

## JENNIFER ROAD TRAFFIC STUDY

Project - H508413

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## I. EXECUTIVE SUMMARY

The purpose of this traffic report is to provide guidance for the feasibility of removing at least one lane along Jennifer Road in Parole, MD. The roadway diet is being evaluated to accommodate the future expansion of the South Shore Trail. The project limits extend along Jennifer Road from Pavilion Parkway to Admiral Drive, from west to east. In the existing condition, Jennifer Road has two travel lanes in each direction divided by a two-way left turn lane. Three intersections are evaluated within this report including:

- Jennifer Road/Pavilion Parkway/US 50 off ramp (signalized)
- Jennifer Road/South Entrance to Detention Center (unsignalized)
- Jennifer Road/Admiral Drive (signalized)

This traffic study assesses traffic operations through Critical Lane Volume (CLV) analysis and Highway Capacity Manual (HCM) Level of Service (LOS). In the existing condition, all intersections operated at HCM LOS C or better in both the AM and PM peak hours. Forecasted Year 2040 volumes, which included a new Anne Arundel County central booking facility at the Jennifer Road Facility, were evaluated for the No Build condition and three build options. Option 1 removes one westbound through lane along Jennifer Road and provided a 100-foot right turn bay at the intersection of Jennifer Road and Pavilion Parkway. Option 2 also removes one westbound through lane along Jennifer Road but does not provide a right turn bay in order to provide more trail flexibility. Lastly, Option 3 removes both one westbound through lane and one eastbound through lane along Jennifer Road. Under all Build options, each intersection is expected to operate at CLV LOS A and HCM LOS D or better in both the AM and PM peak hours. Thus, each design option is expected to sufficiently process the 2040 volumes. Also, the arterial speeds along Jennifer Road remain steady at approximately 34 mph throughout the Existing, No Build, and Build conditions.

At the intersection of Jennifer Road and Pavilion Parkway, the westbound approach LOS remains constant at LOS B through the Existing, No Build and Option 1 condition. The westbound approach LOS increases to LOS C within Options 2 and 3 . Option 1 is expected to be the least impactful alternative with regards to LOS and delay, although all intersections are expected to operate at acceptable LOS for all Build options. Based on the capacity analysis in this study, the removal of one or two travel lanes along Jennifer Road would not degrade traffic operations.

## II. INTRODUCTION

The Anne Arundel County Department of Public Works recently tasked Johnson, Mirmiran \& Thompson (JMT) with completing a schematic design package for sidewalk and trail construction along Jennifer Road in Annapolis, MD. The following evaluation was conducted to determine if it would be practical to remove either the westbound through lane or the two-way left turn lane to accommodate trail construction. Thus, the purpose of this traffic study is to assess the feasibility of a roadway diet along Jennifer Road. This analysis includes the future expansion of the Jennifer Road Detention Center and is a revision to the December 2017 report.

## III. EXISTING CONDITIONS

The study area follows along Jennifer Road, a minor arterial roadway in Parole, MD, from Pavilion Parkway to Admiral Drive. An intermediate unsignalized intersection with five surrounding driveways is present at the entrance of the Anne Arundel County Jennifer Road Detention Center. The study area can be found in Figure 1. Along Jennifer Road there are five lanes, two westbound, two eastbound and a two-way left turn lane. The existing conditions diagram can be found on Figure 2 Field work was preformed to assess current traffic conditions (section III. A). Existing ADA facilities were noted but were not checked in detail for compliance. The following describes the study area.

## Jennifer Road and Pavilion Parkway (Signalized):

This intersection is located at the entrance of the Anne Arundel Medical Center and the US 50 off ramp. The signal is actuated coordinated with an existing cycle length of 120 seconds and split phasing. There is a pedestrian crosswalk along the north leg of the intersection with ADA facilities. The pedestrian facilities include a 65 -foot crosswalk, ramps, and detectable warning surfaces. Accessible pedestrian signals (APS) and countdown pedestrian signals (CPS) are also present. The existing lane configurations are below:

- From the US 50 off ramp south of the intersection there are two left turn lanes and one shared through right turn lane.
- From the west along Jennifer Road there are two through lanes and one left turn lane.
- From Pavilion Parkway, there are two right turn lanes and one left turn lane.
- From the east, there is one through lane and one shared through and right turn lane.


## Jennifer Road and Detention Center (Driveways):

At this intersection, the parking lot for the detention center is to the south and fuel pumps are to the north. Visitor parking for the detention center is also to the north with a driveway to the east of the Detention Center. There are two westbound and two eastbound though lanes. A mid-block pedestrian crossing is present with a hazard identification beacon that serves as a median refuge. This crossing does not properly align with the curb ramps, specifically at the south end of the crosswalk. The misalignment forces pedestrians into the roadway in order to access the ramps. At the north end of the pedestrian cross walk, a bus stop is present. Approximately 700 feet to the east of this intersection is the (West) Annapolis Volunteer Fire Company.



## Jennifer Road and Admiral Drive (Signalized):

This three-legged intersection is where Jennifer Road terminates to the east. Due to previous roadside construction along Jennifer Road at Admiral Drive, the western leg of the intersection only has one receiving lane.

Once construction is complete, it is anticipated that the western leg of the intersection will return to having two receiving lanes, although the outcome of this report will help decide if two lanes are necessary. The existing cycle length for this actuated signal is 75 seconds. The existing lane configurations are following:

- There are two lanes along Jennifer Road, one left turn lane and one right turn lane.
- Northbound on Admiral Drive, there is one shared through and left turn lane.
- Southbound on Admiral Drive, there is one shared through and right turn lane.

A 24-hour traffic count was conducted on November 8, 2017. Three Miovision cameras were used to collect traffic data at the three intersections in the study area. 13-hour turning movement counts were processed from 6:00 AM to 7:00 PM. These traffic and pedestrian volumes can be seen in the Appendix. The AM peak hour was from 7:30 AM to 8:30 AM. The PM peak hour was 5:00 PM to 6:00 PM.

## A) Field Observations

AM peak field observations were conducted on November 8, 2017 and PM peak field observations were conducted on November 16, 2017. The following describes operations during these periods.

## Jennifer Road and Pavilion Parkway (Signalized):

This actuated and coordinated signalized intersection operated below capacity during both the AM and PM field visits. Queues were longest in the AM peak hour from the east and north with a maximum queue of seven (7) vehicles. In the PM peak hour, the maximum queue was observed from the US50 off ramp, with five (5) queued vehicles. All queues were processed by the signal. The northbound and southbound phases were split, and the westbound left turn movement was protected and permissive. The pedestrian cross walk did not have a call during both peak period visits. The APS and CPS were tested during the field visits and were deemed to be working properly. The two-way left-turn lane did not serve any vehicular traffic.

## Jennifer Road and Detention Center (Driveways):

Turning volumes out of the detention center and the pumping station were minute. The two-way left turn lane was underutilized because turning volume from Jennifer Road was minimal at this location. There was a bus stop in the northeast quadrant of the intersection. During the field observations a bus was not seen. Fire house operations did not impact traffic flow.

## Jennifer Road and Admiral Drive (Signalized):

The Jennifer Road and Admiral Drive intersection displayed actuated signal controls. The southbound movements lag to the northbound protected left turn. During the AM field visit, the maximum queue was observed to be seven (7) vehicles on the southbound approach. During the PM peak hour, the maximum queue was observed to be 10 vehicles on the northbound approach. All vehicles were processed without phase failures. The single westbound receiving lane on the western leg of the intersection did not cause an observable detriment to signal operations. During the PM peak hour, both lanes on the eastbound approach were equally utilized.

The posted speed limit was 40 mph along Jennifer Road within the study area. Although a formal speed study was not requested/performed at this time, it was observed that the prevailing speed was between 40 and 50 mph . For modeling purposes, a speed of 45 mph was used.

## IV. EXISTING ANALYSIS

Traffic volumes from the November 8, 2017 count were balanced. The balanced volumes can be found in figure 3. These balanced volumes were used in the existing AM and PM peak hour Synchro models.

Critical Lane Volume (CLV) analysis was conducted for each intersection within the study area. Table 1 displays the resulting CLV, Level of Service (LOS), and Volume to Capacity ratio (V/C).

| Table 1. Existing CLV Analysis |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AM |  |  | PM |  |  |
| Intersection | CLV | LOS | V/C | CLV | LOS | V/C |
| Jennifer Road \& Pavilion <br> Parkway | 473 | A | 0.3 | 345 | A | 0.22 |
| Jennifer Road \& Detention <br> Center | 138 | A | 0.09 | 204 | A | 0.13 |
| Jennifer Road \& Admiral Drive | 435 | A | 0.27 | 705 | A | 0.44 |

Notice that all intersections operate at LOS A as defined by the CLV analysis.

To further assess existing operations, AM and PM peak hour Synchro models were created. The existing balanced volumes were used along with the signal timings that were provided by Anne Arundel County (found in Appendix). The model was calibrated using the field data. The resulting Highway Capacity Manual (HCM) LOS and delay are shown in Table 2.

LEGEND
$\longleftrightarrow$ AM (PM) [TOTAL] - PEDESTRIANS
2.000 - AVERAGE DAILY TRAFFIC

| Jennifer Road Traffic Study |  |  |
| :---: | :---: | :---: |
| 2017Existing Balanced <br> Peak Hour <br> Volumes AM (PM) |  |  |
|  | FIGURE <br> 3 | $6 / 2018$ |

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Table 2. Existing HCM Level of Service and Delay

| AM Peak Hour |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Overall LOS | Overall Delay (sec/veh) | Direction | Approach LOS | Approach Delay (sec/veh) | Movement | $\begin{aligned} & \text { Lane } \\ & \text { LOS } \end{aligned}$ | Lane Delay (sec/veh) |
| Jennifer Road \& Pavilion | C | 34.8 | Eastbound | A | 8.5 | Left | A | 9.7 |
|  |  |  |  |  |  | Through | A | 6.0 |
|  |  |  | Westbound | B | 14.6 | Through | B | 14.6 |
|  |  |  | Northbound | D | 50.3 | Left | D | 48.5 |
|  |  |  |  |  |  | Through/Right | D | 53.3 |
|  |  |  | Southbound | D | 52.4 | Left | D | 53.0 |
|  |  |  |  |  |  | Right | D | 52.3 |
| Jennifer Road \& Detention Center | - | - | Eastbound | A | 0.0 | - | - | - |
|  |  |  | Westbound | A | 0.2 | - | - | - |
|  |  |  | Northbound | B | 10.4 | - | - | - |
|  |  |  | Southbound | A | 9.9 | - | - | - |
| Jennifer Road \& Admiral Drive | B | 10.2 | Eastbound | C | 21.3 | Left | C | 21.3 |
|  |  |  |  |  |  | Right | C | 21.2 |
|  |  |  | Northbound | A | 2.8 | Through/Left | A | 2.8 |
|  |  |  | Southbound | B | 11.1 | Through/Right | B | 11.1 |
| PM Peak Hour |  |  |  |  |  |  |  |  |
| Jennifer Road \& Pavilion | C | 28.1 | Eastbound | A | 4.8 | Left | A | 4.7 |
|  |  |  |  |  |  | Through | A | 4.8 |
|  |  |  | Westbound | B | 10.5 | Through | B | 10.5 |
|  |  |  | Northbound | D | 52.7 | Left | D | 53.6 |
|  |  |  |  |  |  | Through/Right | D | 50.1 |
|  |  |  | Southbound | D | 51.4 | Left | D | 54.5 |
|  |  |  |  |  |  | Right | D | 50.8 |
| Jennifer Road \& Detention Center | - | - | Eastbound | A | 0.1 | - | - | - |
|  |  |  | Westbound | A | 0.0 | - | - | - |
|  |  |  | Northbound | B | 13.4 | - | - | - |
|  |  |  | Southbound | A | 9.1 | - | - | - |
| Jennifer Road \& Admiral Drive | B | 13.4 | Eastbound | C | 21.9 | Left | C | 23.3 |
|  |  |  |  |  |  | Right | C | 20.9 |
|  |  |  | Northbound | A | 6.0 | Through/Left | A | 6.0 |
|  |  |  | Southbound | B | 15.5 | Through/Right | B | 15.5 |

During the Existing condition, all intersections operated at a HCM LOS of C or better. The westbound through movement at the intersection of Jennifer Road and Pavilion Parkway operated at LOS B with 14.6 and 10.5 seconds of delay in the AM and PM peak hours, respectively.

SimTraffic microsimulation was used to determine the existing queues for each intersection in the study area. The resulting average and $95^{\text {th }}$ percentile queues are presented in Table 3.

| Table 3. Existing Average and 95th Percentile Queues in Feet (AM (PM)) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Intersection | Direction | Movement | Avg. Queue | 95th Queue |
| Jennifer Road and Pavilion Parkway | Northbound | L | 141 (119) | 208 (170) |
|  |  | L | 88 (46) | 169 (110) |
|  |  | TR | 120 (37) | 219 (68) |
|  | Southbound | L | 15 (39) | 43 (79) |
|  |  | R | 41 (56) | 66 (85) |
|  |  | R | 19 (18) | 49 (47) |
|  | Eastbound | L | 48 (22) | 115 (54) |
|  |  | T | 2 (24) | 10 (62) |
|  |  | T | 2 (23) | 10 (73) |
|  | Westbound | T | 33 (43) | 74 (84) |
|  |  | TR | 38 (38) | 82 (77) |
| Jennifer Road and Detention Center | Northbound | L | 10 (14) | 34 (39) |
|  |  | R | 3 (6) | 17 (26) |
|  | Southbound | LTR | 4 (1) | 17 (6) |
| Jennifer Road and Admiral Drive | Northbound | LT | 48 (85) | 92 (139) |
|  | Southbound | TR | 59 (54) | 102 (99) |
|  | Eastbound | L | 21 (60) | 50 (109) |
|  |  | R | 70 (100) | 129 (167) |

Under the existing conditions, the westbound through and right turn lane had a maximum $95^{\text {th }}$ percentile queue of approximately 80 feet (seen in yellow). SimTraffic was also used to determine the arterial speed along Jennifer Road. In the AM peak hour, the speeds were 35 mph and 36 mph in the eastbound and westbound direction, respectively. In the PM peak hour, the speeds were 34 mph and 37 mph in the same respective directions.

## V. NO BUILD VOLUMES AND ANALYSIS

2040 forecasted volumes are needed to access the feasibility of any proposed design in the future. To develop year 2040 forecasted volumes, the BMC model was referenced. A simple annual growth rate of one half of one percent ( $0.5 \%$ ) was applied to the balanced volumes. After reviewing the local development plans, it was assumed that this percentage would encompass any future background developments, with the exception of the future Jennifer Road Detention Center. No traffic impact study was conducted for the expanded detention center, therefore Anne Arundel County instructed JMT to
conduct a study at a similar facility. To account for the future expansion, traffic volume data was collected at the Montgomery County Detention Center on Seven Locks Road, which is a similarly sized facility (see the June 2018 volumes in the Appendix). To interpolate the Montgomery County facility's volumes to the new Jennifer Road facility, the follow assumptions were used:

- The Anne Arundel County Detention Center's management staff at a previous review meeting explained that the expanded Jennifer Road facility is expected to process 1,400 people per month or 16,800 people annually.
- The Montgomery County Detention Center processes 13,000 offenders annually (Malagari, 2018). This information implies that the new Jennifer Road center will process $30 \%$ more offenders than the Montgomery County facility.
- The Anne Arundel County Detention Center management staff stated that the new facility is expected to need 50 new employees working over three shifts. This will generate 17 new trips both in and out during future shift changes. To be conservative, these 34 trips were applied to both the AM and PM peak hours even though some of the shift changes occurred outside of the AM/PM peak hours at Jennifer Road.
- To be conservative, the highest volume day from the Montgomery County traffic data was used, along with the highest volume AM and PM shift changes across the entire data collection period. This data was then scaled by a factor of 1.3 to account for the larger facility along Jennifer Road.
- It was assumed that all new trips, including employee shift changes, would occur at the parking lot adjacent to the new expanded Jennifer Road Detention Center, south of Jennifer Road.
- The new trips were distributed using the existing lane/movement utilizations.

With the conservative assumptions listed above, a total of 110 new trips are expected during the AM peak hour, 60 trips into the new facility and 50 out. In the PM peak hour, 135 new trips are expected, 60 trips into the facility and 75 out. The new trips can be seen in Figure 4.

The balanced volumes (Figure 3) were compounded using the simple annual growth rate until the year 2040. These volumes can be found in Figure 5. The new trips from the Jennifer Road Detention Center (Figure 4) were also included in the development of the 2040 volumes. The resulting 2040 volumes with the future expansion of the Jennifer Road Detention Center can be found on Figure 6.

Since 2007, the AADT along Jennifer Road has decreased at an average linear rate of 140 vehicles per day (vpd) (Figure 7). With that in mind, it is a conservative assumption to increase the future volumes. Also, the 2016 MDOT reported AADT for Jennifer Road was 5,570 vpd. Importantly, FHWA advises that roadways with ADT of 20,000 vpd or less are good candidates for a roadway diet (Crowe, 2014).


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$$
\xrightarrow{\frac{170(205) 4}{130(275)}}
$$

| Jennifer Road Traffic Study |  |  |
| :---: | :---: | :---: |
| 2040 Peak Hour <br> Volumes AM (PM) <br> Without Detention Center <br> Expansion |  |  |
|  | FIGURE <br> 5 | $6 / 2018$ |



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## Figure 7. Jennifer Road Historic AADT



The balanced 2040 volumes were used to create subsequent Synchro models for the anticipated future conditions. The same signal phases were used as the existing models. The same methods of evaluations were used to assess the operations of all the intersection in the study area. Table 4 displays the CLV analysis for the No Build 2040 volumes.

| Table 4. Year 2040 No Build CLV Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | CLV | LOS | V/C | CLV | LOS | V/C |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 551 | A | 0.34 | 419 | A | 0.26 |
| Jennifer Road \& Pavilion <br> Parkway | 239 | A | 0.15 | 336 | A | 0.21 |  |  |  |  |  |  |  |
| Jennifer Road \& Detention <br> Center | 515 | A | 0.32 | 830 | A | 0.52 |  |  |  |  |  |  |  |
| Jennifer Road \& Admiral Drive |  |  |  |  |  |  |  |  |  |  |  |  |  |

Notice that all intersections operate at LOS A as defined by the CLV analysis. The resulting HCM LOS and delay can be found in Table 5.

Table 5. Year 2040 No Build HCM Level of Service and Delay

| AM Peak Hour |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Overall LOS | Overall Delay (sec/veh) | Direction | Approach LOS | Approach Delay (sec/veh) | Movement | $\begin{aligned} & \text { Lane } \\ & \text { LOS } \end{aligned}$ | Lane Delay (sec/veh) |
| Jennifer Road \& Pavilion | C | 35.0 | Eastbound | B | 14.7 | Left | B | 19.6 |
|  |  |  |  |  |  | Through | A | 7.5 |
|  |  |  | Westbound | B | 18.8 | Through | B | 18.8 |
|  |  |  | Northbound | D | 47.9 | Left | D | 47.1 |
|  |  |  |  |  |  | Through/Right | D | 49.0 |
|  |  |  | Southbound | D | 52.4 | Left | D | 54.5 |
|  |  |  |  |  |  | Right | D | 52.2 |
| Jennifer Road \& Detention Center | - |  | Eastbound | A | 0.2 | - | - | - |
|  |  |  | Westbound | A | 0.5 | - | - | - |
|  |  |  | Northbound | B | 12.1 | - | - | - |
|  |  |  | Southbound | B | 11.4 | - | - | - |
| Jennifer Road \& Admiral Drive | B | 11.0 | Eastbound | C | 21.9 | Left | C | 22.3 |
|  |  |  |  |  |  | Right | C | 21.8 |
|  |  |  | Northbound | A | 3.0 | Through/Left | A | 3.0 |
|  |  |  | Southbound | B | 12.2 | Through/Right | B | 12.2 |
| PM Peak Hour |  |  |  |  |  |  |  |  |
| Jennifer Road \& Pavilion | C | 28.7 | Eastbound | A | 9.9 | Left | B | 11.4 |
|  |  |  |  |  |  | Through | A | 9.6 |
|  |  |  | Westbound | B | 11.6 | Through | B | 11.6 |
|  |  |  | Northbound | D | 52.5 | Left | D | 53.5 |
|  |  |  |  |  |  | Through/Right | D | 49.9 |
|  |  |  | Southbound | D | 52.8 | Left | D | 54.8 |
|  |  |  |  |  |  | Right | D | 52.4 |
| Jennifer Road \& Detention Center | - | - | Eastbound | A | 0.1 | - | - | - |
|  |  |  | Westbound | A | 0.0 | - | - | - |
|  |  |  | Northbound | C | 17.7 | - | - | - |
|  |  |  | Southbound | A | 9.3 | - | - | - |
| Jennifer Road \& Admiral Drive | B | 14.8 | Eastbound | C | 22.1 | Left | C | 23.8 |
|  |  |  |  |  |  | Right | C | 20.9 |
|  |  |  | Northbound | A | 8.3 | Through/Left | A | 8.3 |
|  |  |  | Southbound | B | 16.7 | Through/Right | A | 16.7 |

Each intersection displayed an overall increase in delay from the existing conditions for both the AM and PM peak hours, however all intersection operated at LOS C or better. Much of the individual approach and lane delays also increased. The SimTraffic generated queues for the 2040 No Build models are displayed in Table 6.

| Intersection | Direction | Movement | Avg. Queue | 95th Queue |
| :---: | :---: | :---: | :---: | :---: |
| Jennifer Road and Pavilion Parkway | Northbound | L | 151 (114) | 217 (168) |
|  |  | L | 103 (46) | 185 (115) |
|  |  | TR | 145 (44) | 244 (91) |
|  | Southbound | L | 14 (41) | 40 (85) |
|  |  | R | 48 (62) | 83 (103) |
|  |  | R | 20 (25) | 47 (52) |
|  | Eastbound | L | 58 (27) | 127 (72) |
|  |  | T | 3 (25) | 13 (69) |
|  |  | T | 4 (28) | 19 (76) |
|  | Westbound | T | 48 (52) | 96 (104) |
|  |  | TR | 57 (46) | 106 (93) |
| Jennifer Road and Detention Center | Northbound | LTR | 34 (44) | 60 (74) |
|  | Southbound | LTR | 8 (4) | 26 (17) |
| Jennifer Road and Admiral Drive | Northbound | LT | 64 (97) | 116 (163) |
|  | Southbound | TR | 65 (68) | 121 (119) |
|  | Eastbound | L | 21 (67) | 49 (123) |
|  |  | R | 74 (98) | 125 (160) |

The SimTraffic reported arterial speed along Jennifer Road was 35 mph in the eastbound direction and 34 mph in the westbound direction during the AM peak hour. In the PM peak hour, the arterial speed was 33 mph and 36 mph in the eastbound and westbound direction, respectively.

Also, regarding traffic operations and capacity, the two-way left turn lane was considered unnecessary in both the existing and year 2040 conditions for two reasons. First, the turning volumes along Jennifer Road close to the detention center and fuel pumps were minimal. The improved safety that is attributed with a left turn lane is not present due to the lack of left turn volume into the driveways. Second, the left turn lane increases the distance for pedestrians to cross Jennifer Road.

## VI. ALTERNATIVE DEVELOPMENT

Three options were developed to accommodate the trail. Option 1 involves removing the northernmost through lane along Jennifer Road. At the intersection of Jennifer Road and Pavilion Parkway a right turn bay of 100 feet would be provided for westbound traffic turning into the Anne Arundel Medical Center. The length of the entering taper would need to be determined during the final design stages. The proposed turn bay could be lengthened, but further modification would need to be made to the alignment of the trail. Under this option, there would be one westbound through travel lane and two eastbound through travel lanes along Jennifer Road. The existing two-way left turn lane would not be removed to maintain existing lane configurations at the signal. Figures 6 and 7 in the appendix display a concept of Option 1.

Option 2 is identical to Option 1 except that at the intersection of Jennifer Road and Pavilion Parkway, there would only be one westbound lane. This single lane will facilitate both the westbound through and right turn movements at that intersection. Option 2 provides flexibility in trail location in the northwest quadrant of the Pavilion Parkway intersection. The benefit of flexibility is offset by the financial impact of removing more of the northernmost lane on Jennifer Road. The proposed design can be seen in the appendix on Figures 8 and 9.

Option 3 involves the removal of two existing through lanes along Jennifer Road, which would leave one travel lane in each direction. This option would provide ample room for the trail and could provide street side parking. For this analysis, the lane configurations at both signalized intersections would remain the same as Option 2. The eastbound lane drop on Jennifer Road would occur between the US50 off ramp and the entrance to the Detention Center. This analysis was conducted to assess the operational feasibility of having one through travel lane in each direction along Jennifer Road. Within final design stages, heavy vehicle activity near the Detention Center and Annapolis Volunteer Fire Company will need to be considered.

The detailed geometric layout for Option 3 will need to be fully developed within the stages of the final design. The removal of an additional lane will likely provide the County more flexibility in the selection of an overall typical section for Jennifer Road between Pavilion Parkway and Admiral Drive. Several items that will need to be considered in detail include the grass buffer width adjacent to trail, inclusion of a sidewalk on opposite side of trail, inclusion of in-road bike lanes, and partial to total reconstruction of the storm drainage system.

All options were evaluated through CLV analysis. The AM results can be seen in Table 7 and the PM results can be found in Table 8. The CLV analysis for the Jennifer Road/detention center and Jennifer/Admiral Drive did not change from Option 1 to Option 2.

| Table 7. Option 1 and 2 AM CLV Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Existing |  |  | 2040 No Build |  |  | Option 1 |  |  | Option 2 |  |  | Option 3 |  |  |
|  | CLV | LOS | V/C | CLV | LOS | V/C | CLV | LOS | V/C | CLV | LOS | V/C | CLV | LOS | V/C |
| Jennifer Road <br> \& Pavilion <br> Parkway | 473 | A | 0.3 | 551 | A | 0.34 | 639 | A | 0.4 | 684 | A | 0.43 | 684 | A | 0.43 |
| Jennifer Road <br> \& Detention Center | 138 | A | 0.09 | 239 | A | 0.15 | 326 | A | 0.2 | 326 | A | 0.2 | 351 | A | 0.22 |
| Jennifer Road \& Admiral Drive | 435 | A | 0.27 | 515 | A | 0.32 | 515 | A | 0.32 | 515 | A | 0.32 | 515 | A | 0.32 |


| Table 8. Option 1 and 2 PM CLV Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Existing |  |  | 2040 No Build |  |  | Option 1 |  |  | Option 2 |  |  | Option 3 |  |  |
|  | CLV | LOS | V/C | CLV | LOS | V/C | CLV | LOS | V/C | CLV | LOS | V/C | CLV | LOS | V/C |
| Jennifer Road \& Pavilion Parkway | 345 | A | 0.22 | 419 | A | 0.26 | 557 | A | 0.35 | 572 | A | 0.36 | 572 | A | 0.36 |
| Jennifer Road <br> \& Detention Center | 204 | A | 0.13 | 336 | A | 0.21 | 368 | A | 0.23 | 368 | A | 0.23 | 523 | A | 0.33 |
| Jennifer Road \& Admiral Drive | 705 | A | 0.44 | 830 | A | 0.52 | 830 | A | 0.52 | 830 | A | 0.52 | 830 | A | 0.52 |

The removal of a westbound through lane did not impact the intersection of Jennifer Road and Admiral Drive because there was only one westbound receiving lane in the existing condition. Under Option 2, at the intersection of Jennifer Road and Pavilion Parkway, the CLV increased but remained at a LOS A.

The removal of two travel lanes on Jennifer Road did not detrimentally affect any of the study intersections, as all operated at LOS A.

A Synchro model was created to reflect all options. The resulting AM intersection HCM LOS and delay can be found in Table 9. The PM intersection HCM LOS can be seen in Table 10. The approach and individual lane delay and LOS can be found in Table 11 for Option 1, Table 12 for Option 2, and Table 13 for Option 3.

| Table 9. Option 1, 2, and 3 AM HCM Analysis |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Existing |  | 2040 No Build |  | Option 1 |  | Option 2 |  | Option 3 |  |
|  | LOS | $\begin{gathered} \text { Delay } \\ \text { (sec/veh) } \end{gathered}$ | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | $\begin{gathered} \text { Delay } \\ \text { (sec/veh) } \end{gathered}$ | LOS | $\begin{gathered} \text { Delay } \\ \text { (sec/veh) } \end{gathered}$ |
| Jennifer Road \& Pavilion | C | 34.8 | C | 35.0 | C | 35.0 | D | 35.5 | D | 35.5 |
| Jennifer Road \& Detention Center Northbound | B | 10.4 | B | 12.1 | B | 13.7 | B | 13.7 | B | 13.2 |
| Jennifer Road \& Detention Center Southbound | A | 9.9 | B | 11.4 | B | 11.7 | B | 11.7 | B | 12.0 |
| Jennifer Road \& Admiral Drive | B | 10.2 | B | 11.0 | B | 11.0 | B | 11.0 | B | 11.0 |

Table 10. Option 1, 2, and 3 PM HCM Analysis

| Intersection | Existing |  | 2040 No Build |  | Option 1 |  | Option 2 |  | Option 3 |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | LOS | Delay <br> (sec/veh) | LOS | Delay <br> (sec/veh) | LOS | Delay <br> (sec/veh) | LOS | Delay <br> (sec/veh) | LOS | Delay <br> (sec/veh) |
|  <br> Pavilion | C | 28.1 | C | 28.7 | C | 28.7 | C | 28.8 | C | 28.8 |
|  <br> Detention Center <br> Northbound | B | 13.4 | B | 17.7 | C | 23.6 | C | 26.6 | C | 23.8 |
|  <br> Detention Center <br> Southbound | A | 9.1 | A | 9.3 | B | 10.4 | B | 10.4 | B | 10.1 |
|  <br> Admiral Drive | B | 13.4 | B | 14.8 | B | 14.8 | B | 14.8 | B | 14.8 |

Table 11. Year 2040 Option 1 HCM Level of Service and Delay

| AM Peak Hour |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Overall LOS | $\begin{gathered} \text { Overall } \\ \text { Delay } \\ \text { (sec/veh) } \end{gathered}$ | Direction | $\begin{aligned} & \text { Approach } \\ & \text { LOS } \end{aligned}$ | Approach Delay (sec/veh) | Movement | $\begin{aligned} & \text { Lane } \\ & \text { LOS } \end{aligned}$ | Lane <br> Delay (sec/veh) |
| Jennifer Road \& Pavilion | C | 35.0 | Eastbound | B | 13.7 | Left | B | 18.1 |
|  |  |  |  |  |  | Through | A | 7.4 |
|  |  |  | Westbound | B | 20.2 | Through | C | 20.7 |
|  |  |  |  |  |  | Right | B | 17.3 |
|  |  |  | Northbound | D | 47.7 | Left | D | 46.9 |
|  |  |  |  |  |  | Through/Right | D | 48.9 |
|  |  |  | Southbound | D | 52.4 | Left | D | 54.5 |
|  |  |  |  |  |  | Right | D | 52.2 |
| Jennifer Road \& Detention Center | - |  | Eastbound | A | 0.2 | - | - | - |
|  |  |  | Westbound | A | 0.6 | - | - | - |
|  |  |  | Northbound | B | 13.7 | - | - | - |
|  |  |  | Southbound | B | 11.7 | - | - | - |
| Jennifer Road \& Admiral Drive | B | 11.0 | Eastbound | C | 21.9 | Left | C | 22.3 |
|  |  |  |  |  |  | Right | C | 21.8 |
|  |  |  | Northbound | A | 3.0 | Through/Left | A | 3.0 |
|  |  |  | Southbound | B | 12.2 | Through/Right | B | 12.2 |
| PM Peak Hour |  |  |  |  |  |  |  |  |
| Jennifer Road \& Pavilion | C | 28.7 | Eastbound | A | 6.9 | Left | A | 6.8 |
|  |  |  |  |  |  | Through | A | 7.0 |
|  |  |  | Westbound | B | 15.0 | Through | B | 15.1 |
|  |  |  |  |  |  | Right | B | 11.5 |
|  |  |  | Northbound | D | 52.8 | Left | D | 53.5 |
|  |  |  |  |  |  | Through/Right | D | 50.9 |
|  |  |  | Southbound | D | 52.8 | Left | D | 54.8 |
|  |  |  |  |  |  | Right | D | 52.4 |
| Jennifer Road \& Detention Center | - | - | Eastbound | A | 0.1 | - | - | - |
|  |  |  | Westbound | A | 0.0 | - | - | - |
|  |  |  | Northbound | C | 23.6 | - | - | - |
|  |  |  | Southbound | B | 10.4 | - | - | - |
| Jennifer <br>  <br> Admiral <br> Drive | B | 14.8 | Eastbound | C | 22.1 | Left | C | 23.8 |
|  |  |  |  |  |  | Right | C | 20.9 |
|  |  |  | Northbound | A | 8.3 | Through/Left | A | 8.3 |
|  |  |  | Southbound | B | 16.7 | Through/Right | B | 16.7 |

Table 12. Year 2040 Option 2 HCM Level of Service and Delay

| AM Peak Hour |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Overall LOS | Overall Delay (sec/veh) | Direction | Approach LOS | Approach Delay (sec/veh) | Movement | $\begin{aligned} & \text { Lane } \\ & \text { LOS } \end{aligned}$ | Lane Delay (sec/veh) |
| Jennifer Road \& Pavilion | D | 35.5 | Eastbound | B | 13.8 | Left | B | 18.4 |
|  |  |  |  |  |  | Through | A | 7.2 |
|  |  |  | Westbound | C | 21.3 | Through/Right | C | 21.3 |
|  |  |  | Northbound | D | 48.3 | Left | D | 47.4 |
|  |  |  |  |  |  | Through/Right | D | 49.5 |
|  |  |  | Southbound | D | 52.3 | Left | D | 53.9 |
|  |  |  |  |  |  | Right | D | 52.2 |
| Jennifer Road \& Detention Center | - |  | Eastbound | A | 0.2 | - | - | - |
|  |  |  | Westbound | A | 0.6 | - | - | - |
|  |  |  | Northbound | B | 13.7 | - | - | - |
|  |  |  | Southbound | B | 11.7 | - | - | - |
| Jennifer Road \& Admiral Drive | B | 11.0 | Eastbound | C | 21.9 | Left | C | 22.3 |
|  |  |  |  |  |  | Right | C | 21.8 |
|  |  |  | Northbound | A | 3.0 | Through/Left | A | 3.0 |
|  |  |  | Southbound | B | 12.2 | Through/Right | B | 12.2 |
| PM Peak Hour |  |  |  |  |  |  |  |  |
| Jennifer Road \& Pavilion | C | 28.8 | Eastbound | A | 6.6 | Left | A | 6.5 |
|  |  |  |  |  |  | Through | A | 6.6 |
|  |  |  | Westbound | B | 15.4 | Through/Right | B | 15.4 |
|  |  |  | Northbound | D | 53.1 | Left | D | 53.5 |
|  |  |  |  |  |  | Through/Right | D | 52.1 |
|  |  |  | Southbound | D | 52.8 | Left | D | 54.8 |
|  |  |  |  |  |  | Right | D | 52.4 |
| Jennifer Road \& Detention Center | - |  | Eastbound | A | 0.1 | - | - | - |
|  |  |  | Westbound | A | 0.0 | - | - | - |
|  |  |  | Northbound | C | 26.6 | - | - | - |
|  |  |  | Southbound | B | 10.4 | - | - | - |
| Jennifer <br>  <br> Admiral <br> Drive | B | 14.8 | Eastbound | C | 22.1 | Left | C | 23.8 |
|  |  |  |  |  |  | Right | C | 20.9 |
|  |  |  | Northbound | A | 8.3 | Through/Left | A | 8.3 |
|  |  |  | Southbound | B | 16.7 | Through/Right | B | 16.7 |

Table 13. Year 2040 Option 3 HCM Level of Service and Delay

| AM Peak Hour |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Overall LOS | Overall Delay (sec/veh) | Direction | Approach LOS | Approach Delay (sec/veh) | Movement | $\begin{aligned} & \text { Lane } \\ & \text { LOS } \end{aligned}$ | Lane Delay (sec/veh) |
| Jennifer Road \& Pavilion | D | 35.5 | Eastbound | B | 13.8 | Left | B | 18.4 |
|  |  |  |  |  |  | Through | A | 7.2 |
|  |  |  | Westbound | C | 21.3 | Through/Right | C | 21.3 |
|  |  |  | Northbound | D | 48.3 | Left | D | 47.4 |
|  |  |  |  |  |  | Through/Right | D | 49.5 |
|  |  |  | Southbound | D | 52.4 | Left | D | 53.9 |
|  |  |  |  |  |  | Right | D | 52.2 |
| Jennifer Road \& Detention Center | - |  | Eastbound | A | 0.2 | - | - | - |
|  |  |  | Westbound | A | 0.6 | - | - | - |
|  |  |  | Northbound | B | 13.2 | - | - | - |
|  |  |  | Southbound | B | 12.0 | - | - | - |
| Jennifer Road \& Admiral Drive | B | 11.0 | Eastbound | C | 21.9 | Left | C | 22.3 |
|  |  |  |  |  |  | Right | C | 21.8 |
|  |  |  | Northbound | A | 3.0 | Through/Left | A | 3.0 |
|  |  |  | Southbound | B | 12.2 | Through/Right | B | 12.2 |
| PM Peak Hour |  |  |  |  |  |  |  |  |
| Jennifer Road \& Pavilion | C | 28.8 | Eastbound | A | 6.6 | Left | A | 6.5 |
|  |  |  |  |  |  | Through | A | 6.6 |
|  |  |  | Westbound | B | 15.4 | Through/Right | B | 15.4 |
|  |  |  | Northbound | D | 53.1 | Left | D | 53.5 |
|  |  |  |  |  |  | Through/Right | D | 52.1 |
|  |  |  | Southbound | D | 52.8 | Left | D | 54.8 |
|  |  |  |  |  |  | Right | D | 52.4 |
| Jennifer Road \& Detention Center | - |  | Eastbound | A | 0.1 | - | - | - |
|  |  |  | Westbound | A | 0.0 | - | - | - |
|  |  |  | Northbound | C | 23.8 | - | - | - |
|  |  |  | Southbound | B | 10.1 | - | - | - |
| Jennifer <br>  <br> Admiral <br> Drive | B | 14.8 | Eastbound | C | 22.1 | Left | C | 23.8 |
|  |  |  |  |  |  | Right | C | 20.9 |
|  |  |  | Northbound | A | 8.3 | Through/Left | A | 8.3 |
|  |  |  | Southbound | B | 16.7 | Through/Right | B | 16.7 |

Both signalized intersections within the study area maintained their LOS from the existing condition when option 1 was implemented. The unsignalized intersection at Jennifer Road and the detention center decreased from a LOS A to B in both Option 1 and 2. All intersections operated at LOS D or better for all Build options.

Under Build Option 1, the approach delay along westbound Jennifer Road at the intersection of Pavilion Parkway increased marginally by 1.4 and 3.4 seconds in the AM and PM peak hours, respectively. This result is consistent within Option 2 and 3 as well. Throughout all Build options this approach LOS is maintained at LOS C or better.

SimTraffic was used to determine the queue lengths and arterial speeds for all design options. Table 14 displays the queue lengths and Table 15 Displays the arterial speeds.

| Table. 14 |  | (ions 1, 2, | Option 1 |  | Option 2 |  | Option 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intersection | Direction | Movement | Avg. Queue | 95th <br> Queue | Avg. Queue | 95th Queue | Avg. Queue | 95th Queue |
| Jennifer <br> Road and Pavilion Parkway | Northbound | L | 149 (117) | 216 (182) | 150 (115) | 212 (187) | 154 (122) | 224 (183) |
|  |  | L | 100 (48) | 182 (126) | 101 (48) | 182 (127) | 105 (55) | 196 (134) |
|  |  | TR | 139 (46) | 228 (93) | 144 (45) | 243 (94) | 136 (37) | 222 (75) |
|  | Southbound | L | 16 (33) | 45 (68) | 13 (37) | 39 (76) | 14 (37) | 40 (77) |
|  |  | R | 42 (65) | 68 (108) | 42 (61) | 70 (103) | 44 (61) | 73 (97) |
|  |  | R | 18 (25) | 45 (54) | 19 (24) | 44 (51) | 22 (24) | 47 (53) |
|  | Eastbound | L | 57 (27) | 120 (67) | 56 (28) | 125 (74) | 62 (26) | 126 (67) |
|  |  | T | 5 (33) | 41 (85) | 2 (29) | 11 (77) | 7 (37) | 25 (87) |
|  |  | T | 5 (37) | 24 (92) | 5 (34) | 22 (90) | 4 (35) | 20 (90) |
|  | Westbound | T/TR | 88 (96) | 165 (179) | 103 (106) | 189 (187) | 105 (98) | 200 (190) |
|  |  | R | 24 (7) | 83 (42) | - | - | - | - |
| Jennifer Road and Detention Center | Northbound <br> Southbound | LTR | 36 (43) | 62 (74) | 34 (42) | 58 (80) | 32 (41) | 54 (70) |
|  |  | LTR | 8 (4) | 24 (17) | 9 (3) | 27 (13) | 9 (3) | 25 (16) |
| Jennifer Road and Admiral Drive | Northbound | LT | 63 (102) | 111 (168) | 63 (106) | 113 (182) | 58 (104) | 104 (187) |
|  | Southbound | TR | 65 (67) | 116 (124) | 70 (69) | 128 (121) | 64 (72) | 128 (135) |
|  | Eastbound | L | 23 (71) | 58 (142) | 19 (63) | 47 (116) | 20 (71) | 56 (131) |
|  |  | R | 74 (101) | 125 (165) | 72 (102) | 123 (180) | 79 (101) | 134 (160) |

For Option 1, although a 100 -foot storage bay would adequately store the $95^{\text {th }}$ percentile queues, it should be noted that some vehicles may be trapped in the through lane queue, unable to reach the storage bay.

| Table 15. Jennifer Road Arterial Speeds (mph) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Existing |  | $\begin{gathered} 2040 \text { No } \\ \text { Build } \end{gathered}$ |  | Option 1 |  | Option 2 |  | Option 3 |  |
|  | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM |
| Jennifer Road Eastbound | 35 | 34 | 35 | 33 | 35 | 32 | 34 | 32 | 34 | 31 |
| Jennifer Road Westbound | 36 | 37 | 34 | 36 | 34 | 35 | 34 | 35 | 32 | 33 |

The arterial speeds along Jennifer Road were similar to the No Build and Existing condition with most design options only altering the speeds by one to two miles per hour.

The arterial LOS is shown in Table 16. The LOS was outputted from Synchro and included Jennifer Road from west of Pavilion Parkway/US 50 Off Ramp to Admiral Drive. Synchro references the Arterials section of the Highway Capacity Manual to assign an arterial LOS that is based upon the roadway's class, signal delay, travel time, and speeds.

| Table 16. Jennifer Road AM \& PM Peak Hour Arterial Level of Service (LOS) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | AM Peak Hour LOS |  | PM Peak Hour LOS |  |
|  | Eastbound | Westbound | Eastbound | Westbound |
|  | C | C | D | B |
| No Build 2040 | C | C | D | B |
| Build Option 1 | C | C | D | C |
| Build Option 2 | C | C | D | C |
| Build Option 3 | $C$ | $C$ | D | C |

During the AM peak hour, the LOS along Jennifer Road remains constant with a LOS C in both the eastbound and westbound directions. In the PM peak hour, the eastbound LOS also remains constant at LOS D. During the PM peak hour in the westbound direction, the LOS decreases from LOS B to LOS C for each of the three study options. This reduction in service can be attributed to the loss of the westbound travel lane to accommodate the Trail.

Options 1 and 2 were evaluated with Autoturn for the Fire House and the Anne Arundel County Detention Center. The Autoturn layout can be seen in Figures 10 and 11 in the appendix. The removal of the northernmost lane along Jennifer Road would not impede existing heavy vehicles from turning in the future.

## VII. CONCLUSION

Based upon the traffic analysis, the removal of one westbound lane along Jennifer Road would not significantly affect traffic operations. Option 1 is the least impactful alternative that will accommodate the trail. Delay at the three study intersections increased by an average of 1.5 seconds/vehicle in the AM peak hour and 4.1 second/vehicle in the PM peak hour. Under Option 1, all the study intersections operated at a HCM LOS C or better in both the AM and PM peak hours. The largest increase in $95^{\text {th }}$ percentile queue length with the implementation of Option 1 is expected to be 85 feet or approximately 3 vehicles westbound at the intersection of Jennifer Road and Pavilion Parkway in the PM peak hour.

Per our evaluation of Option 2, it is slightly more impactful when compared to Option 1. With the implementation of Option 2, the intersection of Jennifer Road and Pavilion Parkway is expected to operate at a HCM LOS D in the AM peak hour. This anticipated reduction in LOS is due to the minor increase in intersection delay of 0.7 seconds/vehicle from 34.8 to 35.5 . The largest increase in a $95^{\text {th }}$ percentile queue for Option 2 is expected to be 100 feet or approximately 4 vehicles westbound at Pavilion Parkway in the AM peak hour.

Option 3 involves the most roadside construction as two travel lanes would be removed. All the study intersections would operation at LOS D or better in both the AM and PM peak hours. The intersection of Jennifer Road and Pavilion Parkway is expected to operate at LOS D and LOS C in the AM and PM peak hours, respectively.

It is anticipated that all intersections within the study area will operate at LOS D or better with all design options. Although the two-way left turn lane is unnecessary for traffic operations, the addition width serves as added capacity for emergency vehicles.

Upon final design, the use of in-road bike lanes and final lane widths would need to be considered.

## Works Cited

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Malagari, Suzy. "Department of Corrections and Rehabilitation." Montgomery County Detention Center, Montgomery County, MD, 2018, www.montgomerycountymd.gov/cor/MCDC/index.html.

## Appendix

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## Digital Appendix

Synchro (.syn) Files
Synchro Reports
SimTraffic Reports
Arterial Speed Reports

| $1: 9600$ Baud |
| :--- |
| $3: 9600$ Baud |

Access Code: 9999
Channel: 1
Address: 0

Phase Initialization Data


| Vehicle Density Timings |  |  |  |  |  |  | General Control |  |  |  | Miscellaneous |  |  |  | No <br> Simu <br> Gap <br> Out | Special Sequence |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ph. | Added <br> Initial | Max <br> Initial | Time B4 Redu | $\begin{gathered} \text { Car } \\ \text { B4 } \\ \text { Redu } \end{gathered}$ | Time To Redu | Min <br> Gap | Non-Act <br> Response | Veh <br> Recall | Ped Recall | Recall Delay | Non <br> Lock | Dual <br> Entry | Last <br> Car <br> Pass | Condit Service |  | Omit | Minus Yel | Omit <br> Call |
| 1 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 2 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | NonActI | Min | None | 0 | No | Yes | No | No | No | 0 | 0 | 0 |
| 3 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 4 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | NonActII | None | None | 0 | Yes | No | No | No | No | 0 | 0 | 0 |
| 5 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | Yes | No | No | No | No | 0 | 0 | 0 |
| 6 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | NonActI | Min | None | 0 | No | Yes | No | No | No | 0 | 0 | 0 |
| 7 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 8 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | NonActII | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 9 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 10 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 11 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 12 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 13 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 14 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| 15 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |


| 160.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vehical Detector Phase Assignment |  |  |  |  |  | Pedestrian Detector |  |  |  |  |  | Special Detector Phase Assignment |  |  |  |  |  |
|  | Assign <br> Phase | Mode | Switch <br> Phase | Extend | Delay |  | Assign Phase | Mode | Switch <br> Phase | Extend | Delay |  |  | Mode | Switch <br> Phase | Extend | Delay |
| Veh Det:1 | 2 | Veh | 0 | 0.0 | 0 | Ped Det:1 | 2 | Ped | 0 | 0.0 | 0 | Default Data |  |  |  |  |  |
| Veh Det:2 | 4 | Veh | 0 | 0.0 | 8 | Ped Det:2 | 4 | Ped | 0 | 0.0 | 0 |  |  |  |  |  |  |
| Veh Det:3 | 4 | Veh | 0 | 0.0 | 2 | Ped Det:3 | 6 | Ped | 0 | 0.0 | 0 |  |  |  |  |  |  |
| Veh Det:4 | 5 | Veh | 0 | 0.0 | 4 | Ped Det:4 | 8 | Ped | 0 | 0.0 | 0 |  |  |  |  |  |  |
| Veh Det:5 | 6 | Veh | 0 | 0.0 | 0 | Default Data |  |  |  |  |  |  |  |  |  |  |  |

## Unit Data





Alternate Sequences
No Alternate
Sequences
Programmed

## Port 1 Data

| BIU | Port | Basic | Message |
| :---: | :---: | :---: | :---: |
| Addr | Status | Det | 40 |
| 0 | Used | No | No |
| 1 | Used | No | No |
| 8 | Used | No | No |
| 16 | Used | No | No |
| 18 | Used | No | No |

## Signal Driver Ouput

| Channel | Control | Hardware Pins |
| :---: | :---: | :---: |
| 1 | 1 - Veh Phase 1 | 1 - Phase 1 RYG |
| 2 | 2 - Veh Phase 2 | 2 - Phase 2 RYG |
| 3 | 3 - Veh Phase 3 | 3 - Phase 3 RYG |
| 4 | 4 - Veh Phase 4 | 4 - Phase 4 RYG |
| 5 | 5 - Veh Phase 5 | 5 - Phase 5 RYG |
| 6 | 6 - Veh Phase 6 | 6 - Phase 6 RYG |
| 7 | 7 - Veh Phase 7 | 7 - Phase 7 RYG |
| 8 | 8 - Veh Phase 8 | 8 - Phase 8 RYG |
| 9 | 18 - Ped Phase 2 | 10 - Phase 2 DPW |
| 10 | 20 - Ped Phase 4 | 12 - Phase 4 DPW |
| 11 | 22 - Ped Phase 6 | 14 - Phase 6 DPW |
| 12 | 24 - Ped Phase 8 | 16 - Phase 8 DPW |
| 13 | 33 - Overlap A | 17 - Overlap A RYG |
| 14 | 34 - Overlap B | 18 - Overlap B RYG |
| 15 | 35 - Overlap C | 19 - Overlap C RYG |
| 16 | 36 - Overlap D | 20 - Overlap D RYG |
| 17 | 17 - Ped Phase 1 | 9 - Phase 1 DPW |
| 18 | 19 - Ped Phase 3 | 11 - Phase 3 DPW |
| 19 | 21 - Ped Phase 5 | 13 - Phase 5 DPW |
| 20 | 23 - Ped Phase 7 | 15 - Phase 7 DPW |


| Coordination Data | Dial/Split | Cycle |
| :--- | :---: | :---: |
| General Coordination Data |  |  |



## Traffic Plan Data

| Plan: // | Offset Time: <br> Mode: |  | Alternat Sequence: Special Function: |  | Rg 2 Lag Time: <br> Correction Mode: |  | Rg 3 Lag Time: |  | Rg 4 Lag Time: |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Local TBC Data |  |  |  |  |  |  | Source |  |  | Equ | te |  |  |  |
| Start of | Saving | Month: 3 | Week: 2 | Cycle Zero Reference | Hours: 0 | Min: 0 | Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| End of | aving | Month: 11 | Week: 1 |  |  |  |  |  |  |  |  |  |  |  |

## Traffic Data

PHASE FUNCTION


## AUX. Events



Default Data - No Special Day(s) or Week(s) Programmed



## Dimming Data

Default Data - No Dimming Programmed

| Lane Defination |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Lanes | Name | Green <br> Inbound | Yellow <br> Inbound | Red <br> Inbound |
| Default Data - Lane Defination |  | Green <br> Outbound | Yellow <br> Outbound |  |
| program day | program hour | program minute |  |  |
|  |  |  |  |  |

## Preemption Data

Flash $=$ Preempt $1 \quad$ Preempt $2=$ Preempt $3 \quad$ Preempt $4=$ Preempt 5
Preempt $1=$ Preempt $2 \quad$ Preempt $3=$ Preempt $4 \quad$ Preempt $5=$ Preempt 6

|  | Preem <br> NonLocking | pt Time <br> Link to <br> Preempt | rs <br> Delay |  | Dura tion | $\begin{aligned} & \text { Max } \\ & \text { Call } \end{aligned}$ | $\begin{aligned} & \text { Lock- } \\ & \text { Out } \end{aligned}$ | Min <br> Green | Min Walk | Debo unce | $\begin{array}{r} \text { Gate } \\ \text { ext } \\ \text { end } \end{array}$ | $\mathrm{Se}$ <br> Ped Clear |  | Red | $\square_{\text {Grn }}$ | Track <br> Ped | Yel | Red | Dwell Green | Ped Clear |  | Red |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 20 | 0 | 0 | 40 | 20 | 10 | 0 | 40 | 20 |
| 2 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 0 | 0 | 40 | 20 | 10 | 0 | 40 | 20 |
| 3 | No | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 0 | 0 | 40 | 20 | 30 | 0 | 40 | 20 |
| 4 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |
| 5 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |
| 6 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |


| Preempt 1 |  |  | Preempt 2 |  |  | Preempt 3 |  |  | Preempt 4 |  |  | Preempt 5 |  |  | Preempt 6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Phase | Exit <br> Phase | Exit <br> Calls | Phase | Exit <br> Phase | Exit <br> Calls | Phase | Exit <br> Phase | Exit <br> Calls | Phase | Exit <br> Phase | $\begin{gathered} \text { Exit } \\ \text { Calls } \end{gathered}$ | Phase | Exit <br> Phase | Exit <br> Calls | Phase | Exit <br> Phase | Exit <br> Calls |
| 2 | Yes | Yes | 1 | No | Yes | 2 | Yes | Yes | 1 | No | Yes | 1 | No | Yes | 1 | No | Yes |
| 4 | No | Yes | 2 | Yes | Yes | 4 | No | Yes | 2 | No | Yes | 2 | No | Yes | 2 | No | Yes |
| 5 | Yes | Yes | 3 | No | Yes | 5 | Yes | Yes | 3 | No | Yes | 3 | No | Yes | 3 | No | Yes |
| 6 | No | Yes | 4 | No | Yes | 6 | No | Yes | 4 | No | Yes | 4 | No | Yes | 4 | No | Yes |
|  |  |  | 5 | Yes | Yes |  |  |  | 5 | No | Yes | 5 | No | Yes | 5 | No | Yes |
|  |  |  | 6 | No | Yes |  |  |  | 6 | No | Yes | 6 | No | Yes | 6 | No | Yes |
|  |  |  | 7 | No | Yes |  |  |  | 7 | No | Yes | 7 | No | Yes | 7 | No | Yes |
|  |  |  | 8 | No | Yes |  |  |  | 8 | No | Yes | 8 | No | Yes | 8 | No | Yes |
| Priority Timers |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Prio rity | Non- <br> Locking | Del Ex ay end | Free <br> Dial | Free Split |  |  | ck Lock out B | Max Green | PreGreen | Recall | Excl-co <br> Phase <br> Sve. |  | gnal Ty | Transit | Overlap | Blankout |  |

## Priority Detector Channels

## Priority

## Detector

## Priority Fixed Phases

## Priority

Legend:
CO-PHASE FALSE TRUE
QJ-PHASE

Page 7

Priority
Priority Bank :
$\quad$ Partial Priority
Alt Seq
Alt Seq Enabled
Min Walk

Level

| Full Priority |  |
| :--- | :--- |
| Freq. Override | Method |
| Ped skip | Return |
| Force full Priority | PedWait |
| Frequency | PedOverride |
| Freq. Level |  |

## Recovery

Method
Return

PedOverride

| Codes: | 0 | X |
| :---: | :---: | :---: |
|  | FALSE | TRUE |


| Priority : | Priority : | Priority : |
| :---: | :---: | :---: |
| Priority Bank : Queue Phase Detector Time Default data | Priority Bank : Queue Phase Detector Time Default data | Priority Bank: Queue Phase Detector Time Default data |
| Priority : | Priority : | Priority : |
| Priority Bank: Queue Phase Detector Time Default data | Priority Bank: Queue Phase Detector Time Default data | Priority Bank: Queue Phase Detector Time Default data |


| Priority : <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B | Priority <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Default Data |  |  |  |  |  |  |  |  | Default Data |  |  |  |  |  |  |  |  |
| Priority : <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B | Priority <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6 A | B |
| Default Data |  |  |  |  |  |  |  |  | Default Data |  |  |  |  |  |  |  |  |
| Priority : <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B | Priority : <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B |
| Default Data |  |  |  |  |  |  |  |  | Default Data |  |  |  |  |  |  |  |  |




## Default Data

| $1: \mathbf{1 2 0 0}$ Baud |
| :--- |
| $3: \mathbf{1 2 0 0}$ Baud |

Access Code: 9999
Channel:
Address: 12
Revision: 3.13h
IP Address:

## Phase Initialization Data

| Phase | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Initial 1-Inact 4-Grn 1-Inact 1-Inact 1-Inact 4-Grn 1-Inact 1-Inact 0-None 0-None 0-None 0-None 0-None 0-None 0-None 0-None
PHASE DATA

| Vehical Basic Timings |  |  |  |  |  |  | Misc Timings Walk Walk |  |  |  |  |  | Pedestrian Timings Alt Actuated |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Phase | Min <br> Green | Passage | Max 1 | Max2 | Yellow | $\begin{aligned} & \text { All } \\ & \text { Red } \end{aligned}$ | Green Yellow <br> Delay Delay | Offset <br> Time | Offse <br> Mode |  |  | $\begin{gathered} \text { Bike } \\ \text { Psg } \end{gathered}$ | Walk | Ped <br> Clr | Alt <br> Walk | Ped <br> Clr | Flash Walk | $\begin{gathered} \text { Ext } \\ \text { Ped Clr } \end{gathered}$ | Rest in Walk |
| 1 | 4 | 3.0 | 25 | 30 | 3.0 | 1.5 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 2 | 20 | 5.0 | 45 | 50 | 4.0 | 1.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 7 | 14 |  |  | No | 0 | No |
| 3 | 8 | 3.0 | 20 | 30 | 3.0 | 2.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 4 | 8 | 3.0 | 30 | 50 | 4.0 | 1.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 5 | 0 | 0.0 | 0 | 0 | 3.0 | 1.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 6 | 20 | 5.0 | 35 | 50 | 4.0 | 1.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 7 | 0 | 0.0 | 0 | 0 | 3.0 | 1.0 | $0.0 \quad 0.0$ | 0 | $0-A d v a$ | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 8 | 0 | 0.0 | 0 | 0 | 3.0 | 1.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 9 | 0 | 0.0 | 0 | 0 | 3.0 | 0.0 | $0.0 \quad 0.0$ | 0 | $0-\mathrm{Adva}$ | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 10 | 0 | 0.0 | 0 | 0 | 3.0 | 0.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 11 | 0 | 0.0 | 0 | 0 | 3.0 | 0.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 12 | 0 | 0.0 | 0 | 0 | 3.0 | 0.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 13 | 0 | 0.0 | 0 | 0 | 3.0 | 0.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 14 | 0 | 0.0 | 0 | 0 | 3.0 | 0.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 15 | 0 | 0.0 | 0 | 0 | 3.0 | 0.0 | $0.0 \quad 0.0$ | 0 | $0-A d v a$ | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| 16 | 0 | 0.0 | 0 | 0 | 3.0 | 0.0 | $0.0 \quad 0.0$ | 0 | 0-Adva | ance | 0 | 0 | 0 | 0 |  |  | No | 0 | No |
| Vehicle Density Timings |  |  |  |  |  |  | General Control |  |  |  | Miscellaneous |  |  |  |  | No | Special Sequence |  |  |
| Ph. | Added <br> Initial | $\begin{aligned} & \text { Max } \\ & \text { Initial } \end{aligned}$ | Time B4 Redu | Car <br> B4 <br> Redu | $\begin{gathered} \text { Time } \\ \text { To } \\ \text { Redu } \end{gathered}$ | Min <br> Gap | Non-Act <br> Response | Veh <br> Recall | Ped <br> Recall | Recall <br> Delay |  | Non <br> ock | Dual <br> Entry | Last <br> Car <br> Pass | Condit Service | Simu <br> Gap <br> Out | Omit | $\begin{gathered} \text { Minus } \\ \mathrm{t} \\ \text { Yel } \end{gathered}$ | Omit Call |
| 1 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | Yes | No | No | No | No | 0 | 0 | 0 |
| 2 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | NonActI | Min | None | 0 |  | No | Yes | No | No | No | 0 | 0 | 0 |
| 3 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | Yes | No | No | No | No | 0 | 0 | 0 |
| 4 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | NonActII | None | None | 0 |  | Yes | No | No | No | No | 0 | 0 | 0 |
| 5 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 5 | 5 | 0 |
| 6 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | NonActI | Min | None | 0 |  | No | Yes | No | No | No | 0 | 0 | 0 |
| 7 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 7 | 7 | 0 |
| 8 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | NonActII | None | None | 0 |  | No | No | No | No | No | 8 | 8 | 0 |
| 9 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 0 | 0 | 0 |
| 10 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 0 | 0 | 0 |
| 11 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 0 | 0 | 0 |
| 12 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 0 | 0 | 0 |
| 13 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 0 | 0 | 0 |
| 14 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 0 | 0 | 0 |
| 15 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 |  | No | No | No | No | No | 0 | 0 | 0 |


| 160.0 | 0 | 0 | 0 | 0 | 0.0 | None | None | None | 0 | No | No | No | No | No | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vehical Detector Phase Assignment |  |  |  |  |  | Pedestrian Detector |  |  |  |  |  | Special Detector Phase Assignment |  |  |  |  |  |
|  | Assign |  | Switch |  | Delay | Assign |  |  | Switch |  | Delay |  |  | Mode | Switch <br> Phase | Extend | Delay |
| Veh Det:1 | 1 | Veh | 0 | 0.0 | 3 | Ped Det:1 | 2 | Ped | 0 | 0.0 | 0 |  | It |  |  |  |  |
| Veh Det:2 | 6 | Veh | 0 | 0.0 | 0 | Ped Det:2 | 4 | Ped | 0 | 0.0 | 0 |  |  |  |  |  |  |
| Veh Det:3 | 2 | Veh | 0 | 0.0 | 0 | Ped Det:3 | 6 | Ped | 0 | 0.0 | 0 |  |  |  |  |  |  |
| Veh Det:4 | 2 | Veh | 0 | 0.0 | 0 | Ped Det:4 | 8 | Ped | 0 | 0.0 | 0 |  |  |  |  |  |  |
| Veh Det:5 | 4 | Veh | 0 | 0.0 | 5 | Defaul | Data |  |  |  |  |  |  |  |  |  |  |
| Veh Det:6 | 4 | Veh | 0 | 0.0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| Veh Det:7 | 3 | Veh | 0 | 0.0 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |
| Veh Det:8 | 3 | Veh | 0 | 0.0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |


| General Control |  |  |  |  | Remote Flash <br> Test A = Flash |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Startup Time: | 5 sec |  | Input | Output |  |  |  | Default Data <br> - No Flash |
| Startup State: | Flash | Ring | Respons | Selection | Phase | Entry | Exit |  |
| Red Revert: | 40.0 sec |  | Ring 1 | Ring 1 | Default Data <br> - No Flash |  |  |  |
| Auto Ped Clr: | No |  | Ring 2 | Ring 2 |  |  |  |  |
| Stop T Reset: | No |  | None | None |  |  |  |  |
| Alt Sequence: | 0 |  | None | None |  |  |  |  |
| Special Seq: I/O Modes | 0-Standard |  |  |  |  |  |  |  |
| ABC Input( | try) Modes: 0 | D Input(Entry) Modes: 0 <br> D Output(O/STS) Modes: 0 |  |  |  |  |  |  |
| ABC Output | /STS) Modes: 0 |  |  |  |  |  |  |  |



| Ring |  |  |  | Phase(s) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Next |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Phase | Ring | Phase | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & =0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | 1 | 2 | 3 | 4 | 1 | 1 | 3 | 3 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1 | 1 | 2 |  | 5 | 5 | 7 | 7 | 2 | 2 | 4 | 4 |  |  |  |  |  |  |  |  |
| 2 | 1 | 3 |  | 6 | 6 | 8 | 8 | 5 | 6 | 7 | 8 |  |  |  |  |  |  |  |  |
| 3 | 1 | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6 | 2 | 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Alternate Sequences
No Alternate
Sequences
Programmed

## Port 1 Data

| BIU | Port | Basic | Message |
| :---: | :---: | :---: | :---: |
| Addr | Status | Det | 40 |
| 0 | Used | No | No |
| 1 | Used | No | No |
| 8 | Used | No | No |
| 16 | Used | No | No |
| 18 | Used | No | No |

## Signal Driver Ouput

| Channel | Control | Hardware Pins |
| :---: | :---: | :---: |
| 1 | 1 - Veh Phase 1 | 1 - Phase 1 RYG |
| 2 | 2 - Veh Phase 2 | 2 - Phase 2 RYG |
| 3 | 3 - Veh Phase 3 | 3 - Phase 3 RYG |
| 4 | 4 - Veh Phase 4 | 4 - Phase 4 RYG |
| 5 | 5 - Veh Phase 5 | 5 - Phase 5 RYG |
| 6 | 6 - Veh Phase 6 | 6 - Phase 6 RYG |
| 7 | 7 - Veh Phase 7 | 7 - Phase 7 RYG |
| 8 | 8 - Veh Phase 8 | 8 - Phase 8 RYG |
| 9 | 18 - Ped Phase 2 | 10 - Phase 2 DPW |
| 10 | 20 - Ped Phase 4 | 12 - Phase 4 DPW |
| 11 | 22 - Ped Phase 6 | 14 - Phase 6 DPW |
| 12 | 24 - Ped Phase 8 | 16 - Phase 8 DPW |
| 13 | 33 - Overlap A | 17 - Overlap A RYG |
| 14 | 34 - Overlap B | 18 - Overlap B RYG |
| 15 | 35 - Overlap C | 19 - Overlap C RYG |
| 16 | 36 - Overlap D | 20 - Overlap D RYG |
| 17 | 17 - Ped Phase 1 | 9 - Phase 1 DPW |
| 18 | 19 - Ped Phase 3 | 11 - Phase 3 DPW |
| 19 | 21 - Ped Phase 5 | 13 - Phase 5 DPW |
| 20 | 23 - Ped Phase 7 | 15 - Phase 7 DPW |


| Coordination Data | Dial/Split | Cycle |
| :--- | :---: | :---: |
| General Coordination Data |  |  |



## Traffic Plan Data

| Plan: // | Offset Time: <br> Mode: |  | Alternat Sequence: Special Function: |  | Rg 2 Lag Time: <br> Correction Mode: |  | Rg 3 Lag Time: |  | Rg 4 Lag Time: |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Local TBC Data |  |  |  |  |  |  | Source Equate Days |  |  |  |  |  |  |  |
| Start of Daylight Saving End of Daylight Saving |  | Month: 3 <br> Month: 11 | Week: 2 <br> Week: 1 | Cycle Zero Reference | Hours: 24 | Min: 0 | Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Traffic Data

PHASE FUNCTION


## AUX. Events



Default Data - No Special Day(s) or Week(s) Programmed



## Dimming Data

Default Data - No Dimming Programmed

| Lane Defination |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Lanes | Name | Green <br> Inbound | Yellow <br> Inbound | Red <br> Inbound |
| Default Data - Lane Defination |  | Green <br> Outbound | Yellow <br> Outbound |  |
| program day | program hour | program minute |  |  |
|  |  |  |  |  |

## Preemption Data

Flash $>$ Preempt $1 \quad$ Preempt $2=$ Preempt $3 \quad$ Preempt $4=$ Preempt 5
Preempt $1>$ Preempt $2 \quad$ Preempt $3=$ Preempt $4 \quad$ Preempt $5=$ Preempt 6

|  | Preemp <br> Non- <br> Locking | pt Time <br> Link to <br> Preempt | ers <br> Delay |  | Dura tion | Max <br> Call | LockOut | Min Green | Min Walk | Debo unce | $\begin{array}{r} \text { Gate } \\ \text { ext } \\ \text { end } \end{array}$ | Ped Clear |  | Red | Grn | Track <br> Ped | Yel | Red | Dwell Green | Ped <br> Clear |  | Red |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |
| 2 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |
| 3 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |
| 4 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |
| 5 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |
| 6 | No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 40 | 20 | 10 | 8 | 40 | 20 | 10 | 8 | 40 | 20 |


| Preempt 1 |  |  | Preempt 2 |  |  | Preempt 3 |  |  | Preempt 4 |  |  | Preempt 5 |  |  | Preempt 6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Phase | Exit <br> Phase | Exit <br> Calls | Phase | Exit <br> Phase | $\begin{gathered} \text { Exit } \\ \text { Calls } \end{gathered}$ | Phase | Exit <br> Phase | Exit <br> Calls | Phase | Exit <br> Phase | Exit <br> Calls | Phase | Exit <br> Phase | Exit <br> Calls | Phase | Exit <br> Phase | $\begin{array}{r} \text { Exit } \\ \text { Calls } \\ \hline \end{array}$ |
| 1 | No | Yes | 1 | No | Yes | 1 | No | Yes | 1 | No | Yes | 1 | No | Yes | 1 | No | Yes |
| 2 | No | Yes | 2 | No | Yes | 2 | No | Yes | 2 | No | Yes | 2 | No | Yes | 2 | No | Yes |
| 3 | No | Yes | 3 | No | Yes | 3 | No | Yes | 3 | No | Yes | 3 | No | Yes | 3 | No | Yes |
| 4 | No | Yes | 4 | No | Yes | 4 | No | Yes | 4 | No | Yes | 4 | No | Yes | 4 | No | Yes |
| 5 | No | Yes | 5 | No | Yes | 5 | No | Yes | 5 | No | Yes | 5 | No | Yes | 5 | No | Yes |
| 6 | No | Yes | 6 | No | Yes | 6 | No | Yes | 6 | No | Yes | 6 | No | Yes | 6 | No | Yes |
| 7 | No | Yes | 7 | No | Yes | 7 | No | Yes | 7 | No | Yes | 7 | No | Yes | 7 | No | Yes |
| 8 | No | Yes | 8 | No | Yes | 8 | No | Yes | 8 | No | Yes | 8 | No | Yes | 8 | No | Yes |
| Priority Timers |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Prio rity | NonLocking | Del Ext ay en | Free <br> Dial | Free Split |  |  |  | Max Green | PreGreen | Recall | Excl-co <br> Phase <br> Svc. |  | ignal Typ | Transit | verlap | Blankout |  |

## Priority Detector Channels

## Priority

## Detector

## Priority Fixed Phases

## Priority

Legend:
CO-PHASE FALSE TRUE
QJ-PHASE

Priority
Priority Bank :
$\quad$ Partial Priority
Alt Seq
Alt Seq Enabled
Min Walk

Level

| Full Priority |  |
| :--- | :--- |
| Freq. Override | Method |
| Ped skip | Return |
| Force full Priority | PedWait |
| Frequency | PedOverride |
| Freq. Level |  |

## Recovery

Method
Return

PedOverride

| Codes: | 0 | X |
| :---: | :---: | :---: |
|  | FALSE | TRUE |


| Priority : | Priority : | Priority : |
| :---: | :---: | :---: |
| Priority Bank : Queue Phase Detector Time Default data | Priority Bank : Queue Phase Detector Time Default data | Priority Bank: Queue Phase Detector Time Default data |
| Priority : | Priority : | Priority : |
| Priority Bank: Queue Phase Detector Time Default data | Priority Bank: Queue Phase Detector Time Default data | Priority Bank: Queue Phase Detector Time Default data |


| Priority : <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B | Priority <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Default Data |  |  |  |  |  |  |  |  | Default Data |  |  |  |  |  |  |  |  |
| Priority : <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B | Priority <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6 A | B |
| Default Data |  |  |  |  |  |  |  |  | Default Data |  |  |  |  |  |  |  |  |
| Priority : <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B | Priority : <br> Bank <br> Detector | PE | 1A | 2A | 3A | 4A | 5A | 6A | B |
| Default Data |  |  |  |  |  |  |  |  | Default Data |  |  |  |  |  |  |  |  |



Default Data

## Default Data

## Default Data

Preempt 5


## Default Data

Default Data
Default Data

## System/Detectors Data










Figure 14


Figure 14


Figure 14
Maryland State Highway Administration
Data Services Engineering Division
Turning Movement Counts - Field Sheet


Comments: WITHMIOVISION


Figure 15
Job No.:


| Name--> | PARKINGL |  |  |  |  | DETENTION | CENTERE | NTRANCE |  |  | JENNIFER | OAD |  |  |  | JENNIFER | OAD |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HOUR |  |  | From North |  |  |  |  | From South |  |  |  |  | From East |  |  |  |  | From West |  |  | GRAND |
| ENDING | U turn | Left | Through | Right | Total | U turn | Left | Through \| | Right | Total | U turn | Left | Through | Right | Total | U turn | Left | Through \| | Right | Total | TOTAL |
| 00:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | , | 0 | , |  | 0 | 0 | 0 | , | 0 | 0 | 0 |
| 00:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:00 | , | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |
| 01:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |
| 02:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 | 0 | 0 | 0 | 0 | 0 | , | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |
| 03:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |
| 05:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 26 | 0 | 27 | 0 | 0 | 20 | 7 | 27 | 54 |
| 06:30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 26 | 0 | 28 | 1 | 0 | 17 | 8 | 26 | 55 |
| 06:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 37 | 0 | 40 | 0 | 2 | 11 | 16 | 29 | 69 |
| 07:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 5 | 54 | 0 | 59 | 0 | 3 | 22 | 12 | 37 | 97 |
| 07:15 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 10 | 0 | 1 | 43 | 0 | 44 | 0 | 2 | 25 | 7 | 34 | 88 |
| 07:30 | 0 | 0 | 1 | 3 | 4 | 0 | 10 | 0 | 2 | 12 | 0 | 2 | 55 | 0 | 57 | 0 | 0 | 31 | 9 | 40 | 113 |
| 07:45 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | , | 2 | 44 | 1 | 47 | 0 | 1 | 46 | 3 | 50 | 100 |
| $\underline{08: 00}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 | 0 | 0 | 63 | 0 | 63 | 0 | 0 | 32 | 6 | 38 | 105 |
| $\underline{08: 15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 45 | 0 | 45 | 0 | 0 | 46 | 4 | 50 | 97 |
| 08:30 | 0 | 0 | 0 | 5 | 5 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 56 | 0 | 57 | 0 | 0 | 41 | 2 | 43 | 107 |
| 08:45 | 0 | 0 | 0 | 3 |  | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 44 | 0 | 45 | 0 | 3 | 41 | 1 | 45 | 94 |
| 09:00 | 0 | 0 | 0 | 1 |  | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 42 | 0 | 42 | 1 | , | 37 | 4 | 44 | 88 |
| 09:15 | 0 | 1 | 0 | 5 | 6 | 0 |  | 0 | 0 | 1 | 0 | 0 | 36 | 0 | 36 | 0 | 0 | 36 | 1 | 37 | 80 |
| 09:30 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 57 | 0 | 57 | 1 | 1 | 30 | 0 |  | 92 |
| 09:45 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 43 | 0 | 2 | 35 | 2 | 39 | 84 |
| 10:00 | 0 | 0 | 0 | 7 | 7 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 39 | 0 | 40 | 0 | 4 | 33 | , | 40 | 88 |
| 10:15 | 0 | 1 | 0 | 0 |  | 0 | 2 | 2 | 1 | 5 | 0 | 0 | 46 | 0 | 46 | 1 | 1 | 29 | 2 | 33 | 85 |
| 10:30 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 53 | 0 | 2 | 38 | 0 | 40 | 95 |
| 10:45 | 0 | 0 | 0 | 3 | 3 | 0 |  | 0 | 0 | 1 | 0 | 0 | 37 | 0 | 37 | 0 | 1 | 43 | 0 | 44 | 85 |
| 11:00 | 0 | 0 | 0 | 2 | 2 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 52 | 0 | 52 | 0 |  | 38 | 4 | 43 | 100 |
| 11:15 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 2 | 3 | 0 | 0 | 34 | 0 | 34 | 0 | 1 | 44 | 1 | 46 | 85 |
| 11:30 | 0 | 0 | 0 | 4 | 4 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 35 | 0 | 35 | 1 |  | 38 | 1 | 43 | 84 |
| 11:45 | 0 | 0 | 0 | 4 | 4 | 0 | 1 | 0 | 2 | 3 | 0 | 2 | 49 | 0 | 51 | 0 | 0 | 53 | 2 | 55 | 113 |
| 12:00 | 0 | 0 | 0 | 4 | 4 | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 32 | 0 | 34 | 1 | 0 | 36 | 4 | 41 | 82 |
| 12:15 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 33 | 0 | 33 | 1 | , | 52 | 2 | 58 | 96 |
| 12:30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | , | 1 | 44 | 0 | 45 | 0 | 0 | 49 | 3 | 52 | 98 |
| 12:45 | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 1 | 3 | 5 | 0 | 0 | 60 | 0 | 60 | 0 | 3 | 53 | 3 | 59 | 127 |
| 13:00 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 43 | 0 | 46 | 0 | 2 | 49 | 1 | 52 | 100 |
| 13:15 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 2 | 4 | 0 | 3 | 55 | 0 | 58 | 0 | 6 | 40 | 3 | 49 | 113 |
| 13:30 | 0 | 1 | 0 | 3 | , | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 59 | 0 | 59 | 0 | 4 | 50 | 0 | 54 | 118 |
| 13:45 | 0 | 1 | 0 | 3 | 4 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 58 | 0 | 58 | 1 | 3 | 38 | 0 | 42 | 106 |
| 14:00 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 1 | 3 | 0 | 0 | 50 | 0 | 50 | 0 | 0 | 53 | 0 | 53 | 108 |
| 14:15 | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 0 | 1 | 2 | 0 | 2 | 35 | 0 | 37 | 0 | 1 | 43 | 2 | 46 | 88 |
| 14:30 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 49 | 0 | 50 | 0 | 2 | 45 | 6 | 53 | 106 |
| 14:45 | 0 | 0 | 0 | 4 | 4 | 0 | 2 | 0 | 2 | 4 | 0 | 0 | 38 | 0 | 38 | 0 | 0 | 69 | 17 | 86 | 132 |
| 15:00 | 0 | 0 | 0 | 3 | 3 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 52 | 1 | 53 | 0 | 3 | 69 | 2 | 74 | 133 |
| 15:15 | 0 | 0 | 0 | 2 | 2 | 0 | 12 | 0 | 2 | 14 | 0 | 1 | 40 | 0 | 41 | 1 | 1 | 56 | 1 |  | 116 |
| 15:30 | 0 | 0 | 0 | 3 | , | 0 | 17 | 0 | 2 | 19 | 0 | 0 | 56 | 0 | 56 | 0 | 4 | 44 | 1 | 49 | 127 |
| 15:45 | 0 | 0 | 0 |  |  | 0 | 8 | 0 | 3 | 11 | 0 | 0 | 58 | 0 | 58 | 1 | 1 | 52 | 2 |  | 130 |
| 16:00 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 0 | 1 | 5 | 0 | 1 | 53 | 0 | 54 | 0 | 0 | 45 | 0 | 45 | 106 |
| 16:15 | 0 | 1 | 0 |  | 2 | 0 | 8 | 0 | 3 | 11 | 0 | 0 | 46 | 0 | 46 | 0 | 0 | 75 | 0 | 75 | 134 |
| 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 66 | 0 | 66 | 0 | 1 | 65 | 0 | 66 | 138 |
| 16:45 | 0 | 0 | 0 | 1 |  | 0 | 6 | 0 | 1 | 7 | 0 | 0 | 47 | 0 | 47 | 0 | 0 | 64 | 0 | 64 | 119 |
| 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | , | 0 | 51 | 0 | 51 | 0 | 2 | 69 | 1 | 72 | 127 |
| $\underline{17: 15}$ | 0 | 0 | 0 | 1 |  | 0 | 4 | 0 | 2 | 6 | 0 | 0 | 53 | 0 | 53 | 0 | 0 | 73 | 1 | 74 | 134 |
| $\underline{17: 30}$ | 0 | 0 | 0 | , | 1 | 0 | 4 | 0 | 1 | 5 | , | 0 | 60 | 0 | 60 | 0 | 2 | 117 | 0 | 119 | 185 |
| $\underline{17: 45}$ | 0 | 0 | , | 0 |  | 0 | 8 | 0 | 1 | 9 | 0 | 0 | 63 | 0 | 63 | 0 | 0 | 60 | 2 | 62 | 134 |
| 18:00 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 37 | 0 | 37 | 0 | 1 | 54 | 2 | 57 | 97 |
| 18:15 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 28 | 0 | 29 | 0 | 2 | 54 | 1 | 57 | 88 |
| 18:30 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 31 | 0 | 0 | 58 | 1 | 59 | 91 |
| 18:45 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 31 | 0 | 31 | 0 | 1 | 42 | 1 | 44 | 78 |
| 19:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 29 | 0 | 4 | 50 | 1 | 55 | 84 |
| 19:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19:30 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20:00 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20:30 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 20:45 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $21: 00$ | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 21:15 | 0 | 0 | 0 | 0 |  | , | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | , | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |
| 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | , | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | , | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 9 | 1 | 93 | 103 | 0 | 151 | 3 | 38 | 192 | 0 | 36 | 2373 | 2 | 2411 | 10 | 75 | 2410 | 152 | 2647 | 5353 |
| AM Peak Vol | 0 | 1 | 1 | 3 | 5 | 0 | 16 | 0 | 4 | 20 | 0 | 4 | 207 | 1 | 212 | 0 | 1 | 155 | 22 | 178 | 415 |
| PM Peak Vol | 0 | 0 | 0 | 2 | 2 | 0 | 20 | 0 | 4 | 24 | 0 | 0 | 227 | 0 | 227 | 0 | 4 | 319 | 4 | 327 | 580 |

Figure 15


Figure 15


Comments: WITH MIOVISION


Figure 16
Maryland State Highway Administration
Data Services Engineering Division
Turning Movement Counts - Field Sheet


Figure 16
Job No.:
Location:
Date:
Recorder:
Interval (dd)
(In Minutes)
 Maryland State Highway Administration
Data Services Engineering Division Data Services Engineering Division
Turning Movement Counts - Field Sheet

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| 11/8/2017 | Wednesday | Town: | ANNAPOLIS |
| JMT |  | Weather: | CLOUDY |



Figure 16

$\qquad$



Page 36

Figure 18
JMT
40 Wight Ave. Hunt Valley MD 21030 Traffic Volume Study - Field Sheet
Request No.:
Job No.:

| DATE(m/d/y): |  |  |  | 6/6/2016 | 6/7/2018 | 6/8/2018 | 6/9/2018 | Daily | Wkday | Wkend |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| End Time | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Avg. | Avg. | Avg. |
| 0:15 |  |  |  | 0 | 4 | 2 | 3 | 2 | 2 | 2 |
| 0:30 |  |  |  | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 0:45 |  |  |  | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| 1:00 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:15 |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1:30 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:45 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 |  |  |  | 0 | 0 | 1 | 2 | 1 | 0 | 1 |
| 2:15 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 |  |  |  | 0 | 0 | 4 | 0 | 1 | 1 | 0 |
| 3:00 |  |  |  | 0 | 2 | 0 | 1 | 1 | 1 | 1 |
| 3:15 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 3:30 |  |  |  | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 3:45 |  |  |  | 0 | 2 | 1 | 0 | 1 | 1 | 0 |
| 4:00 |  |  |  | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| 4:15 |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 4:30 |  |  |  | 0 | 1 | 2 | 1 | 1 | 1 | 1 |
| 4:45 |  |  |  | 0 | 0 | 0 | 2 | 1 | 0 | 1 |
| 5:00 |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 5:15 |  |  |  | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 5:30 |  |  |  | 0 | 2 | 0 | 1 | 1 | 1 | 1 |
| 5:45 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 6:00 |  |  |  | 0 | 2 | 1 | 1 | 1 | 1 | 1 |
| 6:15 |  |  |  | 0 | 3 | 2 | 4 | 2 | 2 | 2 |
| 6:30 |  |  |  | 0 | 1 | 1 | 2 | 1 | 1 | 1 |
| 6:45 |  |  |  | 0 | 2 | 1 | 2 | 1 | 1 | 1 |
| 7:00 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 |  |  |  | 0 | 15 | 16 | 12 | 11 | 10 | 6 |
| 7:30 |  |  |  | 0 | 4 | 1 | 2 | 2 | 2 | 1 |
| 7:45 |  |  |  | 0 | 2 | 2 | 0 | 1 | 1 | 0 |
| 8:00 |  |  |  | 0 | 1 | 2 | 2 | 1 | 1 | 1 |
| 8:15 |  |  |  | 0 | 7 | 4 | 2 | 3 | 4 | 1 |
| 8:30 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8:45 |  |  |  | 0 | 0 | 0 | 4 | 1 | 0 | 2 |
| 9:00 |  |  |  | 0 | 2 | 0 | 3 | 1 | 1 | 2 |
| 9:15 |  |  |  | 0 | 2 | 2 | 0 | 1 | 1 | 0 |
| 9:30 |  |  |  | 0 | 4 | 1 | 1 | 2 | 2 | 1 |
| 9:45 |  |  |  | 0 | 1 | 3 | 0 | 1 | 1 | 0 |
| 10:00 |  |  |  | 0 | 4 | 2 | 0 | 2 | 2 | 0 |
| 10:15 |  |  |  | 0 | 3 | 0 | 1 | 1 | 1 | 1 |
| 10:30 |  |  |  | 0 | 4 | 0 | 0 | 1 | 1 | 0 |
| 10:45 |  |  |  | 0 | 6 | 2 | 0 | 2 | 3 | 0 |
| 11:00 |  |  |  | 0 | 4 | 5 | 3 | 3 | 3 | 2 |
| 11:15 |  |  |  | 0 | 5 | 6 | 2 | 3 | 4 | 1 |
| 11:30 |  |  |  | 0 | 3 | 3 | 1 | 2 | 2 | 1 |
| 11:45 |  |  |  | 2 | 8 | 2 | 4 | 4 | 4 | 2 |
| 12:00 |  |  |  | 3 | 0 | 1 | 3 | 2 | 1 | 2 |

Figure 18


Comments : $\square$

Figure 18

JMT
40 Wight Ave. Hunt Valley MD 21030 Traffic Volume Study - Field Sheet


| DATE $(\mathrm{m} / \mathrm{d} / \mathrm{y})$ : | 6/10/2018 | 6/11/2018 | 6/12/2018 |  |  |  |  | Daily | Wkday | Wkend |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| End Time | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Avg. | Avg. | Avg. |
| 0:15 | 3 | 4 | 4 |  |  |  |  | 4 | 4 | 2 |
| 0:30 | 1 | 0 | 0 |  |  |  |  | 0 | 0 | 1 |
| 0:45 | 0 | 1 | 0 |  |  |  |  | 0 | 1 | 0 |
| 1:00 | 0 | 0 | 1 |  |  |  |  | 0 | 1 | 0 |
| 1:15 | 0 | 0 | 0 |  |  |  |  | 0 | 0 | 0 |
| 1:30 | 1 | 2 | 2 |  |  |  |  | 2 | 2 | 1 |
| 1:45 | 0 | 0 | 0 |  |  |  |  | 0 | 0 | 0 |
| 2:00 | 0 | 0 | 1 |  |  |  |  | 0 | 1 | 0 |
| 2:15 | 0 | 0 | 1 |  |  |  |  | 0 | 1 | 0 |
| 2:30 | 0 | 0 | 0 |  |  |  |  | 0 | 0 | 0 |
| 2:45 | 0 | 1 | 0 |  |  |  |  | 0 | 1 | 0 |
| 3:00 | 1 | 1 | 1 |  |  |  |  | 1 | 1 | 1 |
| 3:15 | 1 | 0 | 1 |  |  |  |  | 1 | 1 | 1 |
| 3:30 | 2 | 2 | 0 |  |  |  |  | 1 | 1 | 1 |
| 3:45 | 1 | 2 | 2 |  |  |  |  | 2 | 2 | 1 |
| 4:00 | 0 | 2 | 1 |  |  |  |  | 1 | 2 | 0 |
| 4:15 | 0 | 0 | 1 |  |  |  |  | 0 | 1 | 0 |
| 4:30 | 1 | 0 | 0 |  |  |  |  | 0 | 0 | 1 |
| 4:45 | 0 | 2 | 1 |  |  |  |  | 1 | 2 | 0 |
| 5:00 | 0 | 0 | 1 |  |  |  |  | 0 | 1 | 0 |
| 5:15 | 0 | 0 | 1 |  |  |  |  | 0 | 1 | 0 |
| 5:30 | 1 | 0 | 0 |  |  |  |  | 0 | 0 | 1 |
| 5:45 | 1 | 0 | 0 |  |  |  |  | 0 | 0 | 1 |
| 6:00 | 2 | 3 | 3 |  |  |  |  | 3 | 3 | 1 |
| 6:15 | 1 | 0 | 2 |  |  |  |  | 1 | 1 | 1 |
| 6:30 | 1 | 1 | 0 |  |  |  |  | 1 | 1 | 1 |
| 6:45 | 1 | 1 | 0 |  |  |  |  | 1 | 1 | 1 |
| 7:00 | 12 | 1 | 3 |  |  |  |  | 5 | 2 | 6 |
| 7:15 | 1 | 18 | 14 |  |  |  |  | 11 | 16 | 1 |
| 7:30 | 0 | 1 | 1 |  |  |  |  | 1 | 1 | 0 |
| 7:45 | 0 | 1 | 3 |  |  |  |  | 1 | 2 | 0 |
| 8:00 | 0 | 3 | 3 |  |  |  |  | 2 | 3 | 0 |
| 8:15 | 2 | 1 | 2 |  |  |  |  | 2 | 2 | 1 |
| 8:30 | 0 | 0 | 4 |  |  |  |  | 1 | 2 | 0 |
| 8:45 | 3 | 1 | 2 |  |  |  |  | 2 | 2 | 2 |
| 9:00 | 1 | 0 | 0 |  |  |  |  | 0 | 0 | 1 |
| 9:15 | 0 | 2 | 2 |  |  |  |  | 1 | 2 | 0 |
| 9:30 | 0 | 3 | 5 |  |  |  |  | 3 | 4 | 0 |
| 9:45 | 1 | 0 | 1 |  |  |  |  | 1 | 1 | 1 |
| 10:00 | 1 | 4 | 1 |  |  |  |  | 2 | 3 | 1 |
| 10:15 | 2 | 3 | 1 |  |  |  |  | 2 | 2 | 1 |
| 10:30 | 1 | 5 | 1 |  |  |  |  | 2 | 3 | 1 |
| 10:45 | 1 | 5 | 1 |  |  |  |  | 2 | 3 | 1 |
| 11:00 | 0 | 5 | 1 |  |  |  |  | 2 | 3 | 0 |
| 11:15 | 1 | 5 | 4 |  |  |  |  | 3 | 5 | 1 |
| 11:30 | 0 | 4 | 8 |  |  |  |  | 4 | 6 | 0 |
| 11:45 | 1 | 4 | 0 |  |  |  |  | 2 | 2 | 1 |
| 12:00 | 0 | 5 | 4 |  |  |  |  | 3 | 5 | 0 |

Figure 18

| 12:15 | 2 | 3 | 2 |  |  |  |  | 2 | 3 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12:30 | 0 | 0 | 6 |  |  |  |  | 2 | 3 | 0 |
| 12:45 | 1 | 1 |  |  |  |  |  | 1 | 1 | 1 |
| 13:00 | 1 | 6 |  |  |  |  |  | 4 | 6 | 1 |
| 13:15 | 0 | 7 |  |  |  |  |  | 4 | 7 | 0 |
| 13:30 | 0 | 3 |  |  |  |  |  | 2 | 3 | 0 |
| 13:45 | 1 | 3 |  |  |  |  |  | 2 | 3 | 1 |
| 14:00 | 3 | 3 |  |  |  |  |  | 3 | 3 | 2 |
| 14:15 | 0 | 2 |  |  |  |  |  | 1 | 2 | 0 |
| 14:30 | 1 | 3 |  |  |  |  |  | 2 | 3 | 1 |
| 14:45 | 3 | 2 |  |  |  |  |  | 3 | 2 | 2 |
| 15:00 | 2 | 3 |  |  |  |  |  | 3 | 3 | 1 |
| 15:15 | 12 | 17 |  |  |  |  |  | 15 | 17 | 6 |
| 15:30 | 1 | 0 |  |  |  |  |  | 1 | 0 | 1 |
| 15:45 | 2 | 7 |  |  |  |  |  | 5 | 7 | 1 |
| 16:00 | 2 | 2 |  |  |  |  |  | 2 | 2 | 1 |
| 16:15 | 3 | 14 |  |  |  |  |  | 9 | 14 | 2 |
| 16:30 | 0 | 2 |  |  |  |  |  | 1 | 2 | 0 |
| 16:45 | 0 | 4 |  |  |  |  |  | 2 | 4 | 0 |
| 17:00 | 0 | 2 |  |  |  |  |  | 1 | 2 | 0 |
| 17:15 | 2 | 4 |  |  |  |  |  | 3 | 4 | 1 |
| 17:30 | 0 | 2 |  |  |  |  |  | 1 | 2 | 0 |
| 17:45 | 1 | 1 |  |  |  |  |  | 1 | 1 | 1 |
| 18:00 | 0 | 2 |  |  |  |  |  | 1 | 2 | 0 |
| 18:15 | 0 | 4 |  |  |  |  |  | 2 | 4 | 0 |
| 18:30 | 1 | 3 |  |  |  |  |  | 2 | 3 | 1 |
| 18:45 | 0 | 2 |  |  |  |  |  | 1 | 2 | 0 |
| 19:00 | 1 | 2 |  |  |  |  |  | 2 | 2 | 1 |
| 19:15 | 4 | 2 |  |  |  |  |  | 3 | 2 | 2 |
| 19:30 | 0 | 4 |  |  |  |  |  | 2 | 4 | 0 |
| 19:45 | 0 | 5 |  |  |  |  |  | 3 | 5 | 0 |
| 20:00 | 0 | 2 |  |  |  |  |  | 1 | 2 | 0 |
| 20:15 | 1 | 2 |  |  |  |  |  | 2 | 2 | 1 |
| 20:30 | 1 | 0 |  |  |  |  |  | 1 | 0 | 1 |
| 20:45 | 0 | 3 |  |  |  |  |  | 2 | 3 | 0 |
| 21:00 | 0 | 1 |  |  |  |  |  | 1 | 1 | 0 |
| 21:15 | 2 | 1 |  |  |  |  |  | 2 | 1 | 1 |
| 21:30 | 0 | 1 |  |  |  |  |  | 1 | 1 | 0 |
| 21:45 | 0 | 2 |  |  |  |  |  | 1 | 2 | 0 |
| 22:00 | 3 | 2 |  |  |  |  |  | 3 | 2 | 2 |
| 22:15 | 0 | 0 |  |  |  |  |  | 0 | 0 | 0 |
| 22:30 | 3 | 4 |  |  |  |  |  | 4 | 4 | 2 |
| 22:45 | 0 | 7 |  |  |  |  |  | 4 | 7 | 0 |
| 23:00 | 15 | 10 |  |  |  |  |  | 13 | 10 | 8 |
| 23:15 | 5 | 11 |  |  |  |  |  | 8 | 11 | 3 |
| 23:30 | 1 | 1 |  |  |  |  |  | 1 | 1 | 1 |
| 23:45 | 1 | 1 |  |  |  |  |  | 1 | 1 | 1 |
| 0:00 | 1 | 1 |  |  |  |  |  | 1 | 1 | 1 |
|  |  |  |  |  |  |  |  |  |  |  |
| Totals | 121 | 257 | 92 | 0 | 0 | 0 | 0 | 196 | 255 | 61 |

Comments : $\square$

