projects (80/20)

The High Priority Project (HPP) program provides funds for specific projects identified by Congress. These funds are not flexible, since they are earmarked for specific projects only. The funding ratio is 80% Federal, 20% State.

Surface Transportation Programs (STP)

STP is intended to benefit collector and minor arterial roads. In order to be eligible for funding a road must be classified by the Federal Highway Administration (FHWA) as a collector or arterial, local roads are not eligible. Under this broad program category are the following sub-programs.

STP-Urban Program (80/20)

The STP-Urban program provides funds for improvements to eligible roads in urban areas. The eligibility guidelines for STP-Urban funds are flexible. Funds can be used for a wide range of projects, such as

roadway widening, roadway reconstruction, transit projects and ridesharing. Fifty percent of all STP funds are reserved for the STP-Urban Program. It is the largest of all the STP programs. Funds are allocated to states and regions according to a formula that is based on the population of the urban area. The funding ratio for the STP-Urban program is 80 percent federal funds to be matched by 20 percent state and/or local funds.

STP-Anywhere Program (80/20)

Thirty percent of STP funds can be used anywhere in a state, regardless of rural or urban designation. These funds are known as the STP-Anywhere funds and can be used for any type of transportation project. Since they are not allocated to specific urban areas or regions, ConnDOT usually determines where the funds will be spent. The funding ratio for the STP-Anywhere program is 80 percent federal funds to be matched by 20 percent state funds.

STP-Safety Program (80/20)

Ten percent of all STP funds must be spent on safety improvement projects. ConnDOT uses a list of high accident rate locations to select and develop candidate projects for this program. Projects are also selected from ConnDOT's program to improve rail grade crossings. The funding ratio for the STP-Safety Program is 80 percent federal funds to be matched by 20 percent state funds.

STP-Enhancement Program (80/20)

This program is for projects that go above and beyond what is customarily considered part of a transportation activity. The enhancement activities must relate to the intermodal transportation system by reason of function or impact and must be encompassed in one of the twelve eligible enhancement areas.

List of eligible enhancement areas:

- Provision of facilities for pedestrians and bicyclists.
- Making available safety and educational activities for pedestrians and bicyclists.
- Acquisition of scenic easements and scenic or historic sites.

- Scenic or historic highway programs including provisions of tourist and welcome center facilities.
- Landscaping and other scenic beautification.
- Historic preservation.
- Rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals).
- Preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian or bicycle trails).
- Control and removal of outdoor advertising.
- Archaeological planning and research.
- Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.
- Establishment of transportation museums.

ConnDOT selects the STP-Enhancement projects in consultation with all of the Regional Planning Organizations (RPO's) in the State. Each RPO submits its highest priority projects and ConnDOT selects from among the submittals. The funding ratio for the STP-Enhancement Program is 80 percent federal funds to be matched by 20 percent local funds. Typically, the State does not provide the matching funds for this program.

In addition to these federal funding programs, Connecticut's Office of Policy and Management administers the Local Capital Improvement Program (LoCIP) which distributes funds to municipalities for reimbursement of eligible local capital improvement projects such as road, bridge or public building construction activities. A municipality can draw down on LoCIP funds by completing a simple application form for project approval and project reimbursement that gives a general description of the project, its work location, and the actual cost of the reimbursement.

The Community Development Block Grant (CDBG) Program is the Federal Government's primary program for promoting community revitalization throughout the country. CDBG provides annual grants on a formula basis to approximately 1,000 metropolitan cities and urban counties. CDBG funds are used for a wide range of community development activities directed

toward neighborhood revitalization, economic development, and improved community facilities and services.

In the past, the City has also financed transportation improvement projects through the sale of municipal bonds. Historically, the City has issued general obligation bonds, voter approved bonds that are backed by the full faith, credit and unlimited taxing power of the issuer. The proceeds from the sale of these bonds are used to fund the approved project(s). As of June 30, 2004 the City's general obligations bond fund was rated "Aaa" by Moody's Investors Service and "AAA" by both Standard & Poor's and Fitch Ratings. Both of these ratings are considered favorable for the issuance of municipal bonds. The City Charter provides the protocol for the issuance of municipal bonds.

Itemized cost estimates for each of the traffic calming treatments are described in detail in Appendix D and summarized below:

The probable construction cost for **roundabouts** ranges from approximately $75,000 for the low-end treatment to $ 143,000 for a high-end treatment. The estimate is based on a 15' radial device and includes the cost of constructing mountable curbing and splitter islands, as well as signage and landscaping. The low-end cost estimate is based on bituminous concrete curbing being substituted for granite curbing and decorative pavers. Additional dollars may be saved in situations where a roundabout is installed on a flexible base street as opposed to a street with a rigid base.

The cost of installing a single **curb extension** is estimated to be approximately $14,000. The estimate is based on a typical 30' wide street with granite curbing set in concrete pavement. Two new sidewalk ramps are included in the estimate in order to satisfy ADA standards. No low-end cost estimate is provided for curb extensions because no construction items can be deleted or substituted.

Road diets have an estimated construction cost of $5.33 per lineal foot, or $2,665 per 500 feet. These quantities are based on a typical 4-lane roadway with one 4-way intersection per 500 lineal feet. The estimate includes the cost of painting pavement markings and symbols as well the cost of removing

existing markings. No suitable alternates may be used to reduce the cost of road diets.

The estimated construction cost for an **enhanced crosswalk** ranges from approximately $1,000 to $19,000. The estimate was developed assuming a typical 30' wide street with 8" reinforced concrete base. Quantities for new sidewalk ramps are not included in the estimate. The low-end cost estimate was obtained by providing painted lines rather than granite curb and concrete pavers. The low-end cost estimate also assumes construction within a flexible base street.

Estimated construction costs for **raised crosswalks** and **speed tables** range from approximately $5,000 to $43,000. Quantities are based on a typical 30' wide street. New sidewalk ramps are not included in the estimate. The high-end cost includes reconstruction of the concrete road base to the new grade, decorative concrete pavers, and granite curb. The low-end cost substitutes a bituminous concrete surface for the granite curb and decorative pavers. It also assumes construction within a flexible base street.

Raised intersections have an estimated low-end construction cost of approximately $25,000 and a high-end cost of $141,000. The majority of the cost savings associated with the low-end estimate come from substituting a bituminous concrete surface for the granite curbing and decorative pavers.

The estimated cost of **street closures** ranges from approximately $9,000 to $18,000. The estimates are based on a 30' roadway. For the low-end estimate, the cost was reduced by using bituminous curbing and a bituminous concrete surface rather than landscaping.

Parking chicanes have an estimated cost between approximately $2,000 and $16,000 per 300 lineal feet. The low-end parking chicane treatment utilizes painted markings rather than granite curbing and landscaping.

Providing an estimate of the construction cost for **intersection realignments** is somewhat complicated because each realignment is unique. However, Urban has prepared an estimate based on the proposed realignment of Maple Avenue at Retreat Avenue. The most expensive item associated with

the intersection realignment estimate is traffic signal hardware. The high-end cost estimate for this treatment is approximately $197,000. However, for a less complex typical four-way intersection without landscaping and enhanced crosswalks, the cost may be reduced to approximately $132,000.

The cost estimate for a **median island** was based on a 6 foot wide by 85 foot long median. The high-end construction cost is estimated to be approximately $24,000. The low-end cost, which is obtained by substituting bituminous concrete curbing and surface for granite curbing and landscaping, is estimated to be approximately $5,000.

Appendix

A

Traffic Count Data

(Sorted alphabetically by street name)

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Adams Street	Albany Avenue	Norfolk Street	32	1050
Adams Street	Homestead Avenue	Albany Avenue	34	950
Addison Street	Tower Avenue	Rosemont Street	31	500
Adelaide Street	Campfield Avenue	Stedman Street	35	2950
Adelaide Street	Franklin Avenue	Wethersfield Avenue	34	2300
Airport Road	Wethersfield Avenue	Ledyard Street	N/A	19500
Albany Avenue	Mark Twain Drive	Scarborough Street	N/A	20400
Albany Avenue	Milford Street	Adams Street	N/A	13200
Albany Avenue	Prospect Avenue	Bloomfield Avenue	N/A	18800
Albany Avenue	Scarborough Street	Terry Road	N/A	24200
Allen Pl	Broad Street	Washington Street	32	1950
Andover Street	Cornwall Street	Blue Hills Avenue	32	600
Andover Street	Granby Street	Lyme Street	30	350
Andover Street	Lyme Street	Palm Street	30	500
Annawan Street	Dean Street	Wethersfield Avenue	32	3000
Ashford Street	west of	Main Street	33	800
Ashley Street	Atwood Street	May Street	30	1050
Ashley Street	Huntington Street	Garden Street	35	3300
Asylum Avenue	Woodside Cir	Woodland Street	41	14650
Atwood Street	Ashley Street	Collins Street	31	3350
Atwood Street	Collins Street	Asylum Avenue	31	4350
Atwood Street	Sargeant Street	Ashley Street	29	1350
Babcock Street	Grand Street	Russ Street	30	3250
Babcock Street	Russ Street	Capitol Avenue	30	1600
Babcock Street	Park Street.	Grand Street.	22	1300
Baldwin Street	Roosevelt Street	South Street	27	300
Baltic Street	Lebanon Street	Coventry Street	31	350
Baltimore Street	Albany Avenue	Norfolk Street	32	700
Baltimore Street	Homestead Avenue	Albany Avenue	31	850
Barbour Street	Cleveland Street	Kensington Street	37	6350
Barbour Street	Kensington Street	Earle Street	33	6600
Barbour Street	Naugatuck Street	Westland Street	34	5900
Barbour Street	Tower Avenue	Cleveland Street	21	4500
Barbour Street	Westland Street	Judson Street	30	4600
Barker Street	Campfield Avenue	Stedman Street	35	3500
Barker Street	Franklin Avenue	Wethersfield Avenue	35	3300
Barnard Street	Washington Street	Maple Avenue	33	5750
Bartholomew Avenue.	south of	Park Street.	N/A	2700
Beacon Street	Warrenton Avenue.	Farmington Avenue.	N/A	1500
Becket Street	South Street	Brown Street	29	300
Benton Street	Maple Avenue	Franklin Avenue	32	3150
Benton Street	Maple Avenue	Webster Street	30	1000
Benton Street	west of	Wethersfield Avenue	30	950
Bloomfield Avenue	north of	Albany Avenue	N/A	21600
Blue Hills Avenue	Tower Avenue	Manchester Street	36	13700
Blue Hills Avenue	Westbourne Parkway	Burlington Street	N/A	12300
Bodwell Street	Franklin Avenue	Wethersfield Avenue	34	950

[5] The speeds shown above are 85th percentile speeds, representing the speed at which 85% of the vehicles are traveling at or under

[6] These values represent the bi-directional (if applicable) traffic volumes on a typical weekday

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Bolton Street	Wethersfield Avenue	Franklin Avenue	38	1900
Bond Street	Franklin Avenue	Maple Avenue	35	2700
Boothbay Street	Lebanon Street	Coventry Street	35	900
Branford Street	Cornwall Street	Blue Hills Avenue	33	750
Branford Street	Granby Street	Lyme Street	33	300
Bristol Street	Newington Avenue	Hollywood Avenue	35	250
Broad Street	Capitol Street	Russ Street	33	7650
Broad Street	Farmington Avenue	I-84	38	11050
Broad Street	Grand Street	Park Street.	32	8300
Broad Street	Park Street.	Ward Street	25	4450
Broad Street	Vernon Street	Allen Pl	26	6050
Brookfield Street	Dart Street	Flatbush Avenue	35	2650
Brown Street	Campfield Avenue	Becket Street	34	8450
Brown Street	Casco Street	Becket Street	30	8350
Brown Street	Dalton Street	Brunswick Street	33	7650
Brownell Avenue	Broad Street	Washington Street	36	1400
Brunswick Street	South Street	Brown Street	30	250
Buckingham Street	Washington Street	Cedar Street	33	7450
Burlington Street	Blue Hill Avenue	Cornwall Street	37	450
Burnham Street	Hartland Street	Cornell Street	35	2500
Burnham Street	North Canaan Street	Lyme Street	34	2800
Burnham Street	Palm Street	Hartland Street	36	2200
Burton Street	Homestead Avenue	Albany Avenue	36	1450
Bushnell Street	Campfield Avenue	Franklin Avenue	36	2350
Cabot Street	Homestead Avenue	Albany Avenue	33	1800
Cambridge Street	Tower Avenue	Rosemont Street	34	700
Campfield Avenue	Adelaide Street	Barker Street	32	5350
Campfield Avenue	Cowles Street	South Street	32	3400
Campfield Avenue	Cromwell Street	Chester Street	32	2550
Campfield Avenue	Goodrich Street	Hanmer Street	37	2850
Campfield Avenue	Preston Street	Douglas Street	31	4850
Campfield Avenue	Standish Street	Brown Street	29	3550
Campfield Avenue	Tredeau Street	Cromwell Street	35	2550
Campfield Avenue	Victoria Road	Montowess Street	29	2300
Cantebury Street	Westbourne Tpk	Plainfield Street	37	400
Cantebury Street	Westbourne Tpk	Plainfield Street	32	550
Canterbury Street	Westbourne Parkway	Plainfield Street	36	400
Capen Street	Vine Street	Enfield Street	36	3600
Captiol Avenue	Flower Street	Broad Street	35	2650
Casco Street	South Street	Brown Street	31	350
Chandler Street	Sherbrooke Avenue	Dorset Street	42	1800
Chapman Street	Newbury Street	Maple Avenue	34	450
Charlotte Street	Barbour Street	Martin Street	27	2450
Charter Oak Avenue	Popieluszko Crt	Wyllys Street	35	5250
Charter Oak Pl	Wyllys Street	Charter Oak Avenue	32	850
Chatham Street	Cornwall Street	Blue Hill Avenue	N/A	450
Chatham Street	Granby Street	Lyme Street	N/A	300
Chatham Street	Lyme Street	Cornwall Street	N/A	450
Chester Street	Campfield Avenue	George Street	35	700
Chester Street	Franklin Avenue	George Street	37	850
Clark Street	Westland Street	Judson Street	32	2000
Cleveland Avenue	Barbour Street	Hampton Street	39	3150

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Cleveland Avenue	Garden Street	Barbour Street	34	1250
Clifford Street	Broad Street	Maple Avenue	34	2800
Colebrook Street	Cornwall Street	Blue Hills Avenue	31	450
Colebrook Street	Blue Hills Avenue	Ridgefield Street	32	200
Colebrook Street	Granby Street	Lyme Street	29	300
Colebrook Street	Lyme Street	Palm Street	28	250
Collins Street	Atwood Street	Willard Street	29	8700
Collins Street	Huntington Street	Sumner Street	34	7950
Collins Street	Woodland Street	Atwood Street	36	5050
Colonial Street	Broad Street	Washington Street	32	650
Coolidge Street	Chandler Street	Broadview Terr	38	600
Cornell Street	Morningside Street	Euclid Street	28	650
Cornwall Street	Andover Street	Holcomb Street	30	2650
Cornwall Street	Holcomb Street	Colebrook Street	31	2850
Cornwall Street	Pembroke Street	Thomaston Street	37	2750
Cornwall Street	Branford Street	Manchester Street	36	2300
Cornwall Street	Litchfield Street	Harold Street	39	900
Cornwall Street	Litchfield Street	Harold Street	36	950
Cornwall Street	Westminster Street	Branford Street	33	2450
Coventry Street	Baltic Street	Tower Avenue	38	7450
Coventry Street	Boothbay Street	Pershing Street	43	7100
Coventry Street	East Bunham Street	Harold Street	27	6000
Cowles Street	Campfield Avenue	George Street	30	600
Crescent Street	New Britain Avenue	Broad Street	28	550
Cromwell Street	Campfield Avenue	George Street	35	650
Cromwell Street	Franklin Avenue	George Street	34	850
Crown Street	Ellsworth Street	Julius Street	30	1050
Crown Street	Webster Street	Ellsworth Street	30	1100
Dalton Street	South Street	Brown Street	30	400
Dart Street	Brookfield Street	Chandler Street	32	850
Deerfield Avenue	Albany Avenue	Greenfield Street	37	1200
Dover Street	Roosevelt Street	South Street	26	250
Durham Street	Lyme Street	Palm Street	35	500
E. Burnham Street	Lebanon Street	Coventry Street	36	1250
East Euclid Street	Blue Hills Avenue	Coventry Street	37	600
East Harold Street	Lebanon Street	Coventry Street	31	300
Eastview Street	Newbury Street	Broad Street	32	150
Eaton Street	Wethersfield Avenue	Franklin Avenue	33	1000
Edgewood Street	Albany Avenue	Greenfield Street	33	1400
Edgewood Street	Homestead Avenue	Albany Avenue	32	1700
Edgewood Street	Homestead Avenue	Albany Avenue	29	1400
Edgewood Street	Vine Street	Enfield Street	33	1150
Edgewood Street	Vine Street	Keney Terr	34	2200
Edwards Street	Walnut Street	Albany Avenue	39	2700
Elizabeth Street	Oxford Street	Whitney Street	20	1400
Elliot Street	west of	Wethersfield Avenue	30	2200
Ellsworth Street	Crown Street	New Britain Avenue	33	850
Essex Street	Retreat Avenue	Maple Avenue	29	2250
Euclid Street	Cornell Street	Blue Hills Avenue	33	1300
Euclid Street	Palm Street	Cornell Street	35	450
Fairfield Avenue	Fairfield Avenue	New Britain Avenue	N/A	2400
Fairfield Avenue	Maple Avenue	Salem Street	39	10500
Farmington	Owen Street	Woodland Street	37	9550

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Avenue				
FD Oats Avenue	Garden Street	Bethel Street	45	3450
Fenwick Street	Roosevelt Street	South Street	27	500
Fern Street	No. Beacon Street	Oxford Street	25	2750
Fern Street	No. Beacon Street	Prospect Street	28	3200
Fern Street	North Beacon Street	Oxford Street	25	2650
Fern Street	North Beacon Street	Prospect Street	28	3200
Fern Street	North Beacon Street	Prospect Street	29	3250
Flatbush Avenue	Brookfield Street	Coleman Drive	N/A	8700
Flatbush Avenue	Community Pl	Overlook Terr	N/A	12600
Flatbush Avenue	Hillside Avenue	Zion Street	37	5400
Flatbush Avenue	Mahoney Avenue	Community Pl	N/A	20500
Florence Street	East Street	Main Street	30	700
Francis Avenue.	south of	Park Street.	N/A	1250
Franklin Avenue	Barker Street	Bond Street	35	12450
Franklin Avenue	Hanmer Street	Plymouth Street	42	4550
Franklin Avenue	Preston Street	Bliss Street	34	13450
Franklin Avenue	Victoria Road	Montowess Street	43	3000
Freeman Street	Torwood Street	Maple Avenue	34	3600
Garden Street	Albany Avenue	Mather Street	30	7500
Garden Street	Capen Street	Edgewood Street	32	5250
Garden Street	Capen Street	FD Oats Avenue	36	8250
Garden Street	Edgewood Street	Nelson Street	27	4650
Garden Street	FD Oats Avenue	Pliny Street	33	8150
Garden Street	Homestead Avenue	Albany Avenue	33	7750
Garden Street	Tower Avenue	Cleveland Street	33	700
George Street	Cromwell Street	Chester Street	26	750
George Street	Goodrich Street	Hanmer Street	33	900
George Street	Preston Street	Douglas Street	25	1100
George Street	Roosevelt Street	South Street	31	250
George Street	Standish Street	Brown Street	28	1900
George Street	Tredeau Street	Cromwell Street	28	550
George Street	Victoria Road	Montowess Street	23	400
Gilman Street	Maple Avenue	Campfield Avenue	38	1900
Girard Avenue	Elizabeth Street	Asylum Avenue	38	1750
Girard Avenue	Farmington Avenue	Fern Street	35	2300
Goodrich Street	Campfield Avenue	George Street	35	200
Goodrich Street	Wethersfield Avenue	Franklin Avenue	35	1500
Granby Street	Burlington Street	Cornwall Street	38	7350
Granby Street	Colebrook Street	Holcomb Street	38	7250
Grand Street	Broad Street	Lawrence Street	30	750
Grand Street	Hungerford Street	Broad Street	25	1150
Grand Street	Lafayette Street	Oak Street	25	1650
Grandview Terr	White Street	West Preston Street	31	400
Grant Street	Stafford Street	Stanwood Street	33	300
Greenfield Street	Woodland Street	Oakland Terr	37	7600
Greenwich Street	Tower Avenue	Rosemont Street	30	200
Hamilton Street	Hillside Avenue	Zion Street	35	4650
Hanmer Street	Campfield Avenue	George Street	33	300
Hanmer Street	Fenwick Street	Franklin Avenue	28	1050
Hanmer Street	Wethersfield Avenue	Franklin Avenue	38	950
Hartland Street	Harold Street	Burnham Street	22	350
Hartland Street	Litchfield Street	Simpson Street	34	500

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Hartland Street	Simpson Street	Harold Street	24	450
Harvard Street	White Street	Linmoore Street	30	450
Heath Street	Capitol Avenue	Ashton Street	33	1400
Henry Street	Roxbury Street	Mountford Street	32	1300
Hillside Avenue	Allendale Road	Flatbush Avenue	31	6400
Hillside Avenue	New Britain Avenue	Ansonia Street	35	2650
Hillside Avenue	Park Terrace	Hamilton Street	26	8350
Holcomb Street	Blue Hills Avenue	Ridgefield Street	39	5300
Holcomb Street	Cornwall Street	Blue Hills Avenue	33	1300
Holcomb Street	Lyme Street	Granby Street	31	550
Holcomb Street	Lyme Street	Palm Street	29	800
Holcomb Street	Ridgefield Street	Coventry Street	33	2800
Hollywood Avenue	Bristol Street	Marion Street	27	500
Homestead Avenue	Albany Avenue	Baltimore Street	45	11200
Hubbard Road	Cromwell Street	Hanmer Street	37	1400
Hubbard Road	Cromwell Street	Victoria Street	37	1650
Hubbard Road	Hanmer Street	South Street	36	850
Hudson Street	Park Street	Buckingham Street	32	5400
Hungerford Street	Capitol Avenue	Russ Street	29	800
Hungerford Street	Grand Street	Park Street	30	950
Huyshope Avenue	Curcombe Street	Wawarme Avenue	33	1050
Huyshope Avenue	north of	Nepaquash Street	35	3450
Irving Street	Albany Avenue	Mather Street	33	1850
Irving Street	Albany Avenue	Mather Street	33	1950
Irving Street	Homestead Avenue	Albany Avenue	34	1050
Irving Street	Homestead Avenue	Albany Avenue	37	1050
Jefferson Street	Washington Street	Seymour Street	30	8650
John Street	Park Street	Buckingham Street	N/A	800
Judson Street	Martin Street	Barbour Street	24	950
Julius Street	Crown Street	King Street	30	1300
Julius Street	Mountford Street	King Street	26	1350
Julius Street	New Britain Avenue	Crown Street	30	1800
Kane Street	Madison Avenue	New Park Avenue	N/A	6800
Kenneth Street	Maple Avenue	Broad Street	34	1450
Kent Street	Albany Avenue	Homestead Avenue	32	550
Kent Street	Albany Avenue	Norfolk Street	28	1100
Kent Street	Norfolk Street	Albany Avenue	28	1700
Kenyon Street	Farmington Avenue	Fern Street	39	1650
Kenyon Street	Fern Street	Elizabeth Street	34	1050
Kenyon Street	north of	Elizabeth Street	28	750
Kenyon Street	south of	Asylum Avenue	30	800
King Street	Webster Street	Julius Street	32	750
Lafayette Street	Russ Street	Grand Street	31	2400
Laurel Street	Farmington Avenue	Hawthorne Drive	35	7800
Laurel Street	north of	Park Street.	N/A	9950
Lawrence Street	Grand Street	Park Street	30	2000
Lawrence Street	Park Street	Ward Street	30	2000
Lenox Street	Albany Avenue	Greenfield Street	33	1800
Lincoln Pl	Broad Street	Washington Street	35	1100
Linmoore Street	Fairfield Avenue	Grandview Terr	31	4450
Linmoore Street	Newbury Street	Maple Avenue	38	4800
Linmore Street	Cheshire Street	Monroe Street	32	3550

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Linmore Street	Fairfield Avenue	Cheshire Street	33	3700
Lisbon Street	Stonington Street	Wyllys Street	30	950
Locust Street	Hendrixsen Avenue	Wawarme Avenue	31	1750
Lyme Street	Andover Street	Holcomb Street	29	1250
Lyme Street	Branford Street	Westminster Street	33	1000
Lyme Street	Colebrook Street	Pembroke Street	33	1050
Lyme Street	Thomaston Street	Plainfield Street	32	1950
Lyme Street	Tower Avenue	Manchester Street	30	1100
Lyme Street	Tower Avenue	Pomfret Street	41	1200
Magnolia Street	Albany Avenue	Mather Street	28	1250
Magnolia Street	Albany Avenue	Mather Street	31	1350
Magnolia Street	Greenfield Street	Mather Street	29	1100
Magnolia Street	Homestead Avenue	Albany Avenue	30	1550
Main Street	Pavilion Street	Canton Street	40	11050
Main Street	Windsor Street	Cleveland Avenue	40	0
Manchester Street	Cornwall Street	Salisbury Street	34	900
Manchester Street	Granby Street	Lyme Street	32	400
Manchester Street	Lyme Street	Palm Street	35	450
Maple Avenue	Broad Street	Chaplin Street	N/A	19900
Maple Avenue	Fairfield Avenue	Salem Street	47	10050
Maple Avenue	King Street	Mountford Street	N/A	12000
Marion Street	Newington Avenue	Hollywood Avenue	37	750
Mark Twain Drive	Ogilby Drive	Dillon Rd	N/A	5100
Marshall Street	Farmington Avenue	Niles Street	33	1900
Masseek Street	Huyshope Avenue	Van Dyke Avenue	30	350
Mather Street	East Street	Main Street	36	4200
May Street	Ashley Street	Collins Street	30	1350
May Street	Sargeant Street	Ashley Street	30	1650
McKinley Street	Roosevelt Street	South Street	26	300
Meadow Street	Wethersfield Avenue	Ledyard Street	N/A	3200
Melrose Street	Tower Avenue	Rosemont Street	30	1400
Milford Street	Albany Avenue	Homestead Avenue	36	850
Montowese Street	Campfield Avenue	George Street	34	350
Montowese Street	Franklin Avenue	George Street	37	500
Montrose Street	Stafford Street	Sprague Street	27	250
Montrose Street	Stanwood Street	Windham Street	30	500
Morningside Street	Palm Street	Cornell Street	34	1000
Mountford Street	Broad Street	Julius Street	30	2050
Mountford Street	Julius Street	Maple Avenue	36	650
New Britain Avenue	Chandler Street	Oliver Street	42	9750
New Britain Avenue	Clermont Street	Natick Street	N/A	17700
New Britain Avenue	Crescent Street	Broad Street	37	0
New Britain Avenue	Roslyn Street	Grant Street	39	9000
New Park Avenue	Park Street.	Grace Street	N/A	13450
Newbury Street	Linmoore Street	Chapman Street	27	550
Newbury Street	Roxbury Street	GrandviewTer	34	650
Newfield Avenue	Flatbush Avenue	omewood Pl	40	9500
Newfield Avenue	New Britain Avenue	Dexter Street	41	11200
Newfield Avenue	Overlook Terr	Dexter Street	42	9750
Newington Avenue	Waterford Street	New Britain Avenue	44	6800

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
North Beacon Street	Fern Street	Cone Street	29	850
North Beacon Street	Fern Street	Cone Street	29	750
North Beacon Street	Fern Street	Cone Street	34	750
North Beacon Street	Fern Street	Elizabeth Street	37	1250
North Beacon Street	Fern Street	Elizabeth Street	25	1250
Oak Street	Grand Street	Russ Street	30	2000
Oak Street	Park Street	Grand Street	30	1150
Oak Street	Russ Street	Capitol Avenue	33	3100
Oakland Terrace	Albany Avenue	Greenfield Street	33	1300
Oakland Terrace	Homestead Avenue	Albany Avenue	32	1100
Otis Street	Campfield Avenue	Franklin Avenue	35	900
Oxford Street	Farmington Avenue	Cone Street	35	1300
Oxford Street	Fern Street	Elizabeth Street	33	600
Palm Street	Holcomb Street	Andover Street	30	1150
Palm Street	Lyme Street	Colebrook Street	31	900
Palm Street	Westminster Street	Branford Street	38	1200
Palm Street	Burnham Street	Harold Street	29	1900
Palm Street	Morningside Street	Euclid Street	31	1050
Park Street	Broad Street	Hungerford Street	23	3650
Park Street	Broad Street	Lawrence Street	27	8700
Park Street	John Street	Hudson Street	27	6400
Park Street	Main Street	John Street	27	6600
Park Street	Park Terrace	Laurel Street	N/A	16450
Park Street	Pope Pk. Hwy	Laurel Street	N/A	17400
Park Street	Wadsworth Street	Hudson Street	25	6150
Park Street	Washington Street	Cedar Street	29	8200
Park Street	Washington Street	Lafayette Street	28	6850
Park Street	Zion Street	Park Terrace	32	6050
Park Terrace	Hillside Avenue	Summit Street	37	5750
Park Terrace	York Street	Park Street.	N/A	18000
Pawtucket Street	Maple Avenue	Franklin Avenue	31	2250
Pembroke Street	Blue Hills Avenue	Ridgefield Street	32	800
Pembroke Street	Granby Street	Lyme Street	34	400
Plainfield Street	Blue Hills Avenue	Canterbury Street	24	450
Plainfield Street	Granby Street	Lyme Street	32	1700
Plainfield Street	Granby Streetff	Mark Twain Drive	N/A	4300
Plymouth Street	Franklin Avenue	Wethersfield Avenue	35	1250
Pope Park Drive	North of	Park Terrace	39	4050
Pope Park Hwy	south of	Park Street.	31	4600
Preston Street	Campfield Avenue	George Street	38	4700
Preston Street	Franklin Avenue	Wethersfield Avenue	34	3450
Preston Street	Winship Street	Franklin Avenue	31	5450
Prospect Avenue	Farmington Avenue	Cone St	39	13100
Prospect Avenue	south of	Capitol Avenue	35	12250
Prospect Avenue	Sycamore La	Belknap Road	42	10200
Redding Street	Wethersfield Avenue	Franklin Avenue	31	1400
Regent Street	Warrenton Avenue	West Boulevard	26	300
Retreat Avenue	Essex Street	Maple Avenue	35	9250
Ridgefield Street	Colebrook Street	Holcomb Street	40	4100

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Ridgefield Street	Thomaston Street	Pembroke Street	42	3450
Ridgefield Street	Westbourne Parkway	Plainfield Street	45	4300
Rockville Street	Vine Street	Enfield Street	35	500
Roosevelt Street	Baldwin Street	George Street	27	700
Roosevelt Street	Franklin Avenue	Fenwick Street	28	1150
Rosemont Street	Greenwich Street	Melrose Street	34	600
Rosemont Street	west of	Main Street	30	1150
Roslyn Street	New Britain Avenue	Stanwood Street	36	400
Roslyn Street	Stafford Street	Stanwood Street	33	150
Roxbury Street	Henry Street	Broad Street	31	2850
Roxbury Street	Newbury Street	Harwich Street	29	2800
Russ Street	Broad Street	Hungerford Street	N/A	4500
Rutland Street	Tower Avenue	Ashford Street	31	350
Salisbury Street	Litchfield Street	Harold Street	32	650
Sargeant Street	Atwood Street	May Street	31	1250
Sargeant Street	Huntington Street	Garden Street	36	2350
Scarborough Street	Asylum Avenue	Albany Avenue	44	16250
School Street	Bond Street	Washington Street	32	900
Seyms Street	Main Street	East Street	26	1150
Sharon Street	Cornwall Street	Blue Hill Avenue	30	600
Sheldon Street	Taylor Street	Charter Oak Avenue	34	950
Sherman Street	Farmington Avenue	Lorraine Street	33	2250
Shultas Pl	west of	Wethersfield Avenue	35	1650
Sigourney Street	Ashley Street	Collins Street	32	11500
Sigourney Street	Homestead Avenue	Albany Avenue	34	0
Sigourney Street	Farmington Avenue	Hawthorne Drive	34	11150
Sisson Avenue	Cherry Street	Capitol Avenue	33	9200
Sisson Avenue	Farmington Avenue	Fales Street	33	9000
South Street	Fenwick Street	Franklin Avenue	30	4200
South Street	Becket Street	Campfield Avenue	27	5950
South Street	Casco Street	Brunswick Street	37	5550
South Street	Franklin Avenue	McLean Street	31	3550
South Street	west of	Dalton Street	38	4800
South Whitney Street	Capitol Avenue	Park Street.	33	4800
South Whitney Street	Warrenton Avenue	Farmington Avenue.	32	6350
South Whitney Street	Warrenton Avenue	West Boulevard	28	6300
Stafford Street	Grant Street	Roslyn Street	32	400
Stafford Street	Newington Avenue	Montrose Street	36	600
Standish Street	Franklin Avenue	George Street	34	1100
Standish Street	Franklin Avenue	Wethersfield Avenue	30	1550
StandishStreet	George Street	Campfield Avenue	28	450
Stanwood Street	Grant Street	Montrose Street	28	650
Stanwood Street	Newington Avenue	Nepaug Street	32	550
Sterling Street	Homestead Avenue	Albany Avenue	34	1450
Stonington Street	Wethersfield Avenue	Groton Street	30	3150
Summit Street	Zion Street	Park Terr	27	7700
Taylor Street	Charter Oak Avenue	Sheldon Street	N/A	1600
Terry Road	Asylum Avenue	Westerly Terr	40	1150
Thomaston Street	Blue Hills Avenue	Ridgefield Street	30	700
Thomaston Street	Granby Street	Lyme Street	35	450

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Torwood Avenue	Griswold Street	Salem Street	30	100
Tower Avenue	Coventry Street	Waverly Street	54	12800
Tower Avenue	Hampton Street	Rutland Street	49	11700
Tower Avenue	west of	Main Street	41	11000
Tredeau Street	Campfield Avenue	George Street	33	450
Tredeau Street	Franklin Avenue	George Street	35	600
Tremont Street	Farmington Avenue	Warrenton Street	37	950
Van Dyke Avenue	south of	Sequassen Street	40	2050
Vernon Street	Broad Street	Washington Street	39	2150
Vernon Street	Summit Street	Broad Street	25	550
Victoria Road	Campfield Avenue	George Street	34	950
Victoria Road	Franklin Avenue	Campfield Avenue	38	950
Victoria Road	Wethersfield Avenue	McMullen Avenue	35	1350
Vine Street	W. Raymond Street	Mansfield Street	32	6750
Vine Street	Westland Street	Holcomb Street	39	6200
Vine Street	Westland Street	Winchester Street	35	8000
Wadsworth Street	Park Street	Buckingham Street	32	1650
Warrenton Avenue	Evergreen Avenue	Whitney Street	27	3200
Warrenton Avenue	Whitney Street	Rodney Street	28	2800
Washington Avenue	Brownell Street	Retreat Avenue	38	14800
Waverly Street	129' south of	Jackson Terr	25	2650
Waverly Street	180' south of	Jackson Terr	15	1700
Waverly Street	250' south of	Jackson Terr	23	2150
Wawarme Avenue	Ledyard Street	Locust Street	46	3300
West Preston Street	Newbury Street	Broad Street	34	1750
Westbourne Parkway	Blue Hill Avenue	Garfield Street	35	5350
Westerly Terrace	Albany Avenue	Terry Road	33	100
Westerly Terrace	Terry Road	Albany Avenue	32	150
Westland Street	Vine Street	Auburn Street	41	4600
Westminster Street	Cornwall Street	Blue Hills Avenue	32	450
Westminster Street	Granby Street	Lyme Street	34	300
Westminster Street	Lyme Street	Palm Street	29	350
Wethersfield Avenue	Barker Street	Bond Street	39	7200
Wethersfield Avenue	Hanmer Street	Plymouth Street	40	12000
Wethersfield Avenue	Preston Street	Bliss Street	36	7400
Wethersfield Avenue	Standish Street	Airport Road	33	7350
Wethersfield Avenue	Victoria Road	Bolton Street	41	12150
White Street	Fairfield Avenue	Grandview Terr	34	4450
White Street	Harvard Street	Roger Street	35	8400
White Street	Newbury Street	Broad Street	41	4550
Whitney Street	Cone Street	Fern Street	32	6850
Whitney Street	Farmington Avenue	Fern Street	37	7750
Whitney Street	Fern Street	Elizabeth Street	35	7150
Whitney Street	Warrenton Avenue	Farmington Avenue.	32	6350
Whitney Street	Warrenton Avenue	West Boulevard	28	6300
William Street	Liberty Street	Albany Avenue	31	1650

Street	Between	And	Speed (mph)[5]	24-Hour Volume[6]
Wilson Street	Hillside Avenue	Zion Street	31	850
Winchester Street	Vine Street	Auburn Street	29	600
Winship Street	Preston Street	Douglas Street	27	700
Woodstock Street	Blue Hills Avenue	Colton Street	39	600
Wyllys Street	Norwich Street	Charter Oak Avenue	36	14900
Zion Street	Harbison Avenue	Hamilton Street	35	11150

Appendix

B

Charrette Minutes

(Sorted by citywide opening charrette, focus groups, and neighborhoods)

URBAN ENGINEERS, INC.

1010 Wethersfield Ave.
Hartford, CT 06114
Phone: (860) 296-0700
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Hartford Neighborhood Traffic Calming
www.hartfordtrafficcalming.com

MINUTES OF MEETING

Subject: Kick Off Workshop

Date: Tuesday, September 10, 2002

Time: 4:00 PM

Location: St. Francis Care Center for Health Enhancement, 95 Woodland Street, Hartford

Present: See Attached Attendance Sheet

As attendees arrived at the meeting, they were each given a 'dot' to place on a map corresponding to the neighborhood they were from. At the end of the meeting the dots were totaled as follows:

Neighborhood	Total Dots
Asylum Hill:	6
Barry Square:	3
Behind the Rocks:	1
Blue Hills:	2
Clay Arsenal:	3
Downtown:	3
Frog Hollow:	2
Northeast:	1
Parkville:	3
Sheldon Charter Oak:	0
South End:	5
South Green:	4
Southwest:	2
Upper Albany:	3
West End:	16

Najib Habesch:
- Welcome and project team introductions
- Introduced Bhupen

Bhupen Patel:
- Discusses success of Scarborough/Prospect Ave projects
- Unlike other departments, traffic engineering hasn't had s single plan that has been shelved

- Introduced Councilman Painter

Councilman Robert Painter:
- He is here to represent the mayor and city council
- Asks residents to be patient. If we want to do this right it will take the full two years.
- Asks audience to encourage their neighbors to come to future meetings.

Najib Habesch:
- We can be contacted via the website, e-mail, or phone number. Contact info will be distributed after the meeting.
- We want to be accessible and encourage feedback
- Discusses the local and national traffic calming expertise of the team
- Introduced Dan

Dan Burden:
- The project team will lay out the foundation for the project. Residents will take the active role.
- The project team will give residents the training and vocabulary to decide on traffic calming techniques
- We will talk about the process as much as the product
- It is important to get a consensus in each neighborhood

Activity 1:
- Write down your definition of traffic calming
- Dan's definition is: civil obedience
- Residents' definitions were written on index cards which we collected afterwards

Activity 2:
- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

Sense of Community	31
Safety	26
Quiet/Peaceful	17
Beauty	14
Access/Convenience	12
Clean	11
Diversity	10
Pedestrian Friendly	10
Historical	9
Respect	9
Crime Prevention	8
Active/Lively	7
Prevent Speeding	4
Green/Nature	4
Property Value	3
Prosperity	3
Bike Friendly	2
Good Schools	2
Predictability	1
Happiness	1
Enjoy	1
Obedience	1
Sense of Place	1

- ❑ Longevity 1
- ❑ Prestigious 1
- ❑ Single Family Homes 1
- ❑ Affordable 1
- ❑ Size 1
- ❑ Lower Taxes 1
- ❑ Progressive 1
- ❑ Comfort 1
- ❑ Quality 1
- ❑ Mecca 1
- ❑ Urban 1
- ❑ Children 1
- ❑ Pride 1

Dan then gave a 196-slide presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- City should do mailings to inform residents of traffic calming meetings. But it is also important for community leaders to go door to door and promote the project.
- Special traffic calming tools can be used around schools
- We are currently collecting volume and speed data
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- Traffic calming must also work for emergency responders, we are having a focus group for them. Speed pillows are a useful tool.
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming too
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- Large numbers work better
- Discussed the process for each charrette

- List problems
- Use stickers to vote on priority
- Work tables. Often, all the tables come up with the same solutions
- Presentations
- Develop a master plan with recommendations
- Report should include priorities, and what should be treated first
- Engineering staff will make sketches, and do field work, size and position equipment

- A number of Hartford's streets are appropriate for road diets

Najib:

- Proposed schedule
  - Kickoff — Sept. 10, 2002
  - Neighborhoods 1,2 and 3 — Nov. 18-27, 2002
  - Neighborhoods 4,5,6 and 7 — Jan. 22-28, 2003
  - Neighborhoods 8,9,10, and 11 — Apr. 8-15, 2003
  - Neighborhoods 12,13 and 14 — Jun 17-24, 2003
  - Final Presentation — not scheduled, August maybe

- Crash data for the year 2000 was collected for the entire City.
- Neighborhoods have been ranked based on number of crashes.
- If residents have no preference we will schedule the neighborhoods based on the accident history. However, we would prefer to know which neighborhoods feel the most ready and would like to begin immediately.
- One resident says Park Street streetscape project should be incorporated into the project
- Another resident says Parkville has already held meetings and has created a plan. He wants to know if they should use this plan or start over. Dan recommends starting at the beginning of the process because they might get some new ideas and it will make it easier to get a consensus in the neighborhood.

Activity 3:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - Policing/Enforcement/Jail — 46
  - Speeding — 33
  - Transit Friendly — 21
  - Noise — 17
  - Illegal Parking — 16
  - Bicycle Friendly — 14
  - Geographically Appropriate — 14
  - Enhanced School Zones — 13
  - Focus on Hartford Residents — 13
  - Incorporate Existing Plans — 11
  - Treat Neighborhood Needs — 11
  - Cut Through Traffic — 10
  - Parking Placement — 10
  - Don't Move the Problem — 9
  - Budget — 8
  - Diverse Representation — 7
  - Less Asphalt — 6
  - More Parking — 6
  - Jaywalking — 5
  - Education — 5

- Heal Neighborhoods 4
- Enduring Construction 4
- Quality Materials 4
- Get Rid of All Cars 3
- Community Benefits 2
- Audio/Tactile Signals 2
- Involve Children in Process 1

Activity 4:

- Participants assembled in small groups with the other representatives from their neighborhood. Each group discussed whether or not their neighborhood was prepared to immediately begin the charrette process. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - UPPER ALBANY
    - Feel they are ready to begin immediately. They plan on gaining support through phone calls, neighborhood organizations, flyers, merchants, and a property owner list.
    - The main concerns are: parking, dislike of one way steets, summer noise, loitering, and speeding.
    - Residents: Marie Delaire

  - BLUE HILLS
    - Would like to have charrettes in January. They feel they can get a turnout of over 100 residents through block clubs, the Blue Hills News and weeklies, town meetings, the Blue Hills NRZ, the Blue Hills Civic Association, and a phone tree.
    - Their main concerns are: speeding, parking, policing, cut throughs, noisy mopeds and motorcycles, and deteriorating curbs and potholes. They also mentioned that Ridgefield Street was turned into a one-way street 10 years ago, but that didn't last because residents complained that it just relocated the traffic.
    - Residents: Don Noel, Keisha Freckleton

  - CLAY ARSENAL
    - Major concerns are: Accidents at the intersection of Enfield St and Mansfield St, accidents on Main Street, speeding on Enfield Street, Garden Street, and F.D. Oats Avenue.
    - Residents: Gwen Rowser

  - SOUTH GREEN
    - Do not want to hold charrettes immediately. Would prefer medium or long term charrettes.
    - They would prefer to use NRZ boundaries rather than the official neighborhood boundaries.
    - Their top priorities are: the Wyllys Street\Maple Avenue\Main Street intersection, the Wyllys Street\Main Street intersection, and speeding on Franklin Avenue. They feel there are intersections where traffic lights need to be removed and intersections where traffic lights need to be installed. They also identified red running as a problem. They feel that the one-way streets are confusing.

  - WEST END
    - Would like to be part of the first group. They feel that beginning immediately would allow them to integrate traffic calming with the Farmington Avenue and Parkville

projects. Along with Asylum Hill they have had more than two years of community traffic calming involvement. They are prepared to notify residents through door to door flyers, newsletters, WECA meetings, tie ins with all sub-committees, and a calling blitz.
  - Identified their main concerns as: speeding, cut throughs, parking issues, one way sections of Asylum Ave, and school and park safety.
  - They would also like to integrate their charrettes with the Asylum Hill's.
  - Residents: Stephanie Woodlock, Stephan Christiansen, Joe Raycraft, Toni Gold, John Burlow, Allen Wilson, Michael Viola

- ASYLUM HILL
  - Would like to be part of the first group. They have participated in traffic calming studies with the West End.
  - Their main concerns are: "No Man's Land", Asylum Avenue and other one-way streets which break up the neighborhood, parking for residents, and school safety issues.

- BARRY SQUARE / SOUTH END
  - Would like to be part of the first group. They cite the plan to resurface Maple Avenue and side streets next year. They also are implementing the Greenberg plan that includes a traffic calming and pedestrian study. Cobblestone walkways are also planned. They also have the second highest number of accidents.
  - They identified noise, speeding, parking and volumes as concerns in several different areas. They also feel several should be improved aesthetically. Specific areas which require traffic calming are the Maple Ave / Webster Street intersection, Goodwin Park, Airport Avenue, Franklin Avenue, and Webster Street. They would also like to see traffic calming used to improve safety in the vicinity of several schools.
  - Residents: Clare Murphy, Terry Witherall, Carl Williams, Dulcie Giadone, John McKenna, Ruz Hamner, John Blanchfield

- PARKVILLE
  - They would like to begin the process immediately. They have preliminary drawings ready and are going out to bid for the final design.
  - Speeding is a problem on New Park Ave, Park Street, Beacon Street, South Whitney Street, and Sisson Avenue. Other concerns include the lack of a traffic light and crosswalk at Francis Court and New Park, the Prospect Ave / West Boulevard intersection, parking issues on Rowe Street, Hazel Street, and Orange Street, and the use of one-way streets.
  - Residents: Joe Langlais, Christine Steinner, Joshua Laforte

- SOUTHWEST
  - Did not indicate a preference for scheduling of charrettes
  - Would like to eliminate all traffic signals and stop signs on Newfield Ave. Would also like New Britain Avenue to have only one eastbound lane.
  - Residents: Gary Pigg

- FROG HOLLOW
  - Did not indicate a preference for scheduling of charrettes
  - Concerns include: heavy traffic and parking on Broad Street, parking problems on Capitol Avenue, the Park Street and Park Terrace intersection, poor flow on the one-way streets, and the Russ St / Sigourney Street intersection

- The Behind the Rocks and Northeast neighborhoods did not participate in this activity because residents had to leave early. No residents of the Sheldon Charter Oak neighborhood attended the meeting.

These minutes should be considered a reasonable accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.

Najib O. Habesch
Project Manager

NOH/jr
w/attachments (sign-in sheets)

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MINUTES OF MEETING

Subject: Emergency Service Providers Focus Group

Date: Friday, September 13, 2002

Time: 11:00 AM

Location: 250 Constitution Plaza, Hartford, CT

Present:
R. Barco, HFD
Michael R. Ciccarelli, Deputy Fire Chief, HFD
W. Long, HPD
William E. Abbott, Fire Marshall, HFD
Donald Chafin Jr., Sergeant, HPD Traffic Division
Jonathan Greene, Director of Operations, American Medical Response
Terry Waller, Captain of Special Services, HFD
Dan Burden
Najib Habesch
Jill Barrett
Joe Rimiller

➲ Dan: What are your concerns for the traffic calming project traffic calming program?

- access to major medical centers including Hartford Hospital and Saint Francis Hospital
- ambulances patrol different sectors, but become congregated at drop off points (hospitals) when it gets busier
- as traffic becomes heavier it is more difficult to get ambulances into the community
- deployment patterns change by time of day, day of week, and time of year
- it is very difficult for units to get through the city
- during Meadows concerts traffic gets backed up all the way to I-84 East
- too much traffic on Albany Ave and Main St
- there is no place to feed the traffic to
- peak traffic downtown begins around 3:45 and ends around 6:00, some days it starts as early as 3:00
- response times are the biggest concern
- fire dept is taking over EMS, they are out of the fire house more than in it
- we may want to include parts of downtown through the NRZs, there is a large residential population in Busnell Towers which pays a lot of taxes
- downtown NRZ wants inclusion in everything, and they will make noise is they aren't
- first line police officers are medical response technicians

- morning peak is from 7 to 9
- residents frequently complain to the police department about speeding and congestion
- drag racing is becoming an issue downtown
- Farmington Avenue traffic is a result of traffic from downtown
- suburbanites want traffic to speed up, Hartford residents want it to slow down
- plow drivers will to streets with speed humps last, which makes it difficult for police cruisers to get through
- Park Street bumpouts made it extremely difficult for fire trucks to get through
- bumpouts haven't been a problem at Huntington Street, because of the angle
- shutting down roads in the Sheldon Charter Oak neighborhood created access problems
- streets are too narrow, especially downtown, making it difficult to drive an emergency vehicle down the opposite lane
- arterial roads are most important for efficient response time, slight delays on residential streets are acceptable when the majority of the route allows for quick response
- if there was more space for parking emergency vehicles could go faster

➲ Dan: Can captains attend beginning and final neighborhood meetings?

- there is a lieutenant responsible for each neighborhood, the lieutenant would be most familiar with the specific neighborhood needs

➲ Dan: We want to check plans with EMS providers before presenting them to the public.

- Fire Department can give us turning radii for its trucks

➲ Dan: We need three things from emergency service providers:
1. map with emergency response routes and fire house locations
2. 4 minute response windows
3. turning radii of vehicles

➲ Dan: We will send a video about traffic calming as it applies to EMS providers

➲ Dan: We would never install a new stop sign unless it was absolutely necessary. Also, we highly discourage speed humps. They slow down emergency response by 6 to 11 seconds. Other devices can keep all vehicles in motion. Curb extensions are good when properly designed. If you put a curb extension on the right turning side it can improve the ability to get onto a street, but on the left hand side it prevents a right turning vehicle from making a wide enough turn. Curb extensions also remove parking at the intersection.

- Curb extensions can produce a nightmare for parking enforcement, people park wherever they want, including on the curbs
- if we put ballards on curb extension to prevent parking people will complain about aesthetics
- landscaping prevents parking on curb extension
- sometimes people park in front of the curb extension on the main street

➲ Jill: I will rely on police/fire to provide me with names of people who complain

➲ Dan: Are there any other issues that need to be discussed?

- need to be able to get equipment on every street, and do it within a reasonable amount of time
- North and South Ends have completely different traffic patterns, their issues will vary
- we can't please everybody, we must get a proper balance
- the meetings should be held at convenient times for everybody
- we should make contact with Hartford 2000 and all neighborhood groups

- don't want rotaries to be used
- cities here are much more condensed than in the midwest and should be calmed differently
- don't want aesthetics of devices to overshadow function, if that happens they will be removed

- In the past, Jersey barriers have been used to close streets as a means of solving drug problems. This created access problems for EMS providers. However, EMS providers have no problem with closures that can be jumped by their vehicles
- NRZs have a lot authority and will use it, so it important to listen to them

These minutes should be considered a reasonable accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.

Najib O. Habesch
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MINUTES OF MEETING

Subject: Transit Focus Group

Date: Wednesday, November 20, 2002

Time: 2:00 PM

Location: Greater Hartford Transit District

Present: Dan Burden, Najib Habesch, Joe Rimiller, Sandy Fry (CRCOG), Cindy Lemek (All Aboard!), Jennifer Carrier (CRCOG), Mario Ramiro (ConnDOT), Charlie Carson (CT Transit), Art Handman (GHTD)

- Dan: What do you hope to get out of the traffic calming project?

- Sandy Fry, bike and pedestrian planner for CRCOG
- The project should provide a greater sense of the importance of bike and pedestrian issues.
- CRCOG wants to give town engineers the message that small actions can be taken to make roads more bike and pedestrian friendly
- CRCOG has a bike plan for Hartford that says that bicycle accommodations are needed on the roads, but it does not provide specifications. The plan states that bike lanes are needed.
- Problems are created by drivers park at the bus stops on Albany Ave.

- Cindy Lemek, All Aboard!
- The project should help people get to the bus stops.
- It should be easy for pedestrians to cross the streets at bus stops.
- Make transit a more inviting option for residents and commuters.
- The project should not stop at the city line. Outlying areas that impact Hartford must be considered.
- Bus rapid transit from Hartford to New Britain is being planned.
- Maps of the bus stations exist. We can get these in electronic form.

- Jennifer Carrier, engineer for CRCOG
- The master plan should include typical cross sections which demonstrate how bike lanes work with parking, pedestrians,etc.
- What happens when a bike lane reaches an intersection?
- What types of temporary measures can be installed?
- We should consider a pull-out area for buses leaving the bus stop.
- Cut through traffic is a major concern for Hartford.

- Mario Ramiro, ConnDOT
- How does this project impact state roadways?
- Is federal funding available?
- His job will be to look at the plan and see how it affects safety, capacity, and congestion.
- On State projects, if the sidewalk is impacted by roadwork, then it is rebuilt. Otherwise the sidewalk not worked on, even if it does need rebuilding.

- Charlie Carson, CT Transit
- Transit amenities such as bus shelters should be improved.
- HOV lanes have not been used for buses and bikes to date, but CTTransit would welcome the idea.
- CRCOG has done a corridor study on Albany Ave to Woodland St.

- Dan
- No money has been set aside by the City for construction
- We want the master plan to be incorporated with other projects wherever possible.

- Art Handman, Greater Hartford Transit District
- We would like to increase the flow of transit and paratransit vehicles, especially on Park St

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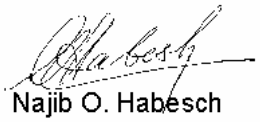

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MINUTES OF MEETING

Subject: Merchants Focus Group with HEZBA

Date: Friday, November 22, 2002

Time: 12:00 PM

Location: Club Pyramid 3155 Main St.

Present: See Sign-In Sheet

➲ Najib:

- Thanks to Reggie, HEZBA, Jill for putting this focus group together
- Explanation of traffic calming project
- City will conduct an overall study because spot treatments have failed
- Special interest groups can provide an overview of their issues
- Contact us with any additional ideas or information

➲ Dan: What are the most important issues relating to your businesses?

- There is a lot of traffic, speeding, and construction on Earl St. Speed limits and other signs should be posted on this street.
- The 25 mph speed limit on all of Hartford's streets isn't publicized
- More signage would be helpful
- Crosswalks should be marked more clearly
- There should be a countdown on pedestrian signals
- Drivers use Main St during the morning and afternoon peaks because I-91 is too backed up. This makes is more difficult for those who want to stop and shop.
- There is not enough parking and no signs saying where to park.
- Cars slow down when they cross the town line from Hartford to Windsor because they know there is increased speed enforcement in Windsor. Windsor also had medians with flowers which may contribute to the slower speeds.
- There are speeding problems downtown and a lack of parking signs.
- The media should be used to promote a crackdown on speeding and illegal parking.
- We should keep the streets wide and step up enforcement.
- Vehicles stop in the middle of the road so that the drivers can have conversations. People see the police doing this and think that it is okay to block traffic and talk.
- Drivers think that Tower Ave is a freeway.
- There are a lot of accidents on West Boulevard and Beacon St.

- The City was doing a good job of keeping abandoned vehicles off the roads, but now the problem is resurfacing again.
- It should be illegal to fix your vehicle on the street. This should be an enforced city ordinance.
- Turn lanes are needed at some intersections. Tower Ave gets backed up because there aren't any. There are also back ups at the gas stations on Tower Ave.
- Street repairs take too long. The detours used during construction are inefficient. There should also be more coordination so that multiple construction projects are occurring simultaneously.
- The drainage on Main St is poor. After storms there are big puddles of water.
- We should put cameras on the roads. Then when people abandon cars we can catch them.
- Drivers run the signal at the intersection of Ridgefield St and Westbourne Parkway
- People take shortcuts in order to get ahead of school buses
- There is a lack of respect for law enforcement.
- People run red lights.
- Outsiders and newcomers to the City don't respect residents.
- Cars park on the right side of Plainfield St by the railroad tracks, so you can't see children from the Fisher School crossing the street if you are driving westbound
- Some streets are closed off with barriers (Sargeant St. for example). This makes the area feel like a maze.

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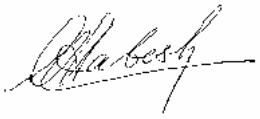

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MINUTES OF MEETING

Subject: Disabled Citizens Focus Group

Date: Tuesday, January 28, 2003

Time: 4:00 PM

Location: City of Hartford, 550 Main Street

Present: Bea Isaacs (Farmington Avenue Alliance)
Phil Will (Farmington Avenue Alliance, Farmington Avenue Business District)
Kathryn Coffin (City of Hartford)
Steve Thal (resident of Woodland Street)
Kevin Gamble (Orientation and Ability Specialist, State of Connecticut Board of Education Services to the Blind)
Marylou Mayo (resident of Woodland Street)
Veera Karukonda (City of Hartford)
Gerry Maine (City of Hartford)
Kevin Burnham (City of Hartford)
Najib Habesch (Urban Engineers, Inc.)
Joe Rimiller (Urban Engineers, Inc.)
Dan Burden (Walkable Communities)
Jill Barrett (Fitzgerald and Halliday, Inc.)

- Dan Burden: Roundabouts can be used to improve pedestrian safety and keep traffic moving.
- Kevin Gamble: What is the difference between roundabouts and rotaries?
- Dan Burden: A rotary, or traffic circle, is as big as a baseball field. A full fledged roundabout is about the size of the baseball field's diamond. Rotaries operate at high speeds (approximately 30-35mph). A properly designed urban roundabout does not tolerate speeds above 25 mph, and does not encourage speeds more than 15-25mph. Drivers entering a roundabout must yield to traffic already in it. The roundabout's inner island is a minimum 6 inches high, and can be surrounded by an outer island approximately 3 inches high which trucks may drive over.Roundabouts also have splitter islands that force motorists to start turning right as they approach. Seattle has installed 700 and has reduced accidents by 93% with no injury crashes.
- Kevin Gamble: Is snow removal a problem at roundabouts?

- Dan Burden: Montpelier and Brattleboro, VT have had no problems with snow removal.

- Dan Burden: Mini-roundabouts are much smaller than regular roundabouts. They are typically 15 feet in diameter though some are as small as 7 feet. Mini-roundabouts still have splitter islands. The splitter islands generally have gaps that provide protections for pedestrians in the crosswalk. Large vehicles can drive directly across the center.

- Kathryn Coffin: How does the fire department feel about mini-roundabouts?

- Dan Burden: The fire department needs to see a mini-roundabout in use in order to form an opinion. We will use temporary roundabouts before installing permanent ones. The fire department should prefer mini-roundabouts to stop signs.

- Kathryn Coffin: I'm not sure if Hartford drivers will slow down for roundabouts.

- Dan Burden: They will because they won't have a choice. Roundabouts force the driver to slow down.

- Kathryn Coffin: What is the City's liability?

- Dan Burden: There are fewer crashes, so liability is reduced.

- Bea Isaacs: Do the three-inch outer circles on a roundabout prevent SUVs from driving straight through.

- Dan Burden: Yes. Roundabouts actually have a bigger payoff when it comes to SUVs. SUVs don't track as well and therefore must travel through the roundabout more slowly.

- Gerry Maine: Will drivers yield to pedestrians?

- Dan Burden: Yes. A drivers desire to yield is based directly on his travel speed. Since drivers will be traveling at lower speeds it will be more convenient for them to yield.

- Kevin Gamble: The splitter island won't help blind people cross the road because they won't know when they've reached the island.

- Mary Lou Mayo: If I wanted to cross the road at a roundabout I would have wait for a gap in traffic by listening to the vehicles. The traffic flow can sound continuous sometimes. And I wouldn't be able to cross if I was also deaf. The buzzer on Farmington Avenue has saved my life.

- Kathryn Coffin: What experiences have people with wheelchairs and the visually impaired had with roundabouts?

- Dan Burden: Roundabouts are an advantage for people with wheelchairs because ramps are included in the design, there is a shorter distance for them to cross, and vehicles travel at lower speeds and have a higher yield percentage.

- Kevin Gabmle: It seems that pedestrians would have to wait a very long time for a gap in traffic at the intersection of Farmington Avenue and Woodland Street.

- Dan Burden: Several other traffic calming tools can be combined with a roundabout to improve the yielding percentage, including: flat top speed tables, pulsing lights, advance pavement markers, and rumble strips on the exiting areas.

- Kevin Gamble: Can a pedestrian signal be used at a roundabout?

- Dan Burden: Pedestrian signals can defeat the purpose of a roundabout because traffic won't flow properly if there are too many pedestrians. However a special signal could be installed on Farmington Avenue at Woodland Street, because of the resident population. Not everyone crossing the street would need to use it. There is some excellent audio-tactile technology that can be used. Larger pushbuttons that give a definitive click when pressed can be installed. A large Braille arrow can be installed above the button in order to indicate the angle of the crosswalk. And very distinctive sounds can be emitted by the pedestrian signal.

- Steve Thal: It is important to consider that reaction time is different for everyone.

- Kathryn Coffin: Billie Louise Benson is an expert in audio-tactile equipment. She works at Boston College. She could help fine tune the equipment.

- Kathryn Coffin: Does the City have data on pedestrian fatalities?

- Veera Karukonda: The police department has this data.

- Kathryn Coffin: Would back ups from signals create a problem if queue lengths became too long?

- Dan Burden: No. Signals can be modeled and changes to break up queues.

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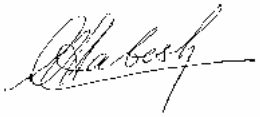

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MINUTES OF MEETING

Subject: Asylum Hill neighborhood charrette

Date: Wednesday, November 20, 2002

Time: 6:00 PM

Location: Saint Francis Care Center, 85 Woodland St.

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- ABC news was in Hartford today to do a story on traffic calming
- Hartford is the first city to do a citywide traffic calming plan
- This is the first of 2 sessions, we will have the closing session in January
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We are aware that previous studies have been done in this neighborhood. The charrette process will make it easier to implement change. We can incorporate the ideas residents like from previous studies.
- We will tweak and determine the technical feasibility of the ideas discussed today and report our findings at the closing session in January. Our results will be supported by data.

Activity 1:

- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

❑ Safety	11
❑ Beauty	8
❑ Slower speeds	6
❑ Sense of community	5

- ❑ Cleanliness 4
- ❑ Improved parking 4
- ❑ Quiet 3
- ❑ Law enforcement 3
- ❑ More lighting 2
- ❑ Character 2
- ❑ Pedestrian friendly 2
- ❑ Shopping 2
- ❑ Convenience 2
- ❑ Speed humps 2
- ❑ Trees 1
- ❑ Culture 1
- ❑ Accessible 1
- ❑ Safe school zones 1
- ❑ Quality of life 1
- ❑ Less traffic 1
- ❑ Buses 1
- ❑ Food 1
- ❑ Local 1
- ❑ Dead End 1

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior

- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - More law enforcement is needed 10
  - Drivers don't yield for pedestrians in crosswalks 9
  - Cars park too close to the intersections 9
  - Safe walking 9
  - Disregard for pedestrians 8
  - Unsafe driving 7
  - Speed spiking problem on Farmington Ave and Asylum Ave 7
  - Fix the sidewalks 7
  - Poorly located bus stops 7
  - Illegal parking 7
  - Too many driveways on Woodland St and Farmington Ave 5
  - Illegal turns on red and left turns on red 4
  - Right turns on red should be eliminated everywhere 4
  - One way streets create problems 3
  - Parking on sidewalks 3
  - Crazy driving on Woodland St 3
  - Cut through traffic 3
  - Bicycle friendly neighborhoods 3
  - Poorly marked crosswalks 3
  - Railroad pinch point on Asylum Ave 2
  - Drop-offs at schools and triple parking 2
  - H.A.R.C. buses 2
  - Difficult for pedestrians to cross Laurel St during peak hours 2
  - Pedestrian walk phases are too short 2
  - Long blocks on Farmington Ave and Asylum Ave 1
  - Double parking 1
  - Poor signage at intersections 1
  - Inappropriate street closures 1
  - Lack of corporate parking 1
  - Bus idling on Farmington Ave 0

Activity 3:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - GROUP 1
  - There is a speeding problem on Laurel St
  - It is difficult to cross the intersection of Farmington Ave and Woodland St. A median island would help.
  - It is difficult to cross the intersection of Farmington Ave and Marshall St

- There are many pedestrians crossing Woodland St between the senior center and the church
- Parking in front of West Middle School makes it difficult to see what is coming on Niles St
- Asylum Ave needs to be re-paved
- Too many streets are blocked or designated as one-way in the area surrounding Sigourney Square Park
- No plowing at bus stops or in front of the senior center on Woodland St

- GROUP 2
- Drivers make illegal turns on red at the intersection of Farmington Ave and Woodland St
- It is difficult to cross Woodland St to get to the church on Sundays
- Poor bus stop locations off of Farmington Ave
- There is a drug dealing problem on South Marshall St
- The one side parking rule is not enforced on Imlay St
- The light at the intersection of Farmington Ave and Flower St is too long
- There is a great deal of congestion surrounding the intersection of 'Farmington Ave and Asylum Ave from 4 p.m. to 6 p.m.
- Broad St is too wide which makes it dangerous
- There is a speeding problem on Trinity St
- The intersection of Jewell St and Trinity St is obstructed. There is also a disregard for pedestrians in this area.
- There are parking problems on Spruce St
- Asylum Ave is a racetrack between Woodland St and Elizabeth St from 4 p.m. to 6 p.m.
- Crosswalks are needed at the intersections of Asylum Ave and Gillett St, and Asylum Ave and Atwood st
- The intersection of Asylum Ave and Willard St is obstructed
- Churchgoers disregard the one way designation of Huntington St
- Parking bans are not enforced on Huntington St
- Corporate parking on Huntington St and Sumner St
- Parking ban is not enforced on Collins St
- Buses go too fast on Collins St
- The light at the intersection of Collins St and Garden St is too long and isn't always triggered properly
- There is a speeding problem on Fraser Pl
- The light at the intersection of Garden St and Ashley St is too long
- Sargeant St should be open

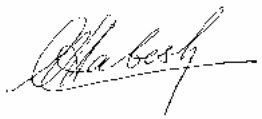
- GROUP 3
- The intersection of Farmington Ave and Woodland St would be a good location for a roundabout
- The right turn on red at the intersection of Farmington Ave and Woodland St should be prohibited
- It is difficult to merge with Farmington Ave traffic when leaving the Mark Twain House
- More green spaces
- It is difficult to cross Farmington Ave and Woodland St because of the heavy traffic
- There is a speeding problem on Laurel St
- The senior citizen population on Woodland St should be taken into consideration
- The intersection of Asylum Ave and Woodland St is very dangerous for pedestrians
- It is difficult to cross the intersection of Woodland St and Niles St
- Gillet St and Niles St are used as a shortcut to get from Asylum Ave to Woodland St
- We should install bike lanes on Farmington Ave
- Bottlenecks at theintersection of Collins St and Atwood St
- Collins St is unsafe
- The intersection of Farmington Ave and Asylum Ave is dangerous for cars and pedestrians
- Myrtle St is unsafe

- Drivers should be able to cut through Huntington St between Ashley St and Sargeant St
- There are drug dealers on Sargeant St near Collins St

- We will let everyone know when the closing session will be once it has been scheduled. It will be towards the end of January.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.



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Hartford Neighborhood Traffic Calming
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MINUTES OF MEETING

Subject: Asylum Hill neighborhood closing

Date: Wednesday, January 22, 2003

Time: 6:00 PM

Location: Saint Francis Care Center, 95 Woodland St.

Present: See Sign-In Sheet

Najib Habesch:
- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:
- We want to know how well we've addressed the issues.
- Let us know if changes should be made to these recommendations.

RECOMMENDATIONS:
1. City to study Asylum two-way traffic
2. Include Farmington Avenue plan, including roundabouts, into Traffic Calming Plan
3. Midblock crossings on Woodland St at the church, Niles St at the school, and Cogswell St.
4. Beautify Sargeant St and Willard St. closures
5. Install raised intersections on Laurel St and Case St
6. Remove the street closure on Ashley St.
7. Maintain existing neck-downs except at Willard St.
8. Install a speed table on Fraser Pl
9. Intersection treatments for Garden St at Cogswell St/Myrtle St
10. One-way traffic pattern Willard-Townley-Atwood

What additions or improvements would you like to see made to this plan?
- ❑ Open street closures only for buses
- ❑ Communicate with businesses and incorporate business development into the plan
- ❑ Don't make Atwood St. one-way and do not close it
- ❑ Don't make Townley St. one-way

- ❑ Don't sacrifice the needs of residents for the needs of businesses
- ❑ It looks like the Cogswell St and Fraser Pl crosswalks are for the businesses, not residents
- ❑ Gillett St and Atwood St need crosswalks
- ❑ Install a roundabout at the intersection of Farmington Ave and Woodland St
- ❑ Drivers ignore the No Turn on Red sign on Farmington Ave at Woodland St
- ❑ Open Sargeant St as well as Ashley St
- ❑ Closures on Ashley St and Sargeant St were based on old methods
- ❑ Talk to the police department before modifying streets. Some treatments may be there to prevent illegal activity.
- ❑ Look at streets holistically
- ❑ Don't reroute traffic to Atwood St
- ❑ Don't close Ashley St but not Sargeant St, or vice versa
- ❑ Are street closures necessary?
- ❑ Remove closures on Ashley St and Sargeant St and replace them with other traffic calming devices.
- ❑ Why is eastbound traffic on Willard St more impacted by buses?
- ❑ The stop locations for H.A.R.C. buses should be reconsidered.
- ❑ It is difficult to get through Woodland St traveling northbound.
- ❑ Crossing buzzers should be used to help the visually impaired
- ❑ Are all of the traffic signals necessary? Traffic flows better when the light on Asylum Ave at Sigourney St is broken and stop signs are used.
- ❑ The daytime signal timings should be improved.
- ❑ Rewrite city or state codes for street standards if necessary.
- ❑ Install a raised table on Farmington Ave at Woodland St.
- ❑ Improve safety near West Middle School.
- ❑ Provide assistance for seniors and the visually impaired.
- ❑ Satisfy all requirements during the planning stage.
- ❑ Continue to involve residents in the process.

- Residents decided that they would like intermediate levels of landscaping to be included in the traffic calming plan. The treatments should be beautified but with landscaping that requires relatively little maintenance.
- A steering committee will be formed to guide the plan through the implementation stage. Volunteers signed up for the steering committee.
- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Asylum Hill plan.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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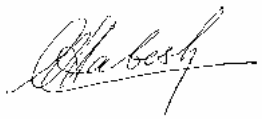

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MINUTES OF MEETING

Subject: Asylum Hill Steering Committee Meeting

Date: Wednesday, May 28, 2003

Time: 5:00 PM

Location: Woodland House, 31 Woodland St.

Present: Najib Habesch, Jill Barrett, Joe Rimiller, Jennifer Cassidey, Mary Lou Mayo, Lee Whittemore, Paul O'Mara

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Najib Habesch:

- We are meeting with key residents to see if the information we gathered at the opening charrette is being translated correctly
- We are doing this after the fact for the Asylum Hill neighborhood since the interim meetings weren't originally planned
- I'd like to review the comments from the closing charrette. Residents were asked what additions or improvements would they like to see made to the plan. They responded as follows:

- ❑ Open street closures only for buses
- ❑ Communicate with businesses and incorporate business development into the plan
- ❑ Don't make Atwood St. one-way and do not close it
- ❑ Don't make Townley St. one-way
- ❑ Don't sacrifice the needs of residents for the needs of businesses
- ❑ It looks like the Cogswell St and Fraser Pl crosswalks are for the businesses, not residents
- ❑ Gillett St and Atwood St need crosswalks
- ❑ Install a roundabout at the intersection of Farmington Ave and Woodland St
- ❑ Drivers ignore the No Turn on Red sign on Farmington Ave at Woodland St
- ❑ Open Sargeant St as well as Ashley St
- ❑ Closures on Ashley St and Sargeant St were based on old methods
- ❑ Talk to the police department before modifying streets. Some treatments may be there to prevent illegal activity.
- ❑ Look at streets holistically
- ❑ Don't reroute traffic to Atwood St
- ❑ Don't close Ashley St but not Sargeant St, or vice versa
- ❑ Are street closures necessary?

- Remove closures on Ashley St and Sargeant St and replace them with other traffic calming devices.
- Why is eastbound traffic on Willard St more impacted by buses?
- The stop locations for H.A.R.C. buses should be reconsidered.
- It is difficult to get through Woodland St traveling northbound.
- Crossing buzzers should be used to help the visually impaired
- Are all of the traffic signals necessary? Traffic flows better when the light on Asylum Ave at Sigourney St is broken and stop signs are used.
- The daytime signal timings should be improved.
- Rewrite city or state codes for street standards if necessary.
- Install a raised table on Farmington Ave at Woodland St.
- Improve safety near West Middle School.
- Provide assistance for seniors and the visually impaired.
- Satisfy all requirements during the planning stage.
- Continue to involve residents in the process.

- We are making the following suggestions for Asylum Hill:

1. Study Asylum two-way traffic.
   - This idea has been received well and seems like a top priority.
   - Changes should be tested in the winter time to see how things operate under the worst conditions.
2. Adopt Farmington Avenue plan, including roundabouts.
   - There is still a lot of work to be done and it may take a while.
3. Midblock crossings on Woodland between the church and the senior center, Niles at West Middle School, and on Cogswell.
   - Pedestrians won't be able to cross Woodland Street without a buzzer, even if the distance they're crossing is reduced.
   - A crosswalk that close to the intersection may cause more harm than good.
   - An alternative may be to redefine the crosswalks at the intersection of Farmington and Woodland. Also improve the signage at the intersection, for example, install more visible "No Turn on Red Signs".
   - "Stop Here on Red" signs work well at other intersections.
   - The paint on the stop lines and crosswalks are worn out on Farmington Ave and Asylum Ave.
   - The midblock crossing on Woodland could help people who are parking across the street and crossing for the church on Sundays.
   - The "Yield to pedestrians" sign at the Y hasn't gotten drivers to yield.
   - Safety would be maximized if pedestrians walk an extra fifty feet to the intersection and cross using the signal. The midblock crossing may not be necessary.
   - CPTV is buying a building near the intersection of Asylum and Woodland. This will generate more pedestrian traffic.
   - Pedestrians currently have difficulty crossing Woodland at Niles.
   - The committee does not want to do a petition to determine whether or not the midblock crossing on Woodland is recommended.
   - Crosswalks are also needed on Asylum at either Gillett of Atwood. There is a bus stop in this area and many pedestrians cross Asylum here.
   - Najib: Pedestrian signals cannot be installed unless federal warrants are met.
4. Beautify Sargeant and Willard closures.
5. Raised intersections on Laurel at Case.
   - This is needed. There is a speeding problem.
6. Remove closure on Ashley.
   - Residents of Ashley St are okay with opening the closure as long as Sargeant Street is opened also and some other traffic calming treatment is applied.
   - Bob McAllister sent an e mail to Kevin Burnham requesting that Sargeant Street be opened.

- A lot of people have said that they want Willard re-opened.
- Improving flow on Sargeant, Ashley, Asylum, and Collins would have a positive impact on other areas as well.
- I can see opening Willard for cars but adding traffic from HARC buses would have a negative impact on the street.
- Jill: Residents should have more information before they can decide whether or not they want street closures. Police data, fire department data, maintenance information and information on HARC buses would make the decision easier for them.
- Najib: We can give the committee drawings and help them understand their options. We would like the committee to then go into the community and find out want residents feel their preference is regarding the closures. We will work together on this and hold additional meetings.

7. Maintain existing neck-downs except at Willard.
8. Speed table on Fraser Place.
9. Median island, bumpout, and lane re-striping on Cogswell at Garden.
   - Najib: The curb extension should not impact the downtown circulator. Buses would not make the turn around the curb extension and the bus stop will not necessarily be located right at the intersection.
   - Najib: The Hartford may want to do something with their parking lot located at this intersection.
10. One-way traffic pattern on Willard, Townley, and Atwood.
    - Najib: HARC buses have difficulty making the left turn from Asylum onto Willard, so they are forced to stop on Asylum and block traffic. If one or two curb extensions are removed at the intersection the buses that can fit into the building's garage will be able to make the left turn.
    - The neighborhood discussed opening up Willard Street with Catherine Johnson. Residents of Willard complained that their children play on the street and they don't want it opened.
    - There are 4300 vehicles per day on Atwood between Asylum and Collins. It is a major shortcut to the hospital's parking lot. Converting the street to a one way would have a major impact on this traffic.
    - Curb extensions shouldn't be removed from Willard because the intersection is a school crossing.
    - Najib: They're very narrow bumpout, approximately one and a half feet wide. Removing them wouldn't widen the intersection by much.
    - Najib: If the street remains a two way the curb extensions should be removed to accommodate buses. However, if the street is designated as a one way the curb extensions should remain as they are or be widened.
    - Najib: We'd like the City to have a policy where curb extensions are constructed whenever possible on streets that accommodate parking for extended periods of time.
    - It seems that pocket parking provides fewer parking spaces that head in parking, but it looks much safer.
    - The curb extensions on Mortson look good and are effective.
11. Install curb extensions on Collins at May and Huntington.
    - Najib: We originally were considering a raised intersection at Collins and May. However this is on an emergency route and therefore we cannot use vertical deflection. Instead we are suggesting curb extensions in order to provide horizontal deflection.
    - Najib: The curb extension at May will be more sever.
    - You shouldn't take parking away at Collins and May because there is already a shortage.
    - Najib: The curb extension would only effect the section of Collins Street between Willard and May. Parking is not permitted there.
    - Why is a curb extension being suggested for Collins at Hungtington? There is a traffic signal at this intersection.
    - Najib: We will check our records to see what the issue was.

Other topics which were discusses at the meeting:

- Treatments will be tested soon. We were hoping to get started on testing several weeks ago but have been delayed due to changes within the City.
- Consider treatments for Garden Street.
- Najib: Right now we are still finalizing the plan. Then the suggestions can be prioritized and money can be found to implement them.
- Residential areas should be the top priority.
- Paul will discuss the plan with the block group.
- The next meeting will be held on June 25th at 5pm in Mary Lou's apartment.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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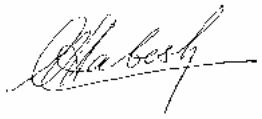

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Hartford Neighborhood Traffic Calming
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MINUTES OF MEETING

Subject: Barry Square and South End Neighborhood Charrette

Date: Tuesday, November 19, 2002

Time: 6:00 PM

Location: Saint Augustine's Church, 10 Campfield Avenue

Present: See Attached Sign-In Sheets

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will have the closing session in January
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- We are leading off with the most well organized neighborhoods
- The residents of the neighborhood own the plan
- The Barry Square and South End charrettes have been combined because of their common issues and organizations
- We've sat down with focus groups such as emergency service providers and seniors in order to recognize their special needs

Activity 1:

- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

❑ Quite/Peaceful	34
❑ Safety	23
❑ Cleanliness	14
❑ Friendliness/Community	14
❑ Law Enforcement	11

❑ Parking	10
❑ Beauty	8
❑ Less Traffic	8
❑ Plants and Trees	6
❑ Lower Speeds	6
❑ Good Shopping	4
❑ Pedestrian friendly	3
❑ Diversity	2
❑ Respect	2
❑ Convenient transit	2
❑ One way streets	2
❑ Well lit	2
❑ Obeying rules of the road	2
❑ Residential	2
❑ History	1
❑ Pet friendly	1
❑ Quick emergency response	1
❑ Convenience	1
❑ Responsibility	1
❑ Quality of life	1
❑ Taxes	1

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior

- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS

❑ Speeding is an overall problem	27
❑ Noise from car stereos	19
❑ The intersection of six streets at Barry Square is problematic and causes congestion	14
❑ Too much parking on Roxbury Street	13
❑ Cars don't stop for stop signs at intersection of Roxbury St and Henry St	12
❑ Bike lanes should be installed	11
❑ Partial one ways on some streets divert traffic onto other streets	11
❑ Vehicles pass on the right on Maple Ave	11
❑ Poor sight distance at the corner of Henry St and New Britain Ave	10
❑ Parking issues and problem with multiple lanes on Maple Ave	10
❑ Merging problems at intersection of Fairfield Ave and Maple Ave	10
❑ Poor pedestrian behavior	9
❑ Speeding and racing on Franklin Ave at night	9
❑ Barry Square should be more pedestrian friendly	8
❑ Don't forget about buses	8
❑ Chaos around the schools	8
❑ Chaos of pick up and parking at White School on Bodwell Street	7
❑ Stops signs increase speeds and noise	6
❑ Promote pedestrian activity, especially around businesses	6
❑ Parking and speeding problems on Wethersfield Ave at Airport Road	6
❑ Cut through traffic on Bliss Street	6
❑ Do not obstruct access to businesses with traffic	5
❑ Signals on Franklin Ave are conducive speeding	5
❑ Speeding on West St, Preston St	5
❑ Cut through from highway on Brown St, Wethersfield Ave, and Franklin Ave	5
❑ Problems on Bolton St, near the car wash	4
❑ Parking on both sides of Preston St	4
❑ Parking problems at Webster Theater	4
❑ Maple Ave between Brown St and Preston St	4
❑ Bar activity on Franklin Ave	3
❑ Too much traffic on Barker St and Bushnell St	3
❑ One way designation on Newbury St has caused problems	3
❑ Chaos at school on Preston St	2

- Chaos at school on Wethersfield Ave 2
- Pedestrian crossing at New Britain Ave and Fairfield Ave 1
- Speeding on Preston St, from Franklin Ave to Campfield Ave 1
- Speeding on Airport Road 1

Activity 4:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - SOUTH END GROUP 1
  - School children and teenagers jaywalk at the intersection of Campfield and Douglas, and Geroge and Douglas
  - There are problems with noise, speeding, and parking (especially overnight) on Douglas Street
  - Cars don't stop for the four way stop signs at the intersection of Douglas St and Campfield Ave
  - There are problems with too much traffic and speeding on West Preston Street. Cars turn onto West Preston from Fairfield Ave and Maple Ave at dangerous speeds. Also, many trucks use this street as a shortcut even though they are not supposed to.

  - SOUTH END GROUP 2
  - Residents would like to have a bike lane installed on Franklin Avenue. Several roundabouts could also help solve problems on this road. Possible locations for roundabout on Franklin Avenue are the intersections of Preston Street, Brown Street, and Victoria Road
  - We would like to see roundabouts at the intersections of Wethersfield Ave and Bond Street, and Wethersfield Ave and Brown Street
  - Bodwell Street should be a one way street
  - There is a speeding problem on Harwich St

  - SOUTH END GROUP 3
  - There is too much traffic on Bolton Street and issues with parking for the church. Curb extensions at the intersection of Farnklin Ave and Bolton St could help. A traffic circle could be place at the intersection of Wethersfield Ave and Bolton St.
  - Median islands can be used to calm traffic on Franklin Avenue.
  - A traffic circle should be placed at the intersection of Franklin Ave and Brown St
  - Turning lanes should be built on Franklin Ave, Airport Rd, and Maple Ave
  - Curb extensions at the intersection of Ledyard St and Airport Rd would calm traffic
  - Curb extensions would also help at the Campfield Ave and Preston St intersection
  - There is a speeding problem on Preston St. Parking on one side of the street could help.
  - We like the island n Grandview Terrace. Similar islands could be used on other streets, including Roxbury Street, which is used as a shortcut.
  - The intersection of Fairfield Ave and Summit St is dangerous. Narrowing the road would help.
  - There should not be parking on New Britain Ave during rush hour

  - SOUTH END GROUP 4
  - We need to outline all parking spaces on Maple Ave and make sure there is no parking within thirty feet of the intersections so cars can make turns

- We need left and right turn lanes at all intersections
- We would like more trees in the tree belt along both sides of Maple Ave
- We want to make sure emergency vehicles have quick access to all areas, especially when it snows
- The medians at the intersection of Maple Ave and Fairfield Ave need more landscaping
- We need to slow traffic on Maple Ave, but not to a crawl. Remember to keep the businesses on Maple Ave in mind.
- Traffic backs up on Wethersfield Ave by the car wash near Bolton St
- The signal at the intersection of Franklin Ave and South St is too long. Vehicles take shortcuts on residential roads to avoid it.
- The intersections of Wethersfield Ave and Brown St and Franklin Ave and Brown St are very dangerous. People speed through the intersections. Narrowing the road would help.
- There is a speeding problem on Franklin Ave
- It is difficult to get through Douglas St with cars parked on both sides of the road. Parking should be limited to one side of the road.
- There are problems with speeding and noise on all of Preston St
- It is difficult to cross Maple Street in the east-west direction on Kenneth St, and Mapleton St
- There is a speeding problem on Wethersfield Ave
- Curb extensions should be installed at the intersection of Bliss St and Franklin Ave. They could also be used at the intersection of Bliss St and Wethersfield Ave to improve sight distance.
- We need to review which streets are designated as one way streets
- It is too difficult to turn onto Franklin Ave or Wethersfield Ave from the side streets
- There are parking and speed problems on Redding St
- There are serious traffic problems around all of the schools in the neighborhood during opening and closing

- <u>SOUTH END GROUP 5</u>
- There is a general parking problem in the neighborhood
- The City needs to enforce the existing parking laws
- People park at the corners of the intersection of Franklin Ave and Preston St which makes it difficult to turn at the intersection
- Cars travel too fast on the road through Goodwin Park. Maybe it should be a one way road.
- Griswold St intersects Maple Ave at an angle. This has helped to keep things quiet.
- Torwood St is used as a shortcut.
- There are traffic and parking problems on Freeman St
- The kids from the South School take over the neighborhood when school lets out
- We would like Maple Ave to be more pedestrian friendly
- Traffic should be calmed on Bolton St
- Slow down traffic on Franklin Ave
- Parking should only be allowed on one side of West Preston St. Traffic should be slower on West Preston

- <u>BARRY SQUARE GROUP 1</u>
- Overnight parking should be disallowed on Roxbury St, Harwich St, and West Preston St
- There are problems with speeding, truck traffic, and noise all along West Preston St. We would like to see bumpouts, roundabouts, textured pavement, or median islands used to improve the street.
- Curbing should be replaced with only granite or concrete, not asphalt
- Parking in front of buildings should be eliminated in order to enhance pedestrian friendliness
- Eliminate the stop sign on Roxbury St at Harwich St
- Slow the traffic on Roxbury St with bumpouts or textured pavement

- Enforce the parking laws around the Webster Theater
- Consider head-in parking at the post office for a limited time
- Narrow the pedestrian crossings at the intersection of Maple Ave and Campfield Ave. Consider bumpouts, textured pavement, and a roundabout at this intersection.
- Use roundabouts or other traffic calming devices on New Britain Ave

- BARRY SQUARE GROUP 2
- There should only be parking on one side of Roxbury St
- There is a speeding problem on Roxbury St
- Put median islands on Newbury St and Roxbury St
- The roads are too wide at the intersection of New Britain Ave and Summit St
- Narrow Roxbury St and Fairfield Ave
- Put bike lanes on Brown St
- Parking should be banned on New Britain Ave during peak hours
- More blocks should be like Grandview Terrace
- Put a stoplight at the intersection of Franklin Ave and Benton St

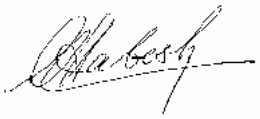
- BARRY SQUARE GROUP 3
- Bushnell street has problems with speeding and parking enforcement. On the weekend kids are everywhere because of the club.
- The intersection of Franklin Ave and Benton St needs a light

- BARRY SQUARE GROUP 4
- Build a roundabout at the intersection of White St and Monroe St in order to help children cross that intersection safely. This would also make the crossing guard's job safer.
- No overnight parking should be allowed on Roxbury St and Harwich St
- We should put a traffic signal at the intersection of Fairfield Ave and Roxbury St
- Roxbury St should be designated as a one way street
- Henry St should be designated a one way street

- We will meet at 10:00 a.m. on Saturday, November 23rd to walk through these neighborhoods, look at the problems we have discussed here, and discuss the possible solutions. We will be meeting at Saint Augustine's Church. Everyone is welcome to attend.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.



Najib O. Habesch
Project Manager

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cc: Bhupen Patel
Veera Karukonda
File

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MINUTES OF MEETING

Subject: Barry Square and South End Walking Audit

Date: Saturday, November 23, 2002

Time: 10:00 A.M.

Location: Saint Augustin's Church, 10 Campfield Avenue

Present: Approximately 25 Stakeholders

- BARRY SQUARE INTERSECTION
- Short term parking is needed
- There is a speeding problem on Maple Ave
- We should reorient traffic so there are fewer approaches
- The church and library should be taken into consideration.
- The planted triangle in front of the intersection should be maintained better.
- Having one and a half lanes on Maple Ave is dangerous.
- Put diagonal parking.
- Make Bond Street a one way.
- People from the southeast of Hartford would use the intersection as a shortcut to get to the Southwest neighborhood if access opened up.
- People use the gas station as a shortcut.
- Dan: Use a dumbbell roundabout at this intersection (This is actually two roundabouts with a median island in between.)

- WEBSTER ST (IN FRONT OF WEBSTER THEATER)
- Dan: Install curb extensions on the front corner.
- Dan: We will set up cones and see how it works before spending money on a permanent curb extension.

- MAPLE AVE
- Dan: Two lanes could more than handle peak traffic
- Dan: With only two lanes on Maple Ave, the prudent driver would set the speed
- Dan: Consider diagonal parking on one of both sides
- Install left turn storage lanes.

- SOUTH ST AND DALTON ST INTERSECTION
- Dan: Use curb extensions or chokers every 400 to 700 ft on South St. This will make it easier to cross to the park.

- BROWN ST
- Vehicles come off the highway onto Airport Road and continue on Brown St
- 7500 vehicles per day
- Dan: consider the same treatments as on South St

- CAMPFIELD AVE AND DOUGLAS ST INTERSECTION
- Mini roundabout make an intersection quieter and safer.
- Trees can be used to give the roundabout height.
- Stop signs are removed when a mini-roundabout is installed.
- If sidewalks are set back, a roundabout is a cheap solution. But if they're too close then curb extensions are needed and construction becomes more expensive. Sidewalks are rather close at this intersection, but a mini-roundabout would be cheap at other intersections.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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URBAN ENGINEERS, INC.

Najib O. Habesch
Project Manager

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MINUTES OF MEETING

Subject: Barry Square and South End Neighborhood Interim Meeting

Date: Tuesday, March 18, 2003

Time: 11:30 AM

Location: Urban Engineers, Inc., 1010 Wethersfield Ave.

Present: See Attached Sign-In Sheets

Najib Habesch:

- This is an interim check to make sure we are on the right path. We have translated your comments from the opening charrette and mapped out our recommendations to address those concerns. We'd like to go over these recommendations and get your input on whether we are headed in the right direction or if we need to make some changes.

- Maple Ave, Franklin Ave, and Wethersfield Ave will be changed to two lanes with curb extensions, turning pockets, refuge islands, and bike lanes if possible. The bike lanes should be four feet wide and we are having trouble finding room for them.

  - Residents are concerned about drivers using the shared lanes properly. They might not grant right of way. Also, residents are concerned that back ups will occur at some intersections.

    - Roadways will be signed in order to help drivers follow the rules of the road. We will look at every block individually and have proper storage at each intersection. We will use the MUTCD and AASHTO to determine the proper storage length at each intersection.

- There may not be enough roadway width for two bike lanes to be installed. Instead we could put one-way bike lanes on Wethersfield Ave and Franklin Ave in opposite directions.

  - That would be excellent.

- We recommended an intersection modification for Wethersfield Ave at Airport Rd. However we will probably remove this recommendation before the final design. Altering this intersection would be very difficult and likely to cause more problems.

  - Wethersfield Ave and Airport Rd is a dangerous intersection that should be improved. Look at the accident data before removing the recommendation.

- Curb extensions provide several types of safety benefits for pedestrians and drivers.

 There is a lot of traffic traveling in the wrong direction on Bliss Street at night.

  - Increased signage or switching the direction of the one way designation could help this problem. However, there is not a lot that can be done from a traffic calming perspective.

- Let's take a look at the plan for Franklin Avenue.

  - There is a speeding problem on Brown Street between Wethersfield Ave and Franklin Ave.
  - An effort should be made to consult with MDC to see if we can have them make some changes while they are already digging?
  - MDC has meetings especially for the purpose of bringing up these types of issues. There will be a meeting with the MDC and city planner on March 25th.

- Urban will be attending the meeting on the 25th.

- Let's discuss the plan for Maple Avenue

  - When there is a tour bus parked in front of the theater and parking on Webster St, the area gets too congested. Driveways get blocked. There is not enough parking for all of the apartments in this area.

    - We can look at pocket parking for Webster Street. Putting curb extensions at some driveways, or perhaps just marking spaces could help.

  - The signal at the Barry Square intersection is another issue. We are considering a dumbbell roundabout for this intersection. However this could be very expensive. We need to consider cost and make compromises.

    - Put a curb extension on the West side of the post office. This would prevent wide turns and help pedestrians cross from the church to the post office.
    - The curb extension could go on the median between Maple Ave and Campfield Ave.

- We are planning on recommending speed tables for Preston St, Otis St, Bushnell St, Adelaide St, and Barker St.

  - Good. There are speeding problems on the streets, especially Adelaide.

- We are looking at curb extensions for Newbury and West Preston.

  - The four way stop sign works well there.

    - We won't remove the stop signs.

- We are recommending mini-roundabouts for several locations. Mini-roundabouts force drivers to slow down, but not come to a complete stop. Roundabouts eliminate right angle collisions and cause injury and fatality rates to decrease.

- The City has never used roundabouts before. There are some questions about how pedestrians will handle them. The numbers of pedestrians and traffic volumes are low enough at these locations so vehicles can travel through the roundabouts without affecting pedestrians.

- Most pedestrians won't walk 20 to 30 feet out of their way to use a crosswalk if they are moved.

- We are putting in temporary roundabouts to see how they work.

  - We should try shifting the temporary roundabouts to different locations in order to test them and let people get used to the idea.

  - What if drivers don't know how a roundabout works?

- We will put signage at the roundabout locations to help vehicles maneuver through them. We can also install dividing islands to guide vehicles to the right and prevent them from turning left at the roundabout. We also hope the information programs will be implemented to educate people on roundabouts. A public access TV program could work.

  - Landscaping could be used to elevate the roundabouts and make them more visible. The Hartford Proud and Beautiful pots could be used. They would also be inexpensive.

- At the temporary roundabouts we will use a pot or other type of landscaping, and surround it with recycled asphalt. The recycled asphalt is inexpensive.

- We are recommending chicanes on South Street. These devices work like a slalom.

  - Two chicanes should be placed on the side of South Street where the park is. Parking is banned on this side anyway. Put one chicane on the far side of the park in order to preserve parking.

- Dan Burden recommended a roundabout for Fairfield and Maple Ave. However we feel it is too difficult to construct a roundabout there. We are still looking at other alternatives.

  - The crashes that occur at that intersection are very severe.

  - The cemetery wants to keep the traffic signal at the intersection for when there are funeral processions.

- The hill on West Preston causes drivers to speed. The stop sign on West Preston comes right after the hill. Drivers have little time to react to the stop signs.

  - Installing a rumble strip in advance of the stop sign might make it easier.

- If you think of any more issues or changes you would like to see made in the plan please contact us any time.

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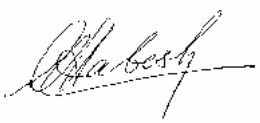
URBAN ENGINEERS, INC.



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MINUTES OF MEETING

Subject: Barry Square/South End Closing Charrette

Date: Tuesday, June 24, 2003

Time: 6:00 PM

Location: Saint Augustine's Church, 10 Campfield Avenue

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for the West End:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet ADA requirements and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-roundabouts are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.

- Dan then reviewed the plan for the West End. The plan included the following suggestions:

SUGGESTIONS:

1. Maple, Franklin, and Wethersfield Avenues to become two lanes, with bike lanes, curb extensions, turning pockets and refuge islands
2. Enhanced crosswalk and curb extensions at Barry Square
3. Chicane on South at Casco Street
4. Mini-roundabouts on Franklin, Campfield, George, and at other locations
5. Curb extensions on Franklin, Brown, and Preston
6. Two-side parking, and speed tables on Barker, Adelaide, Bushnell, Otis, and Preston
7. Speed table and curb extensions on South at Dalton
8. Intersection realignment at Maple and Douglas
9. Eliminate one-ways in all locations where not warranted
10. Lane reconfiguration on Wethersfield at Airport

- Diversified Technology Consultants (DTC) is currently working on a design for Maple Avenue. DTC made a brief presentation highlighting their progress. The plan includes curb extensions at the Barry Square intersection to make the area more pedestrian friendly, realignment of the intersection of Maple and Douglas, and enhancing the intersection of Maple and South to make it more pedestrian friendly. DTC's work will eventually be rolled into the Traffic Calming Master Plan.

What additions or improvements would you like to see made to this plan?

- ❑ Use painted symbols to indicate that the bike lanes are intended for bicycle use
- ❑ The redesigned streets should look like Farmington Avenue in West Hartford
- ❑ Avoid roundabouts because they are confusing. Hartford drivers will have difficulty figuring them out.
- ❑ Many of the treatments involve new infrastructure. The City has done a poor job of maintaining existing infrastructure. A commitment must be made to maintaining the traffic calming treatments.
- ❑ Something should be done at the intersection of Fairfield and White to prevent illegal passing maneuvers.
- ❑ Re-stripe Fairfield to prevent speeding.

Residents had the following questions:

Q. How will the traffic calming devices impact plowing and street sweeping?
A. Many northern cities have had success with traffic calming. The treatments will be designed with these maintenance issues in mind.

Q. The intersection of Maple and South already has an island. Why does it need to be redesigned?
A. The approaches intersect at an awkward angle. By realigning the intersection we should be able to slow down turning traffic.

Q. Maple Ave is currently undergoing construction. Is it too late to incorporate elements of the traffic calming plan into the construction?
A. It is likely that it is too late for some of the more complex treatments, but it might not be too late to include pavement striping treatments.

Q. It is difficult to cross Maple and Franklin on the intersecting streets. Would designating these streets as one way make it easier to cross?
A. There are better treatments we can use to make crossing easier. One way streets are generally unpopular with residents because they encourage speeding.

Q. How will the traffic calming treatments be financed?
A. The treatments can be constructed as part of future projects. Some neighborhoods in other cities have had residents contribute money for traffic calming in order to help the City finance the work and get things done quicker.

- The residents are unanimously in favor of moderate landscaping such as grass and trees which are aesthetic but easily maintained.
- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Blue Hills Traffic Calming Plan.
- Residents interested in becoming more involved in the project were asked to sign up for the neighborhood steering committee.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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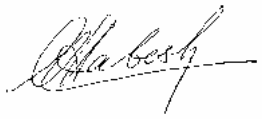
URBAN ENGINEERS, INC.



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cc: Bhupen Patel
Kevin Burnham, PE
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MINUTES OF MEETING

Subject: Behind the Rocks and South West Neighborhoods Charrette

Date: Saturday June 21, 2003

Time: 10:00 AM

Location: The Village South Community Room, 331 Wethersfield Avenue

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session in September
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Dan gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.

- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 1:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - ❑ Speeding and cut through traffic on Saybrooke St 16
  - ❑ Heavy traffic and double parking at school on Newington, New Britain Ave 8
  - ❑ Lack of crosswalks and sidewalk on the South side of the road On New Britain Ave at Hyland Park 7
  - ❑ Speeding on Catherine 7
  - ❑ Flashing lights don't stop traffic on Hillside, White 6
  - ❑ Speeding and stop sign running at Broadview and Stone 5
  - ❑ Signal green time for Hillside is too short during PM peak 5
  - ❑ Speeding on Fairfield Ave 4
  - ❑ Speeding on Hillside Ave 4
  - ❑ White and Fairfield Ave intersection is poorly designed 4
  - ❑ Stop sign running at the intersection of Natick and Broadview 4
  - ❑ Double parking and pedestrian safety at Kennelly School on Monroe and Hillside 3
  - ❑ Double parking, illegal parking and speeding on Zion 3
  - ❑ Speeding and stop sign running at Broadview and Chandler 3
  - ❑ Traffic lights are geared for commuters, not residents 3
  - ❑ Cut-through traffic on residential streets 3
  - ❑ Flatbush and Brookfield interseciton is too wide, speeding problem 2
  - ❑ Difficult making left turns at Fairfield, New Britain, Summit intersection 2
  - ❑ East-West streets are like a freeway, especially Freeman 2
  - ❑ Speeding on Wilson St 1
  - ❑ High volumes on Summit 1
  - ❑ More responsive pedestrian push buttons needed 1
  - ❑ Zion Street is too wide 1
  - ❑ Speeding on Westbrook 1
  - ❑ Stop sign running on Zion at Wilson 0

- ❑ CPTV parking egress onto New Britain Ave is tough 1
- ❑ One way street designations are ignored 0

Activity 2:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - GROUP 1
  - ❑ The New Britain Ave, Fairfield Ave, Summit St, Zion St intersection area is chaotic. Curb extensions are needed. The area should be made more pedestrian friendly.
  - ❑ Short medians and boulevard style sidewalks should be utilized on Fairfield Ave. to reduce speeds.
  - ❑ Improve safety for children at the park on Fairfield.
  - ❑ Install exclusive left turn lanes on Fairfield at White, left turns are difficult to make, resulting in congestion
  - ❑ High traffic volumes on Fairfield at White
  - ❑ Parked cars lead to congestion on Fairfield at White
  - ❑ Improve conditions for pedestrians and school children on Fairfield at White, consider using a raised intersection, refuge islands, or brick crosswalks
  - ❑ Poor sight lines on Fairfield at White caused by cars parking right at the intersection
  - ❑ The intersections of White at Cheshire and White at Monroe experience a high volume of cars speeding down the hill. These are school crossings. Also, curb extensions are needed at these intersections to reduce illegal parking.
  - ❑ The intersection of New Britain and Newington has high traffic volumes and is a school crossing. The road is very wide at the intersection and cars speed down New Britain Ave westbound. The intersection needs wider sidewalks, curb extensions, a refuge area, and possibly a raised intersection or roundabout.
  - ❑ Freeman Street is long and used as a speedway. Chokers or short medians would help.
  - ❑ Install a raised intersection on Natick at Broadview
  - ❑ Install a roundabout on Stone at Broadview
  - ❑ The intersection of Flatbush and Brookfield is too wide and encourages speeding. Consider using a traffic circle.
  - ❑ Speeding cars don't stop at Broadview and Chandler. A roundabout and curb extensions are needed.
  - ❑ Speeding on Arnold Street from Zion to Catherine
  - ❑ Illegal parking on Catherine at Hillside makes it difficult to turn
  - ❑ Speeding on Westbrook, Saybrooke, Bannister, and Ledger
  - ❑ Bike lanes are needed on New Britain Ave
  - ❑ Use chicanes on Zion Street to slow the traffic
  - ❑ Slow traffic at the park entrance by using chicanes on New Britain Ave, East of Summit Street

  - GROUP 2
  - ❑ Speeding problem on Arnold Street at Catherine Street
  - ❑ The flashing light on New Britain at Zion at night doesn't work
  - ❑ Fix the timing of the light on New Britain at Hillside. The green time for Hillside is too short during the PM peak and not enough cars can get through.
  - ❑ Consider a traffic circle on New Britain at Hillside
  - ❑ Curb extensions on New Britain at Hillside could improve visibility
  - ❑ Install a mini circle on White and Fairfield.

- Build a choker on White at Monroe to slow traffic in front of the school
- Keep the light on White at Hillside as a regular stop and go light. The flashing light at night doesn't stop traffic
- The intersection of New Britain and Newington is too wide, especially for a school zone. Build curb extensions and a refuge island.
- Speeding on Catherine from Zion to Westbrook
- New parking signs are needed on Catherine Street
- There is a speeding problem at Wilson and Hillside

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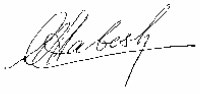

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w/attachments (sign-in sheets)

cc: Bhupen Patel
Kevin Burnham, PE
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MINUTES OF MEETING

Subject: Behind The Rocks and South West Closing Charrette

Date: Thursday, September 18, 2003

Time: 6:30 PM

Location: Saint James Church Parish Building, 75 Zion Street

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for the Behind the Rocks and South West neighborhoods:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet Americans with Disabilities Act and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-circles are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.
- Dan then reviewed the plan for Behind the Rocks and South West. The plan included the following suggestions:

SUGGESTIONS:

1. Reduce the number of lanes on New Britain Avenue, Newington Avenue, and Newfield Avenue.
2. Raised intersection near Kennelly School, Hooker School, and Moylan School.
3. Speed tables on Saybrooke, Westbrook, and Cumberland.
4. Modified intersections at New Britain at White, Zion at Flatbush, and Brookfield at Saybrooke.
5. Mini-roundabouts on Linmoore, Hillside, Broadview, and other streets.
6. Curb extensions on Hillside, White, Roger, and other locations.
7. Revise signals on New Britain Avenue so that they revert to flashing operation at midnight rather than 10 P.M.
8. Provide additional green time for Hillside Avenue traffic at the intersection of Hillside and New Britain Avenue.

What additions or improvements would you like to see made to this plan?

- ❑ Address speeding at the intersection of Flatbush and Broadview.
- ❑ Provide improvements on Brookfield at Saybrooke and on Broadview at Chandler.
- ❑ The intersection of Hamilton, Zion, and Summit is dangerous and has experienced many accidents.
- ❑ The intersection of Broadview and Chandler is uniquely shaped and deceptive to approach drivers.
- ❑ The intersection of Broadview and Coolidge has poor visibility. The stop signs help somewhat.
- ❑ Many of the East-West running streets in the Behind the Rocks neighborhood have speeding problems (especially Harbison).
- ❑ Speeding is a problem on Zion Street. It should be placed on a road diet.
- ❑ Fairfield Avenue is used as shortcut between New Britain Avenue and Zion Street. It should be placed on a road diet.
- ❑ Divert traffic from Zion and Fairfield onto Maple Avenue.
- ❑ The speeding problem on Fairfield Avenue begins at 5 A.M. every day.
- ❑ Passing on the right at stop signs and traffic signals is a problem all over Hartford.
- ❑ The signal at the intersection of White and Chandler turn from red to yellow sometimes. The malfunction should be fixed.
- ❑ Improve the signal coordination on Chandler, White, and New Britain Avenue.
- ❑ Make pedestrian signals more responsive.
- ❑ Emergency vehicles honk their horns when they approach the intersection of Fairfield and White because they know the sight distance at the intersection is poor. Loud stereos are also a problem. A roundabout would move cars out of the intersection faster so they don't wait at a signal and create a disturbance.
- ❑ There is a speeding problem on Grafton Street. Also, drivers make fast turns at the intersections of Grafton at Flatbush, and Grafton at Broadview.
- ❑ Use planters to make the traffic calming treatments more attractive.
- ❑ Don't move the problems from Hillside to Zion or vice versa.

- Residents were then asked to identify the problems that they felt were priorities and should be addressed first. Their top priorities are:

All areas around schools	8
New Britain Avenue at White Street	6
Fairfield and Zion Avenue, particularly at White St.	5
Broadview at Chandler	4

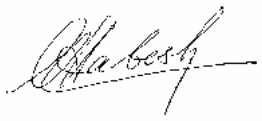
Broadview at Flatbush	3
Brookfield including the Saybrook intersection	2

Residents had the following questions:
Q. How will the traffic calming devices impact plowing and street sweeping?
A. Many northern cities have had success with traffic calming. The treatments will be designed with these maintenance issues in mind.

- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Behind the Rocks and South West Traffic Calming Plans.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.



Najib O. Habesch
Project Manager

NOH/jr

cc: Bhupen Patel
Kevin Burnham, PE
File

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Hartford Neighborhood Traffic Calming
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MINUTES OF MEETING

Subject: Behind The Rocks and South West Closing Charrette

Date: Tuesday, January 20, 2004

Time: 5:00 PM

Location: Urban Engineers, Inc., 1010 Wethersfield Avenue

Present: Phil Payer, Kim Sirois, Erik Beach (HART), Mayra Esquilin, deLinda Brown-Jagre, Najib Habesch (Urban), Joe Rimiller(Urban), Kevin Burnham (City of Hartford)

- This meeting is an opportunity for residents of the Behind the Rocks and South West neighborhoods who did not attend the charrettes to learn about the Traffic Calming Master Plan and discuss issues in their neighborhoods. Residents agreed that many of the traffic problems with which they are concerned are already being addressed by the plan. However, they would like to see treatments added at the following locations:

  - Flatbush Avenue. Speeding is a problem, especially at the hill near Chandler Street. A new school will be opened off of Flatbush Avenue so the area should be made more pedestrian friendly.
  - Zion Street at Arnold Street. Vehicles parked too close to the intersection obstruct sight distance.
  - Ellington Street has a speeding problem.
  - Brookfield Street at Ellington Street. Speeding is a problem. Residents would like to see treatments similar to those recommended on Brookfield at Ellington (median islands).
  - Brookfield Street. Consider speed tables to limit speeding.

Prepared by:
URBAN ENGINEERS, INC.

Joe Rimiller
Project Engineer

cc: File

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MINUTES OF MEETING

Subject: Blue Hills Neighborhood Charrette

Date: Thursday January 23, 2003

Time: 6:00 PM

Location: Oak Hill School Auditorium, 120 Holcomb St.

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session shortly
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Activity 1:

- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

❑ Friendly Neighbors	12
❑ Homes	8
❑ Safety	7
❑ Quiet	6
❑ Schools	5
❑ Good Streets/Transportation	5
❑ Diversity	2
❑ Off Street Parking	2
❑ Urban Location	2
❑ Access	2

- ❑ Beauty 1
- ❑ Clean 1
- ❑ Activity 1
- ❑ Slow Traffic 1
- ❑ Church 1
- ❑ Moderate 1
- ❑ Parks 1
- ❑ Jobs 1
- ❑ Obedient drivers 1
- ❑ Availability 1
- ❑ Long time residents 1
- ❑ Control kids on bikes 1

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - School parking on Blue Hills Ave and Westbourne Parkway 13
  - Intersection of Tower Ave and Blue Hills Ave 11
  - Speeding on Tower Ave 11
  - Speeding on Blue Hills Ave 11
  - School crossings on Plainfield St at Granby St, and Tower Ave at Granby St 10
  - Pedestrian crossings on Cornwall St at Plainfield St 7
  - Speeding on Lyme St 7
  - Speeding down the hill at Tower Ave and Coventry St 7
  - Church parking on Blue Hills Ave, Pembroke St, and Burlington St 7
  - Palm St at Burnham St 6
  - Speeding on Burlington St 6
  - Intersection of Blue Hills Ave and West Euclid St 6
  - Accidents and speeding at Granby St and Andover St 5
  - Speeding at Cornwall St and Plainfield St 5
  - Ridgefield St 5
  - Chaotic parking on Pembroke St 5
  - Intersection of Lyme St, Cornwall St, and Hebron St 4
  - Parked cars, trash and snow removal on Chatham St and Plainfield St 4
  - Speeding at Granby St and Durham St 4
  - Speeding on Coventry St 1

Activity 3:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - GROUP 1
  - Blue Hills is a unique neighborhood because its traffic problems vary from block to block
  - There was a crossing guard killed by a speeding vehicle at the intersection of Granby St and Burnham St. Children from the Twain School use this crossing.
  - Parked cars are snowbound by the Twain school.
  - The intersection of Granby St and Tower Ave is hazardous because of Weaver School traffic.
  - Drivers run stop signs on Cornwall Street. It is a speedway.
  - The stop sign at Lyme St and Durham St is not working.
  - There are accidents at the intersection of Tower Ave and Palm St. Speeding is a problem here.
  - Stop signs are inconsistently placed at Lyme St and Westminster St.
  - There should be an island on Holcomb St, from Granby St to Cornwall St
  - Drivers run the stop sign at the intersection of Cornwall St and Plainfield St. Speeding is also a problem here. Children use this crossing.
  - A mini-roundabout should be installed at the intersection of Cornwall St and Plainfield St.
  - Cars park all over the place on Blue Hills Ave and Pembroke St on Sundays for church.
  - Speeding is a problem on Blue Hills Ave.
  - There are problems with loitering and drug traffic at Keney Park.
  - There is drug dealing activity at the intersection of Plainfield St and Lyme St
  - The Jumoke School buses create traffic problems.
  - Speed humps can be used on some streets.

- Some stop signs are hidden by trees or bushes.
- When the snow is not properly removed, intersections get icy and become slippery.

- GROUP 2
- Drivers use Burlington St as a shortcut to get from Cornwall St to Blue Hills Ave. An island and road narrowing would help here.
- Install curb extensions at the intersection of Blue Hills Ave and Westbourne Parkway.
- Close the intersection of Granby St and Cornwall St. Make it into a park.
- Install an island on Granby St, between Cornwall St and Burlington St.
- There is a speeding problem on Ridgefield St.
- Install a roundabout on Ridgefield St at Plainfield St.
- Install curb extensions on Cornwall St at Holcomb St.
- Speeding is a problem on Granby St. Install roundabouts on Granby at Plainfield St., Andover St., and Tower Ave.
- Install an island on Corwall st. at Plainfield St., in front of the school.
- Install a roundabout, island, or curb extension on Granby St. at Burnham St.
- Many streets should have one side parking only.
- Install curb extensions on Euclid St. at Palm St., Cornell St., and Blue Hills Ave. These intersections currently have stop signs which drivers are running.
- Speeding is a problem on east Euclid St, East Harold St, and Harold St.
- Blue Hills Ave is a state road. We should get input from the state.

- GROUP 3
- There have been accidents in front of the Mark Twain School. Improvements are needed there.
- Drivers run the stop signs on Tower Ave at Palm St.
- Tower Ave needs to be improved.
- Drivers run the four way stop signs on Holcomb St. at Lyme St. A roundabout should be installed here.
- There is a parking problem on Chatham St.
- Drivers speed on Cornwall St.
- The entire length of Lyme St. is a speedway. There have been accidents at Holcomb St. and Lyme St.
- There are dangerous parking conditions on Granby St. in front of the playground.
- We should make sure that buses and fire trucks are still able to operate on the narrow roads.
- Use criss-cross lines to discourage speeding.
- There are parking problems in front of the church at Blue Hills Ave and Pembroke St.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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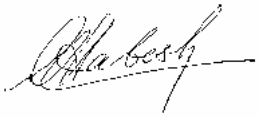

Najib O. Habesch
Project Manager

NOH/jr
w/attachments (sign-in sheets)

cc: Bhupen Patel
Kevin Burnham

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MINUTES OF MEETING

Subject: Blue Hills Neighborhood Interim Meeting
Date: April 30, 2003
Time: 6:00 pm
Location: Blue Hills Civic Association Office
Present: See Attached Sign-In Sheets

Najib Habesch:

- This is an interim check to make sure we are on the right path. We have translated your comments from the opening charrette and mapped out our recommendations to address those concerns. We'd like to go over these recommendations and get your input on whether we are headed in the right direction or if we need to make some changes.

- Residents brought up the following issues.

- Frustration from parents picking up kids on Plainfield/Granby
- Drivers run the stop signs at Holcomb and Lyme. There are many accidents.
- Granby is in poor condition from Tower Ave to the town line
- Traffic from the bank at backs up on Blue Hills Ave southbound near Morningside
- Consider enhanced crosswalks on Blue Hills Ave at West Euclid, East Burnham, and Harold
- Replace the roundabout on Tower Ave at Blue Hills Ave with something else, possibly bumpouts.
- Evaluate the crosswalk on Blue Hills Ave in front of the hospital.
- Consider moving the crosswalk on Holcomb to the other side of Blue Hills Ave
- Do something at the intersection of Cornwall and Plainfield
- Burlington St may be a fire route. Don't put a speed table there if it is.
- There is a sight distance problem at the intersection of Blue Hils Ave and Burlington St
- There are speeding problems on Nahum and Berkely (in Bowles Park)
- Modify the signal on Granby at Plainfield so that the pedestrian cycle is only on-demand

- If you think of any more issues or changes you would like to see made in the plan please contact us any time.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.

Najib O. Habesch
Project Manager

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MINUTES OF MEETING

Subject: Blue Hills Closing Charrette

Date: Tuesday, June 17, 2003

Time: 6:30 PM

Location: Oak Hills School, 120 Holcomb Street

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for Blue Hills:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet Americans with Disabilities Act and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-circles are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.

- Dan then reviewed the plan for Blue Hills. The plan included the following suggestions:

SUGGESTIONS:

1. Reduce speeds on Blue Hills Avenue with curb extensions, tree, diagonal parking (in commercial zone) and two roundabouts
2. Reduce Tower Avenue to two lanes, add curb extensions at most intersection including Blue Hills Avenue
3. Create park and gateway at Cornwall and Granby Street with modified intersection
4. Reduce speeding on Cornwall Street with curb extensions and three roundabouts
5. Improve school safety and reduce chaos with curb extensions, improved crossings with chokers at Granby and Plainfield Streets
6. Curb extensions on Westbourne Parkway
7. Roundabouts and curb extensions on Palm, Lyme, and Ridgefield
8. Raised intersections on Lyme Street

What additions or improvements would you like to see made to this plan?

- ❑ The intersection of Plainfield and Cornwall should be treated. This intersection is a school crossing and drivers speed through it without stopping.
- ❑ There have been many accidents at the intersection of Tower and Palm. The intersection has a speeding problem.
- ❑ Treatments are needed at the intersection of Blue Hills Avenue and East Morningside Street. There is a speeding problem and parked vehicles obstruct the view at the intersection.
- ❑ There is a speeding problem on West Euclid at Cornell Street.
- ❑ The blinking light at the intersection of Blue Hills Ave and Branford Street causes problems.
- ❑ Parked vehicles limit the sight distance on Burlington Street. Speeding is also a concern.
- ❑ Drivers pass on the right on Blue Hills Avenue, crossing over the white line used to discourage speeding
- ❑ The tree belts on Blue Hills Avenue are too narrow. During the winter snow is plowed onto the sidewalk.
- ❑ Buses have trouble getting out of the Rawson School because of congestion.
- ❑ There is a speeding problem on Pembroke Street.

Residents had the following questions:

Q. Why is a raised island suggested for Pembroke at Lyme rather than an alternative treatment?
A. We considered recommending a mini-roundabout for the intersection but felt that a raised intersection was a better fit because of geometry and drainage issues.

Q. Will anything be done on Coventry Street?
A. The City will be doing some work on Coventry. It will be placed on a road diet and crosswalks will be improved in the vicinity of the hospital.

Q. Will anything be done to alleviate the speeding problem on Ridgefieild Street between Westbourne Parkway and Holcomb Street?
A. Yes, we have suggested curb extensions on Ridgefield at Westbourne Parkway, a speed table between Westbourne and Plainfield, a mini-roundabout on Ridgefield at Plainfield, and a mini-roundabout on Ridgefield at Holcomb.

Q. How do you deal with traffic calming devices near a hill?
A. It is important that the devices aren't a surprise to drivers. We will be sure that devices near hills will have adequate height to improve their visibility. We will also provide appropriate warning signs to alert drivers.

Q. How will the traffic calming treatments be financed?

A. The treatments can be constructed as part of future projects. Some neighborhoods in other cities have had residents contribute money for traffic calming in order to help the City finance the work and get things done quicker.

Q. How long will it take to see the treatments on the ground?
A. Some of the simpler treatments can be implemented almost immediately. Some treatments should be built within two to three years. Its likely that half of the treatment will be built within ten years. However, none of the communities Dan has worked with have implemented every treatment on their plan.

- The majority of the residents are in favor of moderate landscaping such as grass and trees which are aesthetic but easily maintained. Several residents also voted for durable, low maintenance landscaping, and several voted for high maintenance planted landscaping.
- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Blue Hills Traffic Calming Plan.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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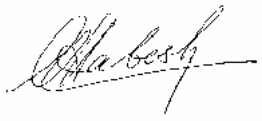
URBAN ENGINEERS, INC.



Najib O. Habesch
Project Manager

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cc: Bhupen Patel
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MINUTES OF MEETING

Subject: Clay Arsenal Opening Charrette

Date: Monday June 23, 2003

Time: 6:00 PM

Location: Ropkins Library at SAND School, 1750 Main Street

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session shortly
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Dan gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.

- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 1:

- Residents made a list of concerns they would like to see addressed by the traffic calming project.

- RESULTS
  - Drivers run the stop signs at the intersection of Seyms Street and Center Street
  - Double parking on Mather Street
  - Clay Arsenal has unique land use, many lots are too small for on-site parking
  - Maintenance of lights and tree limbs should be improved
  - People don't obey the alternate parking designation on streets such as Pliny and Brook

Activity 2:

- Participants assembled in a small group to discuss problems that are specific to their neighborhood, and identified problem areas on a map.

- RESULTS

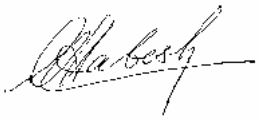
  - GROUP 1
  - Speeding is a problem on Pliny Street. If Pliny was shorter drivers wouldn't speed down it. Make Pliny one way eastbound between Garden and Brook, and one way westbound between Brook and Bethel. Include house numbers on the street signs so it is easier to navigate the one way streets.
  - The intersection of Guildford St and Brook St is located on lower ground and could be a drainage problem.
  - Install curb extensions at the intersection of Brook Street and Guilford Street.
  - The lighting on Bethel Street between Guilford Street and Mahl Avenue is too dim. Also, tree branches should be trimmed in this area.
  - Pedestrians have difficulty crossing Main Street at Battles Street. Crosswalks should be painted at this intersection.
  - Drivers run the stop signs at the intersection of Seyms Street and East Street and speed past the park where children play. A speed table should be installed on Seyms Street

between Center Street and East Street. Also install a speed table on Center Street between Fairmont Street and Seyms Street.

- Install curb extensions on Center Street at Seyms Street to make it easier for children to cross
- Crosswalks should be painted at the intersection of Albany Ave. and Bedford Street, and at the intersection of Albany Ave. and Green Street.
- Homestead Ave. is too congested.
- Speeding and double parking are problems on Mather Street between Vine and Brook
- Install a raised intersection or curb extensions on Brook at Mather
- Modify the intersection of Homestead Ave. and Main Street. It needs to be realigned.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.



Najib O. Habesch
Project Manager

NOH/jr
w/attachments (sign-in sheets)

cc: Bhupen Patel
Kevin Burnham, PE
File

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MINUTES OF MEETING

Subject: Clay Arsenal Closing Charrette

Date: Monday, September 15, 2003

Time: 3:30 PM

Location: Ropkins Library Branch at SAND School, 1750 Main Street

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for Clay Arsenal:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet Americans with Disabilities Act and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-circles are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.
- Dan then reviewed the plan for Clay Arsenal. The plan included the following suggestions:

SUGGESTIONS:

1. Use curb extensions and lane reductions on Main Street
2. Place a raised intersection on Garden at F.D. Oates and Garden at Mather
3. Place mini-roundabouts on Brook at Mather and Seyms at East
4. Use curb extensions on Albany and Main
5. Use curb extensions on Edwards at Walnut and on Guilford at Brook
6. Use chokers on Pliny and Mahl
7. Place a raised crosswalk on Seyms, in front of the park entrance
8. Use a roundabout at the intersection of Main and Albany

What additions or improvements would you like to see made to this plan?

- ❑ Install a signal in front of the SAND School at Main and Mather to make it easier for kids to cross.
- ❑ The crosswalks on Main at Mather should be defined more clearly.
- ❑ There is no signage around Quirk Middle School. There is a crossing guard for the SAND School, but not one for Quirk Middle School. Just because the students at Quirk are a little older doesn't mean they don't need a crossing guard. The dangerous crossings are on Albany at Edwards and Albany at Williams.
- ❑ Edwards Street should be designated as one way during school pick up and drop off. The buses for Quirk Middle School as well as the buses for Three Rivers Magnet School use Edwards Street for pick ups and drop offs.
- ❑ Put speed tables on Edwards Street in front of the school.

- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Clay Arsenal Traffic Calming Plan.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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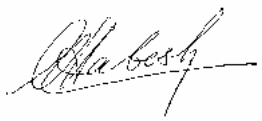

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MINUTES OF MEETING

Subject: Frog Hollow Neighborhood Charrette

Date: Tuesday April 8, 2003

Time: 6:00 PM

Location: The Learning Corridor Cafeteria, 15 Vernon Street

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session shortly
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Activity 1:

- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

❑ Safety	5
❑ Diversity	5
❑ Parks	5
❑ Businesses	4
❑ Proximity	4
❑ History	3
❑ Quiet	2
❑ Transit/Buses	2
❑ Education	1
❑ Appearance	1

- ❑ Neighbors 1
- ❑ Children 1
- ❑ Bicycle Friendly 1
- ❑ Park River 1
- ❑ Parking 1
- ❑ Small Buildings 1

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - ❑ Illegal parking everywhere 8
  - ❑ Volume during peak hours backs up traffic 7
  - ❑ Lack of greenery and trees on Washington and other streets 7
  - ❑ Speeding 6
  - ❑ Difficult for pedestrians to cross Park Terrace, Especially near Summit St 6

- ❑ Congestion on Washington 6
- ❑ There are no bike lanes 6
- ❑ Rebuild sidewalks 6
- ❑ Bad intersections: 6
  Park Terrace at Russ St
  Park Street at Park Terrace
  Capitol Ave at Park Terrace
- ❑ Pedestrians can't get from Capitol Ave to Pope Park 6
- ❑ Jaywalking 5
- ❑ Speeding on Park Terr. 5
- ❑ The number of lanes on Washington changes unexpectedly 4
- ❑ Lafayette Circle is difficult for pedestrians to cross 4
- ❑ Difficult for cars to cross Park St by Sanchez School 4
- ❑ The intersection of Ward and Zion is too wide 3
- ❑ Convenient bus parking needed on Broad 3
- ❑ Poor pedestrian entries to the park 3
- ❑ Congestion, especially on Jefferson St 2
- ❑ Speeding by cars on Vernon coming from Washington 2
- ❑ Lack of direct access to Park St 1
- ❑ Speeding on Putnam St, between Russ and Park 1
- ❑ There are no bike racks 1
- ❑ Congestion at the Capitol, Lawrence, Flower intersection, Especially the left turn on Lawrence 1
- ❑ Convenient parking for businesses on Capitol Ave 1
- ❑ No place for kids to walk in front of Burns School 1
- ❑ Improve the Flatbush Ave I-84 off ramp 0

Activity 3:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

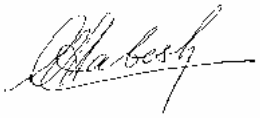
  - GROUP 1
  - ❑ Speeding on Putnam Street, between Russ and Park
  - ❑ Broad Street is congested and not friendly for pedestrians
  - ❑ Congestion in front of the Sanchez and Burns Schools. It is exacerbated by on street parking.
  - ❑ Trucks double park in front of El Mercado when they are unloading
  - ❑ Parking rules on Washington are inconsistent. Some areas are metered and others aren't.
  - ❑ There were 25 accidents in 18 months at the intersection on Washington and Allen
  - ❑ There is a speeding problem on Vernon Street, between Washington and Broad
  - ❑ More parking enforcement is needed on all streets
  - ❑ It is difficult for kids to cross Park Terrace and access the park because there is not traffic control on Park Terrace between Park Street and Pope Park Drive
  - ❑ There is not enough off street parking. State workers park all day on Capitol, Babcock, Park Terrace, Lawrence, and Columbia
  - ❑ There are high volumes and lots of accidents at the intersection of Park St and Park Terr
  - ❑ Putnam is supposed to be one way from 8-9 AM and 3-4 PM but people don't obey. They speed down Putnam at all hours. Putnam is congested when school lets out.
  - ❑ It is difficult for pedestrians to cross at the intersection of Park Terr and Russ St. The stop lights clog up traffic.
  - ❑ Speeding is a problem on Park Terr.

- The intersections of Zion and Ward and Zion and Summit are too wide. It is not clearly indicated how vehicles should move through them.
- The number of lanes on Washington changes suddenly

- GROUP 2
- State employees park on the streets in the northern part of the neighborhood and cause congestion
- Consider removing the light at Capitol and Sigourney. Replace it with a roundabout.
- Remove lanes and install a roundabout at the intersection of Park Terrace and Russ St
- Improve the back driveway to Burns school on Park Terrace
- There are problems with the Park Terrace and Summit Street intersection. Put stop signs on all three approaches. Create visible places for pedestrians to cross the street. Create pocket parking with curb extensions. Install signs for Trinity and other destinations.
- Pedestrian signals are too short and infrequent.
- Decent bus stop areas with sidewalk access ramps are needed.
- A stop sign at the intersection of Affleck Street and Jefferson Street would improve visibility and make it easier to get onto Affleck Street.
- Hospital employees park on Madison and other streets in the southern part of the neighborhood. This causes congestion.
- It is difficult to cross Allen Place at Affleck Street because of parked vehicles.
- Speeds on Hungerford Street are too fast. Drivers don't stop at the intersection of Hungerford and Russ. It is difficult to clearly see the intersection from Russ St.
- Trees should be added on Broad St, Washington St, and Park St

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.



Najib O. Habesch
Project Manager

NOH/jr
w/attachments (sign-in sheets)

cc: Bhupen Patel
Kevin Burnham, PE
File

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Hartford Neighborhood Traffic Calming
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MINUTES OF MEETING

Subject: Frog Hollow Closing Charrette

Date: Tuesday, September 16, 2003

Time: 6:30 PM

Location: Pope Park Recreation Center, 30 Pope Park Drive

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for Frog Hollow:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet Americans with Disabilities Act and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-circles are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.
- Dan then reviewed the plan for Frog Hollow. The plan included the following suggestions:

SUGGESTIONS:

1. Reduce speeds on Park Terrace and create improved pedestrian crossings to Pope Park through a series of choker islands.
2. Add curb extensions and crosswalks along Park Street.
3. Modify the intersection of Zion and Summit.
4. Use curb extensions on Affleck.
5. Use a parking chicane on Putnam.
6. Modify the intersection of Park Terrace and Russ.
7. Plant trees on Park Street between Laurel and Park Terrace.
8. Place curb extensions on Ward at Broad and Ward at Zion.

What additions or improvements would you like to see made to this plan?

- ❑ Make sure the island at the intersection of Zion and Summit is shaped so that the northbound left turn from Zion onto Summit can be made.
- ❑ Lafayette Square is too wide and difficult to cross.
- ❑ Speeding is a problem on one-way streets.
- ❑ Parking designation should be consistent from street to street and the parking bans used for garbage removal and street sweeping should make sense.
- ❑ Address the speeding problem on Madison Street.
- ❑ Remember that some houses don't have off street parking.
- ❑ Two-way streets give residents more options for navigation and parking.
- ❑ Use striping to show where cars should park.
- ❑ The new bike lanes on Captiol Avenue work very well. They've slowed traffic down and kids are bicycling in them.
- ❑ The intersection of Broad Street and New Britain Avenue should be addressed.
- ❑ Jefferson Street needs a crosswalk between Affleck and Broad because hospital worker park and cross there.
- ❑ Three more crosswalks are needed on Washington Street, at Madison, Jefferson, and Lincoln.
- ❑ Educate people about bicycling rules.
- ❑ Install curb extensions at the intersection of Hillside and Hamilton.
- ❑ Putnam Street is scheduled to be a Pride block.
- ❑ Hartford is beginning an adopt a park program in the spring. Maybe traffic calming treatments can be incorporated.
- ❑ Curb extensions are needed on Broad Street. There is more pedestrian traffic on Broad than on Affleck.

Residents had the following questions:

Q. Will traffic calming work in the snow?
A. Many northern cities have had success with traffic calming. The treatments will be designed with plowing in mind.

Q. Will traffic calming have a negative impact on emergency response? Washington Street is already congested and has to be used by ambulances?
A. We've avoided using speed tables and other vertical devices around the hospital. The treatments suggested for the Frog Hollow neighborhood won't cause problems for emergency responders?

Q. How will the traffic calming treatments be financed?

A. The treatments can be constructed as part of future projects. Some neighborhoods in other cities have had residents contribute money for traffic calming in order to help the City finance the work and get things done quicker.

Q. How long will it take to see the treatments on the ground?
A. Some of the simpler treatments can be implemented almost immediately. Some treatments should be built within two to three years. It's likely that half of the treatment will be built within ten years. However, none of the communities Dan has worked with have implemented every treatment on their plan.

- Residents were then asked to identify the problems that they felt were priorities and should be addressed first. Their top priorities are:

Curb extensions on Broad Street at Madison, Jefferson, and Lincoln	13
Speeding and crossings on Washington Street	11
Putnam Street parking chicane	9
Modify Park Terrace at Russ Street	7
Install chokers on Park Terrace	6
Install curb extensions on Affleck at Jefferson	2

- The majority of the residents are in favor of attractive landscaping rather than plain asphalt.
- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Frog Hollow Traffic Calming Plan.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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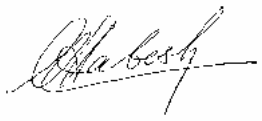
URBAN ENGINEERS, INC.



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MINUTES OF MEETING

Subject: Northeast Neighborhood Charrette

Date: Monday, January 27, 2003

Time: 6:00 PM

Location: Clark School, 75 Clark St.

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session shortly
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Activity 1:

- Residents were asked to give reasons why they live in their neighborhood and qualities which make it unique.

- RESULTS:

  - Its where I was born
  - Its home
  - It's a real community
  - Everything is connected
  - You can walk anywhere

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - ❑ Speeding on Martin St. 12
  - ❑ Congestion in front of Weaver High (Tower Ave at Granby St) 11
  - ❑ Speeding on all of Tower Ave. 9
  - ❑ Speeding on Main St. 7
  - ❑ Pedestrian crossing for seniors on North Main St., in front of Saint Monica's 7
  - ❑ Main St. at Sunset St. intersection 7
  - ❑ Bus traffic on Main St. at Windsor St. 7
  - ❑ Speeding on Capen St. 7
  - ❑ Speeding on Barbour St. 6
  - ❑ Albany Ave and Vine St. intersection is too big 6
  - ❑ Speeding on Clark St., in front of the school 6
  - ❑ Speeding on Vine St. 5
  - ❑ Garden St., Love La., and Westland St. intersection 5
  - ❑ Double parking on Earle Street 4

- ❑ Running stop signs at Clark St. and Nelson St. intersection 4
- ❑ Speeding on Cambridge St. and Ashford St. 4
- ❑ Mahl Ave going into F.D. Oats Ave. 4
- ❑ Speeding on Earle St. 3
- ❑ Speeding around the park 3
- ❑ Garden St. and Enfield St. intersection 1
- ❑ Running stop sign on Hampton St. at Earle St. 1
- ❑ Right turns on Sanford St. at Main St. 1
- ❑ Windsor Street and Sanford Street intersection 1
- ❑ Speeding on Edgewood St. 0

Activity 3:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - GROUP 1
  - ❑ Speeding, shootings, and drug activity on Blue Hills Ave.
  - ❑ Speeding and drugs at Keney Park
  - ❑ Speeding on Edgewood St.
  - ❑ Speeding, drugs, and loitering on F.D. Oats Ave. at Garden St.
  - ❑ Speeding, drugs on Garden St.
  - ❑ Speeding on Nelson St.
  - ❑ Main St. needs landscaping
  - ❑ Congestion and drugs on Barbour St. at Judson St.
  - ❑ Speeding on Westland St.
  - ❑ Speeding and stripped cars on Naugatuck St.
  - ❑ Speeding on Cleveland Ave.
  - ❑ Main St. needs crosswalks and better lighting
  - ❑ Speeding on Main St.
  - ❑ Double parking, speeding, drug activity, and congestion on Hampton St. at Earle St.
  - ❑ Cemeteries on Tower Ave at Garden St. need landscaping
  - ❑ There have been two pedestrian fatalities on Westland St., between Holcomb St. and Auburn St.
  - ❑ Speeding on Tower Ave.
  - ❑ Low lighting
  - ❑ It is difficult to cross Main St. in front of Saint Monica's Home
  - ❑ Speeding leads to many other problems in the community

  - GROUP 2
  - ❑ Speeding problem on Martin St.
  - ❑ Speeding on Barbour St.
  - ❑ Install roundabouts with trees on Clark St. at Elmer St. and Clark St. at Nelson St.
  - ❑ Better pedestrian crossing on Westland St. at Clark St.
  - ❑ Install a mini-roundabout on Martin St. at Risley St.
  - ❑ Lane reduction or lane narrowing should be used on Tower Ave to prevent speeding
  - ❑ Better crossing is needed at the park
  - ❑ Install curb extensions on Sunset Ave at Main St. to make it easier to pull out onto Main St. Curb extensions could also limit some of the turnaround traffic from the highway.
  - ❑ It is difficult to cross Main St. near Sunset St. because of speeding. This is an important crossing location because there is a bus stop. Extend the island or narrow the road.
  - ❑ Tower Ave at Barbour St. is more dangerous with the stop signs than it was with the traffic signal.

- The intersection of Tower Ave and Barbour St. needs a pedestrian signal.
- Earle St. and Hampton St. should be narrower.
- Alternating one side parking is a bad idea.
- Residents of Earle St. should park in their driveways.
- Use pedestrian bridges at dangerous intersections.

- GROUP 3
- Speeding on Greenfield St, F.D. Oats Ave., and Mahl Ave.
- Speeding on Enfield St.
- Speeding on Garden St.
- Speeding on Martin St.
- Speeding on Westland St.,
- Speeding on Cleveland Ave.
- Speeding on Tower Ave.
- Speeding on Ashford St. and Cambridge St.
- Poor traffic control on Garden St. at Westland St.
- Poor traffic control on Barbour St. at Westland St.
- Earle St. is too tight
- Ban parking on one side of Earle St. or make it a one way street
- Poor lighting on Martin St.
- Poor lighting on Main St., from Cleveland Ave to Terry Square.
- Update the city's parking regulations. They were made when families only owned one car.
- Residents of Cleveland Ave. should park in their driveways instead of on the road.
- More enforcement.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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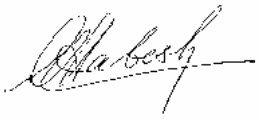

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MINUTES OF MEETING

Subject: Northeast Closing Charrette

Date: Monday, September 15, 2003

Time: 6:00 PM

Location: John C. Clark School, 75 Clark Street

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for Northeast:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet Americans with Disabilities Act and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-circles are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.
- Dan then reviewed the plan for Blue Hills. The plan included the following suggestions:

SUGGESTIONS:

1. Install curb extensions and better crosswalk markings on Main Street and Tower Avenue
2. Place Tower and Main on road diets by reducing the number of lanes
3. Install speed tables on Cleveland, Westland, Vine, Garden, and Martin
4. Install mini-roundabouts on Martin at Risley, Westland at Garden, Nelson at Garden, Capen at Garden, Capen at Enfield, and at Vine at Edgewood
5. Install raised intersections on Vine at Love, Waverly at Charlotte, Westland at Acton, and Earle at Hampton
6. Paint bike lanes on Vine
7. Install curb extensions around John Clark School

What additions or improvements would you like to see made to this plan?

- ❑ Prevent drivers from using Addison Street as a shortcut between Tower and Main
- ❑ There have been a lot of accidents on Westland at Barbour. Further improve the safety of this intersection.
- ❑ Drivers run the stop sign at the intersection of Clark and Elmer. A raised intersection should be used in addition to the curb extensions.
- ❑ Give residents sufficient warning before any treatments are installed.
- ❑ Improve the signal coordination and add left turn lanes on North Main Street.
- ❑ Mark bus lanes and bike lanes clearly.
- ❑ Consider curb extensions at the intersection of Martin and Capen to deter speeding on Martin.
- ❑ Install a mini-roundabout at the intersection of Martin and Nelson.
- ❑ Enfield Street should have more treatments to address the speeding problem along the entire street.

- Residents were then asked to identify the problems that they felt were priorities and should be addressed first. Their top priorities are:

❑ Speeding on North Main Street	9
❑ Speeding on Martin, between Capen and Nelson	8
❑ Stop sign running on Clark at Elmer	7
❑ Speeding on Tower	6
❑ Speeding on Barbour	5
❑ Speeding and stop sign running at Martin and Risley	4
❑ Cut throughs on Addison and Rosemont	3
❑ Accidents at Westland and Barbour	2

- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Northeast Traffic Calming Plan.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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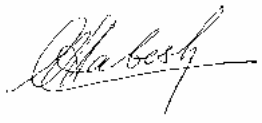

URBAN ENGINEERS, INC.

MINUTES OF MEETING

Subject: Parkville Neighborhood Charrette

Date: Wednesday April 9, 2003

Time: 6:00 PM

Location: Parkville Community School

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session shortly
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Activity 1:

- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

❑ Friendly/Sense of Community	18
❑ Businesses and Restaurants	11
❑ Safety	9
❑ Homes	7
❑ Convenience/Access	6
❑ Quiet	5
❑ Cleanliness	4
❑ Organized	4
❑ Activity	3
❑ Children/School	3

- ❑ Diversity 3
- ❑ Family 2
- ❑ Green 2
- ❑ Urban 1
- ❑ Ownership 1
- ❑ Churches 1

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - ❑ Parking on both sides of the street is problematic, especially on Newton St. 11
  - ❑ Park/New Park/Sisson is a bad intersection 9
  - ❑ Speeding on Newton St 9
  - ❑ Crossing need at senior center on Newton 8
  - ❑ Pocket parking is desired on Park St 7
  - ❑ Congestion at school drop off zones 6

- ❑ Speeding 6
- ❑ High hedge on Grace St at Greenwood 6
- ❑ Cars park too close to corners 6
- ❑ Congestion at Park and New Park intersection 5
- ❑ Poor drainage 5
- ❑ Emergency access for Newton a concern with 2 side parking 5
- ❑ Grace St is used as a shortcut 4
- ❑ Blocking driveways with parking cars 4
- ❑ Drivers do speed tests on the streets 4
- ❑ Trees need grooming, cause sight distance problems 4
- ❑ Use pocket parking 4
- ❑ Poor street lighting 4
- ❑ Drivers take the corner of Kibbe too fast 4
- ❑ Double parking, especially at schools 3
- ❑ Delivery trucks parking on sidewalks 3
- ❑ Need pedestrian crossing at the senior center 3
- ❑ Drivers run red light at South Whitney 3
- ❑ Illegal parking 2
- ❑ Speeding on Rowe Ave 2
- ❑ Pedestrian crossing needed at Chadwick 2
- ❑ Congestion on Grace in AM in front of the school 2
- ❑ Cars crash into the building at Park and Rowe Ave intersection 2
- ❑ Garbage dumping 2
- ❑ Congestion on Hamilton 1
- ❑ Commercial vehicles going through high population areas 0
- ❑ There is a sight distance problem going from Rowe to Park St 0
- ❑ Poorly maintained sidewalks 0

Activity 3:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - GROUP 1
  - ❑ Designated right and left turn lanes are needed on Hamilton Street, for vehicles turning onto New Park
  - ❑ Stop signs are needed at the Grace St and Greenwood St intersection
  - ❑ A chicane or parking chicane is needed on Newton St
  - ❑ The Park St and Prospect St intersection is offset. This should be fixed.
  - ❑ A crosswalk is needed on New Park near Francis Ct (in front of Stop and Shop)
  - ❑ There was a fatality on New Park Ave. A median island is needed between Kane St and Francis Ct.
  - ❑ Plant more trees on New Park
  - ❑ Crosswalks and curb extensions are needed on Park Street at Chadwick Ave, Newton Street, and Bartholomew Ave
  - ❑ The alternating oneway streets are problematic. Drivers get stuck behind delivery trucks.
  - ❑ Some signal timings should be corrected. Timings were changed on the Park and So. Whitney signal and traffic flows much better now.
  - ❑ Add a crosswalk on Hamilton between Francis and Bartholomew
  - ❑ Install curb extensions at the Park and New Park intersection. Possibly on the corner of Sisson Ave.

  - GROUP 2

- Install a raised intersection on Park Street in front of Chadwick Ave. This is a school crossing.
- The parking attendant is stopping traffic at the intersection of Capitol and Sisson. It is very dangerous.
- Install a traffic circle at the intersection of Park, New Park, and Sisson
- Drivers double park on New Park Ave near Grace Street
- Speeding is an issue at the intersection of Kibbe St and Madison Ave
- People coming out of work speed down New Park Ave
- Drivers speed around the corner where Kibbe St meets Bulkeley Ave. Consider installing a speed bump near the corner.
- There is a speeding problem on Bulkeley Ave
- It's hard to see both ways at the intersection of Rowe Ave and Park St. Speeding makes it difficult to traverse the intersection.

• GROUP 3
- Drivers speed on Capitol Ave because it is too long and wide. The problem is worst from Sisson to the railroad overpass.
- There should be a designated area for delivery trucks on Park Street
- Drivers run the red light at Park and South Whitney
- Poor visibility on Rowe at Park
- There should be a roundabout on Park at New Park and Sisson
- Install curb extensions and improve the crosswalks at Park and New Park
- Use short medians at the intersection of Park and New Park
- Realign the intersection of Park and Francis Ave
- People drop garbage on Pope Park highway. The City should maintain it better
- There is a speeding problem on Francis Ave
- There is congestion on Hamilton. Traffic backs up from New Park Ave and the intersection of Hamilton and Francis gets blocked
- It is unsafe for kids to cross New Park Ave at Merrill St
- There is a speeding problem on Kibbe St
- Traffic back ups on Park Street due to school drop offs and pick ups
- There is a speeding problem at the intersection of Greenwood and Grace St. There is only one stop sign at the intersection when there should be three. These roads are also used as a shortcut from Park to New Park.
- Double-parking and speeding on Newton.
- Drivers run red lights at the intersection of Amity and Park.

• GROUP 4
- Install curb extensions at the intersection of Park and Newton
- There are problems with speeding and double parking on Newton.
- Install curb extensions on Capitol Ave at Newton St
- Traffic from the Wooden Tap creates traffic and Parking problems on Capitol and Sisson
- There should be a crosswalk on Park, New Park and Sisson
- Use a roundabout at the intersection of Park, New Park, and Sisson
- Something should be done to discourage cut through traffic on Greenwood and Grace
- The hedges at the intersection of Greenwood and Grace are too high and limit sight distance
- Stop signs are needed on Greenwood at Grace
- The crosswalks that are painted-on wash away very quickly.
- Property in front of the 7-11 at Prospect, Park St, and Park Rd can be used to realign the intersection. The City and 7-11 have discussed the issue.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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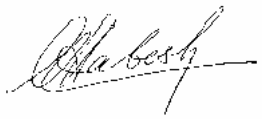

Najib O. Habesch
Project Manager

NOH/jr
w/attachments (sign-in sheets)

cc: Bhupen Patel
Kevin Burnham
File

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MINUTES OF MEETING

Subject: Parkville Closing Charrette

Date: Wednesday, June 18, 2003

Time: 6:00 PM

Location: Parkville Community Center, 11 New Park Ave.

Present: See Sign-In Sheet

Jill Barrett:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for the Parkville:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, Americans with Disabilities Act requirements and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-circles are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.

- Dan then reviewed the plan for Parkville. The plan included the following suggestions:

SUGGESTIONS:

1. Adopt Picture it Better Together Plan for Park St and New Park Ave. Park and New Park will be rebuilt with two lanes, curb extensions, brick crosswalks, and bike lanes.
2. Place Capitol on a road diet.
3. Parking chicanes will be applied to Newton, South Whitney, Rowe, and other North/South residential streets where speeds are high.
4. A raised intersection will be applied to Grace at Greenwood.
5. A raised intersection will be place at Kibbe and Bulkeley.
6. A parking chicane will be used on Francis Avenue.

Residents had the following questions:

Q. Will the traffic calming treatments make it easier for people in wheelchairs to cross the street?
A. Yes, the curb extensions will make it easier for people in wheelchairs by limiting the distance they have to cross. The curb extensions will also prevent cars from parking too close to the corner. This will make it easier to see oncoming traffic. Other treatments such as raised intersections and parking chicanes will help people in wheelchairs by slowing down the traffic.

Q. How long does it take to get the treatments in place?
A. Relatively simple treatments such as striping will take less time to get in place. Some treatments can be built when other construction takes place. Funding will have to be found for some treatments before they are built. Work is already in process. A temporary mini-circle has been installed on North Beacon at Fern Street. Tower Avenue will be placed on a road diet shortly.

Q. Is the Picture It Better Together plan a good fit for Park Street?
A. Yes, The Picture it Better Together Plan includes landscaping, features inset parking which will prevent illegal parking at intersections, and makes it easier for pedestrians to cross the street. Valley gutters might be added to improve the plan. Valley gutters are a type of gutter located between parked vehicles and the travel lane. They act as a buffer and are visually appealing.

Q. Will the opinions and needs of residents be taken into account?
A. Yes, keep communicating through public meetings and be up front with the engineers about what you want.

Q. We like the plan, but what if it doesn't get implemented?
A. Many cities have financial issues but making this investment will help to revitalize Hartford.

Q. Do curb extensions make the whole street narrower?
A. No, just the intersections.

Q. Will emergency vehicles still have access to all areas?
A. Yes. We have met with police, fire department, and ambulance personnel to discuss their needs and concerns. We haven't recommended closing any streets because doing so could cause access problems. The treatments will be designed with emergency response in mind. We want to solve problems without creating any new ones.

Q. The intersection of Park and New Park is very congested. Won't removing lanes from these streets make the congestion worse?
A. No, lane changes will be made mid-block, but lanes won't be taken away at the intersections. Therefore, capacity won't be reduced.

Q. Trucks servicing the C-Town grocery store drive over my grass when making deliveries because they don't have enough room to turn and drive over the curb. Can anything be done about this?
A. It is difficult to solve every traffic related problem. We hope to solve as many problems as we can without creating any new ones.

- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Parkville Traffic Calming Plan.

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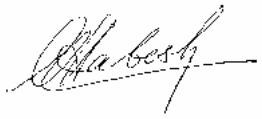

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MINUTES OF MEETING

Subject: Sheldon Charter Oak/South Downtown Opening Charrette

Date: Tuesday April 15, 2003

Time: 6:00 PM

Location: Charter Oak Cultural Center, 21 Charter Oak Avenue

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session shortly
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Activity 1:

- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

❑ Location/Accessibility	11
❑ Culture/Diversity	11
❑ Quiet	6
❑ History	6
❑ Sense of Community	4
❑ Safety	3
❑ Beauty	3
❑ Architecture	3
❑ Investment	3
❑ Less Traffic	3

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - ❑ Speeding on Main Street 8
  - ❑ Main Street is too wide 8
  - ❑ The intersection of Main and Wyllys is very congested in the morning 7
  - ❑ Double parking on Main Street 6
  - ❑ The Charter Oak/So. Prospect intersection is too wide. 5
  - ❑ Too many traffic lights and they are not properly synchronized 4
  - ❑ Jaywalking 4
  - ❑ There are no midblock crossing on Main Street (200 Block) 4
  - ❑ There is no transition where Whitehead Highway traffic is dumped onto local streets (especially Pulaski Circle) 4
  - ❑ Speeding is a problem on Wyllys. There is a long distance between signals. 3
  - ❑ Poor sight distance at many intersections. 3

- ❑ Speeding on Charter Oak Place 3
- ❑ The pedestrian phase does not allow enough time for crossing Main 3
- ❑ Parking causes chaos on Hudson at Capitol and Buckingham 3
- ❑ The Charter Oak and Wyllys intersection is confusing 3
- ❑ Speeding on the corner of Van Block Ave at Nepaquash 3
- ❑ Difficulty crossing Sheldon due to right turns on red 2
- ❑ Pedestrians jaywalk on Main because pedestrian signals aren't responsive 2
- ❑ Some "No Right Turn on Red" designations on Main St are senseless 2
- ❑ The pedestrian phases on Main Street should be improved 2
- ❑ Difficult for pedestrians to cross Charter Oak Ave and Charter Oak Pl. 2
- ❑ Speeding on Stonington 2
- ❑ Speeding on Van Dyke and Huyshope 2
- ❑ Availability of on street parking 2
- ❑ Charter Oak Place is used as a shortcut 1
- ❑ Difficulty turning from South Prospect onto Sheldon 1
- ❑ Snow should be stored properly 1
- ❑ Traffic control cabinets are unattractive 0
- ❑ Incorporate ideas of Colt property redevelopment 0
- ❑ Consider the additional streets being constructed at Dutch Point and Stonginton 0
- ❑ Poor sight distance at the intersection of Capitol Ave, Washington, and Main, due to parked vehicles 0

Activity 3:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - GROUP 1
  - ❑ The intersection of Wyllys and Charter Oak Ave is difficult to get across. Install a roundabout to slow traffic.
  - ❑ Main Street is too wide. Create a boulevard with planting strips and bike lanes in order to slow traffic.
  - ❑ Install curb extensions at the intersection of South Prospect and Sheldon St.
  - ❑ Do something to slow down traffic on the Whitehead Highway.
  - ❑ Eliminate or reduce surface parking on Hudson Street between Buckingham and Capitol Ave.
  - ❑ Install curb extensions on Hudson and Buckingham.
  - ❑ Install curb extensions on Main Street at Charter Oak Ave.
  - ❑ Install curb extensions on Capitol Ave at Trinity Street and Washington St.
  - ❑ Use a parking chicane on Charter Oak Place to reduce speeds.
  - ❑ Install a raised intersection and curb extensions on South Prospect at Charter Oak Ave.
  - ❑ Consider pedestrian refuge islands on Main Street and Charter Oak Ave.
  - ❑ Maple Ave at Main Street and Maple Ave at Jefferson Street are bad intersections for both drivers and pedestrians. Geometric revisions should be made.
  - ❑ Install curb extensions on Maple Ave at Park Street.
  - ❑ Charter Oak Avenue needs to be improved.
  - ❑ Narrow Wyllys Street with medians and lane reduction.
  - ❑ Cars park too close to the driveway of Ramon Betance School on Charter Oak Ave.

- GROUP 2
- ❑ Several improvements are needed on Main Street. Curb extensions should be installed at many intersections. More trees should be planted. Implement head in parking and build wider sidewalks.
- ❑ Put a pedestrian refuge island on Main Street between Park Street and Charter Oak Ave.
- ❑ Install bike lanes on Main Street.
- ❑ Build a pedestrian refuge island on Charter Oak Ave at South Prospect.
- ❑ Install curb extensions on South Prospect at Sheldon St.
- ❑ Use chicanes on Van Block Ave.
- ❑ Wawarme Ave is a drag racing strip.
- ❑ There is a lot of congestion in the Main Street, Maple Ave, Retreat Ave Jefferson Street are whenever hospital shifts change.
- ❑ Install a roundabout on Main Street at Wyllys Street.
- ❑ Install a roundabout on Maple Ave at Jefferson St.
- ❑ The following streets have speeding problems: Wyllys, Main, Charter Oak Place, Van Block, Huyshope, Van Dyke, Charter Oak Ave, Pulaski Circle.
- ❑ Pedestrians have trouble crossing Main Street at Charter Oak Ave and Buckingham.
- ❑ Double parking on Main Street.
- ❑ Signals have a pedestrian phase 24 hours a day. Pedestrian phases should only be included when needed.
- ❑ The 200 Block of Main Street needs treatment.

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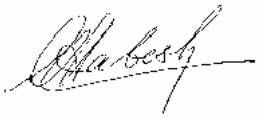

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Project Manager

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MINUTES OF MEETING

Subject: South Green Neighborhood Charrette

Date: Monday June 16, 2003

Time: 5:30 PM

Location: The Village South Community Room, 331 Wethersfield Avenue

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session shortly
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Dan gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.

- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
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- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 1:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - ❑ Speeding 10
  - ❑ Entire South Green Park area needs holistic treatment 10
  - ❑ Maple, Franklin, and Wethersfield should have fewer lanes,
  - ❑ Parking treatments, and landscaping 8
  - ❑ Annawan is used as a cut through between Wethersfield
  - ❑ Sidestreets along Franklin havepoor visibility at Franklin 7
  - ❑ Create more bike paths 7
  - ❑ Chaotic drop off/pick ups at Fox Elementary School at Benton and Maple 5
  - ❑ Intersection of Jefferson, Maple, and Retreat is confusing 4
  - ❑ Speeding on Franklin between Retreat and Shultas 4
  - ❑ Signal needed on Benton at Franklin (congestion and cars parking too close to intersection) 4
  - ❑ Implement diagonal parking wherever possible 3
  - ❑ Bus stop area on Main at Park St is too crowded 2
  - ❑ Alternate parking does not work, there's no enforcement 2
  - ❑ No one stops for the light on Wethersfield at Morris 2
  - ❑ Signal coordination on Main St encourages speeding 2
  - ❑ Use camera enforcement to prevent speeding 2
  - ❑ Franklin and Shultas signal doesn't change properly 1
  - ❑ Accidents at the intersection of Washington, Retreat, and Vernon, difficulty making southbound and westbound left turns 1
  - ❑ One way streets don't work, dangerous school Crossings on Franklin and Wethersfield 1
  - ❑ Poor pavement marking maintenance 0

Activity 2:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - GROUP 1
  - We would like to see the following treatments utilized wherever possible: Raised crosswalks, curb extensions, bike paths, diagonal parking, left turn lanes, and refuge islands
  - Traffic should be regulated in front of Bulkeley High School on Wethersfield Ave
  - Elliot Street should be designated as a two way street. Converting it to a one way has made it more dangerous. The added parking limits the sight distance.
  - Changes should be made everywhere to make the neighborhood more pedestrian friendly
  - A new system is needed for the intersection of Main, Wyllys, and Jefferson, possibly a roundabout
  - There are many bus transfers at the intersection of Park and Main Street. This causes congestion. Some of the land from the empty lots at this intersection could be used to make parking and turning easier for buses
  - Vehicles park in travel lanes on Main Street, north of Jefferson
  - Parking treatments should be applied to Main, Wethersfield, Maple, and Congress
  - Alternate parking does not work
  - The intersection of Washington and New Britain Ave is dangerous
  - Traffic circles should be built on Wethersfield at Morris, Franklin at Annawan, Franklin at Pawtucket, Maple at Pawtucket, and Maple at Shultas to prevent drivers from speeding in residential areas
  - It is very difficult to make left turns from Annawan and Pawtucket. Build curb extensions on Franklin at Annawan, Franklin at Pawtucket, and Maple at Pawtucket

  - GROUP 2
  - Improve the crosswalks at Park and Main
  - Consider special lanes for emergency vehicles
  - They now enforce no parking on Wyllys during rush hour. This has reduced congestion.
  - Redesign Retreat Ave so it intersects Maple Ave at a right angle. A connecting street could be built behind Midas
  - It is uncomfortable for pedestrians to walk around downtown
  - Pedestrian crossing signals should have countdowns showing how much time is left to cross. They have these in New Haven and they seem to work well.
  - There should be bike paths entering the neighborhood in each direction
  - A crosswalk was recently painted on Maple Ave, It works well and pedestrians are less confused now
  - There should be two crossing on Wethersfield Ave in front of Bulkeley High. Bump out the sidewalk into the road so there is less distance for students to cross.
  - There are many bus transfers at Park and Main. Use some of the empty land at the intersection to help these buses turn.
  - It is difficult to make left turns at the intersection of Wethersfield and Wyllys, and at the intersection of Main, Jefferson, and Wyllys
  - Consider building a roundabout at the intersection of Main, Jefferson, and Wyllys.
  - The entire Main, Park, Jefferson, Wyllys, Maple, Retreat area is very confusing for both drivers and pedestrians
  - The intersection of Main and Park is too wide. Two left turn lanes are not needed on Main Street's southbound approach

- Improve the signal coordination on Main Street. Try making all of the signals change at the same time.
- Buses cause congestion on Main
- Cars coming from the Pulaski Circle speed down Hudson Street

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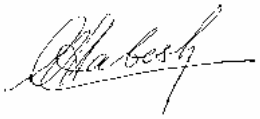

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MINUTES OF MEETING

Subject: South Green and Sheldon Charter Oak Closing Charrette

Date: Wednesday, September 17, 2003

Time: 5:30 PM

Location: Parish House of the Church of the Good Shepherd

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for South Green and Sheldon Charter Oak:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet Americans with Disabilities Act and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-circles are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.

- Dan then reviewed the plan for South Green. The plan included the following suggestions:

SOUTH GREEN SUGGESTIONS:

1. Reduce speeds on Franklin, Maple, and Wethersfield by placing these streets on road diets.
2. Realign the intersections of Jefferson at Maple and Retreat at Maple.
3. Provide curb extensions on Annawan, Retreat, and Buckingham.
4. Provide speed tables on Annawan.
5. Remove stop signs on Morris at Dean and replace with a speed table.
6. Provide parking chicane on Hudson, using reverse in angled parking.
7. Modify turn lanes and signal timings on Washington at Retreat.
8. Other identified needs will be added to the Barry Square neighborhood report.

SHELDON CHARTER OAK SUGGESTIONS:

1. Reduce number of lanes, lane widths, and add bike lanes as appropriate on Wawarme, Wethersfield, Prospect, Wyllys, and Charter Oak Avenue.
2. Use curb extensions on Sheldon at Prospect, Van Dyke at Sequassen, and along Charter Oak Avenue.
3. Add a refuge island to Main at Charter Oak Avenue and appropriate mid-block choker crossings on Main.
4. Mini-roundabouts on Curcombe at Hendricxswn, Huyshope at Masseek, Huyshope at Sequassen, and Stonington at Norwich.
5. Add parking chicanes on Charter Oak Place.
6. Add raised intersections on Van Block at Sequassen and Van Block at Weehasset.

What additions or improvements would you like to see made to this plan?

- ❑ If a road diet with left turn lanes is implemented make sure that drivers don't use the left turn lanes as through lanes.
- ❑ Charter Oak Place is a one way street which drivers sometimes travel the wrong way on.
- ❑ Use treatments that take aesthetics into consideration.
- ❑ Put medians on Washington at Retreat and reduce Washington to one lane in each direction.
- ❑ It is difficult for pedestrians to cross Retreat and Maple.
- ❑ Make it easier to cross Main Street.
- ❑ Capitol Avenue and Buckingham Street should be addressed.
- ❑ Calm traffic on Hudson between Pulaski Circle and Jefferson Street.
- ❑ South Prospect is used for highway access. The heavy traffic and cars parking too close to the driveways makes it difficult to pull out. The problem is most severe near Betances School. South Prospect is a dangerous place to bicycle.
- ❑ Charter Oak Avenue should have reverse in parking.
- ❑ Enforce parking regulations on the corner of Charter Oak Avenue and Charter Oak Place.
- ❑ Reduce the width of Main Street, possibly by using diagonal parking.
- ❑ Apply holistic treatments which won't move the problem somewhere else.
- ❑ Consider using diagonal parking on Wyllys Street if it is wide enough.
- ❑ Include South Downtown in the plan.

Residents had the following questions:

Q. Will traffic calming slow down non-law abiding citizens?

A. There is no way to get 100% of the population to obey the speed limit. However, if we can slow down 85% of drivers through traffic calming it will make a significant difference and also make it easier for police to enforce the remaining 15%.

Q. Drivers stay out of the bike lanes on Capitol Avenue but not on North Main Street. Can the North Main road diet be striped better?

A. The markings and signage for North Main Street will be finished very soon.

Q. Hartford has a low percentage of home owners. Will that make it difficult to find people to adopt the devices and provide landscaping?
A. If there is difficulty finding home owners to adopt the landscaping responsibilities we can ask churches, schools, and other organizations.

Q. Don't mini-roundabout make it more difficult for pedestrians to cross the street?
A. If we put the mini-roundabouts in the right locations and design them properly, they will improve pedestrian safety. Seattle has installed over 1,000 mini-roundabouts and has been able to reduce crashes by 93%.

Q. How soon will we see the treatments on our streets?
A. Some treatments are already being implemented. We have tested a mini-roundabout at the intersection of North Beacon and Fern Street. Next we will test three more mini-roundabouts in the Blue Hills neighborhood. North Main Street and Maple Avenue have been placed on road diets. Wethersfield Avenue and Tower Avenue will follow. Bike lanes have been painted on Capitol Avenue. Other treatments will be implemented when the opportunity arises. Many of these treatments can be incorporated into other construction projects.

Q. Will the traffic calming plan relocated the problems to different areas?
A. No. We are studying how the suggested treatments will impact traffic flow. We will add or change treatments if we will problems will be moved.

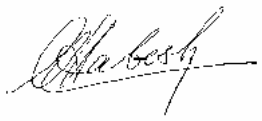
Q. How will the traffic calming devices impact plowing and street sweeping?
A. Many northern cities have had success with traffic calming. The treatments will be designed with these maintenance issues in mind.

Q. How well has diagonal parking worked in other towns?
A. Garo Garabedian, Greenwich town engineer, says that in the past engineers have designed streets to be too wide, and now they need to be narrowed. Recently the town of Greenwich implemented diagonal parking on a street. They didn't loose and parking spaces and gained a pick up/drop off area for transit. The diagonal parking had a calming effect on traffic on the street and speeds have been reduced. The slower speeds also make it easier for drivers to get in and out of the parking spaces. There has not been one complaint about the diagonal parking.

- The majority of the residents are in favor of moderate landscaping such as grass and trees which are aesthetic but easily maintained. Several residents also voted for durable, low maintenance landscaping, and several voted for high maintenance planted landscaping.
- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the South Green and Sheldon Charter Oak Traffic Calming Plans.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.



Najib O. Habesch
Project Manager

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Hartford Neighborhood Traffic Calming
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MINUTES OF MEETING

Subject: Upper Albany Neighborhood Charrette

Date: Tuesday January 21, 2003

Time: 6:00 PM

Location: Artist's Collective, 1200 Albany Ave

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will schedule a closing session shortly
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Activity 1:

- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

❑ Diversity/Culture	7
❑ Sense of Community	7
❑ People/Families	4
❑ Safety	3
❑ Lively	3
❑ Parks and Trees	3
❑ Historic	3
❑ Businesses and Shops	3
❑ Food	3
❑ Artistic	2

- ❑ Convenience 2
- ❑ Work 2
- ❑ Housing 2
- ❑ Clean 1
- ❑ Respect 1
- ❑ Commitment 1
- ❑ Hope 1
- ❑ Strength 1
- ❑ Honesty 1
- ❑ Walkable 1
- ❑ Calmness 1
- ❑ Illegal parking 1
- ❑ Technology in schools 1
- ❑ Density 1
- ❑ Housing for the Elderly 1
- ❑ Police Presence 1
- ❑ Speeding 1
- ❑ Unique 1
- ❑ Communication 1
- ❑ Transportation 1

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved
- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior

- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - ❑ Intersection of Albany Ave and Blue Hills Ave 15
  - ❑ Intersection of Albany Ave and Woodland St 14
  - ❑ Address pedestrian safety along all of Albany Ave 12
  - ❑ Intersection of Albany Ave, Burton St, and Vine St 10
  - ❑ Illegal parking and at intersections and double parking 10
  - ❑ Speeding at Oakland Ave and Albany Ave 7
  - ❑ Improve Albany Ave 7
  - ❑ Intersection of Homestead Ave and Albany Ave 7
  - ❑ One way streets are confusing 6
  - ❑ Intersection of Albany Ave and Kent St 5
  - ❑ Chaos at schools 5
  - ❑ School bus parking on Greenfield St 4
  - ❑ Intersection of Homestead Ave and Sigourney St 4
  - ❑ Chaos at the intersection in front of Artist's Collective 3
  - ❑ Edgewood St, between Albany Ave and Homestead Ave 2
  - ❑ Intersection of Albany Ave and Lenox St 2
  - ❑ Albany Ave and Adams St 2
  - ❑ Improve Ridgefield St at Greenfield St 1
  - ❑ Intersection of Albany Ave and Sigourney St 1
  - ❑ Street closures on side streets 1
  - ❑ Sigourney St at the bridge 0

Activity 3:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - GROUP 1
  - ❑ The cross streets are not lined up properly
  - ❑ Edgewood St is one way in opposite directions on either side of Albany Ave
  - ❑ Traffic is too fast on the side streets
  - ❑ Clear signage is needed to identify the one way streets
  - ❑ It is difficult to cross Albany Ave from the side streets
  - ❑ The on street parking rules are not clear and not enforced
  - ❑ Albany Ave is very congested during the peak hours
  - ❑ Albany Ave is a speedway at night
  - ❑ Clearly defined crosswalks are needed on Albany Ave
  - ❑ Shorten the crosswalks on Albany Ave, especially near schools
  - ❑ Bus stops should be clearly defined and illegal parking at stops must be prevented
  - ❑ The signal timings on Albany Ave are not coordinated properly
  - ❑ Left turn lanes are needed on Albany Ave, especially at Woodland St
  - ❑ It is hard to tell whether Albany Ave has two lanes, or one lane plus parking
  - ❑ On street parking is needed on Albany ave
  - ❑ Would rumble strips be useful?

- Enforcement is a huge issue

- GROUP 2
- The eastern portion of the neighborhood should be a gateway to downtown and include landscaping
- Homestead Ave and Garden St need landscaping to encourage redevelopment, and to make it feel more pedestrian friendly
- The landscaping on the western portion of Albany Ave should continue through the city
- Drivers pulling out of Baltimore St, Kent St, Adams St, and Milford St can't see past the parked cars on Albany Ave
- Curb extensions are needed on Albany Ave, especially near the schools
- The distance between signals on Albany Ave is too long
- Install refuge islands in front of the library
- Install a landscaped roundabout at the intersection of Albany Ave and Blue Hills Ave. Consider installing curb extensions here along with the roundabout. Curve extensions would help define the bus stop.
- One way streets encourage speeding, it's a problem on Kent and other streets
- There is no parking available for small businesses. One way streets also make access to businesses difficult.
- The new development at Sealtest could cause more traffic problems
- Install bike lanes on Homestead Ave and Albany Ave
- There are a lot of accidents at the intersection of Albany Ave and Woodland St
- There should be a treatment on Kent St, north of Albany Ave, to prevent the traffic from Blue Hills Ave from cutting through

- GROUP 3
- Install a bulbout at Albany Ave and Kent St
- Add parking in front of the businesses on Albany Ave
- Convert Homestead Ave to two lanes instead of four
- Install diagonal parking on Albany Ave southbound from Sterling St to Woodland St
- We need better landscaping than the flower pots
- Lenox St should be one way in the opposite direction
- Install a bulbout on Albany Ave at Oakland Terr
- Install a hump or bulbout on Edgewood St
- Install a bulbout on Blue Hills Ave at Norfolk St

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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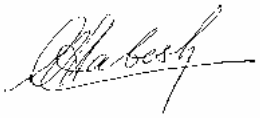

Najib O. Habesch
Project Manager

NOH/jr
w/attachments (sign-in sheets)

cc: Bhupen Patel
Kevin Burnham
File

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MINUTES OF MEETING

Subject: Upper Albany Closing Charrette

Date: Tuesday, April 14, 2003

Time: 6:00 PM

Location: Artists Collective, 1200 Albany Ave

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- This is the second of two charrettes
- We've looked at the issues discussed in the opening charrette. We'd like to present the results and get feedback on what else needs to be done.

Dan Burden:

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for the West End:
  - Curb extensions are great tools for slowing speeds at intersections and midblock locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet ADA requirements and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-roundabouts are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.

- Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.

- Dan then reviewed the plan for the West End. The plan included the following suggestions:

SUGGESTIONS:

1. Reduce speeds on Albany with signal progression and other methods.
2. Create gateway at Albany and Homestead.
3. Modify intersections on Albany with curb extensions.
4. Install raised intersections at Ridgefield and Greenfield, and at Greenfield and Vine.
5. Create chicanes by using off-set parking on longer roads between Homestead and Albany.
6. Place Homestead on a road diet, with curb extensions on Woodland, Edgewood and Sigourney.
7. Place Albany Ave on a road diet.
8. Install a roundabout on Albany at Homestead.
9. Reverse direction of one way signs on Harrison Place.

What additions or improvements would you like to see made to this plan?

- ❑ Enfield Street wasn't mentioned last time. But it has a speeding problem that should be addressed.
- ❑ If cobblestone textures are used they should be maintained properly.
- ❑ Something should be done on Milford Street. It is difficult to turn from Milford onto Homestead.
- ❑ Don't move traffic from Edgewood onto Sigourney.
- ❑ It is difficult to get from Milford onto Homestead because of all the parked cars.
- ❑ There are problems with congestion and speeding on Kent St and Baltimore St.
- ❑ Vehicles park to close to the corner on Kent St at Albany Ave. It makes it difficult to turn onto Albany.
- ❑ Consider reversing the direction of travel on Kent.
- ❑ Residents would like to get a traffic analysis done for the streets between Albany and Norfolk Street. This will help them decide if they'd like to change the direction of the one ways.
- ❑ Westbourne Parkway is a speedway.
- ❑ Speeding and congestion are concerns on Blue Hills Ave and Albany Ave.

Residents had the following questions:

Q. Will any of these treatments cause back ups?
A. No. They just prevent traffic from hitting unsafe speeds. Traffic calming can also be used to address capacity issues. For example, roundabouts improve the capacity of an intersection.

Q. Will pedestrians be able to cross an intersection with a roundabout?
A. Yes. Roundabouts will force vehicles to travel through the intersection at lower speeds. There will be gaps between vehicles at the intersection, so pedestrians won't have to wait to cross.

Q. Can larger vehicles get through chokers?
A. Yes. We design the treatment with a larger vehicle in mind.

- Residents decided that they would like traffic calming features that are moderately landscaped. The treatments may involve grass, shrubs, or easily maintained trees. Residents want the City to maintain the landscaping. However, if at a later time residents decide to sponsor the treatments they can enhance the landscaping and maintain it.
- A technical committee will be formed to guide the plan through the implementation stage and beyond. A "Friends of Traffic Calming" committee will be formed to assist the technical committee. Volunteers signed up for both.
- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the Upper Albany Traffic Calming Plan.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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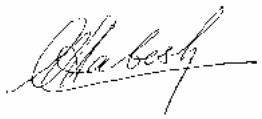

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MINUTES OF MEETING

Subject: West End Neighborhood Charrette

Date: Thursday, November 21, 2002

Time: 6:00 PM

Location: United Methodist Church

Present: See Sign-In Sheet

Najib Habesch:

- Welcome and project team introductions
- Thanks to all of the neighborhood organizations for their help
- This is the first of 2 sessions, we will have the closing session in January
- In between sessions we will engineer solutions
- Once the charrette process is complete we will create a master plan for the city

Dan Burden:

- We are leading off with the most well organized neighborhoods
- The residents of the neighborhood own the plan
- We've sat down with focus groups such as emergency service providers, seniors and transit authorities in order to recognize their special needs

Activity 1:

- Each resident received five Post-It's and was asked to write one word on each that reflects a value that they see or would like to see in their neighborhood

- RESULTS:

❑ Sense of Community	58
❑ Safety	46
❑ History and Architecture	31
❑ Quiet and Peaceful	26
❑ Diversity	26
❑ Location and Convenience	22
❑ Trees and Parks	14

❑ Beauty	13
❑ Family and Children	10
❑ Clean	8
❑ Good schools	7
❑ Accessible	5
❑ Pedestrian friendly	5
❑ Culture and character	4
❑ Property value	4
❑ Shopping	3
❑ Quality of Life	3
❑ Involvement	3
❑ Respect	3
❑ Vitality	2
❑ Sidewalks	1
❑ Pet Survival	1
❑ Prestige	1
❑ Less car dependence	1
❑ Well maintained	1
❑ Stability	1
❑ Lasting	1
❑ Activism	1
❑ Home	1
❑ Stop signs	1
❑ Supportive	1
❑ Street parking	1
❑ Improving	1
❑ Challenging	1
❑ Unique	1
❑ Liberal	1
❑ Privacy	1
❑ Opportunity	1
❑ City services	1
❑ Good drivers	1
❑ Re-paved Farmington Ave	1
❑ City environment and suburban homes	1
❑ Integrity	1

Dan then gave a presentation. The salient points of the presentation were:

- When traffic is light and speeds are low people have many friends and acquaintances in their neighborhood
- As speeds and volumes increase, people have fewer neighborhood friends and acquaintances
- When speeds are too high people no longer consider the street and the front of their homes as part of their territory
- The same homes are worth $5,000 to $15,000 less when speeds increase by 10 mph
- Stop signs result in speed spiking
- Residents solve their neighborhood's problems
- Residents simulate traffic calming devices on the streets
- Speed humps create noise. Many people request speed humps but do not want them in front of their homes.
- Speed humps also tend to have a negative impact on property values. They are not very high on our list of options.
- Speed and injury severity are closely related. By reducing speeds many lives can be saved

- Special traffic calming tools can be used around schools
- Road dieting makes traffic move better but slower
- Hartford has a lot to work with, including lots of stores and a diverse ethnic mix
- You have to calm an entire neighborhood. You can't just move problems from your street to another street.
- Trees can be used as a traffic calming tool
- Bike lanes
- Traffic circles
- Roundabouts
- Tree wells
- Flat top tables
- Curb extensions
- We will use PhotoShop to show residents what their changes would look like
- Streets experience cut through traffic because major intersections are failing
- Beauty has an impact on driver behavior
- It is important to get a large turnout for the closing sessions in January because it will make it easier to implement the tools we will use to create change

Activity 2:

- Residents made a list of concerns they would like to see addressed by the traffic calming project. Each resident then received seven stickers that he/she placed next to the concerns they considered most important.

- RESULTS
  - There are no crosswalks on Farmington Ave from Whitney St to Sisson Ave 42
  - Difficulty crossing Farmington Ave at Sisson Ave 37
  - Speeding, volume, and pedestrian safety on Whitney St 31
  - Back ups at the Sisson Ave off ramp 28
  - Speeding and safety in front of Noah Webster School 26
  - Girard St and Kenyon St are too long 25
  - Too much traffic on Bloomfield Ave 22
  - Drivers ignore the 4-way stop at South Whitney St and Warrenton Ave 21
  - Back ups on Albany Ave at Prospect Ave 21
  - Traffic problems on all of Asylum Ave 19
  - Farmington Ave and Girard St intersection is dangerous 17
  - Scarborough St-back ups and speeding problems 17
  - Bloomfield Ave and Albany Ave traffic on Prospect Ave 16
  - Pedestrian safety at Albany Ave and Prospect St 15
  - Left turn lanes needed at intersection of Farmington Ave and Beacon St 15
  - Speeding and weaving on Scarborough St 15
  - Keep 18 wheeler traffic off of Scarborough St 14
  - Sherman St has problems with volume and speeding 13
  - Speeding on North Beacon St 13
  - Racing over hill on Prospect Ave, dangerous for blind driveways 12
  - Heavy traffic on Beacon St, south of Farmington Ave 12
  - Speeding midblock on Kenyon St 11
  - Speeding on Farmington Ave near Evergreen St 10
  - 4-way stop at Fern St and Girard St is ignored 9
  - Safety of children on Girard St 9
  - Prospect St traffic 9
  - Intersection of Beacon St and Cone St 9
  - Students peel out of law school, don't respect pedestrians 8
  - Preserve on street parking 8

- Intersection of Terry Rd and Westerly Terr is dangerous 8
- Intersection of North Beacon St and Elizabeth St is dangerous 8
- Stop signs on Warrenton Ave 7
- Cut through traffic on Loarraine St and problems with 1-way 7
- Speeding on Evergreen Ave 6
- Safety near soccer field on Girard St 6
- Parking interferes with visibility at intersection of Tremont St and Warrenton Ave 6
- Speeding on Sisson Ave 5
- Safety concerns at Girard St and Kenyon St 4
- Parking problems at intersection of Asylum Ave and Girard St 2
- Poor visibility on Kenyon St 1
- Back ups during UHART graduation 1
- Pedestrian conditions at dog leg 1

Activity 3:

- Participants assembled in small groups with the other representatives from their neighborhood. The groups then discussed problems that are specific to their neighborhood, and identified problem areas on a map. Residents were also asked to sign their neighborhood maps.

- RESULTS

  - WEST END GROUP 1
  - Sisson Ave-problems with speeding and pedestrian safety
  - Farmington Ave-problems with speeding, back up at intersections during peak hours, and the lack of pedestrian crossings
  - Prospect Ave-problems with speed, volume, back ups, pedestrian safety, parking in front of the Governor's house, school safety. The speeding problem is a result of the street's length and the timing of the lights.
  - Beacon St-problems with speeding because the road is too long and wide
  - Whitney St-problems with speeding, volume, and school safety at the corner of Whitney St and Cone St. The street is too wide.
  - Fern St-The road is used as an alternative route. There is a lot of traffic from the law school.
  - Albany Ave-problems with speeding, UHART traffic, commuter traffic, and back ups at the lights during heavy traffic.
  - Asylum Ave-problems with speed, commuter traffic, and safety at the intersection of Asylum and Prospect Ave
  - Sherman St-this street is currently under construction so perhaps traffic calming changes could take place now
  - Residents would like to see roundabouts installed at the following intersections:
    Farmington Ave and Beacon St
    Warrenton Ave and South Whitney St
    Warrenton Ave and Evergreen Ave
    Cone St and North Beacon St
    Cone St and Whitney St
    Fern St and North Beacon St
    Fern St and Whitney St
    Fern St and Girard Ave
    Albany Ave and Bloomfield Ave
  - Residents would like to see median islands installed on the following streets:
    Farmington Ave between Beacon St and Treamont St
    Farmington Ave between Denison St and Woodland St
    North Beacon St between Fern St and Elizabeth St
    Albany Ave between Westerly Terrace and Mark Twain Dr

- WEST END GROUP 2

- The following streets have long blocks and are experiencing problems with cut through traffic. Mid block treatments are needed to solve the problems:
  Terry Road
  Scarborough St
  Beacon St
  Oxford St
  Treamont St
  South Whitney St
  Kenyon St
  Girard Ave
  Sherman St
  Warrenton Ave
- There are large concentrations of children on the following streets. Their safety should be taken into consideration:
  Oxford St between Cone St and Fern St
  Whitney St between Farmington Ave and Cone St
  Girard Ave between Fern St and Elizabeth St
- The following intersections are unsafe or congested. Roundabouts and corner treatments are needed:
  Elizabeth St and Whitney St
  Elizabeth St and Girard Ave
  Fern St and Girard Ave
  Cone St and Whitney St
  Warrenton Ave and Beacon St
  Warrenton Ave and Oxford St
  Warrenton Ave and Whitney St
- Traffic lights cause speed spiking on Whitney St
- Re-route the I-84 traffic away from Scarborough and Whitney St
- I-84 signs should be removed from Albany Ave near Scarborough St
- Stop allowing 18 wheelers to use streets as cut throughs

- WEST END GROUP 3

- Farmington Ave needs to be more pedestrian friendly. Crosswalks are needed. It is also difficult to enter or exit the businesses on Farmington Ave.
- Bike lanes should be installed on Farmington Ave
- Angle parking should be created on Farmington Ave
- More trees should be planted on Farmington Ave. Traffic calming tools should be used to beautify the area.
- Drivers speed off of the Sisson Ave exit from I-84. This is also a dangerous pedestrian crossing
- Prospect Ave should be narrowed. Bike lanes would help. Median islands could also be used.
- The 4-way stops on Fern St should be replaced with roundabouts. These intersections should also be made safer for pedestrians.
- Traffic calming tools should be utilized in front of Elizabeth Park to ensure safety for children.
- The back up on Albany Ave is horrible.
- Many of the blocks in the neighborhood are too long. This encourages speeding.

- WEST END GROUP 4

- In theory, West Blvd is the main artery, but traffic flow is so bad that many drivers cut through Warrenton Ave, which is supposed to be a residential side street. Use roundabouts and narrowing to smooth out West Boulevard. Use roundabouts and/or speed tables to smooth Warrenton Ave.

- The intersections at each end of West Blvd (Sisson Ave and Prospect Ave) are major challenges.
- The intersection of Warrenton Ave and Prospect St is also messy.
- On the long side streets, chicanes should be installed a third of the way from the intersections. Trees or bushes should be planted in the chicanes.
- The light at the intersection of West Boulevard and Prospect Ave is impossible.
- Narrow West Boulevard and have one lane on each side of a median island.
- The left turn from Sisson Ave to Warrenton Ave is a problem.
- Restore parking on Tremont St and Oxford St between Warrenton Ave and Farmington Ave.
- Beacon St, Oxford St., and Tremont St. should be narrowed.
- The Farmington Ave master plan includes a good plan for traffic flow.
- Restore parking on Whitney St. between Cone St and Fern St.
- There is too much traffic coming off of I-84 and onto Prospect Ave, Albany Ave, and Bloomfield Ave.
- There are too many students on the road before classes in the morning, and after classes in the afternoon.
- Either restore parking on both sides of Prospect Ave or install bike lanes on both sides in order to slow down traffic.
- Build a triangle of planting on Albany Ave at the intersection of Prospect Ave. Build a right turn lane to one side of the triangle so vehicles turning right onto Prospect Ave won't have to stop at the light.
- Install a triangle with planting at the intersection of Albany Ave and Bloomfield Ave.
- State involvement is needed for Albany Ave because it is a state highway.
- Build another westbound right turn lane on Albany Ave so vehicles can get to Bloomfield Ave while avoiding the light at the intersection.
- Build another road to the UHART campus from Albany Ave.
- Better use of turning lanes
- Bike lanes and parking lanes are needed on Scarborough St. Keep the trucks off of Scarborough St.
- Longer turning lanes are needed on Scarborough St.
- Resident would like to see roundabouts installed at the following intersection:
  West Boulevard and Prospect Ave
  West Boulevard and South Whitney St
  West Boulevard and Sisson Ave
  Warrenton Ave and Beacon St
  Warrenton Ave and Oxford St
  Warrenton Ave and Whitney St
  Warrenton Ave and Evergreen Ave
  Farmington Ave and Sisson Ave
  Fern St and Prospect Ave
  Fern St and Oxford St
  Fern St and Whitney St
  Fern St and Kenyon St
  Fern St and Girard Ave
  Elizabeth St and Whitney St
  Elizabeth St and Girard Ave
  Elizabeth St and Asylum Ave
  Asylum Ave and Whitney St
- Residents would like to see speed tables installed on the following streets:
  Scarborough St
  Terry Rd
  North Beacon St between Fern St and Elizabeth St
  Oxford St between Fern St and Elizabeth St
  Whitney St between Fern St and Elizabeth St
  Kenyon St between Farmington Ave and Fern St

Girard Ave between Farmington Ave and Fern St
Beacon St between Warrenton Ave and Farmington Ave
Oxford St between Warrenton Ave and Farmington Ave
Tremont St between Warrenton Ave and Farmington Ave
Whitney St between Warrenton Ave and Farmington Ave
Sisson Ave at Gray St

- WEST END GROUP 5

- All of the intersections on Farmington Ave from Prospect Ave to Woodland St need improvement
- The should be a northbound turn lane at the intersection of Prospect Ave and Farmington Ave
- Additional parking is needed on Farmington Ave
- Put at a roundabout at the intersection of Whitney St and Farmington Ave
- Need to calm traffic in front of the school on Whitney St
- Parking should be allowed on both sides of Kenyon St between Farmington Ave and Fern St
- Put speed humps on Kenyon St between Fern St and Elizabeth St
- Put a roundabout at the intersection of Fern St and Kenyon St
- Put a roundabout at the intersection of Whitney St and Elizabeth St
- Puyt a roundabout at the intersection of Kenyon St and Elizabeth St
- Install medians on Asylum Ave
- Asylum Ave is too narrow to have two lanes in each direction
- There should be designated parking on Asylum Ave
- Put chokers on Terry Rd
- Use on street parking to simulate chokers on Scarborough St
- There are blind hills on Prospect ave and Scarborough St
- Prohibit 18 wheeler traffic on Scarborough St
- Install roundabouts on the intersections along Albany Ave
- Install a roundabout at the intersection of Terry Rd and Westerly Terrace

- WEST END GROUP 6

- It is difficult for pedestrians to cross Whitney St
- Install a mini traffic circle at the intersection of Warrenton Ave and Beacon St
- Use raised tables on Beacon St
- Crosswalks are needed on Farmington Ave
- Turning lanes are needed on Farmington Ave
- On-street parking is needed on Farmington Ave
- Farmington Ave should be two lanes
- There are a lot of stop signs on Fern St, but no one obeys them
- Eliminate stop signs all over the West End
- Reduce the number of lanes on Asylum Ave
- Install a mini roundabout at the intersection of Asylum Ave and Scarborough St
- There is too much traffic on Prospect Ave
- Install a median island in front of the governor's residence on Prospect Ave
- An eastbound turn lane is needed on Albany Ave at the intersection of Bloomfield Ave
- The Albany Ave and Bloomfield Ave intersection is nasty
- Install a mini roundabout at the intersection of Scarborough St and Albany Ave

- We will meet at 2:00 p.m. on Saturday, November 23rd to walk through these neighborhoods, look at the problems we have discussed here, and discuss the possible

solutions. We will be meeting at United Methodist Church. Everyone is welcome to attend.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

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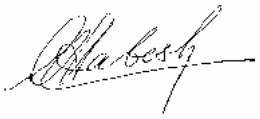

Najib O. Habesch
Project Manager

NOH/jr
w/attachments (sign-in sheets)

cc: Bhupen Patel
Veera Karukonda
File

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MINUTES OF MEETING

Subject: West End Walking Audit

Date: Saturday, November 23, 2002

Time: 2:00 P.M.

Location: United Methodist Church, Farmington Avenue

Present: Approximately 15 Stakeholders

- PROSPECT AVENUE
- *(Separate walking audit with Marcia Tofolan, and Joan and Albie Hurwit)*
- Prospect Ave carries traffic off of I-84 to UHART. It also carries a lot of trucks and buses.
- Prospect Ave is very narrow between Albany Ave and Asylum Ave.
- There is a steep hill that creates visibility problems. The crest of the hill is at 1161 Prospect Ave.
- There is a lot of on street parking in front of the two churches on the street.
- Prospect Ave is the dividing street between Hartford and West Hartford.
- Speeding is a major concern for residents.
- There are back ups at the intersection of Route 44 and Prospect Ave. Also, drivers run red lights at this intersection.
- Some of the traffic on Prospect Ave should be moved to Scarborough St which is better suited for handling heavy traffic.
- Residents like the medians on Asylum Ave in West Hartford.
- The signal timings on Prospect Ave contribute to the speeding problem. If you accelerate you can beat the lights on Asylum Ave and Albany Ave.
- Commuters also speed and litter. Its not just the students.
- Events at UHART create lots of traffic on Bloomfield Ave
- The left turn from Asylum Ave onto Prospect Ave from West Hartford is very dangerous. You can't see oncoming traffic because of the hill.
- *Marcia and the Hurwits would like to receive a copy of the case study about residents financing traffic calming improvements in Orlando*
- *Marcia would like a packet of info on what to expect in the West End so she can help promote it.*
- Dan: Short medians would reduce speeding on Prospect Ave. They should be placed every 500 to 700 feet.
- Dan: The Asylum Ave and Prospect Ave intersection is perfect for a roundabout.
- Dan: Roundabout would also work at the intersection of Albany Ave and Bloomfield Ave, and the intersection of Scarborough St and Albany Ave.

- FARMINGTON AVE AND SOUTH WHITNEY ST INTERSECTION
- Speeding is a major concern.
- Drivers run red lights and don't yield to pedestrians.
- Noah Webster school is on South Whitney St
- Farmington Ave is 48 feet wide.
- Dan: get rid of the diagonal span signals.
- Dan: Make Farmington Ave a two-lane road with turn lanes and refuge islands.

- NOAH WEBSTER SCHOOL
- South Whitney St is 33 feet wide
- We should also visit this area during school hours.
- Don't move all of the traffic from South Whitney St onto Tremont St. Use similar treatments on Tremont St.
- Dan: Make South Whitney St and Cone St a raised intersection. Also install median islands.
- Dan: Locate parking on alternating sides of the street every 200 feet to create a chicane effect.

- TREMONT ST AND CONE ST
- People park right up to the corner of the intersection on Tremont St.
- Dan: Curb extensions can be used to solve that problem.

- CONE ST AND OXFORD ST
- Cone St and Oxford St are both 29 feet wide
- Residents don't like the stop signs
- Dan: Install roundabouts here

- GIRARD ST
- Residents would like parking on both sides of the street but feel Girard St is too narrow.
- Dan: Cars can still park on both sides of the street. Yield pockets are used to compensate for the limited width.

- TREMONT ST (SOUTH OF FARMINGTON AVE)
- Tremont St is 29 feet wide
- Residents want parking on both sides of the street and crosswalks for pedestrians
- Dan: Install flat top speed tables 1/3 of the way from each intersection

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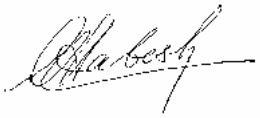

Najib O. Habesch
Project Manager

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MINUTES OF MEETING

Subject: West End Interim Meeting

Date: Thursday, April 4, 2003

Time: 7:00 P.M.

Location: West End Civic Association

Present: Approximately 20 Stakeholders

- Jill gave a brief review of the traffic calming charrette process. We are here to tweak the plan before the next charrette. We will further evaluate the plan at the charrette. Jill reviewed the neighborhood's concerns as voted on in the opening charrette. Jill then reviewed the recommendations for the West End.

- Restore parking on Beacon, Oxford, and Tremont. This would narrow the street and reduce speeds.
  - Two-side parking would work well on Tremont. It would reduce speeding and the extra parking is needed.
  - Kenyon and Girard should also have parking restored on both sides.
  - Whitney Street may also benefit from two-side parking. Two-side parking is currently permitted but everybody parks on one side anyway. There is some concern over Whitney being wide enough to handle two-side parking.
  - Parking chicanes could be used on Whitney and other streets. Parking chicanes are a popular idea.
  - Residents would like to see two-side parking on many more streets.

- Raised intersections on Warrenton at Oxford and Whitney, and on Elizabeth at Oxford.
  - There should be another raised intersection on Elizabeth at Whitney
  - During the walkabout Dan recommended a raised intersection at Whitney and Cone, not a roundabout as shown on the plan. He also said there would be a refuge island at this location.

- Mini roundabouts
  - There should be another mini-roundabout at Scarborough, Whitney, and Asylum
  - There should be a roundabout at the off ramp on Sisson Ave.
  - There should be another mini-roundabout on Kenyon at Fern
  - Another mini-roundabout on Sherman at Lorraine
  - Mini-roundabouts are needed at every intersection on Whitney
  - Put a mini-roundabout at Farmington and Prospect

- Speed Tables
- There are speed tables on shorter blocks and none on longer ones. Speed tables should be added to the longer blocks.
- Dan said a couple speed tables would be installed on a block, dividing it into thirds. Only one speed table is shown on each block.
- A speed table may not be needed if a street is already adding parking and a mini-roundabout.
- People won't want speed tables in front of their homes.

- Other concerns
  - Drivers run red lights at Farmington and Sisson
  - Evergreen, Fales, and Gray need some type of treatment
  - The streets between Fern and Elizabeth should have mid-block treatments. This was talked about at the charrettes but it is not on the plan. Speed tables would work.
  - Speed tables should also be used on South Whitney St.
  - The median islands on Prospect Ave should continue all the way South of Farmington Ave
  - The intersection of Capitol, West Blvd, and Prospect needs treatment
  - Evergreen and Warrenton are very densely populated and there are speeding problems there.
  - The Warrenton and Evergreen intersection is dangerous. It is on a hill and vehicles skid on the ice.
  - The speeding problem on Sherman wasn't addressed.
  - The Farmington Avenue plan is not shown on the handout.
  - The ramp on Sisson should be more attractive. It should serve as a gateway from the highway to the neighborhood. It is also very difficult for pedestrians to cross here.
  - A parking chicane could be used on Whitney Street. It would be cheap and improve safety at the school.
  - Lorraine Street is designed improperly. It was made into a one way street because of the design flaws.
  - There should be a cross-walk on Farmington Ave in front of Owens St
  - The Warrenton and Prospect intersection needs curb extensions
  - Prefer one side parking on Evergreen

- Jill: The plan can be updated for the charrette.

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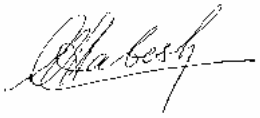

Najib O. Habesch
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Veera Karukonda
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MINUTES OF MEETING

Subject: West End Closing Charrette

Date: Thursday, April 10, 2003

Time: 7:00 PM

Location: United Methodist Church

Present: See Sign-In Sheet

- Dan Burden gave a presentation highlighting traffic calming devices that were considered for the West End:
  - Curb extensions are great tools for slowing speeds at intersections and mid-block locations. They are often used in combination with other tools, such as refuge islands, or part of a modified intersection. They are very helpful to inset parking, meet ADA requirements and reduce pedestrian crossing times and distances.
  - Raised intersections provide a colorful vertical intersection effect. They slow traffic in three ways. First they create an attractive, distinct shape. Second, they create a vertical deflection forcing a low speed approach. Third, they highlight the area as a pedestrian space.
  - Roundabouts and mini-roundabouts are the most effective and popular traffic calming feature. These horizontal deflection tools lower speeds to 15-20mph, shorten pedestrian crossings to 12-14 feet at a time, decrease injury crashes about 90%, reduce noise and pollution, and increase area property values.
  - Speed tables slow traffic through vertical deflection. They are the best tools for pedestrian and bicyclist crossings. Although they are not desired where volumes are high (above 10,000), on bus routes or prime emergency response routes, they have great utility. Their most common placements are at schools, parks, many local streets, and on some moderate volume roads.
  - Chicanes divert traffic from its intended course. Deflection speeds are held to 15-20mph. These tools are highly effective and can be made very attractive. These tools work for all size vehicles.
  - Short medians are best described as a pregnant median, or a mis-located roundabout. They are highly effective tools, slowing traffic to about 15-20mph. Short medians are very attractive. Best for local streets.
- Dan then reviewed the plan for the West End. The plan included the following suggestions:

SUGGESTIONS:

1. Restore parking on both sides of many streets.
2. Raised intersections on Warrenton at Oxford, Warrenton at Whitney, Elizabeth at Oxford, Whitney at Cone, Evergreen at Gray and Terry at Westerly Terrace.
3. Short medians on Prospect.
4. Roundabouts on Prospect at Asylum and Albany
5. Roundabout at Albany and Bloomfield
6. Scarborough, Asylum, and Farmington reduced to two lanes.
7. Mini-roundabouts at many intersections on Fern, Cone, and Elizabeth.
8. Flat top tables on Sherman, Kenyon, Girard, Tremont, Oxford, and North Beacon.
9. Speed table near Uconn Law School.
10. Parking chicane on South Whitney and Whitney.
11. Curb extension on Warrenton at Prospect.

What additions or improvements would you like to see made to this plan?

- ❑ Talk to the historical commission to see if any of the suggestions impact historical areas.
- ❑ Something should be done at the freeway exit and West Boulevard.
- ❑ Don't move the traffic from Scarborough onto Terry Road.
- ❑ Scarborough may require more than pavement markings.
- ❑ Address pedestrian safety at Sisson Ave./Farmington Ave. The new restaurants will create more pedestrian activity at this location.
- ❑ Consider roundabouts on Asylum, especially at Scarborough and Whitney.
- ❑ Speeding is a problem on Whitney St between Elizabeth and Fern.
- ❑ Drivers ignore the stop signs at the intersection of Warrenton and Evergreen.
- ❑ The intersection of West Boulevard, Capitol, and Prospect is dangerous and needs work.
- ❑ There should be a pedestrian refuge island on Whitney Street in front of Noah Webster School.
- ❑ Some of the longer streets may need to be broken up visually. Landscaped chicanes may accomplish this better than speed tables.
- ❑ Keep traffic moving on Farmington Avenue. Traffic moves to slow when it snows.
- ❑ The one way signing on Lorraine Street may need to be refined.

Residents had the following questions:

Q. Who determines what traffic calming treatments can be afforded?
A. Many of these treatments will be incorporated into future projects. When a street is reconstructed or resurfaced these changes can be made. Locations that are a higher priority and locations requiring simple treatments may be addressed sooner.

Q. Will the CT Department of Transportation embrace the plan for Albany Ave?
A. We are working with them to address Albany Ave. Roundabouts are becoming more acceptable in many states.

Q. Why were raised intersections used on South Whitney rather than roundabouts?
A. We selected treatments that were suitable for the intersection's geometry.

Q. Why doesn't the parking chicane on Whitney Street continue all the way to Warrenton?
A. Parking chicanes aren't needed on shorter blocks. The length of the block prevents speeding.

- A technical committee will be formed to guide the plan through the implementation stage and beyond. A "Friends of Traffic Calming" committee will be formed to assist the technical committee. Volunteers signed up for both.
- Residents agreed that the project team has their approval to examine the concerns addressed at this meeting and move forward with the West End Traffic Calming Plan.
- All but two individuals voted in favor of the plan as it is shown to date.

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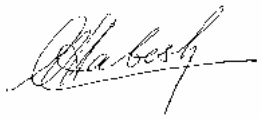

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cc: Bhupen Patel
Kevin Burnham, PE
File

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MINUTES OF MEETING

Subject: West End Follow Up Meeting

Date: Tuesday, January 20, 2004

Time: 9:00 A.M.

Location: Crystal Barry's office, 543 Prospect Avenue

Present: Najib Habesch (Project Manager, Urban Engineers), Kevin Burnham (Traffic Engineer, City of Hartford), Crystal, 3 West End stakeholders

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- Crystal would like to know what is happening with the plan for Whitney Street.
- The community is beginning to form the conception that nothing will happen.
- A chicane has been suggested for Whitney Street. Najib discussed how a chicane is designed and how we want to deploy it to ensure that it is a success.
- Money will dictate what aspects of the neighborhood plan get implemented and how quickly.
- Crystal is concerned that the City has many plans that's don't get developed. She wants Kevin to get something started because once it gets started you build momentum that can advance the rest of the plan.
- Kevin will get Whitney Street on the paving list. Najib will develop parking chicane plans once we know Whitney is going to be on the list.
- Kevin will confirm that Whitney Street is on the paving list at the upcoming WECA meeting in February.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.

Najib O. Habesch
Project Manager

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MINUTES OF MEETING

Subject: West End Mini-Roundabout Debriefing

Date: Tuesday, July 22, 2003

Time: 7:00 PM

Location: 143 Fern Street

Present: Najib Habesch, Kevin Burnham, Jill Barrett, Joe Rimiller, Residents of North Beacon and Fern Street, see Sign-In Sheet for complete list

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1) Welcome and Introductions

2) Project Background and Status

- We are looking to the community to help build a traffic calming master plan
- We have held workshops which educate residents about traffic calming tools and what they can accomplish
- Residents are then asked to identify problems in their neighborhoods and tools they would like to see implemented
- Two of the residents present at the meeting attended the first charrette.
- After the first workshop the traffic calming team handles the engineering work
- At the second charrette we present a plan for the neighborhood and ask for feedback

3) How Does a Mini-Roundabout Work?

- At the West End Neighborhood opening charrette residents indicated that stop sign running and mid-block speeding were problems on North Beacon Street and Fern Street.
- With a properly designed mini-roundabout you can't drive straight through the intersection. The driver has to slow down to 15-18 mph.
- We tested a twenty-foot diameter circle at the intersection of North Beacon and Fern and found that it was very effective in slowing down cars but was too big for buses to get through. We then tested a fourteen-foot diameter circle. Buses were able to get through but it was too small to effectively slow down cars. The seventeen-foot diameter circle, which we used, is a compromise. It is large enough to slow cars but small enough to allow buses through.
- In the future we would prefer to use a fourteen-foot diameter circle surrounded by a twenty-foot diameter apron which heavy vehicles could drive over. Such a circle would have the greatest traffic calming effect on passenger cars while still allowing heavy vehicles to get through. The City was unable to acquire the mountable apron for this test.

4) Before and After Data

- We performed automatic traffic counts at the intersection in order to compare the volumes and speeds before and after the test mini-roundabout was installed.
- There was no significant reduction in volume or speed.
- We also compared accident data. There were three accidents at the intersection during the three years prior to the installation of the mini-roundabout. There have not been any accidents since the mini-roundabout was installed. However, the observation period is very short and we cannot draw any conclusions regarding the safety of the intersection.

5) Open Discussion

- ❑ There used to be a traffic light at the intersection. Why was it removed?
- Najib: We are not sure why it was removed. But the presence of a signal if justified by the Manual on Uniform Traffic Control Devices. There are twelve warrants for the presence of a traffic signal involving factors such as accidents, pedestrian activity, vehicle volumes, gaps in traffic, and proximity to schools. We know the intersection most likely will not meet any of these warrants. We would have to check the City's records to determine why it was removed. The signal is very close to the intersection of Fern and Prospect. That may have played a role in the signal's removal.

- ❑ Did the intersection improve after the signal was removed and stop signs were installed?
- Najib: The police department's records probably don't go back far enough for us to compare the accident history.

- ❑ There were a lot of accidents at the intersection when the signal was there.
- Kevin: An unwarranted signal can often cause accidents.
- Jill: There used to be a sign indicating that there right turns on red were prohibited between 4:00PM and 6:00PM. The signal may have been a means of keeping people off of North Beacon Street.

- ❑ It seems that about 30% to 60% of the vehicles making left turns do so improperly by cutting in front of the circle.
- Najib: If cost were not an issue we could build an island to direct traffic counterclockwise.

- ❑ Cars don't have their signals on when they turn. If you do use your signal it doesn't shut off automatically after you get out of the intersection.

- ❑ The reduction in speeds at the intersection was very minor. Isn't this costing a lot of money for such a small benefit?
- Najib: The purpose of the mini-roundabout was to prevent drivers from running the stop sign.

- ❑ Who said there was a stop sign running problem?
- Najib: Residents who attended the charrettes indicated that there was a problem. (This was also confirmed by one resident who did attend the charrettes.)

- ❑ Stop sign running may involve slowing down and looking both ways but not coming to a complete stop. That doesn't seem like a bad problem.

- ❑ Many drivers ignored the stop signs and went straight through the intersection high speeds during the morning rush hour.

- ❑ Maybe long time residents are desensitized, but newer residents are shocked by the high speeds in the area.

- ❑ It is unsafe for children to cross the intersection because cars don't come to a complete stop.

- ❑ The hedges on the corner are too high and create a visibility problem.

- ❑ Can we have a mini-roundabout with stop signs?
- Kevin: This experiment is part of the City's master plan. We would use different material for a permanent mini-roundabout. A series of roundabouts on a street may have a greater effect of speeds. The mini-roundabout will be removed at some point and may not come back. We are looking for feedback for the device in general, not just as a North Beacon and Fern Street issue.

- ❑ Has there been a change in traffic volume since the mini-roundabout was installed?
- Najib: There has not been much of a change.

- ❑ The school being built on Prospect Street should be taken into consideration. Highland Street will be used as a bus drop off.

- ❑ The mini-roundabout may work better in another location. This intersection is too small.

- ❑ The mini-roundabout is an aesthetic improvement but it has not calmed traffic.
- Najib: The neighborhood plan includes many other devices such as speed tables. The mini-roundabout may be more beneficial in combination with the other tools.

- ❑ What kind of maintenance problems will speed tables and mini-roundabouts cause?
- Kevin: We don't know yet. Plowing and paving may be impacted. There may be savings in police enforcement. It is a learning process.

- ❑ The electronic sings that show a vehicle's speed are effective but ugly. A more aesthetic version of these signs could be a good tool.
- Najib: Those signs only work for some drivers. Others try to see how high they can get their speeds.

- ❑ Why are there currently speed humps on Kenyon?
- Najib: The City tried using them a couple years ago as a quick fix, but they ended up causing problems. Speed tables are a better tool.

- ❑ One year the police enforced the area heavily and it was effective in diverting traffic and reducing speeds?
- Najib: Manpower is the main problem with heavy enforcement.

- ❑ Can residents be given the authority to write traffic tickets?
- Najib: I can't answer that. It may be difficult.

- ❑ During block parties we park cars on both sides of the road and it really slows traffic down.

- ❑ Without a stoplight or stop sign it is hard to get out of the driveways close to the intersection.

- ❑ Could we try installing the mountable apron and create a larger circle?
- Najib: The City wasn't able to get the mountable circle. There has been difficulty coming up with an apron made of the temporary material. We may have to install the mountable circle at a permanent location. We have found a product that could be used for the mountable apron. We are currently testing a crosswalk made of this material on Capitol Avenue in front of the state library.

- How much does the permanent circle cost?
- Najib: It is estimated to cost around $8,000-$15,000 for a simple circle.

- How will snow plows plow around the mini-roundabout?
- Kevin: That is part of the experiment. The City is revising its snow plow routes. Before there were different drivers on the same route. There will be more of an assigned approach to promote a sense of ownership and accountability. This may improve plowing quality.

- Would one way streets work?
- Kevin: One way streets make it difficult for residents to get to their homes. They also encourage speeding because of the excess width.

- What are the rights of pedestrians at the mini-roundabout?
- Najib: Pedestrians have the right of way in the crosswalk. There is the issue of cars not yielding. Yield to pedestrian signs can help. Sidewalk ramps in Hartford are at the intersection corners. This forces crosswalks to be painted right at the intersection. If there were two ramps, one on each side of the corner the crosswalks could be spaced better. Hartford should change some of its standards and they are open to doing so. Our report will recommend that the sidewalk ramp standards be changed.

- The intersection of North Beacon and Fern may not be the best place to test the mini-roundabout. Can it be tested somewhere else?
- Kevin: That is probably what we will do next. We want to try testing a series of consecutive mini-roundabouts to see how they work in a series.

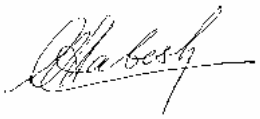
- There are too many signs around the intersection.
- Najib: The yield signs and signs in the intersection must legally stay. Other signs could be removed eventually.
- The no parking signs should be removed. Nobody parks there anyway.

- Are roundabouts being considered for Farmington Avenue?
- Najib: A lot of work has been done on Farmington Avenue as part of a different project. That project will be rolled into the traffic calming master plan.

- Najib: If the mini-roundabout is moved to a new location within the next few weeks will anyone be too disappointed.
- No.

These minutes should be considered a reasonably accurate record of statements made and conclusions reached at subject meeting.

Prepared by:
URBAN ENGINEERS, INC.



Najib O. Habesch
Project Manager

NOH/jr
w/attachments (sign-in sheets)

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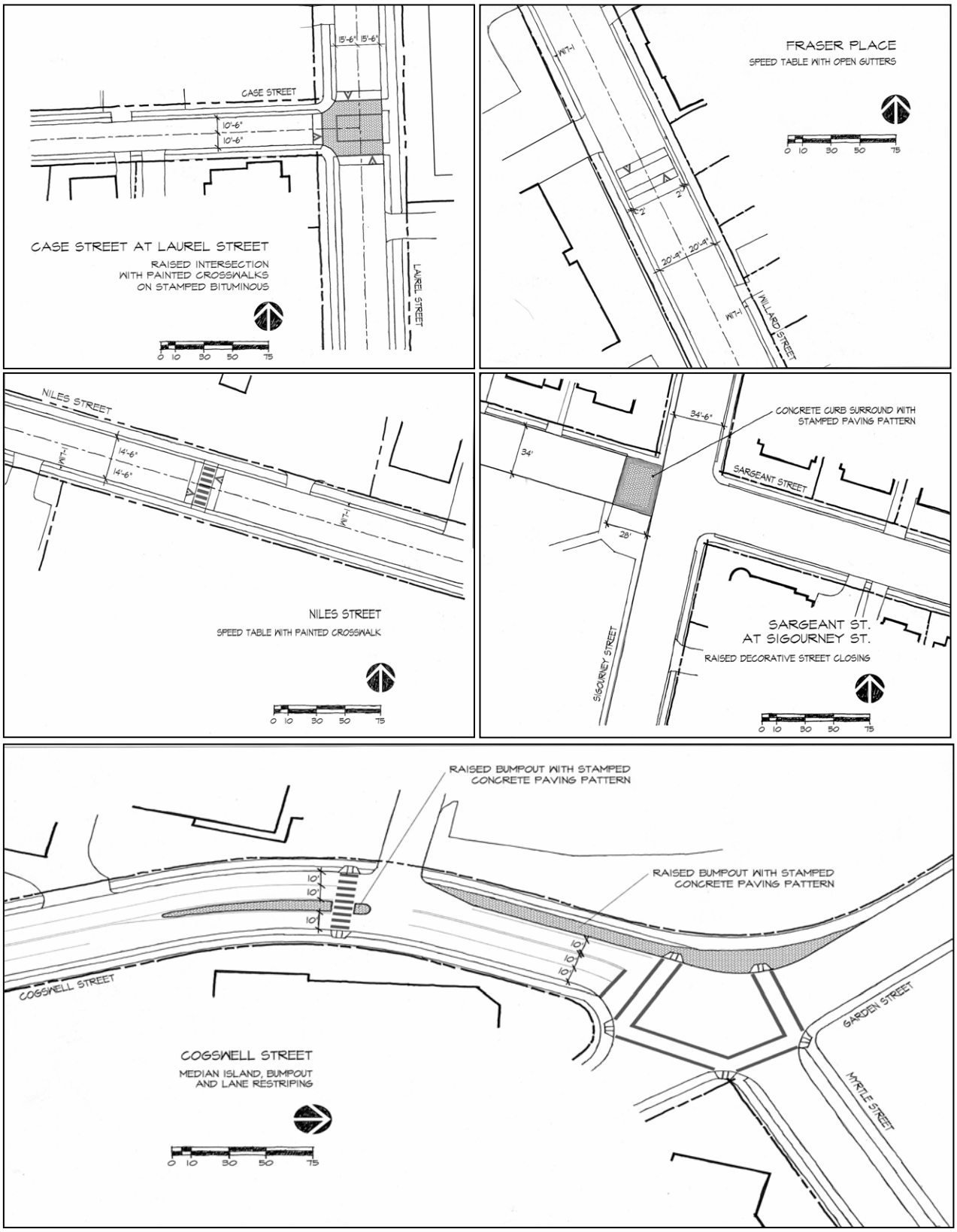
Appendix

C

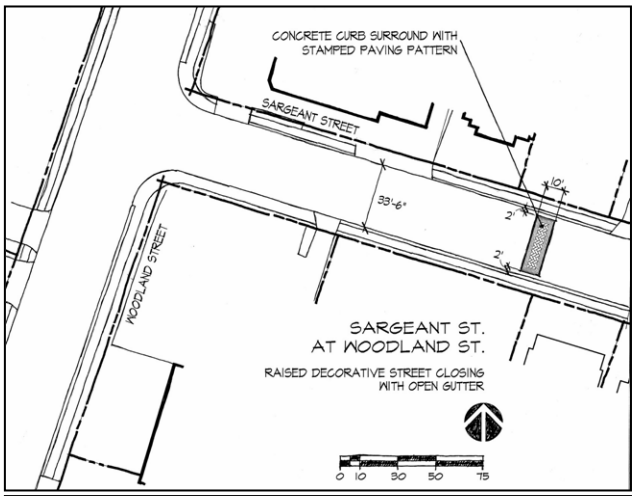
Traffic Calming Sketches

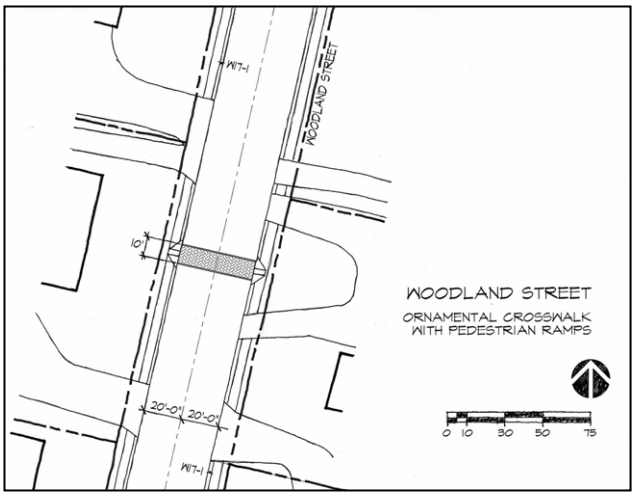
(Sorted by neighborhood)

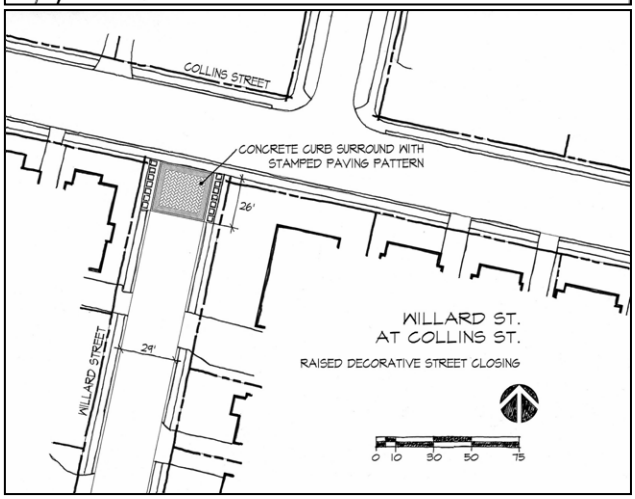
ASYLUM HILL


CASE STREET
15'-6"
15'-6"
10'-6"
10'-6"
CASE STREET AT LAUREL STREET
RAISED INTERSECTION
WITH PAINTED CROSSWALKS
ON STAMPED BITUMINOUS
LAUREL STREET
0 10 30 50 75
FRASER PLACE
SPEED TABLE WITH OPEN GUTTERS
WILLARD STREET
NILES STREET
14'-6"
14'-6"
NILES STREET
SPEED TABLE WITH PAINTED CROSSWALK
34'-6"
34'
28'
CONCRETE CURB SURROUND WITH
STAMPED PAVING PATTERN
SARGEANT STREET
SIGOURNEY STREET
SARGEANT ST.
AT SIGOURNEY ST.
RAISED DECORATIVE STREET CLOSING
RAISED BUMPOUT WITH STAMPED
CONCRETE PAVING PATTERN
RAISED BUMPOUT WITH STAMPED
CONCRETE PAVING PATTERN
10'
10'
10'
COGSWELL STREET
GARDEN STREET
MYRTLE STREET
COGSWELL STREET
MEDIAN ISLAND, BUMPOUT
AND LANE RESTRIPING

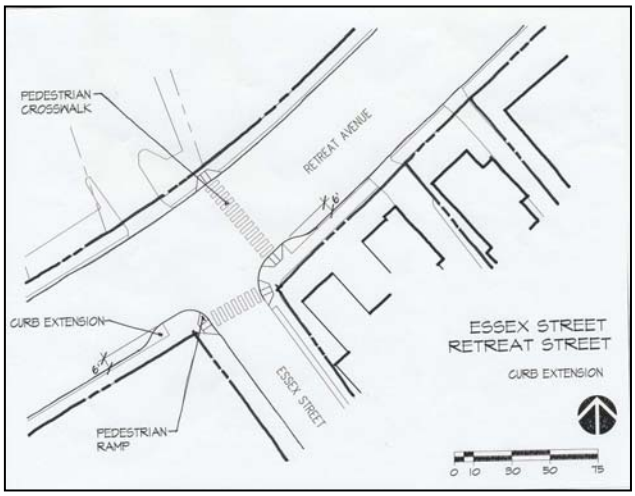
ASYLUM HILL


CONCRETE CURB SURROUND WITH
STAMPED PAVING PATTERN
SARGEANT STREET
33'-6"
10'
2'
2'
WOODLAND STREET
SARGEANT ST.
AT WOODLAND ST.
RAISED DECORATIVE STREET CLOSING
WITH OPEN GUTTER
0 10 30 50 75

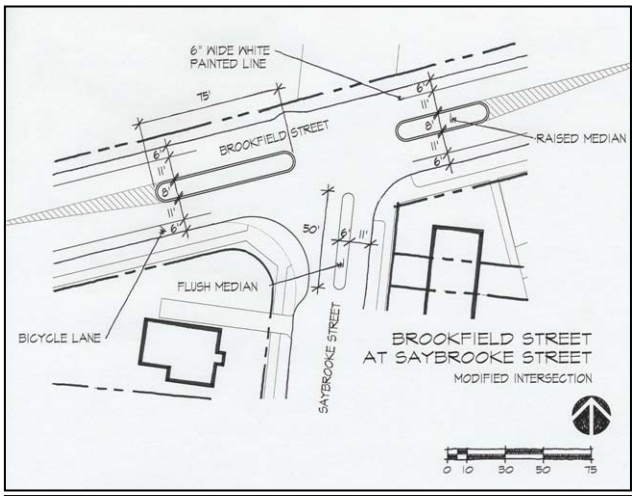

WT-1
WOODLAND STREET
10'
WOODLAND STREET
ORNAMENTAL CROSSWALK
WITH PEDESTRIAN RAMPS
20'-0"
20'-0"
WT-1
0 10 30 50 75

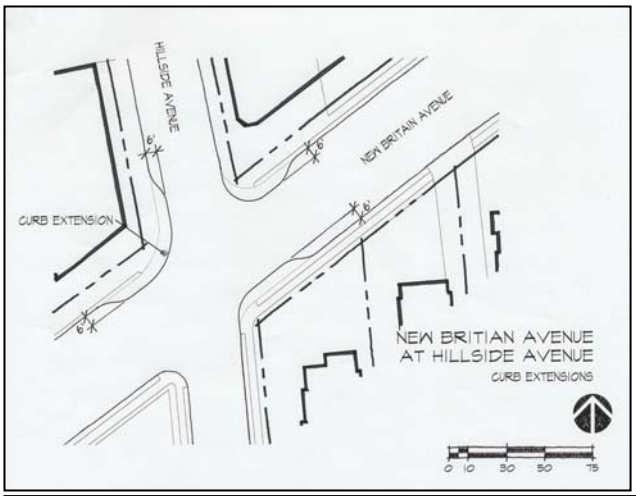

COLLINS STREET
CONCRETE CURB SURROUND WITH
STAMPED PAVING PATTERN
26'
24'
WILLARD STREET
WILLARD ST.
AT COLLINS ST.
RAISED DECORATIVE STREET CLOSING
0 10 30 50 75

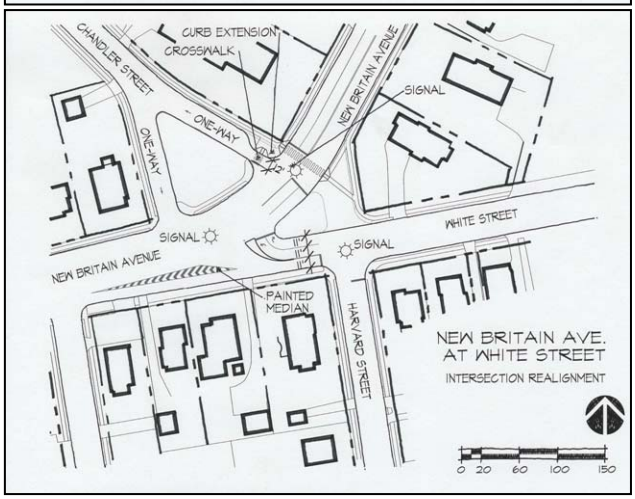
BARRY SQUARE

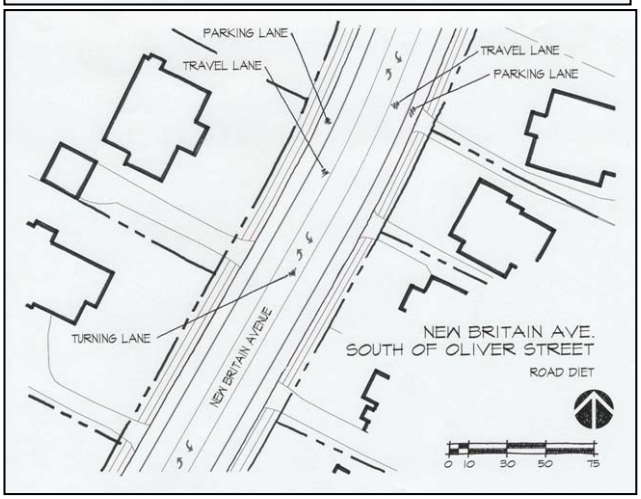


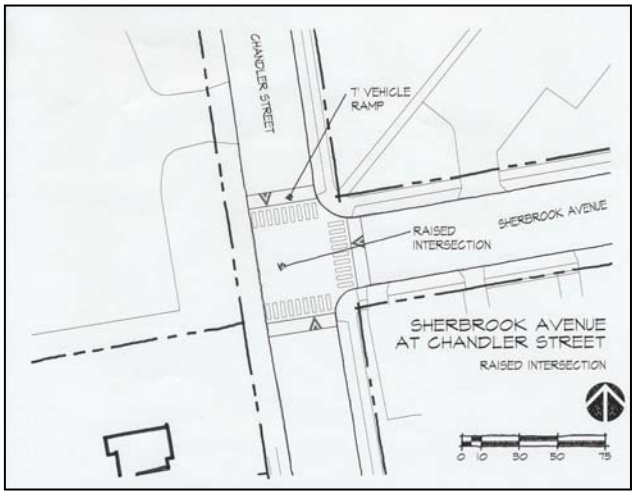
BEHIND THE ROCKS



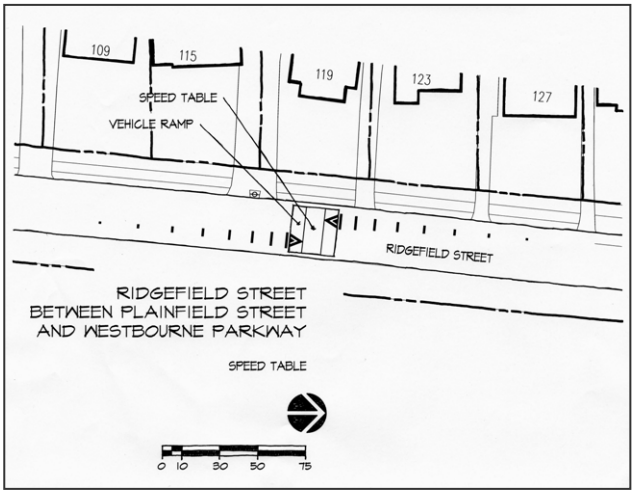




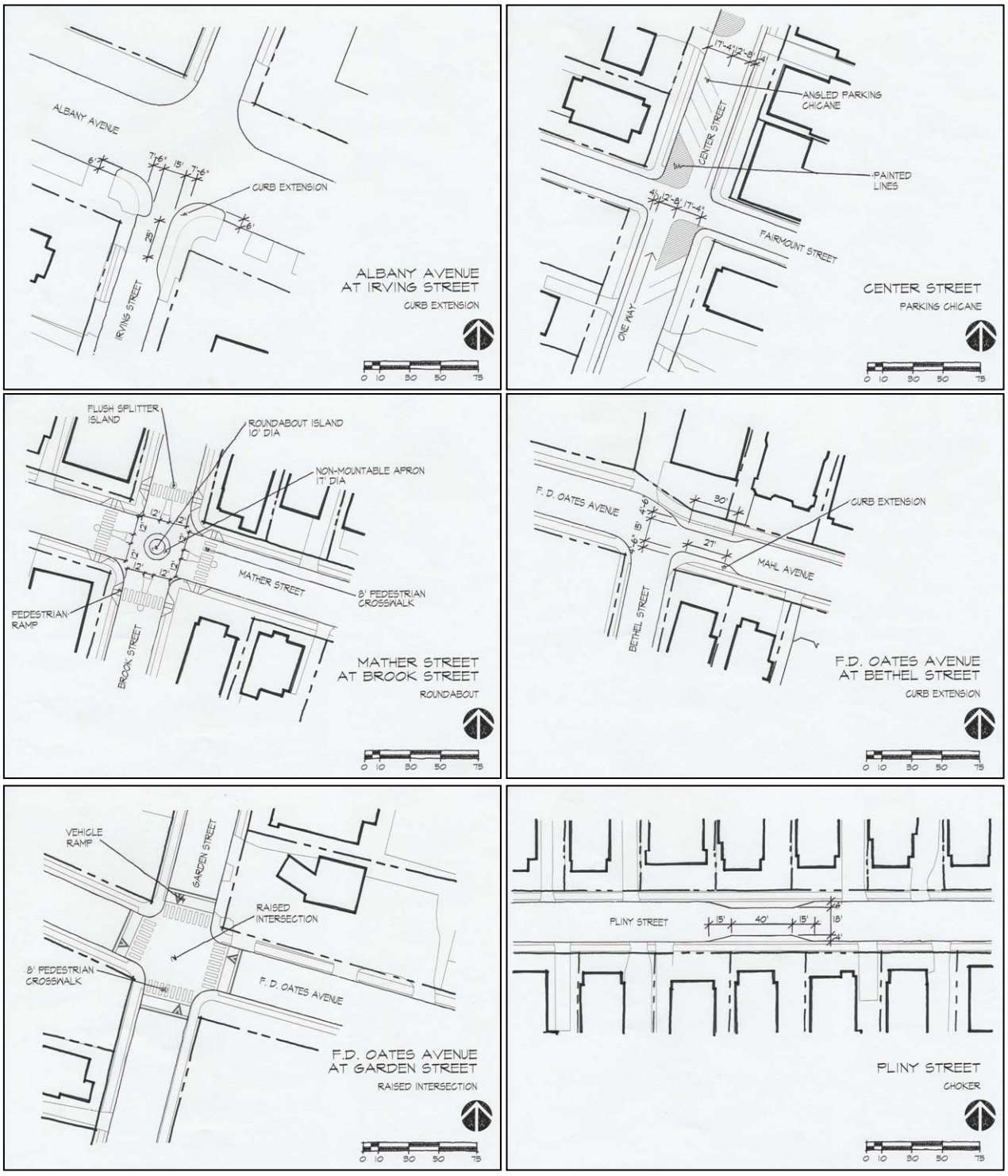




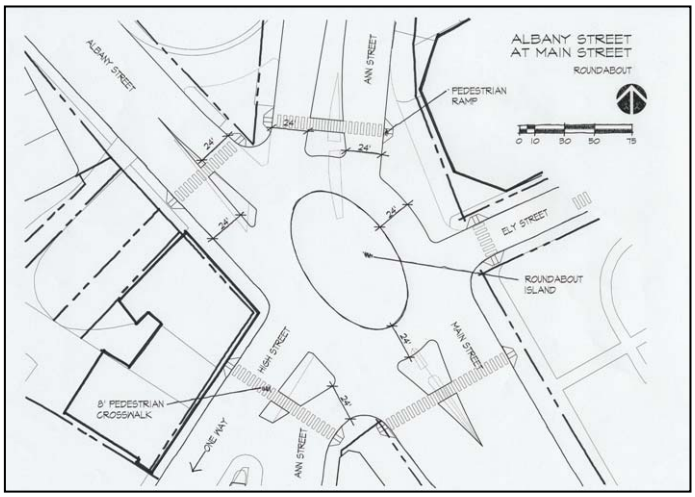
BLUE HILLS

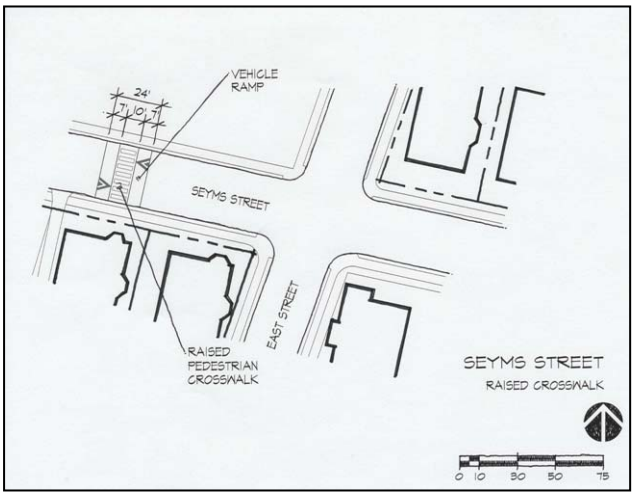

109
115
119
123
127
SPEED TABLE
VEHICLE RAMP
RIDGEFIELD STREET
RIDGEFIELD STREET
BETWEEN PLAINFIELD STREET
AND WESTBOURNE PARKWAY
SPEED TABLE
0 10 30 50 75

CLAY ARSENAL

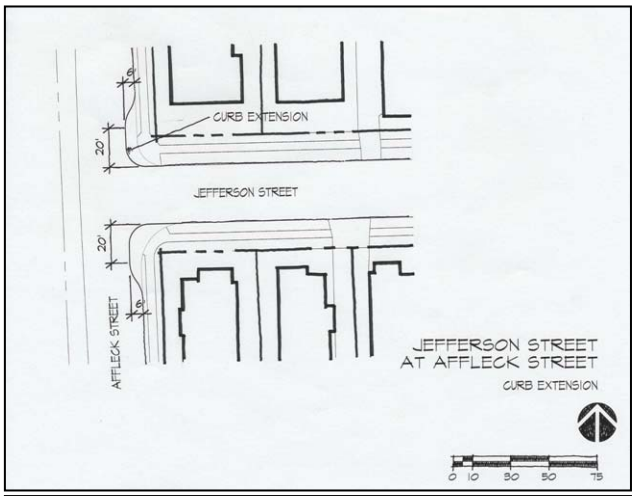


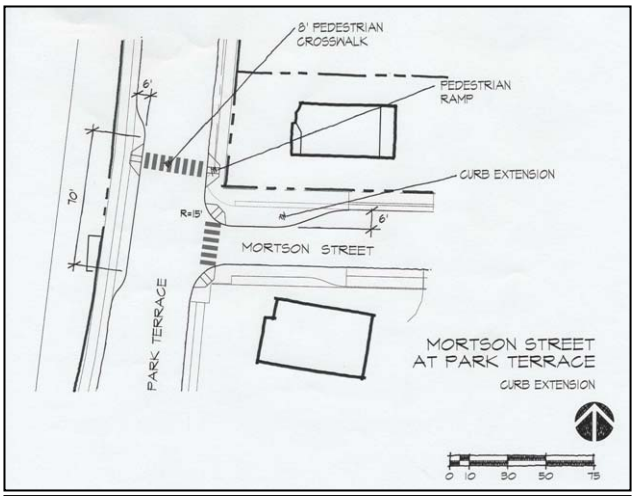
CLAY ARSENAL

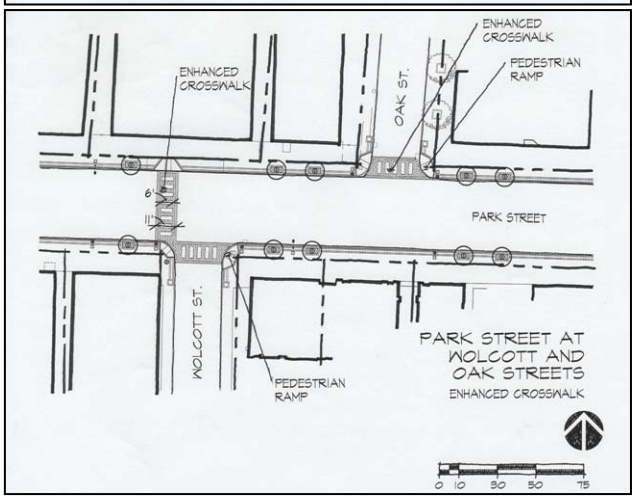


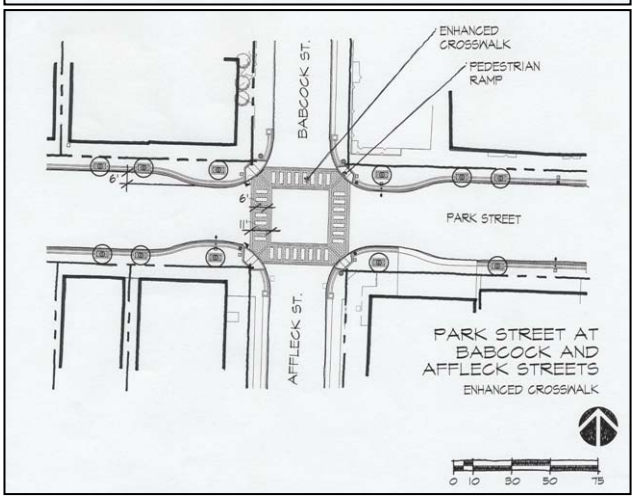


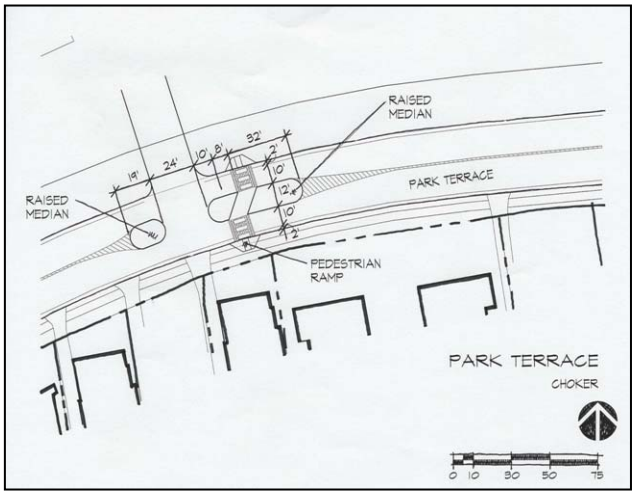
FROG HOLLOW

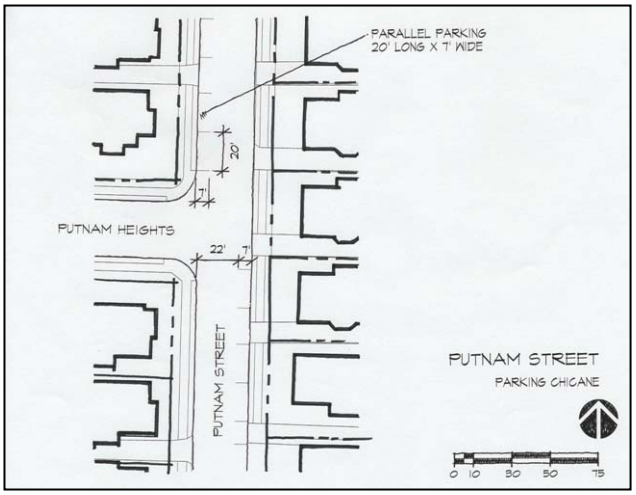

CURB EXTENSION
JEFFERSON STREET
AFFLECK STREET
JEFFERSON STREET
AT AFFLECK STREET
CURB EXTENSION
0 10 30 50 75


8' PEDESTRIAN
CROSSWALK
PEDESTRIAN
RAMP
CURB EXTENSION
MORTSON STREET
PARK TERRACE
MORTSON STREET
AT PARK TERRACE
CURB EXTENSION
0 10 30 50 75

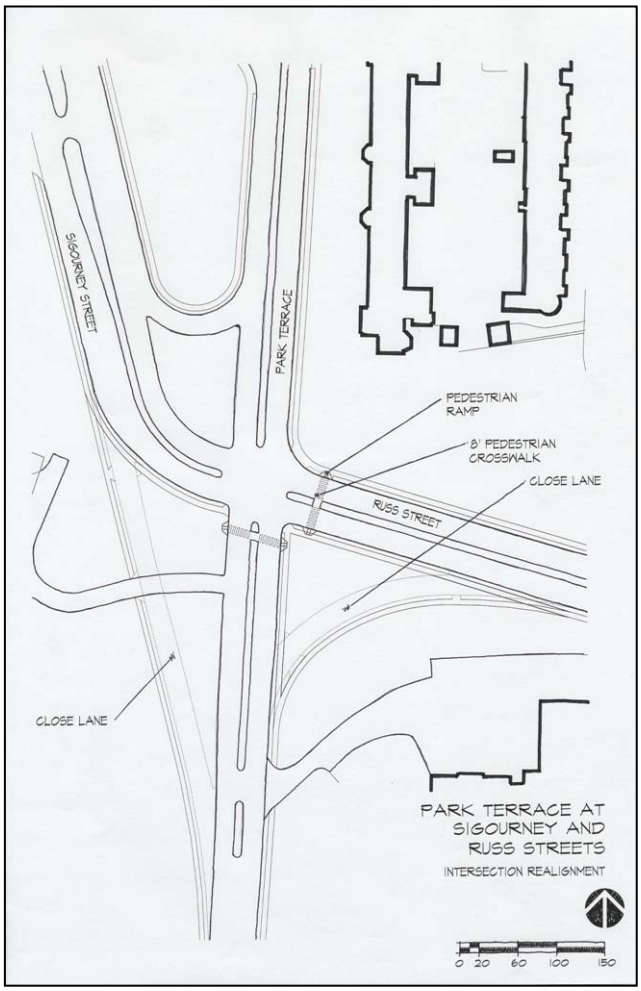

ENHANCED
CROSSWALK
OAK ST.
PEDESTRIAN
RAMP
PARK STREET
WOLCOTT ST.
PEDESTRIAN
RAMP
PARK STREET AT
WOLCOTT AND
OAK STREETS
ENHANCED CROSSWALK
0 10 30 50 75

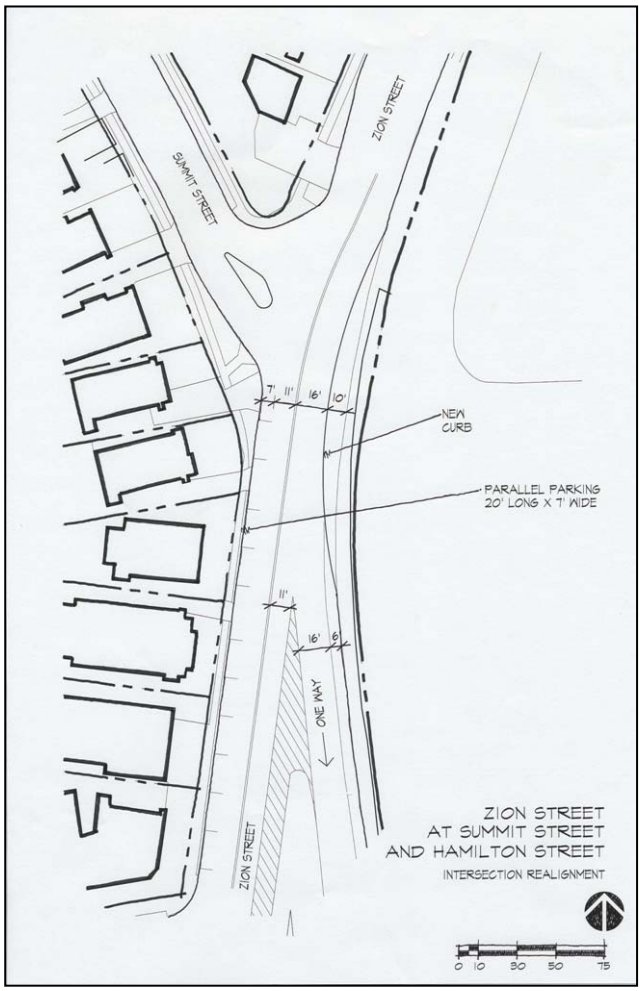

ENHANCED
CROSSWALK
BABCOCK ST.
PEDESTRIAN
RAMP
PARK STREET
AFFLECK ST.
PARK STREET AT
BABCOCK AND
AFFLECK STREETS
ENHANCED CROSSWALK
0 10 30 50 75


RAISED
MEDIAN
PARK TERRACE
RAISED
MEDIAN
PEDESTRIAN
RAMP
PARK TERRACE
CHOKER
0 10 30 50 75

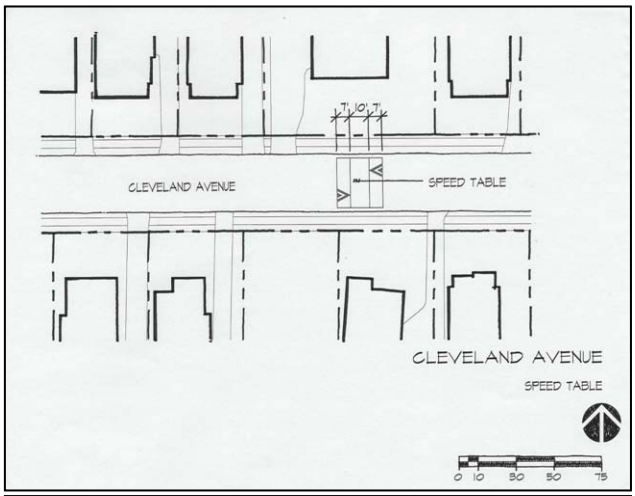

PARALLEL PARKING
20' LONG X 7' WIDE
PUTNAM HEIGHTS
PUTNAM STREET
PUTNAM STREET
PARKING CHICANE
0 10 30 50 75

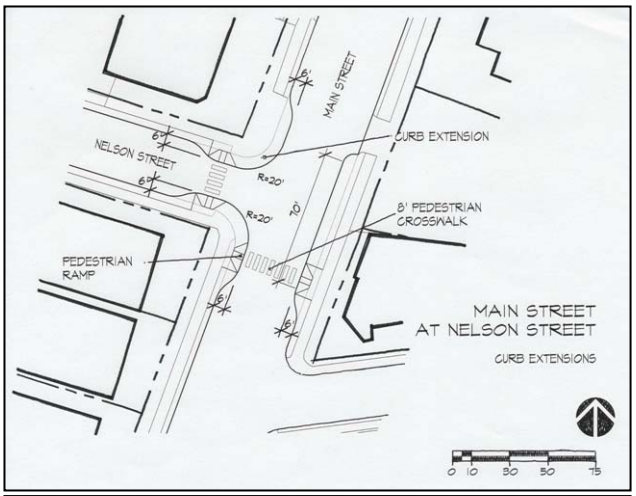
FROG HOLLOW

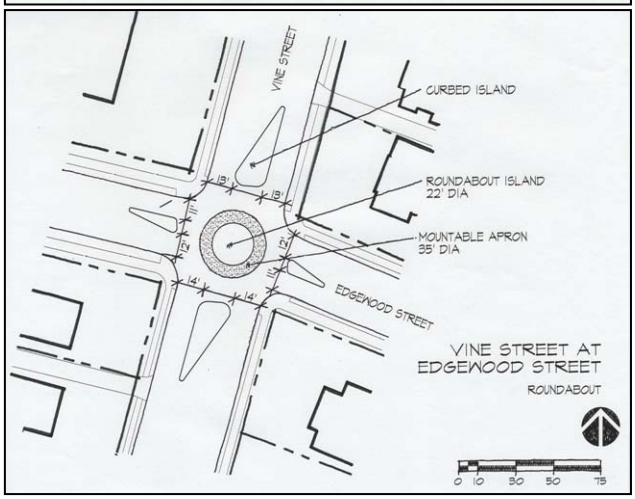

SIGOURNEY STREET
PARK TERRACE
PEDESTRIAN RAMP
8' PEDESTRIAN CROSSWALK
CLOSE LANE
RUSS STREET
CLOSE LANE
PARK TERRACE AT SIGOURNEY AND RUSS STREETS
INTERSECTION REALIGNMENT
0 20 60 100 150

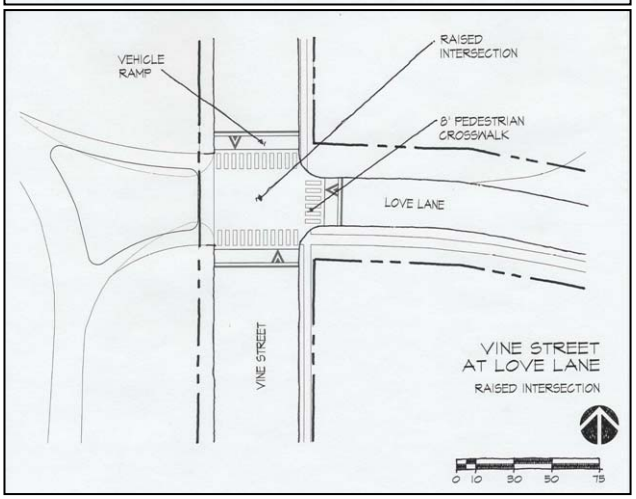

SUMMIT STREET
ZION STREET
7' 11' 16' 10'
NEW CURB
PARALLEL PARKING 20' LONG X 7' WIDE
11'
16' 6'
ONE WAY
ZION STREET
ZION STREET AT SUMMIT STREET AND HAMILTON STREET
INTERSECTION REALIGNMENT
0 10 30 50 75

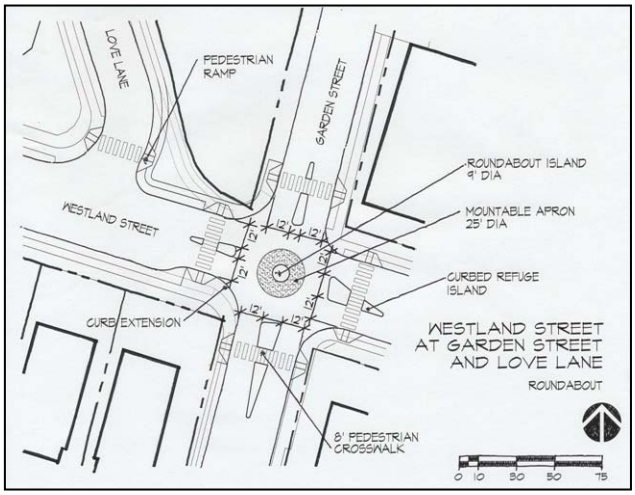
NORTHEAST

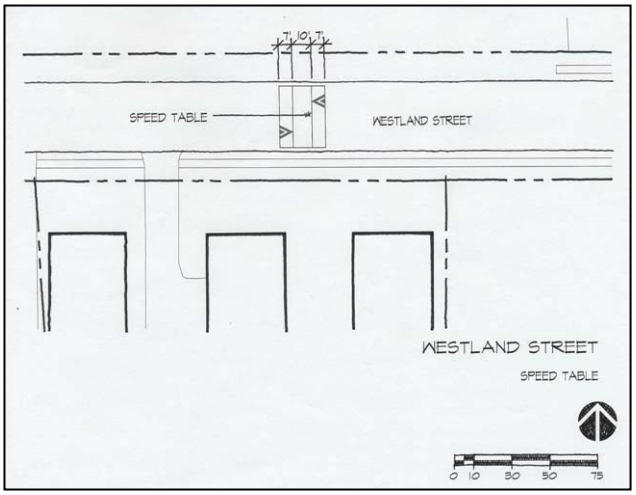

7' 10' 7'
CLEVELAND AVENUE
SPEED TABLE
CLEVELAND AVENUE
SPEED TABLE
0 10 30 50 75


MAIN STREET
NELSON STREET
CURB EXTENSION
R=20'
R=20'
70'
8' PEDESTRIAN CROSSWALK
PEDESTRIAN RAMP
MAIN STREET AT NELSON STREET
CURB EXTENSIONS
0 10 30 50 75

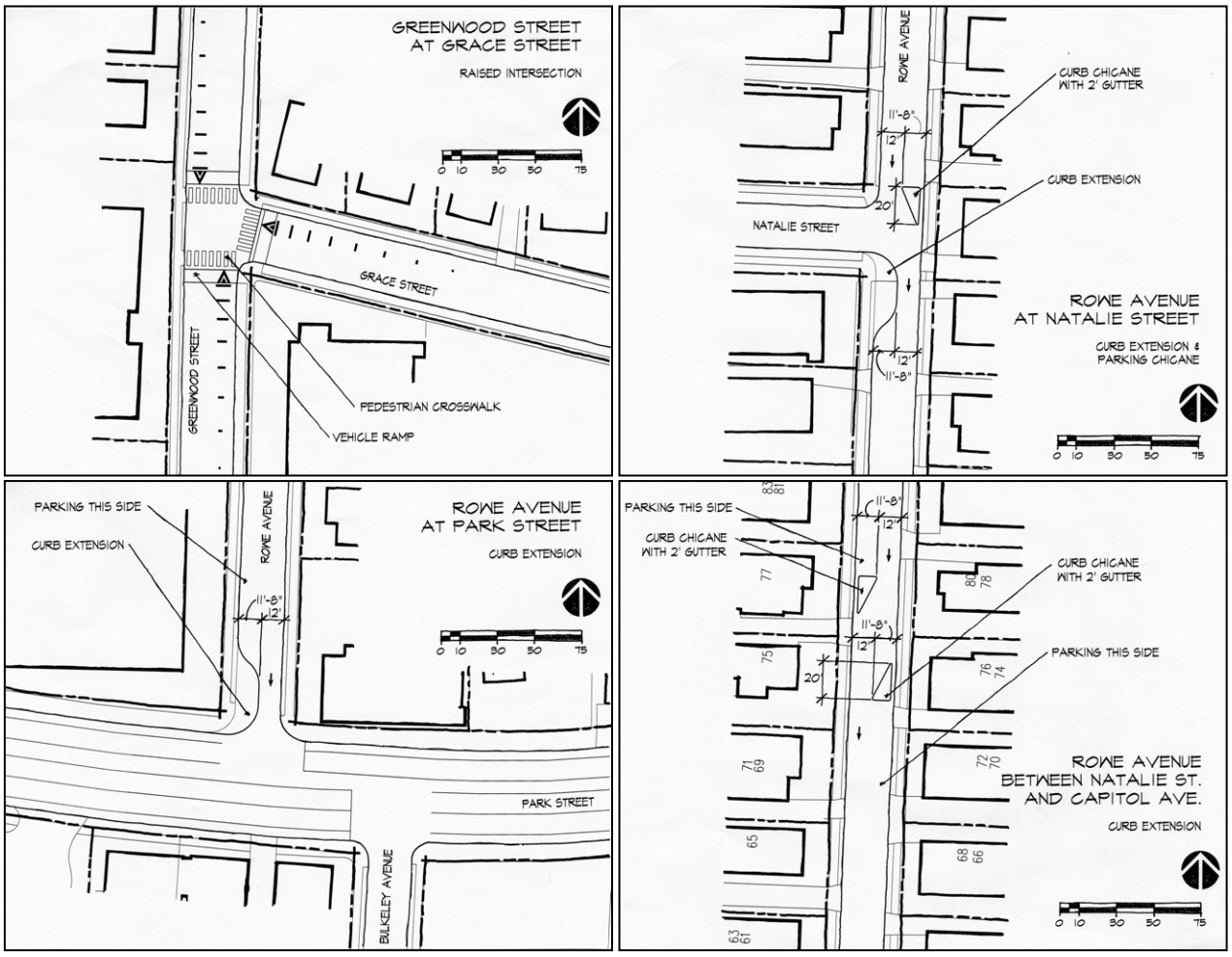

VINE STREET
CURBED ISLAND
ROUNDABOUT ISLAND 22' DIA
MOUNTABLE APRON 35' DIA
EDGEWOOD STREET
VINE STREET AT EDGEWOOD STREET
ROUNDABOUT
0 10 30 50 75


VEHICLE RAMP
RAISED INTERSECTION
8' PEDESTRIAN CROSSWALK
LOVE LANE
VINE STREET
VINE STREET AT LOVE LANE
RAISED INTERSECTION
0 10 30 50 75

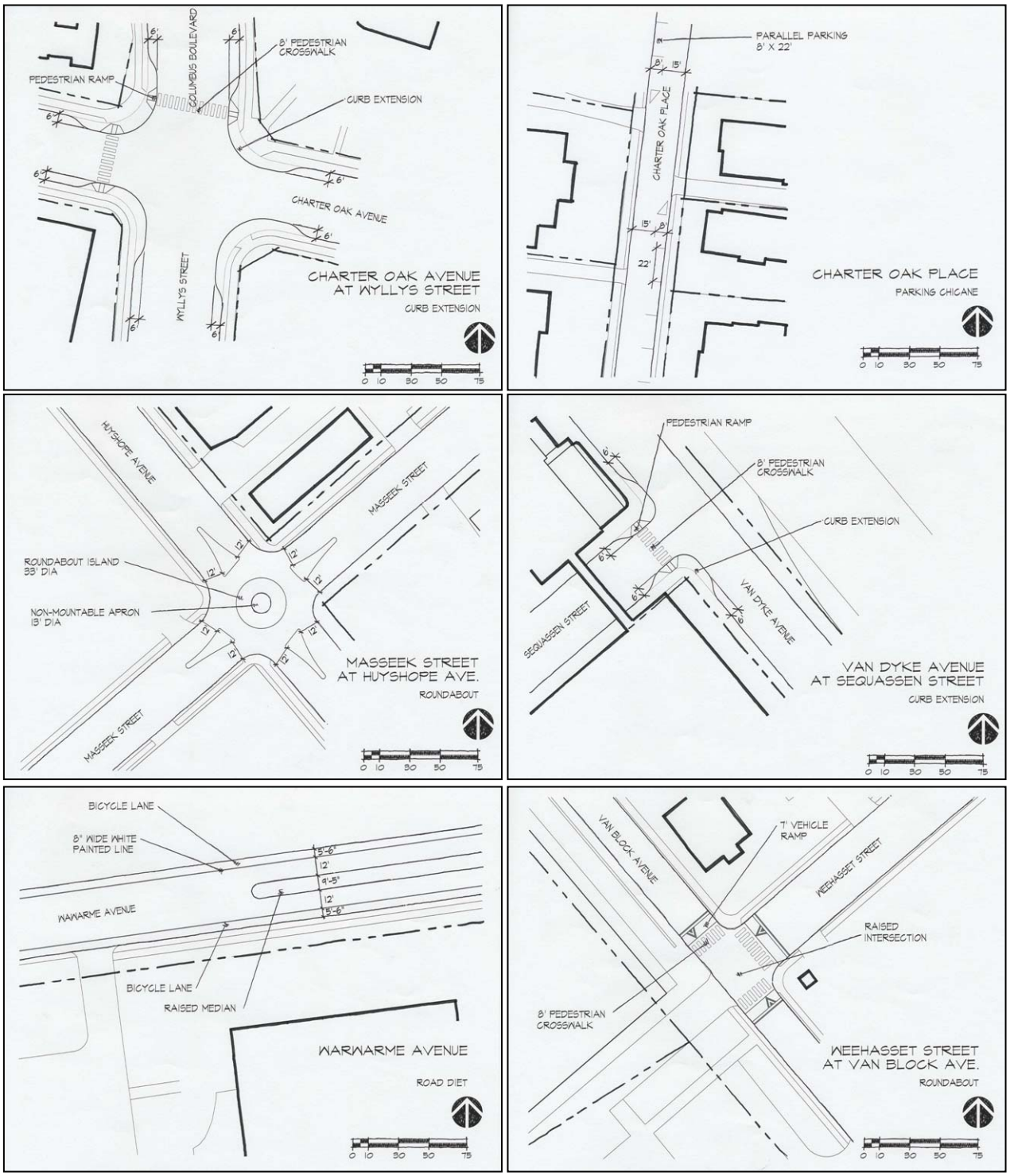

LOVE LANE
PEDESTRIAN RAMP
GARDEN STREET
ROUNDABOUT ISLAND 9' DIA
MOUNTABLE APRON 25' DIA
WESTLAND STREET
CURBED REFUGE ISLAND
CURB EXTENSION
WESTLAND STREET AT GARDEN STREET AND LOVE LANE
ROUNDABOUT
8' PEDESTRIAN CROSSWALK
0 10 30 50 75


7' 10' 7'
SPEED TABLE
WESTLAND STREET
WESTLAND STREET
SPEED TABLE
0 10 30 50 75

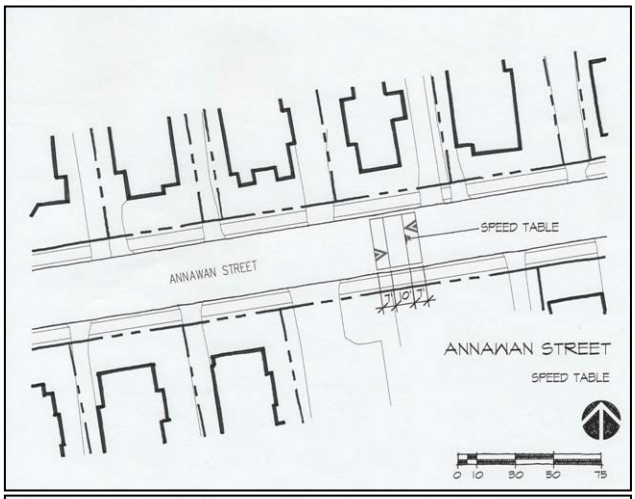
PARKVILLE

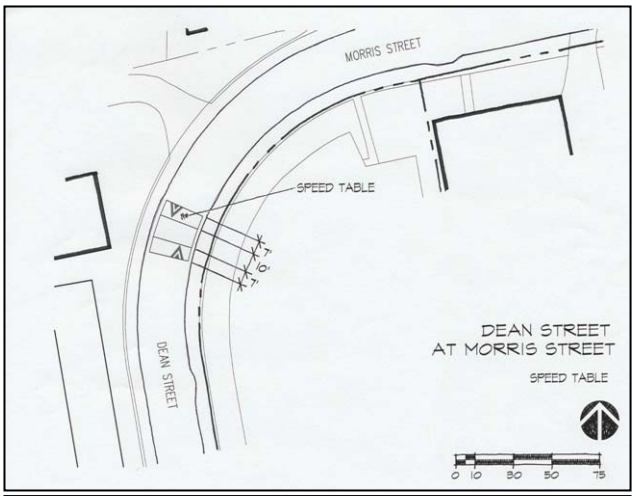

GREENWOOD STREET
AT GRACE STREET
RAISED INTERSECTION
0 10 30 50 75
GRACE STREET
GREENWOOD STREET
PEDESTRIAN CROSSWALK
VEHICLE RAMP
ROWE AVENUE
CURB CHICANE
WITH 2' GUTTER
11'-8"
12'
CURB EXTENSION
20'
NATALIE STREET
ROWE AVENUE
AT NATALIE STREET
CURB EXTENSION &
PARKING CHICANE
0 10 30 50 75
PARKING THIS SIDE
CURB EXTENSION
ROWE AVENUE
11'-8"
12'
ROWE AVENUE
AT PARK STREET
CURB EXTENSION
0 10 30 50 75
PARK STREET
BULKELEY AVENUE
PARKING THIS SIDE
CURB CHICANE
WITH 2' GUTTER
11'-8"
12'
77
75
71
69
65
63
61
20'
80
78
76
74
72
70
68
66
CURB CHICANE
WITH 2' GUTTER
PARKING THIS SIDE
ROWE AVENUE
BETWEEN NATALIE ST.
AND CAPITOL AVE.
CURB EXTENSION
0 10 30 50 75

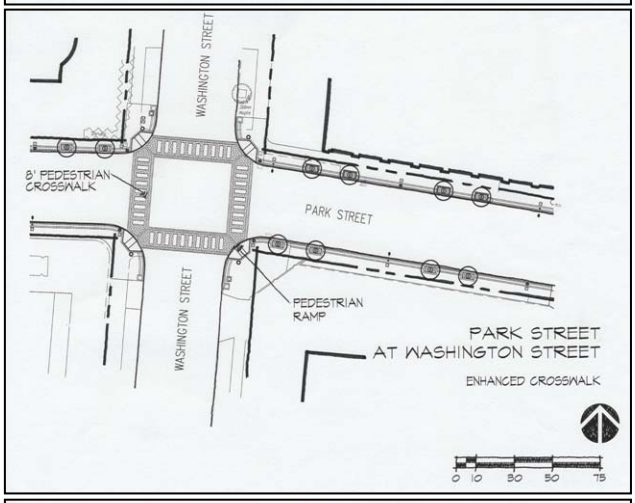
SHELDON CHARTER OAK

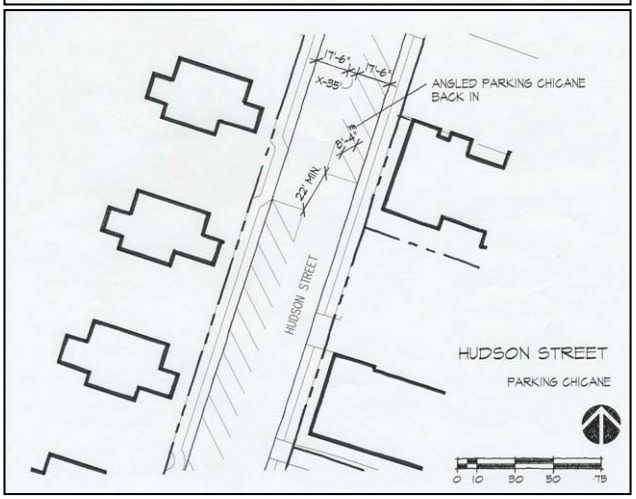


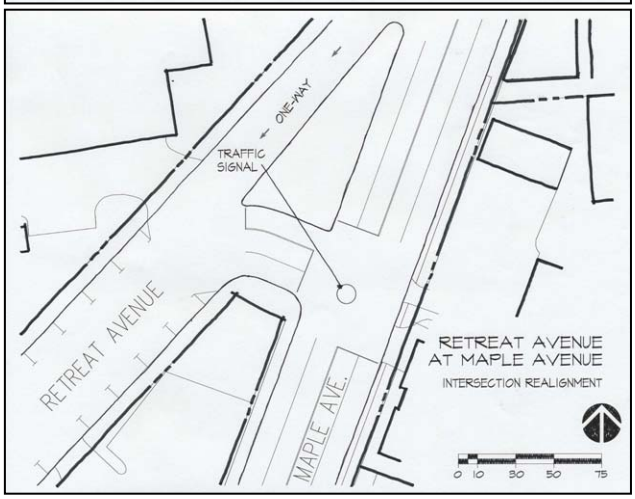
SOUTH GREEN


ANNAWAN STREET
SPEED TABLE
ANNAWAN STREET
SPEED TABLE
0 10 30 50 75

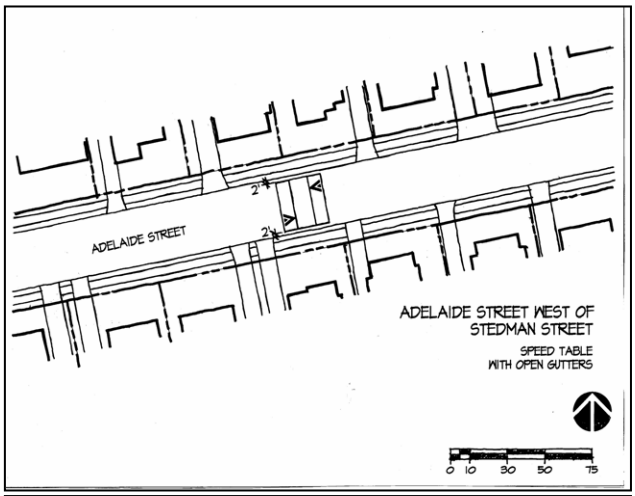

MORRIS STREET
SPEED TABLE
DEAN STREET
DEAN STREET
AT MORRIS STREET
SPEED TABLE
0 10 30 50 75


WASHINGTON STREET
8' PEDESTRIAN CROSSWALK
PARK STREET
WASHINGTON STREET
PEDESTRIAN RAMP
PARK STREET
AT WASHINGTON STREET
ENHANCED CROSSWALK
0 10 30 50 75


17'-6"
X-35°
17'-6"
ANGLED PARKING CHICANE BACK IN
22' MIN
HUDSON STREET
HUDSON STREET
PARKING CHICANE
0 10 30 50 75


ONE-WAY
TRAFFIC SIGNAL
RETREAT AVENUE
MAPLE AVE.
RETREAT AVENUE
AT MAPLE AVENUE
INTERSECTION REALIGNMENT
0 10 30 50 75

SOUTH END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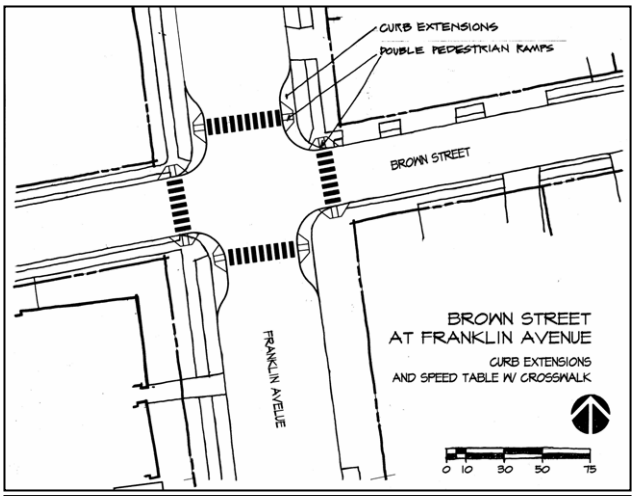
2%
2%
ADELAIDE STREET WEST OF
STEDMAN STREET
SPEED TABLE
WITH OPEN GUTTERS
0 10 30 50 75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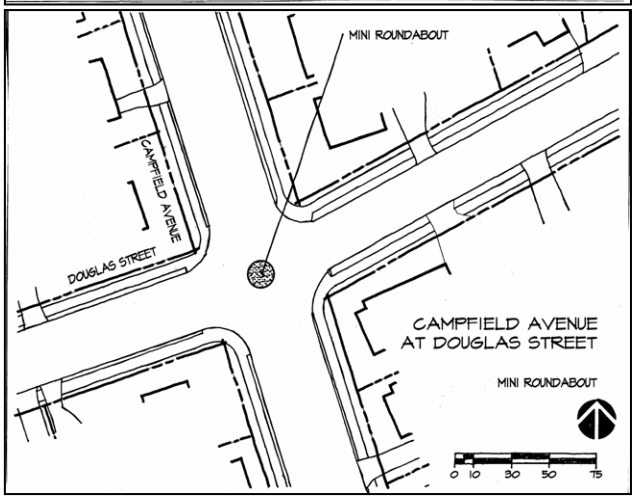
DOUBLE PEDESTRIAN RAMPS
BROWN STREET
FRANKLIN AVENUE
BROWN STREET
AT FRANKLIN AVENUE
CURB EXTENSIONS
AND SPEED TABLE W/ CROSSWALK
0 10 30 50 75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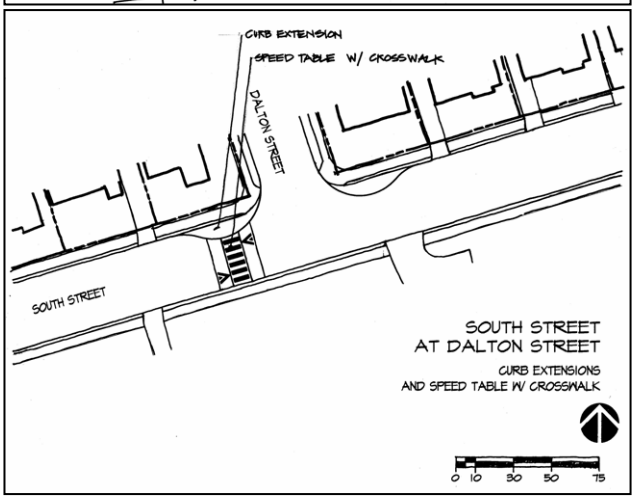
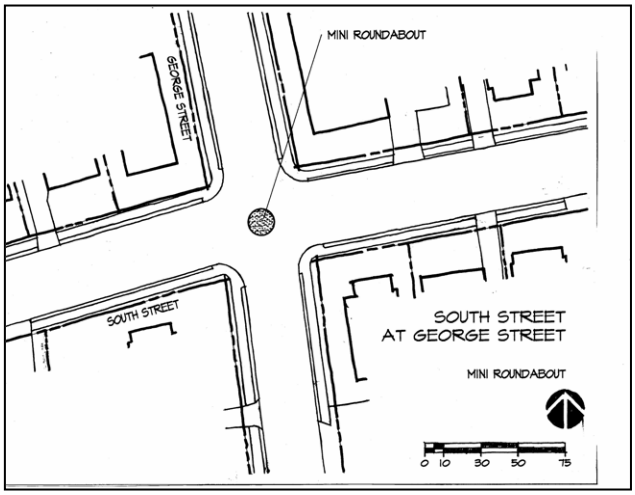
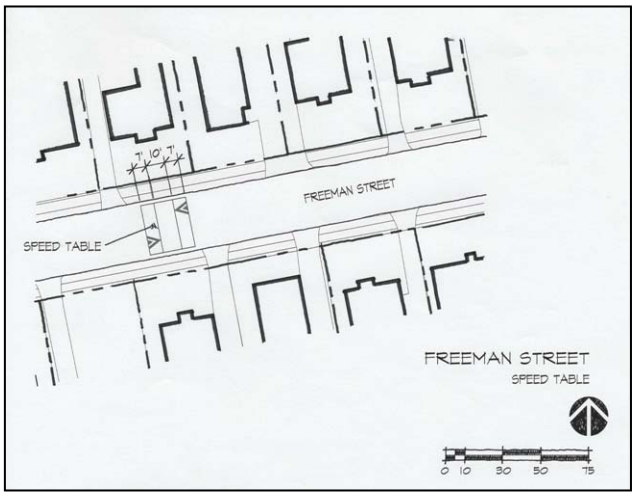
CAMPFIELD AVENUE
DOUGLAS STREET
CAMPFIELD AVENUE
AT DOUGLAS STREET
MINI ROUNDABOUT
0 10 30 50 75


CURB EXTENSION
SPEED TABLE W/ CROSSWALK
DALTON STREET
SOUTH STREET
SOUTH STREET
AT DALTON STREET
CURB EXTENSIONS
AND SPEED TABLE W/ CROSSWALK
0 10 30 50 75


MINI ROUNDABOUT
GEORGE STREET
SOUTH STREET
SOUTH STREET
AT GEORGE STREET
MINI ROUNDABOUT
0 10 30 50 75

SOUTH WEST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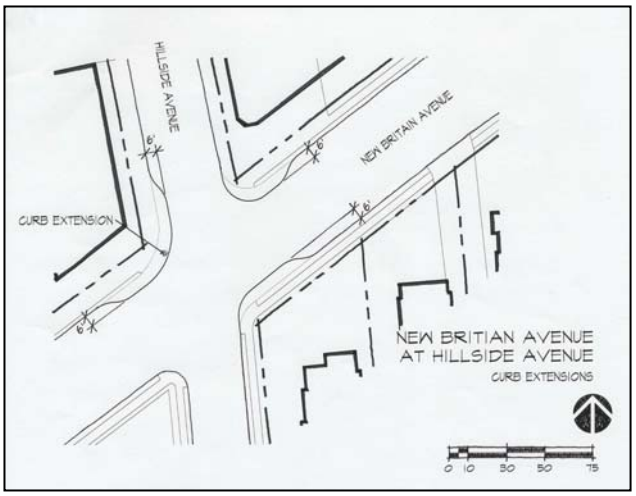
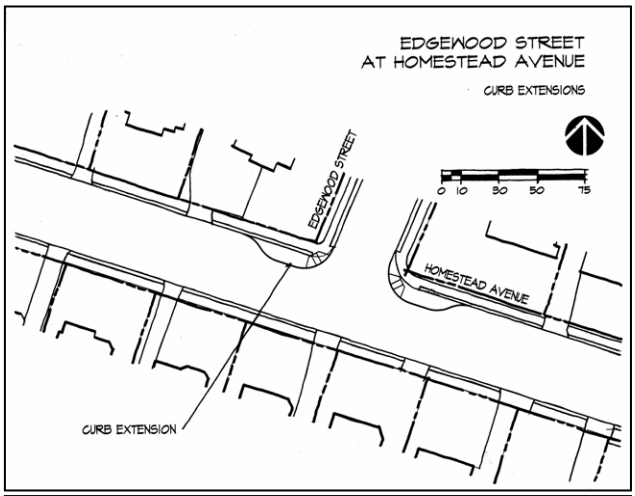
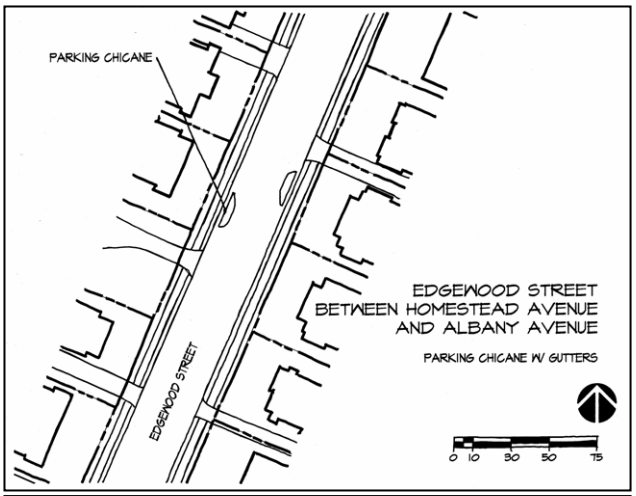
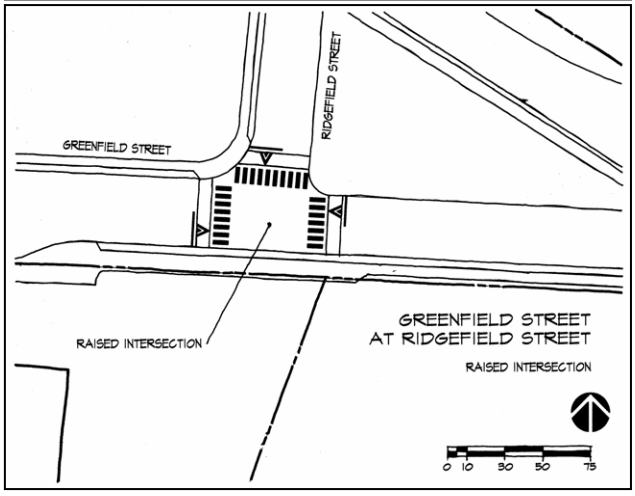
10'
7'
FREEMAN STREET
SPEED TABLE
FREEMAN STREET
SPEED TABLE
0 10 30 50 75

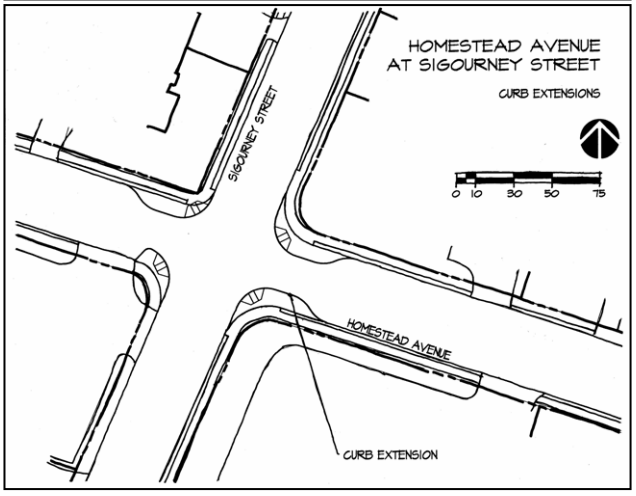

HILLSIDE AVENUE
NEW BRITAIN AVENUE
CURB EXTENSION
6'
NEW BRITIAN AVENUE
AT HILLSIDE AVENUE
CURB EXTENSIONS
0 10 30 50 75

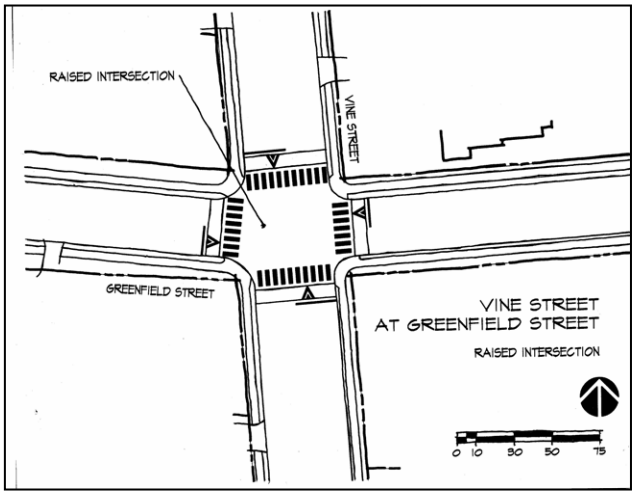
UPPER ALBANY











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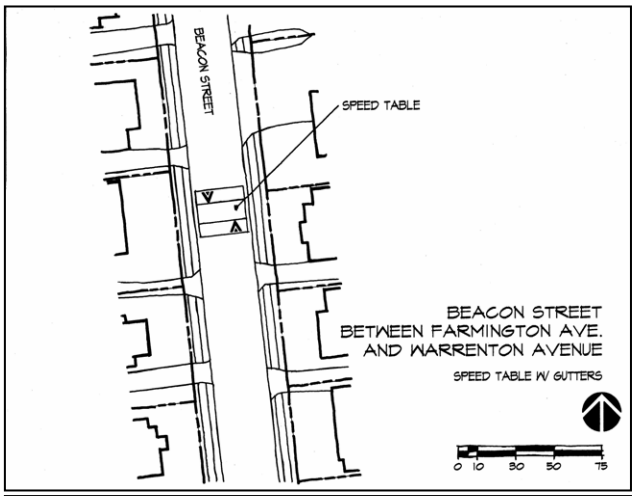
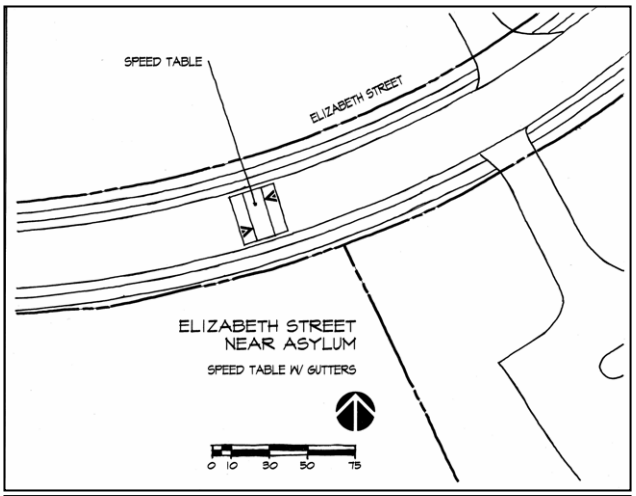

BEACON STREET
SPEED TABLE
BEACON STREET
BETWEEN FARMINGTON AVE.
AND WARRENTON AVENUE
SPEED TABLE W/ GUTTERS
0 10 30 50 75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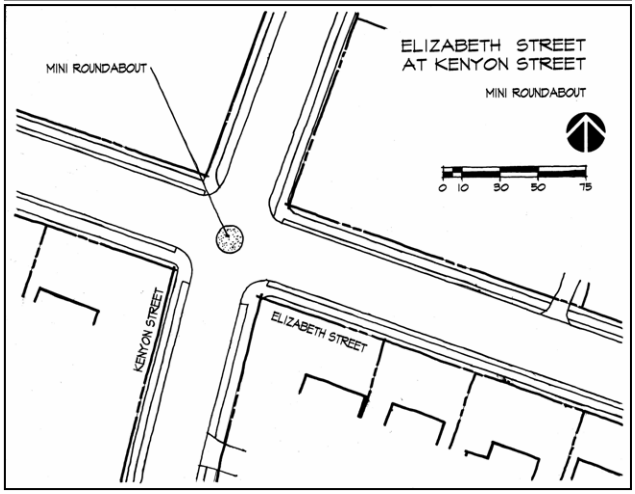
ELIZABETH STREET
ELIZABETH STREET
NEAR ASYLUM
SPEED TABLE W/ GUTTERS
0 10 30 50 75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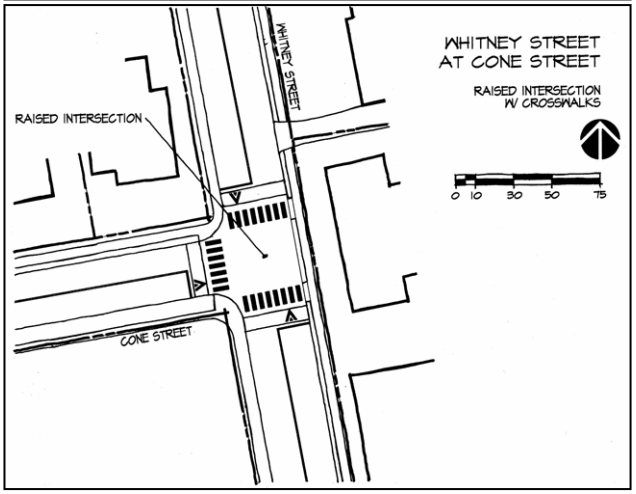
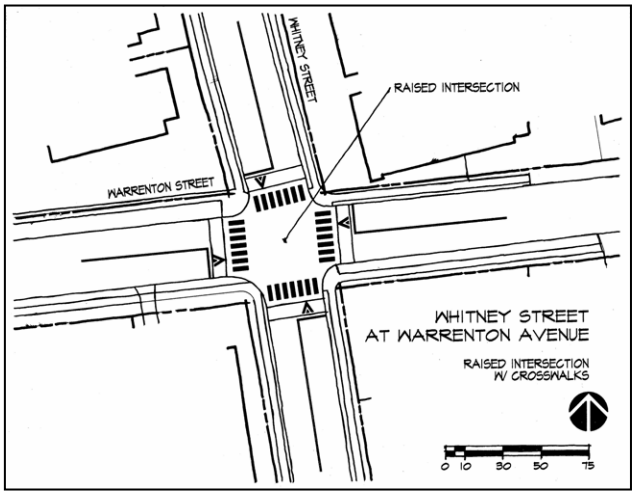
ELIZABETH STREET
AT KENYON STREET
MINI ROUNDABOUT
0 10 30 50 75
KENYON STREET
ELIZABETH STREET


WHITNEY STREET
WHITNEY STREET
AT CONE STREET
RAISED INTERSECTION
W/ CROSSWALKS
RAISED INTERSECTION
0 10 30 50 75
CONE STREET


WHITNEY STREET
RAISED INTERSECTION
WARRENTON STREET
WHITNEY STREET
AT WARRENTON AVENUE
RAISED INTERSECTION
W/ CROSSWALKS
0 10 30 50 75

Appendix

D

Probable Construction Costs

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
Prepared By: Urban Engineers Inc., Hartford, CT.

DATE: **August-04**

Roundabout [RB] Mountable Granite Curb with Splitter Islands in Conc. Base Pavement

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Non Mountable 6x 20 Radial Granite Curbing set in Conc. (Inner Radius)	L.F.	35	$50.00	$1,750
	Straight Granite Curb 6 x 20 set in Concrete	L.F.	400	$30.00	$12,000
	Radial Granite Curb 6 x 20 set in Concrete	L.F.	190	$50.00	$9,500
	Mountable Reinforced Concrete Curb (Outer Radius)	L.F.	100	$45.00	$4,500
	5" Concrete Sidewalk	S.F.	1600	$8.00	$12,800
	8" Reinforced Concrete Sidewalk	S.F.	600	$10.00	$6,000
	Sawcut P.C.C. Base	L.F.	500	$5.00	$2,500
	Construct New 8" Reinforced Road Base	S.Y.	75	$90.00	$6,750
	Remove Existing Bit. And P.C.C. Road Pavement (Conc. Base)	S.F.	1500	$5.00	$7,500
	Repair P.C.C. Pavement 1' max. in front of Curb	L..F.	500	$10.00	$5,000
	Signage and Supports	S.F.	150	$25.00	$3,750
	Decorative Concrete Pavers in Splitter Island and Truck/Bus Apron	S.F.	1200	$15.00	$18,000
	Landscaping, shrubs, multch, topsoil, etc. (Center Island)	L.S.	1	$3,500.00	$3,500
1	**Sub Total Construction Items**				**$93,550**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$2,807
3	Mobilization (8%)				$7,484
4	Maintenance and Protection of Traffic (5%)				$4,678
5	Construction Staking (2%)				$1,871
6	2 Year Inflation (3% per Year)				$5,613
7	**Total of Construction Items** (Lines 1 thru 6)				**$116,002**
8	Contingencies 7%				$8,120
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$124,122**
10	Incidentals 15%				$18,618
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$142,740**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11)				
	A. Delete Granite Curb,Pavers, landscaping, and substitute Bit. Conc. Curb & 2" Bit. Surface				$67,479
	B. Construction within Flexible Base Street				$26,511

Notes and Assumptions:

1. Quanties based on typical 90 degree intersection (30' wide streets) with a radial 15' Outer Radius
2. Quantities for 8 new type I sidewalk ramps are included in this estimate
3. Drainage modifications and major utiltiy relocations costs are not included in this estimate
4. Unit Costs based on 2003 City of Hartford Bid tabulations
5. Incidental Costs include, Minor Vertical Utility Adjustments, Site Preparation,removal of existing pavement markings, etc.
6. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
7. Deduct alternatesare to be selected individually, they may not be combined and deducted from line 11.

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
Prepared By: Urban Engineers Inc., Hartford, CT.

DATE: **August-04**

Curb Extension [CE] with Granite Curb in Concrete Base Pavement

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Straight Granite Curb 6 x 20 Set in Concrete Pavement	L.F.	20	$30.00	$600
	Radial Granite Curb 6 x 20 set in Concrete Pavement	S.F.	45	$50.00	$2,250
	5" Concrete Sidewalk	S.F.	350	$8.00	$2,800
	8" Concrete Sidewalk Pedestrian Ramp	S.F.	150	$10.00	$1,500
	Sawcut P.C.C. Base	L.F.	100	$5.00	$500
	Remove Concrete Road Base	S.F.	100	$5.00	$500
	Repair P.C.C. Pavement 1' max. in front of Flush Curb	L..F.	65	$10.00	$650
	Signage and Supports	S.F.	20	$25.00	$500
1	**Sub Total Construction Items**				**$9,300**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$279
3	Mobilization (8%)				$744
4	Maintenance and Protection of Traffic (5%)				$465
5	Construction Staking (2%)				$186
6	2 Year Inflation (3% per Year)				$558
7	**Total of Construction Items** (Lines 1 thru 6)				**$11,532**
8	Contingencies 7%				$807
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$12,339**
10	Incidentals 15%				$1,851
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$14,190**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11)				
	A. There are no suitable deduct alternates for this item.				

Notes and Assumptions:

1. Quantities based on typical 30' wide street with 8" reinforced concrete base
2. Quantities for two (2) new sidewalk ramp are included in this estimate
3. Drainage modifications and major utility relocations costs are not included in this estimate
4. Unit Costs based on 2003 City of Hartford Bid tabulations
5. Incidental Costs include, Minor Vertical Utility Adjustments, Site Preparation, removal of existing pavement markings, etc.
6. Contingencies include unforeseen conditions and site specific items that cannot accurately be estimated.
7. Deduct alternates are to be selected individually, thay are not to be combined and deducted from line 11.

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
Prepared By: Urban Engineers Inc., Hartford, CT.

DATE: **August-04**

Road Diet [RD] Epoxy Painted Pavement Markings with Reduced Lane Widths (per 500 L.F.)

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	4" Yellow Painted Pavement Markings	L.F.	1100	$0.15	$165
	4" White Painted Pavement Markings	S.F.	1100	$0.15	$165
	12" White Painted Pavement Markings	L.F.	60	$1.70	$102
	Painted Pavement Symbols	L..F.	140	$2.10	$294
	Remove Existing Markings	S.F.	1200	$0.85	$1,020
1	**Sub Total Construction Items**				**$1,746**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$52
3	Mobilization (8%)				$140
4	Maintenance and Protection of Traffic (5%)				$87
5	Construction Staking (2%)				$35
6	2 Year Inflation (3% per Year)				$105
7	**Total of Construction Items** (Lines 1 thru 6)				**$2,165**
8	Contingencies 7%				$152
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$2,317**
10	Incidentals 15%				$347
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$2,664**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11)				
	A. There are no suitable alternates for this work.				

Notes and Assumptions:

1. Quanties based on typical 4 lane road with one 4 way intersection per 500 L.F.
2. Unit Costs based on 2004 City of Hartford Bid tabulations
3. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
4. To determine cost for streets in excess of 500' multiply Total Const. Items (line 11) x Actual Road Length / 500'

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
Prepared By: Urban Engineers Inc., Hartford, CT.

DATE: **August-04**

Enhanced Cross-Walk [EC] with Granite Border in Concrete Base Pavement

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Straight Granite Curb 6 x 20 Set Flush in Pavement	L.F.	60	$30.00	$1,800
	Decorative Concrete Paver set in mortar set on Conc. Road Base	S.F.	300	$20.00	$6,000
	Remove/Reconstruct 8" Rein.Concrete Road Base to New Grade	S.F.	300	$10.00	$3,000
	Sawcut P.C.C. Base	L.F.	60	$5.00	$300
	Repair P.C.C. Pavement 1' max. in front of Flush Curb	L..F.	60	$10.00	$600
	Signage and Supports	S.F.	20	$25.00	$500
1	**Sub Total Construction Items**				**$12,200**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$366
3	Mobilization (8%)				$976
4	Maintenance and Protection of Traffic (5%)				$610
5	Construction Staking (2%)				$244
6	2 Year Inflation (3% per Year)				$732
7	**Total of Construction Items** (Lines 1 thru 6)				**$15,128**
8	Contingencies 7%				$1,059
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$16,187**
10	Incidentals 15%				$2,428
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$18,615**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11. See note below)				
	A. Delete Granite Curb and Conc. Pavers; Provide Painted Lines				$17,394
	B. Construction within Flexible Base Street				$4,394

Notes and Assumptions:

1. Quanties based on typical 30' wide street with 8" reinforced concrete base
2. Quantities for new sidewalk ramps are not included in this estimate
3. Drainage modifications and major utiltiy relocations costs are not included in this estimate
4. Unit Costs based on 2003 City of Hartford Bid tabulations
5. Incidental Costs include, Minor Vertical Utility Adjustments, Site Preparation,removal of existing pavement markings, etc.
6. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
7. Deduct alternates are to be selected individually, they may not be combined and deducted from line 11.

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
Prepared By: Urban Engineers Inc., Hartford, CT.

DATE: **August-04**

Raised Cross-Walk [RC] with Granite Border and Concrete Pavers in Conc. Base Pavement
Speed Table [ST] with Granite Border and Concrete Pavers in Conc. Base Pavement

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Straight Granite Curb 6 x 20 Set Flush in Pavement	L.F.	120	$30.00	$3,600
	Decorative Conc. Pavers set in Mortar on New Concrete Road Base	S.F.	750	$20.00	$15,000
	Sawcut P.C.C. Base	L.F.	60	$5.00	$300
	Remove/Reconstruct Concrete Road Base to New Grade	S.F.	750	$10.00	$7,500
	Repair P.C.C. Pavement 1' max. in front of Flush Curb	L..F.	60	$10.00	$600
	Signage and Supports	S.F.	40	$25.00	$1,000
1	**Sub Total Construction Items**				**$28,000**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$840
3	Mobilization (8%)				$2,240
4	Maintenance and Protection of Traffic (5%)				$1,400
5	Construction Staking (2%)				$560
6	2 Year Inflation (3% per Year)				$1,680
7	**Total of Construction Items** (Lines 1 thru 6)				**$34,720**
8	Contingencies 7%				$2,430
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$37,150**
10	Incidentals 15%				$5,573
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$42,723**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11)				
	A. Delete Granite Curb and Decorative Pavers and substitute Bit. Conc. Surface				$37,764
	B. Construction within Flexible Base Street				$3,479

Notes and Assumptions:

1. Quanties and items are similar for each device and are based on typical 30' wide street with 8" reinforced concrete base
2. Quantities for new sidewalk ramps are not included in this estimate
3. Drainage modifications and major utiltiy relocations costs are not included in this estimate
4. Unit Costs based on 2003 City of Hartford Bid tabulations
5. Incidental Costs include, Minor Vertical Utility Adjustments, Site Preparation,removal of existing pavement markings, etc.
6. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
7. Deduct alternates are to be selected individually, they are not to be combined and deducted from line 11.

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
Prepared By: Urban Engineers Inc., Hartford, CT.

DATE: **August-04**

Raised Intersection [RI] with Granite Border and Concrete Pavers in Conc. Base Pavement

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Straight Granite Curb 6 x 20 Set Flush in Pavement	L.F.	240	$30.00	$7,200
	Decorative Conc. Pavers set in Mortar on New Concrete Road Base	S.F.	2500	$20.00	$50,000
	New Radial Granite Curb	L.F.	60	$50.00	$3,000
	5" Concrete Sidewalk	S.F.	400	$8.00	$3,200
	Sawcut P.C.C. Base	L.F.	120	$5.00	$600
	Remove/Reconstruct Concrete Road Base to New Grade	S.F.	2500	$10.00	$25,000
	Repair P.C.C. Pavement 1' max. in front of Flush Curb	L..F.	120	$10.00	$1,200
	Signage and Supports	S.F.	100	$25.00	$2,500
1	**Sub Total Construction Items**				**$92,700**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$2,781
3	Mobilization (8%)				$7,416
4	Maintenance and Protection of Traffic (5%)				$4,635
5	Construction Staking (2%)				$1,854
6	2 Year Inflation (3% per Year)				$5,562
7	**Total of Construction Items** (Lines 1 thru 6)				**$114,948**
8	Contingencies 7%				$8,046
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$122,994**
10	Incidentals 15%				$18,449
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$141,444**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11, See note below)				
	A. Delete Granite Curb and Decorative Pavers and substitute Bit. Conc. Surface				$116,725
	B. Construction within Flexible Base Street				$10,009

Notes and Assumptions:

1. Quanties based on typical 30' wide street with 8" reinforced concrete base
2. Quantities for new sidewalk ramps are not included in this estimate
3. Drainage modifications and major utiltiy relocations costs are not included in this estimate
4. Unit Costs based on 2003 City of Hartford Bid tabulations
5. Incidental Costs include, Minor Vertical Utility Adjustments, Site Preparation,removal of existing pavement markings, etc.
6. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
7. Deduct alternates are to be selected individually, they may not be combined and deducted from line 11.

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
Prepared By: Urban Engineers Inc., Hartford, CT.

DATE: **August-04**

Street Closure [SC] Granite Curb with Concrete Sidewalk and Landscaping

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Granite Curb 6 x 20 in Concrete Base Pavement	L.F.	60	$30.00	$1,800
	5" Concrete Sidewalk	S.F.	300	$8.00	$2,400
	Sawcut Concrete Base Pavement	L.F.	60	$5.00	$300
	Repair Concrete Base Pavement at Curb	S.F.	60	$10.00	$600
	Remove Exist. Concrete Road Base	S.F.	600	$5.00	$3,000
	Traffic Signs and Supports	L.F.	40	$25.00	$1,000
	Landscaping	LS	1	$2,500.00	$2,500
1	**Sub Total Construction Items**				**$11,600**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$348
3	Mobilization (8%)				$928
4	Maintenance and Protection of Traffic (5%)				$580
5	Construction Staking (2%)				$232
6	2 Year Inflation (3% per Year)				$696
7	**Total of Construction Items** (Lines 1 thru 6)				**$14,384**
8	Contingencies 7%				$1,007
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$15,391**
10	Incidentals 15%				$2,309
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$17,700**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11)				
	A. Delete landscaping, substitute bit. curb and 2" bit. conc. surface.				$8,423

Notes and Assumptions:

1. Quanties based on a 30' wide roadway
2. Unit Costs based on 2003 City of Hartford bid tabulations
3. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
4. Drainage modifications and major utility relocations are not included in this estimate
5. Incidental costs include minor vertical adjustments, site preparation, removal of exist. Pavement markings, etc.

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
Prepared By: Urban Engineers Inc., Hartford, CT.

DATE: **August-04**

Parking Chicane [PC] Granite Curb Islands, Landscaping and White Painted Lines in Concrete Base Road

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Straight Granite Curb 6 x 20 set in Conc. Base Base Road	L.F.	120	$30.00	$3,600
	Radial Granite Curb 6 x 20 set in Concrete Base Road	L.F.	40	$50.00	$2,000
	Sawcut P.C.C. Base	L.F.	160	$5.00	$800
	Remove Existing P.C.C. Road Base	S.F.	350	$5.00	$1,750
	4" Epoxy Painted Pavement Marking	L.F.	100	$0.30	$30
	Traffic Signage and Supports	S.F.	40	$25	$1,000
	Landscaping, Shrubs, etc.	L.S.	1	$1,200	$1,200
1	**Sub Total Construction Items**				**$10,380**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$311
3	Mobilization (8%)				$830
4	Maintenance and Protection of Traffic (5%)				$519
5	Construction Staking (2%)				$208
6	2 Year Inflation (3% per Year)				$623
7	**Total of Construction Items** (Lines 1 thru 6)				**$12,871**
8	Contingencies 7%				$901
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$13,772**
10	Incidentals 15%				$2,066
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$15,838**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11)				
	A. Delete Granite Curb and Landscaping, Substitute Painted Markings				$14,193

Notes and Assumptions:

1. Quanties based on 300 L.F. Section of Typical Parking Chicane
2. Unit Costs based on 2003 City of Hartford bid tabulations
3. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
4. To determine cost for Streets on excess of 300' multiply the Total Const. Cost (line 11) x Actual length / 300'

City of Hartford, Master Traffic Calming
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DATE: **August-04**

Intersection Realignment [IR] with Granite Curb, New Signal Equipment, Enhanced Cross Walks and Landscaping in Concrete Base Pavement

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Straight Granite Curb 6 x 20 Set in Concrete Pavement	L.F.	500	$30.00	$15,000
	Radial Granite Curb 6 x 20 in Concrete Base Pavement	L.F.	150	$50.00	$7,500
	Textured Pavement for Cross Walks	S.F.	1200	$15.00	$18,000
	Traffic Signal Hardware	LS	1	$50,000.00	$50,000
	Sawcut P.C.C. Base	L.F.	750	$5.00	$3,750
	5" Concrete Sidewalk	S.F.	2000	$10.00	$20,000
	8" Sidewalk Ramps	S.F.	300	$10.00	$3,000
	Repair P.C.C. Pavement 1' max. in front of Curb	L..F.	650	$10.00	$6,500
	Signage and Supports	S.F.	80	$25.00	$2,000
	4" Painted Pavement Markings	L.F.	500	$0.50	$250
	12" Painted Pavement Markings	L.F.	150	$2.00	$300
	Landscaping	L.S.	1	$2,500.00	$2,500
1	**Sub Total Construction Items**				**$128,800**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$3,864
3	Mobilization (8%)				$10,304
4	Maintenance and Protection of Traffic (5%)				$6,440
5	Construction Staking (2%)				$2,576
6	2 Year Inflation (3% per Year)				$7,728
7	**Total of Construction Items** (Lines 1 thru 6)				**$159,712**
8	Contingencies 7%				$11,180
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$170,892**
10	Incidentals 15%				$25,634
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$196,526**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11)				
	A. Lesser complexity typical 4 way intersection without landscaping and enhanced cross walks.				$64,847

Notes and Assumptions:

1. The Quanties for this estimate are based on proposed realignment of Maple Ave at Retreat Ave. This realignment should be considered as a "high-end" realignment due to it's complexity.
2. Quantities for rmc, trenching, pedestrian signals, 4 signals and 2 span poles with foundations included in traffic hardware
3. Drainage modifications and major utiltiy relocations costs are not included in this estimate
4. Unit Costs based on 2003 City of Hartford bid tabulations
5. Incidental Costs include, minor vertical utility adjustments, site preparation,removal of existing pavement markings, etc.
6. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
7. No rights of way aquistion costs are included.
8. No costs for replacing the existing bit. pavement are included in this estimate.

City of Hartford, Master Traffic Calming
Estimate of Probable Construction Cost
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DATE: **August-04**

Median Island [MI] - Granite Curb with Landscaping in Concrete Base Roadway

Line	Item Description	Unit	Quantity	Unit Cost	Amount
	Straight 6x 20 Granite Curbing set in Concrete	L.F.	180	$30.00	$5,400
	Radial 6 x 20 Granite Curbing set in Concrete	L.F.	10	$50.00	$500
	Sawcut P.C.C. Base	L.F.	200	$5.00	$1,000
	Remove Existing Bit. And P.C.C. Road Pavement (Conc. Base)	S.F.	600	$5.00	$3,000
	Repair P.C.C. Pavement 1' max. in front of Curb	L..F.	200	$10.00	$2,000
	Traffic Signage and supports	S.F.	20	$25.00	$500
	Landscaping, shrubs, multch, topsoil, trees (2) etc. (Center Island)	L.S.	1	$3,500.00	$3,500
1	**Sub Total Construction Items**				**$15,900**
	Lump Sum Items:				
2	Clearing and Grubbing (3%)				$477
3	Mobilization (8%)				$1,272
4	Maintenance and Protection of Traffic (5%)				$795
5	Construction Staking (2%)				$318
6	2 Year Inflation (3% per Year)				$954
7	**Total of Construction Items** (Lines 1 thru 6)				**$19,716**
8	Contingencies 7%				$1,380
9	**Total Construction Items and Contingencies** (Lines 7+8)				**$21,096**
10	Incidentals 15%				$3,164
11	**Total Construction Items with Incidentals and Contingencies** (Lines 9+10)				**$24,261**
12	**Deduct Alternates** (To be deducted from Total Construction Items, Line 11)				
	A. Delete Granite Curb and Landscaping and substitute Bit. Conc. Curb & 2" Bit. Surface				$19,576

Notes and Assumptions:

1. Quanties based on one 6' wide by 85' long median island.
2. Drainage modifications and major utiltiy relocations costs are not included in this estimate
3. Unit Costs based on 2003 City of Hartford Bid tabulations
4. Incidental Costs include, Minor Vertical Utility Adjustments, Site Preparation,removal of existing pavement markings, etc.
5. Contingencies include unforseen conditions and site specific items that cannot accuratly be estimated.
6. Deduct alternates are to be selected individually, they may not be combined and deducted from line 11.

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Appendix

E

Traffic Calming Committee Volunteers

(Sorted by neighborhood)

Name	Address	Neighborhood
Geraldine Crocker	15 Woodland Street	Asylum Hill
Irene Brennan	15 Woodland Street	Asylum Hill
Jennifer Cassidy	36 Ashley Street	Asylum Hill
Jonathan Quartello	15 Woodland Street	Asylum Hill
Lee Whittemore	15 Woodland Street	Asylum Hill
Marylou Mayo	31 Woodland Street	Asylum Hill
Monica Boerescu	15 Woodland Street	Asylum Hill
Paul O'Mara	164 Ashley Street	Asylum Hill
Roger Coulombe	16 Atwood Street	Asylum Hill
B. Williams	101 Cromwell Street	Barry Square/South End
Carl A. Williams	101 Cromwell Street	Barry Square/South End
Clare Murphy	399 W. Preston Street	Barry Square/South End
Hyacinth Yennie	204 Standish Street	Barry Square/South End
Jeanne Hammer	27 Griswold Street	Barry Square/South End
Lee Beulanger	62 Otis Street	Barry Square/South End
Maryann Laraia	75 Douglas Street	Barry Square/South End
Nivia Avila	288 South Street	Barry Square/South End
Rosamond Hammer	69 Bolton Street	Barry Square/South End
Sue Long	272 Grandview Terrace	Barry Square/South End
Tere Witherell	19 Torwood Street	Barry Square/South End
U. Michelina	71 Roxbury Street	Barry Square/South End
Wilson Plaza	290 South Street	Barry Square/South End
Barry Sellers	152 Freeman Street	Behind the Rocks/South West
Douglas Johnson	152 Freeman Street	Behind the Rocks/South West
Rosa Morales	58 Grafton Street	Behind the Rocks/South West
Roland Klee	250 Constitution Plaza	Sheldon Charter Oak/South Green

Sean P. Arena	79 Morris Street	Sheldon Charter Oak/South Green
Gerald Thorpe	86 Edgewood Street	Upper Albany
Karen Brown	123 Kent Street	Upper Albany
Marilyn Risi	1382 Albany Avenue	Upper Albany
Naomi McKoy	134 Oakland Terrace	Upper Albany
Narvin Wilson	100 Oakland Terrace	Upper Albany
Nenra Emi	403 Woodland Street	Upper Albany
Officer Craig Francis	50 Jennings Road	Upper Albany
Olivia Almagro-Johnson	139 Kent Street	Upper Albany
Pat Willilams	1229 Albany Avenue	Upper Albany
Shirley Minnifield-Campbell	68 Westbourne Parkway	Upper Albany
Christel Berry	169 Whitney Street	West End
Dawn Fuller	45-1 Evergreen Avenue	West End
Donna Nelson	194 South Whitney Street	West End
Edward M. Hagenbach	170 Sisson Avenue	West End
Heather Coyne	80 Terry Road	West End
Henry Murray	200 Whitney Street	West End
Jory Johnson	71 Tremont Street	West End
Kathy Hopkins	137 Girard Avenue	West End
Katrina Gilbert	7 Gilette Street	West End
Marjorie Callan	82 Oxford Street	West End
Mark Socha	22 North Beacon Street	West End
Michael Viola	1414 Asylum Avenue	West End
Phil Toussaint	56 Kenyon Street	West End
Robert Black	1800 Albany Avenue	West End
Stephan Christiansen	56 Scarborough Street	West End
Stephanie Woodlock	64 Tremont Street	West End

Some Project Statistics

55 traffic calming charrettes and public meetings

10,000 flyers produced, publicizing traffic calming charrettes

1,300 charrette invitations mailed

1,000 Hartford residents and other stakeholders participated in charrettes

60 responses and suggestions received via

www.hartfordtrafficcalming.com

6 road diets implemented

2 roundabouts installed

2 parking chicanes deployed

1,660 “hits” on www.hartfordtrafficcalming.com