CHEVY CHASE VILLAGE
BOARD OF MANAGERS
FEBRUARY 9, 2015 MEETING

STAFF REPORT

TO: BOARD OF MANAGERS

FROM: SHANA R. DAVIS-COOK, VILLAGE MANAGER

DATE: 1/7/2015

SUBJECT: FIRST SUBMISSION OF THE CONCEPT DESIGN REPORT FOR THE WEST KIRKE STREET/LAUREL PARKWAY INTERSECTION IMPROVEMENTS PROJECT.

Earlier this week, Board Members were delivered the attached report from the traffic engineering firm hired by the Village to perform an assessment and present a concept design report for improving traffic in and around the Village Hall. These materials were distributed early so Board Members would have plenty of time to review the information and be prepared to provide a consensus on the Board's preferred option during Monday evening's meeting. Representatives from A. Morton Thomas, Inc. (AMT) will be present at the Board's meeting to present their report and answer Board Members' questions.

With a consensus from the Board, staff will then begin to meet with residents whose homes are within sight and sound of the Village Hall to review the report, including the Board's preferred options. The results of those resident meetings will be presented back to the Board at your March regular meeting at which a final decision will be made on the options that will be constructed during FY2016.

The traffic engineers, have divided the roadways surrounding the Village Hall into three Concept Areas. This staff report briefly describes each area, staff's recommendation in (referring to Police Chief John Fitzgerald, Director of Municipal Operations Michael Younes and Village Manager Shana Davis-Cook) each area and our reasons for selecting our recommended option in each area (see **Figure 2** of the attached report for a pros/cons listing for each concept proposal, and see **Appendix C** of the attached report for visual representations of the recommended concepts).

Concept Area A – West Kirke Street and Connecticut Avenue. (4 options)
Village staff recommends Option #2—this option creates a pedestrian refuge, while not adversely impacting snow removal operations by creating a narrow channel (as would be experienced under Option #1). Staff proposes, however, that the hatched triangle (labeled "striped gore area" and shown south of the West Kirke Street roadway median) should be constructed as a raised concrete/brick area to provide an additional pedestrian refuge by creating added traffic separation, while maintaining access for snow plow trucks. The center West Kirke Street median also presents an opportunity for a potential future community sign.

Concept Area B – West Kirke St. and Laurel Parkway Improvement. (4 options)
Village staff recommends Option #4—in this option, two new brick crosswalks are installed; one at-grade crosswalk at the West Kirke/Laurel intersection and one raised crosswalk at the center of the stucco entrance wall located between Laurel Parkway and the Village Hall

parking lot/driveway. These options maintain the most natural entry points to the Village Hall property by maintaining the opening in the wall and the access to the south end of the property to continue toward Connecticut Avenue or the Post Office side of the building (along Connecticut Avenue). This configuration would eliminate the blind turn for vehicles traveling southbound on Laurel Parkway as they approach West Kirke Street, which will improve driver sightlines on both roadways and will make a safer pedestrian crossing at this intersection.

This option does require, however, cutting into the triangular greenspace located between West Kirke Street and Laurel Parkway by approximately eight feet (8'). In doing so, the added roadway width would provide safe, unrestricted two-way traffic along this section of Laurel Parkway (vehicles must currently yield to opposing traffic), while maintaining parking along both sides of the street. This option would require the removal of two mature trees (one of which will likely need to be removed due to age and decline within the next couple of years) and the relocation of an existing utility pole.

Concept Area C – Laurel Pkwy. and West Lenox St. Improvement. (3 options)
Village staff recommends Option #2—while this option results in a net increase in parking spaces and would improve parking behaviors, of the options presented, it does require the most property and roadway impacts by creating angled parking along the West Lenox Street side of the building. Among these would be the removal of several mature trees (with ample room preserved for reforestation along that side of the building) and the relocation of the existing sidewalk. The stand of bamboo that provides screening to the abutting properties along West Lenox Street from the Public Works yard will be unaffected.

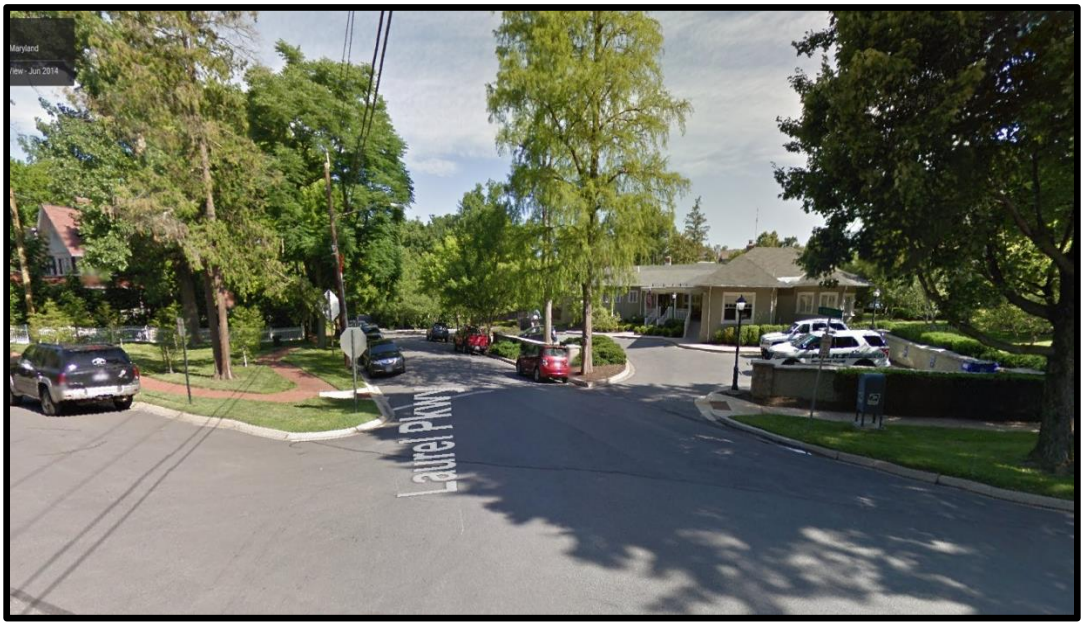
Board Action Requested
The Board is asked to provide its preferred option for each of the following three concept areas:

- Concept Area A – West Kirke Street and Connecticut Avenue.
- Concept Area B – West Kirke St. and Laurel Parkway Improvement.
- Concept Area C – Laurel Pkwy. and West Lenox St. Improvement.

Attachment
Concept Design Report

WEST KIRKE STREET AND LAUREL PARKWAY INTERSECTION IMPROVEMENTS PROJECT

CONCEPT DESIGN REPORT



Prepared By:

A. Morton Thomas and Associates, Inc.

January 28, 2015

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1 Introduction

1-1 Objectives

This project is for the design of safety improvements along several intersections and roadways within the Chevy Chase Village community as well as improved access to the Village Hall. This stage of the analysis develops concept design improvements, evaluates them to determine if they meet the objectives of the community, and computes cost estimates for each option. Though not all roadway deficiencies can be eliminated, due to cost constraints, impacts and jurisdictional limits, with the information provided in this report the Chevy Chase Village can determine which improvements best fits their needs and budget and the project can move forward into the design stage.

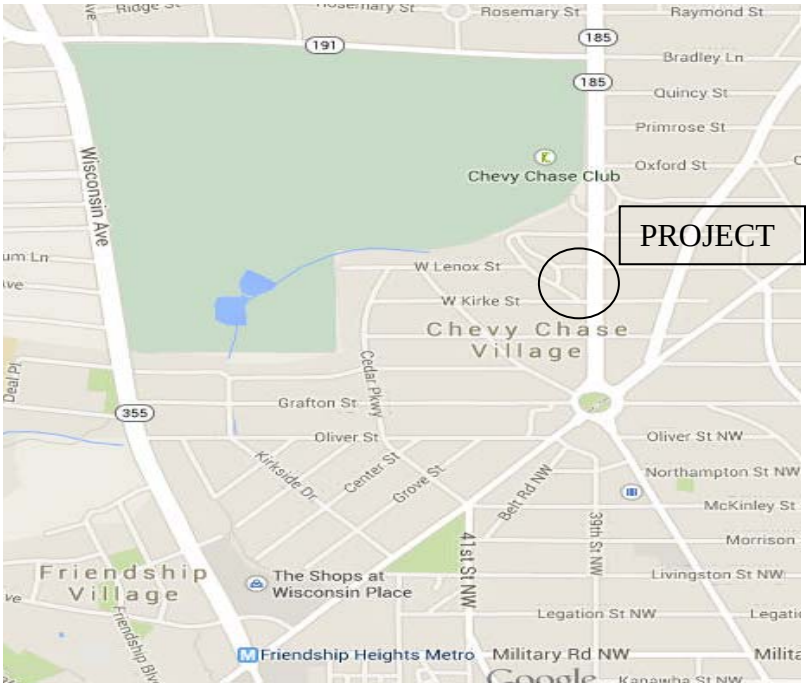
Chevy Chase Village developed a list of safety issues and concerns which they would like to resolve and this list includes:

- *Slow down vehicles traveling at a high rate of speed.* Vehicles entering the village from Connecticut Avenue turn onto Laurel Parkway speeding in front of the Village Hall.
- *Accommodate additional parking for employees and visitors to the Village Hall.* Parking around the Hall is very limited and requires residents and guests to park further down Kirke Street and Laurel parkway.
- *Provide safe pedestrian access to the Village Hall and surrounding roads.* Pedestrians crossing Laurel Parkway to enter the Village Hall do not have a striped crosswalk in front of the building. Pedestrians crossing between parked cars do not give a motorist ample reaction time to come to stop and creates an unsafe condition.
- *Improve access to the roadside mailboxes.* There are no existing parking spaces or drive aisles available for motorist dropping mail or packages into the two mailboxes on Lenox Street and Kirke Street. Motorist will perform illegal driving maneuvers to access the mailboxes from their vehicles.
- *Provide added parking and access to the Post Office.* The post office does not have adequate parking spaces. Currently, only on-street parallel parking on Lenox Street is available.
- *Improve sight distance at intersections.* The intersections of Kirke Street and Connecticut Avenue and Kirke Street and Laurel Parkway have limited site distance due to the angle of the intersection and overgrowth of trees and shrubs around the intersections.
- *Improve truck access to Maintenance Garage.* Currently trucks entering the Village maintenance garage must negotiate parked cars, a curbed grass island in the middle of Laurel Parkway, and the swinging gate for the entrance to the garage.
- *Improve lane configuration at West Kirke and Connecticut Avenue.* The existing width of Kirke Street is 35', and expands to 135' at Connecticut Avenue. Striping consists of a stop bar and a crosswalk but no lane delineation. Changes to Connecticut Avenue involve Maryland State Highway Administration, and are not within the jurisdiction of Chevy Chase Village.

1-2 Project Location

Chevy Chase Village is an incorporated municipality located along the southern border of Montgomery County and the community spans both sides of Connecticut Avenue. The area of study within the Village is shown in Figure 1.

Figure 1 - Project Limits



2 Approach

2-1 Base Mapping

The concept study utilized google maps, previously prepared survey data, GIS data, and site visits to develop base plans and evaluate the area. As the project proceeds to the Design phase, it may be necessary to perform topographic survey in areas where more detailed information is needed. This will be determined after the Village chooses which concepts they want to have constructed.

2-2 Pedestrian Counts

Pedestrian Counts were performed on Wednesday, November 19, 2014, between 9AM and 4PM. The pedestrian count data and graphic of their locations is included in Appendix A. Due to the weather, we believe that there were fewer pedestrians than an average day. However the results show where the majority of pedestrians are crossing Laurel Parkway.

2-3 Existing Features

The proposed concept designs had to consider the impacts to the surrounding area. The designers documented the existing utilities, environmentally sensitive areas and trees to determine whether or not impacts were reasonable. The obvious area to be avoided was the Rain Garden across from the Maintenance yard and adjacent to Laurel Pkwy. From site visits, we determined there are several utility poles along the south edge of Laurel Pky. and a storm drain inlet at the corner of Connecticut Ave. and West Kirke St. In addition, there are several large trees behind the curb along several of the roads within the study limits. These impacts were considered in developing our concept cost estimate.

2-4 Existing Parking

To best describe the location of existing parking, a map in Appendix B shows all the parking spaces provided along the existing roadway for West Kirke St., Laurel Pky. and West Lenox St. All three roadways have on-street (parallel) parking spaces. West Kirke Street currently provides 40 spaces within the project area. Laurel Parkway provides 20 spaces, including two restricted spaces. Parking is not allowed along the interior of the Laurel Parkway circle with the project limits. Lenox Street provides a total of 14 spaces, with one restricted parking space for post office mail truck pick-up/deliveries, one handicap space, and five short term parking spaces.

3 Concept Development

The project study area was broken down into three study areas to address the objectives properly and to analyze each of the connecting roadways for speed, safety and access. Within the study areas, four optimized concepts were designed to best achieve the goals of the project, while minimizing impacts to the natural environment and considering construction costs. For the most part, the concepts are interchangeable and can be combined with any concept from the three study areas to find the most optimum preferred alternative for the project. Appendix C contains the graphic representation of each Study Area and their concept designs. Cost estimates for each design are also provided and contain a high contingency factor at this stage of development to account for cost items that cannot be quantified at this level of design. Once the preferred alternative is determined, a more accurate cost estimate will be generated.

3-1 Area A – West Kirke Street and Connecticut Avenue

Area A consists of West Kirke Street from the Connecticut Avenue intersection to the Laurel Parkway intersection. Vehicles entering the village from Connecticut Avenue would travel at a high rate of speed, unsafe for pedestrians and other vehicles. The turning lanes for West Kirke Street are undefined, with a double yellow stripe separating two-way traffic. With Connecticut Avenue falling under the jurisdiction of MD SHA, safe turning movements to and from Connecticut Avenue are not included in this study. Sight distance for vehicles entering Connecticut Avenue is limited due to the trees and shrubs along Connecticut Avenue north of the intersection. Trimming back the vegetation

in this area would help increase the sight distance for all of the options. This topic is to be discussed with MDSHA. The improvement options on West Kirke Street consist of a median and channelizing island, a large median, a reduced roadway width and a reduced roadway width with a median. See Figure 2 for Pros / Cons for each option. Parking will need to be restricted for about 50 ft from the intersection.

3-1.1 Option 1 - Median and Channelizing Island: Option consists of 6' island with mountable curb separating ingress and egress from Connecticut Avenue, a 15' left-turn/thru lane and a mountable curb concrete island separating right-turn movements. Given the large intersection opening, this option allows safe pedestrian refuge across West Kirke Street. The option utilizes the existing roadway footprint and would not require changes to the existing drainage. Approximate cost – $60,000.

3-1.2 Option 2 – Large Median: Similar to the previous option, a 12' island separates ingress and egress from Connecticut Avenue. The added width narrows the ingress to slow down traffic, provides a larger refuge for pedestrians, and would allow for landscaping to be added to the island. The right turn lane from West Kirke Street would be 15' wide, and designated by traffic striping. By not utilizing a concrete island, it provides an easier maintenance (i.e. snow removal) for the village. Traffic delineators could be installed within the striped gore area as added protection for pedestrians, although pose a maintenance problem for snow removal and constant replacement. Approximate cost – $34,000.

3-1.3 Option 3 - Reduced Roadway Width: Option would narrow the intersection width by removing the southern portion of pavement and install a new curb line with 20' radius. The option would provide the safest pedestrian crossing, reduce speed, and channelize turning movements with a conventional intersection configuration. This option would impact the existing drainage system along West Kirke Street. New drainage structures, pipes and grading would be required for this option. Approximate cost – $60,000.

3-1.4 Option 4 - Reduced Roadway Width with Median: Similar to option #3, the intersection would be reduced to provide traffic calming, however a 6' concrete island would separate ingress and egress for Connecticut Avenue. This would improve safety between the opposing movements, and allow for a Village gateway sign to be installed. This option would also impact the existing drainage system along West Kirke Street. New drainage structures, pipes and grading would be required for this option. Approximate cost – $68,000.

3-2 Area B – West Kirke Street and Laurel Parkway

Area B consists of Laurel Parkway from West Kirke Street to the beginning of the Laurel Parkway Circle. Vehicles entering this area would travel at a high rate of speed from Connecticut Avenue, unsafe for pedestrians and other vehicles. Parking in front of the Village Hall has been difficult as street parking on both sides of Laurel Parkway narrow the two-way travel to substandard passing widths (16'+/- provided), and pedestrian traffic crossing the roadway has limited sight distance. The improvement options consist of raised crosswalks, closing the wall opening, existing parking conditions with minor restriping, addition of a channelizing island, and roadway widening with parallel parking. The use of angled parkway was analyzed, but was not suitable for this area due to roadway width constraints, and additional loss of parking spaces. See Figure 2 for Pros / Cons for each option.

3-2.1 Option 1 - Existing Parking Conditions: Option utilizes the existing parking along Laurel Parkway, but reduces the intersection at West Kirke Street. The reduction in intersection width would provide a traffic calming measure and increase pedestrian safety. Channelize striping would further help with traffic calming. The two-way traffic would still need to yield to on-coming traffic due to the substandard roadway width for two-way travel. The existing wall opening in front of the Village hall would be closed to redirect pedestrians to the safer crosswalk location north of the wall. This option would utilize a raised crosswalk to reduce speeds through the area. Due to the raised crosswalk there would be a loss of three parking spaces along Laurel Parkway A standard brick crosswalk would be provided across the Laurel Parkway and West Kirke Street intersection. Approximate cost – $71,000.

3-2.2 Option 2 - Existing Road with Channelizing Island: This option utilizes the existing roadway footprint and will continue to provide substandard two-way traffic with parking on both sides of the street. A channelizing island near the West Kirke Street intersection would be installed to help reduce speed from West Kirke Street. This option would also provide a raised cross walk, but located in-line with the wall opening in front of the Village Hall. Modifications to the existing sidewalk in the park area would align with the raised crosswalk. A midblock crosswalk location would provide a centralized entrance to the Village Hall. To accommodate the raised crosswalk, four parking spaces would be lost. Approximate cost – $40,000.

3-2.3 Option 3 - One-Way Existing Road Width: Option would utilize the existing roadway width, allow for parking on both sides of Laurel Parkway, but restrict the flow of traffic to one-way northbound. This would allow for safer passage and adequate lane width for one-way traffic. The intersection with West Kirke Street would be moved to the west to provide additional space between West Kirke Street and Connecticut Avenue. A midblock

crosswalk location would provide a centralized entrance to the Village Hall. To accommodate the raised crosswalk, four parking spaces would be lost. A standard brick crosswalk would be provided across the Laurel Parkway and West Kirke Street intersection. Approximate cost – $30,000.

3-2.4 Option 4 - Laurel Widening with Parallel Parking: Laurel Parkway would be widened from 30' to 38' to accommodate safe two-way traffic and provide parking on both sides of the road to minimize the loss of parking spaces. The existing intersection at West Kirke Street would be moved to the west. A midblock crosswalk location would provide a centralized entrance to the Village Hall. To accommodate the raised crosswalk, four parking spaces would be lost. A standard brick crosswalk would be provided across the Laurel Parkway and West Kirke Street intersection. Approximate cost – $90,000.

3-3 Area C – Laurel Parkway and Lenox Street

Area C consists of Laurel Parkway "circle" adjacent to the Village Hall, and Lenox Street to Connecticut Avenue. The Laurel Parkway is currently two-way traffic with some street parking. Safety concerns around the entrance to maintenance yard include the narrow width of the roadway, and minimal sight distance for pedestrians and vehicles around the Village Hall. Parking along Lenox Street is street parking on both sides of the road as Lenox Street is one-way eastbound. Options consist of changing Laurel Parkway to a one-way road traveling north, providing additional parking by removing the existing island, and providing angled parking along Lenox Street for ease of parking. The gate to the maintenance yard would be upgraded to a rolling fence gate to reduce the impact the swinging gate has on the existing road. Lenox Street and Connecticut Avenue intersection would be modified to have a smaller radius on the north side to deter motorist from illegally turning on to Lenox Street. See Figure 2 for Pros / Cons for each option.

3-3.1 Option 1 - Existing Condition with Angled Parking: Option would modify the existing two-way traffic to one-way northbound to provide safe travel through the area. The option would provide safety for street parking on Laurel Parkway near the Lenox street intersection would be increased with one-way traffic. Lenox Street would be restriped to provide angled parking in front of the Post Office. Restricted loading zone striping would be provided on the existing mail truck delivery concrete pad. Street parking would be restricted on the north side of Lenox Street. This option would result in the loss of six parking spaces. Approximate cost – $9,000.

3-3.2 Option 2 - Widening for Angled Parking: Laurel Parkway would be modified to one-way northbound traffic. The existing curbed island would be removed and new curbing to accommodate two parking spaces adjacent to the interior Laurel Parkway Circle. Lenox Street would be widened 9' to the south to accommodate angled parking for the Post Office. The widening would include the removal of 4 small trees and one larger tree. It

would not impact the existing sidewalk; however the curb would be adjacent to the sidewalk with no grass strip or buffer. This option would gain two (2) parking spaces, *with a possible additional two (2) parking spaces if the space for deliveries is also angled*. Approximate cost – $94,000.

3-3.3 Option 3 - Two-Parking Space Configuration: Laurel Parkway would be modified to one-way northbound traffic. The existing curbed island would be removed and new curbing to accommodate two parking spaces adjacent to the interior Laurel Parkway Circle. The parking along Lenox Street would remain as the current configuration. This option would gain two additional parking spaces. Approximate cost – $20,000.

Figure 2 - Pros / Cons List

Chevy Chase Village
Intersection Improvements

Area A West Kirke Street and Connecticut Avenue Intersection		
Options	**Pro**	**Con**
Option #1- Median and Channelizing Island	Utilizes existing footprint	Intersection restriction
	Refuge Island protects pedestrians from vehicular traffic and reduces crossing distances	No calming measures for Southbound right-turn movement
		May cause snow removal maintenance issues
	Improves vehicular safety by separating opposing traffic and turning movements	Poor line-of-sight looking over shoulder during SB right-turn onto Connecticut
Option #2- Large Median	Utilizes existing footprint	Less refuge and longer crossing distance for pedestrians than Option #1
	Provides green space in median for "entrance gateway" into Village	Poor line-of-sight looking over shoulder during SB right-turn onto Connecticut
	Striping provides larger turning radius for bigger vehicles	No calming measures for Southbound right-turn movement
	Improves vehicular safety by separating ingress and egress traffic	
Option #3- Reduced Roadway Width	Reduced roadway width/turning radii provides traffic calming	Intersection restriction for vehicles
	Pedestrian crossing distance reduced	No separation between ingress and egress traffic
		Sharp right turn onto Connecticut Ave. SB
Option #4- Reduced width with Median	Highest pedestrian safety of options	Intersection restriction for vehicles
	Refuge island between ingress and egress vehicles	Sharp right turn onto Connecticut Ave. SB
	Reduced roadway width/turning radii provides traffic calming	

Area B - Kirke Street and Laurel Parkway Area		
Options	**Pro**	**Con**
Option #1- Existing Parking Conditions	Shorter crosswalk and reduced radius improve pedestrian safety	Existing restrictive roadway width remains
	Reduced intersection width provides traffic calming measure	Existing street parking creates less than desirable travel lane width
	Striped gore area channelizes vehicles improving safety	
	Small impacts to existing footprint	
	Raised crosswalk increases ped. safety and provides traffic calming	
	Closing wall opening provides extra parking space	
Option #2- Existing Road Width with Channelizing Island	Channelizing island for traffic calming	Existing restrictive roadway width remains
	Separation of ingress/ egress traffic improves vehicular safety	
	Minimal impact to existing footprint	
	Raised crosswalk increases ped. safety and provides traffic calming	
	2nd Least expensive Option	
Option #3- One-Way Existing Road Width	Reduced intersection width provides traffic calming measure	One-way vehicular flow only
	Least Expensive Option	No crosswalk at Kirke Street
	Raised crosswalk increases ped. safety and provides traffic calming	
	Minimal impact to existing footprint	
Option #4- Laurel Widening with Parallel Parking	Two-way traffic maintained with appropriate lane widths	Impact to trees, utility pole, and grass area
	Maintains parallel parking on both sides of street	Most expensive option
	Shorter crosswalk and reduced radius improves pedestrian safety	
	Raised crosswalk increases ped. safety and provides traffic calming	

Area C - Laurel Parkway and Lenox Street Area		
Options	**Pro**	**Con**
Option #1- Existing Condition with Angled Parking	Removal of Island offer better flow for Municipal Vehicles	Loss of 6 Parking Spaces
	One-way restriction improves safety	Loss of two-way traffic flow
	Angled parking spaces improve access and ease of parking	
Option # 2- Widening for Angled Parking	One-way restriction improves safety	Loss of two-way traffic flow
	Angled parking spaces improve access and ease of parking	
	Addition of 4 parking Spaces	
	Existing island removal increases travel widths	
Option #3 - Two Parking Space Configuration	Addition of 2 Parking Spaces	Loss of two-way traffic flow
	Existing island removal increases travel widths	

3-4 Mail Box Relocation

One of the main objectives for the project is to improve access to the two mail boxes located in front of the Village Hall and the Post Office respectively. Coordination with the Post office would be required for modifications to the mailbox locations. The mailbox in front of the Village Hall is not accessible by car and no parking provided to conveniently drop off mail. The mailboxes are in close proximity to the heavily traveled Connecticut Avenue, and do not promote safe pedestrian access for the residents. Relocation of the mailbox to a suitable location would be most advisable. Locations include: West Kirke Street-west of the Laurel Parkway intersection; removal of the mailbox on West Kirke Street.

The second Mailbox located in front of the Post office is not accessible from the driver side and typically conflicts with the mail truck and Lenox Street thru traffic. Suitable locations to be moved to would include: north side Lenox Street across from the existing location. This would allow motorists to access the mailbox from their vehicles. A second location would be in front of the Post office forcing residence to park legally and walk to the mailbox. The locations of the mailboxes are at the discretion of US Postal Service.

4 Next Steps

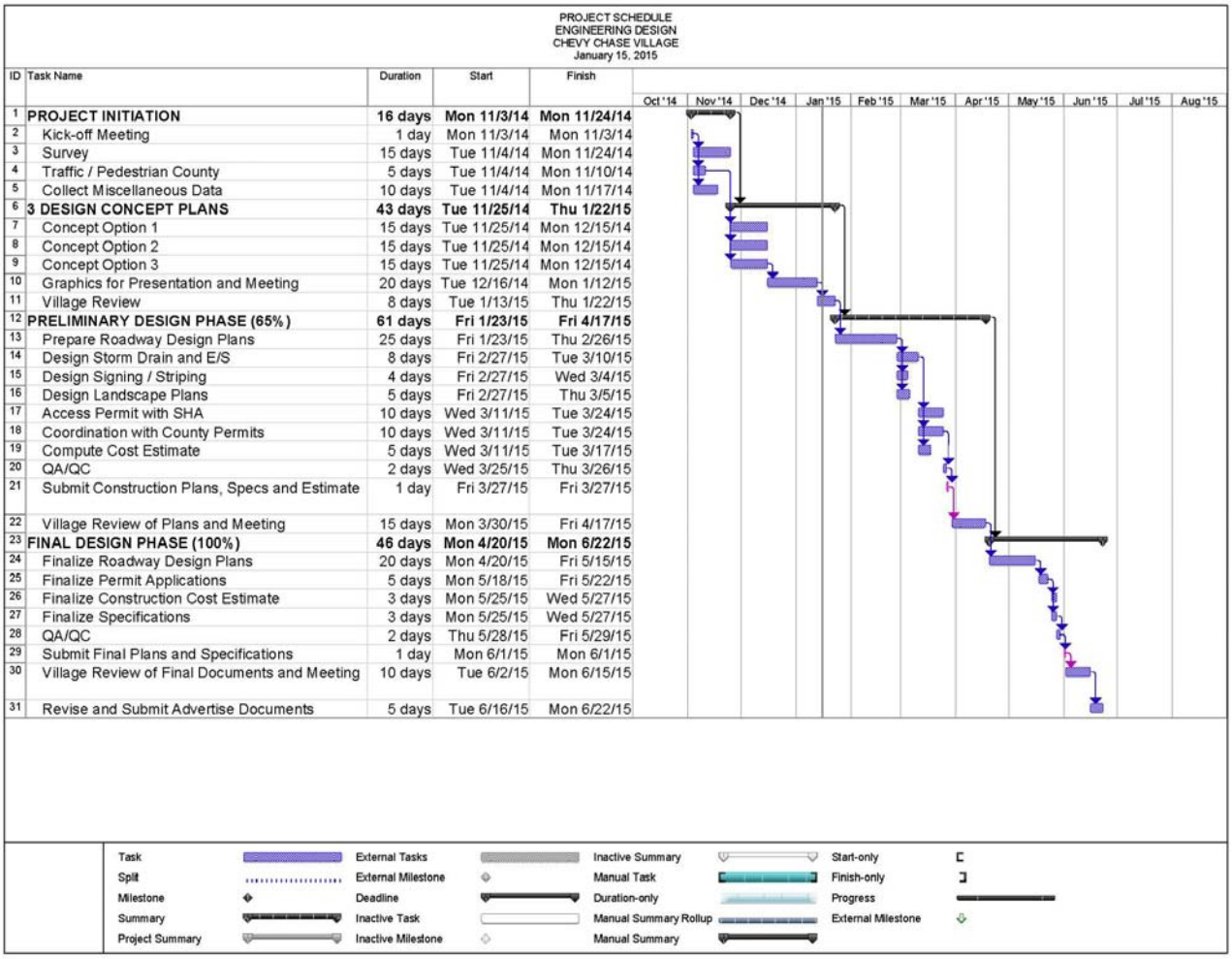
4-1 Determine Preferred Option

This report and analysis of each concept design option will be the basis for the Village to determine what improvements they will have constructed. Once the decision is made, AMT will move forward to develop full design plans to advertise for construction and obtain the required permits. The plans for permits will be reviewed by the Village as well as Montgomery County for Erosion and Sediment Control and Historic Preservation. Coordination with SHA will be required to obtain an Access Permit for any modifications within the State Right of Way at Connecticut Avenue.

4-2 Schedule

The completion of the project with documents ready for Advertisement will be June 22, 2015. See schedule for intermediate submittal dates.

Figure 3 – Current Project Schedule



ID	Task Name	Duration	Start	Finish
1	**PROJECT INITIATION**	**16 days**	**Mon 11/3/14**	**Mon 11/24/14**
2	Kick-off Meeting	1 day	Mon 11/3/14	Mon 11/3/14
3	Survey	15 days	Tue 11/4/14	Mon 11/24/14
4	Traffic / Pedestrian County	5 days	Tue 11/4/14	Mon 11/10/14
5	Collect Miscellaneous Data	10 days	Tue 11/4/14	Mon 11/17/14
6	**3 DESIGN CONCEPT PLANS**	**43 days**	**Tue 11/25/14**	**Thu 1/22/15**
7	Concept Option 1	15 days	Tue 11/25/14	Mon 12/15/14
8	Concept Option 2	15 days	Tue 11/25/14	Mon 12/15/14
9	Concept Option 3	15 days	Tue 11/25/14	Mon 12/15/14
10	Graphics for Presentation and Meeting	20 days	Tue 12/16/14	Mon 1/12/15
11	Village Review	8 days	Tue 1/13/15	Thu 1/22/15
12	**PRELIMINARY DESIGN PHASE (65%)**	**61 days**	**Fri 1/23/15**	**Fri 4/17/15**
13	Prepare Roadway Design Plans	25 days	Fri 1/23/15	Thu 2/26/15
14	Design Storm Drain and E/S	8 days	Fri 2/27/15	Tue 3/10/15
15	Design Signing / Striping	4 days	Fri 2/27/15	Wed 3/4/15
16	Design Landscape Plans	5 days	Fri 2/27/15	Thu 3/5/15
17	Access Permit with SHA	10 days	Wed 3/11/15	Tue 3/24/15
18	Coordination with County Permits	10 days	Wed 3/11/15	Tue 3/24/15
19	Compute Cost Estimate	5 days	Wed 3/11/15	Tue 3/17/15
20	QA/QC	2 days	Wed 3/25/15	Thu 3/26/15
21	Submit Construction Plans, Specs and Estimate	1 day	Fri 3/27/15	Fri 3/27/15
22	Village Review of Plans and Meeting	15 days	Mon 3/30/15	Fri 4/17/15
23	**FINAL DESIGN PHASE (100%)**	**46 days**	**Mon 4/20/15**	**Mon 6/22/15**
24	Finalize Roadway Design Plans	20 days	Mon 4/20/15	Fri 5/15/15
25	Finalize Permit Applications	5 days	Mon 5/18/15	Fri 5/22/15
26	Finalize Construction Cost Estimate	3 days	Mon 5/25/15	Wed 5/27/15
27	Finalize Specifications	3 days	Mon 5/25/15	Wed 5/27/15
28	QA/QC	2 days	Thu 5/28/15	Fri 5/29/15
29	Submit Final Plans and Specifications	1 day	Mon 6/1/15	Mon 6/1/15
30	Village Review of Final Documents and Meeting	10 days	Tue 6/2/15	Mon 6/15/15
31	Revise and Submit Advertise Documents	5 days	Tue 6/16/15	Mon 6/22/15

APPENDIX A

A. Morton Thomas & Associates, Inc.

2 East Read Street, 4th Floor
Baltimore, MD 21202
(410) 752-6552

Default Comments
Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Comments Tab

File Name : Corey Ped Count 11-19-14
Site Code : 14768001
Start Date : 11/19/2014
Page No : 1

Groups Printed- Unshifted

	From North					From East					From South					From West					
Start Time	Mvnt # 2	Mvnt # 3	Mvnt # 4	Mvnt # 1	App. Total	Mvnt # 6	Mvnt # 7	Mvnt # 8	Mvnt # 5	App. Total	Mvnt # 10	Mvnt # 11	Mvnt # 12	Mvnt # 9	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
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11:30 AM	0	0	0	0	0	4	0	0	0	4	5	6	8	0	19	0	0	0	0	0	23
11:45 AM	0	0	0	0	0	0	1	0	2	3	0	0	1	1	2	0	0	0	0	0	5
Total	0	1	0	0	1	4	1	0	2	7	5	12	10	1	28	0	0	0	0	0	36
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
12:15 PM	1	0	0	1	2	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	5
12:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	2	0	2	1	5	0	3	1	1	5	0	0	0	0	0	10
Total	1	0	0	1	2	3	0	2	1	6	0	5	4	1	10	0	0	0	0	0	18
01:00 PM	1	1	1	1	4	1	0	1	2	4	1	2	0	0	3	0	0	0	0	0	11
01:15 PM	0	1	0	0	1	0	1	0	1	2	1	1	2	0	4	0	0	0	0	0	7
01:30 PM	0	0	0	0	0	1	0	0	0	1	0	3	2	0	5	0	0	0	0	0	6
01:45 PM	0	0	0	1	1	0	0	0	1	1	0	1	1	1	3	0	0	0	0	0	5
Total	1	2	1	2	6	2	1	1	4	8	2	7	5	1	15	0	0	0	0	0	29
02:00 PM	0	0	0	0	0	1	0	0	0	1	1	3	2	0	6	0	0	0	0	0	7
02:15 PM	2	0	1	0	3	1	3	2	3	9	0	0	1	1	2	0	0	0	0	0	14
02:30 PM	0	1	1	0	2	0	1	1	0	2	0	0	1	1	2	0	0	0	0	0	6
02:45 PM	0	0	0	0	0	1	0	0	0	1	0	3	2	0	5	0	0	0	0	0	6
Total	2	1	2	0	5	3	4	3	3	13	1	6	6	2	15	0	0	0	0	0	33
03:00 PM	0	2	0	1	3	0	1	2	0	3	1	1	1	0	3	0	0	0	0	0	9
03:15 PM	2	1	0	0	3	0	0	0	0	0	1	3	3	1	8	0	0	0	0	0	11

A. Morton Thomas & Associates, Inc.

2 East Read Street, 4th Floor
Baltimore, MD 21202
(410) 752-6552

Default Comments
Change These in The Preferences Window
Select File/Preference in the Main Scree
Then Click the Comments Tab

File Name : Corey Ped Count 11-19-14
Site Code : 14768001
Start Date : 11/19/2014

Groups Printed- Unshifted

	From North					From East					From South					From West					
Start Time	Mvnt # 2	Mvnt # 3	Mvnt # 4	Mvnt # 1	App. Total	Mvnt # 6	Mvnt # 7	Mvnt # 8	Mvnt # 5	App. Total	Mvnt # 10	Mvnt # 11	Mvnt # 12	Mvnt # 9	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
03:30 PM	0	1	1	0	2	0	0	2	0	2	0	3	3	0	6	0	0	0	0	0	10
03:45 PM	0	4	3	0	7	0	0	2	0	2	0	2	2	0	4	0	0	0	0	0	13
Total	2	8	4	1	15	0	1	6	0	7	2	9	9	1	21	0	0	0	0	0	43
Grand Total	6	13	8	7	34	12	12	21	10	55	13	55	48	8	124	0	0	0	0	0	213
Apprch %	17.6	38.2	23.5	20.6		21.8	21.8	38.2	18.2		10.5	44.4	38.7	6.5		0	0	0	0		
Total %	2.8	6.1	3.8	3.3	16	5.6	5.6	9.9	4.7	25.8	6.1	25.8	22.5	3.8	58.2	0	0	0	0	0	

LAUREL PARKWAY

CONNECTICUT AVENUE

KIRKE STREET

BRICK

STONE

SCB

7 #1 6 #2 8 #4 13 #8

48 #12 55 #11 10 #5

12 #7 8 #9 13 #10

12 #6 21 #8

PEDESTRIAN TRAFFIC TO SITE

PEDESTRIAN TRAFFIC FROM SITE

VOLUME OF PEDESTRIANS (9AM–4PM) X

MOVEMENT NUMBER #X

A. Morton Thomas and Associates, Inc.
Consulting Engineers

Chevy Chase Village
Established 1890

REVISIONS

DATE / INITIAL | ITEMS

Chevy Chase Village West Kirke
Chevy Chase Village, Maryland

SCALE | APPROVED: BN | DRAWN: BY

DATE | SHEET

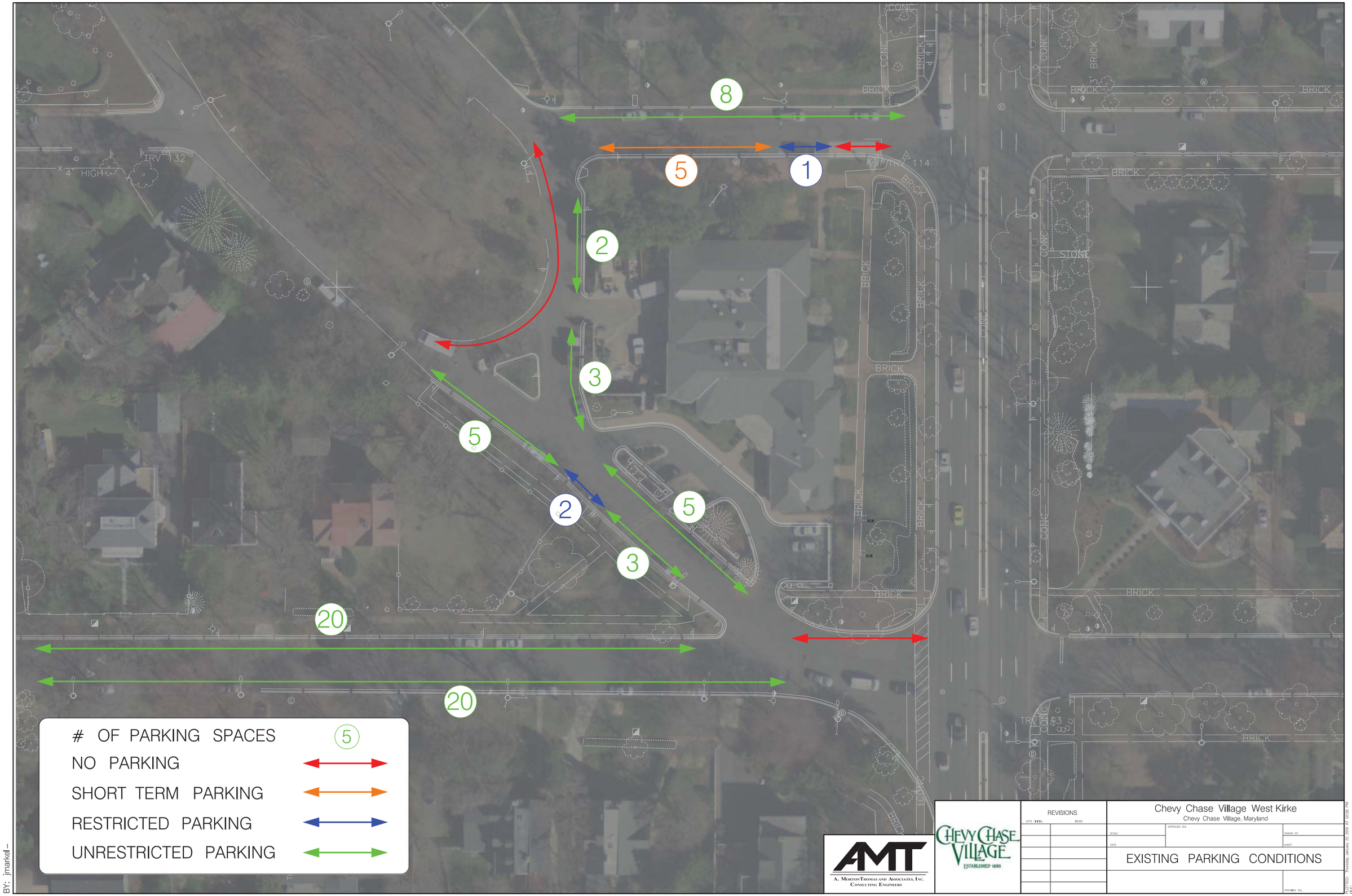
PEDESTRIAN COUNTS – 9AM TO 4PM

DRAWING NO.

BY: jmarkel –

PLOTTED: Friday, January 16, 2015 AT 10:53 AM
FILE:

APPENDIX B



A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS

CHEVY CHASE VILLAGE
ESTABLISHED 1890

REVISIONS

DATE	NTR.	ITEMS

Chevy Chase Village West Kirke
Chevy Chase Village, Maryland

SCALE | APPROVED: BN | DRAWN: BY

DATE | SHEET

EXISTING PARKING CONDITIONS

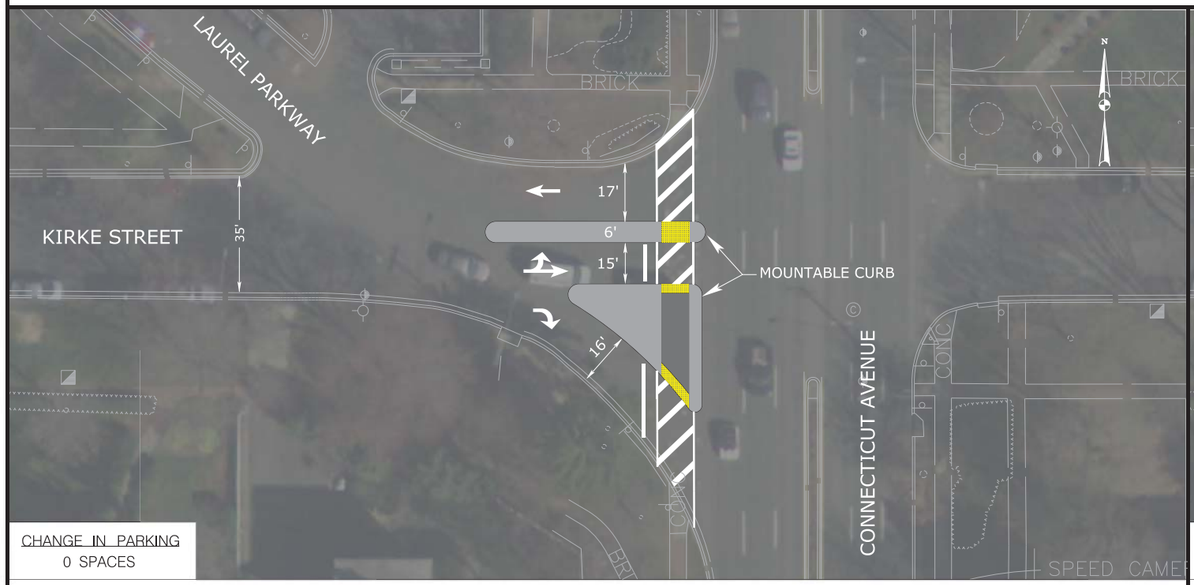
DRAWING NO.

BY: jmarkel –

PLOTTED: Thursday, January 22, 2015 At 10:35 PM
FILE:

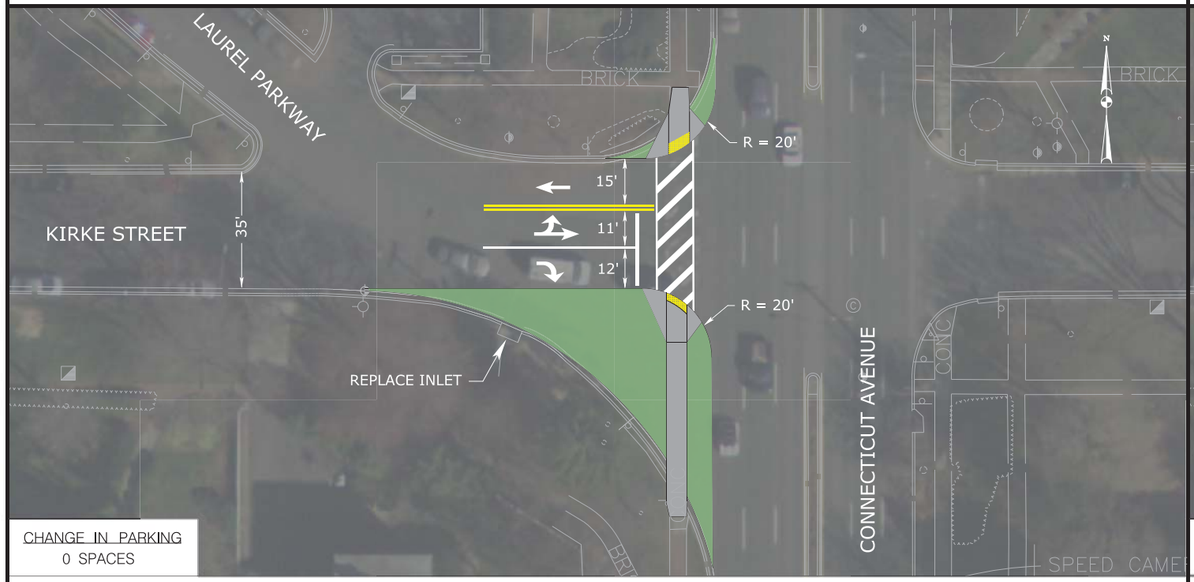
APPENDIX C

Area A – Kirke St. and Connecticut Ave. Improvement Concepts

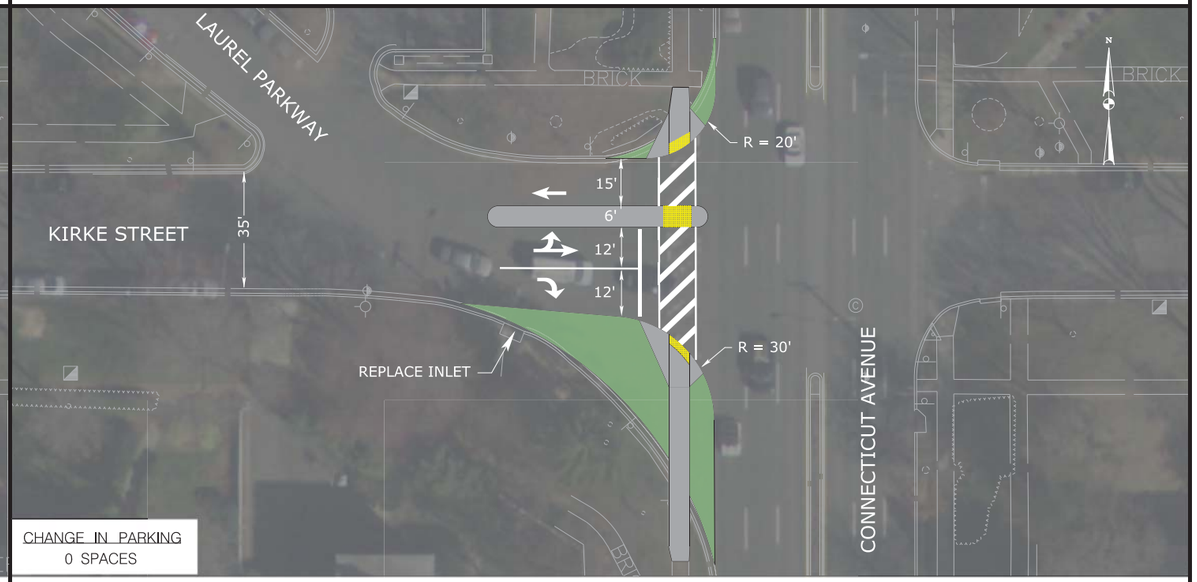


Option #1 – Median and Channelizing Island

Option #2 – Large Median



Option #3 – Reduced Roadway Width



Option #4 – Reduced Roadway Width With Median

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS

CHEVY CHASE VILLAGE
ESTABLISHED 1890

REVISIONS
DATE | INITIAL | ITEMS

Chevy Chase Village West Kirke
Chevy Chase Village, Maryland

SCALE | APPROVED BY | DRAWN BY
DATE | SHEET

Area A – Kirke St. and Connecticut Ave. Concepts

DRAWING NO.

BY: jmarkel – FILE: [illegible] Monday, January 27, 2018 At 10:55 PM

Area B – Kirke St. and Laurel Pkwy. Improvement Concepts

Option #1 – Existing Parking Conditions

Option #2 – Existing Road Width with Channelizing Island

Option #3 – One–Way Existing Road Width

Option #4 – Laurel Widening with Parallel Parking

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS

CHEVY CHASE VILLAGE
ESTABLISHED 1890

REVISIONS

DATE	ITEMS

Chevy Chase Village West Kirke
Chevy Chase Village, Maryland

SCALE | APPROVED BY | DRAWN BY
DATE | SHEET

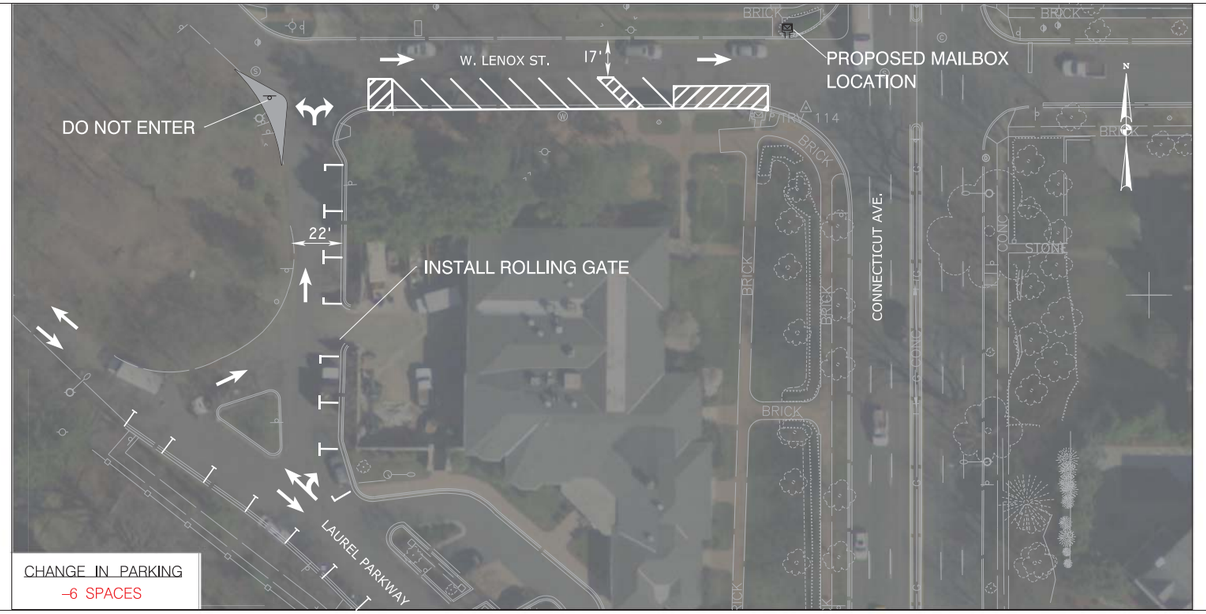
Area B – Kirke St. and Laurel Pkwy. Concepts

DRAWING NO.

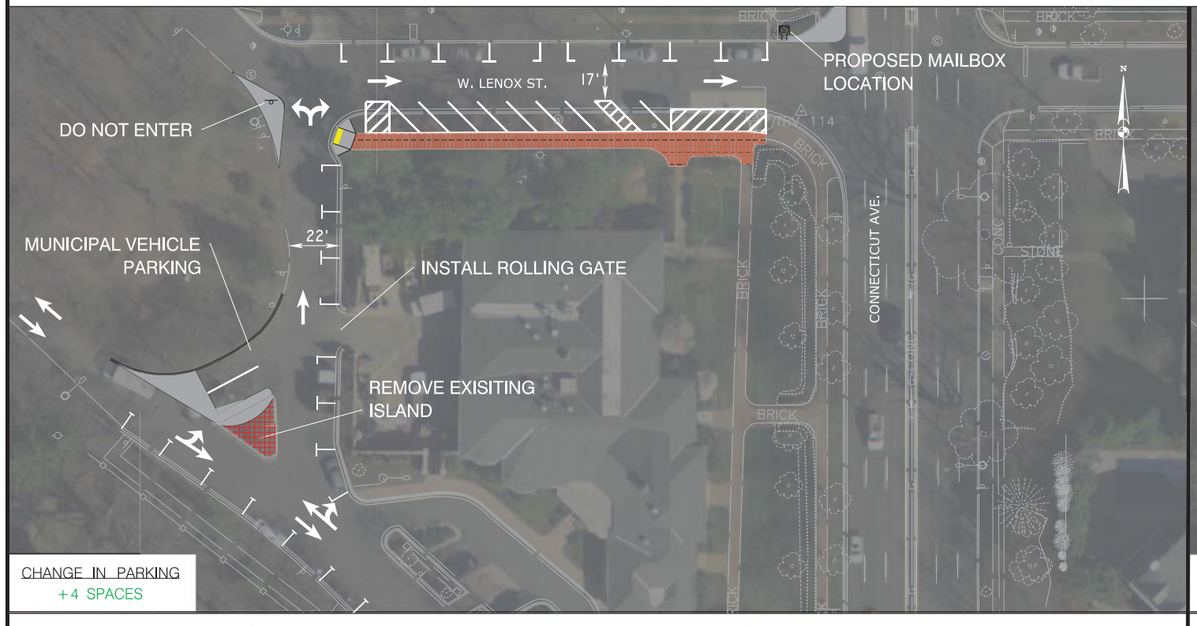
BY: jmarkel –

PLOTTED: Friday, January 30, 2015 AT 11:25 AM

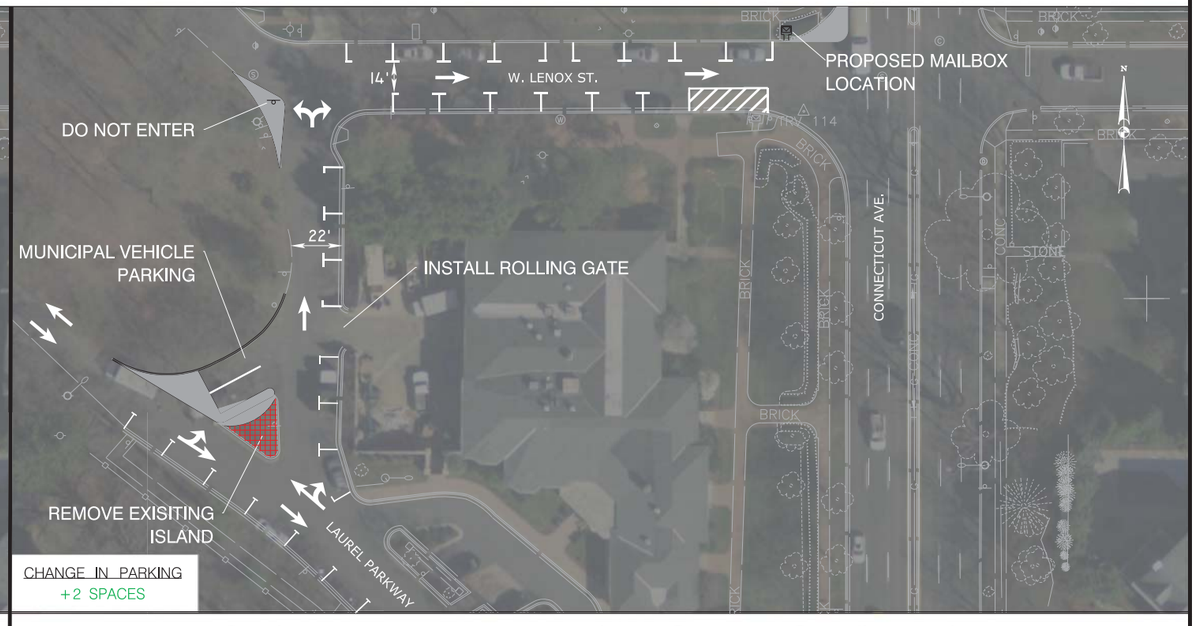
Area C – Laurel Pkwy. and W. Lenox St. Improvement Concepts



Option #1 – Existing Condtion with Angled Parking



Option #2 – Widening for Angled Parking



Option #3 – Two Parking Space Configuration

A. Morton Thomas and Associates, Inc.
Consulting Engineers

Chevy Chase Village
Established 1890

REVISIONS

DATE / INITIAL	ITEMS

Chevy Chase Village West Kirke
Chevy Chase Village, Maryland

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Area C – Laurel Pkwy. and W. Lenox Concepts

DRAWING NO.

BY: jmarkel –
PLOT DATE: Friday, January 30, 2015 AT 11:56 AM

A. MortonThomas and Associates, Inc.
Consulting Engineers

CHEVY CHASE VILLAGE
ESTABLISHED 1890

REVISIONS	
DATE	ITEMS

Chevy Chase Village West Kirke
Chevy Chase Village, Maryland

SCALE | APPROVED: BN | DRAWN: BY
DATE | SHEET

MAILBOX LOCATIONS

DRAWING NO.

BY: jmarkel

PLOTTED: Friday, January 30, 2015, At 11:03 AM
FILE: