

LOCAL IMPACTS AND COSTS

Exhibit IX. A.2.b

The proposed Resorts World Hudson Valley is a mixed use development that will incorporate a 600-room hotel with a full-service gaming facility and a conference center, along with associated, complementary amenities on an approximate 373-acre site. Potential impacts include those to traffic and noise, watershed impacts from stormwater and wastewater discharge, and hydrologic impacts to surface waters and wetlands. The design for Resorts World Hudson Valley has been developed in conjunction with LEED® measures to minimize impacts to the greatest extent possible. Where impacts cannot be avoided, RW Orange County LLC has developed a cohesive mitigation strategy as detailed in Exhibit IX.A.3 Mitigation of Impact to Host Municipality and Nearby Municipalities.

Traffic and Roadway Infrastructure

Preliminary Transportation Demand Impacts

Development of the proposed Resorts World Hudson Valley would generate substantial numbers of new vehicular trips by auto, taxi and bus on the roadway system providing access to the project site. The majority of these trips (approximately 90 percent) would arrive and depart via I-84, with Route 17K, Route 747 and Route 207 providing local access. Most vehicles destined to/from I-84 would use the I-84/Route 747 interchange located immediately to the southeast of the project site which was designed to accommodate future demand from expanded use of the nearby Stewart International Airport. As this airport demand has not been realized, the I-84/Route 747 interchange typically functions with available capacity during peak periods.

A new signalized intersection on Route 17K and a new roundabout on Route 747 would provide access to the proposed project's internal roadway system. With implementation of these physical roadway improvements, and minor changes to signal timing and phasing at the existing intersections of Route 17K with Rock Cut Road and Route 747 with the eastbound I-84 entrance/exit ramps, project-generated traffic could be accommodated with no significant increase in congestion in both the opening year of the proposed project and in the estimated time of completion plus 10 years.

Traffic and Roadway Infrastructure Impacts

The Resorts World Hudson Valley site is proposed to be served by two access points. A new signalized T-intersection along Route 17K will be constructed to serve the project from the north. A new two-lane roundabout along Route 747 will be constructed to serve the project traffic from the south.

These two points of access will connect a new north-south access road and a new east-west access road. These new roadway facilities will provide direct vehicular access to the Resorts World Hudson Valley project via Route 17K and Route 747 both of which have excellent connectivity with I-84. The internal access roads also provide circulation of vehicles among Resorts World Hudson Valley and the surface parking lot. The internal access roadways provide adequate capacity to handle the expected volumes of traffic. To minimize disruption to through traffic and maximize operations and increase safety, turn lanes are provided at each access point/driveway that serves the Resorts World Hudson Valley project. The internal access roads will serve several points of access to the site as follows:

- Three points of access to the south along the two-lane, divided east-west access road will provide simple, convenient ingress and egress to the hotel entry, VIP entry, and casino and valet.
- Two points of access further north along the east-west access road will provide access to the parking garage, bus parking/drop-off/pick-up and the loading dock at the rear of the casino.
- Further east, the east-west access road provides two points of direct access to an on-site surface parking lot.

LOCAL IMPACTS AND COSTS

Under the proposed project a new T-intersection is proposed on Route 17K approximately 855 feet to the west of the existing intersection with Route 747. Route 17K currently operates with one travel lane in each direction in this location, before widening to six lanes (two westbound and four eastbound) approaching Route 747. Under the proposed project, the roadway would be further widened to accommodate two eastbound lanes approaching the new intersection (consisting of a through lane and a shared through/right-turn lane) and three westbound lanes (consisting of two through lanes and a left-turn lane). A three-lane approach (two northbound lanes and one southbound lane) is proposed for the project site's access roadway at this intersection. A two-phase signal timing plan coordinated with the signal timing at the adjacent Route 17K/Route 747 intersection was assumed for this new intersection. The spacing of the traffic signal to adjacent signals provides ample distance to ensure the proper progression of vehicles with minimal overall delays. As a T-intersection and with adequate side street laneage, the intersection will function at an acceptable level of service, with minimal queues and delays to through traffic along Route 17K.

Route 747 will be widened to a four-lane divided section from approximately 500 feet to the north and approximately 300 feet to the south of the new roundabout. Beyond the limits of the proposed widening, Route 747 will transition back to its current two-lane configuration.

The east-west access road, at its connection to Route 747 is proposed to consist of a four-lane divided section, with two receiving/inbound lanes. The eastbound approach to the roundabout will consist of two outbound lanes.

The proposed design includes approximately 6,550 parking spaces among one multi-level parking garage and one surface parking lot. A bus depot is also included as the resort would feature shuttle service from nearby transportation facilities including nearby MetroNorth stations (e.g., Otisville, Middletown, Campbell Hall, and Salisbury Mills-Cornwall) and Stewart International Airport. Details on traffic demand and impacts are provided in Exhibit VIII. C.17.d Necessary Roadway and Traffic Improvements and included as Appendix IX. A.2.b Draft TIS.

Noise Impacts

Considering the equipment and construction activity expected for construction of the project and the distances at which the equipment would be operating, construction noise could reach approximately 83.7 dBA Leq at residences located along Maple Avenue directly west and north of the hotel/casino facility. Existing noise levels recorded in 2014 ranged between 44.6 dBA Leq and 50 dBA Leq, and noise levels recorded for environmental documentation for the HIBC project Noise Impact Assessment in the vicinity of the residences indicate that ambient sound pressure levels in the area were between 50.0 and 52.0 dBA Leq (Chazen Companies, 2009).

Given the impact threshold of 6 dBA above ambient, there would be periods when construction noise exceeds impact criteria. Project contractors would be required to mitigate construction noise experienced near the residential area along Maple Avenue. If mitigated noise levels exceed ambient levels by more than 6 dBA, additional mitigation measures would be enacted.

The majority of traffic to and from the RW Hudson Valley would use the new access road off Route 747 with additional access via a new access road off NY Route 17K. Noise levels at the residences along Route 747 may increase due to additional traffic along the highway. This will be evaluated in subsequent detailed analysis.

Operation of the RW Hudson Valley would involve HVAC equipment and other equipment. This equipment would be enclosed or far enough removed from area residences so it would not raise noise levels above ambient conditions.

The rear of the Resorts World Grand Hotel (northwest corner) would contain a truck loading/unloading dock for the transfer of supplies required to operate the facility. Other maintenance equipment such as trash compactors would be located here. With the exception of trucks entering and exiting the loading bay, all noise generating equipment would be within a noise-absorbing enclosure and

LOCAL IMPACTS AND COSTS

would not affect nearby residences. Trucking to and from the facility would be scheduled for daytime hours and loading/unloading would occur within a bay enclosed on three sides.

Water Demand, Supply, and Infrastructure Capacity

As described in the Orange County Water Master Plan, Orange County receives its water supply from both surface and groundwater sources within 11 County watersheds. The majority of the County's water supply is provided by 160 community water supply systems which draw fresh water from County reservoirs and aquifers.

The project site is currently not served with water. Water demand for the proposed project is approximately 360,000 average daily flows (ADF). Potable water would be supplied from onsite wells.

Several groundwater wells (4 to 8) will be installed to depths of approximately 500 feet, depending on test well results and actual yields to meet the estimated maximum daily demand of 470,000 gallons per day (gpd). Testing is underway to determine pumping capacity and yield and number of wells required to meet estimated demand. A corresponding water treatment facility will treat the groundwater before being distributed interior to the site via 8 and 12 inch water mains.

Groundwater

Groundwater is found in the glacially-derived overburden deposits at depths ranging from zero to six feet below grade and is at or near the surface in the extensive wetland/stream areas of the site, suggesting that these wetland and stream areas may be zones of shallow groundwater discharge. The overburden is not capable of producing quantities of groundwater for potable, commercial, or agricultural uses. Groundwater for existing commercial, industrial, residential, and agricultural use in the area is obtained from the shale bedrock, which is first encountered at the site from two to fifteen (15) feet below grade. The shale is capable of producing average yields of 40 gallons per minute (gpm) but higher yields can be obtained within large fracture or bedding plane zones located 300 to 500 feet below grade.

Recharge to the shale bedrock groundwater is dependent on the hydraulic conductivity between the overburden and the shale formation. Bedrock groundwater recharge areas may occur off-site, where the shale outcrops or sub crops below shallow overburden deposits characterized by more granular material with a high to medium infiltration capacity. Recharge areas may also be present at the site in areas where the overburden is shallow (i.e., less than five feet) and has the same infiltration qualities.

If the shallow groundwater is hydraulically connected to the deep bedrock groundwater, the installation and use of bedrock groundwater supply wells may draw the shallow groundwater down into the bedrock, potentially "draining" the existing wetlands and reducing the habitat available for local flora and fauna. In addition, drawing water into the bedrock aquifer from the surface would convert the wetland/stream areas from groundwater discharge areas into a groundwater recharge areas, potentially drawing any contaminants introduced to the site into the bedrock groundwater supply.

Waste Water Production, Discharge, and Infrastructure Capacity

There is currently no sewer service to the Resorts World Hudson Valley site, and the Town of Montgomery does not have waste water treatment capacity to serve the proposed flows.

Sewer demands were calculated and approximately 360,000 gallons of liquid waste per day (ADF) and 900,000 gallons of liquid waste per day (peak hour) are estimated of entirely sanitary waste water. It would not use any existing public waste water treatment facilities. A waste water reclamation facility (WRF) will be constructed on-site, with a gravity sewer collection system composed of 8 to 12 inch gravity sewer mains and a 12-inch force main for the WRF effluent. The treated waste water discharge would be released on-site at the downstream point. The "full capacity" flows of 360,000 gallons per day (gpd) are anticipated to occur primarily on the weekends and holidays with lower flow rates occurring during the weekdays. Assuming a 50 percent reduction during the weekdays, the WRF is expected to operate at approximately 180,000 gpd ADF most of the time. Therefore, the WRF design incorporates dual treatment trains with 180,000 gpd ADF treatment capacity each. Provisions will be provided for operator flexibility to

LOCAL IMPACTS AND COSTS

operate one or both treatment trains at any given time. Surge attenuation will be provided to accommodate the daily flow fluctuations.

RW Orange County LLC would be the Applicant/Sponsor for the new sewer district, with an application anticipated in August 2014.

With 100 percent of the irrigation proposed on-site using reclaimed water and not potable water and the proposed 6,600 toilets on site using reclaimed water for toilet flushing, the reclaimed water demand is estimated to be 133,000 gpd.

Stormwater Discharge and Management

The proposed action would approve the disturbance of greater than one acre of land and create storm water runoff. Potential storm water discharge and management impacts include water quality impacts to the Tin Brook watershed resulting from changes in land cover and increased impervious surfaces, new point sources, and discharging wastewater as well as storm water volume and potential flooding impacts.

The proposed project site is divided into two major drainage areas: the Resorts World Grand Casino area, and the surface parking area. The Resort Worlds Hudson Valley site will be treated as new development in accordance with the *New York State Stormwater Management Design Manual*. Resorts World Hudson Valley’s storm water management systems for both drainage areas will seek to minimize impacts by exceeding New York State Department of Environmental Conservation (NYSDEC) standards for both water quality and water quantity control.

Watershed Impacts

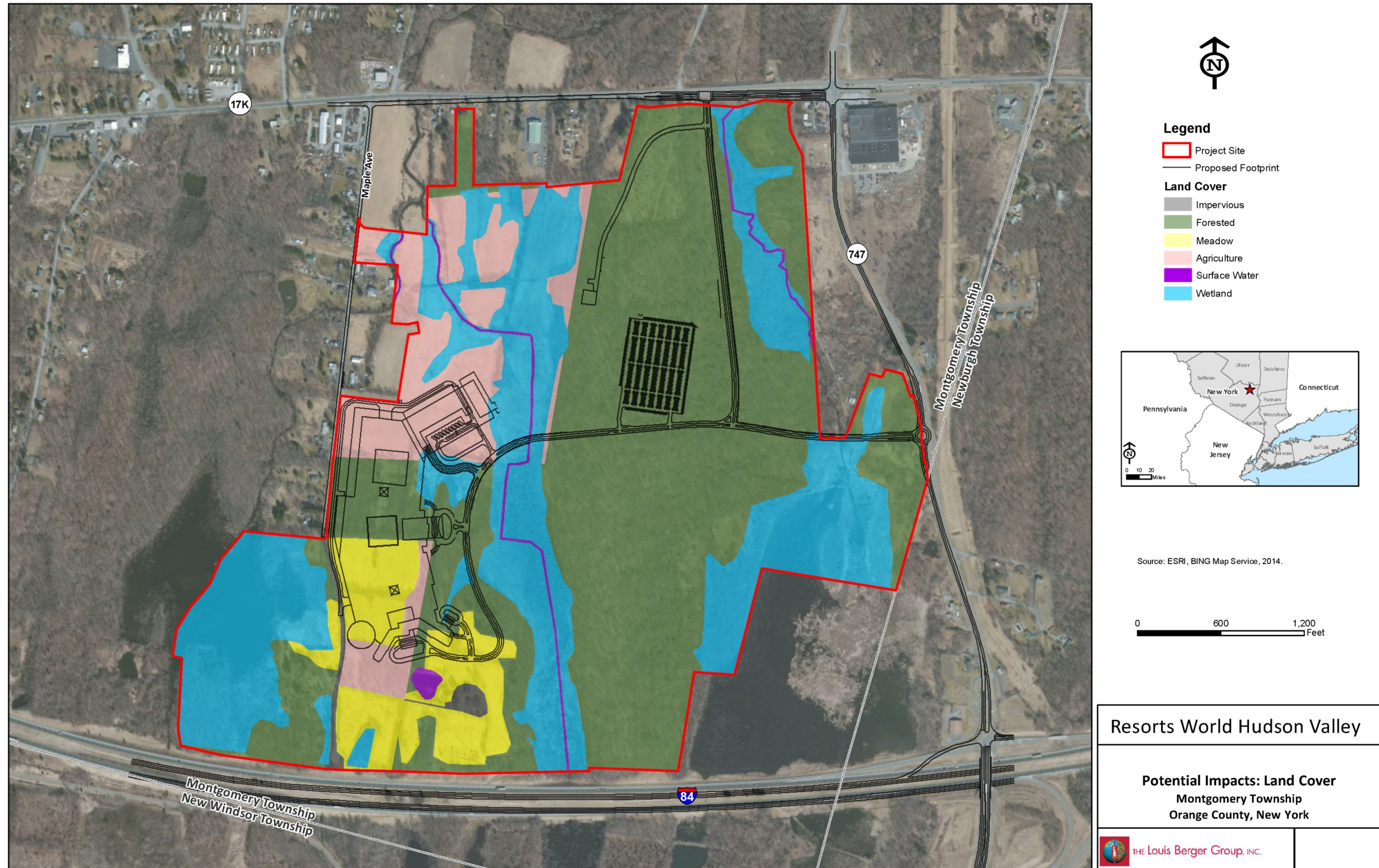
The Resorts World Hudson Valley site is located within the Tin Brook watershed, which is encompassed by the Walkill River watershed. The proposed project site is undeveloped and generally comprised of wooded and agricultural land uses, with the exception of a single family residence in the southern portion of the site. Because the proposed project site is part of the Walkill River watershed, development of the Hudson Valley Resorts facility must be performed in accordance with the Walkill Watershed Conservation and Management Plan.

According to land cover type impact calculations, impervious surfaces on the site will increase by approximately 75 acres as a result of the proposed development. Some forested areas will be removed, resulting in a loss of approximately 43 acres of forested land. Table IX. A.2.b-1 and Figure IX. A.2.b-1 illustrate potential impacts on land cover that would result from development on the proposed Resorts World Hudson Valley site. New storm water discharge point sources include roads, parking lots, pedestrian facilities, and rooftops. Exhibit VIII. C.17.e describes the management, treatment, detention, and discharge measures for both drainage areas of the site.

Table IX. A.2.b-1. Land Cover Types on the Project Site

Land Cover Type	Current Acreage	Acres Impacted
Agricultural (includes active orchards, field, greenhouse etc.)	37.06	15.66
Forested	189.32	42.26
Meadows, grasslands or brushlands (nonagricultural, including abandoned agricultural)	27.10	12.15
Roads, buildings and impervious surfaces	2.86	0.44
Surface Water features (lakes, ponds, streams, rivers, etc.)	2.52	0.03
Wetlands (freshwater)	114.26	4.49
Total	373.12	75.37

Figure IX. A.2.b-1. Potential Impacts: Land Cover



LOCAL IMPACTS AND COSTS

Currently, storm water is discharged to wetlands and streams without treatment. Storm water discharges from the site will be managed to minimize watershed impacts using the following practices:

- On-site detention and retention: Storm water will be directed into on-site storm water management facilities and green infrastructure. After providing the necessary water quality treatment, the runoff will be discharged into existing on-site wetlands and tributaries of Tin Brook.
- Storm water discharge control : Outlet structures from the aforementioned detention and retention facilities will be designed to minimize the impacts to the on-site wetlands and streams into which they discharge. Outlet structures will be designed to control discharge flows, therefore minimize the potential for erosion.
- Storm water reuse: Where practical, storm water will be collected for reuse on the site, likely for irrigation of lawn and landscaped areas, particularly the Gardens areas. Storm water from building rooftops and/or paved areas will likely be the sources for storm water reuse collection, given that these areas will likely contain the most pollutants.
- On-site infiltration: Soils on the project site are comprised of sandy, granular materials conducive to infiltration. Infiltration basins and bio-retention storm water management measures will be designed to provide opportunities for groundwater recharge. These infiltration systems will be located upstream of the aforementioned detention and retention facilities that will capture and further treat storm water overflows from the infiltration facilities during larger storm events.
- Enhanced storm water treatment: Storm water management measures will be designed to exceed NYSDEC standards for both water quality and water quantity control by at least ten (10) percent.

Flooding Impacts

Approximately 32 acres of land on the Hudson Valley Resort site are located within the 100-year floodplain, largely composed of the Tin Brook, a portion of which is located near the crossing under Route 17K.

The water volume discharged to the 100-year floodplain during a 100-year storm (pre-development) is estimated to be approximately 1.9 million cubic feet, while water volume to be discharged to the 100-year floodplain during a 100-year storm (post-development) is estimated to be approximately 3.0 million cubic feet. This represents an increase of approximately 1.1 million cubic feet; however, no storm water will flow to adjacent properties, and the release rate of all proposed flow from the site will be less than or equal to existing flow rates due to the employment of stormwater best management practices. Additionally, on-site storm water management measures will consist of infiltration systems that will reduce some of the total flow that would otherwise be discharged into the floodplain areas.

Surface Waters and Wetlands

Three north flowing streams were identified on the project site under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and the New York State Department of Environmental Conservation (NYSDEC). These include Tin Brook and two tributaries to Tin Brook, all of which are mapped as NYSDEC Class B state-regulated protected streams.

According to the U.S. Fish and Wildlife National Wetlands Inventory (NWI), surface waters (e.g., streams, ponds) comprise 1.23 acres of the project site, while wetlands comprise 51.97 acres of the project site. According to the NYSDEC Resource Mapper, wetlands under the jurisdiction of NYSDEC are mapped within and in the general vicinity of the project site.

Wetlands and open waters present on the project site are listed in Table IX. A.2.b-2. The wetland data are from an existing delineation that was completed for the HBIC DEIS. This assessment utilizes existing delineated data to estimate the potential impacts of the proposed Resorts World Hudson Valley on wetlands. These delineated wetlands and open water areas are in the process of being updated to reflect

LOCAL IMPACTS AND COSTS

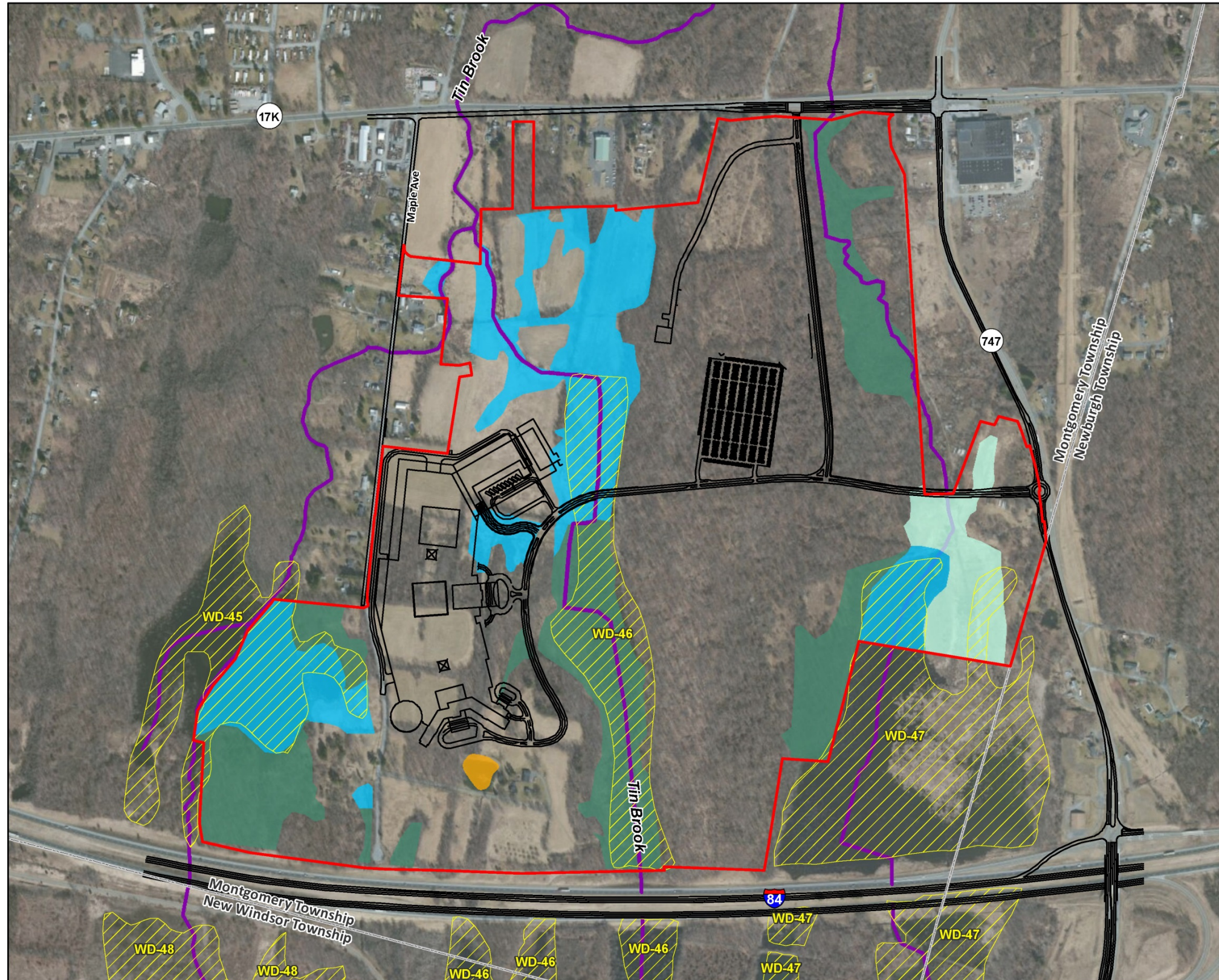
current site conditions. Additional detail on wetlands and surface waters are provided in Exhibit VIII C.1.c Description of Land.

The proposed project will require the placement of fill within approximately 4.52 acres of freshwater wetlands and the minor alteration of a stream for a road crossing. The wetland types and extent of impact are summarized in Table IX. A.2.b-2 below. The impact calculations are approximate and based on an estimated level of disturbance associated with the preliminary development footprint. Figure IX. A.2.b-2 illustrates the potential impacts to surface water and wetlands on the project site.

Table IX. A.2.b-2. Surface Waters and Wetlands

Surface Water	Acres in Project Area	Acres Impacted
PUBx	0.78	0.0
R3UB	1.73	0.03
Total Surface Water	2.51	0.03
Freshwater Wetland	Acres in Project Area	Acres Impacted
PEM1E	49.35	2.85
PSS1E	11.54	0.77
PFO1E	53.37	0.87
Total Wetlands	114.26	4.52

Figure IX. A.2.b-2. Potential Impacts: Wetlands and Waterbodies



N

Legend

- Project Site
- Proposed Footprint
- NYSDEC Wetlands

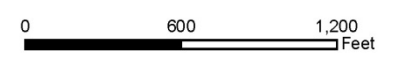
Freshwater Wetlands

- PEM1E
- PFO1E
- PSS1E

Surface Water

- PUBx
- R3UB

Source: ESRI, BING Map Service, 2014.



Resorts World Hudson Valley	
Potential Impacts: Wetlands and Waterbodies	
Montgomery Township Orange County, New York	
THE Louis Berger Group, Inc.	

LOCAL IMPACTS AND COSTS

Below are descriptive classifications of the existing delineated wetlands on site.

- *PEM 1E* -This Palustrine System (P) includes all non-tidal wetlands dominated by trees, shrubs, emergents, mosses or lichens. The Emergent (EM) Class is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. The Subclass '1' refers to Persistent -a condition that is dominated by species that normally remain standing at least until the beginning of the next growing season. The 'E' Modifier refers to a water regime that is Seasonally Flooded/Saturated: where surface water is present for extended periods, especially early in the growing season and when surface water is absent, substrate remains saturated near the surface for much of the growing season.
- *PSS 1E* -This Palustrine System (P) includes all non-tidal wetlands dominated by trees, shrubs, emergents, mosses or lichens. The Scrub Shrub (SS) Class is characterized by woody vegetation that is less than 6 meters tall. The Subclass '1' refers to Broad-leaved Deciduous -a habitat that is characterized by woody shrubs with leaves that are shed during the cold or dry season. The 'E' Modifier refers to a water regime that is Seasonally Flooded/Saturated: where surface water is present for extended periods, especially early in the growing season and when surface water is absent, substrate remains saturated near the surface for much of the growing season
- *PFO 1E* -This Palustrine System (P) includes all non-tidal wetlands dominated by trees, shrubs, emergents, mosses or lichens. The Forested (FO) Class is characterized by woody vegetation that is 6 meters tall or taller. The Subclass '1' refers to Broad-leaved Deciduous -a habitat that is characterized by woody trees or shrubs with relatively wide, flat leaves that are shed during the cold or dry season. The 'E' Modifier refers to a water regime that is Seasonally Flooded/Saturated: where surface water is present for extended periods, especially early in the growing season and when surface water is absent, substrate remains saturated near the surface for much of the growing season.
- *PUB x* - This Palustrine System (P) includes all non-tidal wetlands dominated by trees, shrubs, emergents, mosses or lichens. The Unconsolidated Bottom (UB) Class includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30%. The (x) is a special modifier that stands for Excavated, indicating that the wetland lies within a basin or channel that have been dug, gouged, blasted or suctioned through artificial means by man.
- *R3UB* -This Riverine System (R) includes all non-tidal flowing waters and streams. The three (3) classifies the stream as Upper Perennial in nature. The Unconsolidated Bottom (UB) Class includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30%.

Electricity Demand and Infrastructure Capacity

The Resorts World Hudson Valley site is within the service area of Central Hudson Gas & Electric (CHGE). The existing electrical overhead distribution line originates at a substation located north of Route 17K approximately one-half mile away. There is no service directly to the property, but homes and commercial property in the vicinity are served by an overhead circuit located along the south side of Route 17K and in an easement on the east side of Route 747. The existing substation does not have sufficient capacity to serve the proposed land uses for Resorts World Hudson Valley, therefore utility upgrades will occur as part of the project.

The preliminary electrical load has been calculated to be 30 megawatts (MW). Proposed electrical demands were estimated based on the Resorts World Hudson Valley master plan an estimated demand factors. Annual electricity usage during operation is estimated at 39.2 million kilowatt-hours (kWh). The design load for the total development is anticipated to 64,061 kilovolt-amperes (kVA) and 60,857 kilowatts (kW). A summary of the major electrical needs from the plan are included in Table IX. A.2.b-3 and provided in further detail in Exhibit VIII. C.17.a.

LOCAL IMPACTS AND COSTS

Table IX. A.2.b-3. Electric Design Load

Space	Interior Area (Sq Ft)	Total KVA (Connected Load)
Ground Floor – Casino & Conference Center	1,099,040	30,773
Hotel	654,550	6,546
Casino Basement	131,535	3,420
Mezzanine	131,535	3,420
Hotel Parking Garage	1,599,625	3,238
Misc.		7,778
Water Treatment	20,000	620
Total Development (KVA)		55,795
		(KW)
		53,005
		(A @ 480 V)
		67,142

CHGE provided a willingness to serve letter on June 26, 2014 indicating the ability to provide the electrical service required to meet the loads for Resorts World Hudson Valley, indicating available supply and therefore minimal impacts on the electric supply network.

Impacts on Protected Habitats and Species

The property has a wide range of wildlife habitat consisting of upland forest, wetland forest and marsh, open water ponds, and streams. These areas will support a variety of species including deer, coyote, beaver, passerine birds and waterfowl, amphibians, and snakes. A large portion of the site includes previously-disturbed areas which are not fully vegetated or altered through human activity (e.g., agricultural fields). These areas either do not provide wildlife habitat or provide only marginal habitat for the wildlife types mentioned. The construction of the project will result in the loss of upland and wetland forest habitat, emergent and open water wetlands, and active and fallow agricultural fields. The conversion of habitat to other uses will result in the direct loss of some wildlife. Remaining habitats directly adjacent to the hotel/casino complex will also have a reduction in value to wildlife due to the combined effects of increased human activity, lighting, and noise. The surrounding landscape has extensive, similar habitat that will remain unaffected by the project and is capable of supporting similar wildlife species.

The USFWS and the NYSDEC New York Natural Heritage Program (NYNHP) were contacted for information regarding the potential presences of species of special concern. A response from the NYNHP has not been received to date. The USFWS identified five potential species within Orange County. For the majority of these species, suitable habitat within the proposed development areas is absent. Based on site investigations and habitat assessments, several of the listed species are not expected to occur within the site. For those federal species with potential habitat, site-specific surveys have been initiated in consultation with the USFWS. Surveys are in progress for the Indiana Bat and the Northern Long Eared Bat to confirm presence/absence of these species. . For those species with potential habitat, site specific surveys have been initiated in consultation with USFWS to determine impact. Coordination with NYSDEC will occur once a list of species of special concern has been received. Additional site specific surveys may be needed to identify the potential impacts of the project on state-listed species habitat.

LOCAL IMPACTS AND COSTS

Table IX. A.2.b-4. Summary of listed species of concern provided by the USFWS and NYNHP

Common Name	Species Name	Status	Potential Habitat Within Property	Potential Habitat Within Construction Limits	Field Surveys
Animals					
Bog turtle	<i>Clemmys muhlenbergii</i>	Threatened (USFWS) Endangered (NY)	No	No	No
Dwarf Wedge Mussel	<i>Alasmodonta heterodon</i>	Endangered (USFWS) Endangered (NY)	No	No	No
Indiana bat	<i>Myotis sodalis</i>	Endangered (USFWS) Endangered (NY)	Yes	Yes	Ongoing
Northern long-eared Bat	<i>Myotis septentrionalis</i>	Proposed Endangered (USFWS)	Yes	Yes	Ongoing
Plants					
Small Whorled Pogonia	<i>Isotria medeoloides</i>	Threatened (USFWS) Endangered (NY)	No	No	No

Impacts to potential habitat within the site for rare species will be finalized once surveys are complete. Some rare species may experience a loss of foraging habitat and decline in quality of remaining habitat due to an increase in human activity and use.

LOCAL IMPACTS AND COSTS

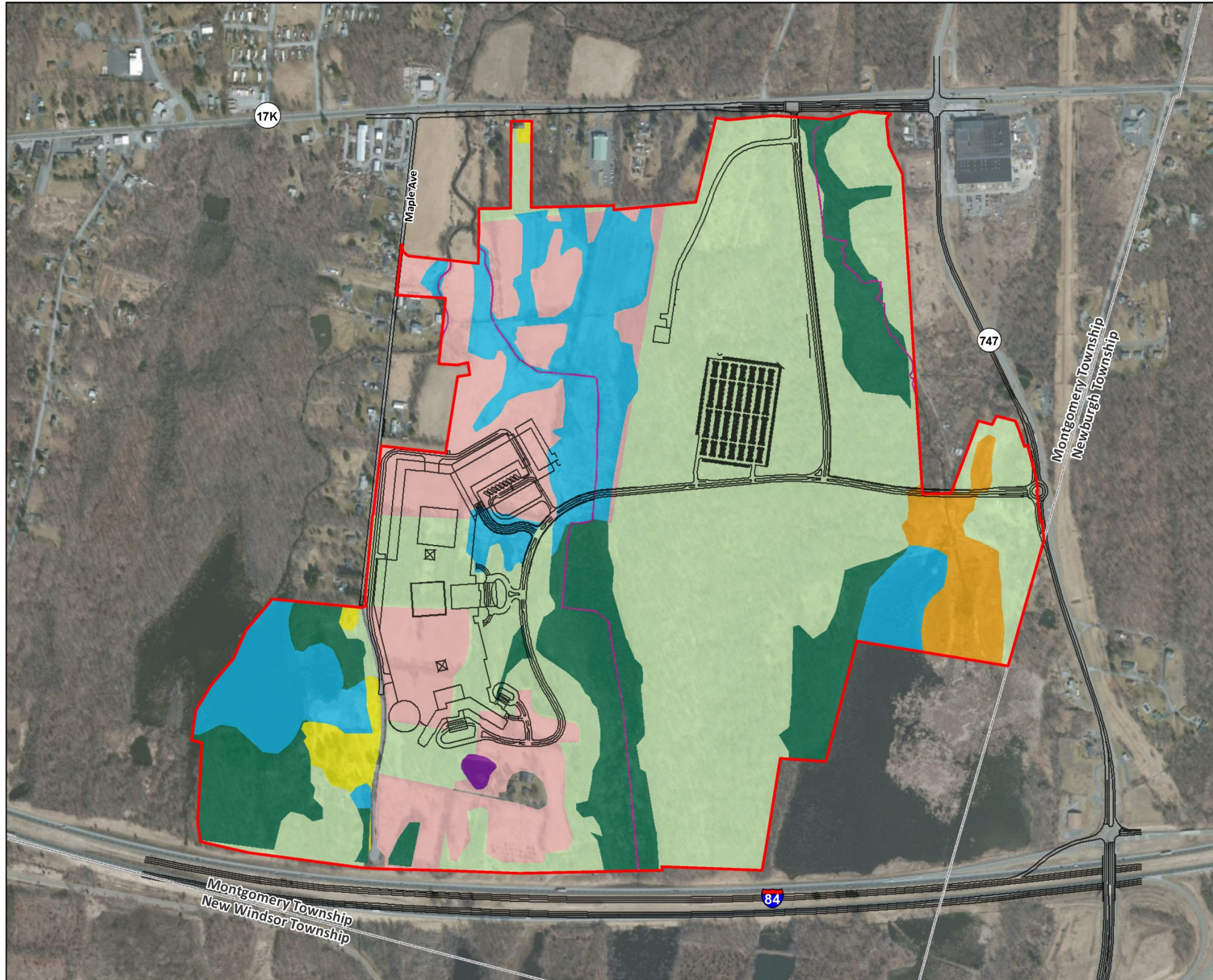
Ecological Communities

According to NYNHP data, no significant natural communities are mapped on or in the vicinity of the Resorts World Hudson Valley site. The property has a wide range of wildlife habitat consisting of upland forest, wetland forest and marsh, open water pond and streams. These areas will support a variety of species including deer, coyote, beaver, passerine birds and waterfowl, amphibians and snakes. A large portion of the site includes previously-disturbed areas which include agricultural lands altered through human activity. These areas either do not provide wildlife habitat or only marginal habitat for the wildlife types mentioned. Potential impacts to existing ecological or vegetative communities on the site are shown in Table IX. A.2.b-5 and Figure IX. A.2.b-3.

Table IX. A.2.b-5. Impacts to Ecological Communities

Ecological Communities	Current Acreage	Acres Impacted
Cropland/Field Crops	57.07	24.56
Palustrine Emergent Wetland	49.35	2.85
Palustrine Forested Wetland	53.37	0.87
Palustrine Scrub Shrub Wetland	11.54	0.77
Palustrine Unconsolidated Bottom	0.78	0.00
Riverine, Unconsolidated Bottom	1.73	0.03
Southern Successional Hardwood Forest	191.66	45.81
Successional Old Field	4.75	0.04

Figure IX. A.2.b-3. Potential Impacts: Ecological Communities





Legend

- Project Site
- Proposed Footprint

Vegetative Communities

- Palustrine Emergent Wetland
- Palustrine Forested Wetland
- Palustrine Scrub Shrub Wetland
- Palustrine Unconsolidated Bottom
- Riverine, Unconsolidated Bottom
- Cropland/Field Crops
- Southern Successional Hardwood Forest
- Successional Old Field



Source: ESRI, BING Map Service, 2014.
Berger, 2014.



Resorts World Hudson Valley	
Potential Impacts: Ecological Communities	
Montgomery Township Orange County, New York	
 THE LOUIS BERGER GROUP, INC.	

LOCAL IMPACTS AND COSTS

Light Pollution and Visual Impacts

No significant impacts have been identified in relation to aesthetic and visual resources; it is anticipated that the proposed development will enhance the visual character of the site by removal of the old, deteriorating buildings, removal of all existing site lighting, and the introduction of a modern, sustainable development scheme with LEED® designed buildings, re-vegetation of graded areas and added landscape plantings in keeping with the existing rural character of the area. Areas outside of the limits of disturbance specified on the project construction plans will be protected and preserved in existing vegetative cover.

Light Pollution

The conceptual lighting plan has been designed with a minimum amount of lighting limited to illuminating circulation areas only for safety and security, and incorporates cutoff fixtures to minimize stray light. The use of modern, Night Sky compliant lighting fixtures will minimize the visibility of site lighting from off site. The anticipated site illumination, overall, will avoid any potential impact on distant aesthetic resources from light pollution.

Exterior site lighting is proposed according to a conceptual lighting plan designed to achieve area lighting for distinct areas of the site plan while avoiding light pollution. The site lighting will be designed based on current best practice such as Dark Sky Society “Guidelines for Good Exterior Lighting Plans.” The site lighting will be implemented with a focus on reducing “sky glow” through minimizing excessive lighting, using shielded fixtures with efficient light bulbs while ensuring public safety. Light will be directed downward through the use of full cut-off and/or fully shielded fixtures, along with fully shielded wall packs and flush mounted canopy fixtures. Lighting will be confined to necessary areas and minimized to the extent possible while meeting safety purposes including safe pedestrian passage and property identification. Site lighting will be turned on for active business hours.

All existing light fixtures including pole mounted fixtures along with wall and surface-mounted fixtures will be removed from the site. All proposed luminaires will be either LED or low-pressure sodium vapor exterior lamps with cutoff fixtures, mounted on 18-foot poles or 3 feet 4 inch bollards. Light fixtures will use shut-off controls. An ornamental style standard will be selected for use throughout the project for continuity. Locations of light fixtures at buildings have been carefully considered to place lights on the interior sides of the site, opposite Route 17A so as to avoid undue nighttime spillover. All fixtures are full-cut-off, down-light only.

- Street/Area lighting:
 - Full cut-off, 2700K LED, 18 feet tall
- Bollard/pathway lighting:
 - Full cut-off, 2700K LED, 3 foot-4 inches tall
- Decorative Wall Sconces @ exterior columns:
 - Full cut-off, 2700K LED, mounted @ 6 feet above grade
- Upper Façade Grazing Light:
 - 2700K LED, mounted under roof eaves, height varies.

Fixture height will be limited. Pole lamps found in limited numbers within the existing development will be eliminated and a single, cutoff pole lamp is proposed where internal roadways intersect, for safety purposes. In addition, a single, cutoff pole lamp is proposed at each of the new access intersections on Route 17K, Maple Avenue, and the internal access road for safety. Proposed area lighting is limited to the parking area on the east side of the project. Lamp selection will be made based on “lumen cap” recommendations including the following: commercial properties in non-urban commercial zones = 25,000

LOCAL IMPACTS AND COSTS

lumens per acre. Residential areas = 10,000 lumens per acre. Maximum lumen levels for different fixtures will be based on mounting heights, as described in Table IX. A.2.b-6.

Table IX. A.2.b-6. Lamp Selection

Mounting Height (feet)	Recommended Maximum Lumens
6	500 – 1000 lumens
8	600 – 1,600 lumens
10	1,000 – 2,000 lumens
12	1,600 – 2,400 lumens

Specification of cutoff pole fixtures throughout the project will limit the extent of ground illumination to the localized area immediately around the light poles, and limit the amount of horizontal stray light or reflection upward, thereby minimizing the potential for adverse visual effect on the night sky. Light emanating from within the buildings spilling outward will be minimized with design focusing on interior light cutoff such as blinds and curtains.

The conceptual lighting plan for the site has been designed with a minimum amount of lighting, limited to only that which is needed for safety and security in circulation areas. Site lighting levels will be reduced closer to property lines, where the height of light poles will diminish based on the distance to the property line. Development will largely occur in existing open spaces that have been previously cleared on the western portion of the project site. Limited removal of the existing natural barriers will be undertaken only as required. The development of the site will include enhancement of the existing perimeter vegetation in the form of additional tree planting and landscaping further establishing the perimeter buffers while limiting light spillover to adjacent properties and rights of way.

One area where outdoor lighting will also be installed is the surface parking lot in the east-central portion of the site. This area will also implement the use of Dark Sky compliant technologies to provide safety and task lighting for evening use. The parking lot will be located within wooded areas of the project site. The lighting will be designed based on containing light within the premises and basic lighting concepts of pathways and surrounding trees employing LED lighting technology. Design concepts include the use of suspended downlights casting light into patterned projections downward and not outward and the use of cool color temperature lamps to mimic the feel of moonlight. Full-cutoff LED landscape bollards will illuminate the pathways to parking areas.

By using the best practices of Dark Sky compliant design, the development will avoid light pollution and the lighting will not have a negative impact on the aesthetic and visual resources in the area of development or beyond.

Visual Impacts

To the extent possible, the proposed development has been sited within the existing 373 acres of disturbed/developed area. Changes in local area views (which are limited to particular vantage points along Route 17K) will be defined by the change in architectural design style and increase in density of development on the Site. There will be clearing for roadways and building sites, including the individual detached buildings set within woodland to remain, but the clearing will be limited by specifications set forth on the construction plans to allow for proper screening from public views.

Orange County, New York is home to over 180 properties on the national and/or State Register of Historic Places. Twenty-two of these properties fall within a five mile radius of the project site. Of these twenty-two NHR properties, none of the sites fall within the viewshed determination as having views of the site and development.

Twenty three parks surround the project site along with Orange Lake, located approximately 2.0 miles to the northeast. None of the parks have been identified as having views of the project site as

LOCAL IMPACTS AND COSTS

determined by the viewshed analysis. However, these elevated areas have the potential to have views of the project site development if tree canopy was not considered.

- Berea Park 1.08 miles
- Brick House Museum 1.50 miles
- James Olley Park 2.74 miles
- Cronomer Hill Park 4.00 miles
- New Windsor Park 4.34 miles
- Temple Hill Park 4.38 miles
- Municipal Park 4.84 miles
- San Giacomo Park 4.90 miles

Orange Lake lies approximately two miles from the project site. The northern portions of the lake currently have views of the project site and future development. Orange Lake is a private lake without public access; however, residential properties found on the eastern edge (Orange Lake Estates) have deeded access to the lake and use the lake for boating, fishing, swimming, and ice fishing. Other residential properties are found on the southern and western shores of Orange Lake. The viewshed analysis did not identify these areas to the south and west to have views of the site due to slight topography and tree canopy conditions.

The Resorts World Hudson Valley project site is located just north of the Stewart State Forest, separated by Interstate 84 and is accessed by Little Britain Road/Route 207 which runs along the southern border of the Park. The regional topography combined with the tree cover effectively blocks potential view of the Site from this recreational resource. However, the GIS viewshed analysis indicates potential views from the trail system could be present if existing tree cover was not present. The GIS viewshed analysis indicates that no views exist to the project site from the Stewart State Forest and thus the project will not have a significant visual impact on this resource.

The siting of the Resorts World Grand Hotel has frontage along Maple Avenue and will have a ground floor elevation established at approximately 440 feet to match existing grades. The Hotel roof deck as designed extends upward at a height of approximately 200 ft. to the elevation 640 ft. The proximity of the home sites along Maple Avenue to the proposed area of development currently allows a direct line of sight view between the existing homes and the development area. While a portion of the existing trees obscure views, the potential for adverse visual impact exists and will need to be mitigated by vegetative screening at the edge of the development area, in conjunction with any restoration of the existing landscape between the two areas.

Impacts on Land and Geological Features

The proposed project will require the excavation and grading of approximately 1,000,000 cubic yards of natural material to construct the new buildings and parking lot. In addition, development will likely require 26.5 acres of tree removal. The Resorts Hudson Valley will occupy approximately 75 acres of land, with 52 acres of the facility footprint encompassing previously disturbed land that includes single family residents and pasture/farmland cleared for agriculture. The remaining acreage required for facility construction (23 acres) will be composed of undeveloped land, resulting in 75 acres of new development. The primary development would be constructed on a relatively flat surface. A net increase of approximately 25 acres in disturbed, lands would be created by the proposed facility.

Construction activities on undeveloped land will result in a greater loss of topsoil than those on developed areas. The exposed soil will be vulnerable to erosion via wind and water. Mitigation measures will include Best Management Practices (BMPs) to minimize and reduce effects on soil erosion to less-than-significant levels. Adherence to the New York State Pollution Discharge Elimination System General Permit for Storm Water Discharges from Construction Activity, combined with the required storm water pollution prevention plan (SWPPP) and soil protection BMPs to minimize effects, would reduce the potential effect to less than significant.

LOCAL IMPACTS AND COSTS

Impacts on land also could include impacts from potential releases of hazardous materials, which could affect surface water and groundwater. Potential releases could include petroleum products or other hazardous materials used during project construction, or hazardous materials used for maintenance, landscaping, etc. following construction of the proposed project. A Phase I Environmental Site Assessment (ESA) will be conducted on the site to determine the potential for hazardous material-related impacts due to any Recognized Environmental Concerns that may be identified within the project area.

Other impacts on land include construction where depth to the water table is less than 3 feet and construction on land where bedrock is exposed or generally within 5 feet of existing ground surface. Blasting will likely be required during project construction, and shale could be ripped. If it is necessary, impact from blasting would be low but permanent.

LOCAL IMPACTS AND COSTS

APPENDIX IX. A.2.b

DRAFT
RESORTS WORLD HUDSON VALLEY
TRAFFIC IMPACT STUDY

Town of Montgomery, New York

Prepared for:

RW Orange County LLC d/b/a Resorts World New York

Prepared by:

Philip Habib & Associates

102 Madison Avenue, 11th Fl.

New York, NY 10016

June 27, 2014

TABLE OF CONTENTS

INTRODUCTION.....1

ANALYSIS METHODOLOGY2

EXISTING CONDITIONS3

Traffic.....3

Parking6

Transit.....6

Pedestrians and Bicycles.....8

FUTURE CONDITIONS WITHOUT THE PROJECT8

Future Travel Demand.....8

Traffic.....8

Parking.....10

Transit.....10

Pedestrians and Bicycles.....10

FUTURE CONDITIONS WITH THE PROJECT10

Travel Demand.....10

Proposed Roadway Improvements.....16

Trip Assignment17

Traffic.....17

Parking20

Transit.....20

Pedestrians and Bicycles.....20

LONG-TERM FUTURE TRAFFIC CONDITIONS AT ETC+1021

2027 No-Build Condition21

2027 Build Condition23

PRINCIPAL CONCLUSIONS.....26

APPENDICES

APPENDIX A - Summary of Resorts World Casino Auto Occupancy Data

LIST OF FIGURES

	Follows Page
Figure 1 Project Site Location.....	1
Figure 2 Existing Roadway Network	1
Figure 3 Existing Friday AM/PM/Evening Peak Hour Traffic Volumes	3
Figure 4 Existing Saturday Midday/Evening Peak Hour Traffic Volumes.....	3
Figure 5 2017 No-Build Friday AM/PM/Evening Peak Hour Traffic Volumes.....	8
Figure 6 2017 No-Build Saturday Midday/Evening Peak Hour Traffic Volumes.....	8
Figure 7 Project Site Plan.....	10
Figure 8 Proposed New Route 17K Intersection.....	16
Figure 9 Proposed New Route 747 Roundabout.....	16
Figure 10 Friday AM/PM/Evening Peak Hour Project-Generated Vehicle Trips	17
Figure 11 Saturday Midday/Evening Peak Hour Project-Generated Vehicle Trips	17
Figure 12 2017 Build Friday AM/PM/Evening Peak Hour Traffic Volumes.....	17
Figure 13 2017 Build Saturday Midday/Evening Peak Hour Traffic Volumes.....	17
Figure 14 2027 No-Build Friday AM/PM/Evening Peak Hour Traffic Volumes.....	21
Figure 15 2027 No-Build Saturday Midday/Evening Peak Hour Traffic Volumes.....	21
Figure 16 2027 Build Friday AM/PM/Evening Peak Hour Traffic Volumes.....	23
Figure 17 2027 Build Saturday Midday/Evening Peak Hour Traffic Volumes.....	23

LIST OF TABLES

	Page
Table 1 Intersection Level of Service Criteria.....	3
Table 2 Existing Conditions at Analyzed Intersections	7
Table 3 2017 No-Build Conditions at Analyzed Intersections	9
Table 4 Transportation Planning Factors	11
Table 5 Travel Demand Forecast – Person Trips.....	14
Table 6 Travel Demand Forecast – Vehicle Trips	15
Table 7 2017 Build Conditions at Analyzed Intersections	18
Table 8 2027 No-Build Conditions at Analyzed Intersections	22
Table 9 2027 Build Conditions at Analyzed Intersections	24

INTRODUCTION

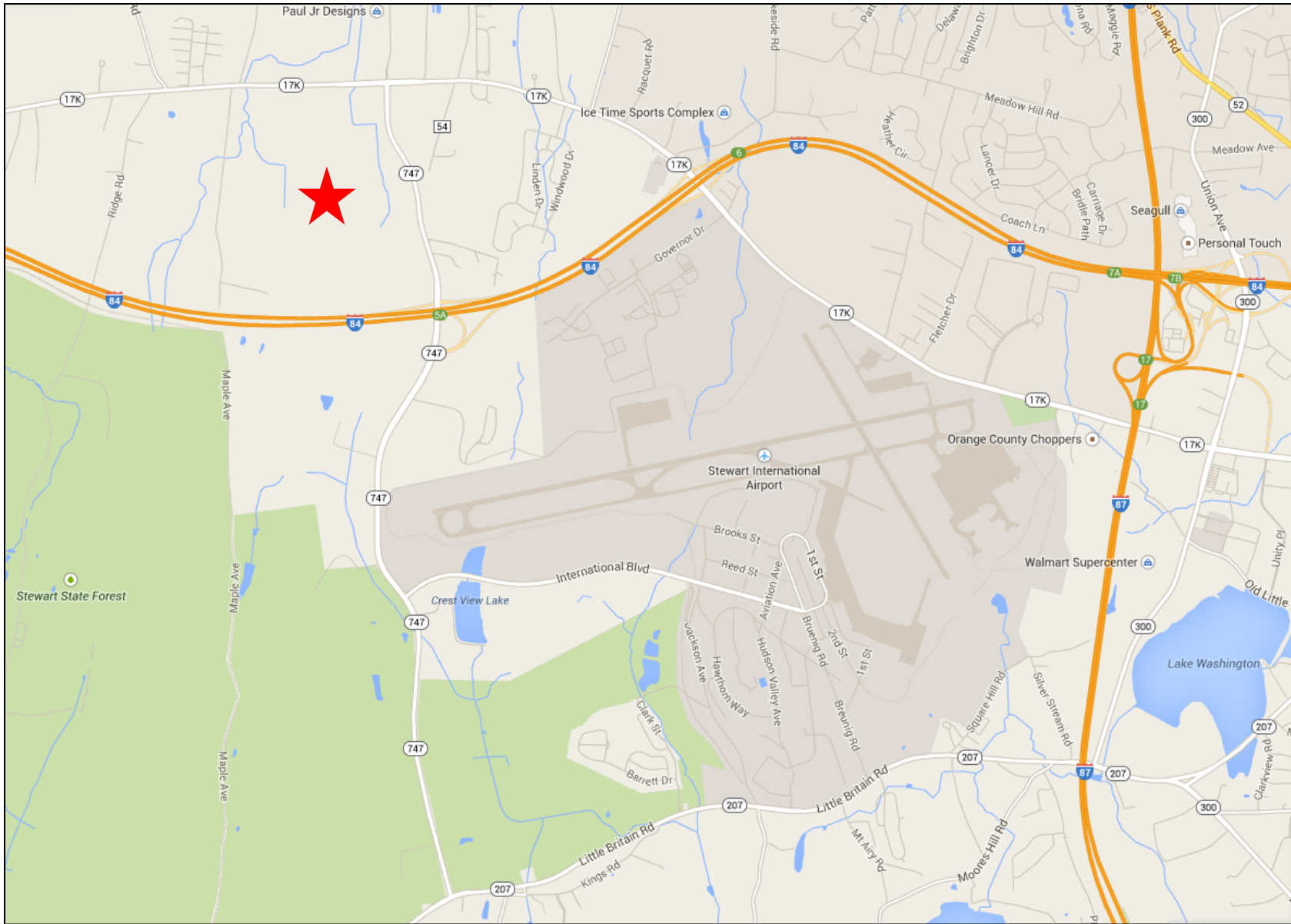
This study examines the existing transportation conditions in the vicinity of the project site, as well as conditions in the future with and without the proposed Resorts World Hudson Valley development in the Town of Montgomery, Orange County, New York. The project would include the development of a full service gaming facility with an accessory 600-room hotel along with a convention center on a site adjacent to Interstate 84 (I-84). Traffic would access the project from New York State Route 17K along the site's northern boundary and from New York State Route 747 along the site's eastern boundary (see **Figure 1**). I-84 borders the project site on the south, and there is an interchange with Route 747 (Interchange 5A) to the southeast of the site. I-84 also connects with Route 17K at Interchange 6 approximately 1.5 miles to the east of the project site. It is anticipated that the proposed project would be completed and fully operational by the end of 2016. However, to be conservative, it is assumed that traffic levels would not fully develop until the first summer after opening. A 2017 analysis year is therefore assumed for the analysis of future traffic conditions with the proposed project.

Travel demand generated by the proposed project is expected to result in increased traffic volumes along the Route 17K and Route 747 corridors which provide direct access to the project site and would connect the site to the I-84. As shown in **Figure 2** and described in more detail later in this assessment, a traffic study area encompassing a total of nine existing intersections (six signalized and three unsignalized) along the Route 17K and Route 747 corridors were selected for analysis based on the assignment of new project-generated vehicle trips. Analyzed existing intersections include the following.

1. Route 17K and Coldenham Road (County Route 75) (signalized)
2. Route 17K and Maple Avenue (unsignalized)
3. Route 17K and Browns Road (unsignalized)
4. Route 17K and Route 747/Stone Castle Road (signalized)
5. Route 17K and Rock Cut Road (County Road 23) (signalized)
6. Route 747 at I-84 westbound entrance/exit ramps (signalized)
7. Route 747 at I-84 eastbound entrance/exit ramps (signalized)
8. Route 747 and International Boulevard (unsignalized)
9. Route 747 at Route 207 (Little Britain Road) (signalized)

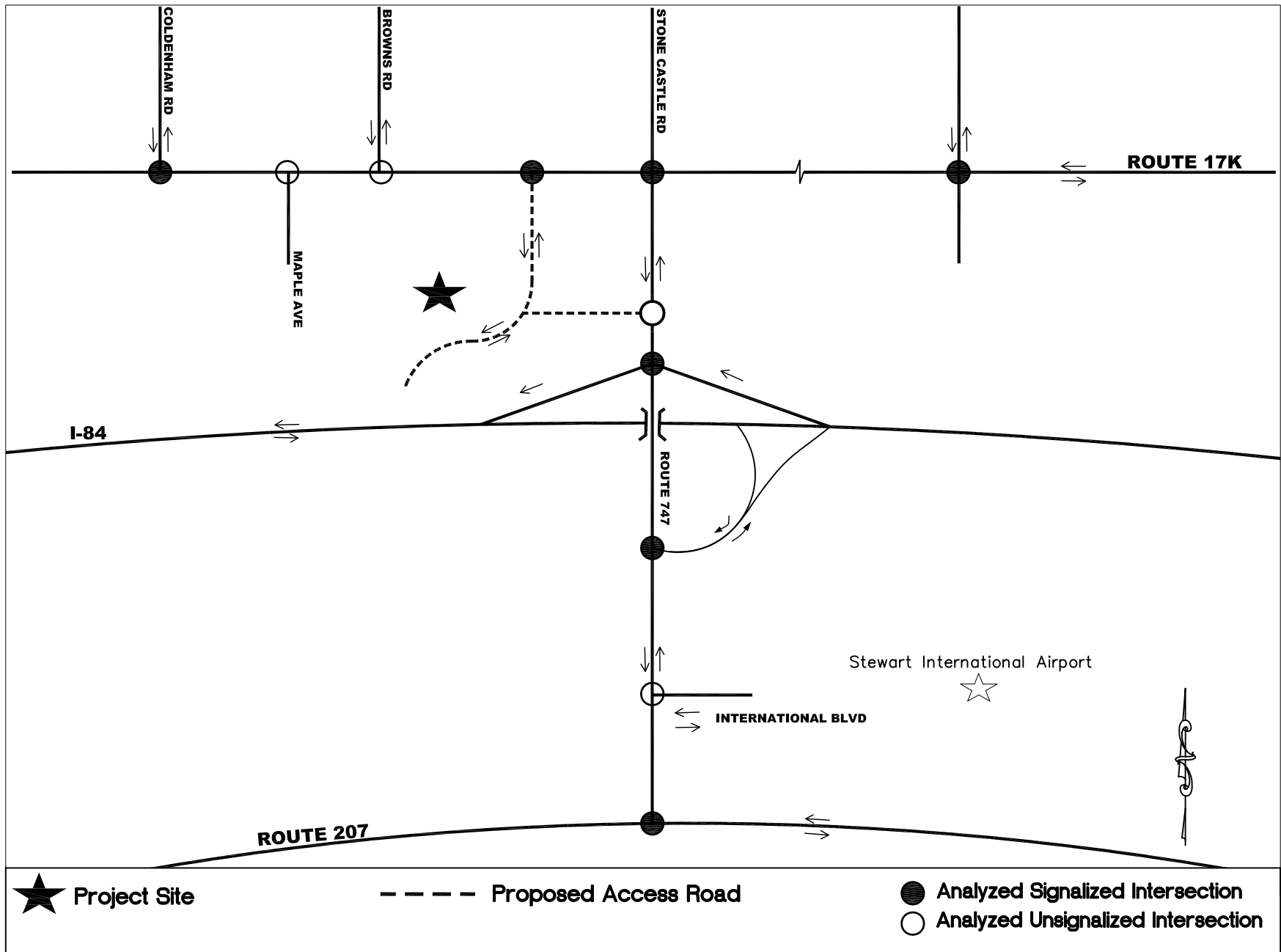
As shown in **Figure 2**, the analysis of future traffic conditions with the project also includes a proposed signalized intersection at the project entrance on Route 17K approximately 855 feet to the west of Route 747 and a proposed roundabout at the project entrance on Route 747 approximately 0.5-mile to the south of Route 17K.

The traffic analysis focuses on the weekday 8-9 a.m. (AM) and 5-6 p.m. (PM) peak hours which are typical periods of peak commuter demand on the area's roadway network. The weekday 9-10 p.m. (evening) and Saturday 2-3 p.m. (midday) and 9-10 p.m. peak hours are also analyzed as these are anticipated to be periods of peak demand for the proposed casino, and convention center uses. Analyzed intersections are assessed under existing (2014) conditions, the 2017 future conditions without the project (2017 No-Build), and the 2017 future conditions with the



 Proposed Resorts World Hudson Valley Site

Figure 1
Project Site Location



N.T.S

Figure 2
Project Site Location

project (2017 Build). Conditions in 2027—the estimated time of project completion plus 10 years (ETC+10)—are also analyzed to demonstrate the functionality of proposed new roadway improvements over a 10 year period.

ANALYSIS METHODOLOGY

The capacity analyses at signalized and unsignalized intersections in the study area are based on the methodology presented in the 2000 Highway Capacity Manual (HCM) and utilize HCS+ Version 5.5 software. The capacity analysis for the proposed roundabout is based on 2010 HCM procedures using HCS2010, Version 6.60. Traffic data required for these analyses include the hourly volumes on each approach and various other physical and operational characteristics including signal timing plans for signalized intersections and the physical layout, lane markings, curbside parking regulations, and other relevant characteristics of each analyzed intersection.

The HCM procedures express quality of flow at signalized intersections in terms of level of service (LOS), based on the amount of delay experienced by a driver at an intersection. Levels of service range from A, with a minimal delay (10 seconds or less per vehicle), to F, representing unacceptably long delays (80 seconds or greater per vehicle). The HCM methodology also provides a volume-to-capacity (v/c) ratio for each signalized intersection approach, representing the ratio of traffic volumes on an approach to its traffic carrying capacity. At a value of 1.0, the intersection lane group operates over capacity. In this situation, severe congestion occurs in traffic flow, with stop-and-start conditions and extensive vehicle queuing and delays. In contrast, a value of 0.80 indicates that 80 percent of the capacity is being used and traffic flows are generally acceptable.

For unsignalized intersections, the HCM methodology generally assumes that major street traffic is not affected by minor street flows. Left turns from the major street are assumed to be affected by the opposing, or oncoming major street flow. Minor street traffic is obviously affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. This relationship differs somewhat from the criteria used for signalized intersections, primarily because drivers expect different levels of performance from the two different kinds of transportation facilities. For unsignalized intersections, levels of service range from A, with minimal delay (10 seconds or less per vehicle), to F, which represents long delays (over 50 seconds per vehicle).

Table 1 shows the LOS/delay relationship for signalized and unsignalized intersections using the HCM methodology. Levels of service A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E is considered to be the limit of acceptable delay, and LOS F is considered to be unacceptable to most drivers. In this study, lane groups operating at LOS E or F or a v/c ratio of 0.85 or above are identified as congested.

Table 1
Intersection Level of Service Criteria

Level of Service (LOS)	Average Delay per Vehicle (seconds)	
	Signalized Intersections	Unsignalized Intersections
A	less than 10.1	less than 10.1
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	greater than 80.0	greater than 50.0

Source: Highway Capacity Manual.

EXISTING CONDITIONS

Traffic

Existing Traffic Volumes

Existing conditions for the traffic analysis were developed from a data collection program conducted for this project in June 2014, and from data currently available from secondary sources including the *HIBC – Route 747 Investors I, LLC Traffic Impact Study* (The Chazen Companies, February 26, 2010). The 2014 data collection program included both manual turning movement and automatic traffic recorder (ATR) counts along the Route 17K and Route 747 corridors. Existing traffic volumes for the five analyzed peak hours at intersections along these corridors are shown in **Figures 3 and 4**.

Roadway Network

The principal access roadways for the proposed Resorts World Hudson Valley development would include I-84 and New York State Routes 17K, 747 and 207. The following provides a description of these roadways and other intersecting roadways in proximity to the proposed development site.

Interstate 84

I-84 in New York State is a four-lane limited access east-west highway that extends approximately 72.5 miles from the Pennsylvania state line at Port Jervis to the Connecticut state line east of Brewster. In the vicinity of the project site it operates with two moving lanes in each direction separated by a planted median. The closest interchanges to the project site are at Route 747 (Interchange 5A) immediately to the southeast of the project site, and at Route 17K (Interchange 6) approximately 1.5-miles to the east. I-84 also connects with the New York State Thruway (I-87) at Interchange 7A/B approximately 3.75-miles to the east of the project site. I-84 is a primary vehicular route between southern New England, Pennsylvania and points west and

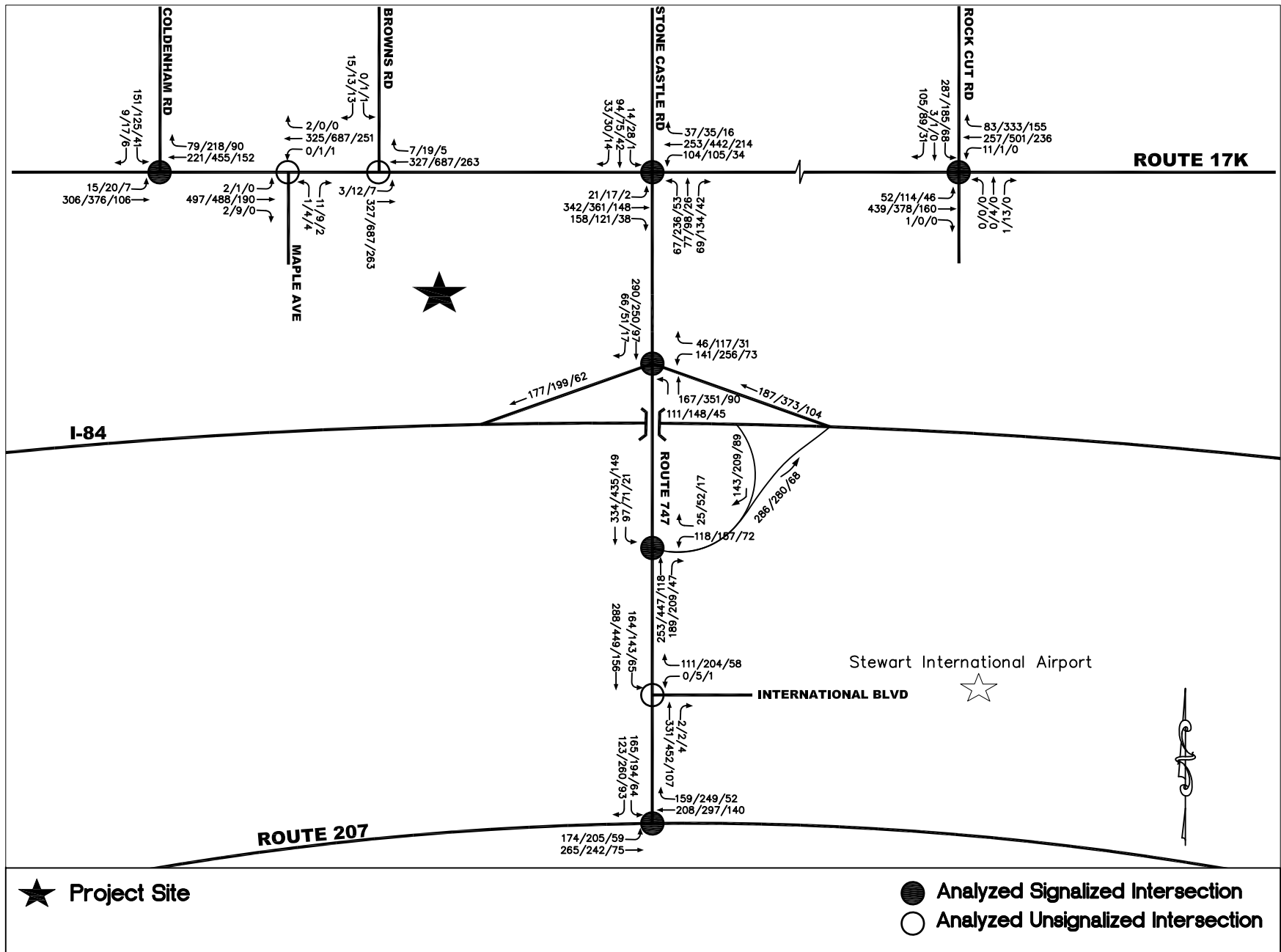


Figure 3
Existing Friday AM/PM/Evening Peak Hour Traffic Volumes

N.T.S

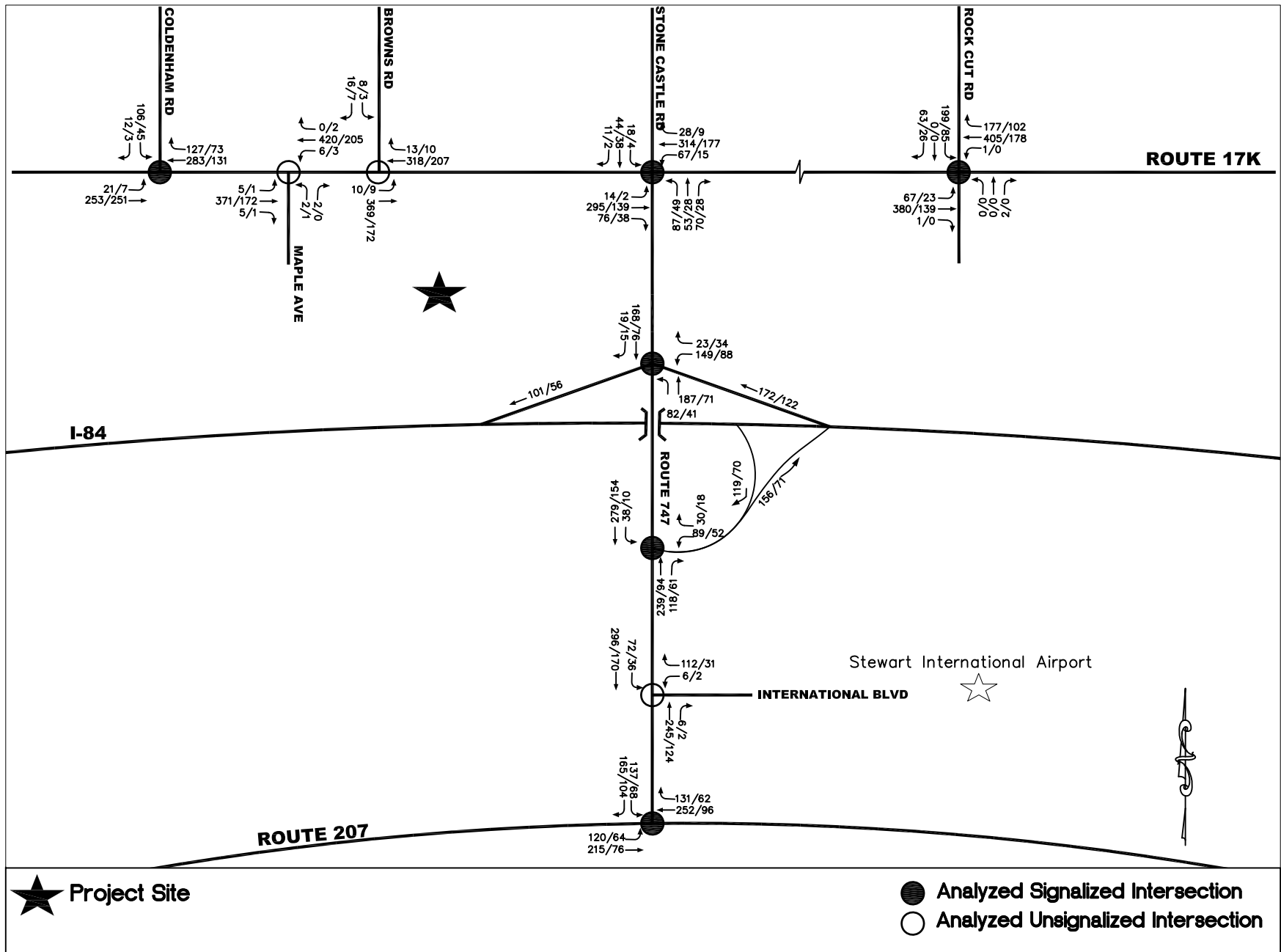


Figure 4
Existing Saturday Midday/Evening Peak Hour Traffic Volumes

N.T.S

Resorts World Hudson Valley Traffic Study

consequently carries heavy truck volumes. It also carries substantial daily east-west commuter traffic. Annual average daily traffic (AADT) on I-84 totals approximately 48,000 vehicles.

As discussed later in this report, the majority of vehicles en route to and from the proposed Resorts World Hudson Valley are expected to use I-84, most via the I-84/Route 747 interchange. It should therefore be noted that this interchange was designed to accommodate future demand from expanded use of the adjacent Stewart International Airport. As this airport demand has not been realized, the I-84/Route 747 interchange typically functions with available capacity during peak periods.

New York State Route 17K

New York State Route 17K is an east-west highway located entirely within Orange County that extends approximately 22.5 miles from an intersection with County Route 76 east of Bloomingburg to a junction with U.S. Route 9W within the city of Newburgh. In proximity to the project site it runs parallel and to the north of I-84 and typically operates with one moving lane in each direction. As shown in **Figures 3 and 4**, existing traffic volumes on Route 17K to the west of Route 747 range up to 521 vehicles per hour (vph) eastbound and 706 vph westbound during the Friday peak hours, and up to 385 vph eastbound and 421 vph westbound during the Saturday peak hours. There are no bus stops, on-street parking or pedestrian facilities on Route 207 in proximity to the project site.

New York State Route 207

New York State Route 207 (Little Britain Road) is located entirely within Orange County and extends approximately 19 miles in an east-west direction between Route 17K in Newburgh to the east and the intersection of Routes 17, 17A and 17M in Goshen to the west. The roadway typically operates with one moving lane in each direction with dedicated turn lanes provided at selected intersections. As shown in **Figures 3 and 4**, existing traffic volumes on Route 207 approaching Route 747 range up to 447 vph eastbound and 546 vph westbound during the Friday peak hours, and up to 335 vph eastbound and 383 vph westbound during the Saturday peak hours. State Bike Route 17, a signed, on-road bicycle route, is located along Route 207. There are no bus stops, on-street parking or pedestrian facilities on Route 207 in proximity to the intersection with Route 747.

New York State Route 747

New York State Route 747 extends approximately 3.4-miles from Route 207 on the south to Route 17K and Stone Castle Road on the north. The roadway typically operates with one moving lane in each direction between Route 17K and I-84 Interchange 5A, two moving lanes in each direction between Interchange 5A and the access road to Stewart International Airport (International Boulevard), and one moving lane in each direction between International Boulevard and Route 207. As shown in **Figures 3 and 4**, existing traffic volumes on Route 747 to the south of Interchange 5A range up to 656 vph northbound and 592 vph southbound during the Friday peak hours, and up to 357 vph northbound and 368 vph southbound during the Saturday peak hours. There are no bus stops, on-street parking or pedestrian facilities along Route 747.

Rock Cut Road (County Route 23)

Rock Cut Road extends northward approximately 6 miles from a signalized intersection with Route 17K before becoming County Route 20 to the north of Route 300. The roadway typically operates with one moving lane in each direction. Bus stops, on-street parking and pedestrian/bicycle facilities are not provided. Existing traffic volumes north of Route 17K range up to 451 vph northbound and 395 vph southbound during the Friday peak hours, and up to 244 vph northbound and 262 vph southbound during the Saturday peak hours.

Stone Castle Road

Stone Castle Road extends northward approximately 1.6 miles from the signalized intersection of Routes 17K and 747 to Route 52. The roadway typically operates with one moving lane in each direction. Bus stops, on-street parking and pedestrian/bicycle facilities are not provided. As shown in **Figures 3 and 4**, existing traffic volumes on Stone Castle Road north of Route 17K range up to 150 vph northbound and 141 vph southbound during the Friday peak hours, and up to 95 vph northbound and 73 vph southbound during the Saturday peak hours.

Browns Road

Browns Road extends northward approximately 2.5 miles from a stop-controlled intersection with Route 17K to Berea Road. The roadway typically operates with one moving lane in each direction. Bus stops, on-street parking and pedestrian/bicycle facilities are not provided. Existing traffic volumes on Browns Road north of Route 17K range up to 31 vph northbound and 15 vph southbound during the Friday peak hours, and up to 23 vph northbound and 24 vph southbound during the Saturday peak hours.

Maple Avenue

Maple Avenue extends southward approximately 1.3 miles from a stop-controlled intersection with Route 17K to a cul-de-sac at the northerly limit of I-84. The roadway operates two-way although no centerline markings are provided. There are no bus stops, on-street parking or pedestrian/bicycle facilities provided. Existing traffic volumes on Maple Avenue south of Route 17K range up to 13 vph northbound and 10 vph southbound during the analyzed Friday peak hours, and up to 4 vph northbound and 11 vph southbound during the Saturday midday peak hour.

Coldenham Road (County Route 75)

Coldenham Road extends northward approximately 3 miles from a signalized intersection with Route 17K to Route 208 near Walden, New York. The roadway typically operates with one moving lane in each direction. There are no bus stops, on-street parking or pedestrian/bicycle facilities provided. Existing traffic volumes on Coldenham Road north of Route 17K range up to 238 vph northbound and 160 vph southbound during the Friday peak hours, and up to 148 vph northbound and 118 vph southbound during the Saturday peak hours.

International Boulevard

International Boulevard is an east-west roadway that connects Route 747 to Stewart International Airport and typically operates with two moving lanes in each direction. The westbound International Boulevard approach to Route 747 consists of a lane for vehicles merging onto

northbound Route 747 and a stop-controlled left-turn lane for vehicles turning onto southbound Route 747. A dedicated left-turn lane is also provided for southbound vehicles turning onto eastbound International Boulevard. There are no bus stops, on-street parking or pedestrian/bicycle facilities provided. Existing traffic volumes on International Boulevard east of Route 747 range up to 168 vph eastbound and 209 vph westbound during the Friday peak hours, and up to 78 vph eastbound and 118 vph westbound during the Saturday peak hours.

Table 2 shows the resulting existing v/c ratios, delays and levels of service in each peak hour at analyzed intersections. As shown in **Table 2**, under existing conditions the eastbound Route 17K approach at the signalized intersection with Rock Cut Road currently operates with a marginal v/c ratio of 0.94 (LOS D) in the Friday PM peak hour, and the westbound approach operates at a marginal v/c ratio of 0.87 (although at an acceptable LOS C) during this period. All other lane groups at this and other analyzed intersections currently operate at a marginal LOS D or an uncongested LOS A, B or C in all analyzed peak hours.

Parking

There is typically no on-street parking along Route 17K, Route 747, Route 207 and other study area roadways.

Transit

Short Line buses en route to and from the Port Authority Bus Terminal in Midtown Manhattan serve the 289-space Newburgh Park and Ride Lot on Route 17K near Interchange 17 on the New York State Thruway (I-87), approximately 4.5 miles to the east of the project site. This facility is also served by Short Line buses providing local service between Newburgh and Middletown/Monticello. In proximity to the project site, Short Line buses operate along Route 17K. The nearest rail transit station is Metro-North Railroad's Salisbury Mills-Cornwall station on the Port Jervis Line located approximately 8 miles to the south of the project site. This station is served by trains operated jointly by Metro-North Railroad and New Jersey Transit (NJ Transit) between Hoboken, New Jersey and Port Jervis, New York. Connecting NJ Transit rail service to and from Midtown Manhattan and points south along the Northeast Corridor is available at Secaucus Junction, while connecting Port Authority Trans-Hudson (PATH) rail service and ferry service to both Midtown and Lower Manhattan are available at Hoboken.

More frequent rail service is available at Metro-North's Hudson Line station at Beacon, New York, from which trains operate directly into Manhattan's Grand Central Terminal. This station is an approximately 10-mile drive to the east of the project site via the Newburgh-Beacon Bridge (\$1.50 toll) which carries I-84 over the Hudson River. Ferry service between Newburgh and the Metro-North station at Beacon is also available during the weekday AM and PM commuter peak periods (\$1.75 fare).

Table 2
Existing Conditions at Analyzed Intersections

Intersection	Approach	Lane Group	Friday AM Peak Hour			Friday PM Peak Hour			Friday Evening Peak Hour			Saturday Midday Peak Hour			Saturday Evening Peak Hour		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Route 17K @ Coldenham Road (Signalized)	EB	LT	0.46	15.3	B	0.51	16.0	B	0.15	11.5	B	0.39	14.2	B	0.36	13.8	B
	WB	TR	0.38	14.0	B	0.71	20.8	C	0.24	12.4	B	0.44	14.8	B	0.20	12.0	B
	SB	LR	0.26	18.0	B	0.22	17.7	B	0.12	16.9	B	0.22	17.7	B	0.11	16.8	B
Route 17K @ Route 747/ Stone Castle Road (Signalized)	EB	L	0.17	36.4	D	0.13	36.1	D	0.01	35.2	D	0.09	35.8	D	0.01	35.2	D
	EB	T	0.30	19.7	B	0.30	19.7	B	0.15	18.3	B	0.21	18.9	B	0.11	18.0	B
	EB	R	0.14	18.3	B	0.12	18.1	B	0.04	17.4	B	0.07	17.7	B	0.03	17.4	B
	WB	L	0.46	39.1	D	0.45	39.0	D	0.16	36.3	D	0.32	37.7	D	0.09	35.8	D
	WB	TR	0.27	19.4	B	0.38	20.5	C	0.18	18.6	B	0.26	19.3	B	0.15	18.3	B
	NB	L	0.28	29.8	C	0.83	51.7	D	0.23	29.3	C	0.27	29.6	C	0.23	29.2	C
	NB	TR	0.31	30.0	C	0.39	30.7	C	0.12	28.2	C	0.20	28.9	C	0.14	28.4	C
Route 17K @ Rock Cut Road (Signalized)	SB	L	0.18	28.8	C	0.19	28.9	C	0.05	27.6	C	0.08	27.9	C	0.02	27.4	C
	SB	TR	0.30	29.9	C	0.26	29.5	C	0.14	28.3	C	0.14	28.4	C	0.15	28.4	C
	EB	LTR	0.64	18.7	B	0.94	42.2	D **	0.28	13.0	B	0.61	18.3	B	0.21	12.2	B
	WB	LTR	0.49	16.0	B	0.87	30.3	C **	0.44	15.0	B	0.63	18.5	B	0.33	13.5	B
Route 747 @ I-84 EB On/Off Ramp (Signalized)	NB	LTR	0.01	15.7	B	0.03	15.8	B	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B
	SB	LTR	0.74	27.5	C	0.51	20.2	C	0.16	16.8	B	0.52	20.4	C	0.24	17.4	B
	WB	L	0.14	21.0	C	0.19	21.5	C	0.09	20.6	C	0.10	20.7	C	0.05	20.4	C
	WB	R	0.03	20.2	C	0.05	20.4	C	0.01	20.1	C	0.03	20.2	C	0.01	20.1	C
	NB	T	0.28	22.2	C	0.48	24.2	C	0.13	20.9	C	0.24	21.8	C	0.09	20.6	C
Route 747 @ I-84 WB On/Off Ramp (Signalized)	SB	L	0.41	34.6	C	0.31	33.5	C	0.11	32.0	C	0.16	32.4	C	0.04	31.5	C
	SB	T	0.21	10.1	B	0.25	10.4	B	0.08	9.3	A	0.15	9.7	A	0.09	9.4	A
	WB	L	0.16	21.2	C	0.27	22.3	C	0.07	20.5	C	0.14	21.1	C	0.08	20.6	C
	WB	LT	0.16	21.2	C	0.27	22.3	C	0.07	20.5	C	0.14	21.0	C	0.08	20.6	C
	WB	R	0.06	20.5	C	0.12	20.9	C	0.03	20.2	C	0.02	20.2	C	0.03	20.3	C
Route 747 @ Route 207 (Signalized)	NB	L	0.25	32.9	C	0.30	33.2	C	0.11	31.9	C	0.23	32.7	C	0.08	31.7	C
	NB	T	0.23	10.3	B	0.46	12.3	B	0.10	9.5	A	0.22	10.2	B	0.08	9.3	A
	SB	TR	0.33	22.7	C	0.26	22.0	C	0.12	20.9	C	0.17	21.3	C	0.09	20.7	C
	EB	L	0.35	11.1	B	0.49	12.6	B	0.10	9.0	A	0.34	11.1	B	0.13	8.9	A
	EB	T	0.33	10.2	B	0.26	9.6	A	0.08	8.5	A	0.22	9.3	A	0.10	8.5	A
Route 17K @ Maple Avenue (Unsignalized)	WB	TR	0.57	24.6	C	0.64	26.3	C	0.31	20.8	C	0.53	23.7	C	0.23	20.0	C
	SB	L	0.45	28.9	C	0.42	28.6	C	0.17	26.0	C	0.30	27.3	C	0.16	25.9	C
	SB	R	0.11	25.4	C	0.18	26.1	C	0.07	25.1	C	0.12	25.6	C	0.08	25.2	C
	EB	LTR	0.00	8.0	A	0.00	9.2	A	0.00	7.8	A	0.00	8.2	A	0.00	7.7	A
Route 17K @ Browns Road (Unsignalized)	WB	LTR	0.00	8.5	A	0.00	8.5	A	0.00	7.7	A	0.01	8.2	A	0.01	7.6	A
	NB	LTR	0.04	13.7	B	0.09	18.2	C	0.03	12.2	B	0.02	15.3	C	0.01	12.1	B
	SB	LTR	0.02	20.0	C	0.02	19.9	C	0.00	9.8	A	0.05	20.1	C	0.03	11.1	B
Route 747 @ International Boulevard (Unsignalized)	EB	LT	0.00	8.1	A	0.03	9.4	A	0.01	7.9	A	0.02	8.1	A	0.02	7.8	A
	SB	LR	0.12	18.6	C	0.07	20.1	C	0.02	12.3	B	0.10	15.3	C	0.02	10.7	B
Route 747 @ International Boulevard (Unsignalized)	WB	L	0.00	23.2	C	0.07	29.2	D	0.01	12.4	B	0.05	16.6	C	0.01	11.6	B
	SB	L	0.18	8.7	A	0.14	8.9	A	0.07	7.7	A	0.07	8.1	A	0.03	7.7	A

Peak Hours: Friday 8:00-9:00 a.m., 5-6 p.m. and 9-10 p.m.; Saturday 2-3 p.m and 9-10 p.m.

L-left, T-through, R-right, DefL-analysis considers a defacto left-turn lane on this approach

V/C Ratio - Volume to capacity ratio, sec. - seconds

LOS - Level of Service

** Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.85)

Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.5)

Pedestrians and Bicycles

There are typically no sidewalks, crosswalks or pedestrian signals at analyzed intersections along Route 17K, Route 747 and Route 207. State Bike Route 17, a signed, on-road bicycle route, is located along Route 207. This route extends a total of 442 miles from State Bicycle Route 9 in the Village of Wappingers Falls in Dutchess County to State Bicycle Route 517 in the village of Westfield on the shores of Lake Erie.

FUTURE CONDITIONS WITHOUT THE PROJECT

Future Travel Demand

Transportation conditions in the future without the proposed Resorts World Hudson Valley project (the No-Build condition) are expected to reflect increased traffic due to general background growth and demand from new development. A traffic growth rate of 1.08 percent per year was assumed for the study area roadway network for the 2014 through 2017 period, consistent with the population growth rate used in the Orange County Transportation Council travel demand model. **Figures 5 and 6** show projected traffic volumes in the 2017 No-Build condition.

Traffic

Table 3 shows the v/c ratios, delays and levels of service for analyzed intersections within the traffic study area in the 2017 No-Build condition. As shown in **Table 3**, two intersections are projected to experience congestion in the No-Build condition compared to one intersection under existing conditions. Intersections with congested lane groups in the No-Build condition include the following.

Route 17K at Route 747/Stone Castle Road

As shown in **Table 3**, under 2017 No-Build conditions the northbound left-turn from Route 747 onto westbound Route 17K at this signalized intersection is projected to operate at a congested LOS E in the Friday PM peak hour compared to LOS C during this period under existing conditions.

Route 17K at Rock Cut Road

As shown in **Table 3**, under 2017 No-Build conditions the eastbound Route 17K approach at the signalized intersection with Rock Cut Road is projected to operate at LOS E in the Friday PM peak hour and the westbound approach is projected to operate at a marginal v/c ratio of 0.90 (although at an acceptable LOS C) during this period. As noted previously, these approaches currently experience marginal conditions in the Friday PM peak hour under existing conditions, with v/c ratios of 0.94 (LOS D) and 0.87 (LOS C), respectively.

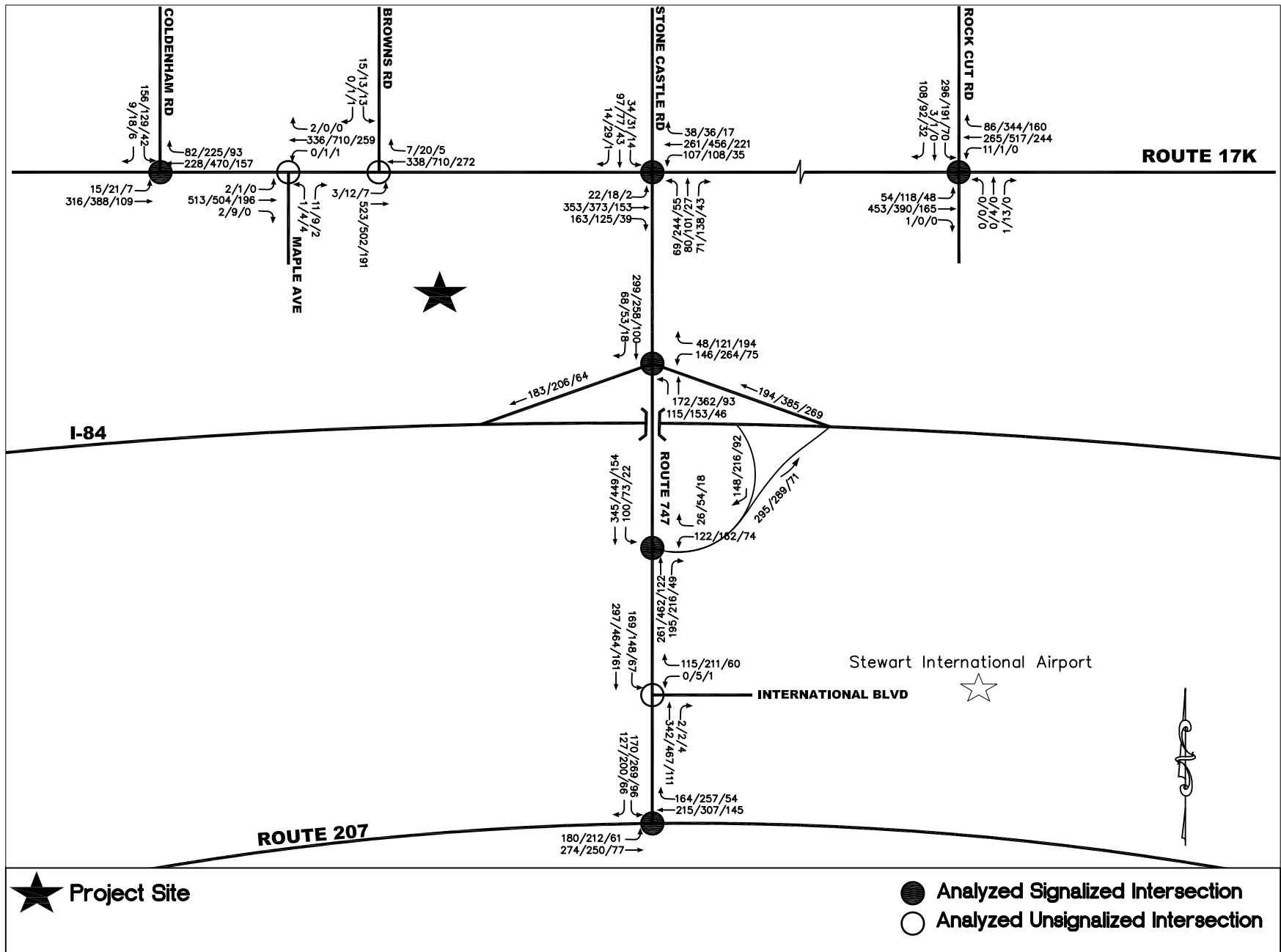


Figure 5
2017 No-Build Friday AM/PM/Evening Peak Hour Traffic Volumes

N.T.S

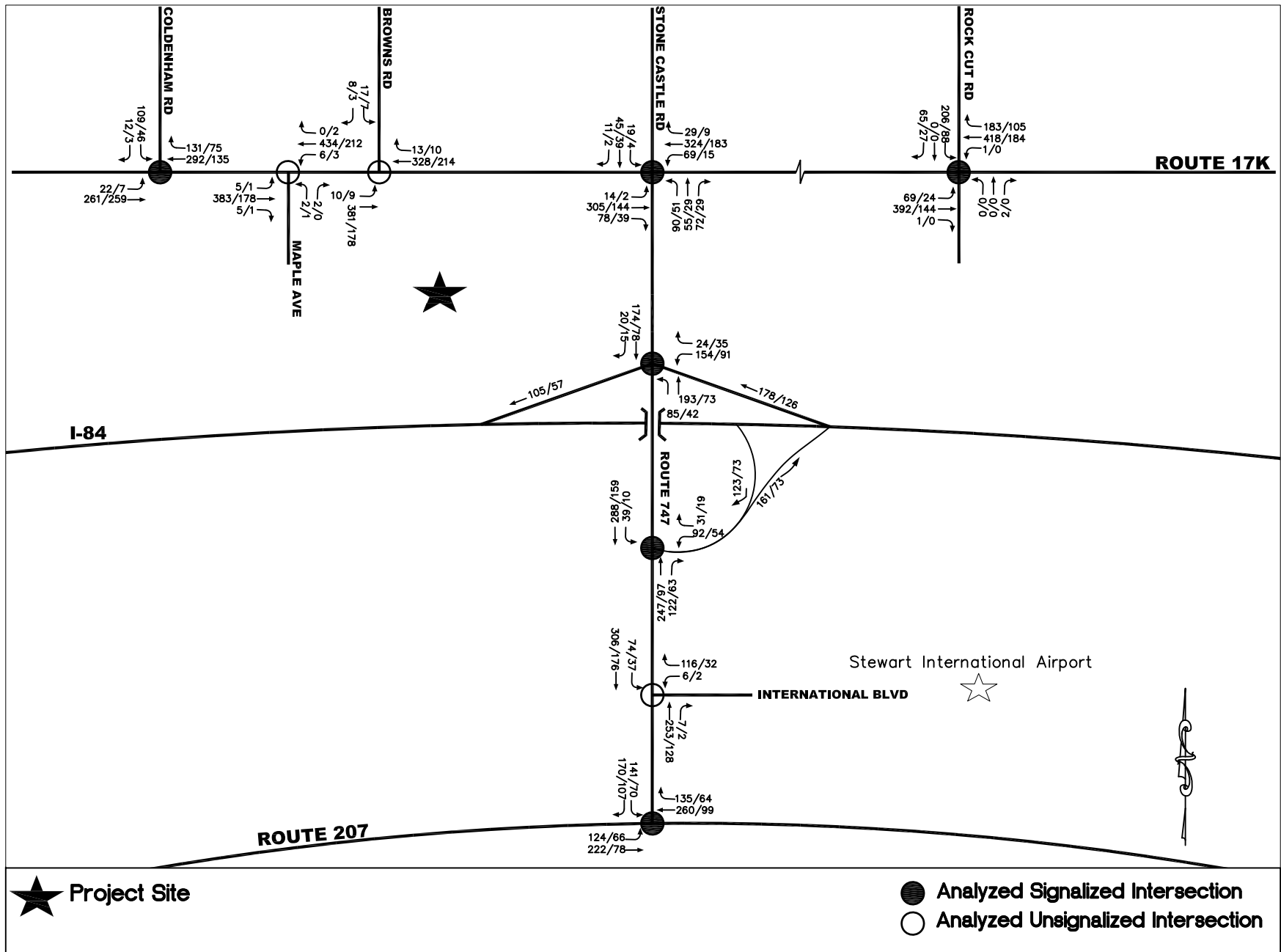


Figure 6
2017 No-Build Saturday Midday/Evening Peak Hour Traffic Volumes

N.T.S

Resorts World Hudson Valley Traffic Study

Table 3 2017 No-Build Conditions at Analyzed Intersections

Intersection	Approach	Lane Group	Friday AM Peak Hour			Friday PM Peak Hour			Friday Evening Peak Hour			Saturday Midday Peak Hour			Saturday Evening Peak Hour		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Route 17K @ Coldenham Road (Signalized)	EB	LT	0.47	15.6	B	0.53	16.4	B	0.15	11.6	B	0.40	14.3	B	0.37	13.9	B
	WB	TR	0.39	14.2	B	0.74	21.7	C	0.25	12.5	B	0.45	15.0	B	0.21	12.1	B
	SB	LR	0.27	18.1	B	0.23	17.7	B	0.12	16.9	B	0.23	17.7	B	0.11	16.8	B
Route 17K @ Route 747/ Stone Castle Road (Signalized)	EB	L	0.17	36.5	D	0.14	36.2	D	0.01	35.2	D	0.09	35.8	D	0.01	35.2	D
	EB	T	0.31	19.8	B	0.31	19.8	B	0.16	18.4	B	0.22	19.0	B	0.12	18.1	B
	EB	R	0.14	18.3	B	0.12	18.1	B	0.04	17.4	B	0.07	17.7	B	0.03	17.4	B
	WB	L	0.47	39.2	D	0.46	39.1	D	0.16	36.3	D	0.34	37.8	D	0.09	35.8	D
	WB	TR	0.27	19.4	B	0.39	20.6	C	0.19	18.7	B	0.27	19.4	B	0.15	18.4	B
	NB	L	0.29	29.9	C	0.87	56.1	E **	0.24	29.3	C	0.28	29.7	C	0.23	29.3	C
	NB	TR	0.33	30.1	C	0.40	30.9	C	0.12	28.2	C	0.21	29.0	C	0.15	28.4	C
	SB	L	0.18	28.8	C	0.20	29.0	C	0.05	27.6	C	0.09	27.9	C	0.02	27.4	C
Route 17K @ Rock Cut Road (Signalized)	EB	LTR	0.66	19.4	B	1.00	56.1	E **	0.30	13.2	B	0.64	19.0	B	0.22	12.3	B
	WB	LTR	0.51	16.3	B	0.90	33.4	C **	0.48	15.5	B	0.65	19.0	B	0.34	13.6	B
	NB	LTR	0.01	15.7	B	0.03	15.8	B	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B
	SB	LTR	0.76	28.8	C	0.53	20.5	C	0.17	16.9	B	0.54	20.7	C	0.25	17.5	B
Route 747 @ I-84 EB On/Off Ramp (Signalized)	WB	L	0.14	21.1	C	0.20	21.5	C	0.09	20.6	C	0.11	20.8	C	0.06	20.4	C
	WB	R	0.03	20.2	C	0.05	20.4	C	0.01	20.1	C	0.03	20.2	C	0.02	20.1	C
	NB	T	0.28	22.2	C	0.50	24.3	C	0.13	21.0	C	0.25	21.9	C	0.09	20.7	C
	SB	L	0.43	34.7	C	0.31	33.6	C	0.11	32.1	C	0.17	32.4	C	0.04	31.5	C
	SB	T	0.21	10.1	B	0.26	10.4	B	0.08	9.3	A	0.16	9.8	A	0.09	9.4	A
Route 747 @ I-84 WB On/Off Ramp (Signalized)	WB	L	0.16	21.3	C	0.28	22.3	C	0.07	20.5	C	0.14	21.1	C	0.09	20.7	C
	WB	LT	0.16	21.3	C	0.28	22.3	C	0.07	20.5	C	0.14	21.1	C	0.09	20.7	C
	WB	R	0.06	20.5	C	0.12	21.0	C	0.03	20.2	C	0.02	20.2	C	0.03	20.3	C
	NB	L	0.26	32.9	C	0.31	33.3	C	0.11	31.9	C	0.24	32.8	C	0.08	31.8	C
	NB	T	0.23	10.3	B	0.48	12.4	B	0.11	9.5	A	0.23	10.3	B	0.08	9.3	A
Route 747 @ Route 207 (Signalized)	EB	L	0.37	11.3	B	0.51	13.0	B	0.11	9.1	A	0.35	11.2	B	0.13	9.0	A
	EB	T	0.34	10.3	B	0.27	9.7	A	0.09	8.5	A	0.22	9.3	A	0.10	8.6	A
	WB	TR	0.59	25.1	C	0.66	26.9	C	0.32	20.9	C	0.55	24.0	C	0.24	20.1	C
	SB	L	0.46	29.1	C	0.43	28.7	C	0.17	26.0	C	0.31	27.3	C	0.17	25.9	C
	SB	R	0.11	25.5	C	0.19	26.1	C	0.07	25.1	C	0.13	25.6	C	0.09	25.2	C
Route 17K @ Maple Avenue (Unsignalized)	EB	LTR	0.00	8.1	A	0.00	9.3	A	0.00	7.8	A	0.00	8.3	A	0.00	8.3	A
	WB	LTR	0.00	8.5	A	0.00	8.5	A	0.00	7.7	A	0.01	8.3	A	0.01	8.3	A
	NB	LTR	0.05	13.9	B	0.10	19.2	C	0.03	12.4	B	0.02	15.7	C	0.02	15.7	C
	SB	LTR	0.02	20.8	C	0.02	20.9	C	0.00	9.9	A	0.05	20.9	C	0.05	20.9	C
Route 17K @ Browns Road (Unsignalized)	EB	LT	0.00	8.1	A	0.03	9.5	A	0.01	7.9	A	0.02	8.1	A	0.02	8.1	A
	SB	LR	0.12	19.4	C	0.07	21.0	C	0.02	12.4	B	0.11	15.7	C	0.11	15.7	C
Route 747 @ International Boulevard (Unsignalized)	WB	L	0.00	24.3	C	0.07	30.9	D	0.01	12.6	B	0.05	17.1	C	0.05	17.1	C
	SB	L	0.19	8.7	A	0.14	8.9	A	0.07	7.7	A	0.07	8.1	A	0.07	8.1	A

Peak Hours: Friday 8:00-9:00 a.m., 5-6 p.m. and 9-10 p.m.; Saturday 2-3 p.m. and 9-10 p.m.
L-left, T-through, R-right, DefL-analysis considers a default left-turn lane on this approach
V/C Ratio - Volume to capacity ratio, sec. - seconds
LOS - Level of Service
** Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.85)
Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.5)

Route 17K at Maple Avenue

As shown in **Table 3**, under No-Build conditions the southbound stop-controlled Maple Avenue approach to Route 17K is projected to operate at a congested LOS E in the Friday PM peak hour compared to a marginal LOS D during this period under existing conditions.

Parking

Parking conditions in the traffic study area are expected to remain relatively unchanged in the 2017 No-Build condition.

Transit

Transit services are expected to remain unchanged in the 2017 No-Build condition, with the exception of routine schedule and service adjustments made by Short Line and Metro-North Railroad due to changes in demand.

Pedestrians and Bicycles

It is anticipated that no new pedestrian or bicycle facilities will be developed along Route 17K, Route 747, Route 207 or other study area roadways under 2017 No-Build conditions.

FUTURE CONDITIONS WITH THE PROJECT

As shown in **Figure 7** and described in more detail below, in the 2017 future with the project (the Build condition) the proposed Resorts World Hudson Valley development would be built on a site bounded by Route 17K on the north, I-84 on the south, and Route 747 on the east. The project would include development of a full service gaming facility and accessory 600-room hotel along with a convention center. An internal access roadway system would connect to Route 17K at a new signalized intersection west of Route 747, and to Route 747 at a new roundabout south of Route 17K. The following describes the projected travel demand that would be generated by this new development, proposed improvements to the study area roadway network that would be implemented under the project, and future transportation conditions with the proposed Resorts World Hudson Valley.

Travel Demand

Planning Factors

The transportation planning factors used to forecast the travel demand that would be generated by the proposed project's casino, hotel and convention center uses are shown in **Table 4** and discussed below.

Casino

As shown in **Table 4**, for preliminary planning purposes it is estimated that approximately 6.3 million visitors and employees would travel to the proposed Resorts World Hudson Valley casino annually. This equates to approximately 1,200 trips per gaming position, a level of



Not to scale

Source: Steelman Partners

Figure 7
Project Site Plan

**Table 4
Transportation Planning Factors**

Land Use:	Casino		Hotel		Convention Center					
	annual visitor/ employee arrivals		600 rooms		(6)					
	6,300,000				Friday	1,200 visitors/day		Saturday	3,500 visitors/day	
Friday Person-Trips :	(1) 38,560 person-trips		(4) 4.0 trips/room		(5) 2,460 person-trips					
Saturday Person-Trips :	49,570 person-trips		4.0 trips/room		7,175 person-trips					
Peaking characteristics:	(2) Friday	(2) Saturday	(3) Friday Saturday		(7) Friday Saturday					
AM Peak (8-9 AM)	1.0%	---	8.0% ---		6.3% ---					
Midday Peak (2-3 PM)	---	4.8%	---		5.2%		---		13.1%	
PM Peak (5-6 PM)	4.6%	---	13.0% ---		10.5% ---					
Evening Peak (9-10 PM)	8.1%	7.9%	1.1% 2.5%		0.0% 0.0%					
Modal Splits:	(3) Friday	(3) Saturday	(3) All Periods		(3) Friday/Saturday					
Auto	84.0%	84.0%	100.0%		84.0%					
Taxi	1.0%	1.0%	0.0%		1.0%					
Charter Bus/Other Bus	10.0%	10.0%	0.0%		5.0%					
Walk/Other	5.0%	5.0%	0.0%		10.0%					
	100.0%	100.0%	100.0%		100.0%					
Directional Distribution	(2) Friday	(2) Saturday	(3) Friday Saturday		(7) Friday Saturday					
	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out	
AM Peak	74% 26%	--- ---	54% 46%	--- ---	95% 5%	--- ---	52% 48%	---	---	
Midday Peak	---	64% 36%	---	47% 53%	---	---	---	---	---	
PM Peak	51% 49%	---	56% 44%	---	15% 85%	---	---	---	---	
Evening Peak	56% 44%	54% 46%	57% 43%	80% 20%	0% 0%	0% 0%	---	---	---	
Vehicle Occupancy:	(1) Friday	(1) Saturday	(3) All Periods		(7) Friday Saturday					
Auto	2.30	2.50	2.00		1.70		2.70			
Taxi	1.42	1.55	2.00		1.90		2.60			
Charter Bus/Other Bus	35	35	35		35		35			

Notes :

- (1) Based on spring 2013 count at Resorts World Casino at Aqueduct on days without horse racing.
- (2) Based on 2009 count data from Empire City Casino in Yonkers.
- (3) PHA assumption.
- (4) Assumes an average of 2 persons per room and 2 trips per person.
- (5) Assumes 2.05 trips per visitor per day to account for employee trips.
- (6) Assumes an average of 3,500 visitors per day for a weekend public show and 1,200 visitors per day for a weekday trade show.
- (7) Based on data from *No. 7 Subway Extension - Hudson Yard Rezoning and Development Program FGEIS*.

Resorts World Hudson Valley Traffic Study

demand consistent with recent projections for proposed casino developments in Philadelphia which generally show demand ranging from 1,000 to 1,700 annual trips per gaming position (*Economic and Fiscal Impacts Analysis of Six Philadelphia Casino Proposals*, AKRF, October 29, 2013). This projected level of demand also reflects the location of the proposed Resorts World Hudson Valley casino in less densely populated suburban/rural area when compared to an urban location such as Philadelphia.

Based on 2013 data from door counts at the Resorts World Casino at Aqueduct and at the Empire City Casino in Yonkers, New York, it is expected that the busiest weekday at the proposed casino would be Friday when an estimated 19,280 people would travel to the casino, and that demand would peak on Saturday when an estimated 24,785 people would travel to the casino. Consequently, it is estimated that the proposed casino would generate a total of approximately 38,560 daily person trips (i.e., one inbound and one outbound trip per person) on a Friday, and approximately 49,570 person trips on a Saturday.

Hourly arrival and departure patterns observed at both the Resorts World Casino at Aqueduct and the Empire City Casino in Yonkers, New York were considered to determine the temporal and directional (in/out) distributions for the trips generated by the proposed casino. The patterns from the Empire City Casino were selected for use as they generally reflect visits of a longer duration than were observed at the Resorts World Casino at Aqueduct, and are more consistent with the expected visit duration of casino patrons at the proposed Resorts World Hudson Valley.

Given the location of the project site in a relatively suburban/rural area in proximity to two interstate highways (I-84 and I-87), it is anticipated that the substantial majority of project-generated trips would be made by motor vehicle. As shown in **Table 4**, based on data collected at the Resorts World Casino at Aqueduct, it is estimated that approximately 10 percent of trips would be made by the bus mode (primarily charter buses), and that a relatively small number of trips (1 percent) would be by taxi or livery car. In addition, it is likely that some trips would also utilize the rail transit mode via the Metro-North Railroad's Salisbury Mills-Cornwall station on the Port Jervis Line or the Beacon station on the Hudson Line. Given the distance of the site from each of these two stations (approximately 8 miles and 10 miles, respectively), it is assumed that any rail trips would include a connecting trip by shuttle bus and are therefore accounted for as part of the overall bus demand.

Trips by walking or other modes such as bicycle are expected to account for approximately 5 percent of casino demand, with the majority of these trips comprised of patrons of the adjacent convention center who would be expected to walk between this venue and the casino/hotel. Overall, the auto mode is expected to account for the remaining 84 percent of casino trip generation.

Auto vehicle occupancies of 2.3 persons per auto for Friday and 2.5 persons per auto for Saturday were used for casino trips. These occupancies were developed from survey data collected at the Resorts World Casino at Aqueduct (see **Table A-1** in **Appendix A**), and were adjusted slightly upward to reflect the proposed casino's location in a less urban and more

Resorts World Hudson Valley Traffic Study

suburban/rural environment and a longer average trip-length to/from the casino. A vehicle occupancy of 35 persons per charter bus was also assumed.

Hotel

The travel demand forecast for the project's hotel component assumes that there would be approximately 600 rooms with an average occupancy of two persons per room, that each person would account for two trips to/from the project site (i.e., one inbound and one outbound), and that these trips would primarily be made by auto. The hotel is assumed to be integral/accessory to the casino.

Convention Center

Events at the proposed project's convention center component are expected to attract up to 3,500 persons per day on weekends and up to 1,200 persons per day on weekdays. (Events on weekends would typically be open to the public while events scheduled on weekdays would typically be trade shows that would generate a lower level of travel demand.) Conservatively assuming that events would be scheduled up to 50 weeks per year, and that there would be an average of one weekend event and three weekday events per week, it is estimated that approximately 530,000 persons would visit the proposed convention center annually. As shown in **Table 4**, accounting for employee trips it is estimated that daily travel demand would total approximately 2,460 person-trips on a Friday (in and out combined) and 7,175 trips on a Saturday when events are scheduled. Temporal and directional (in/out) distributions and vehicle occupancies for the convention center were based on survey data from similar uses, and modal splits were assumed to be similar to those used for the adjacent casino/hotel.

Trip Generation

Tables 5 and 6 show the estimated numbers of project-generated person trips by mode of transportation and the numbers of vehicle trips during the Friday 8-9 a.m. (AM), 5-6 p.m. (PM) and 9-10 p.m. (evening) peak hours and the Saturday 2-3 p.m. (midday) and 9-10 p.m. (evening) peak hours based on the transportation planning factors discussed above. As shown in **Table 5**, it is estimated that the proposed project's casino/hotel and convention center uses would generate a total of approximately 541, 2,032 and 3,123 person trips (in and out combined) during the Friday AM, PM, and evening peak hours, respectively, and approximately 3,319 and 3,916 person trips during the Saturday midday and evening peak hours. As shown in **Table 6**, it is estimated that vehicle trips (inbound and outbound, combined) would total 256, 844 and 1,197 during the Friday AM, PM and evening peak hours, respectively, and 1,156 and 1,389 during the Saturday midday and evening peak hours, respectively. Vehicle trips would include auto and charter bus trips, as well as trips by taxi or livery car. The taxi/livery car trips have been balanced to reflect that each vehicle transporting inbound passengers would typically depart empty, and that each vehicle transporting outbound passengers would typically arrive empty.

It is important to note that most, if not all, patrons of the proposed project's hotel component are expected to be patrons of the casino, and are therefore also reflected in the casino's travel demand forecast. As noted previously, trips generated by the proposed hotel are expected to be primarily by auto. Therefore, a "linked-trip" credit equivalent to the number of hotel trips in each peak hour was applied to the auto casino trip generation numbers shown in **Tables 5 and 6**.

Resorts World Hudson Valley Traffic Study

**Table 5
Travel Demand Forecast – Person Trips**

Land Use:	Friday				Saturday						
	Casino	Hotel	Convention Center		Total	Casino	Hotel	Convention Center		Total	
Peak Hour Trips:	38,560 trips/day	600 rooms	1,200 visitors/day			49,570 trips/day	600 rooms	3,500 visitors/day			
AM Peak	194	192	155		541	----	----	----		----	
Middy Peak	----	----	----		----	2,254	125	940		3,319	
PM Peak	1,462	312	258		2,032	----	----	----		----	
Evening Peak	3,097	26	0		3,123	3,856	60	0		3,916	
Person Trips:											
	In	Out	In	Out	In	Out	Total				
AM Auto	121	42	104	88	124	7	486				
Taxi	1	1	0	0	1	0	3				
Bus	14	5	0	0	7	0	26				
Walk/Other	8	3	0	0	15	1	27				
Total	144	51	104	88	147	8	542				
									In	Out	Total
MD Auto									1,212	682	2,894
Taxi									14	8	32
Bus									144	81	272
Walk/Other									72	41	206
Total									1,442	812	3,319
	In	Out	In	Out	In	Out	Total				
PM Auto	626	602	175	137	33	184	1,757				
Taxi	7	7	0	0	0	2	16				
Bus	75	72	0	0	2	11	160				
Walk/Other	37	36	0	0	4	22	99				
Total	745	717	175	137	39	219	2,032				
	In	Out	In	Out	In	Out	Total		In	Out	Total
EVE Auto	1,457	1,145	15	11	0	0	2,628		1,749	1,490	3,299
Taxi	17	14	0	0	0	0	31		21	18	39
Bus	173	135	0	0	0	0	308		208	177	385
Walk/Other	88	68	0	0	0	0	156		104	89	193
Total	1,735	1,362	15	11	0	0	3,123		2,082	1,774	3,916
Notes:	Friday peak hours: 7:30-8:30 a.m. (AM), 5-6 p.m. (PM) and 9-10 p.m. (evening). Saturday peak hours: 2-3 p.m. (middy) and 9-10 p.m. (evening).										

**Table 6
Travel Demand Forecast – Vehicle Trips**

Land Use:	Friday							Saturday						
	Casino		Hotel		Convention Center		Total	Casino		Hotel		Convention Center		Total
	In	Out	In	Out	In	Out		In	Out	In	Out	In	Out	
AM														
Auto	53	18	52	44	73	4	244							
Taxi (balanced)	1	1	0	0	1	1	5							
Bus	0	0	0	0	7	0	7							
Total	55	19	52	44	81	5	256							
								In	Out	In	Out	In	Out	Total
MD														
Auto								485	273	29	33	152	140	1,113
Taxi (balanced)								14	14	0	0	4	4	36
Bus								4	2	0	0	1	1	8
Total								503	289	29	33	157	145	1,156
								In	Out	In	Out	In	Out	Total
PM														
Auto	272	262	87	69	19	108	817							
Taxi (balanced)	10	10	0	0	1	1	22							
Bus	2	2	0	0	0	0	5							
Total	284	274	87	69	20	109	844							
								In	Out	In	Out	In	Out	Total
EVE														
Auto	633	498	7	6	0	0	1,144	700	596	24	6	0	0	1,326
Taxi (balanced)	22	22	0	0	0	0	44	26	26	0	0	0	0	52
Bus	5	4	0	0	0	0	9	6	5	0	0	0	0	11
Total	660	524	7	6	0	0	1,197	732	627	24	6	0	0	1,389

Notes:
 Friday peak hours: 8:00-9:00 a.m. (AM), 5-6 p.m. (PM) and 9-10 p.m. (evening).
 Saturday peak hours: 2-3 p.m. (midday) and 9-10 p.m. (evening).

As shown **Table 5**, the proposed project’s casino/hotel and convention center uses are expected to generate a total of approximately 26, 160 and 308 person trips by bus during the Friday AM, PM and evening peak hours, respectively, and 272 and 385 during the Saturday midday and evening peak hours, respectively. It is also estimated that there would be approximately 27, 99 and 156 walk/other trips during the Friday AM, PM and evening peak hours, respectively, and 206 and 193 during the Saturday midday and evening peak hours, respectively. These trips are expected to consist primarily of persons walking between the project’s casino/hotel and convention center components.

Additional tasks were undertaken to verify the reasonableness of the forecast for the proposed casino. A 2013 traffic impact study for a new casino in Baltimore (*Traffic Impact Study - Baltimore Casino*, WR&A and RJM Engineering, Inc., February 2013), citing Maryland State Highway Administration-approved trip generation rates, shows 0.246 vehicle trips per gaming position in the PM peak hour of the generator and 0.305 vehicle trips per position for the Sunday peak hour of the generator. The above rates reflect an 80 percent motor vehicle mode share.

A travel demand forecast for the proposed Resorts World Hudson Valley project’s casino/hotel components based on the Baltimore rates would total 1,289 vehicle trips in the weekday PM

peak hour of the generator and 1,598 vehicle trips for the weekend peak hour. By comparison, as shown in **Table 6**, the travel demand forecast for the proposed casino/hotel shows somewhat lower numbers of new vehicle trips—1,197 in the weekday evening peak hour and 1,389 in the Saturday evening peak hour. It is important to note, however, that compared to Baltimore, the proposed Resorts World Hudson Valley casino/hotel would be located in a substantially less densely populated suburban/rural area and would therefore be expected to generate a marginally lower level of travel demand per gaming position than would a casino in a more urban area such as Baltimore.

Proposed Roadway Improvements

It is anticipated that a range of physical and operational improvements to the study area roadway system would be implemented in conjunction with development of the proposed project in order to accommodate project-generated demand. These recommended improvements would include the following.

Physical Improvements

As shown in **Figure 7**, under the proposed project an internal roadway system would provide access to buildings and parking facilities on the project site. Vehicles would be able to access this internal roadway system from both Route 17K and Route 747. As shown in **Figure 8**, a new signalized T-intersection is proposed on Route 17K approximately 855 feet to the west of the existing intersection with Route 747. Route 17K currently operates with one moving lane in each direction at this location, before widening to six lanes (two westbound and four eastbound) approaching Route 747. Under the proposed project, the roadway would be further widened to accommodate two eastbound lanes approaching the new intersection and three westbound lanes (two through lanes and a left-turn lane). A three-lane approach (two northbound lanes and one southbound) is proposed for the project's access roadway at this intersection. A two-phase signal timing plan coordinated with the signal timing at the adjacent Route 17K/Route 747 intersection was assumed for this new intersection for preliminary analysis purposes.

As shown in **Figure 9**, the second vehicular access point for the proposed project would be located on Route 747 approximately 0.5-mile to the south of Route 17K where a new two-lane roundabout would be constructed. Route 747 would be widened to accommodate two lanes in each direction approaching this roundabout from both the north and the south. The eastbound access road approach from the project site to the new roundabout would also operate with two moving lanes in each direction near the roundabout.

Operational Improvements

Minor modifications to traffic signal timing and phasing are also proposed for two study area intersections—Route 17K/Rock Cut Road and Route 747/I-84 Eastbound Ramps—in order to accommodate new project-generated demand.

Route 17K/Rock Cut Road

A minor signal timing adjustment—the transfer of 4 seconds of signal green time from the Rock Cut Road northbound/southbound phase to the Route 17K eastbound/westbound phase in the

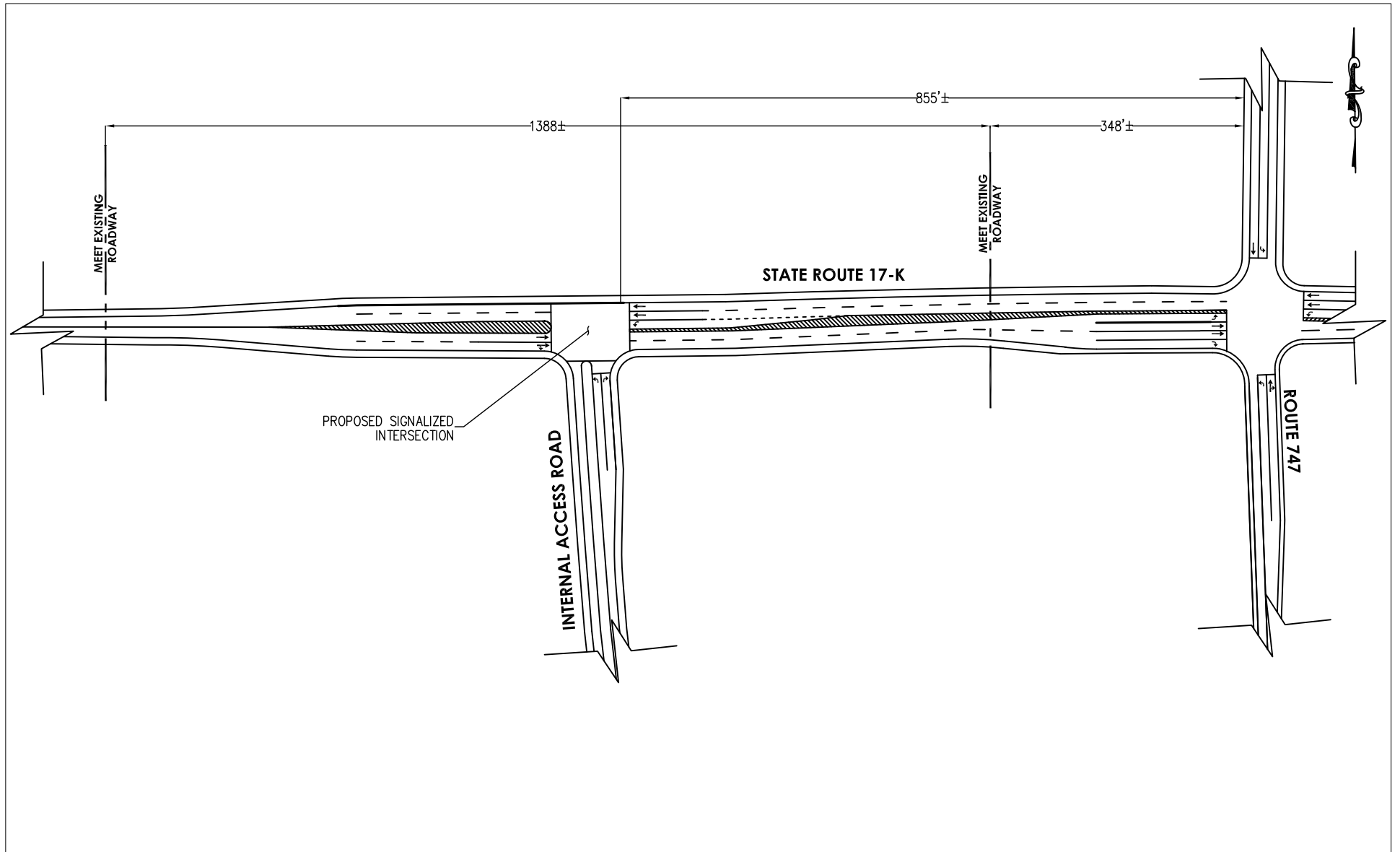


Figure 8
Proposed New Route 17K Intersection

N.T.S.



Figure 9
Proposed New Route 747 Roundabout

N.T.S.

Friday PM peak period—is recommended to provide additional capacity to accommodate project traffic using the Route 17K corridor east of the project site.

Route 747/I-84 Eastbound Ramps

A minor signal timing adjustment—the transfer of 4 seconds of signal green time from the eastbound I-84 exit ramp phase to the Route 747 leading southbound phase in the Friday PM peak hour—is recommended to provide additional capacity to accommodate project traffic using southbound Route 747. It is also recommended that the Route 747 southbound left-turn movement be permitted during the northbound/southbound signal phase.

Trip Assignment

2010 Census population data for the area within a 50-mile radius of the project site were used to estimate the distribution pattern of project-generated vehicle trips to the primary regional access corridors including Interstates I-84 and I-87 and Routes 17K and 207. These trips were then assigned to the local roadway network connecting the corridors to the project site access points. Overall, it is estimated that approximately 82 percent of new vehicle trips would travel to/from points east via I-84 (including 54 percent en route to/from I-87). Of these trips, it is assumed that approximately 66 percent would use Interchange 5A (Route 747) and 16 percent would use Interchange 6 (Route 17K). Approximately 8 percent of vehicle trips are expected to travel to/from points west on I-84 and use Interchange 5A. It is estimated that a further 8 percent of vehicles would be en route to/from the west via Route 17K, and that the remaining 2 percent of vehicle trips would be en route to/from points east and south via Route 207.

Figures 10 and 11 show the incremental increase in peak hour traffic volumes that would result from the development of the proposed project. As shown in **Figures 10 and 11**, from 62 to 287 vehicles (in and out combined) are expected to access the site via Route 17K in the analyzed Friday peak hours and from 277 to 342 during the Saturday peak hours. From 194 to 910 vehicles are expected to access the site via Route 747 in the analyzed Friday peak hours and from 879 to 1,079 during the Saturday peak hours. **Figures 12 and 13** show the total traffic volumes at analyzed intersections in the 2017 Build condition.

Traffic

Table 7 shows the projected v/c ratios, delays and levels of service at analyzed intersections in the 2017 Build condition. The analysis results shown in **Table 7** reflect the effects of both new project-generated traffic and the physical and operational improvements to the roadway network that would be implemented in conjunction with the proposed project. As shown in **Table 7**, the proposed new intersection at the project entrance on Route 17K is projected to operate at an uncongested LOS B or C in all analyzed peak hours. Good levels of service (LOS A or B) are also projected in all analyzed peak hours at the proposed new roundabout at the project entrance on Route 747.

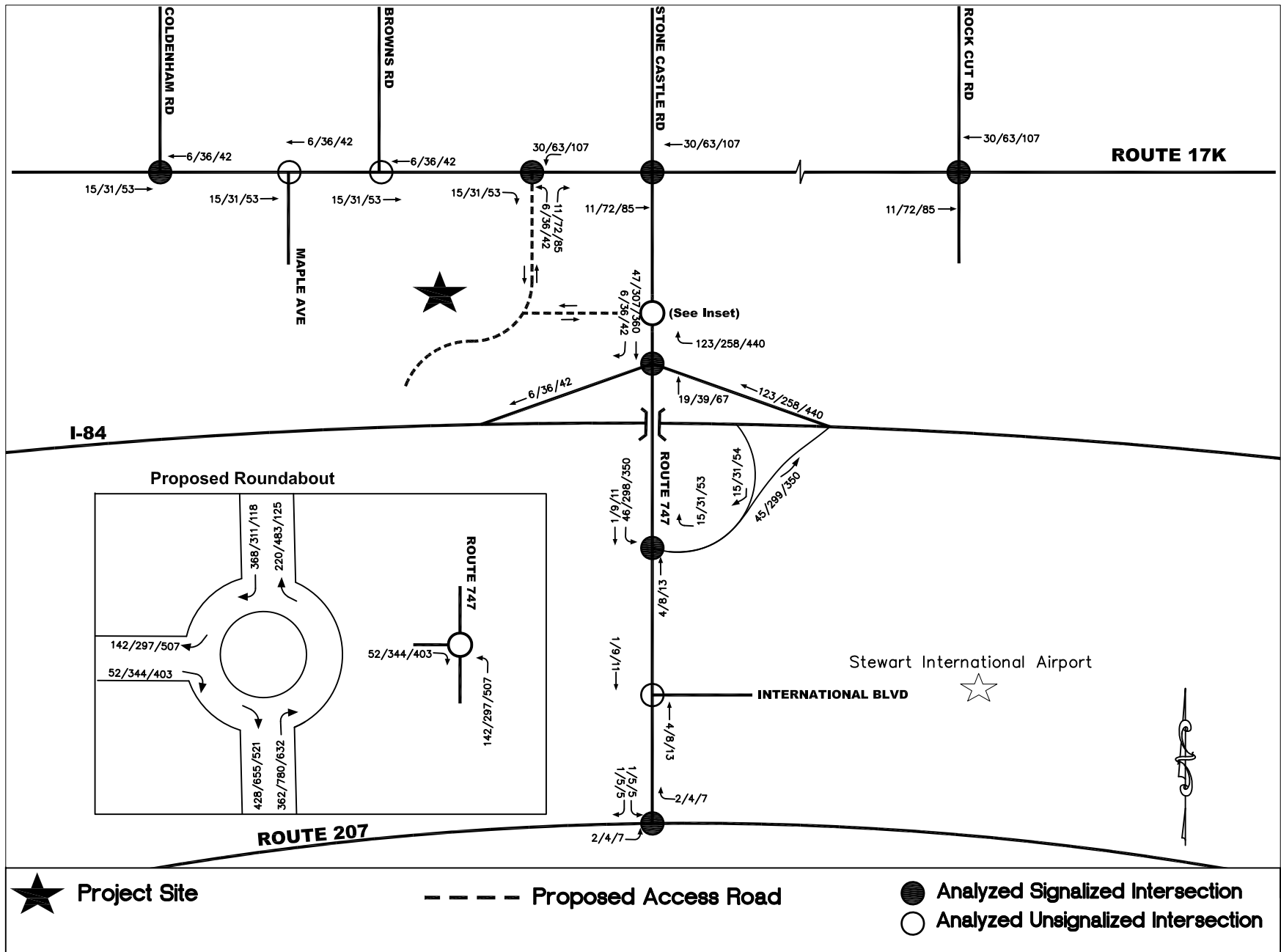


Figure 10
Friday AM/PM/Evening Peak Hour Project-Generated Vehicle Trips

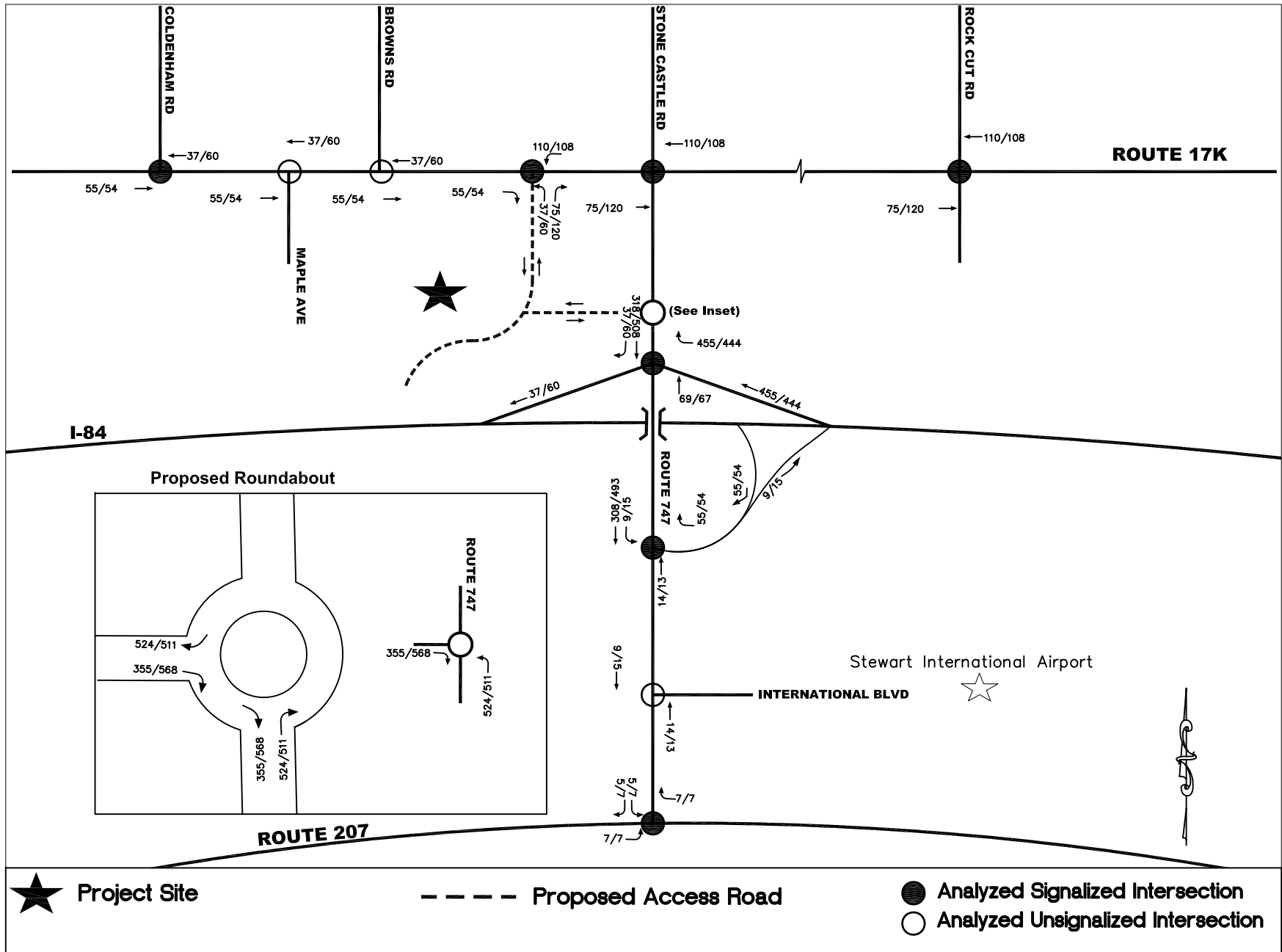


Figure 11
 Saturday Midday/Evening Peak Hour Project-Generated Vehicle Trips

N.T.S

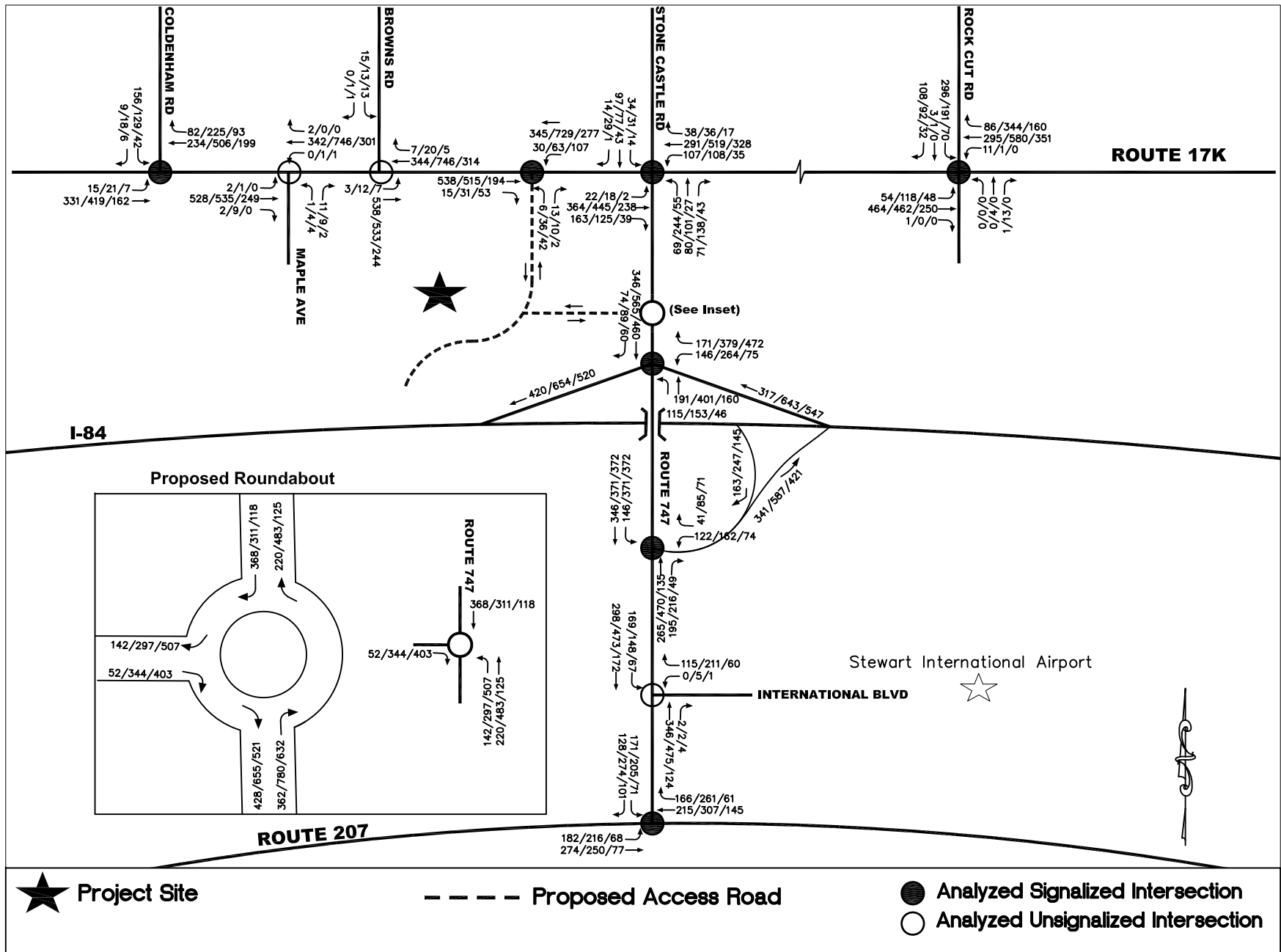


Figure 12
2017 Build Friday AM/PM/Evening Peak Hour Traffic Volumes

N.T.S

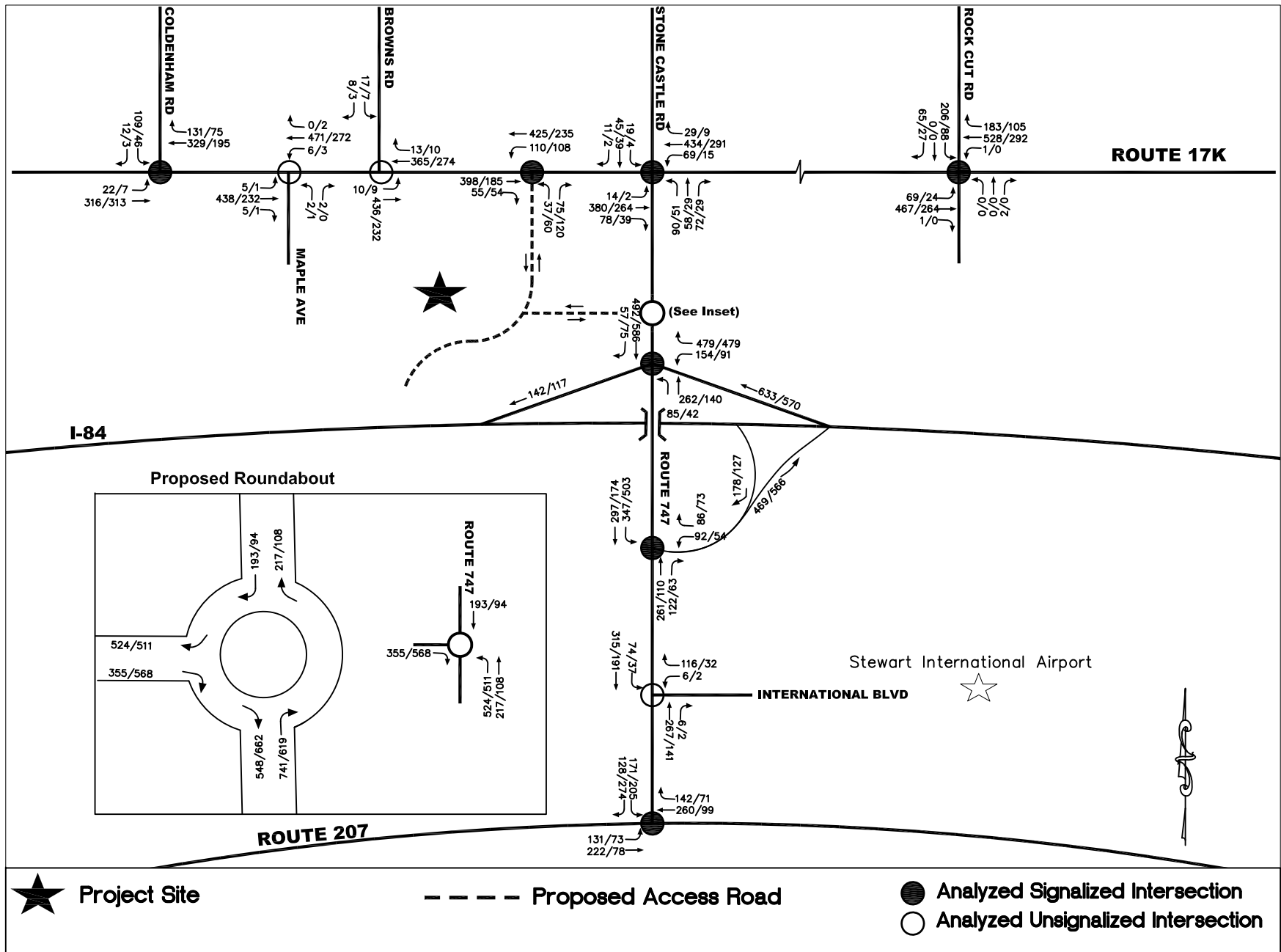


Figure 13
2017 Build Saturday Midday/Evening Peak Hour Traffic Volumes

Resorts World Hudson Valley Traffic Study

Table 7 2017 Build Conditions at Analyzed Intersections

Intersection	Approach	Lane Group	Friday AM Peak Hour						Friday PM Peak Hour						Friday Evening Peak Hour					
			2017 No-Build			2017 Build			2017 No-Build			2017 Build			2017 No-Build			2017 Build		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Route 17K @ Coldenham Road (Signalized)	EB	LT	0.47	15.6	B	0.50	15.9	B	0.53	16.4	B	0.57	17.2	B	0.15	11.6	B	0.22	12.2	B
	WB	TR	0.39	14.2	B	0.40	14.3	B	0.74	21.7	C	0.78	23.6	C	0.25	12.5	B	0.30	13.0	B
	SB	LR	0.27	18.1	B	0.27	18.1	B	0.23	17.7	B	0.23	17.7	B	0.12	16.9	B	0.12	16.9	B
Route 17K @ Route 747/ Stone Castle Road (Signalized)	EB	L	0.17	36.5	D	0.17	36.5	D	0.14	36.2	D	0.14	36.2	D	0.01	35.2	D	0.01	35.2	D
	EB	T	0.31	19.8	B	0.32	19.9	B	0.31	19.8	B	0.38	20.4	C	0.16	18.4	B	0.24	19.1	B
	EB	R	0.14	18.3	B	0.14	18.3	B	0.12	18.1	B	0.12	18.1	B	0.04	17.4	B	0.04	17.4	B
	WB	L	0.47	39.2	D	0.47	39.2	D	0.46	39.1	D	0.46	39.1	D	0.16	36.3	D	0.16	36.3	D
	WB	TR	0.27	19.4	B	0.30	19.7	B	0.39	20.6	C	0.44	21.2	C	0.19	18.7	B	0.27	19.4	B
	NB	L	0.29	29.9	C	0.29	29.9	C	0.87	56.1	E **	0.87	56.1	E **	0.24	29.3	C	0.24	29.3	C
	NB	TR	0.33	30.1	C	0.33	30.1	C	0.40	30.9	C	0.40	30.9	C	0.12	28.2	C	0.12	28.2	C
	SB	L	0.18	28.8	C	0.18	28.8	C	0.20	29.0	C	0.20	29.0	C	0.05	27.6	C	0.05	27.6	C
Route 17K @ Rock Cut Road (Signalized)	EB	LTR	0.66	19.4	B	0.68	19.8	B	1.00	56.1	E **	0.96	42.2	D **	0.30	13.2	B	0.43	15.0	B
	WB	LTR	0.51	16.3	B	0.55	17.1	B	0.90	33.4	C **	0.90	30.4	C **	0.48	15.5	B	0.61	18.1	B
	NB	LTR	0.01	15.7	B	0.01	15.7	B	0.03	15.8	B	0.04	18.5	B	0.01	15.7	B	0.01	15.7	B
	SB	LTR	0.76	28.8	C	0.76	28.8	C	0.53	20.5	C	0.60	24.9	C	0.17	16.9	B	0.17	16.9	B
Route 17K @ Site Entrance (Signalized)	EB	TR				0.44	18.2	B				0.43	18.0	B				0.18	15.3	B
	WB	L				0.15	16.0	B				0.30	18.9	B				0.31	17.8	B
	WB	T	Intersection not present in No-Build condition			0.31	16.6	B	Intersection not present in No-Build condition			0.65	21.7	C	Intersection not present in No-Build condition			0.25	16.0	B
	NB	L				0.01	14.5	B				0.05	14.8	B				0.06	14.9	B
Route 747 @ I-84 EB On/Off Ramp (Signalized)	WB	L	0.14	21.1	C	0.14	21.1	C	0.20	21.5	C	0.23	24.5	C	0.09	20.6	C	0.09	20.6	C
	WB	R	0.03	20.2	C	0.04	20.3	C	0.05	20.4	C	0.08	23.3	C	0.01	20.1	C	0.05	20.3	C
	NB	T	0.28	22.2	C	0.29	22.3	C	0.50	24.3	C	0.51	24.5	C	0.13	21.0	C	0.15	21.1	C
	SB	L	0.43	34.7	C	0.29	10.4	B	0.31	33.6	C	0.82	21.0	C	0.11	32.1	C	0.79	24.5	C
Route 747 @ I-84 WB On/Off Ramp (Signalized)	WB	L	0.16	21.3	C	0.16	21.3	C	0.28	22.3	C	0.28	22.3	C	0.07	20.5	C	0.07	20.5	C
	WB	LT	0.16	21.3	C	0.16	21.3	C	0.28	22.3	C	0.28	22.3	C	0.07	20.5	C	0.07	20.5	C
	WB	R	0.06	20.5	C	0.22	21.9	C	0.12	21.0	C	0.38	23.4	C	0.03	20.2	C	0.40	23.6	C
	NB	L	0.26	32.9	C	0.26	32.9	C	0.31	33.3	C	0.31	33.3	C	0.11	31.9	C	0.11	31.9	C
Route 747 @ Route 207 (Signalized)	EB	L	0.37	11.3	B	0.38	11.3	B	0.51	13.0	B	0.53	13.2	B	0.11	9.1	A	0.12	9.2	A
	EB	T	0.34	10.3	B	0.34	10.3	B	0.27	9.7	A	0.27	9.7	A	0.09	8.5	A	0.09	8.5	A
	WB	TR	0.59	25.1	C	0.59	25.1	C	0.66	26.9	C	0.66	27.0	C	0.32	20.9	C	0.33	21.0	C
	SB	L	0.46	29.1	C	0.46	29.1	C	0.43	28.7	C	0.44	28.9	C	0.17	26.0	C	0.19	26.1	C
Route 747 @ New Site Entrance Roundabout (Unsignalized)	EB	LR				0.04	4.8	A				0.24	10.1	B				0.24	9.0	A
	NB	LT	Intersection not present in No-Build condition			0.20	5.4	A	Intersection not present in No-Build condition			0.41	8.0	A	Intersection not present in No-Build condition			0.33	6.5	A
	SB	TR				0.23	6.1	A				0.21	6.3	A				0.10	6.0	A
Route 17K @ Maple Avenue (Unsignalized)	EB	LTR	0.00	8.1	A	0.00	8.1	A	0.00	9.3	A	0.00	9.6	A	0.00	7.8	A	0.00	8.0	A
	WB	LTR	0.00	8.5	A	0.00	8.6	A	0.00	8.5	A	0.00	8.7	A	0.00	7.7	A	0.00	7.9	A
	NB	LTR	0.05	13.9	B	0.05	14.2	B	0.10	19.2	C	0.11	21.4	C	0.03	12.4	B	0.04	13.8	B
	SB	LTR	0.02	20.8	C	0.02	21.4	C	0.02	20.9	C	0.02	23.6	C	0.00	9.9	A	0.00	10.2	B
Route 17K @ Browns Road (Unsignalized)	EB	LT	0.00	8.1	A	0.00	8.1	A	0.03	9.5	A	0.03	9.9	A	0.01	7.9	A	0.01	8.1	A
	SB	LR	0.12	19.4	C	0.13	20.0	C	0.07	21.0	C	0.09	24.3	C	0.02	12.4	B	0.02	13.6	B
Route 747 @ International Boulevard (Unsignalized)	WB	L	0.00	24.3	C	0.00	24.4	C	0.07	30.9	D	0.08	31.7	D	0.01	12.6	B	0.01	12.9	B
	SB	L	0.19	8.7	A	0.19	8.8	A	0.14	8.9	A	0.14	9.0	A	0.07	7.7	A	0.07	7.7	A

Peak Hours: Friday 8:00-9:00 a.m., 5-6 p.m. and 9-10 p.m.; Saturday 2-3 p.m. and 9-10 p.m.
L-left, T-through, R-right, DefL-analysis considers a default left-turn lane on this approach
V/C Ratio - volume to capacity ratio; sec. - seconds
LOS - Level of Service
** Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.85)
Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.5)

Table 7 (continued)
2017 Build Conditions at Analyzed Intersections

Intersection	Approach	Lane Group	Saturday Midday Peak Hour						Saturday Evening Peak Hour					
			2017 No-Build			2017 Build			2017 No-Build			2017 Build		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Route 17K @ Coldenham Road (Signalized)	EB	LT	0.40	14.3	B	0.48	15.4	B	0.37	13.9	B	0.45	14.9	B
	WB	TR	0.45	15.0	B	0.50	15.7	B	0.21	12.1	B	0.28	12.8	B
	SB	LR	0.23	17.7	B	0.23	17.7	B	0.11	16.8	B	0.11	16.8	B
Route 17K @ Route 747/ Stone Castle Road (Signalized)	EB	L	0.09	35.8	D	0.09	35.8	D	0.01	35.2	D	0.01	35.2	D
	EB	T	0.22	19.0	B	0.28	19.5	B	0.12	18.1	B	0.21	18.9	B
	EB	R	0.07	17.7	B	0.07	17.7	B	0.03	17.4	B	0.03	17.4	B
	WB	L	0.34	37.8	D	0.34	37.8	D	0.09	35.8	D	0.09	35.8	D
	WB	TR	0.27	19.4	B	0.36	20.2	C	0.15	18.4	B	0.24	19.2	B
	NB	L	0.28	29.7	C	0.28	29.7	C	0.23	29.3	C	0.23	29.3	C
	NB	TR	0.21	29.0	C	0.21	29.0	C	0.15	28.4	C	0.15	28.4	C
	SB	L	0.09	27.9	C	0.09	27.9	C	0.02	27.4	C	0.02	27.4	C
	SB	TR	0.15	28.4	C	0.15	28.4	C	0.15	28.4	C	0.15	28.4	C
Route 17K @ Rock Cut Road (Signalized)	EB	LTR	0.64	19.0	B	0.76	23.5	C	0.22	12.3	B	0.37	13.9	B
	WB	LTR	0.65	19.0	B	0.78	23.9	C	0.34	13.6	B	0.48	15.6	B
	NB	LTR	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B
	SB	LTR	0.54	20.7	C	0.54	20.7	C	0.25	17.5	B	0.25	17.5	B
Route 17K @ Site Entrance (Signalized)	EB	TR				0.34	17.0	B				0.17	15.3	B
	WB	L				0.43	21.2	C				0.30	17.8	B
	WB	T	Intersection not present in No-Build condition			0.38	17.4	B	Intersection not present in No-Build condition			0.21	15.6	B
	NB	L				0.05	14.8	B				0.09	15.1	B
Route 747 @ I-84 EB On/Off Ramp (Signalized)	NB	R				0.05	14.8	B				0.08	15.1	B
	WB	L	0.11	20.8	C	0.11	20.8	C	0.06	20.4	C	0.06	20.4	C
	WB	R	0.03	20.2	C	0.07	20.5	C	0.02	20.1	C	0.05	20.4	C
	NB	T	0.25	21.9	C	0.26	22.0	C	0.09	20.7	C	0.10	20.8	C
	SB	L	0.17	32.4	C	0.69	15.3	B	0.04	31.5	C	0.83	25.2	C
Route 747 @ I-84 WB On/Off Ramp (Signalized)	SB	T	0.16	9.8	A	0.16	9.8	A	0.09	9.4	A	0.10	9.4	A
	WB	L	0.14	21.1	C	0.14	21.1	C	0.09	20.7	C	0.09	20.7	C
	WB	LT	0.14	21.1	C	0.14	21.1	C	0.09	20.7	C	0.09	20.7	C
	WB	R	0.02	20.2	C	0.44	24.1	C	0.03	20.3	C	0.45	24.2	C
	NB	L	0.24	32.8	C	0.24	32.8	C	0.08	31.8	C	0.08	31.8	C
	NB	T	0.23	10.3	B	0.31	10.9	B	0.08	9.3	A	0.15	9.8	A
Route 747 @ Route 207 (Signalized)	SB	TR	0.17	21.3	C	0.49	24.2	C	0.09	20.7	C	0.67	27.2	C
	EB	L	0.35	11.2	B	0.38	11.4	B	0.13	9.0	A	0.15	9.1	A
	EB	T	0.22	9.3	A	0.22	9.3	A	0.10	8.6	A	0.10	8.6	A
	WB	TR	0.55	24.0	C	0.56	24.2	C	0.24	20.1	C	0.25	20.2	C
	SB	L	0.31	27.3	C	0.32	27.5	C	0.17	25.9	C	0.18	26.1	C
Route 747 @ New Site Entrance Roundabout (Unsignalized)	SB	R	0.13	25.6	C	0.13	25.6	C	0.09	25.2	C	0.09	25.3	C
	EB	LR				0.21	5.8	A				0.31	6.5	A
	NB	LT	Intersection not present in No-Build condition			0.37	6.9	A	Intersection not present in No-Build condition			0.31	6.2	A
Route 17K @ Maple Avenue (Unsignalized)	SB	TR				0.15	6.7	A				0.07	5.6	A
	EB	LTR	0.00	8.3	A	0.00	8.4	A	0.00	8.3	A	0.00	7.8	A
	WB	LTR	0.01	8.3	A	0.01	8.5	A	0.01	8.3	A	0.01	7.8	A
	NB	LTR	0.02	15.7	C	0.03	17.4	C	0.02	15.7	C	0.01	13.8	B
Route 17K @ Browns Road (Unsignalized)	SB	LTR	0.05	20.9	C	0.06	24.0	C	0.05	20.9	C	0.04	12.3	B
	EB	LT	0.02	8.1	A	0.02	8.2	A	0.02	8.1	A	0.02	8.0	A
Route 747 @ International Boulevard (Unsignalized)	SB	LR	0.11	15.7	C	0.12	17.5	C	0.11	15.7	C	0.03	11.7	B
	WB	L	0.05	17.1	C	0.05	17.6	C	0.05	17.1	C	0.01	12.0	B
	SB	L	0.07	8.1	A	0.08	8.1	A	0.07	8.1	A	0.03	7.7	A

Peak Hours: Friday 8:00-9:00 a.m., 5-6 p.m. and 9-10 p.m.; Saturday 2-3 p.m and 9-10 p.m.
L-left, T-through, R-right, DefL-analysis considers a defacto left-turn lane on this approach
V/C Ratio - volume to capacity ratio; sec. - seconds
LOS - Level of Service
** Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.85)
Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.5)

Resorts World Hudson Valley Traffic Study

As shown in **Table 7**, two intersections are projected to experience congestion in the 2017 Build condition, the same number as in the 2017 No-Build. Intersections with congested lane groups in the Build condition include the following.

Route 17K at Route 747/Stone Castle Road

As shown in **Table 7**, under 2017 Build conditions the northbound left-turn from Route 747 onto westbound Route 17K at this signalized intersection is projected to operate at a congested LOS E in the Friday PM peak hour with 56.1 seconds of delay, unchanged from the No-Build condition. The proposed project would therefore not worsen congestion for this movement compared to conditions in the future without the proposed project.

Route 17K at Rock Cut Road

As shown in **Table 7**, under 2017 Build conditions the eastbound Route 17K approach at the signalized intersection with Rock Cut Road is projected to operate at a marginal LOS D and a v/c ratio of 0.96 in the Friday PM peak hour. However, this would be an improvement compared to the LOS E conditions and 1.00 v/c ratio projected to occur in the 2017 No-Build. It should also be noted that the westbound approach would operate at a marginal v/c ratio of 0.90 during the Friday PM peak hour in the Build condition, unchanged from the No-Build. However, the level of service on this approach would remain at an acceptable LOS C in the Build condition and delay would decrease to 30.4 seconds compared to 33.4 seconds in the No-Build.

All other lane groups at these and other analyzed intersections are projected to remain uncongested in all peak hours in the 2017 future with the proposed project.

Parking

A total of approximately 6,550 parking spaces would be provided on-site, including a 5,650-space parking garage (with 9 spaces of bus parking) and a 900-space surface parking lot for employees. This amount of parking capacity is expected to be sufficient to accommodate peak parking demand generated by the project's casino/hotel and convention center uses.

Transit

Demand at the Metro-North Railroad's Salisbury-Cornwall and Beacon stations would potentially increase as a result of the development of the proposed project. As discussed previously, given the distance of the project site from these two rail stations (8 miles, and 10 miles, respectively), it is anticipated that these rail passengers would start or end their journey via connecting bus service.

Pedestrians and Bicycles

As noted previously, the majority of travel demand generated by the proposed project would be by motor vehicle (the auto and bus modes), and new pedestrian demand would primarily consist of trips en route between on-site uses—i.e., between the project's casino/hotel and convention center. No new pedestrian facilities are therefore proposed at analyzed intersections within the

study area. The proposed project is expected to add new vehicular demand to Route 207, but would not otherwise affect the existing on-road bicycle route (State Bike Route 17) along this corridor.

LONG-TERM FUTURE TRAFFIC CONDITIONS AT ETC+10

As noted previously, analyses of conditions in 2027—the estimated time of project completion plus 10 years (ETC+10)—are assessed to demonstrate the functionality of the proposed roadway improvements over a 10 year period.

2027 No-Build Condition

Figures 14 and **15** show projected peak hour traffic volumes at analyzed intersections in 2027 in the future without the proposed project. The traffic volumes shown in **Figures 14** and **15** reflect an additional 10 years of background growth (at 1.08 percent per year) for the 2017 through 2027 period. **Table 8** shows the projected 2027 No-Build v/c ratios, delays and levels of service at analyzed intersections. As shown in **Table 8**, three intersections are projected to experience congestion in the 2027 No-Build condition compared to one intersection under 2014 existing conditions. Intersections with congested lane groups in one or more peak hours in the 2027 No-Build condition include the following.

Route 17K at Route 747/Stone Castle Road

As shown in **Table 8**, under 2027 No-Build conditions the northbound left-turn from Route 747 onto westbound Route 17K at this signalized intersection is projected to operate at a congested LOS E in the Friday PM peak hour compared to LOS C during this period under existing conditions.

Route 17K at Rock Cut Road

As shown in **Table 8**, under 2027 No-Build conditions the eastbound Route 17K approach at the signalized intersection with Rock Cut Road is projected to operate at a congested LOS F in the Friday PM peak hour. The westbound approach is projected to experience capacity conditions in the Friday PM peak hour with a v/c ratio of 1.00 (LOS D) during this period. These approaches currently experience marginal conditions in the Friday PM peak hour under existing conditions, operating at v/c ratios of 0.94 (LOS D) and 0.87 (LOS C), respectively. Lastly, the southbound Rock Cut Road approach would operate with a marginal v/c ratio of 0.85 (LOS D) in the Friday AM peak hour.

Route 747 at International Boulevard

As shown in **Table 8**, under 2027 No-Build conditions the westbound left-turn from International Boulevard onto Route 747 at this signalized intersection is projected to operate at a congested LOS E in the Friday PM peak hour compared to a marginal LOS D during this period under existing conditions.

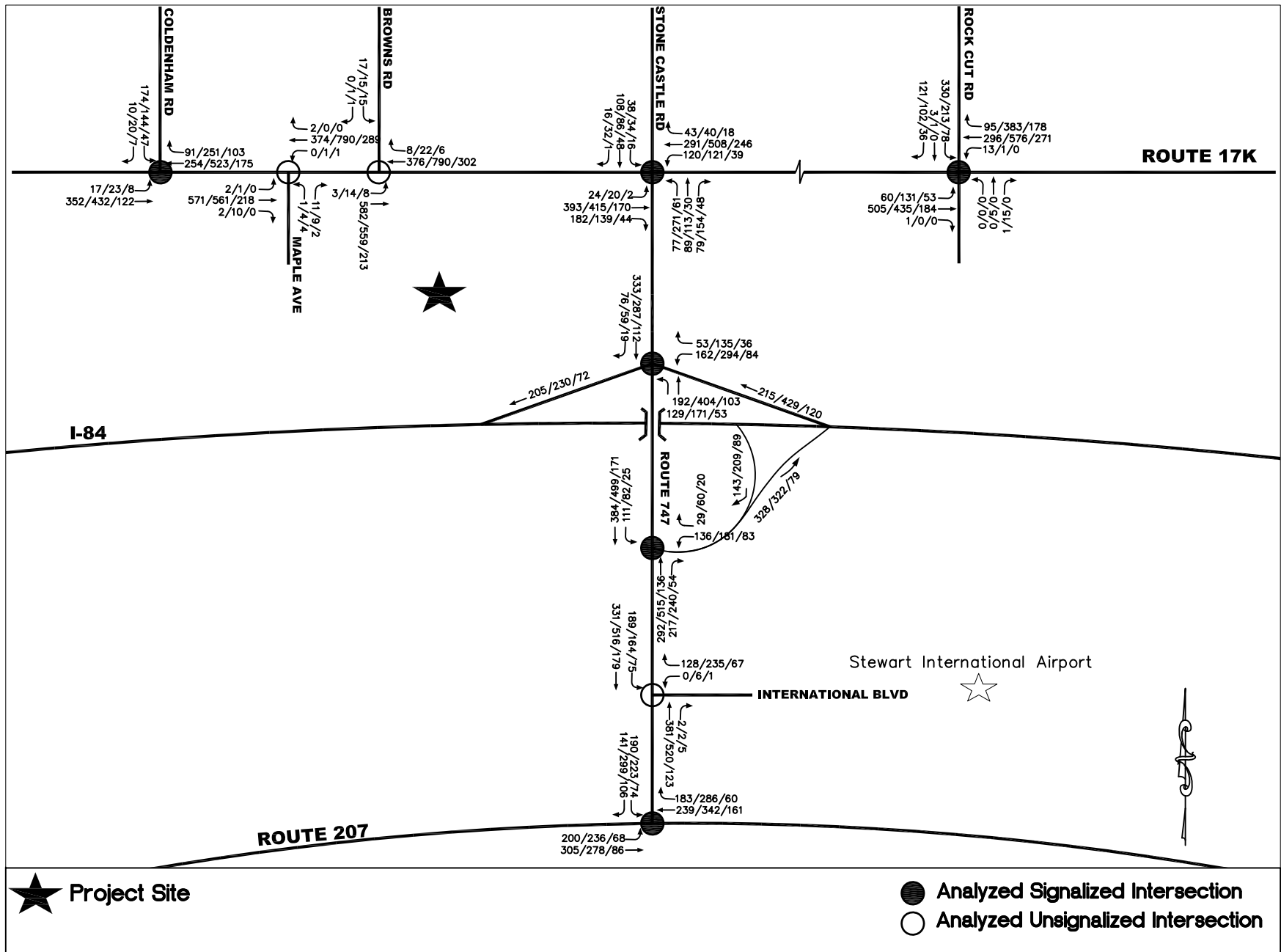


Figure 14
2027 No-Build Friday AM/PM/Evening Peak Hour Traffic Volumes

N.T.S

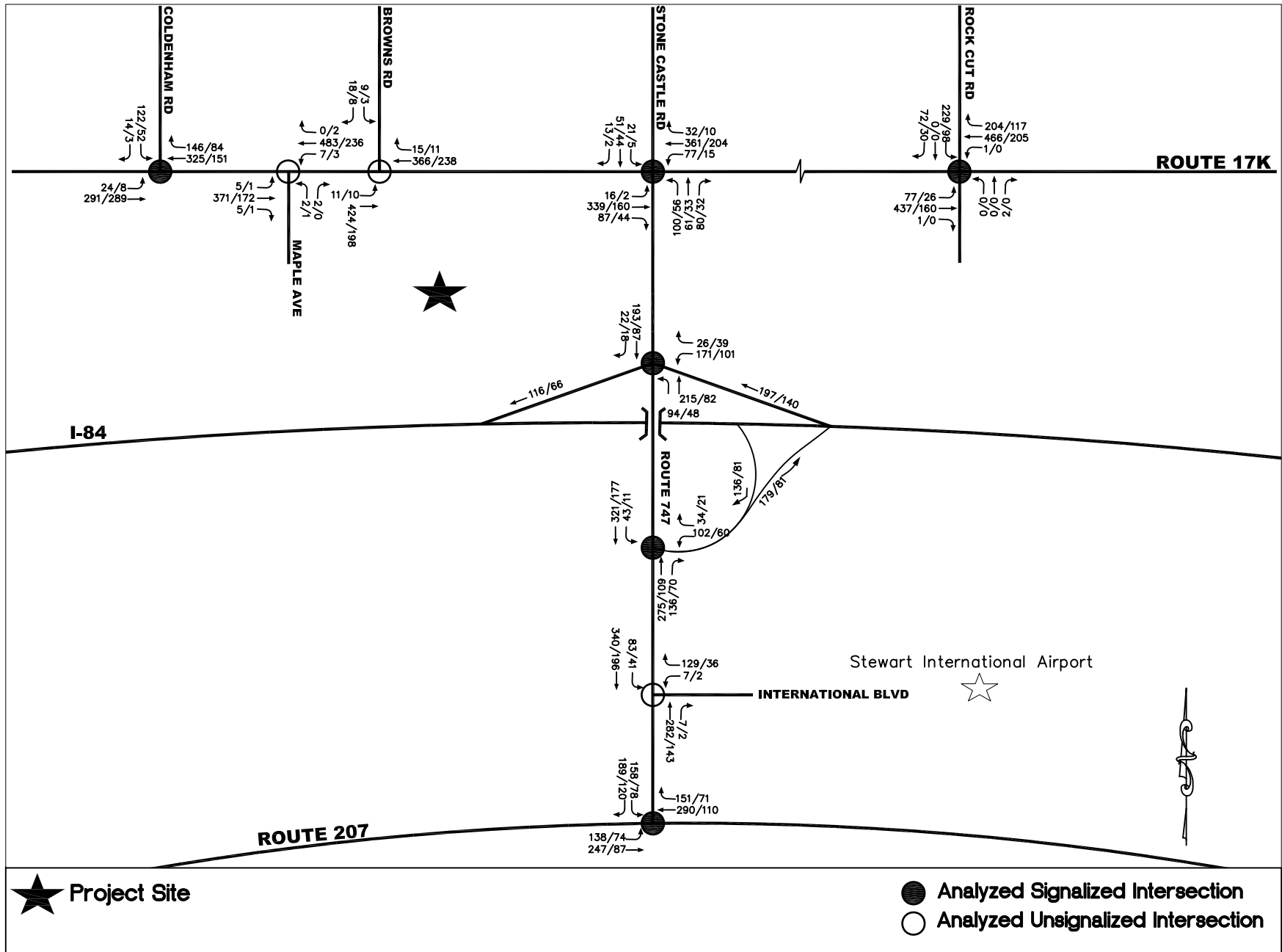


Figure 15
2027 No-Build Saturday Midday/Evening Peak Hour Traffic Volumes

N.T.S

Resorts World Hudson Valley Traffic Study

Table 8 2027 No-Build Conditions at Analyzed Intersections

Intersection	Approach	Lane Group	Friday AM Peak Hour			Friday PM Peak Hour			Friday Evening Peak Hour			Saturday MIDDAY Peak Hour			Saturday Evening Peak Hour		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Route 17K @ Coldenham Road (Signalized)	EB	LT	0.53	16.6	B	0.60	17.8	B	0.17	11.7	B	0.45	15.1	B	0.42	14.5	B
	WB	TR	0.43	14.8	B	0.82	25.7	C	0.28	12.8	B	0.50	15.8	B	0.23	12.3	B
	SB	LR	0.30	18.3	B	0.25	17.9	B	0.14	17.0	B	0.26	17.9	B	0.13	16.9	B
Route 17K @ Route 747/ Stone Castle Road (Signalized)	EB	L	0.19	36.6	D	0.16	36.3	D	0.01	35.2	D	0.10	35.9	D	0.01	35.2	D
	EB	T	0.34	20.1	C	0.35	20.2	C	0.17	18.5	B	0.25	19.2	B	0.13	18.2	B
	EB	R	0.16	18.4	B	0.13	18.2	B	0.04	17.5	B	0.07	17.7	B	0.03	17.4	B
	WB	L	0.53	40.3	D	0.52	39.9	D	0.19	36.5	D	0.37	38.1	D	0.10	35.9	D
	WB	TR	0.30	19.7	B	0.44	21.1	C	0.21	18.8	B	0.30	19.7	B	0.17	18.5	B
	NB	L	0.33	30.3	C	0.97	79.8	E **	0.27	29.6	C	0.31	30.1	C	0.26	29.5	C
	NB	TR	0.36	30.5	C	0.45	31.5	C	0.14	28.3	C	0.23	29.1	C	0.16	28.6	C
	SB	L	0.21	29.1	C	0.23	29.4	C	0.06	27.7	C	0.10	28.0	C	0.03	27.4	C
Route 17K @ Rock Cut Road (Signalized)	EB	LTR	0.74	22.0	C	1.21	132.4	F **	0.34	13.8	B	0.75	22.9	C	0.25	12.6	B
	WB	LTR	0.57	17.6	B	1.00	52.4	D **	0.51	16.1	B	0.72	21.3	C	0.38	14.1	B
	NB	LTR	0.01	15.7	B	0.04	15.9	B	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B
	SB	LTR	0.85	36.1	D **	0.59	21.9	C	0.19	17.0	B	0.59	22.0	C	0.28	17.7	B
Route 747 @ I-84 EB On/Off Ramp (Signalized)	WB	L	0.16	21.2	C	0.22	21.7	C	0.10	20.7	C	0.12	20.9	C	0.06	20.4	C
	WB	R	0.03	20.2	C	0.05	20.4	C	0.01	20.1	C	0.03	20.2	C	0.02	20.1	C
	NB	T	0.32	22.5	C	0.56	25.2	C	0.15	21.1	C	0.27	22.1	C	0.10	20.8	C
	SB	L	0.48	35.3	D	0.35	33.9	C	0.13	32.2	C	0.19	32.6	C	0.05	31.6	C
Route 747 @ I-84 WB On/Off Ramp (Signalized)	SB	T	0.24	10.3	B	0.28	10.6	B	0.09	9.4	A	0.18	9.9	A	0.10	9.5	A
	WB	L	0.18	21.4	C	0.32	22.7	C	0.08	20.6	C	0.16	21.2	C	0.10	20.7	C
	WB	LT	0.18	21.4	C	0.31	22.7	C	0.08	20.6	C	0.16	21.2	C	0.10	20.7	C
	WB	R	0.07	20.5	C	0.13	21.1	C	0.03	20.2	C	0.02	20.2	C	0.04	20.3	C
	NB	L	0.29	33.1	C	0.34	33.5	C	0.13	32.1	C	0.26	32.9	C	0.10	31.8	C
Route 747 @ Route 207 (Signalized)	NB	T	0.26	10.5	B	0.53	13.2	B	0.12	9.6	A	0.25	10.5	B	0.09	9.4	A
	SB	TR	0.38	23.1	C	0.30	22.4	C	0.14	21.0	C	0.19	21.4	C	0.10	20.8	C
	EB	L	0.43	12.0	B	0.61	15.2	B	0.12	9.3	A	0.41	11.9	B	0.15	9.2	A
	EB	T	0.38	10.6	B	0.30	9.9	A	0.10	8.5	A	0.25	9.5	A	0.11	8.6	A
	WB	TR	0.66	27.0	C	0.74	29.7	C	0.35	21.3	C	0.61	25.5	C	0.27	20.4	C
Route 17K @ Maple Avenue (Unsignalized)	SB	L	0.52	29.9	C	0.48	29.4	C	0.19	26.2	C	0.35	27.8	C	0.19	26.1	C
	SB	R	0.12	25.6	C	0.21	26.3	C	0.08	25.2	C	0.14	25.7	C	0.09	25.3	C
	EB	LTR	0.00	8.2	A	0.00	9.8	A	0.00	7.9	A	0.01	8.5	A	0.00	7.8	A
	WB	LTR	0.00	8.8	A	0.00	8.8	A	0.00	7.8	A	0.01	8.4	A	0.01	7.7	A
Route 17K @ Browns Road (Unsignalized)	NB	LTR	0.06	14.8	B	0.15	25.2	D	0.04	13.3	B	0.03	18.0	C	0.01	12.8	B
	SB	LTR	0.02	24.1	C	0.02	25.9	D	0.00	10.1	B	0.06	25.3	D	0.03	11.6	B
	EB	LT	0.00	8.2	A	0.03	10.1	B	0.01	8.0	A	0.02	8.2	A	0.02	7.9	A
Route 747 @ International Boulevard (Unsignalized)	SB	LR	0.16	22.7	C	0.11	27.1	D	0.02	13.3	B	0.13	17.4	C	0.03	11.4	B
	WB	L	0.00	28.8	D	0.12	39.6	E **	0.01	13.4	B	0.07	19.3	C	0.01	12.2	B
	SB	L	0.21	9.0	A	0.17	9.3	A	0.08	7.8	A	0.09	8.2	A	0.03	7.7	A

Notes:
 Peak Hours: Friday 8:00-9:00 a.m., 5-6 p.m. and 9-10 p.m.; Saturday 2-3 p.m. and 9-10 p.m.
 L-left, T-through, R-right, DefL-analysis considers a defacto left-turn lane on this approach
 V/C Ratio - Volume to capacity ratio, sec. - seconds
 LOS - Level of Service
 ** Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.85)
 Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.5)

2027 Build Condition

Figures 16 and **17** show projected peak hour traffic volumes at analyzed intersections in 2027 in the future with the proposed project. The traffic volumes shown in **Figures 16** and **17** include both an additional 10 years of background growth as well as demand generated by the proposed Resorts World Hudson Valley development. **Table 9** shows the projected 2027 Build v/c ratios, delays and levels of service at analyzed intersections. The analysis results shown in **Table 9** reflect the effects of both new project-generated traffic and the physical and operational improvements to the roadway network that would be implemented in conjunction with the proposed project. As shown in **Table 9**, the proposed new intersection at the project entrance on Route 17K is projected to operate at an uncongested LOS B or C in all analyzed peak hours in 2027. Good levels of service (LOS A or B) are also projected in all analyzed peak hours at the proposed new roundabout at the project entrance on Route 747.

As shown in **Table 9**, six intersections are projected to experience congestion in the 2027 Build condition compared to four intersections under 2027 No-Build conditions. Intersections with congested lane groups in the 2027 Build condition include the following.

Route 17K at Coldenham Road

As shown in **Table 9**, the westbound Route 17K approach would operate at a marginal v/c ratio of 0.86 in the Friday PM peak hour compared to a v/c ratio of 0.82 in the 2027 No-Build. However, this lane group would continue to operate at an acceptable LOS C during this period in the 2027 Build condition, unchanged from the 2027 No-Build condition, and no further physical or operational improvements are warranted.

Route 17K at Route 747/Stone Castle Road

As shown in **Table 9**, under 2027 Build conditions the northbound left-turn from Route 747 onto westbound Route 17K at this signalized intersection is projected to operate at a congested LOS E in the Friday PM peak hour with 79.8 seconds of delay, unchanged from the No-Build condition. The proposed project would therefore not result in a worsening of congestion for this movement compared to conditions in the future without the proposed project.

Route 17K at Rock Cut Road

As shown in **Table 9**, under 2027 Build conditions the eastbound Route 17K approach at the signalized intersection with Rock Cut Road is would continue to operate at a congested LOS F in the Friday PM peak hour; however, delay would be reduced to 106.9 seconds compared to 132.4 seconds in the 2027 No-Build condition. Although this approach would experience a marginal v/c ratio of 0.89 in the Saturday midday peak hour, it would continue to operate at an acceptable LOS C in this period.

The westbound Route 17K approach would experience capacity conditions with a v/c ratio of 1.00 during the Friday PM peak hour in the 2027 Build condition as it would in the 2027 No-Build condition. However, this approach would operate at LOS D in the period, and delay would be reduced to 47.8 seconds compared to 52.4 seconds in the 2027 No-Build condition. Lastly, the southbound approach would operate with a marginal v/c ratio of 0.85 (LOS D) in the Friday AM

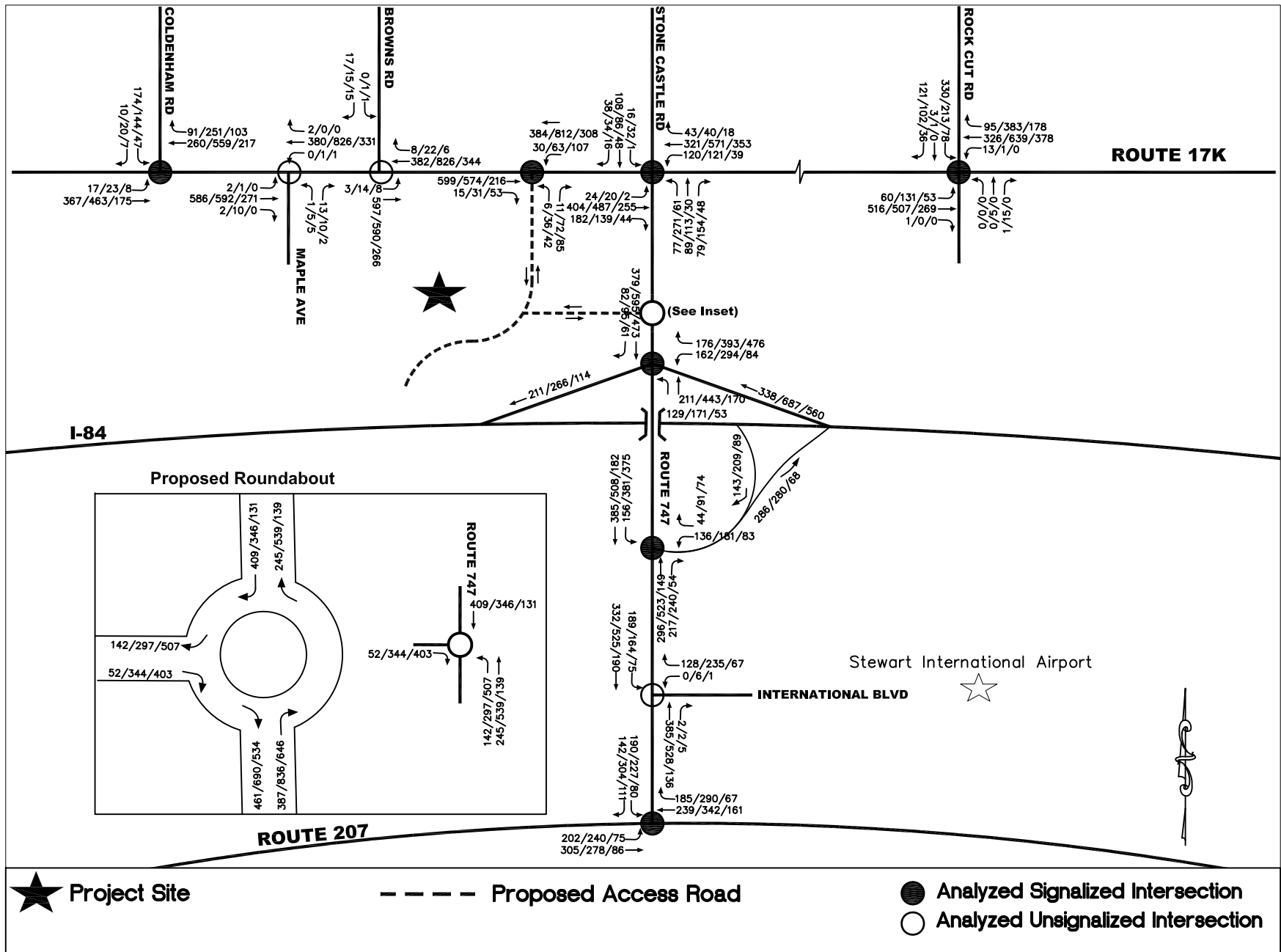


Figure 16
2027 Build Friday AM/PM/Evening Peak Hour Traffic Volumes

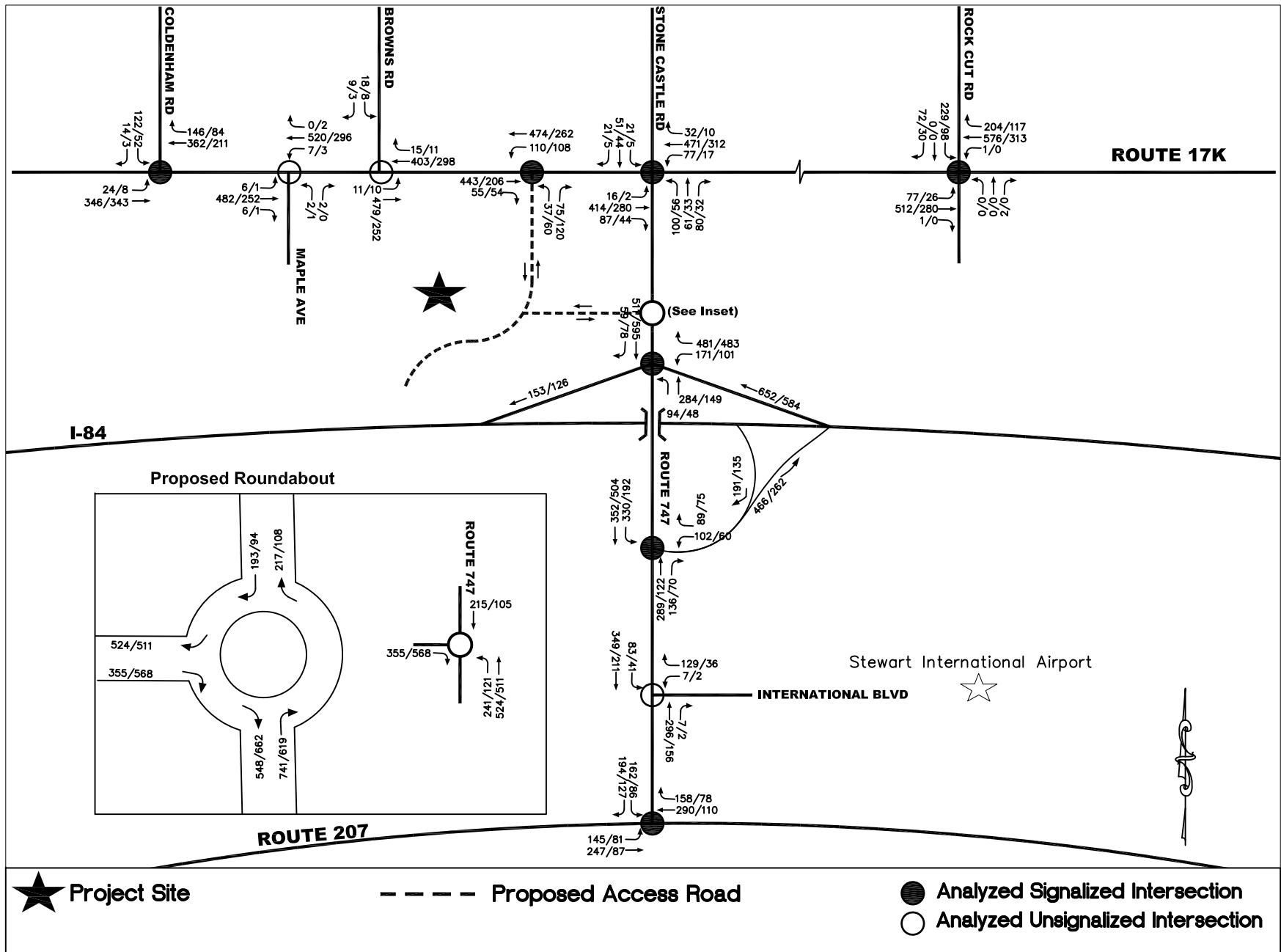


Figure 17
2027 Build Saturday Midday/Evening Peak Hour Traffic Volumes

Table 9
2027 Build Conditions at Analyzed Intersections

Intersection	Approach	Lane Group	Friday AM Peak Hour									Friday PM Peak Hour									Friday Evening Peak Hour								
			2027 No-Build			2027 Build			2027 No-Build			2027 Build			2027 No-Build			2027 Build			2027 No-Build			2027 Build					
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS			
Route 17K @ Coldenham Road (Signalized)	EB	LT	0.53	16.6	B	0.55	17.0	B	0.60	17.8	B	0.65	19.2	B	0.17	11.7	B	0.24	12.4	B	0.28	12.8	B	0.33	13.4	B			
	WB	TR	0.43	14.8	B	0.44	14.9	B	0.82	25.7	C	0.86	28.9	C **	0.14	17.0	B	0.14	17.0	B	0.14	17.0	B	0.14	17.0	B			
	SB	LR	0.30	18.3	B	0.30	18.3	B	0.25	17.9	B	0.25	17.9	B															
Route 17K @ Route 747/ Stone Castle Road (Signalized)	EB	L	0.19	36.6	D	0.19	36.6	D	0.16	36.3	D	0.16	36.3	D	0.01	35.2	D	0.01	35.2	D	0.17	18.5	B	0.04	17.5	B			
	EB	T	0.34	20.1	C	0.35	20.2	C	0.35	20.2	C	0.41	20.8	C	0.19	17.5	B	0.19	17.5	B	0.04	17.5	B	0.04	17.5	B			
	EB	R	0.16	18.4	B	0.16	18.4	B	0.13	18.2	B	0.13	18.2	B	0.04	17.5	B	0.04	17.5	B	0.04	17.5	B	0.04	17.5	B			
	WB	L	0.53	40.3	D	0.53	40.3	D	0.52	39.9	D	0.52	39.9	D	0.19	36.5	D	0.19	36.5	D	0.19	36.5	D	0.19	36.5	D			
	WB	TR	0.30	19.7	B	0.33	20.0	C	0.44	21.1	C	0.49	21.7	C	0.21	18.8	B	0.21	18.8	B	0.21	18.8	B	0.21	18.8	B			
	NB	L	0.33	30.3	C	0.33	30.3	C	0.97	79.8	E **	0.97	79.8	E **	0.27	29.6	C	0.27	29.6	C	0.27	29.6	C	0.27	29.6	C			
	NB	TR	0.36	30.5	C	0.36	30.5	C	0.45	31.5	C	0.45	31.5	C	0.14	28.3	C	0.14	28.3	C	0.14	28.3	C	0.14	28.3	C			
	SB	L	0.21	29.1	C	0.21	29.1	C	0.23	29.4	C	0.23	29.4	C	0.06	27.7	C	0.06	27.7	C	0.06	27.7	C	0.06	27.7	C			
	SB	TR	0.34	30.3	C	0.34	30.3	C	0.30	29.8	C	0.30	29.8	C	0.16	28.5	C	0.16	28.5	C	0.16	28.5	C	0.16	28.5	C			
Route 17K @ Rock Cut Road (Signalized)	EB	LTR	0.74	22.0	C	0.76	22.8	C	1.21	132.4	F **	1.16	106.9	F **	0.34	13.8	B	0.50	16.2	B	0.51	16.1	B	0.66	19.5	B			
	WB	LTR	0.57	17.6	B	0.62	18.6	B	1.00	52.4	D **	1.00	47.8	D **	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B			
	NB	LTR	0.01	15.7	B	0.01	15.7	B	0.04	15.9	B	0.04	18.5	B	0.19	17.0	B	0.19	17.0	B	0.19	17.0	B	0.19	17.0	B			
	SB	LTR	0.85	36.1	D **	0.85	36.1	D **	0.59	21.9	C	0.67	27.2	C															
Route 17K @ Site Entrance (Signalized)	EB	TR				0.49	18.9	B				0.47	18.7	B										0.20	15.5	B			
	WB	L				0.16	16.5	B				0.34	20.1	C										0.31	18.0	B			
	WB	T	Intersection not present in No-Build condition			0.34	17.0	B	Intersection not present in No-Build condition			0.72	23.5	C	Intersection not present in No-Build condition			0.27	16.3	B				0.06	14.9	B			
	NB	L	Intersection not present in No-Build condition			0.01	14.5	B	Intersection not present in No-Build condition			0.05	14.8	B	Intersection not present in No-Build condition			0.06	14.9	B				0.06	14.9	B			
Route 747 @ I-84 EB On/Off Ramp (Signalized)	WB	L	0.16	21.2	C	0.16	21.2	C	0.22	21.7	C	0.26	24.7	C	0.10	20.7	C	0.10	20.7	C	0.01	20.1	C	0.05	20.4	C			
	WB	R	0.03	20.2	C	0.04	20.3	C	0.05	20.4	C	0.08	23.4	C	0.15	21.1	C	0.15	21.1	C	0.16	21.2	C	0.16	21.2	C			
	NB	T	0.32	22.5	C	0.32	22.6	C	0.56	25.2	C	0.57	25.3	C	0.13	32.2	C	0.13	32.2	C	0.81	26.5	C	0.81	26.5	C			
	SB	L	0.48	35.3	D	0.32	10.6	B	0.35	33.9	C	0.88	29.7	C **	0.09	9.4	A	0.09	9.4	A	0.18	9.9	A	0.18	9.9	A			
	SB	T	0.24	10.3	B	0.24	10.3	B	0.28	10.6	B	0.27	8.6	A															
Route 747 @ I-84 WB On/Off Ramp (Signalized)	WB	L	0.18	21.4	C	0.18	21.4	C	0.32	22.7	C	0.32	22.7	C	0.08	20.6	C	0.08	20.6	C	0.08	20.6	C	0.08	20.6	C			
	WB	LT	0.18	21.4	C	0.18	21.4	C	0.31	22.7	C	0.31	22.7	C	0.08	20.6	C	0.08	20.6	C	0.08	20.6	C	0.08	20.6	C			
	WB	R	0.07	20.5	C	0.23	21.9	C	0.13	21.1	C	0.39	23.6	C	0.03	20.2	C	0.40	23.6	C	0.03	20.2	C	0.40	23.6	C			
	NB	L	0.29	33.1	C	0.29	33.1	C	0.34	33.5	C	0.34	33.5	C	0.13	32.1	C	0.13	32.1	C	0.13	32.1	C	0.13	32.1	C			
	NB	T	0.26	10.5	B	0.29	10.7	B	0.53	13.2	B	0.58	14.0	B	0.12	9.6	A	0.12	9.6	A	0.19	10.1	B	0.19	10.1	B			
	SB	TR	0.38	23.1	C	0.43	23.6	C	0.30	22.4	C	0.61	26.1	C	0.14	21.0	C	0.58	25.6	C	0.14	21.0	C	0.58	25.6	C			
Route 747 @ Route 207 (Signalized)	EB	L	0.43	12.0	B	0.44	12.0	B	0.61	15.2	B	0.62	15.5	B	0.12	9.3	A	0.13	9.3	A	0.10	8.5	A	0.10	8.5	A			
	EB	T	0.38	10.6	B	0.38	10.6	B	0.30	9.9	A	0.30	9.9	A	0.35	21.3	C	0.36	21.4	C	0.19	26.2	C	0.21	26.4	C			
	WB	TR	0.66	27.0	C	0.66	27.0	C	0.74	29.7	C	0.74	29.8	C	0.08	25.2	C	0.09	25.2	C									
	SB	L	0.52	29.9	C	0.52	29.9	C	0.48	29.4	C	0.49	29.5	C															
Route 747 @ New Site Entrance Roundabout (Unsignalized)	EB	LR				0.04	5.0	A				0.24	10.6	B				0.24	9.1	A				0.24	9.1	A			
	NB	LT	Intersection not present in No-Build condition			0.22	5.7	A	Intersection not present in No-Build condition			0.44	8.8	A	Intersection not present in No-Build condition			0.34	6.6	A				0.34	6.6	A			
	SB	TR	Intersection not present in No-Build condition			0.26	6.4	A	Intersection not present in No-Build condition			0.24	6.6	A	Intersection not present in No-Build condition			0.11	6.1	A				0.11	6.1	A			
Route 17K @ Maple Avenue (Unsignalized)	EB	LTR	0.00	8.2	A	0.00	8.2	A	0.00	9.8	A	0.00	10.2	B	0.00	7.9	A	0.00	8.1	A	0.00	7.8	A	0.00	7.9	A			
	WB	LTR	0.00	8.8	A	0.00	8.8	A	0.00	8.8	A	0.00	8.9	A	0.04	13.3	B	0.05	14.9	B	0.04	13.3	B	0.05	14.9	B			
	NB	LTR	0.06	14.8	B	0.06	15.1	C	0.15	25.2	D	0.18	30.3	D	0.00	10.1	B	0.00	10.4	B									
	SB	LTR	0.02	24.1	C	0.02	25.0	C	0.02	25.9	D	0.03	30.5	D															
Route 17K @ Browns Road (Unsignalized)	EB	LT	0.00	8.2	A	0.00	8.2	A	0.03	10.1	B	0.04	10.5	B	0.01	8.0	A	0.01	8.2	A	0.02	13.3	B	0.03	14.7	B			
	SB	LR	0.16	22.7	C	0.17	23.5	C	0.11	27.1	D	0.14	33.1	D															
Route 747 @ International Boulevard (Unsignalized)	WB	L	0.00	28.8	D	0.00	29.2	D	0.12	39.6	E **	0.12	40.6	E **	0.01	13.4	B	0.01	13.7	B	0.08	7.8	A	0.08	7.8	A			
	SB	L	0.21	9.0	A	0.22	9.0	A	0.17	9.3	A	0.17	9.3	A															

Peak Hours: Friday 8:00-9:00 a.m., 5-6 p.m. and 9-10 p.m.; Saturday 2-3 p.m. and 9-10 p.m.
 L-left, T-through, R-right, DefL-analysis considers a defacto left-turn lane on this approach
 V/C Ratio - volume to capacity ratio; sec. - seconds
 LOS - Level of Service
 ** Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.85)
 Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.5)

Table 9 (continued)
2027 Build Conditions at Analyzed Intersections

Intersection	Approach	Lane Group	Saturday Midday Peak Hour						Saturday Evening Peak Hour					
			2027 No-Build			2027 Build			2027 No-Build			2027 Build		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Route 17K @ Coldenham Road (Signalized)	EB	LT	0.45	15.1	B	0.52	16.3	B	0.42	14.5	B	0.49	15.6	B
	WB	TR	0.50	15.8	B	0.55	16.6	B	0.23	12.3	B	0.30	13.0	B
	SB	LR	0.26	17.9	B	0.26	17.9	B	0.13	16.9	B	0.13	16.9	B
Route 17K @ Route 747/ Stone Castle Road (Signalized)	EB	L	0.10	35.9	D	0.10	35.9	D	0.01	35.2	D	0.01	35.2	D
	EB	T	0.25	19.2	B	0.30	19.7	B	0.13	18.2	B	0.23	19.0	B
	EB	R	0.07	17.7	B	0.07	17.7	B	0.03	17.4	B	0.03	17.4	B
	WB	L	0.37	38.1	D	0.37	38.1	D	0.10	35.9	D	0.10	35.9	D
	WB	TR	0.30	19.7	B	0.39	20.6	C	0.17	18.5	B	0.26	19.3	B
	NB	L	0.31	30.1	C	0.31	30.1	C	0.26	29.5	C	0.26	29.5	C
	NB	TR	0.23	29.1	C	0.23	29.1	C	0.16	28.6	C	0.16	28.6	C
	SB	L	0.10	28.0	C	0.10	28.0	C	0.03	27.4	C	0.03	27.4	C
	SB	TR	0.17	28.6	C	0.17	28.6	C	0.17	28.6	C	0.17	28.6	C
Route 17K @ Rock Cut Road (Signalized)	EB	LTR	0.75	22.9	C	0.89	33.0	C **	0.25	12.6	B	0.40	14.2	B
	WB	LTR	0.72	21.3	C	0.86	28.6	C **	0.38	14.1	B	0.52	16.2	B
	NB	LTR	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B	0.01	15.7	B
	SB	LTR	0.59	22.0	C	0.59	22.0	C	0.28	17.7	B	0.28	17.7	B
Route 17K @ Site Entrance (Signalized)	EB	TR				0.38	17.4	B				0.19	15.4	B
	WB	L				0.47	22.6	C				0.31	17.9	B
	WB	T	Intersection not present in No-Build condition			0.42	18.0	B	Intersection not present in No-Build condition			0.23	15.9	B
	NB	L				0.05	14.8	B				0.09	15.1	B
Route 747 @ I-84 EB On/Off Ramp (Signalized)	NB	R				0.05	14.8	B				0.08	15.1	B
	WB	L	0.12	20.9	C	0.12	20.9	C	0.06	20.4	C	0.06	20.4	C
	WB	R	0.03	20.2	C	0.07	20.6	C	0.02	20.1	C	0.05	20.4	C
	NB	T	0.27	22.1	C	0.29	22.3	C	0.10	20.8	C	0.12	20.8	C
	SB	L	0.19	32.6	C	0.72	16.3	B	0.05	31.6	C	0.84	26.3	C
Route 747 @ I-84 WB On/Off Ramp (Signalized)	SB	T	0.18	9.9	A	0.18	9.9	A	0.10	9.5	A	0.11	9.5	A
	WB	L	0.16	21.2	C	0.16	21.2	C	0.10	20.7	C	0.10	20.7	C
	WB	LT	0.16	21.2	C	0.16	21.2	C	0.10	20.7	C	0.10	20.7	C
	WB	R	0.02	20.2	C	0.44	24.1	C	0.04	20.3	C	0.45	24.2	C
	NB	L	0.26	32.9	C	0.26	32.9	C	0.10	31.8	C	0.10	31.8	C
	NB	T	0.25	10.5	B	0.34	11.1	B	0.09	9.4	A	0.16	9.8	A
Route 747 @ Route 207 (Signalized)	SB	TR	0.19	21.4	C	0.51	24.5	C	0.10	20.8	C	0.68	27.5	C
	EB	L	0.41	11.9	B	0.44	12.1	B	0.15	9.2	A	0.17	9.2	A
	EB	T	0.25	9.5	A	0.25	9.5	A	0.11	8.6	A	0.11	8.6	A
	WB	TR	0.61	25.5	C	0.62	25.7	C	0.27	20.4	C	0.27	20.4	C
	SB	L	0.35	27.8	C	0.36	27.8	C	0.19	26.1	C	0.20	26.3	C
Route 747 @ New Site Entrance Roundabout (Unsignalized)	SB	R	0.14	25.7	C	0.15	25.8	C	0.09	25.3	C	0.10	25.3	C
	EB	LR				0.21	5.9	A				0.31	6.6	A
	NB	LT	Intersection not present in No-Build condition			0.38	7.1	A	Intersection not present in No-Build condition			0.31	6.3	A
Route 17K @ Maple Avenue (Unsignalized)	SB	TR				0.17	6.9	A				0.08	5.7	A
	EB	LTR	0.01	8.5	A	0.01	8.6	A	0.00	7.8	A	0.00	7.9	A
	WB	LTR	0.01	8.4	A	0.01	8.7	A	0.01	7.7	A	0.01	7.9	A
	NB	LTR	0.03	18.0	C	0.03	20.4	C	0.01	12.8	B	0.01	14.5	B
Route 17K @ Browns Road (Unsignalized)	SB	LTR	0.06	25.3	D	0.08	30.2	D	0.03	11.6	B	0.04	12.7	B
	EB	LT	0.02	8.2	A	0.02	8.3	A	0.02	7.9	A	0.02	8.0	A
Route 747 @ International Boulevard (Unsignalized)	SB	LR	0.13	17.4	C	0.15	19.6	C	0.03	11.4	B	0.03	12.4	B
	WB	L	0.07	19.3	C	0.07	19.9	C	0.01	12.2	B	0.01	12.6	B
	SB	L	0.09	8.2	A	0.09	8.3	A	0.03	7.7	A	0.03	7.8	A

Notes:
 Peak Hours: Friday 8:00-9:00 a.m., 5-6 p.m. and 9-10 p.m.; Saturday 2-3 p.m. and 9-10 p.m.
 L-left, T-through, R-right, DefL-analysis considers a defacto left-turn lane on this approach
 V/C Ratio - volume to capacity ratio; sec. - seconds
 LOS - Level of Service
 ** Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.85)
 Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.5)

peak hour in the 2027 Build condition. However, as conditions would remain unchanged from the 2027 No-Build condition, the proposed project would not result in a worsening of congestion for this movement compared to the future without the proposed project.

Route 747 at Eastbound I-84 Ramps

As shown in **Table 9**, the southbound left-turn from Route 747 onto the eastbound I-84 entrance ramp would operate at a marginal v/c ratio of 0.88 in the Friday PM peak hour compared to a v/c ratio of 0.35 in the 2027 No-Build. However, this lane group would continue to operate at an acceptable LOS C during this period in the Build condition, unchanged from the No-Build condition, and no further improvement measures are recommended.

Route 747 at International Boulevard

As shown in **Table 9**, the westbound left-turn from International Boulevard onto southbound Route 747 would operate at LOS E in the Friday PM peak hour in the 2027 Build condition, as it would in the 2027 No-Build condition. Delay would increase slightly from 39.6 seconds to 40.6 seconds. However, given this relatively small (1 second) increase in delay and the fact that traffic volumes for this movement would remain very low (a total of 6 vehicles in the Friday PM peak hour) no improvement measures are recommended for this intersection.

PRINCIPAL CONCLUSIONS

Development of the proposed Resorts World Hudson Valley would generate substantial numbers of new vehicular trips by auto, taxi and bus on the roadway system providing access to the project site. The majority of these trips (approximately 90 percent) would arrive and depart via I-84, with Route 17K, Route 747 and Route 207 providing local access. Most vehicles destined to/from I-84 would use the I-84/Route 747 interchange located immediately to the southeast of the project site which was designed to accommodate future demand from expanded use of the nearby Stewart International Airport. As this airport demand has not been realized, the I-84/Route 747 interchange typically functions with available capacity during peak periods.

A new signalized intersection on Route 17K and a new roundabout on Route 747 would provide access to the proposed project's internal roadway system. With implementation of these physical roadway improvements, and minor changes to signal timing and phasing at the existing intersections of Route 17K with Rock Cut Road and Route 747 with the eastbound I-84 entrance/exit ramps, project-generated traffic could be accommodated with no significant increase in congestion in both the opening year of the proposed project and in the estimated time of completion plus 10 years.

APPENDIX A

**SUMMARY OF RESORTS WORLD CASINO
AUTO OCCUPANCY DATA**

Table A-1
Summary of Resorts World Casino Auto Occupancy Data

	Autos	Persons	Avg. Persons/Auto
Friday Midday Peak Hour	43	81	1.9
Friday PM Peak Hour	47	105	2.2
Friday Avg.	217	448	2.1
Saturday Midday Peak Hour	54	115	2.1
Saturday PM Peak Hour	62	131	2.1
Saturday Avg.	278	592	2.1
Source: PHA surveys conducted in June 2013 at the Resorts World Casino at Aqueduct Racetrack, Queens, NY.			