MULRYAN ENGINEERING, P.C.

TRAFFIC ENGINEERING REPORT

ULTIMATE SPORTS COMPLEX

CARLETON AVENUE CR 17 &
DPW DRIVE/COURT HOUSE DRIVE
TOWN OF ISLIP

SUFFOLK COUNTY

PROJECT NO. M10-061
SEPTEMBER 27, 2010

1225 FRANKLIN AVENUE, SUITE 325 - GARDEN CITY, NEW YORK 11530
TEL: (516) 616-0083 - FAX (516) 616-0086
WWW.MULRYANENG.COM

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EXECUTIVE SUMMARY

- Mulryan Engineering, P.C. has prepared a traffic engineering analysis of the roadway network surrounding the site of the proposed sports complex located at the intersection of Carleton Avenue (CR 17) and DPW Drive/Court House Drive. The site is in the Hamlet of Central Islip.
- This report addresses the traffic engineering items raised by the Town Planning Department in a meeting held on Thursday, July 22, 2010 with the project team.
- The property is divided into two sections. The portion of the property located along the north side of DPW Drive is currently developed with 7-little league baseball, softball and t-ball fields. The portion of the property located along the south side of DPW Drive is currently part of the Department of Public Works' field yard.
- The proposed project will improve the site with 6-baseball fields, a batting cage, a football/lacrosse/soccer field and a 207,142-square foot multiuse indoor sports complex. The indoor facility will provide two football/lacrosse/soccer fields, a health club (7,168-sf) and a day care facility (11,952-sf). The indoor fields will provide stadium seating. The main field will have 2,800-seats and the other field will have 400-seats (3,200-seats total).
- Access to the site will be provided via the existing traffic signal at the intersection of Carleton Avenue (CR 17) and DPW Drive/Court House Drive. As part of the proposed improvements DPW Drive will be realigned and terminated at the entrance to the Department of Public Works' field yard. The traffic generated by the Department of Public Works' yard will access Carleton Avenue via S. Research Place to the north. The remaining portion of DPW Drive will provide access to the subject site. A secondary right-turn only exit is also proposed.
- The volume of traffic generated by the proposed site will vary each season. The outdoor fields will operate from March to October (7-months). Activities will transition between the indoor and outdoor fields during the months of March and October.

- The hours of operation for the playing fields are anticipated to 5:30 pm to 10:00 pm Monday through Friday and 7:30 am to 10:00 pm Saturday and Sunday. During the week there will be one game starting at 6:00 and a second game starting at 8:00 pm, on each field. On Saturday and Sunday the first game will begin at 8:00 am and the last game will start at 8:00 pm, allowing for a total of seven two-hour games, on each field.
- The health club and day care facility will operate during normal business hours. These uses will operate independent from the playing fields.
- The main field of the indoor stadium provides 2,800-seats. The design is proposed to provide a venue for non-typical events such as championship games. These events will be scheduled when the remainder of the playing fields are not in use.
- The site is anticipated to generate 522-trips in the evening and 399-trips on Saturday during the Spring and Summer and 217-trips in the evening and 116-trips on Saturday during the Fall and Winter. These trips represent vehicles entering and exiting the site during the peak hours of activity.
- A full capacity peak event held on the main indoor field is anticipated to generate a maximum of 934-trips. This volume represents the number of one-way trips either entering or exiting the site during a non-typical peak event. These events will last more than one-hour so the peak the entering and exiting traffic will not occur during the same time period. These events will be scheduled outside of the peak commuter hours of the surrounding roadway network.
- The site provides a total of 1010-parking stalls including 946-paved stalls and 64-landbanked spaces. The Town of Islip zoning code requires 1,422-parking spaces based on the overall development. The application requires a parking variance from the Town of Islip. The anticipated peak parking demand will occur during non-typical events. It is anticipated that during a full capacity championship game a maximum of 934-vehicles will be parked on-site.
- Although the calculations for the overall site show the need for a parking variance the operation of the facility will provide ample parking. The peak parking demand will be generated during non-typical events on the main indoor field. The site design provides 946-paved parking stalls and an additional 64-landbanked parking stalls. The proposed number of

parking spaces on site will be able to accommodate the anticipated peak demand of 934-vehicles. It is also important to consider that a non-typical peak event with 90% occupancy will generate 840-parked vehicles.

- The typical parking demand will be significantly less. During the Fall and Winter when the outdoor fields are not in use the site will have a significant surplus of parking available.
- A review of the existing roadway and traffic conditions in the vicinity of the site reveals that the existing roadway system provides adequate capacity to accommodate the current and proposed traffic volumes.
- A growth rate of 2.0 % per year was applied to the existing traffic volumes for a period of two years to determine the future ambient no build traffic volumes. The traffic generated by the proposed Home Run Hotels project was then added to the ambient no build volumes to model the no build traffic volumes at the study intersections.
- The Highway Capacity Analysis shows that the traffic generated by the proposed development will have no perceptible impact on the level of service at the study intersections or along the roadway network surrounding the subject site.
- Accident records of the roadway network (from March 31, 2007 through April 1, 2010 (3-years)) show that there have been 8-accidents at the intersection of Carleton Avenue and Court House Drive and 10-accident on Carleton Avenue and S. Research Place, within a three year span. The volume of traffic generated by the site is not anticipated to affect the accident rates at these intersections.
- Based on our traffic engineering analysis contained within, the proposed development will have no adverse impact to the surrounding roadway network.

INTRODUCTION

Mulryan Engineering, P.C. has prepared a traffic engineering analysis of the roadway network surrounding the site of the proposed sports complex.

The site is located at the intersection of Carleton Avenue (CR 17) and DPW Drive/Court House Drive. The adjoining properties include a New York State Department of Transportation field yard to the south, Town of Islip Department of Public Works' field yard to the west, an industrial park to the north and Carleton Avenue (CR 17) to the east. The properties on the east site of the intersection include the proposed Home Run Hotels site, the Federal Court complex and the Suffolk County Sports Park. The Suffolk County Sports Park is the home field for the Long Island Ducks baseball team.

The property is divided into two sections. The portion of the property located along the north side of DPW Drive is currently developed with 7-little league baseball, softball and t-ball fields. The portion of the property located along the south side of DPW Drive is currently part of the Department of Public Works' yard.

The proposed project will improve the site with 6-baseball fields, a batting cage, a football/lacrosse/soccer field and a 207,142-square foot multiuse indoor sports complex. The indoor facility will provide two football/lacrosse/soccer fields, a health club and a day care facility. The indoor fields will provide stadium seating. The main field will have 2,800-seats and the other field will have 400-seats (3,200-seats total).

Access to the site will be provided via the existing traffic signal at the intersection of Carleton Avenue (CR 17) and DPW Drive/Court House Drive. As part of the proposed improvements DPW Drive will be realigned and terminated at the entrance to the Department of Public Works' field yard. The traffic generated by the Department of Public Works' yard will access Carleton Avenue via S. Research Place to the north. The remaining portion of DPW Drive will provide access to the subject site. A secondary right-turn only exit is also proposed.

The existing little league fields will be relocated by the applicant. The new little league park will include 7-baseball, softball and t-ball fields and a new football/lacrosse/soccer field. The site will be located on the east side of Belt Drive E./Eastview Drive at the intersection of L Drive.

This study identifies the changes in traffic movements along the adjacent roadway network which will occur as a result of the proposed development and identifies the potential impact of the future build condition on the adjacent street system.

STUDY METHODOLOGY

The traffic engineering analysis prepared for this project serves as the basis for this report as well as the recommendations and conclusions contained within. This report is based on the recommended guidelines and practices outlined by the Institute of Transportation Engineers (ITE). The report summarizes in detail the following information:

- A review of the existing roadway and traffic conditions in the vicinity of the site including roadway geometry, traffic volumes, signal operations, and intersection capacities;

- A detailed review of the existing traffic volumes and travel patterns on the roadway network surrounding the site and a determination of the existing peak hour volumes during each of the time periods studied;

- Calculations of the projected ambient background traffic growth on the existing roadways;

- Trip generation analysis of the volume of traffic expected to be generated by the proposed development;

- Parking generation analysis of the expected parking demand generated by the proposed development;

- Highway capacity analysis of the existing and future traffic volumes considering the development of the site under future build conditions;

- Accident analysis of the accident history along the roadway network for a period of three years; and

- The results, findings and conclusions of our traffic engineering analysis of the existing roadway network and the future conditions based on the traffic characteristics of the proposed development.

EXISTING CONDITIONS

EXISTING ROADWAY NETWORK

Figure No. 1 in the Technical Appendix shows the roadway network and the area surrounding the subject site. The following provides a description of the key roadways located in proximity to the subject site.

Carleton Avenue (CR 17) provides two lanes in each direction with turn lanes at key intersections. Carleton Avenue is located to the east of the subject property. Carleton Avenue is under the jurisdiction of the Suffolk County Department of Public Works

DPW Drive provides one lane in each direction. DPW Drive begins at Carleton Avenue and becomes S. Technology Drive. S. Technology Drive provides one lane in each direction starting at DPW Drive and terminating at its intersection with S. Research Place/Creative Drive. S. Research Place provides one lane in each direction from DPW Drive to Carleton Avenue.

Court House Drive begins at its intersection with Carleton Avenue and continues east to Belt Drive E./Eastview Drive. Court House Drive provides one lane in each direction with a center left turn lane and right turn lanes at key intersections.

The table below shows the average daily traffic volumes on Carleton Avenue:

Roadway	**Average Daily Traffic (vehicles per day)**	**(Year)**
Carleton Avenue (CR 17)	23,233	(2007)

SURROUNDING LAND USES

The adjoining properties include a New York State Department of Transportation field yard to the south, Town of Islip Department of Public Works' field yard to the west, an industrial park to the north and Carleton Avenue (CR 17) to the east. The properties on the east site of the intersection include the proposed Home Run Hotels site, the Federal Court complex and the Suffolk County Sports Park. The Suffolk County Sports Park is the home field for the Long Island Ducks baseball team.

EXISTING TRAFFIC VOLUMES

Manual turning movement counts were collected during the weekday evening and Saturday peak hours at the study intersections. The peak hour turning movement volumes are provided within the Technical Appendix. The turning movement data was collected during the following time periods:

- In the evening from 4:00 p.m. to 6:00 p.m.
- In the evening from 4:30 p.m. to 7:30 p.m.
- On Saturday from 12:00 p.m. to 2:00 p.m.
- On Saturday from 6:30 p.m. to 7:30 p.m.

The late evening counts were taken on days when the Long Island Ducks played at Suffolk County Sports Park. The results of these traffic counts were analyzed to determine the distinct hour during each of the time periods surveyed when traffic experiences its highest level referred to as the "peak hour." The peak hour volume is used in our analysis to model the critical demand during each time period. Counts were collected on Friday, August 20th and 27th, Saturday August 21st and 28th, 2010. The following is a list of the study intersections included in our analysis of the proposed project.

- Carleton Avenue (CR 17) and DPW Drive/Court House Drive
- Carleton Avenue (CR 17) and S. Research Place

ADJUSTED TRAFFIC VOLUME FLOW RATE

The Highway Capacity Analysis uses the adjusted flow rate based on the peak hour volumes and the peak hour factors at each location. The peak hour volume is divided by the peak hour factor to produce the critical 15-minute demand projected over the entire one hour period. The results of this analysis provide the level of service experienced during the busiest 15-minute period within the peak hour.

NO BUILD CONDITIONS

AMBIENT TRAFFIC GROWTH

The volume of traffic using the roadway network has historically increased each year based on population growth and development. An ambient growth rate is used to determine the future base traffic volumes. The ambient growth rate takes into account developments that will increase the volume of traffic at the study intersections prior to the completion of this project.

The Town identified three projects under review in proximity to the subject site. The other planned projects include a 400,000-sf food distribution center on Lowell Avenue south of Suffolk Avenue and a 284-unit residential development at the corner of Belt Drive E. and Lowell Avenue.

In order to account for the traffic generated by these projects, the existing traffic volumes at the study intersections were increased by a growth rate factor of 2.0 % compounded yearly. This growth rate is applied to the existing volumes to generate the base no build traffic volumes.

This rate exceeds the standard ambient growth forecasted for this area. The additional ambient growth is used to account for local development projects that would increase traffic at the study intersections above and beyond the forecasted increase for this area.

The third project identified by the Town was the Home Run Hotel project located on the north-east corner of Carleton Avenue and Court House Drive. The traffic generated by this project was assigned directly to the study intersections as part of the no build analysis.

For the purposes of this analysis, the future no build and build conditions are anticipated to occur within the next two years. This timeframe looks to forecast the traffic conditions beyond the completion of the project. The construction time-frame for this project is anticipated to be approximately 12-months.

ALTERNATIVE DEVELOPMENT UNDER EXISTING ZONING

Under the Town's Master Plan the subject site can be developed with municipal buildings, courts, or private or not-for-profit recreational facilities. The site can accommodate a building of approximately 470,000-square feet. A trip generation analysis was prepared in order to provide a comparison of the potential trips generated by the site developed with a government office complex

The volume of trips generated was based on the standard calculations compiled by the Institute of Transportation Engineers (ITE) in the 8th Edition Trip Generation, 2008. This is often referred to as the Trip Generation Manual and is considered the industry standard for traffic engineering studies. The trip generation was calculated using the ITE Land Use Code 730 (Government Office Complex). The independent variable used in the calculation is the number of "square feet".

	Entering	Exiting	Total
Weekday 7:00 pm to 9:00 pm	926	113	1,039
Weekday 4:00 pm to 6:00 pm	414	926	1,340

FUTURE BUILD CONDITIONS

TRIP GENERATION

The development of the subject site will generate a certain number of vehicle trips throughout the day. The proposed site consists of 2-indoor fields and 7-outdoor fields. The site will operate the 7-outdoor fields from March through October. A trip generation study was conducted at Baseball Heaven in Yaphank during the Labor Day Championship tournament. During the study games were being conducted at each of the 7-playing fields. The number of trips generated per field was applied to the proposed development to determine the number of trip generated by the playing fields.

Additional trips will be generated by the proposed health club and day care facility. The volume of trips generated by this portion of the proposed development was based on the standard calculations compiled by the Institute of Transportation Engineers (ITE) in the 8th Edition Trip Generation, 2008. This is often referred to as the Trip Generation Manual and is considered the industry standard for traffic engineering studies. The trip generation of the proposed development was calculated using the ITE Land Use Code 492 (Health/Fitness Club) and 565 (Day Care Center). The independent variable used in the calculation is the number of "square feet" attributed to each land use.

Spring and Summer Weekday 4:00 pm to 6:00 pm	Entering	Exiting	Total
Indoor Playing Fields	48	32	80
Outdoor Playing Fields	168	112	280
Health Club	14	11	25
Day Care	70	79	149
	300	234	534

Spring and Summer Saturday 12:00 pm to 2:00 pm	Entering	Exiting	Total
Indoor Playing Fields	48	32	80
Outdoor Playing Fields	168	112	280
Health Club	9	11	20
Day Care	13	8	19
	238	163	401

Fall and Winter Weekday 4:00 pm to 6:00 pm	Entering	Exiting	Total
Indoor Playing Fields	48	32	80
Outdoor Playing Fields	0	0	0
Health Club	14	11	25
Day Care	70	79	149
	132	122	254

Fall and Winter Saturday 12:00 pm to 2:00 pm	Entering	Exiting	Total
Indoor Playing Fields	48	32	80
Outdoor Playing Fields	0	0	0
Health Club	9	11	20
Day Care	13	8	20
	70	51	121

The highway capacity analysis prepared for this project utilizes the peak Spring and Summer trip generation during the typical peak hours and during the peak hours when the Long Island Ducks are playing at the Suffolk County Sports Park.

The proposed development will generate significantly less traffic than the Alternative Development Under Existing Zoning of a government office complex on the subject site during the commuter peak hours on the surrounding roadway network.

TRIP DISTRIBUTION

Trips generated by the development of the subject site are distributed throughout the roadway network and assigned to the study intersections. The percent distribution is applied to the trip generation to establish the number of trips assigned to specific turning movements at each of the study intersections. One hundred percent of the trip generation is distributed and assigned to the site access. The distribution model is based on the travel patterns of vehicles at the study intersections observed during the traffic counts collected for this project and the anticipated travel patterns.

The directional distribution for this project anticipates that 50% of the traffic will enter the site from the south, 35% will enter from the north and 15% from the east. Vehicles entering the site from the south will travel northbound and turn left turn into the site. Vehicles entering the site from the north will travel southbound and turn right into the site. Vehicles entering the site from the east will travel westbound across Carleton Avenue into the site.

As part of the proposed project DPW Drive will be realigned. This realignment and the relocation of the little league fields will cause a redistribution of traffic on the roadway network. Access to the Department of Public Works' field yard will be provided via S. Research Place.

The traffic currently using DPW Drive has been added to the traffic volumes at the intersection of S. Research Place under the build condition.

The little league fields will be relocated to the east side of Belt Drive E. opposite L Drive. The traffic generated by the little league will distributed onto Belt Drive E./Eastview Drive. The majority of traffic generated by this site will enter and exit the facility outside of the peak hours of the surrounding roadway network. Vehicles entering and exiting the little league park will have direct access to Lowell Avenue and Spur Drive N. The site also provides indirect access to Carleton Avenue. Each intersection connecting to the major roadway system is controlled by a traffic signal. As the traffic generated by this site is already using the roadway network the potential impact is minimal. Potential traffic generated during the peak hours at the study intersections is represented by the ambient growth rate.

HIGHWAY CAPACITY ANALYSIS

DESCRIPTION

The level of service and capacity analysis prepared for this project is based on the methodologies presented in the Highway Capacity Manual (HCM 2000), published by the Transportation Research Board. The manual provides a consistent system of techniques for the evaluation of the quality of service on highway and street facilities. The following information is contained within Chapters 10, 16 and 17 of the Highway Capacity Manual.

SIGNALIZED INTERSECTIONS

CAPACITY

Capacity at intersections is defined for each lane group. The lane group capacity is the maximum hourly rate at which vehicles can reasonably be expected to pass through the intersection under prevailing traffic, roadway, and signalization conditions. The flow rate is generally measured or projected for a peak 15-minute period, and capacity is stated in vehicles per hour (vehicles per hour). Traffic conditions include volumes on each approach, the distribution of vehicles by movement (left, through, and right), the vehicle type distribution within each movement, the location and use of bus stops within the intersection area, pedestrian crossing flows, and parking movements on approaches to the intersection. Roadway conditions include the basic geometrics of the intersection, including the number and width of lanes, grades, and lane use allocations (including parking lanes). Signalization conditions include a full definition of the signal phasing, timing, and type of control, and an evaluation of signal progression for each lane group. The analysis of capacity at signalized intersections focuses on the computation of saturation flow rates, capacities, volume to capacity ratios, and level of service for lane groups.

LEVEL OF SERVICE

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-minute analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the volume to capacity ratio for the lane group. The critical volume to capacity ratio is an approximate indicator of the overall sufficiency of an intersection. The critical volume to capacity ratio depends on the conflicting critical lane flow rates and the signal phasing.

The average back of queue is another performance measure that is used to analyze a signalized intersection. The back of queue is the number of vehicles that are queued depending on arrival patterns of vehicles and vehicles that do not clear the intersection during a given green phase.

Levels of service are defined to represent reasonable ranges in control delay.

LOS A describes operations with low control delay, up to **10** seconds per vehicle. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

LOS B describes operations with control delay greater than **10** and up to **20** seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

LOS C describes operations with control delay greater than **20** and up to **35** seconds per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with control delay greater than **35** and up to **55** seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with control delay greater than **55** and up to **80** seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high seconds per vehicle ratios. Individual cycle failures are frequent.

LOS F describes operations with control delay in excess of **80** seconds per vehicle. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high volume to capacity ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

Delays in the range of LOS F (unacceptable) can occur while the volume to capacity ratio is below 1.0. Very high delays can occur at such volume to capacity ratios when some combination of the following conditions exists: the cycle length is long, the lane group in question is disadvantaged by the signal timing (has a long red time), and the signal progression for the subject movements is poor. The reverse is also possible (for a limited duration): a saturated lane group (i.e., volume to capacity ratio greater than 1.0) may have low delays if the cycle length is short, or the signal progression is favorable, or both.

Thus, the designation LOS F does not automatically imply that the intersection, approach, or lane group, is over capacity, nor does an LOS better than E automatically imply that unused capacity is available.

UNSIGNALIZED INTERSECTIONS

CAPACITY

At two-way stop controlled (unsignalized) intersections, drivers on the controlled approaches are required to select gaps in the major street flow through which to execute crossing or turning maneuvers on the basis of judgment. In the presence of a queue, each driver on the controlled approach must also use some time to move into the front-of-queue position and prepare to evaluate gaps in the major street flow. Thus, the capacity of the controlled legs is based on three factors: the distribution of gaps in the major street traffic stream, driver judgment in selecting gaps through which to execute the desired maneuvers, and the follow-up time required by each driver in a queue.

The basic capacity model assumes that gaps in the conflicting stream are randomly distributed. When traffic signals on the major street are within 0.25 miles of the subject intersection, flows may not be random but will likely have some platoon structure.

Pedestrians crossing an intersection impede lower-ranked minor street vehicles, but only one lane at a time. This is because vehicles performing a given through or turning movement tend to pass in front of or behind pedestrians once a driver's target lane is clear. The important factor is to determine the number of blockages. For the purpose of determining the pedestrian impedance, the pedestrian volume is the sum of individual pedestrians crossing individually and groups of pedestrians crossing together during the analysis time period.

The existence of a raised or striped median or a two-way left-turn lane (TWLTL) on the major street often causes some degree of a gap acceptance phenomenon known as "two-stage gap acceptance". For example, the existence of a raised or striped median causes a significant proportion of the minor street drivers to first cross part of the major street approach and then pause in the middle of the road to wait for another gap in the other approach. If a two-way left-turn lane exists on the major street, the minor street left-turn vehicle usually merges into the two-way left-turn lane first, then seeks a usable gap on the other approach while slowly moving some distance along the two-way left-turn lane. Both of these behaviors can increase capacity.

The geometric elements near the stop line on the stop-controlled approaches of many intersections may result in a higher capacity than the shared-lane capacity equation may predict. This is because, at such approaches, two vehicles may occupy or depart from the stop line simultaneously as a result of a large curb radius, a tapered curb, or a parking prohibition. The magnitude of this effect will depend in part on the turning movement volumes and the resultant probability of two vehicles being simultaneously at the stop line and on the storage length available to feed the second position at the stop line.

Often, two or three movements share a single lane on the minor approach. With this lane sharing, vehicles from different movements do not have simultaneous access to gaps, nor can more than one vehicle from the sharing movements use the same gap, which influences capacity.

The existence of nearby signalized intersections (i.e., traffic signals on the major street within 0.25 miles of the subject intersection) typically causes vehicles to arrive at the intersection in platoons. This influences the size and distribution of available gaps and may cause an increase in the minor street capacity. The greater the number of vehicles traveling in platoons, the higher the minor street capacity for a given opposing volume. This is due to the greater proportion of large gaps that more than one minor street vehicle can use. If signalized intersections exist upstream of the subject intersection in both directions, the effect is much more complex.

LEVEL OF SERVICE

Four measures are used to describe the performance of TWSC intersections: control delay, delay to major street through vehicles, queue length, and v/c ratio. The primary measure that is used to provide an estimate of LOS is control delay. This measure can be estimated for any movement on the minor (i.e., the stop-controlled) street. By summing delay estimates for individual movements, a delay estimate for each minor street movement and minor street approach can be achieved.

For AWSC intersections, the average control delay (in seconds per vehicle) is used as the primary measure of performance. Control delay is the increased time of travel for a vehicle approaching and passing through an AWSC intersection, compared with a free flow vehicle if it were not required to slow or stop at the intersection.

Capacity analysis at TWSC intersections depends on a clear description and understanding of the interaction of drivers on the minor or stop-controlled approach with drivers on the major street. Both gap acceptance and empirical models have been developed to describe this interaction. Procedures described in this chapter rely on a gap acceptance model developed and refined in Germany (I). The concepts from this model are described in Chapter **10.** Exhibit **17-1** illustrates input to and the basic computation order of the method described in this chapter.

Level of service (LOS) for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS is not defined for the intersection as a whole. LOS criteria are given below:

Level of Service Criteria for Unsignalized Intersections	
Level of Service	**Delay (in seconds per vehicle)**
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

The LOS criteria for TWSC intersections are somewhat different from the criteria used for signalized intersections primarily because different transportation facilities create different driver perceptions. The expectation is that a signalized intersection is designed to carry higher traffic volumes and experience greater delay than an unsignalized intersection.

RESULTS

The following provides the results of the highway capacity analysis prepared for this project in terms of level of service and delay experienced at the study intersections, under the Existing, No Build and Build Conditions.

The "Existing Condition" provides an analysis of the critical 15-mintue period during the peak hour observed at the study intersections. The "No Build Condition" takes into account the background traffic growth and other planned projects that will increase the traffic volumes at the study intersections. To determine the future volume of traffic on the roadway network upon completion of the proposed project; the "Build Condition" considers the trip generation, trip distribution and no build traffic volumes.

- Signalized Intersections:

Carleton Avenue (CR 17) and DPW Drive/Court House Drive

Time Period	**Condition**	**Delay**	**LOS**
PM Peak Hour	Existing	28.0	C
	No Build	30.6	C
	Build	30.3*	C
Saturday Peak Hour	Existing	20.0	B
	No Build	20.4	C
	Build	21.3	C
PM Peak Hour	Existing	25.3	C
LI Ducks Game Day	No Build	26.8	C
	Build	26.7*	C
Saturday Peak Hour	Existing	19.6	B
LI Ducks Game Day	No Build	20.1	C
	Build	21.0	C

* The overall intersection delay is based on a weighted average of each approach. The individual movement delay and level of service are provided in the technical appendix.

Carleton Avenue (CR 17) and S. Research Place

Time Period	Condition	Delay	LOS
PM Peak Hour	Existing	11.8	B
	No Build	11.9	B
	Build	12.4	B
Saturday Peak Hour	Existing	13.4	B
	No Build	13.5	B
	Build	13.7	B
PM Peak Hour	Existing	12.3	B
LI Ducks Game Day	No Build	12.5	B
	Build	12.9	B
Saturday Peak Hour	Existing	11.3	B
LI Ducks Game Day	No Build	11.4	B
	Build	12.7	B

The highway capacity analysis prepared for this project utilizes the peak Spring and Summer trip generation during the typical peak hours and during the peak hours when the Long Island Ducks are playing at the Suffolk County Sports Park.

Carleton Avenue (CR 17) and DPW Drive/Court House Drive

Time Period	Condition	Delay	LOS
PM Peak Hour			
Peak Event	Entering	38.2	D
	Exiting	41.2	D
Peak Event	Entering	34.6	C
during Ducks Game	Exiting	44.6	D
Saturday Peak Hour			
Peak Event	Entering	32.2	C
	Exiting	34.9	C
Peak Event	Entering	31.6	C
during Ducks Game	Exiting	36.9	D

PEAK EVENTS

The roadway network surrounding the subject site has the capacity to accommodate peak events. The results of the capacity analysis for peak events are shown above. These results reflect two scenarios. Scenario one is the peak event entering or exiting traffic occurring during the peak commuter hours and the second scenario is the peak event volumes during the peak hours with a Long Island Ducks home game. The traffic generated by the Ducks game occurs during off-peak hours after the commuter peak.

These peak events are not anticipated to occur during the peak hours of the roadway network so the level of service shown is a theoretical worst case scenario. Peak events will be scheduled sporadically throughout the year and do not represent the typical activity at the proposed site. It is anticipated that approximately five to six peak events will occur at the facility per year. The applicant does not plan to schedule peak events during times that would conflict with traffic generated by the Suffolk County Sports Park.

MITIGATION

In order to accommodate the traffic generated by the site the applicant is proposing to reconstruct DPW Drive. The western section of the roadway will be realigned to terminate into the Town of Islip Department of Public Works' field yard. The eastern section of the roadway will be widened and improved to provide a shared left-through lane and a dedicated right turn lane. The reconstruction of the roadway will require the replacement or modification of the traffic signal equipment within the roadway.

FINDINGS

The highway capacity analysis of the study intersections shows that the development of this property will have no perceptible impact to the level of service on the surrounding roadway network.

ACCIDENT ANALYSIS

The following provides a summary of the New York State Accident records of the roadway network (from March 31, 2007 through April 1, 2010 (3-years)).

Location	No. of Accidents	Year
Carleton Avenue and Court House Drive	0	2007 (9-months)
	0	2008
	7	2009
	1	2010 (3-months)
Carleton Avenue and S. Research Place	0	2007 (9-months)
	5	2008
	5	2009
	0	2010 (3-months)

One fatality occurred at the intersection of Carleton Avenue and S. Research Place. The accident occurred on Saturday, February 9th 2008 at 7:00 pm. The accident records indicate that the vehicle was traveling east making a left turn at an unsafe speed. No other vehicles were involved in the accident.

The intersection of Carleton Avenue and Court House Drive experienced an unusually high number of accidents in 2009. No serious injuries were reported at this intersection over the three year period reported.

The volume of traffic generated by the site is not anticipated to affect the accident rates at these intersections. The accident summary information is provided in the Technical Appendix.

PARKING ANALYSIS

Our office reviewed the site plan prepared by Holzmacher, McLendon & Murrell, P.C. (H2M Group), dated 03-05-10, last revised 09-10-10 revision number ten. Our office has also discussed the proposed development with the applicant and project team.

- The site provides a total of 1,010-parking stalls including 946-paved parking stalls and 64-landbanked spaces. The number of parking spaces provided requires a variance from the Town of Islip.
- Required Parking Calculation Table:

Land Use	**Parking Requirement**	**Proposed Units**	**Required Parking**
Sports Complex Indoor Seating	1-parking stall per 3-seats	3200-seats	1067
Health Club	1-parking stall per 200-sf	5568-sf	28
Racquet Ball Court	1-parking stall per 500-sf	1600-sf	4
Storage	1-parking stall per 600-sf	17396-sf	29
Day Care Center	1-parking stall per 200-sf	11952-sf	60
Sports Complex Outdoor Seating	1-parking stall per 3-seats	700-seats	234
Total Required			**1422**
Total Provided			**1010**

- A parking generation study conducted at Baseball Heaven showed a peak parking generation rate of 48-parked vehicles per field. In total the proposed site provides 9-playing fields. This equated to a peak parking generation rate of 432-vehicles which leaves ample reserve capacity for the health club and day care center.

- The Town requires a total of 1,422-parking stalls. The zoning requirements consider each of the individual components of the overall site. This calculation does not consider the hours of operation of the individual land uses.
- The parking variance centers on the number of seats provided for the two indoor playing fields. The main field provides 2800-seats requiring 934-parking spaces. This single playing field accounts for 66% of the overall parking required by the site.
- The applicant has stated that this field is design to provide a venue for non-typical events such as championship games. These events will be scheduled when the remainder of the playing fields are not in use.
- The site provides 946-paved parking spaces which is adequate to accommodate the anticipated peak demand generated by a full capacity championship game.
- It is important to consider that a championship game with 90% occupancy will generate 840-parked vehicles providing over 100-avaiable paved parking spaces.
- As part of the proposed project the existing little league fields will be relocated. The existing fields provide parking along DPW Drive. The parking spaces within these areas are not clearly defined. The following table provides a comparison of the existing and proposed parking conditions for the little league fields.

Land Use	**Parking Requirement**	**Proposed Units**	**Required Parking**
Existing Little League Complex Outdoor Seating	1-parking stall per 3-seats	300-seats*	100
Total Provided			**78***
Proposed Little League Complex Outdoor Seating	1-parking stall per 3-seats	400-seats	134
Total Provided			**150**

* Approximate values.

- The redevelopment of the little league complex will provide adequate parking to accommodate the anticipated peak demand.

CONCLUSIONS

In summary, the site is located at the intersection of Carleton Avenue (CR 17) and DPW Drive/Court House Drive. The proposed project will improve the subject site with 6-baseball fields, a batting cage, a football/lacrosse/soccer field and a 207,142-square foot multiuse indoor sports complex. The indoor facility will provide two football/lacrosse/soccer fields, a health club (7,168-sf) and a day care facility (11,952-sf). The indoor fields will provide stadium seating. The main field will have 2,800-seats and the other field will have 400-seats (3,200-seats total).

In order to accommodate the traffic generated by the site the applicant is proposing to reconstruct DPW Drive. The western section of the roadway will be realigned to terminate into the Town of Islip Department of Public Works' field yard. The eastern section of the roadway will be widened and improved to provide a shared left-through lane and a dedicated right turn lane. The reconstruction of the roadway will require the replacement or modification of the traffic signal equipment within the roadway. Access to the site will be provided via the existing traffic signal at the intersection of Carleton Avenue (CR 17) and DPW Drive and a secondary right-turn only exit to the south.

The site provides a total of 1,010-parking stalls including 946-paved parking stalls and 64-landbanked spaces. The number of parking spaces provided requires a variance from the Town of Islip. The Town requires a total of 1,422-parking stalls.

The results of our parking analysis indicate that the site will provide adequate parking to accommodate the anticipated peak demand.

The results of the highway capacity analysis show that the roadway network surrounding the subject site has the capacity to accommodate peak events held at the main indoor field. These events are not anticipated to occur during the peak hours of the roadway network.

The highway capacity analysis prepared for this project utilizes the peak Spring and Summer trip generation during the typical peak hours and during the peak hours when the Long Island Ducks are playing at the Suffolk County Sports Park.

The proposed development will generate significantly less traffic than the Alternative Development Under Existing Zoning of a government office complex on the subject site during the commuter peak hours on the surrounding roadway network.

The level of traffic generated by the proposed development will have no perceptible impact to the level of service on the surrounding roadway network.

TECHNICAL APPENDIX

ULTIMATE SPORTS COMPLEX

CARLETON AVENUE CR 17 &
DPW DRIVE/COURT HOUSE DRIVE
TOWN OF ISLIP

SUFFOLK COUNTY

PROJECT NO. M10-061
SEPTEMBER 27, 2010

SECTION NO. 1 ..... TRAFFIC VOLUME DATA

Mulryan Engineering, P.C. — Table No. 1

Ultimate Sports Complex - Islip
M10-061

Growth Factor: 2.00%
No. of Years: 2
Growth Rate: 1.040

Home Run Hotels, LLC Trip Generation

	PM	SAT
Enter	**130**	**163**
Exit	**111**	**136**
Total	241	299

Ultimate Sports Trip Generation

	PM	SAT
Enter	**300**	**238**
Exit	**234**	**163**
Total	534	401

Carleton Avenue (CR 17) and DPW Drive/Court House Drive		Southbound			Westbound			Northbound			Eastbound			
		Right	Through	Left	Right	Through	Left	Right	Through	Left	Right	Through	Left	Total
PM Peak Hour	4:30 PM	0	926	14	67	1	111	59	1010	10	21	0	1	2220
* PM Peak Hour	5:45 PM	4	836	218	3	0	19	418	856	11	5	2	2	2374
Saturday Peak Hour	12:00 PM	2	791	81	40	0	50	155	642	8	3	3	4	1779
* Saturday Peak Hour	6:30 PM	6	564	152	11	0	9	248	662	12	1	1	5	1671
PM Adjusted Flow Rate	0.920	**0**	**1007**	**15**	**73**	**1**	**121**	**64**	**1098**	**11**	**23**	**0**	**1**	2413
* PM Adjusted Flow Rate	0.942	**4**	**887**	**231**	**3**	**0**	**20**	**444**	**909**	**12**	**5**	**2**	**2**	2520
Sat Adjusted Flow Rate	0.904	**2**	**875**	**90**	**44**	**0**	**55**	**171**	**710**	**9**	**3**	**3**	**4**	1968
* Sat Adjusted Flow Rate	0.837	**7**	**674**	**182**	**13**	**0**	**11**	**296**	**791**	**14**	**1**	**1**	**6**	1996
Distribution	Entering			10%				50%	15%					75%
Distribution	Exiting		15%		10%		50%							75%
Site Generated Volume	PM	---	17	13	11	---	56	65	20	---	---	---	---	181
	SAT	---	20	16	14	---	68	82	24	---	---	---	---	224
No Build PM Peak Hour	1.040	**0**	**1063**	**29**	**87**	**1**	**181**	**132**	**1161**	**11**	**24**	**0**	**1**	2690
*** No Build PM Peak Hour**	1.040	**4**	**940**	**254**	**14**	**0**	**76**	**526**	**965**	**12**	**6**	**2**	**2**	2802
No Build Sat Peak Hour	1.040	**2**	**930**	**109**	**60**	**0**	**126**	**260**	**763**	**9**	**3**	**3**	**5**	2271
*** No Build Sat Peak Hour**	1.040	**7**	**721**	**205**	**27**	**0**	**79**	**390**	**847**	**15**	**1**	**1**	**6**	2301
Distribution	Entering	35%				15%				50%				100%
Distribution	Exiting										50%	15%	35%	100%
Site Generated Volume	PM	105	---	---	---	45	---	---	---	150	117	35	82	534
	SAT	83	---	---	---	36	---	---	---	119	82	24	57	401
Build PM Peak Hour		**105**	**1063**	**29**	**87**	**46**	**181**	**132**	**1161**	**150**	**117**	**35**	**82**	3188
*** Build PM Peak Hour**		**105**	**940**	**254**	**14**	**45**	**76**	**526**	**965**	**150**	**117**	**35**	**82**	3309
Build Sat Peak Hour		**83**	**930**	**109**	**60**	**36**	**126**	**260**	**763**	**119**	**82**	**24**	**57**	2649
*** Build Sat Peak Hour**		**83**	**721**	**205**	**27**	**36**	**79**	**390**	**847**	**119**	**82**	**24**	**57**	2670

Carleton Avenue (CR 17) and S. Research Place		Southbound			Westbound			Northbound			Eastbound			
		Right	Through	Left	Right	Through	Left	Right	Through	Left	Right	Through	Left	Total
PM Peak Hour	4:30 PM	41	643	0	0	0	0	0	893	206	216	0	57	2056
* PM Peak Hour	5:00 PM	29	765	0	0	0	0	0	861	229	244	0	39	2167
Saturday Peak Hour	12:15 PM	8	637	0	0	0	0	0	539	241	216	0	28	1669
* Saturday Peak Hour	6:30 PM	7	555	0	0	0	0	0	515	137	155	0	6	1375
PM Adjusted Flow Rate	0.954	**43**	**674**	**0**	**0**	**0**	**0**	**0**	**936**	**216**	**226**	**0**	**60**	2155
* PM Adjusted Flow Rate	0.954	**30**	**802**	**0**	**0**	**0**	**0**	**0**	**903**	**240**	**256**	**0**	**41**	2271
Sat Adjusted Flow Rate	0.946	**8**	**673**	**0**	**0**	**0**	**0**	**0**	**570**	**255**	**228**	**0**	**30**	1764
* Sat Adjusted Flow Rate	0.922	**8**	**602**	**0**	**0**	**0**	**0**	**0**	**559**	**149**	**168**	**0**	**7**	1491
Distribution	Entering		35%											35%
Distribution	Exiting								35%					35%
Site Generated Volume	PM	---	46	---	---	---	---	---	39	---	---	---	---	84
	SAT	---	57	---	---	---	---	---	48	---	---	---	---	105
No Build PM Peak Hour	1.040	**45**	**746**	**0**	**0**	**0**	**0**	**0**	**1012**	**225**	**235**	**0**	**62**	2326
*** No Build PM Peak Hour**	1.040	**32**	**879**	**0**	**0**	**0**	**0**	**0**	**977**	**250**	**266**	**0**	**43**	2447
No Build Sat Peak Hour	1.040	**9**	**757**	**0**	**0**	**0**	**0**	**0**	**640**	**265**	**237**	**0**	**31**	1939
*** No Build Sat Peak Hour**	1.040	**8**	**683**	**0**	**0**	**0**	**0**	**0**	**629**	**155**	**175**	**0**	**7**	1656
Distribution	Entering		35%											35%
Distribution	Exiting								35%					35%
Site Generated Volume	PM	---	105	---	---	---	---	---	82	---	---	---	---	187
	SAT	---	83	---	---	---	---	---	57	---	---	---	---	140
Build PM Peak Hour		**45**	**851**	**0**	**0**	**0**	**0**	**0**	**1094**	**236**	**259**	**0**	**63**	2549
*** Build PM Peak Hour**		**36**	**984**	**0**	**0**	**0**	**0**	**0**	**1059**	**262**	**272**	**0**	**45**	2658
Build Sat Peak Hour		**11**	**841**	**0**	**0**	**0**	**0**	**0**	**697**	**274**	**241**	**0**	**35**	2099
*** Build Sat Peak Hour**		**15**	**766**	**0**	**0**	**0**	**0**	**0**	**686**	**169**	**176**	**0**	**64**	1877

SECTION NO. 2 ..... TRIP GENERATION

M10-061 - Central Islip
Summary of Trip Generation Calculation
For 470.000 Th.Sq.Ft. GFA of Government Office Building
September 15, 2010

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	68.93	0.00	1.00	32397
7-9 AM Peak Hour Enter	4.94	0.00	1.00	2322
7-9 AM Peak Hour Exit	0.94	0.00	1.00	442
7-9 AM Peak Hour Total	5.88	0.00	1.00	2764
4-6 PM Peak Hour Enter	0.38	0.00	1.00	179
4-6 PM Peak Hour Exit	0.83	0.00	1.00	390
4-6 PM Peak Hour Total	1.21	0.00	1.00	569
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

M10-061 - Central Islip
Summary of Trip Generation Calculation
For 11.952 Th.Sq.Ft. GFA of Day Care Center
September 16, 2010

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	79.26	21.03	1.00	947
7-9 AM Peak Hour Enter	6.50	0.00	1.00	78
7-9 AM Peak Hour Exit	5.76	0.00	1.00	69
7-9 AM Peak Hour Total	12.26	6.39	1.00	147
4-6 PM Peak Hour Enter	5.86	0.00	1.00	70
4-6 PM Peak Hour Exit	6.60	0.00	1.00	79
4-6 PM Peak Hour Total	12.46	6.90	1.00	149
Saturday 2-Way Volume	6.21	5.44	1.00	74
Saturday Peak Hour Enter	1.07	0.00	1.00	13
Saturday Peak Hour Exit	0.63	0.00	1.00	8
Saturday Peak Hour Total	1.70	1.78	1.00	20

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

M10-061 - Central Islip
Summary of Trip Generation Calculation
For 7.168 Th.Sq.Ft. GFA of Health/Fitness Club
September 15, 2010

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	32.93	0.00	1.00	236
7-9 AM Peak Hour Enter	0.62	0.00	1.00	4
7-9 AM Peak Hour Exit	0.76	0.00	1.00	5
7-9 AM Peak Hour Total	1.38	1.33	1.00	10
4-6 PM Peak Hour Enter	2.01	0.00	1.00	14
4-6 PM Peak Hour Exit	1.52	0.00	1.00	11
4-6 PM Peak Hour Total	3.53	2.00	1.00	25
Saturday 2-Way Volume	20.87	0.00	1.00	150
Saturday Peak Hour Enter	1.25	0.00	1.00	9
Saturday Peak Hour Exit	1.53	0.00	1.00	11
Saturday Peak Hour Total	2.78	0.00	1.00	20

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

Mulryan Engineering, P.C. **Table No. 2**

Ultimate Sports Complex - Islip
M10-061

Baseball Heaven Trip Generation and Parking Study 09-04-10

	Enter	Exit	Total
11:30 AM	28	21	49
11:45 AM	19	46	65
12:00 PM	13	68	81
12:15 PM	16	41	57
12:30 PM	38	5	43
12:45 PM	27	12	39
1:00 PM	30	19	49
1:15 PM	37	8	45
1:30 PM	35	30	65
1:45 PM	56	28	84
2:00 PM	33	16	49
2:15 PM	38	33	71

	Parking
11:30 AM	292
11:45 AM	299
12:00 PM	272
12:15 PM	217
12:30 PM	192
12:45 PM	225
1:00 PM	240
1:15 PM	251
1:30 PM	280
1:45 PM	285
2:00 PM	313
2:15 PM	330
2:30 PM	335

Hourly Totals

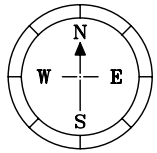
	Enter	Exit	Total
11:30 AM	76	176	252
11:45 AM	86	160	246
12:00 PM	94	126	220
12:15 PM	111	77	188
12:30 PM	132	44	176
12:45 PM	129	69	198
1:00 PM	158	85	243
1:15 PM	161	82	243
2:15 PM	162	107	269
Max	162	107	269
Avg	118	102	221
Min	76	44	120

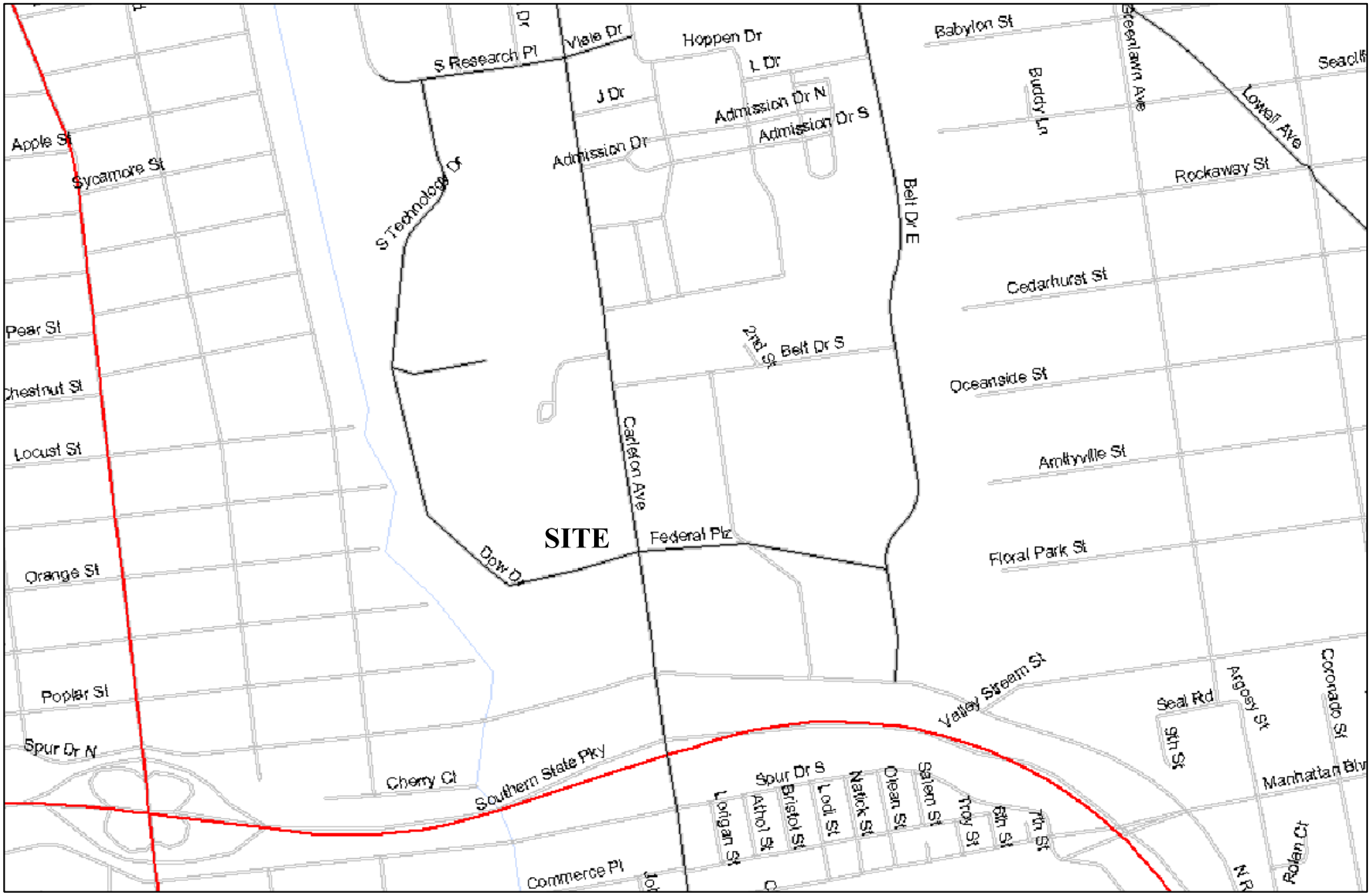
Max Rate Per Field:	**24.0**	**16.0**	**40.0**	**Parking:**	**48.0**
9-Field Trip Generation:	216	144	360	Parking:	432
7-Outdoor Fields:	168	112	280	Parking:	336
2-Indoor Fields:	48	32	80	Parking:	96

SECTION NO. 3 ..... FIGURES

MULRYAN
ENGINEERING, P.C.

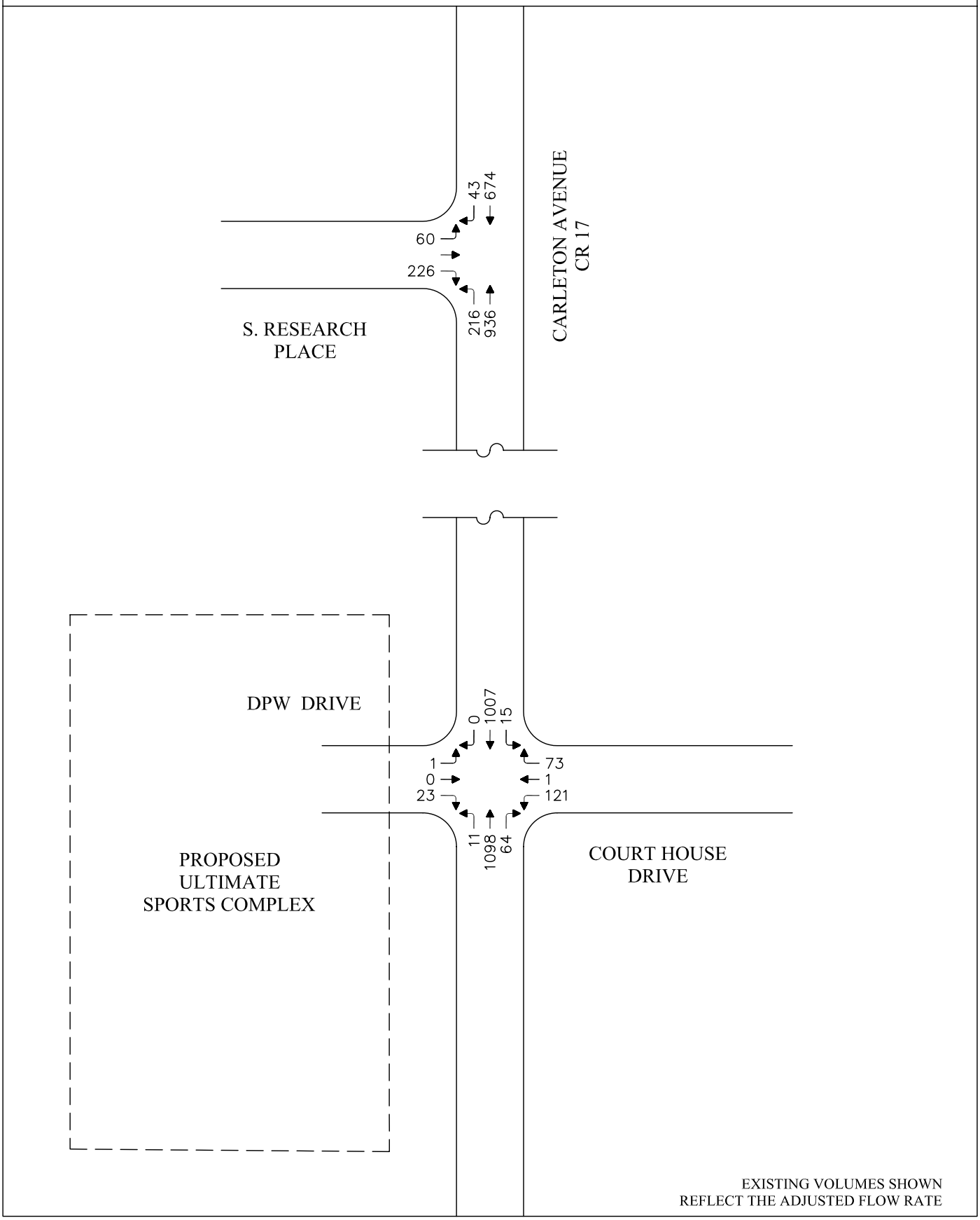
FIGURE No. 1
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
AREA MAP





MULRYAN
ENGINEERING, P.C.

FIGURE No. 2
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR EXISTING



EXISTING VOLUMES SHOWN
REFLECT THE ADJUSTED FLOW RATE

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FIGURE No. 3
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR NO BUILD

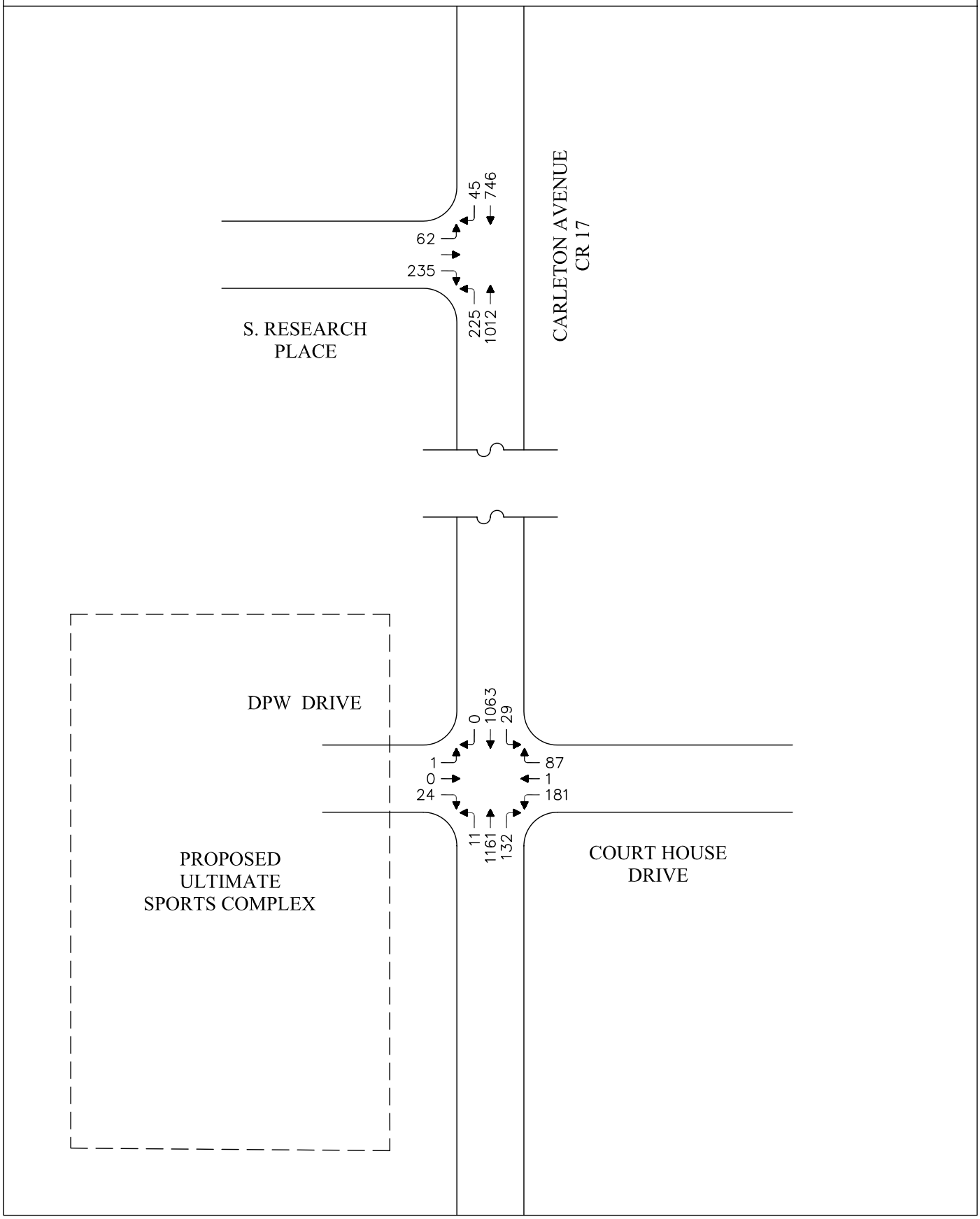

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FIGURE No. 4
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR BUILD

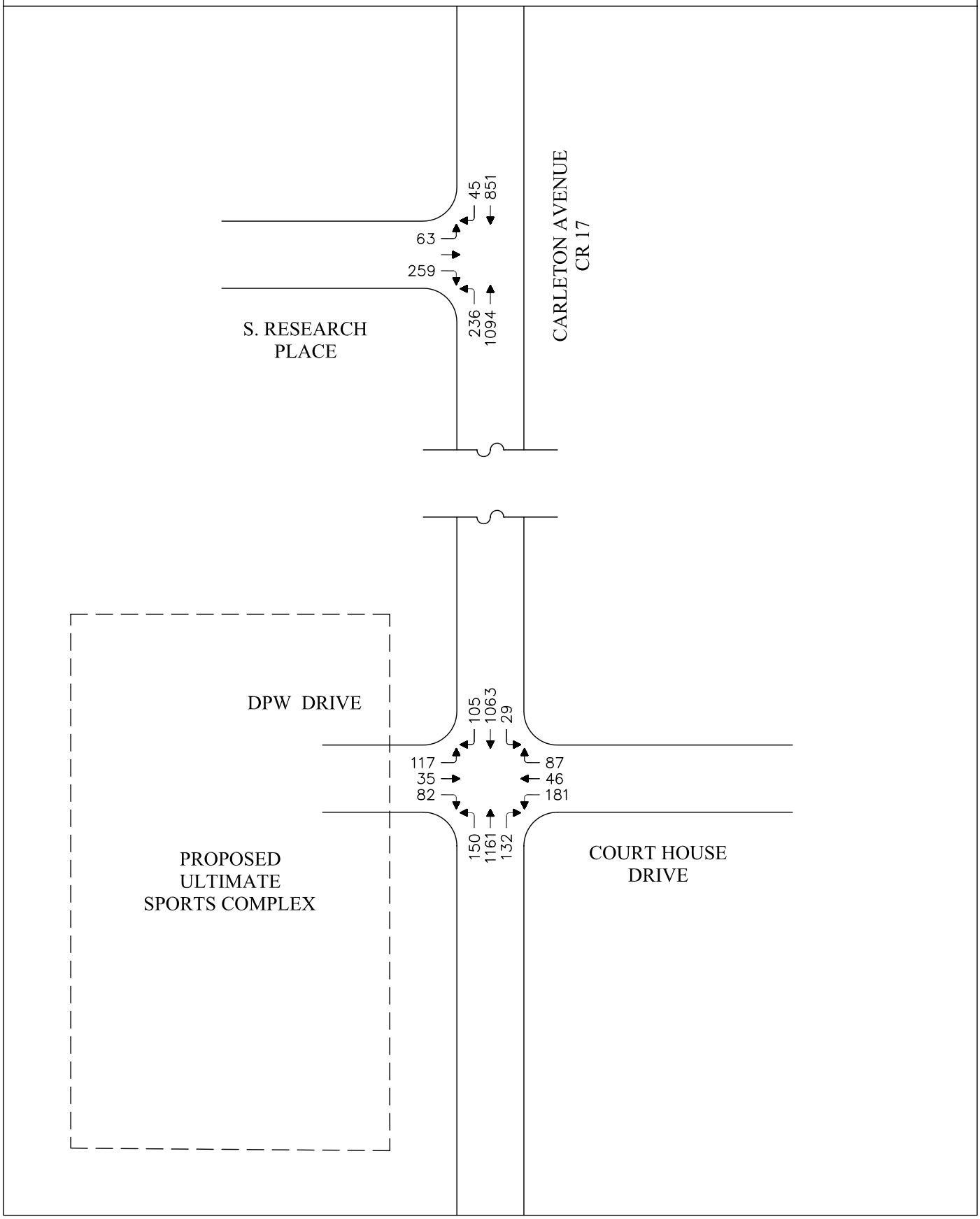

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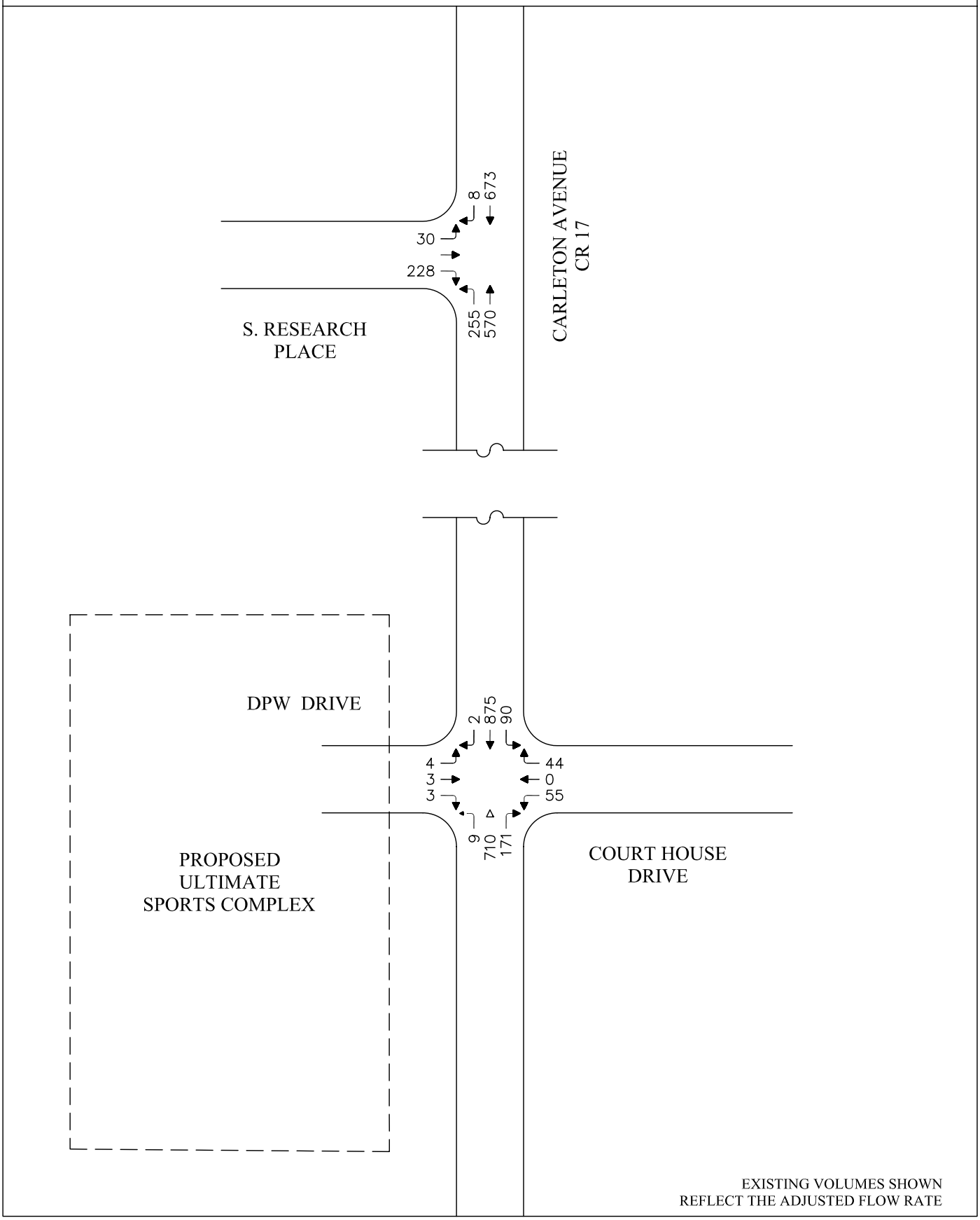
FIGURE No. 5
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR EXISTING



EXISTING VOLUMES SHOWN
REFLECT THE ADJUSTED FLOW RATE

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FIGURE No. 6
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR NO BUILD

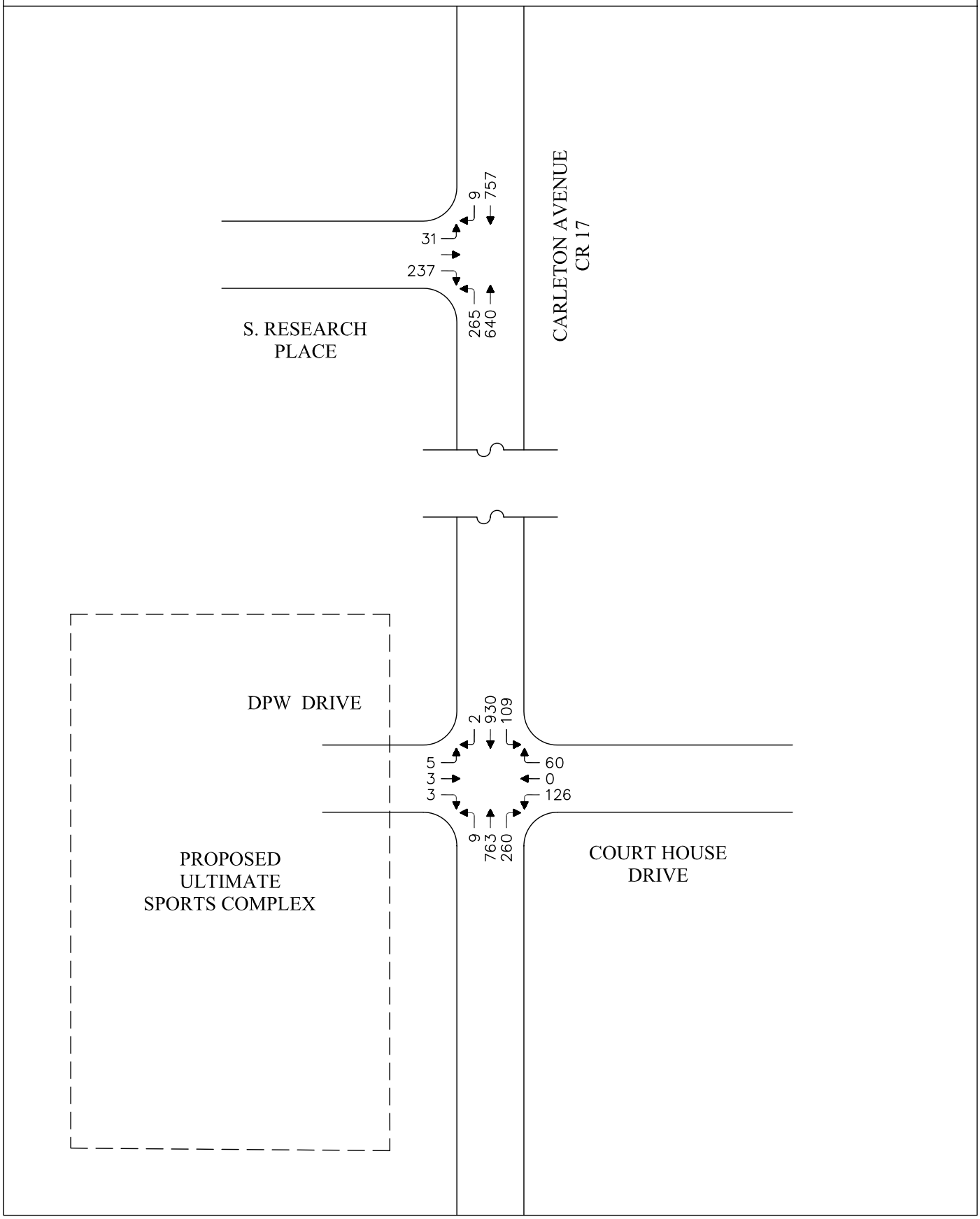

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FIGURE No. 7
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR BUILD

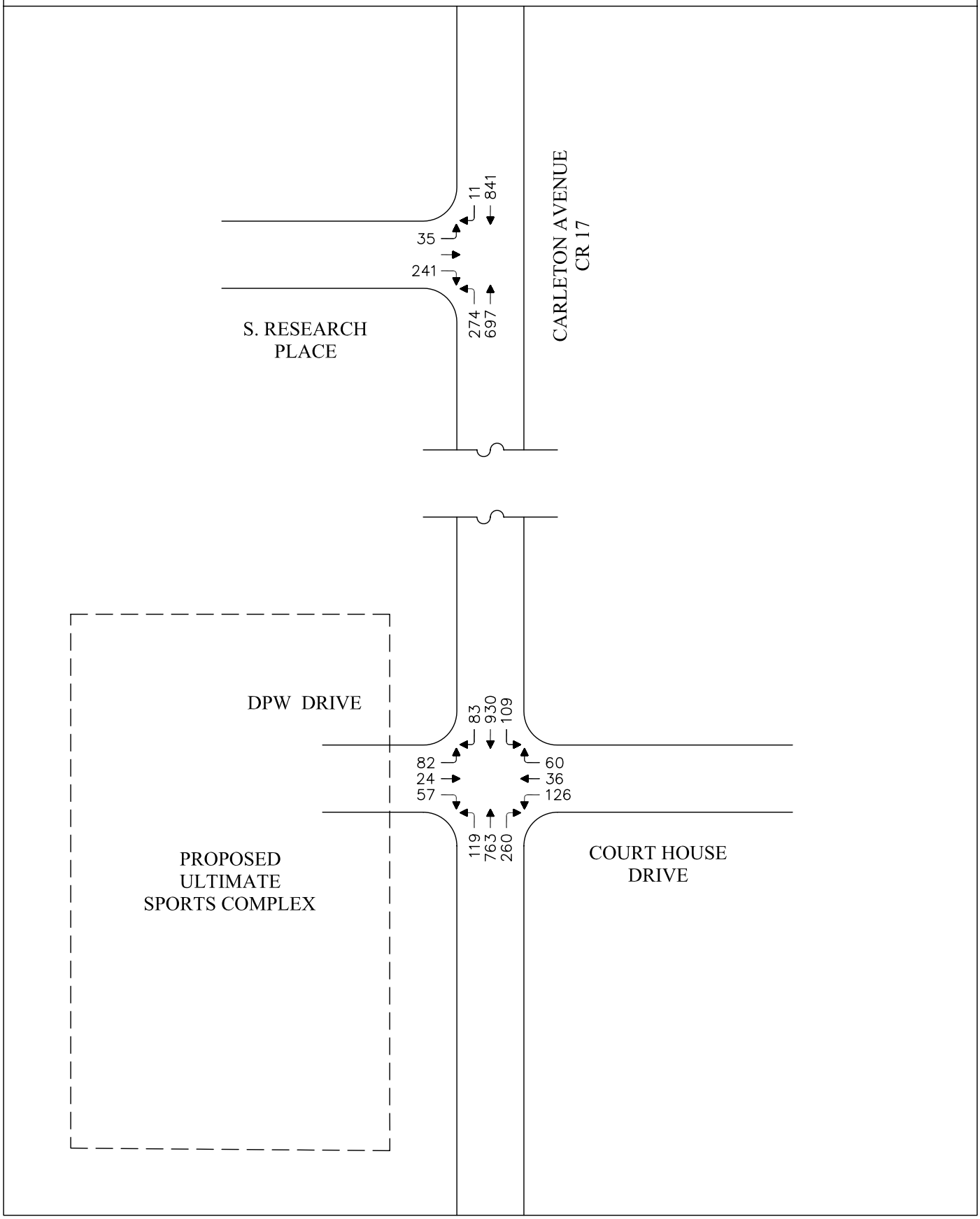

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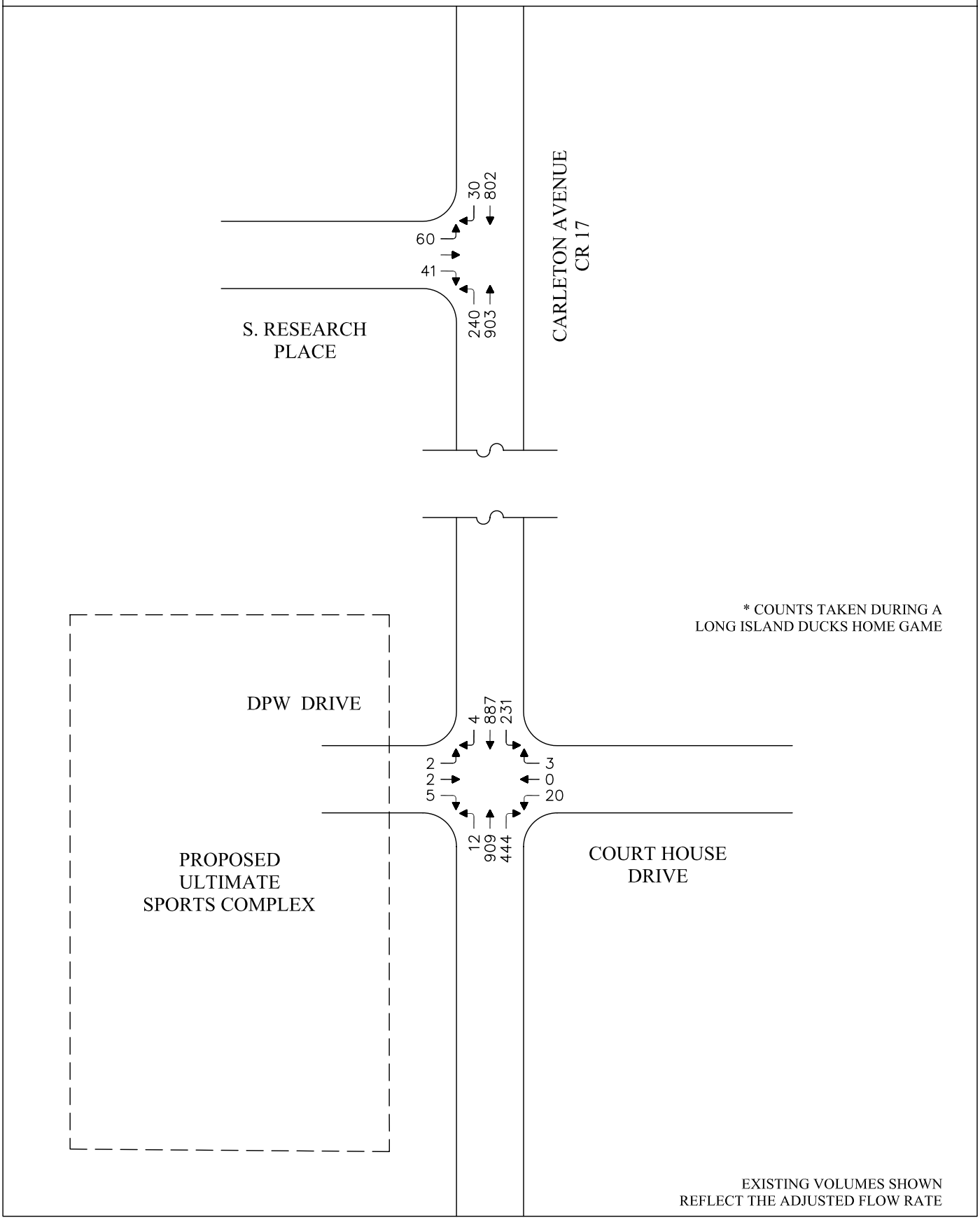
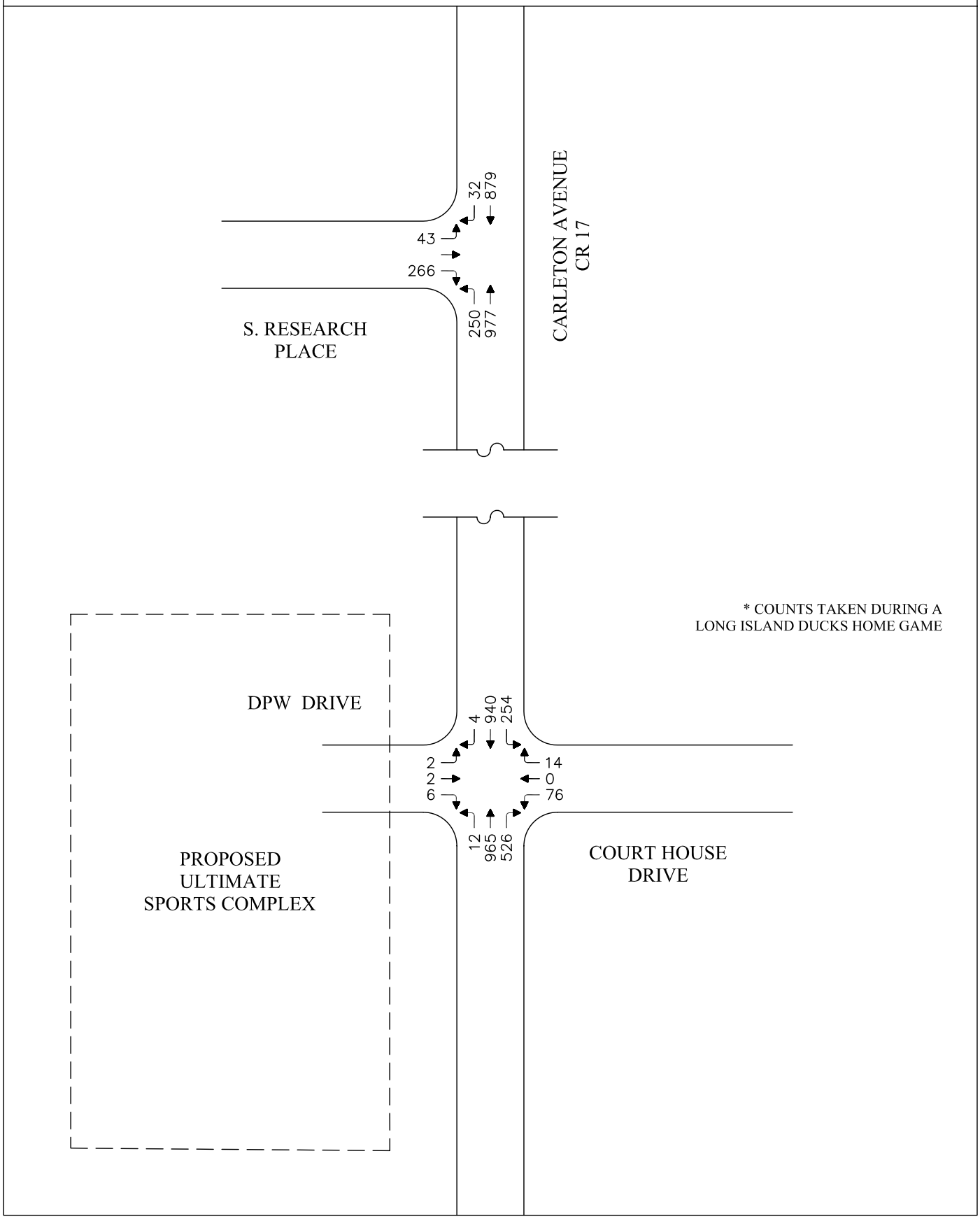
FIGURE No. 8
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR EXISTING



MULRYAN
ENGINEERING, P.C.

FIGURE No. 9
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR NO BUILD



MULRYAN
ENGINEERING, P.C.

FIGURE No. 10
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR BUILD

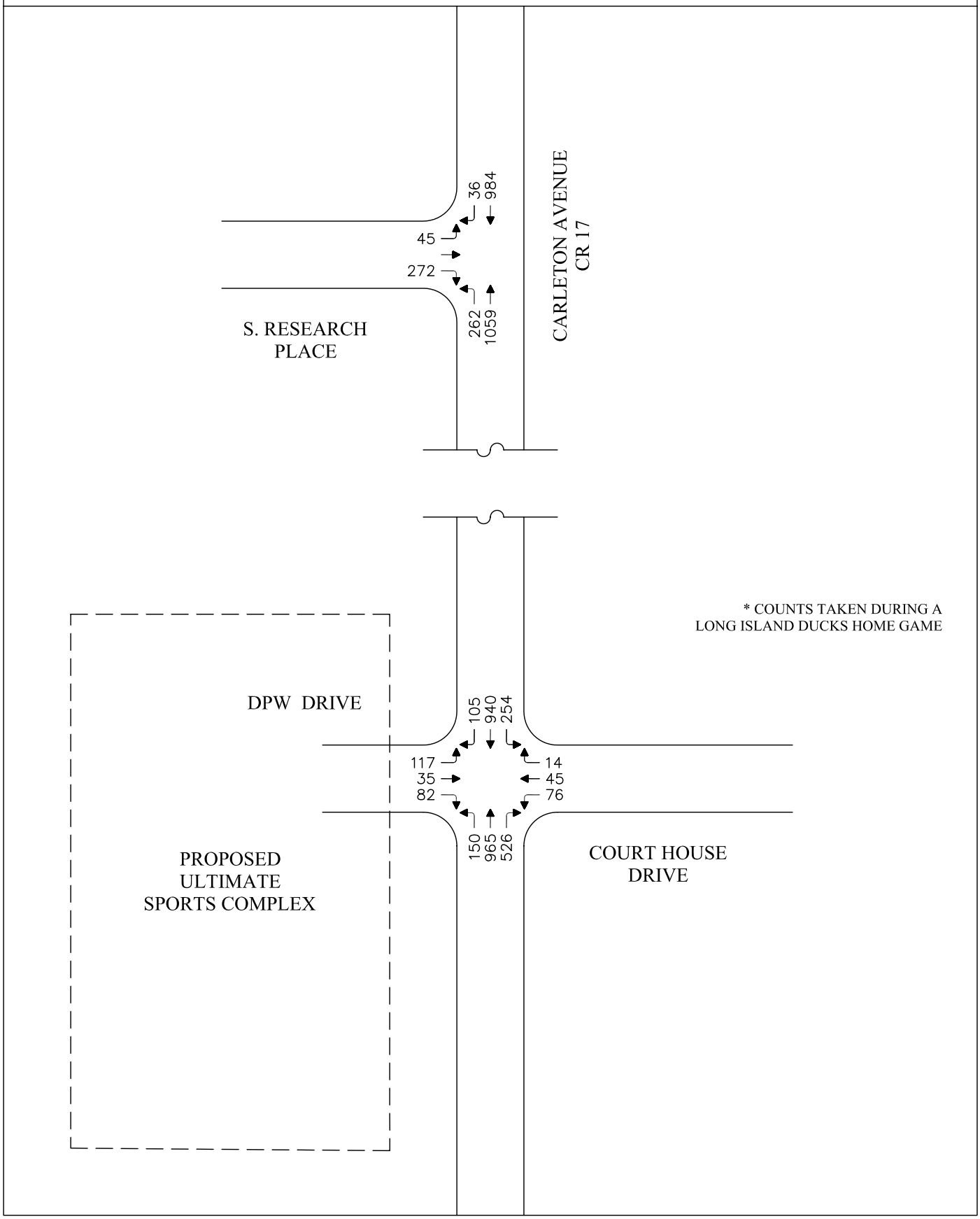


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FIGURE No. 11
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR EXISTING

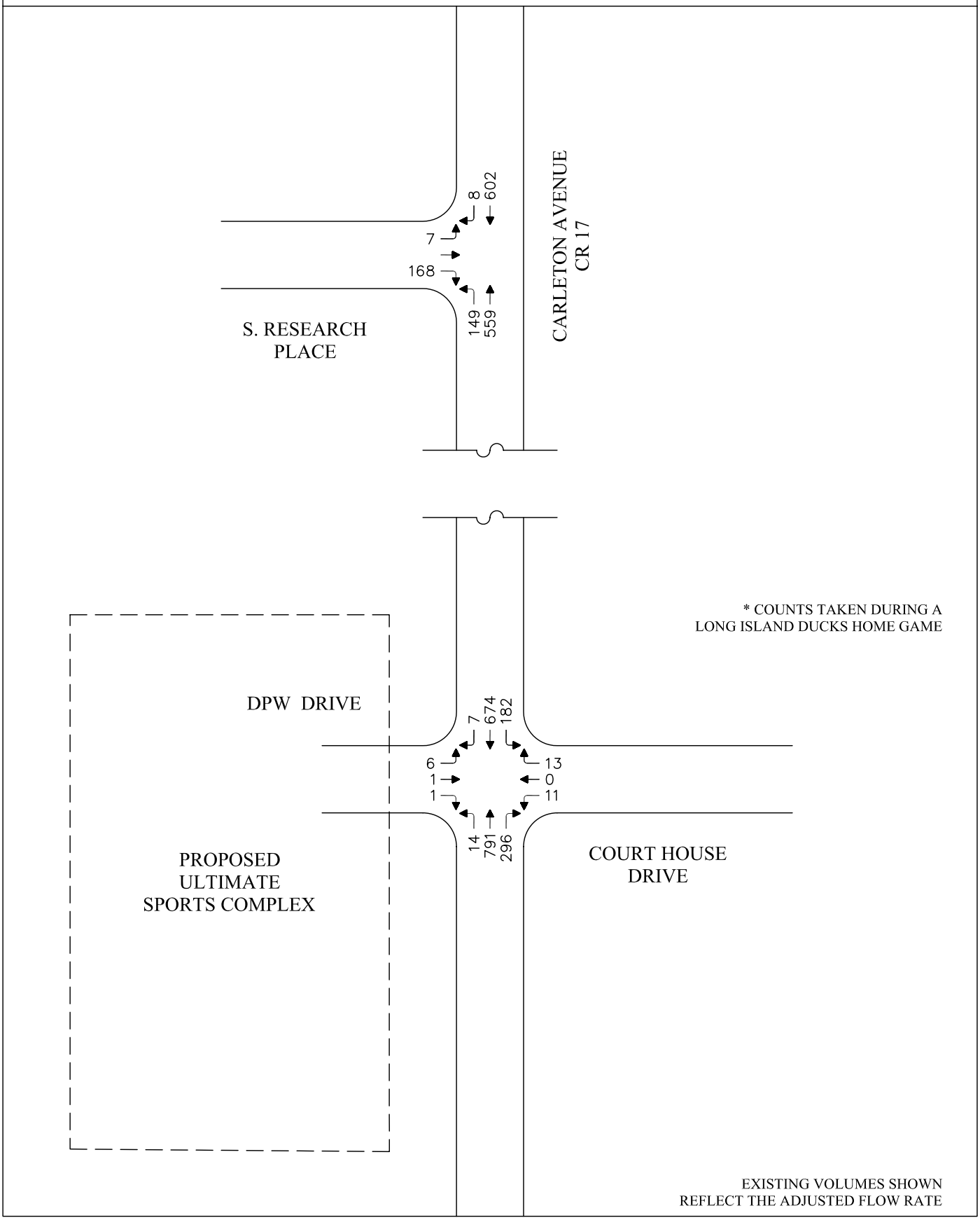

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FIGURE No. 12
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR NO BUILD

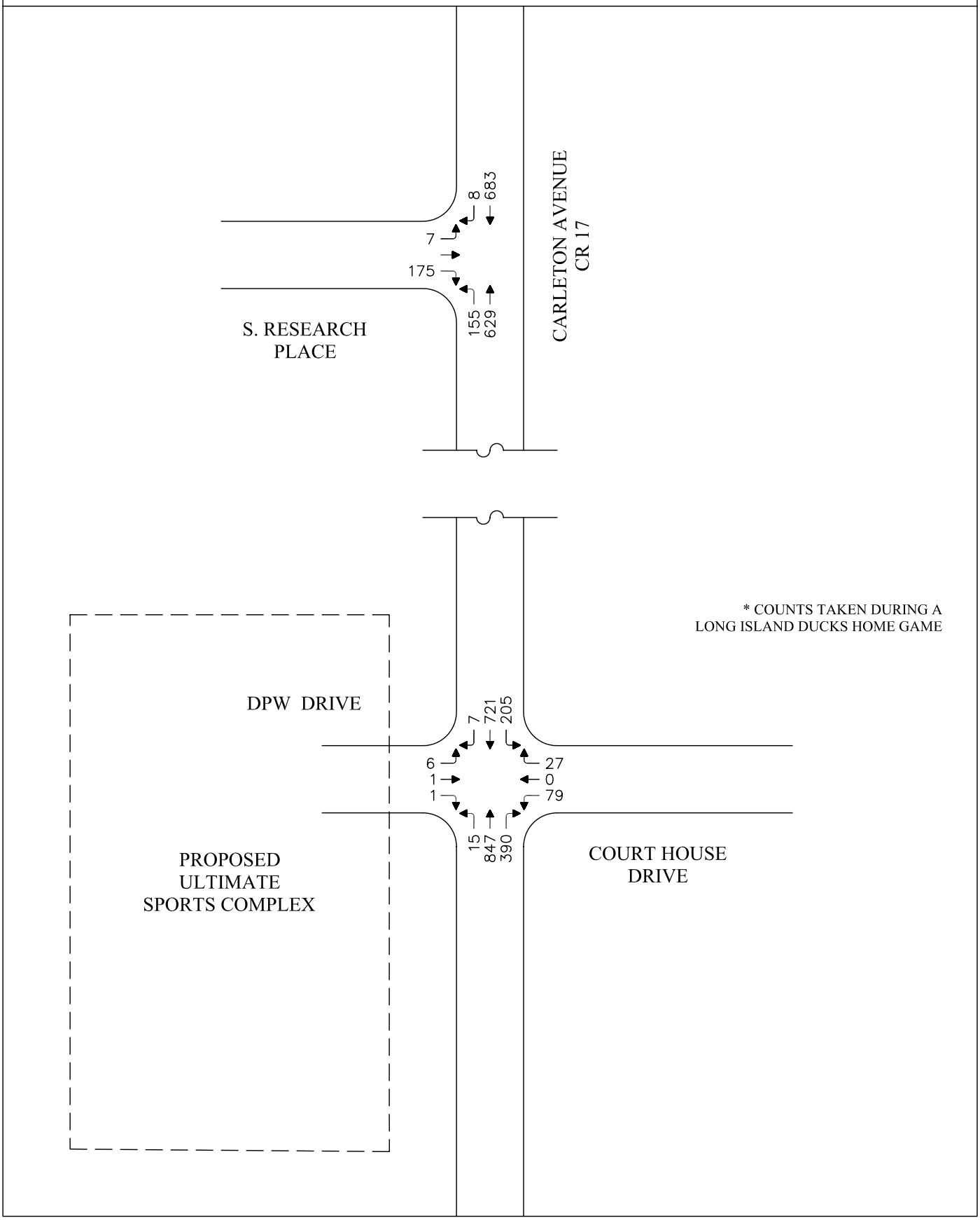

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FIGURE No. 13
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR BUILD

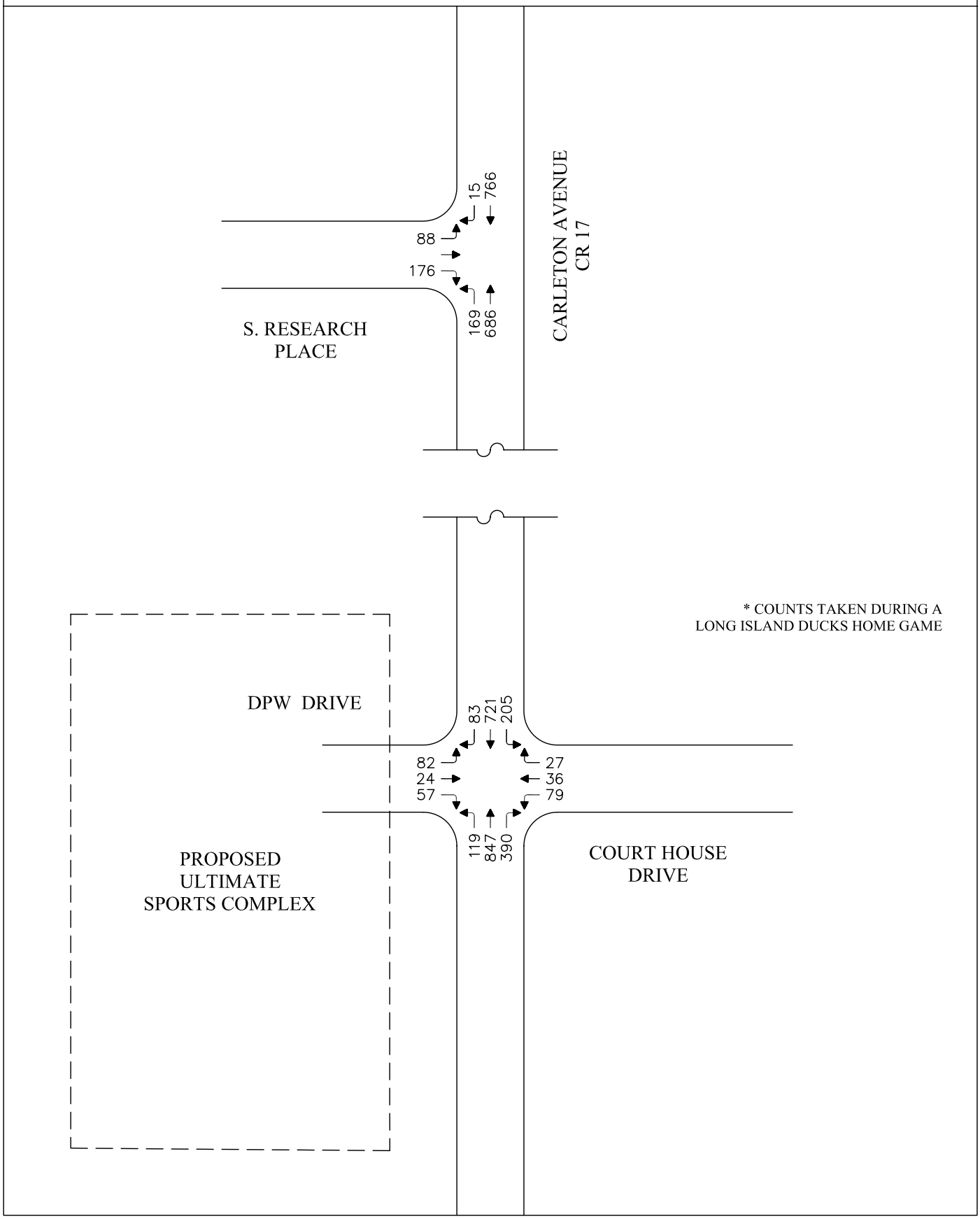

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FIGURE No. 14
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SITE GENERATED
TRAFFIC DISTRIBUTION

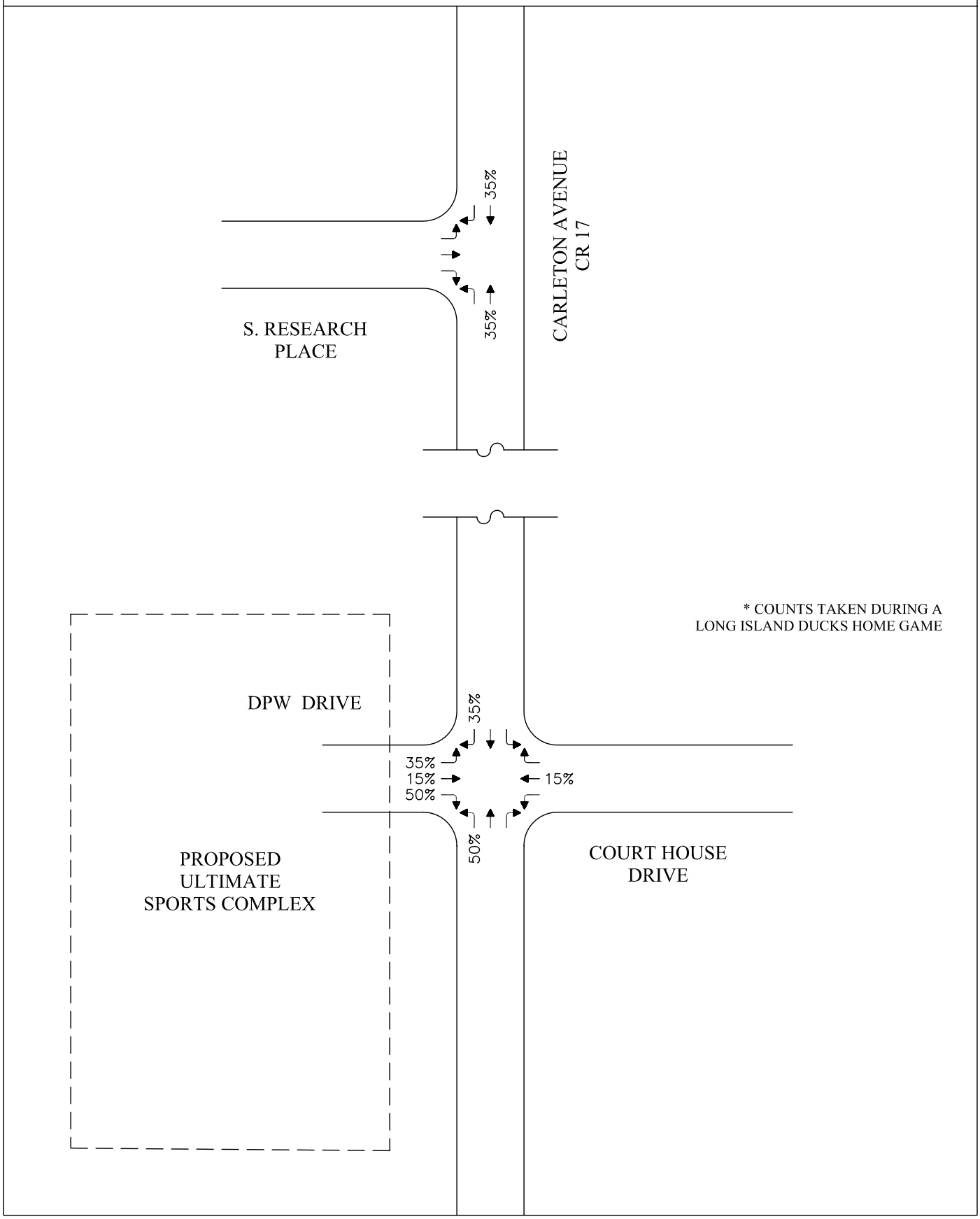

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FIGURE No. 15
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR
SITE GENERATED TRAFFIC VOLUMES

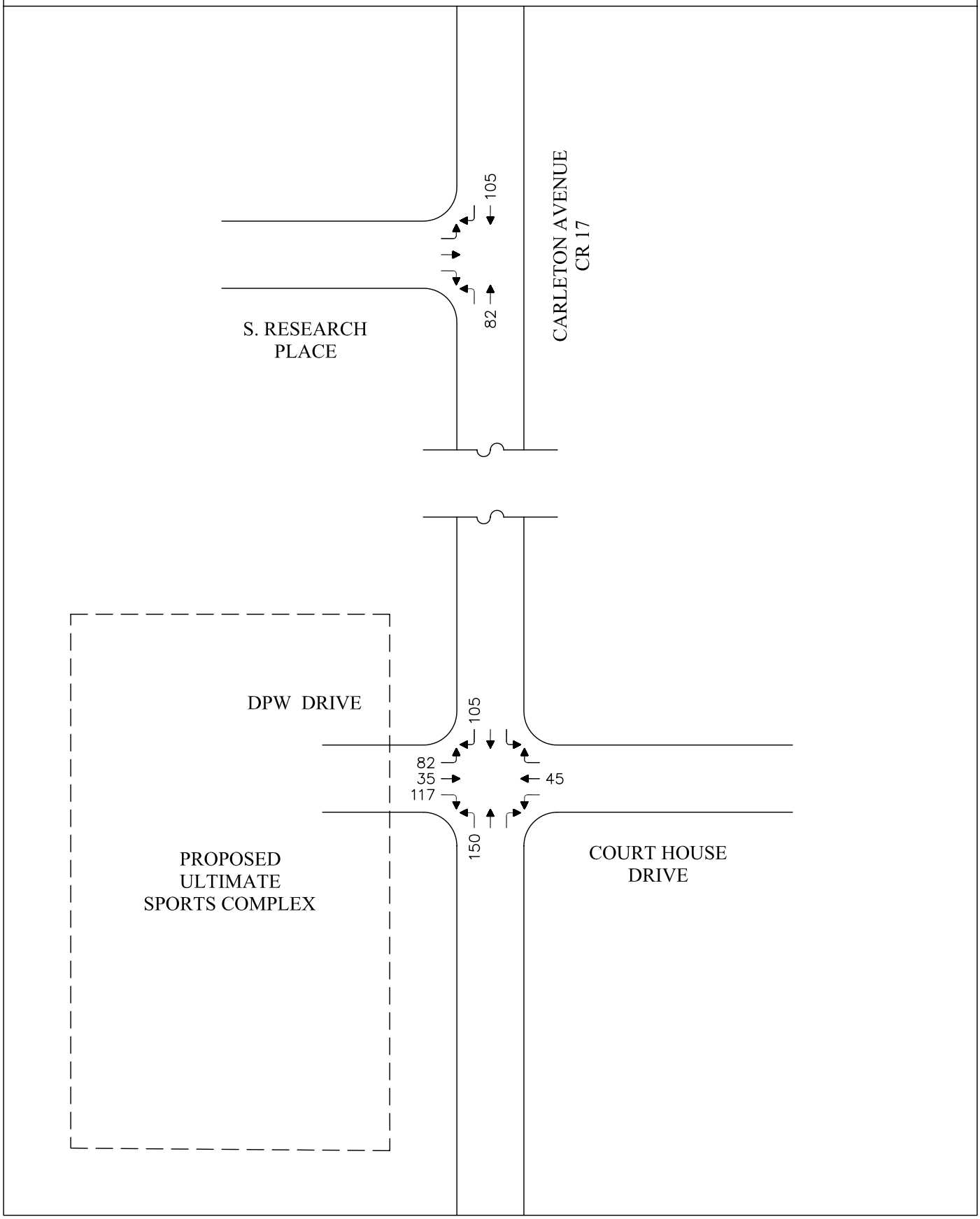

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FIGURE No. 16
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR
SITE GENERATED TRAFFIC VOLUMES

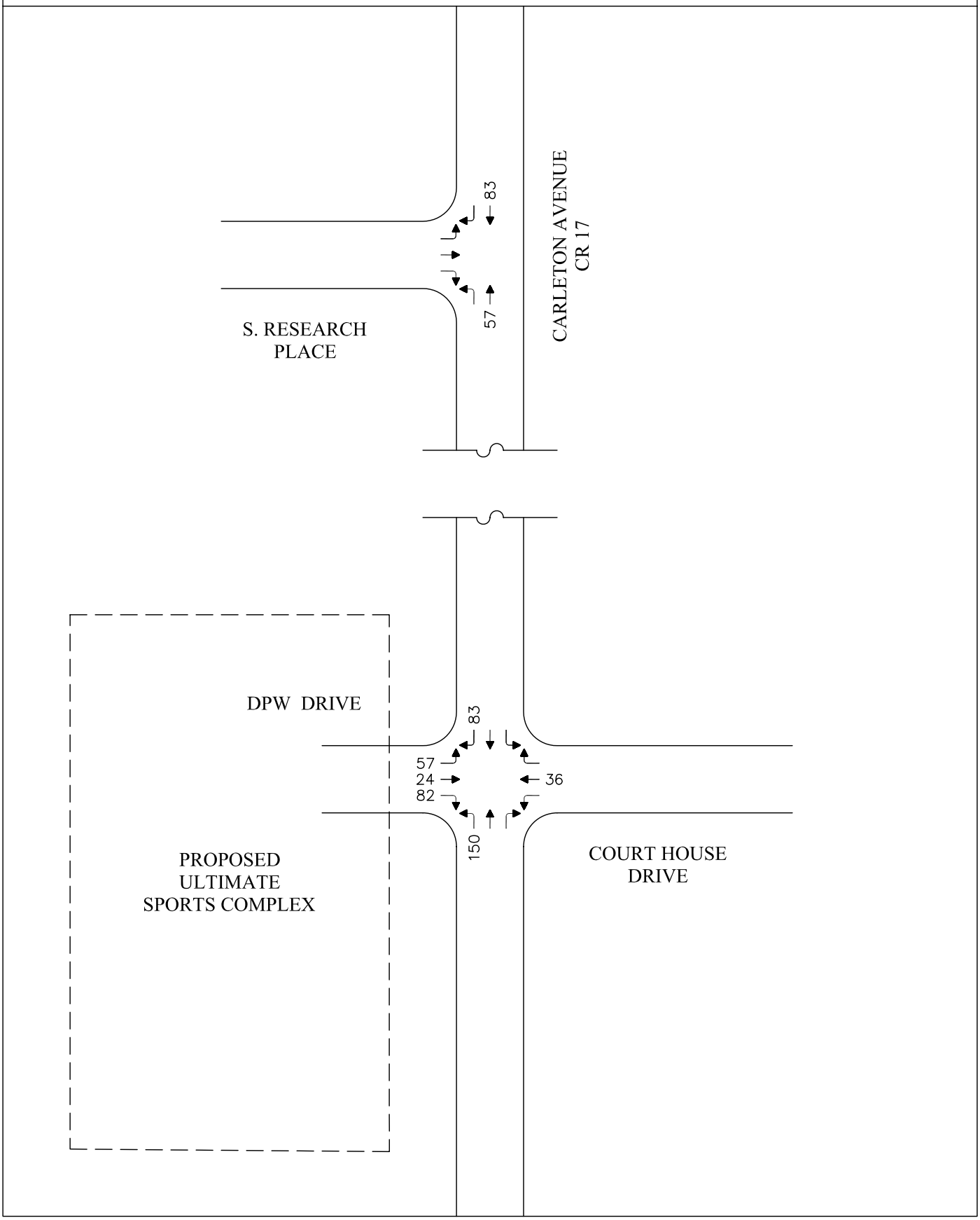

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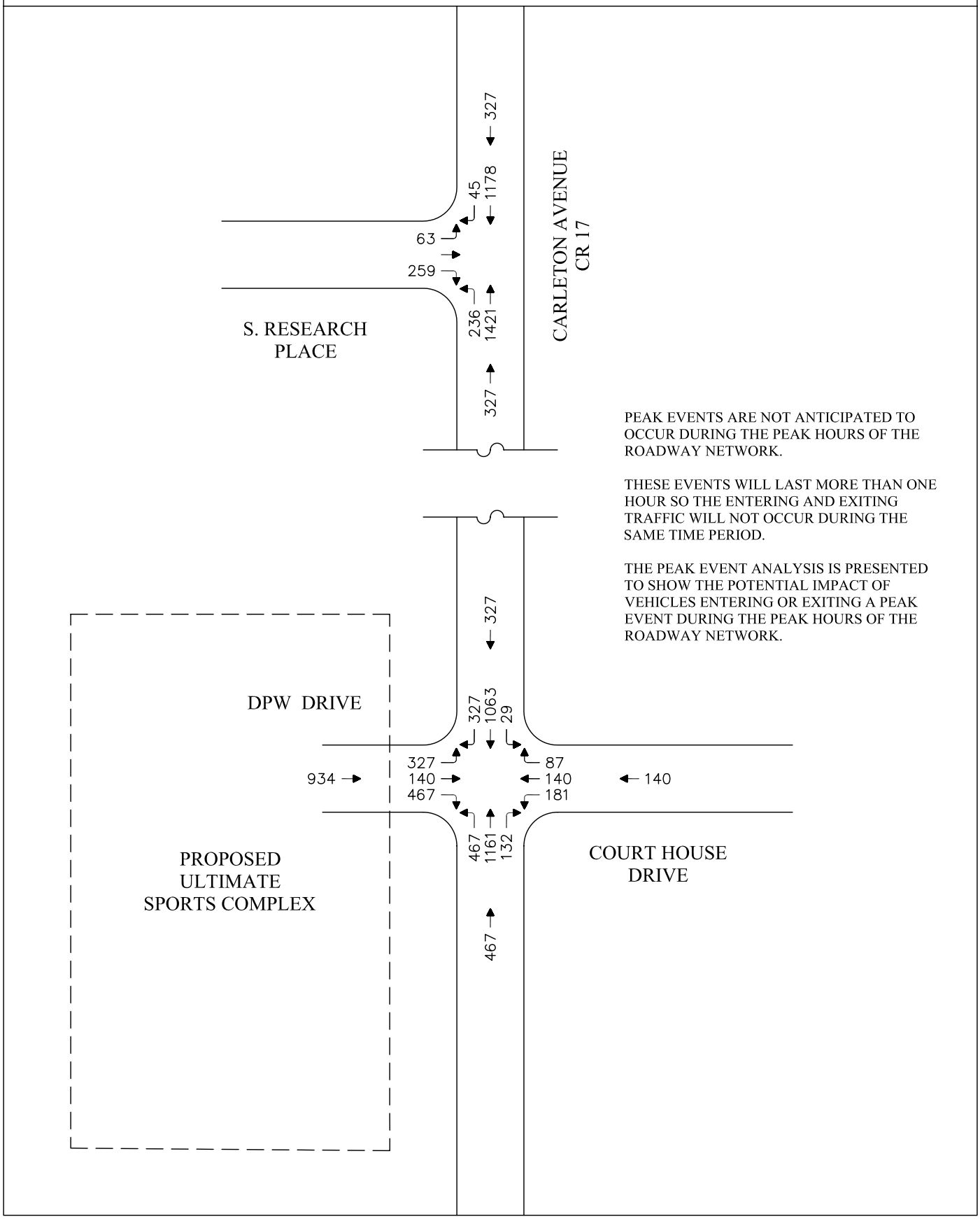
FIGURE No. 17
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR - PEAK EVENT



PEAK EVENTS ARE NOT ANTICIPATED TO OCCUR DURING THE PEAK HOURS OF THE ROADWAY NETWORK.

THESE EVENTS WILL LAST MORE THAN ONE HOUR SO THE ENTERING AND EXITING TRAFFIC WILL NOT OCCUR DURING THE SAME TIME PERIOD.

THE PEAK EVENT ANALYSIS IS PRESENTED TO SHOW THE POTENTIAL IMPACT OF VEHICLES ENTERING OR EXITING A PEAK EVENT DURING THE PEAK HOURS OF THE ROADWAY NETWORK.

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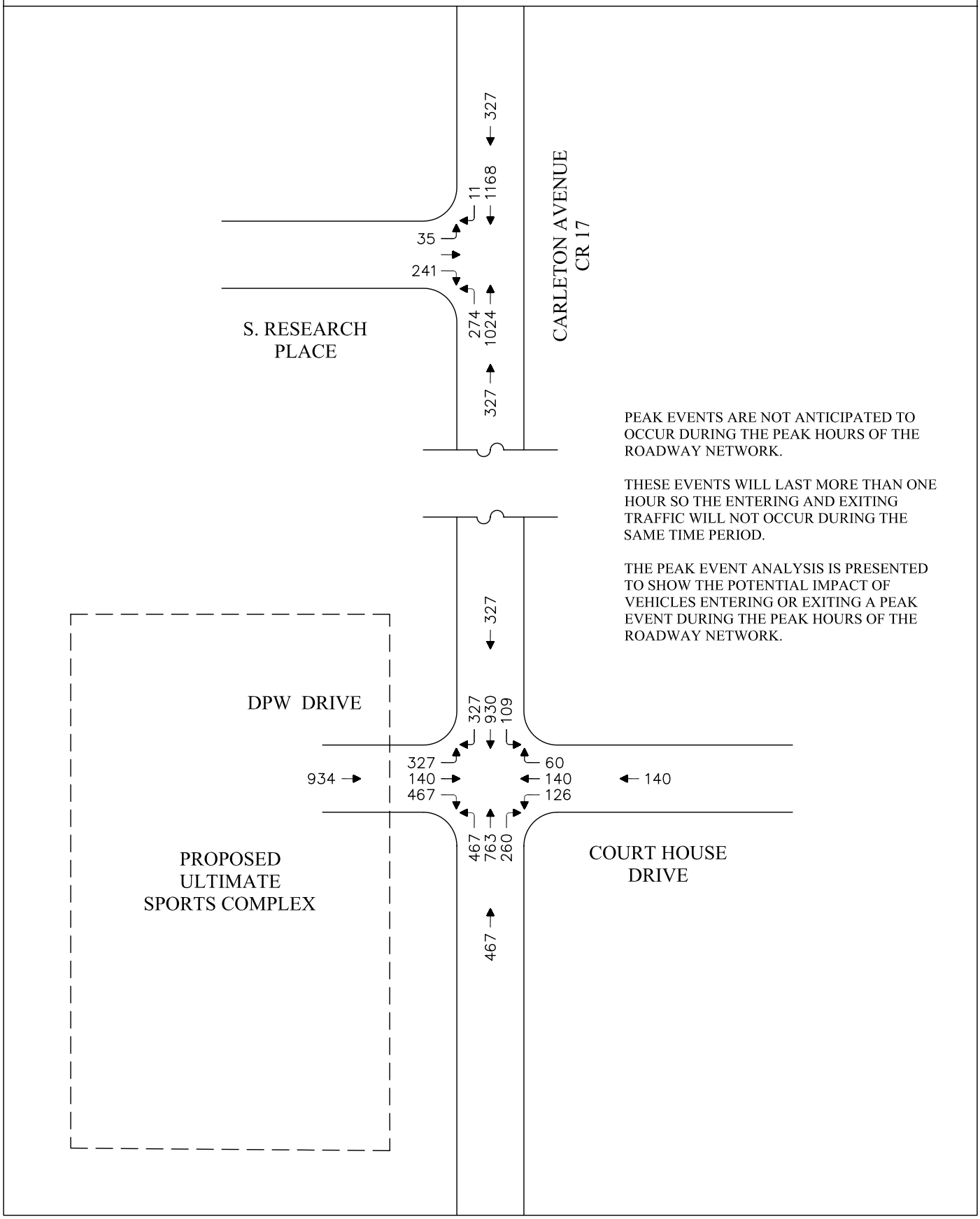
FIGURE No. 18
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR - PEAK EVENT



PEAK EVENTS ARE NOT ANTICIPATED TO OCCUR DURING THE PEAK HOURS OF THE ROADWAY NETWORK.

THESE EVENTS WILL LAST MORE THAN ONE HOUR SO THE ENTERING AND EXITING TRAFFIC WILL NOT OCCUR DURING THE SAME TIME PERIOD.

THE PEAK EVENT ANALYSIS IS PRESENTED TO SHOW THE POTENTIAL IMPACT OF VEHICLES ENTERING OR EXITING A PEAK EVENT DURING THE PEAK HOURS OF THE ROADWAY NETWORK.

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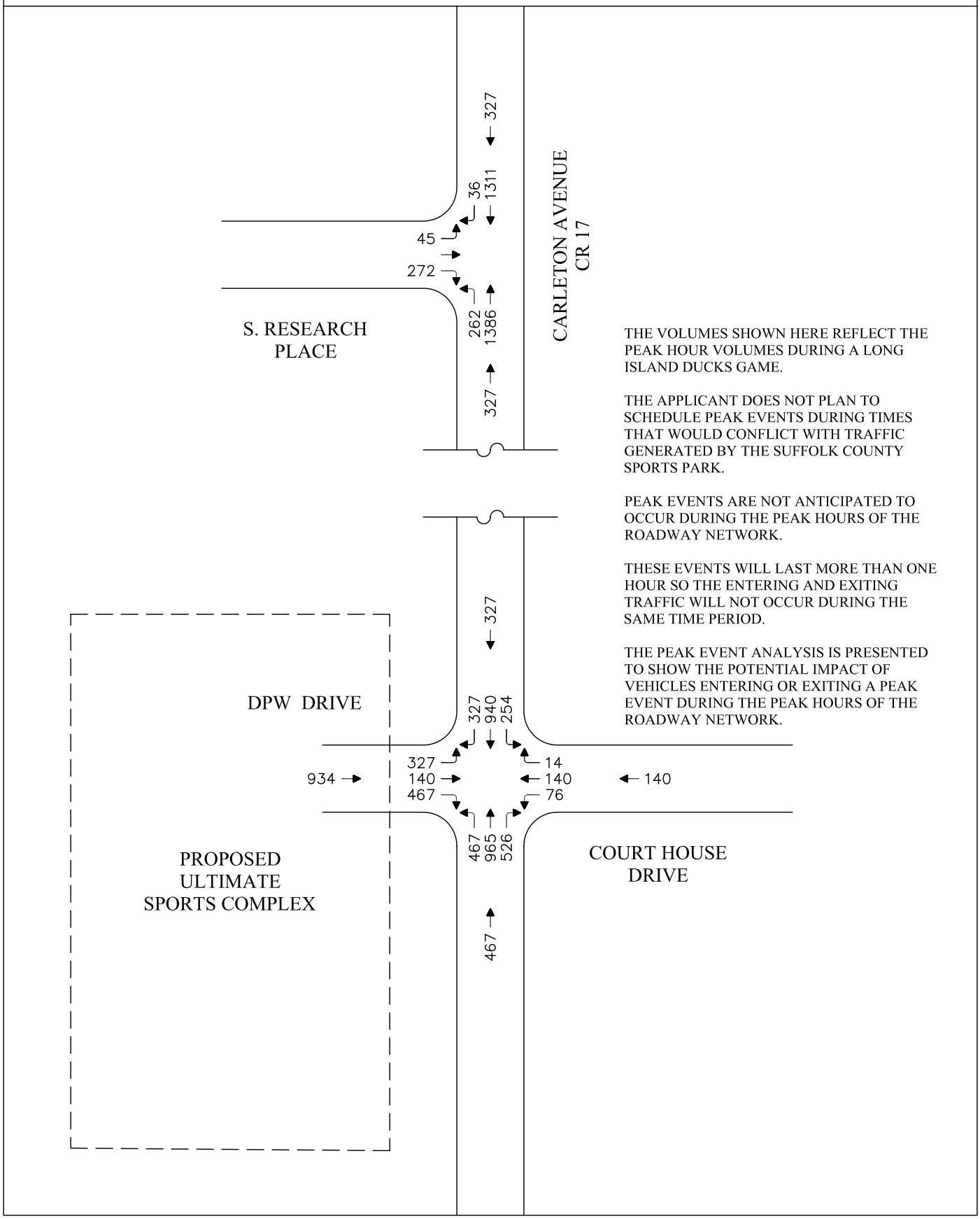
FIGURE No. 19
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
PM PEAK HOUR - PEAK EVENT



THE VOLUMES SHOWN HERE REFLECT THE PEAK HOUR VOLUMES DURING A LONG ISLAND DUCKS GAME.

THE APPLICANT DOES NOT PLAN TO SCHEDULE PEAK EVENTS DURING TIMES THAT WOULD CONFLICT WITH TRAFFIC GENERATED BY THE SUFFOLK COUNTY SPORTS PARK.

PEAK EVENTS ARE NOT ANTICIPATED TO OCCUR DURING THE PEAK HOURS OF THE ROADWAY NETWORK.

THESE EVENTS WILL LAST MORE THAN ONE HOUR SO THE ENTERING AND EXITING TRAFFIC WILL NOT OCCUR DURING THE SAME TIME PERIOD.

THE PEAK EVENT ANALYSIS IS PRESENTED TO SHOW THE POTENTIAL IMPACT OF VEHICLES ENTERING OR EXITING A PEAK EVENT DURING THE PEAK HOURS OF THE ROADWAY NETWORK.

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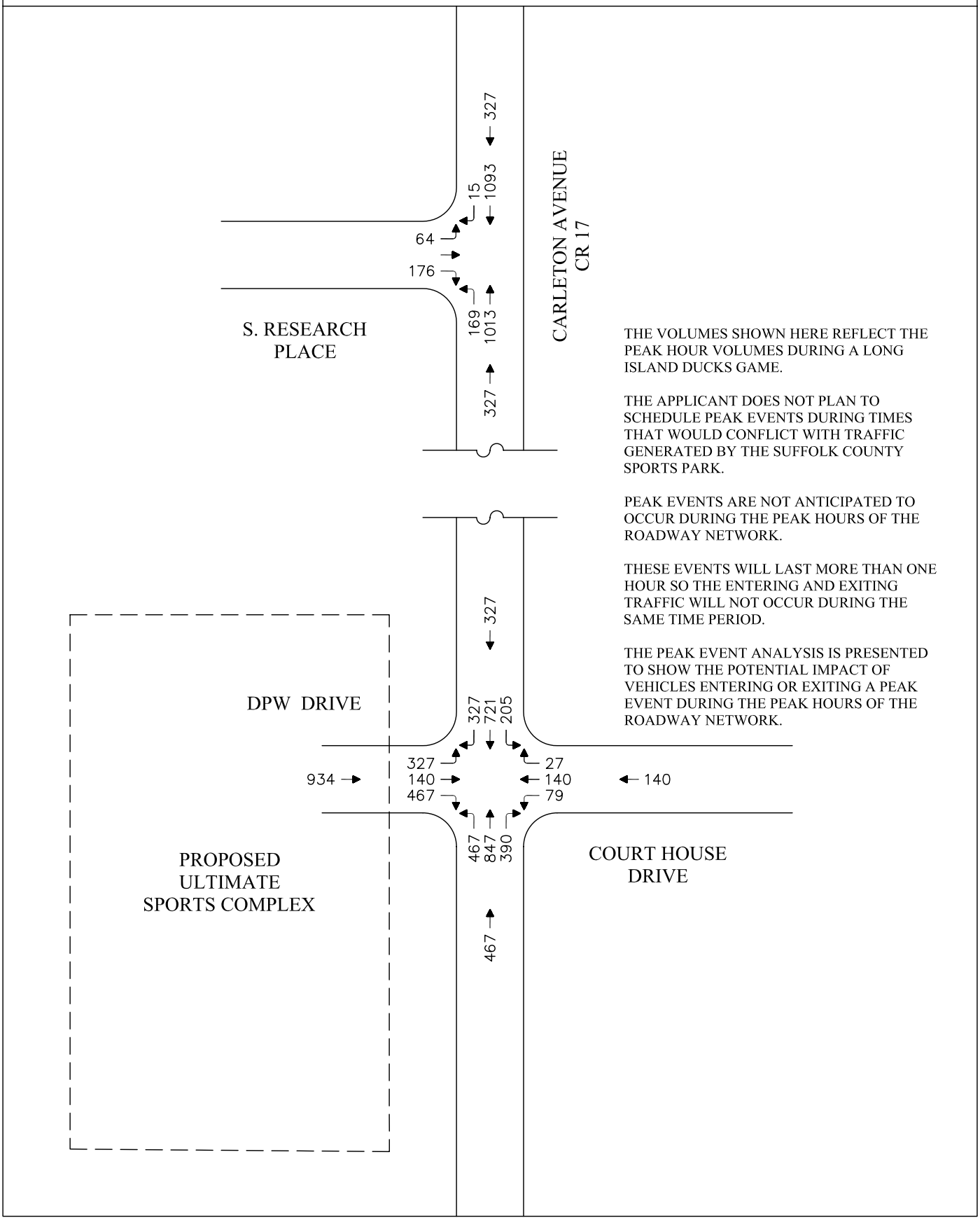
FIGURE No. 20
PROJECT No. M10-061
ULTIMATE SPORTS COMPLEX - ISLIP
SATURDAY PEAK HOUR - PEAK EVENT



THE VOLUMES SHOWN HERE REFLECT THE PEAK HOUR VOLUMES DURING A LONG ISLAND DUCKS GAME.

THE APPLICANT DOES NOT PLAN TO SCHEDULE PEAK EVENTS DURING TIMES THAT WOULD CONFLICT WITH TRAFFIC GENERATED BY THE SUFFOLK COUNTY SPORTS PARK.

PEAK EVENTS ARE NOT ANTICIPATED TO OCCUR DURING THE PEAK HOURS OF THE ROADWAY NETWORK.

THESE EVENTS WILL LAST MORE THAN ONE HOUR SO THE ENTERING AND EXITING TRAFFIC WILL NOT OCCUR DURING THE SAME TIME PERIOD.

THE PEAK EVENT ANALYSIS IS PRESENTED TO SHOW THE POTENTIAL IMPACT OF VEHICLES ENTERING OR EXITING A PEAK EVENT DURING THE PEAK HOURS OF THE ROADWAY NETWORK.

Accident Location Information System (ALIS)

Date: 09/02/1(
01:3(

Accident Verbal Description Report

Page: 5

Data in this report covers the period Mar 31, 2007 - Apr 01, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Suffolk Muni: Islip(T) Ref. Marker: Street: CARLETON AVE
***** CONTINUED

Veh : Registered Weight: State of Registration:

Num of Occupants: Driver's Age: Sex: Citation Issued:

Direction of Travel: Public Property Damage: School Bus Involved:

Pre-Accd Action: