CONNECTICUT ENVIRONMENTAL POLICY ACT (CEPA)
COMPARATIVE PROJECT EVALUATION
INNOVATIVE PARTNERSHIP BUILDING

UNIVERSITY OF CONNECTICUT
STORRS, CONNECTICUT

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1.0 INTRODUCTION

The University of Connecticut (UCONN) proposes to construct the Innovative Partnership Building (IPB) on its North Campus. The IPB would represent the first phase of the implementation of UCONN's North Campus Master Plan, a plan for the development of a technology park at the main campus. The North Campus Master Plan is a component of the *Outlying Parcels Master Plan* (JJR, 2000).

This Comparative Evaluation (CE) will evaluate the impacts of the construction and operation of the IPB in comparison to those development options identified for the site and previously evaluated in the *2001 North Campus Master Plan Environmental Impact Evaluation* (Frederic R. Harris, 2001). It also takes into consideration the findings of the *2011 Final Environmental Impact Statement (EIS) for the North Hillside Road Extension* (Fuss & O'Neill, Inc., 2011). This comparative evaluation approach is consistent with correspondence between the Connecticut Office of Policy and Management (OPM) and UCONN in July/August 2001 regarding the Connecticut Environmental Policy Act (CEPA) process to be undertaken for future site-specific projects on the North Campus.

The IPB would be located on Parcel C, north of the UCONN Wastewater Treatment Plant and the University's tennis courts, and west of the planned extension of North Hillside Road (Figure 1 in Appendix A). The 22-acre wooded parcel is bounded on the north and west sides by an intermittent stream and wetlands; and on the south side by Master Plan Parcel E. Disturbed remnant sections of stone walls are located within the site, and a dirt road above a water main that serves as a hiking trail transects the site from east to west.

The development of the North Campus and associated impacts, including impacts to Parcel C, have been thoroughly explored and evaluated in numerous documents over an approximately 30-year timeframe. The following is a brief summary of this earlier documentation.

1.1 Project History

In 1982, the University of Connecticut Educational Properties, Inc. (UCEPI) was established to develop a research park on what is now termed the North Campus. A Master Plan was prepared for the area in 1983, and then revised in 1986. In 1990, following the approval of the construction of a portion of North Hillside Road, UCONN development options were revisited and, in 1994, an *Environmental Impact Evaluation for State Actions Associated with a Research and Technology Park* (Frederic R. Harris, 1994) was released. The 1994 EIE initially evaluated six alternative site layouts, but then considered two options in detail. The definition of the alternatives was driven by the need to avoid impacts to inland wetlands and associated buffers and represented a less intense program than that previously considered for the North Campus. However, UCEPI wasn't successful in the development of the project and thus design of the North Hillside Road Extension, a key component of the Master Plan, stalled.

In 2000, the University commissioned a study to investigate and plan for the optimal utilization and development of three outlying parcels located immediately adjacent to the core academic campus. Those three outlying parcels included the Agriculture Campus, North Campus and the Depot Campus. The study culminated in the *2000 Outlying Parcels Master Plan*. The master plan for North Campus included in that study focused on efficient development of the area including the reduction of impacts from the North Hillside Road Extension. The North Campus Master Plan was the subject of an EIE in 2001 which included development on the project site, Parcel C, as well as nine other sites, comprising a total of 1.2 million square feet (sf) of space. The North Campus Master Plan parcels, as they are currently defined, are illustrated in Figure 1. The Connecticut OPM found that the 2001 EIE met the requirements under CEPA, but articulated that comparative evaluations would need to be undertaken for the development of specific elements of the North Campus Master Plan as those individual projects move forward.

In 2004, design resumed on the North Hillside Road Extension, and UCONN obtained a Federal Highway Administration grant in 2005. The project's use of Federal dollars prompted compliance with the National Environmental Policy Act (NEPA) which, subsequently, required a Federal Environmental Impact Statement (EIS). The EIS and a state required CEPA comparative evaluation, focusing on traffic growth, were undertaken for the roadway project. As part of the preparation of the Draft EIS and subsequent Final EIS, as well as Section 404 wetlands permitting for the North Hillside Road project, the development alternatives were again revised. The EIS evaluated both the direct impacts resulting from the construction of the roadway, as well as indirect impacts resulting from the development of a technology park on the North Campus.

The CEPA comparative documentation for the North Hillside Road Extension was completed in 2007. The OPM issued a decision/approval letter dated October 1, 2007, indicating that, based upon their review of the submitted CEPA documentation, the original impact assessment and findings of the 2001 North Campus Master Plan EIE were still valid.

With respect to NEPA, the Draft EIS for the North Hillside Road Extension was released in 2008. In response to agency comments on the Draft EIS, modifications were again made to the preferred roadway alignment, to wetland crossing designs, and to the proposed North Campus development envelope in order to reduce impacts to wetlands and wildlife habitat. In order to better identify these impacts, wetland delineations were undertaken in 2004 and 2006 for the entire north campus property, as well as in 2008 specifically for Parcel C. Additionally, a bird survey and vernal pool studies were also undertaken during this timeframe. Subsequently, a Final EIS (FEIS) was released and a Record of Decision (ROD) was signed by the Federal Highway Administration (FHWA) for the North Hillside Road Extension on April 4, 2012, with Alternative 2C selected for implementation.

This IPB Comparative Evaluation was developed to meet the requirements under CEPA as articulated by OPM in their decision on the 2001 North Campus Master Plan EIE. The following documentation details

the current plan for the IPB, comparing it to the impacts assessment undertaken within the 2001 *North Campus Master Plan EIE*. It also takes into consideration the findings of the 2011 *North Hillside Road Extension EIS* where this analysis is different from or supplements the information in the 2001 EIE.

2.0 PROJECT DESCRIPTION

The description that follows includes both the current conceptual plans for the site, as well as development plans and assumptions analyzed in the *North Campus Master Plan EIE* (2001) and the *North Hillside Road Extension EIS* (2011).

2.1 Proposed Project

The project entails the construction of an approximately 112,000-square-foot (sf) U-shaped building dedicated to research and development. The structure would include specialty core facilities, including wet and dry laboratories, tenant space, office and administration space, amenities, and building support space. The three-story building would be integrated with the topography of the site, taking advantage of the site's natural westward slope. The design of the IPB also ventures to equalize the amount of cut and fill earthwork on the site, thereby minimizing site disturbance to the greatest extent possible. The lower level of the building, essentially two wings, would frame a terraced central courtyard and would accommodate high bay laboratories, a clean room, and imaging space. The two laboratory wings would be capped by an extensive green roof that would serve as a stormwater management feature. Above and east of the wings, an entrance lobby, offices, and tenant labs would be located on the upper two floors. The building would be clad in steel, concrete and glass and would be designed to meet, at a minimum, Leadership in Energy and Environmental Design (LEED) Silver Standards. Figure 2 in Appendix A is a conceptual rendering of the IPB and Figure 3 is a site plan.

Access to the site would be provided through two entrances off of North Hillside Road, the spine for the UCONN Research and Development Park. One hundred and twenty-five parking spaces would be provided north of the IPB and an additional 65 spaces would be located to the south. An on-grade loading zone would be constructed on the north side of the building. This loading zone would also serve as special event overflow parking for approximately 25 cars.

The building would be set within a landscaped setting. Lawns and meadow plantings would surround the building on its north, west and east sides. These areas would be divided from the natural woodlands by a thick line of deciduous trees and several rain gardens would be located in the buffers within the parking lots and the lawn areas. As a water conservation measure, a reclaimed water supply main would be made available at the project site for watering landscaped areas.

A variety of low impact development (LID) measures for stormwater management and water quality treatment are incorporated into the IPB site design. These measures adhere to Campus Sustainability Guidelines (JJR, 2004) and Landscape Master Plan and Design Guidelines (Sasaki, 2010). Examples of these measures include a green roof, parking lot rain gardens, vegetated swales, and water quality infiltration basins. The existing detention basin at the southeast corner of Parcel C that presently handles runoff from the nearby Charter Oak Apartments would be reconfigured as part of the IPB project due to the grading required for the construction of the southern entrance drive. This basin was not identified as a regulated inland wetland during the 2008 wetland delineation undertaken by Fuss &

O'Neill. As such, the reconfiguration of the basin would not require any federal or state wetland permits. However, with respect to site runoff during construction, a General Permit Registration for Stormwater and Dewatering Wastewaters Associated with Construction Activities would be required for the project from the CT Department of Energy and Environmental Protection (DEEP). To obtain the registration, the permit application and a Stormwater Pollution Control Plan (SWPCP) should be submitted to the DEEP no less than a minimum of 90 days prior to the start of project construction. Once the project is constructed, stormwater runoff from impervious surfaces on the project site would be attenuated, treated, and slowly released to the Cedar Swamp Brook wetland complex located west of the site in accordance with the 2004 CT DEEP Stormwater Quality Manual.

2.2 North Campus Master Plan EIE

The North Campus Master Plan was prepared to determine the best future land uses for the UCONN property. The 2001 EIE evaluated impacts of the future build out of the master plan and extension of North Hillside Road to provide access to facilitate that build out. With respect to Parcel C, which is the subject of this Comparative Evaluation, the 2001 EIE evaluated the impact of a conceptual 173,000 SF building devoted to technology and research as the primary or preferred alternative. It also envisioned and considered the impact of 577 parking spaces and a developed coverage of Parcel C of 7.8 acres.

2.3 North Hillside Road Extension EIS

The North Hillside Road Extension EIS evaluated options for the alignment of this spine roadway through the Research and Development Park. As part of this analysis, the EIS considered the impact of development on each of the master plan parcels, including Parcel C. As evaluated, the proposed development of Parcel C included 173,000 SF of conceptual building space, a two-story building, and 430 parking spaces (2.5 spaces per 1,000 square feet), with an additional 175 spaces allotted on Parcel D.

3.0 SUMMARY OF PROJECT AREA RESOURCES

3.1 Natural Environment

Parcel C consists of undeveloped land that can be classified as a combination of mature hardwood forest and early-successional hardwood forest. The University's College of Agriculture and Natural Resources uses undeveloped UCONN lands as outdoor classrooms and research labs. The North Campus woodlands have hosted a variety of forestry management classes, local research efforts and public outreach and educational activities. As part of these efforts, management activities on Parcel C converted a portion of the vegetation from mature mixed hardwood woodland to early successional forest by means of patch-cut treatment. The purpose is to study short-term vegetative responses, including invasive species, of canopy changes with and without the presence of deer herbivory. The area also provides a demonstration site for outreach and classroom teaching. Plant species in the managed areas of Parcel C include grasses, wildflowers, brambles (*Rubus spp.*) and woody plant growth including seedlings and sprouts of black oak (*Quercus velutina*), red oak (*Quercus rubra*), white oak (*Quercus alba*), red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), gray birch (*Betula populifolia*), black birch (*Betula lenta*), white ash (*Fraxinus americana*), and shagbark hickory (*Carya ovata*). Early successional growth is utilized as habitat by specific populations of wildlife species that may include golden-winged warblers (*Vermivora chrysoptera*), brown thrashers (*Toxostoma rufum*), NE and eastern cottontail rabbits (*Sylvilagus floridanus*), box turtles (*Terrapine carolina*), eastern towhees (*Pipilo erythrophthalmus*), white-tail deer (*Odocoileus virginianus*) and birds of prey. The portion of Parcel C that is a mature forest is a mix of hardwoods with no one species dominating. Tree species include black oak, red oak, white oak, red maple, sugar maple, yellow birch (*Betula alleghaniensis*), black birch, yellow poplar (*Liriodendron tulipifera*), white ash, and shagbark hickory. Representative wildlife utilizing the mature forested portions of the site may include white-tailed deer, eastern chipmunk (*Tamias striatus*), red fox (*Vulpes vulpes*), moles, mice, opossum (*Didelphimorphia*), grey squirrels (*Sciurus carolinensis*), black-capped chickadee (*Poecile atricapillus*), common crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), American goldfinch (*Spinus tristis*), woodpeckers and wrens, among others (1994 EIE).

Parcel C slopes to the west and southwest, with grades ranging from an elevation of 672 feet above mean sea level in the northeast corner to an elevation of 565 feet above mean sea level at the southwest corner of the parcel. Traversing the interior of this forested parcel from east to west is a gravel roadway that is located above the alignment of an existing 16-inch ductile iron water transmission pipe. This pipe conveys potable water to the UCONN campus from the Willimantic River wellfield. Another notable feature on Parcel C is an eight foot deep 20,000 square foot detention basin located in the southeastern corner of the property. As previously mentioned, this detention basin was built to manage stormwater runoff associated with the nearby Charter Oak Apartment complex.

Interior to Parcel C, approximately 300 feet west of the existing terminus of North Hillside Road and north of the gravel roadway is a regulated watercourse that is the headwaters of an intermittent stream that flows in a southwesterly direction towards Cedar Swamp Brook. Soils in this location are not hydric

and, as such, the wetland area does not meet the criteria to be considered a Federal jurisdictional wetland. However, the seasonal nature of standing water, the presence of hydrophytic vegetation, and the lack of hydric soils indicates that the area is a jurisdictional watercourse. Common vegetation in this wetland area includes red maple, green ash (*Fraxinus pennsylvanica*), spicebush (*Lindera benzoin*), Japanese barberry (*Berberis thunbergii*), sensitive fern (*Onoclea sensibilis*), New York fern (*Thelypteris noveboracensis*) and marsh fern (*Thelypteris palustris*). This wetland area was first delineated in 2008 by Fuss & O'Neill and was therefore not considered in the 2001 EIE. Impacts to this wetland were identified and described for the proposed development on Parcel C in the 2011 North Hillside Road EIS.

Parcel C is bordered on the north and west by wetlands. The linear wetland on the northern boundary of Parcel C connects to the much broader wetland system associated with Cedar Swamp Brook on the west. Spicebush and sweet pepperbush (*Clethra alnifolia*) are the two dominant shrub species found within these two wetland systems. Together these wetlands form an important and undisturbed wildlife corridor that bisects a large portion of north campus. The importance of this wetland corridor and adjacent upland areas for wildlife habitat is bolstered by the presence of several vernal pools in the project area. In particular, vernal pools within the Cedar Swamp Brook wetland system to the west, and those found at the edge of an agricultural field to the east (east of the alignment of North Hillside Road Extension), have been identified as important breeding areas for a variety of vernal pool dependent species.

With respect to endangered or threatened species, coordination with the United States Fish and Wildlife Service (USFWS) for this project determined that there are no federally listed or proposed endangered or threatened species or critical habitats located on or in the vicinity of Parcel C. Additionally, a review of the most current CT DEEP Natural Diversity Database (NDDB) maps determined that no state listed endangered, threatened and/or special concern species occur on Parcel C. However, the NDDB maps did reveal that state listed species occur in nearby areas. Because NDDB mapping is designed to provide only approximate locations of state listed species due to the need to protect them; further project coordination with the CT DEEP NDDB was initiated in the form of a detailed database inquiry. This coordination effort revealed that the CT DEEP NDDB has records of extant populations of state listed endangered, threatened and special concern species on or within the vicinity of Parcel C. As such, the agency, in project correspondence dated April 15, 2013 (attached as Appendix B) has requested that precautions be taken during project construction to protect grassland and forest bird populations by conducting construction activities outside of the avian breeding season (August through March). No specific bird species are identified in the agency correspondence. The CT DEEP also requests that precautions be taken during construction to protect amphibian populations and their habitats. Although no specific amphibian species are identified, this precaution was issued by the CT DEEP due to the proximity of the parcel to vernal pools and critical upland habitat. Lastly, the CT DEEP requests that the Wood Turtle (*Glyptemys insculpta*) also be protected during project construction and offers a variety of measures in their correspondence that can be employed to protect the species from potential harm.

In terms of floodplains, Parcel C lies within Zone C as defined on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) #090128 0005C dated January 2, 1981 for the area. Zone C includes land areas located outside (above) both the 100-year and the 500-year flood elevation; thus flooding is not an issue on the subject parcel.

According to the 1992 Surficial Geology Map of Connecticut and the 1985 Bedrock Geology Map of Connecticut (Connecticut Geological and Natural Resources Survey), the overburden soils at the site consist of glacial till and the underlying bedrock is gray schist. The subsurface conditions at the site generally consist of a surficial layer of topsoil approximately two-feet thick that is underlain by glacial till, weathered rock and more competent gray schist bedrock. The bedrock is about 15 to 30 feet below existing site grades and the glacial till is approximately 13 to 29 feet thick. Groundwater underlying the parcel is designated by the CT DEEP as Class GA. Designated uses of Class GA groundwater include existing private and potential public or private supplies of water suitable for drinking without treatment; and baseflow for hydraulically connected surface water bodies. Discharges to Class GA groundwater are restricted to treated domestic sewage, certain agricultural wastes, and certain water treatment wastewaters. Discharges from septage treatment facilities subject to stringent treatment and discharge requirements are also allowed as are discharges of other wastes of natural origin that easily biodegrade and present no threat to groundwater.

There are no prime or statewide important farmland soils or active agricultural areas within Parcel C, though active farming does occur further to the east.

Refer to Figures 4 and 5 in Appendix A which illustrate various natural resources found in the vicinity of Parcel C.

3.2 Cultural Resources

According to the National Register of Historic Places Geographic Information System data layer, there are no National Register listed buildings, structures, sites, objects or districts located in proximity to the IPB project site. In addition, the 2011 North Hillside Road EIS did not identify any above-ground historic properties in the vicinity of Parcel C.

In 1987, a Phase 1A Archaeological Survey was undertaken for 390 acres in the North Campus. Drawing on the findings of this study, both the 1994 and 2001 EIEs identified Parcel C as having moderate to high sensitivity for prehistoric archaeological resources. The 2011 North Hillside Road EIS again identified the parcel as having prehistoric sensitivity, and recommended additional survey prior to development.

In the fall of 2012, a *Phase 1B Archaeological Reconnaissance Survey of UCONN Technology Park, Parcel C* (ACS 2013) was undertaken. The study included both background research and over 80 shovel tests. The survey did not identify any significant prehistoric or historic archaeological resources on the parcel, and thus no further conservation was recommended.

3.3 Socio-Economic Resources

The 22-acre project site is largely wooded and bordered by wetlands and a stream on its north and west sides. The UCONN Wastewater Treatment Plant lies to the south of the parcel and a residential housing complex, the Charter Oak Apartments, lies to the east across the extension of North Hillside Road. A stormwater detention pond for the complex is located at the south end of the project site. An unpaved road runs from east to west across the project site directly north of the stormwater basin. Commercial uses lie north of the project site at the intersection of Routes 195 and 44.

The project site is zoned by the Town of Mansfield as a Research and Development Limited Industrial Zone. This zone was established to allow for economic opportunities within targeted areas in the town, as reflected in their Plan of Development. Local, regional and state plans support development such as that proposed for the North Campus where such development is concentrated in areas with existing infrastructure, is energy efficient, and is designed to preserve sensitive wildlife habitats. Applicable planning documents include: the 2006 *Town of Mansfield Plan of Conservation and Development*; *Conservation and Development Policies: The Plan for CT, 2013-2018*; and the *Windham Region Land Use Plan 2010*.

3.4 Transportation Systems

The existing North Hillside Road presently terminates in the vicinity of Parcel C. As part of the build-out of the North Campus Master Plan and as assessed in the 2011 EIS, North Hillside Road will be extended to intersect with CT Route 44 and will serve as the main access road or "spine" through the North Campus Research and Development Park. Presently there is no traffic or parking associated with Parcel C as it is currently undeveloped land.

The proposed IPB is part of a plan for the North Campus Research Park. This proposed development is planned to be implemented in stages. IPB is the first program. The study of the potential impacts for the research park noted that the extension of North Hillside Road to intersect Route 44 was essential in the long term to provide appropriate circulation, improve levels of service, and enable the accommodation of increased traffic generation from the Research Park plans.

The currently proposed action which is the subject of this comparative evaluation is the development of one building within the proposed park. It is anticipated that this structure will be occupied prior to the completion of the extension of North Hillside Road to Route 44. Updated studies of the proposed action indicated that the IPB would not by itself require the extension of North Hillside Road in order to maintain acceptable levels of service. Thus the mitigation (extending North Hillside Road) has been determined to be manageable with little adverse impact on the existing UCONN and Mansfield road network. The development of a separate Application for Administrative Decision from the Office of State Traffic Administrator (OSTA) has been completed and is in review by the OSTA office. The application is attached as Appendix C.

The proposed action has been determined to be able to be accommodated within acceptable congestion levels by reliance on the Storrs Road, North Eagleville Road and South Eagleville Road corridor. This analysis was developed to project potential development of the Storrs Center.

Impacts of the IPB will not lower overall Levels of Service at the intersections studied as part of the Administrative Decision Process. While suggestions have been identified for some adjustment of signal timings this mitigation is routine.

It should be noted that the continued development of the North Campus Research Park without extension of North Hillside Road will result in congestion levels which would deteriorate LOS ratings. Thus the extension of North Hillside is an essential mitigation measure to enable continued development of Research Park buildings beyond the proposal which is the subject of this comparative evaluation.

3.5 Physical Environment

There is no utility service to the project site; however, electricity, telecommunications, steam, water, sewer and gas, is provided to the Charter Oak apartment complex east of Parcel C across North Hillside Road.

The UCONN public water supply system provides potable water to the entire campus and would also provide the IPB and future north campus development with potable water. The system's source water originates from two wellfields; the Willimantic River located west of campus and the Fenton River located east of campus. Production from the Fenton River wellfield is impeded by dry conditions typically associated with warmer weather during late summer and early fall. This is also the time of year when the system typically experiences its peak demands. To ensure that the UCONN water system has adequate supply to meet its demands year round, several infrastructure improvements have been made which have helped lower the overall potable water demand by 15% since 2005 despite an increase in students over that period. In addition, the University developed a reclaimed water utility to provide water for non-potable uses at the University's Central Utility Plant (CUP) and for new construction within the North Campus Technology Park; taking the CUP off the potable water system has further reduced the potable system's demand. Lastly, and most important with respect to future campus development; the University completed a CEPA EIE and an associated Record of Decision (July, 2013) that was approved by OPM for potential future sources of water supply. The EIE identified an interconnection with the Connecticut Water Company's (CWC) existing service area to the northwest of campus as the preferred alternative for implementation. In December 2013 an agreement was executed between UCONN and CWC that calls for CWC to provide up to 1.5 million gallons of water daily as needed for the University. With the agreement in place, the state regulatory permitting process for the water service interconnection is scheduled to begin in early 2014. The CWC water service

interconnection project is expected to be completed within 18 months of securing all the required approvals.

With respect to air quality, the Town of Mansfield currently meets the national standards for all criteria pollutants, with the exception of the ozone standard. The town is classified as moderate non-attainment for ozone. Every 3-5 years, the Connecticut Department of Transportation conducts a large scale, statewide air quality analysis to ensure that the state will meet the national standards 20+ years into the future. Recent analyses suggest that there will be a decrease in emissions of VOCs and NOx (the precursors to ozone) in the Greater Connecticut Air Quality District by 2030.

As outlined in the 2001 North Campus Master Plan EIE, a noise monitoring program was undertaken in 1993 to determine the ambient noise levels within the North Campus. The monitoring revealed that the community noise levels were generally below DEEP limits. The most noise sensitive property in the vicinity of the project site is the Charter Oak Apartments to the east of Parcel C, across the extension of North Hillside Road.

4.0 COMPARATIVE ANALYSIS OF IMPACTS

Table 1 below summarizes the potential impacts of the construction and operation of the IPB and compares these impacts to the impacts of the development of the parcel as outlined in the 2001 *North Campus Master Plan EIE*. Where the 2011 *North Hillside Road FEIS* provides additional information, this is also included. The information presented in the table is intended to provide a concise comparison of the impacts in order to meet the requirements under CEPA.

Table 1
Summary Comparison of Potential Environmental Impacts
North Campus Master Plan EIE Parcel C and Proposed IPB

Resource Area	North Campus Master Plan EIE	Proposed IPB Project	Comparison of Impact	Comments
Natural Environment				
Geology, Soils & Farmland	No impacts to prime farmland	No impacts to prime farmland; excavation not anticipated to reach bedrock. Building design integrates surrounding topography thereby minimizing cuts and fills and overall site disturbance	Equivalent	Impacts would be equivalent to those outlined in the 2001 EIE.
Hydrology & Groundwater	With stormwater management plan and BMPs, no significant impacts to water quality	With stormwater management plan and BMPs, no significant impacts to water quality; Low Impact Development (LID) measures to be included in the design	Less	The project is now required to comply with more stringent erosion and sedimentation controls (CTDEEP 2002) and stormwater management guidelines (CT DEEP 2004) that were not in existence at the time of the 2001 EIE. Also, incorporation of a green roof, rain gardens, and other LID measures, coupled with less parking requirements, will reduce the impervious footprint.
Floodplains	No direct impacts to the 100-year or 500-year floodplain	No direct impacts to the 100-year or 500-year floodplain	Equivalent	The project site does not lie within the 100-year or 500-year floodplain. Impacts would be equivalent to those outlined in the 2001 EIE.

Resource Area	North Campus Master Plan EIE	Proposed IPB Project	Comparison of Impact	Comments
Wetlands	Wetlands located on the northern and western periphery of the site, but no other wetlands were delineated on the parcel.	Would impact 0.22 acres of wetlands	Equivalent to the 2011 EIS	The 1992 wetland survey by CTDOT did not delineate wetlands on the project site. However, wetlands were delineated on Parcel C in 2008 and impacts from the proposed concept development were evaluated in the 2011 EIS and found to be 0.22 acres. Permitting was pursued and a wetland mitigation area has been identified. Thus, wetland impacts are unchanged and mitigation has already been planned to offset the impact.
Vegetation & Wildlife	Potential reduction in forest dwelling species; listed species that use fields during migration would not be impacted by loss of forest	Potential reduction in forest dwelling species; some disturbance within the 750-foot critical habitat buffer defined by Calhoun & Klemens (2002) with respect to vernal pools but the project meets specified vernal pool habitat management and conservation objectives.	Less than the 2001 EIE and equivalent to the 2011 FEIS	The project footprint has been designed to preserve greater than 75% of the 750-foot critical upland habitat surrounding nearby vernal pools and as such meets the conservation and habitat management guidelines for vernal pools as specified by Calhoun & Klemens (2002). Due to the location of several vernal pools near Parcel C, it is impossible to completely avoid impacting the 750-foot critical habitat buffer but the project has been located strategically on the parcel and has been designed to reduce this impact to the greatest extent possible. Refer to the CT DEEP NDDB correspondence letter contained in Appendix B, as well as the mitigation outlined in Section 5.0, for precautions to be taken during construction to protect bird species, amphibians and wood turtles so as to minimize project impacts to the greatest extent practicable.
Cultural Resources				
Historic Resources	No impacts to historic resources	No impacts to historic resources	Equivalent	National Register GIS does not identify any above ground resources in the vicinity of the parcel. In addition, the 2011 EIS does not identify any above-ground historic resources in proximity to the site. Impacts would be equivalent to those outlined in the 2001 EIE.
Archaeological Resources	Moderate to high prehistoric potential on north side of parcel; recommend survey	Phase 1B conducted; no additional survey required	Less	2012 Phase 1B Archaeological Survey did not identify any significant prehistoric or historic archaeological resources on the site. Impacts would be less than those identified in the 2001 EIE.

Resource Area	North Campus Master Plan EIE	Proposed IPB Project	Comparison of Impact	Comments
Public Utilities				
	No utility impacts; sufficient water supply; ability of sanitary sewer system to meet demands of full build-out unclear. Daily water use based on a planning metric of 0.1 gallons per day (gpd) per square foot of building. Thus the 173,000 SF building was estimated to use 17,300 gallons per day (gpd). This water use estimate includes use of reclaimed water for heating and cooling.	No utility impacts; the IPB is now 112,000 SF – or 61,000 SF less than that proposed in 2001. Despite being less in overall area, the building is projected to use 28,000 gpd of potable water and 23,500 gpd of reclaimed water (serving the cooling towers).	Equivalent for all utilities except for water use, which is greater than reported in the 2001 EIE and 2011 EIS for the IPB building. Refer to the explanation provided in the column to the right.	Utilities, including electricity, telecommunications, steam, gas, water, reclaimed water, and sewer, are accessible to the project site. With respect to overall water demand (both potable and reclaimed water), the 2001 EIE and 2011 EIS predicted a total average water demand for the North Campus Technology Park of 89,600 gpd. The 173,000 SF building planned for the subject parcel (Parcel C) in the 2001 EIE was estimated to require 17,300 gpd of the total 89,600 gpd, or 19.3% of the total water demand predicted for the Technology Park in 2001. The present total water demand for the North Campus Technology Park is now forecast to be higher. The new water demand is predicted to be 423,500 gpd. Thus, the 51,500 gpd demand for the IPB (which includes both potable and reclaimed water) is now only 12.1% of the total water demand predicted for the Technology Park. Despite the increase in predicted water demand for the IPB, the UCONN water system can meet the IPB's expected water use even in the event that the Fenton wellfield is unavailable. This is primarily due to the UCONN reclaimed water utility which, starting in 2013, recycles the wastewater from the UCONN wastewater treatment plant and returns the water to the UCONN Central Utility Plant for non-potable re-use. The utility plant had been the highest consumer of potable water on the UCONN system. Further, to address the water demands of the entire North Campus as well as other additional demands, UCONN will have successfully supplemented its public water supply as described elsewhere in this comparative evaluation through a new interconnection with another water supply utility. Lastly, UCONN's WPCF has adequate capacity to treat wastewater from the IPB. THE WPCF has a design capacity of 3.0 mgd. Average daily flows at the WPCF currently range between 0.81 mgd and 1.32 mgd.

Resource Area	North Campus Master Plan EIE	Proposed IPB Project	Comparison of Impact	Comments
Socio-Economic Resources				
Land Use	Consistent with existing uses at UCONN campus	Consistent with existing uses at UCONN campus	Equivalent	Would convert woodlands to Research and Development use, but new development would be consistent with existing land uses at the UCONN campus. Impacts would be equivalent to those outlined in the 2001 EIE.
Neighborhood	Job creation, primarily high wage; new tax revenues or state grants in lieu of taxes	Creation of approximately 179 jobs, primarily high wage; potential increase in housing demand; new tax revenues or state grants in lieu of taxes; EJ community impact not anticipated	Equivalent	Overall beneficial impacts to neighborhoods. Impacts would be equivalent to those outlined in the 2001 EIE.
Aesthetics	Vegetated buffers would minimize impacts	Vegetated buffers would minimize impacts	Equivalent	Impacts would be equivalent to those outlined in the 2001 EIE.
Area, Municipal, State & Federal Concerns	Consistent with Town of Mansfield Plan of Development, and CT Conservation and Development Policies	Consistent with Town of Mansfield Plan of Conservation and Development; Conservation and Development Policies: The Plan for CT; and Windham Region Land Use Plan 2010	Equivalent	Would be located within an area designated as a development area within municipal and state planning documents; would concentrate development where existing utility infrastructure exists; the parcel was defined to avoid sensitive habitats to the greatest extent possible. Overall, impacts equivalent to those outlined in the 2001 EIE.

Resource Area	North Campus Master Plan EIE	Proposed IPB Project	Comparison of Impact	Comments
Zoning	Not subject to zoning in the Town of Mansfield	Not subject to zoning in the Town of Mansfield	Equivalent	Because land is owned by the University, development on the parcel is not subject to zoning. Impacts would be equivalent to those outlined in the 2001 EIE.
Energy	Will consider environmentally friendly technologies for energy efficiency	Building LEED Silver; employing environmentally friendly technologies for energy efficiency	Equivalent or less	The facility will be developed following the University's Sustainable Design & Construction Policy and thus will meet the requirements for LEED Silver.
Transportation				
Traffic and Parking	With mitigation, all but one intersection will operate at acceptable level of service (LOS)	The overall intersection LOS in the project study area would remain unchanged and all intersections would experience a LOS C or better; operations would mostly remain the same and in those cases where the LOS would degrade, it would not do so beyond LOS D. Because the IPB is only part of the proposed North Campus Master Plan, its impact on the existing network is small. Extension of North Hillside is not required for a functional road network.	Equivalent or less	A traffic study conducted by BETA Group, Inc. for the IPB for the purposes of securing a Major Traffic Generator Administrative Decision from the State Traffic Administration demonstrates that the proposed IPB would have minimal impact on traffic operations in the project area. While the proposed action can be accommodated without full implementation of actions in the Master Plan EIE, the IPB project can be developed as an initial stage of the overall North Campus Plan without major mitigation measures.

Resource Area	North Campus Master Plan EIE	Proposed IPB Project	Comparison of Impact	Comments
Physical Environment				
Solid Waste & Recycling	Increase in municipal solid waste	Increase in municipal solid waste	Equivalent or less	Impacts could be less due to the fact that the building is smaller than that proposed in the 2001 EIE.
Toxic Waste	University's system of management of regulated waste would be extended to new facilities	Toxic and/or hazardous wastes would be disposed of in accordance with State and federal regulations	Equivalent or less	Impacts could be less due to the fact that the building is smaller than that proposed in the 2001 EIE.
Air Quality	Impacts at peak travel times	Air quality impacts not anticipated to be significant.	Equivalent or less	Air quality impacts are not anticipated to be significant and would be less than that outlined in the 2001 EIE, including during peak times. This is due to a reduction in the size of building; a reduced parking capacity and corresponding reduction in vehicle trips; and cleaner burning engines since 2001.
Noise	Noise typical of commercial developments and due to traffic	Noise typical of commercial developments and due to traffic	Equivalent or less	In addition to traffic noise, potential noise sources include power transformers, HVAC units, and elevator banks. However, the equipment will be located inside the buildings and thus won't significantly impact ambient noise. Impacts could be less than those outlined in the 2001 EIE due to the reduction in the size of the building and thus the reduction of cars on the roads.
Cumulative Impacts				
Public Utilities	Not evaluated	Additional demand for utilities and services with the continued development of the North Campus	Equivalent or less	With the exception of water, the demand for utilities and services associated with the IPB may be less than that evaluated in the 2001 EIE due to the reduction in the size of the building. Therefore, cumulative impacts to most utilities could be diminished. With respect to water, the UCONN water

Resource Area	North Campus Master Plan EIE	Proposed IPB Project	Comparison of Impact	Comments
				system can meet the IPB's expected water use even in the event that the Fenton wellfield is unavailable because the UCONN reclaimed water utility has allowed the UCONN Central Utility Plant, which had been the system's largest consumer of potable water, to come off the potable water system. Further, to address the water demands of the entire North Campus as well as other additional demands, UCONN will have successfully increased their public water supply as described elsewhere in this comparative evaluation through a new interconnection with another water supply utility. A CEPA EIE and ROD for Potential Sources of Water Supply was completed in July 2013. The preferred alternative involves an interconnection with the Connecticut Water Company (CWC). A contract agreement between UCONN and CWC is in place as of December 2013 and permitting for the project is expected to be completed by mid-2015. Thus, cumulative impacts associated with expanding the campus water supply to meet demands attributed to future development have already been identified in an approved EIE and ROD.
Traffic and Parking	Not evaluated	Additional traffic and parking demand with continued development of the North Campus	Equivalent or less	The proposed IPB may generate less traffic than that evaluated in the 2001 EIE due to the reduction in the size of the building and the reduction of parking. Therefore, cumulative impacts to transportation systems may be diminished.
Hydrology	Not evaluated	Impacts to hydrology and water quality due to increase in impervious surfaces and stormwater pollutants	Equivalent or less	Impervious surfaces would be less than planned for within the 2001 EIE. The corresponding water quality impacts may also be less, due in part to low-impact development measures and more stringent erosion and sedimentation control and stormwater management requirements. Therefore, cumulative impacts to hydrology and water quality may be diminished.

5.0 CONCLUSION

Based on the analysis presented herein and the information provided in Table 1, the Innovative Partnership Building planned for Parcel C in UCONN's North Campus would have impacts that are equivalent to or less than the impacts identified in the 2001 North Campus Master Plan EIE and/or the 2011 North Hillside Road Extension FEIS for that same parcel. This is a direct result of detailed natural resource investigations, project planning, and a collaborative design process that has taken place over the years. These efforts have led to the development of an innovative design that avoids and minimizes impacts to natural, cultural and social environmental resources to the greatest extent practicable. Although the IPB has a higher water demand than that reported in the 2001 EIE and 2011 EIS, the percentage of water that the IPB will use when compared to the forecast demand for the entire North Campus Technology Park development is comparatively less. Additionally, a new campus water supply has since been approved through CEPA EIE/ROD documentation (July 2013) and a contractual agreement relative to the new water supply is now in place between UCONN and CWC as of December 2013. The agreement will bring 1.5 million gallons of water per day to the campus in the near future once project permitting is completed and the water pipeline interconnection is constructed. The new supply will be more than adequate to support the IPB as well as the full build out of the North Campus Technology Park in the future.

It is important to note that for any remaining unavoidable adverse impacts, the 2001 EIE and subsequent 2011 FEIS identified mitigation measures to reduce, eliminate or offset the potential adverse impacts associated with the development of the North Campus. In addition to those measures, measures have also been identified for the construction of the IPB on Parcel C, some of which were a direct consequence of new information, regulatory changes, or agency coordination that has taken place since the completion of the 2001 EIE document. These include the following:

<u>Threatened and Endangered Species</u>

- Maintain a minimum of a 100-foot buffer around vernal pools. Whenever possible, a wider buffer should be employed to lessen the amount of salt and chemicals introduced into the soil from the road and sidewalks.
- To the extent possible, site clearing or grading within 750 feet of a vernal pool should be performed outside of the spring amphibian migration period.
- Silt fencing should be used to exclude amphibians from construction areas.
- Amphibian crossings should be designed maximum height clearance to allow greater light penetration and include a more natural interior substrate to aid species movement.
- Silt fencing should be installed around work are prior to activity, and a sweep of the work area should be conducted to look for wood turtles prior to beginning construction.
- Workers should be apprised of the presence of wood turtles and provided with a description of the species.

- Any wood turtle that is discovered during construction should be moved, unharmed, to an area immediately outside of the fenced area, and positioned in the same direction that it was walking.
- Work conducted during early morning or evening hours should occur with special care not to harm basking or foraging wood turtles.
- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.
- Consult with CT DEEP as necessary at the project permitting stage.

Stormwater and Water Quality

- Implement best management practices including temporary runoff and sedimentation control measures during construction. These measures should comply with the CT DEEP 2002 Erosion and Sedimentation Control Guidelines.
- Prepare a stormwater management plan proposing specific stormwater systems for the parcel during construction.
- Manage stormwater on the site through the implementation of LID measures that minimize runoff and preserve water quality. Site stormwater management shall comply with the 2004 CT DEEP Stormwater Quality Manual.

6.0 REFERENCES

Archaeological Consulting Services (ACS). *Phase 1b Archaeological Reconnaissance Survey of UCONN Technology Park, Parcel C*. 2013.

Beta Group, Inc. *Major Traffic Generator Administrative Decision Request/Checklist – Innovative Partnership Building*. 2013

Calhoun, A.J.K. and M.W. Klemens. *Best Development Practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States*. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York. 2002.

CT Department of Energy and Environmental Protection, Bureau of Natural Resources, Wildlife Division. Letter dated April 15, 2013.

CT Office of Policy and Management. *Conservation and Development Policies: The Plan for Connecticut, 2013-2018*.

Frederick R. Harris, Inc. *University of Connecticut, North Campus Master Plan EIE*. 2001.

Fuss & O'Neill, Inc. *Connecticut Environmental Policy Act (CEPA) Comparative Project Evaluation North Campus Master Plan EIE, Tennis Court Relocation*. 2004.

Fuss & O'Neill. Inc. *Final Environmental Impact Statement for the North Hillside Road Extension*. 2011.

Milone & MacBroom, Inc. *University of Connecticut Water and Wastewater Master Plan*. 2007.

Milone & MacBroom, Inc. *University of Connecticut Water Supply Plan*. 2011.

Milone & MacBroom, Inc. *Final Record of Decision Environmental Impact Evaluation – Potential Sources of Water Supply, University of Connecticut, Storrs, Connecticut*. 2013

National Park Service. National Register of Historic Places GIS. September 2013.

Town of Mansfield. *Plan of Conservation and Development*. 2006.

United States Department of the Interior, U.S. Fish and Wildlife Service. Letter dated March 25, 2013.

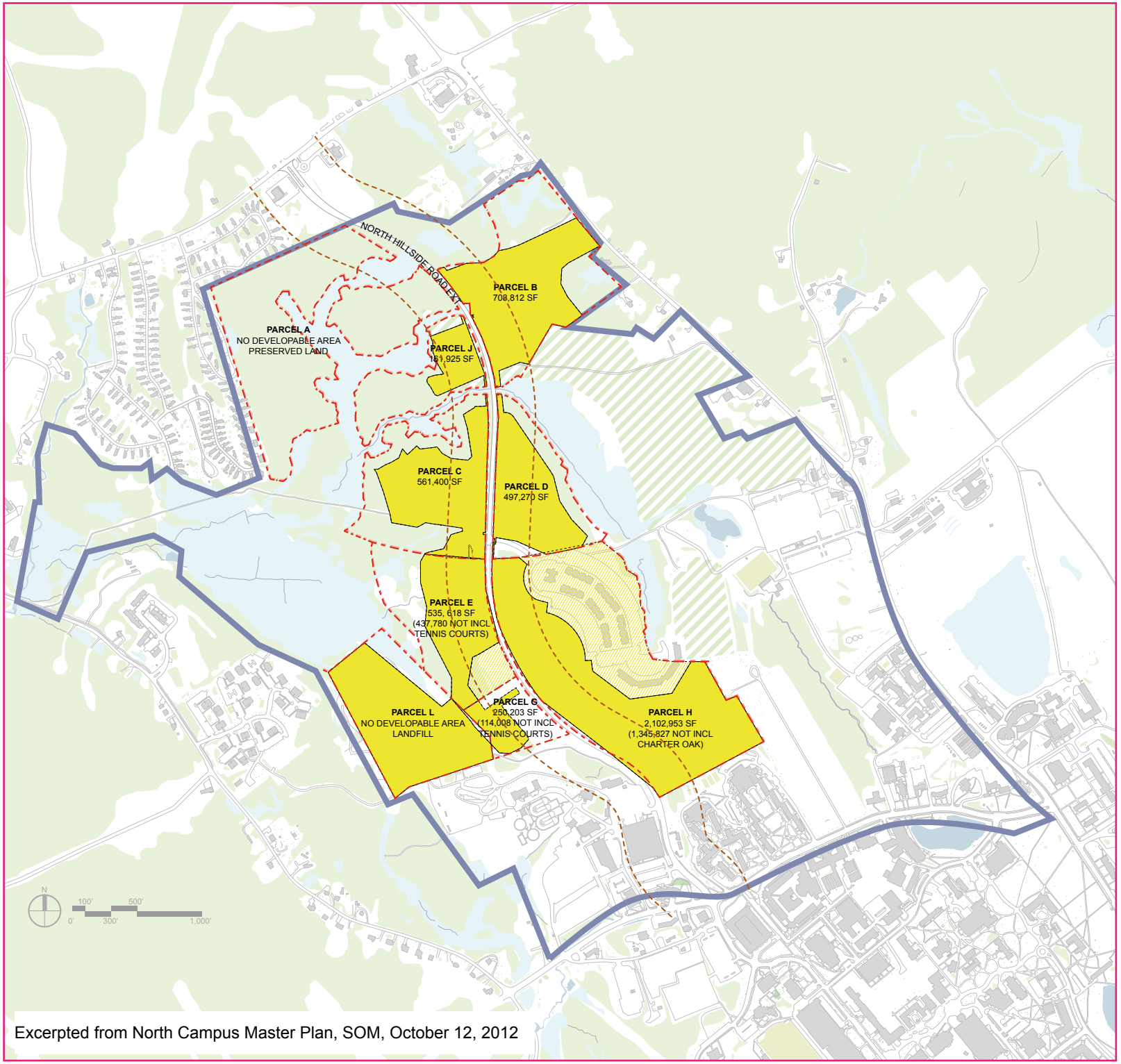
WINCOG. *Windham Region Land Use Plan*. 2010.

WINCOG. Zoning Map of the Town of Mansfield, Connecticut. 2007.

Appendix A- Figures

Innovative Partnership Building, University of Connecticut, Storrs, CT

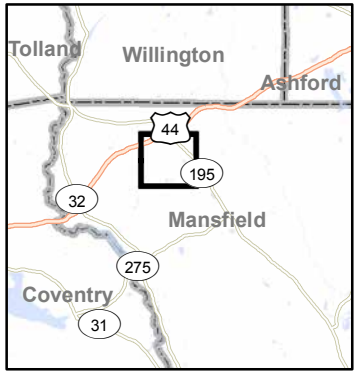
UConn North Campus Master Plan, October 2012



Excerpted from North Campus Master Plan, SOM, October 12, 2012

Figure 1

North Campus Master Plan Parcels

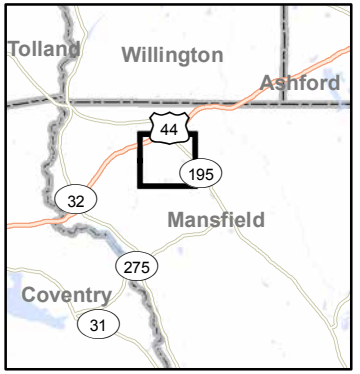


Innovative Partnership Building, University of Connecticut, Storrs, CT

SOM, February 2013

Figure 2

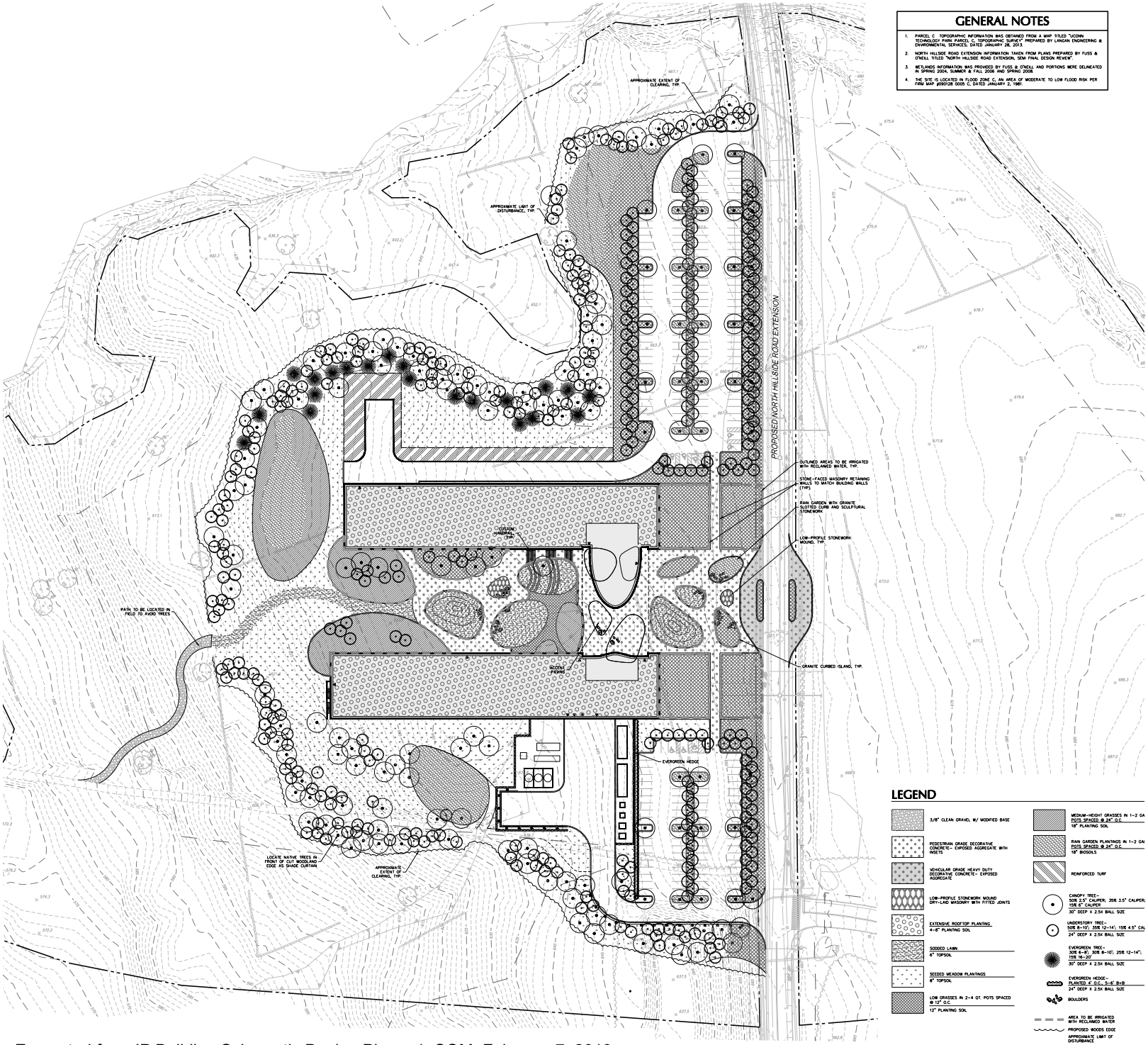
IP Building
Conceptual Rendering



SOM, November, 2013

Innovative Partnership Building, University of Connecticut, Storrs, CT

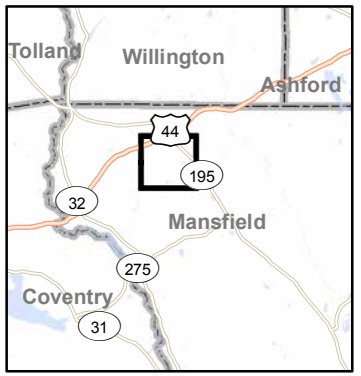
SOM, February 2013

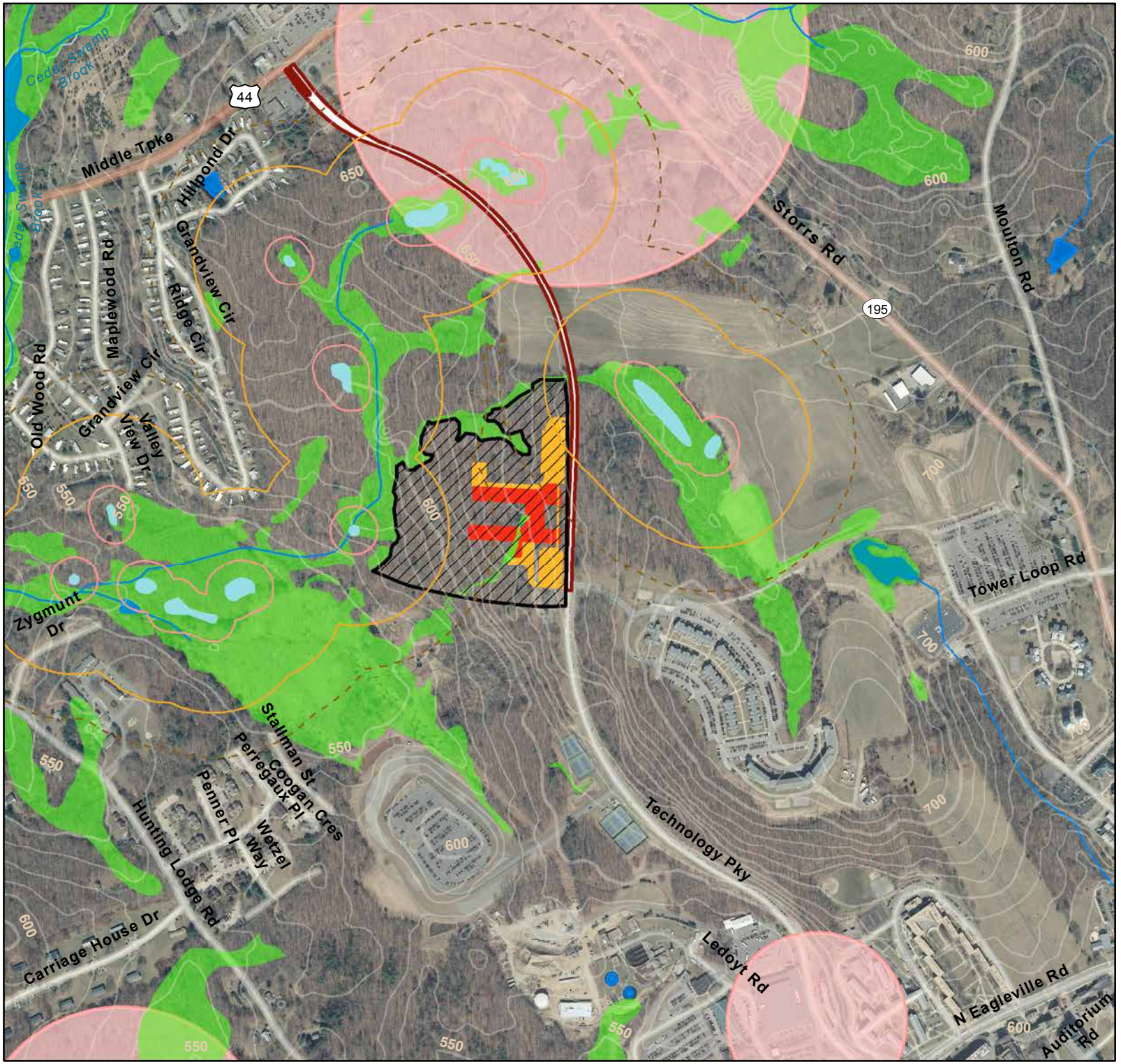


Excerpted from IP Building Schematic Design Phase 1, SOM, February 7, 2013

Figure 3

IP Building
Site Plan





Innovative Partnership Building, University of Connecticut, Storrs, CT

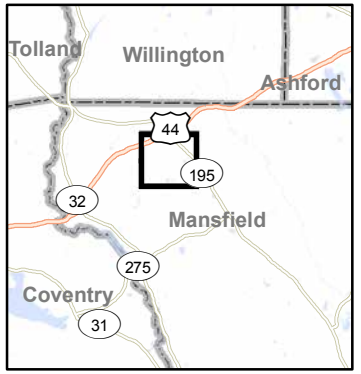
Study Area
Natural Resources

Legend

- Master Plan Parcel C
- Wetland Soils
- Natural Diversity Database Dec. 2013 CT DEEP
- Open Water
- Proposed Structure
- Proposed Parking and Circulation
- North Hillside Road Extension
- 10 Foot Contour Interval
- 100 ft Vernal Pool Envelope
- 500 ft Vernal Pool Envelope
- 750 ft Vernal Pool Envelope
- Identified Vernal Pool

Figure 4

USGS Quadrangle
South Coventry, Spring Hill



Innovative Partnership Building, University of Connecticut, Storrs, CT

SOM, February 2013

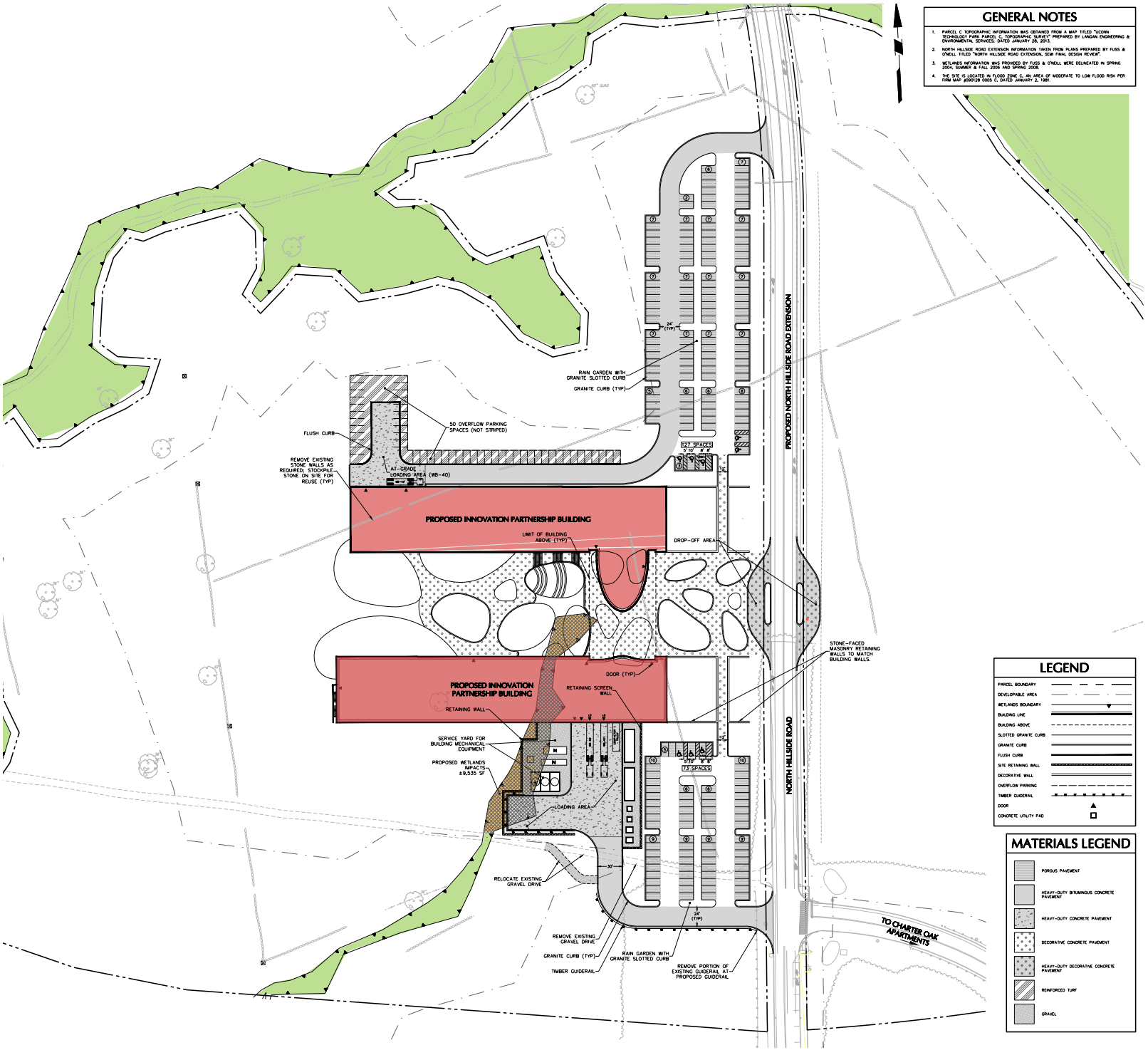
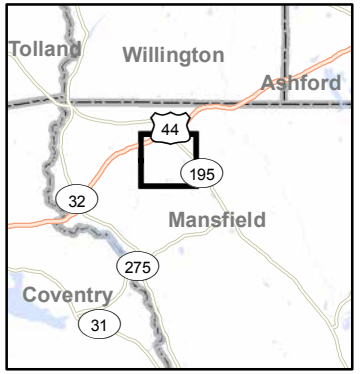


Figure 5

IP Building
Wetland impacts



Excerpted from IP Building Schematic Design Phase 1, SOM, February 7, 2013

Original in Color - FHI - 12/18/2013

Appendix B- CT DEEP Natural Diversity Database Response Letter

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Bureau of Natural Resources
Wildlife Division
Natural History Survey – Natural Diversity Data Base

April 15, 2013

Mr. Paul Stanton
Fitzgerald & Halliday, Inc.
72 Cedar Street
Hartford, CT 06106

Regarding: Innovative Partnership Building (IP Building), University of Connecticut, Storrs, CT
Natural Diversity Data Base 201301174

Dear Mr. Stanton:

In response to your request for a Natural Diversity Data Base (NDDB) Review of State Listed Species for the Innovative Partnership Building (IP Building) at the University of Connecticut in Storrs, CT, our records for this site indicate extant populations of endangered, threatened, and species of special concern on or within the vicinity of the site.

Precautions to protect grassland and forest bird populations shall be addressed, and may include, but not be limited to: construction being conducted outside of the avian breeding season. (August through March)

Precautions to protect amphibian populations; and their habitats shall be addressed, and the project plan should incorporate mitigation measures for vernal pools as discussed in the publication "Best Development Practices; Conserving Pool-Breeding Amphibians in Residential and Commercial Development in the Northeastern United States (Metropolitan Conservation Alliance Technical Paper No. 5). This paper can be obtained by contacting the Metropolitan Conservation Alliance/Wildlife Conservation Society (68 Purchase Street, Third Floor, Suite 2, Rye, New York 10580). Mitigation measures on vernal pools may include, but not be limited to:

- A minimum of a 100-foot buffer should be delineated around vernal pools. Whenever, to the extent possible, a wider buffer would be preferred to lessen the amount of salt and chemicals introduced into the soil from the road and sidewalks, thereby providing more beneficial habitat for wildlife, especially amphibians.
- Amphibian crossings should be designed for maximum height clearance to allow greater light penetration and include a more natural interior substrate to aid species movements.

Precautions should be taken to protect wood turtles. The following guidelines should be considered for the entire length of the project:

- Silt fencing should be installed around the work area prior to activity;

- After silt fencing is installed and prior to work being conducted, a sweep of the work area should be conducted to look for turtles;
- Workers should be apprised of the possible presence of turtles, and provided a description of the species (http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);
- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and positioned in the same direction that it was walking;
- Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and
- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

The Natural Diversity Data Base includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. If the project is not implemented within 12 months, then another Natural Diversity Data Base review should be requested for up-to-date information.

Please be advised a more detailed review may be conducted as part of any subsequent environmental permit applications submitted to the Department of Energy and Environmental Protection for the proposed site. Should state involvement occur in some other manner, specific restrictions or conditions relating to the species discussed above may apply.

Thank you for consulting the Natural Diversity Data Base. If you have further questions, I can be reached by email at Elaine.hinsch@ct.gov or by phone at (860) 424-3011.

Sincerely,

/s/
Elaine Hinsch
Program Specialist II
Wildlife Division

Appendix C- Office of the State Traffic Administration (OSTA) – Administrative Decision (AD) Request

BETA
ENGINEERING SUCCESS **TOGETHER**

January 13, 2014

Mr. David Sawicki, Director
Office of the State Traffic Administration (OSTA)
Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, CT 06131

RE: Innovative Partnership Building
North Hillside Road
University of Connecticut, Storrs, CT
BETA Job #4018

Dear Mr. Sawicki:

BETA Group, Inc. is pleased to submit this Administrative Decision (AD) request on behalf of the University of Connecticut (UConn) for the proposed Innovative Partnership Building (IPB) in the northern section of UConn's campus. The intent of this AD is to update the building square footage and parking values on the existing Certificate (#904I). The IPB will be located along the western side of North Hillside Road, approximately 0.75 miles north of North Eagleville Road (CT Route 480) in the Storrs section of Mansfield. The site is currently wooded and is bounded by additional UConn-owned property. A site location image is attached as Figure 1.

The proposed development will include a single building, which will contain 111,767 square feet (s.f.) of research and development space and 250 parking spaces. The UConn campus currently has a total of 9,953,700 s.f. and 11,632 parking spaces. Following the IPB's completion, the campus will contain a total of 10,065,467 s.f. of building space and 11,882 parking spaces. North Hillside Road will be extended along the site frontage. Access will be provided via two driveways (at the northern and southern limits of the site frontage) and a pick-up/drop-off area at the main building entrance.

The study area selected for this project includes the signalized intersections of North Eagleville Road (CT Route 480) at North Hillside Road, and Storrs Road (CT Route 195) at North Eagleville Road (CT Route 480) and Gurleyville Road. Manual turning movement counts were conducted at the study intersections during the weekday morning and afternoon peak periods (7:00 – 9:00 AM and 4:00 – 6:00 PM) on Thursday, February 21, 2013. Existing peak hour traffic volumes are shown in Figure 2.

BETA GROUP, INC.
1010 Wethersfield Avenue, Suite 305, Hartford, CT 06114
P: 860.513.1503 | F: 860.513.1582 | W: www.BETA-Inc.com

The site-generated traffic estimates were conducted using data from the Institute of Transportation Engineers' (ITE) *Trip Generation, Eighth Edition*. The Land Use Code (LUC) 760 – Research and Development Center data was used. The IPB is expected to generate approximately 146 total trips during the weekday morning peak hour (121 enter, 25 exit) and 142 total trips during the weekday afternoon peak hour (21 enter, 121 exit).

A site traffic distribution model was created using U.S. Census journey-to-work data for persons who work in the Town of Mansfield. These trips were distributed along the local roadway network based on the easiest path(s) to/from the employees' towns of residence. Based on these findings, the site traffic will be distributed approximately 35% to/from the north along CT Route 195, 30% to/from the south along CT Route 195, 10 % to/from the east along Gurleyville Road, 20% to/from the west along North Eagleville Road, and 5% to/from the south along North Hillside Road (south of Eagleville Road). This distribution is summarized in Table 1. The site distribution is shown in Figure 3. The distributed site traffic is shown in Figure 4.

Table 1

Trip Distribution Summary

Location To/From	Percent Distribution
Route 195 north	35%
Route 195 south	30%
Gurleyville Road east	10%
North Eagleville Road west	20%
North Hillside Road south	5%

Historic area traffic trends were reviewed to determine ambient growth patterns to determine a future year (2014) traffic condition during which the proposed development will be completed and occupied. Based on Connecticut Department of Transportation (CTDOT) data, the area traffic volumes have generally decreased between 2002 and 2011. However, to remain conservative, an annual growth rate of 1.0% was applied to the existing traffic volumes to develop the future year "background" traffic volumes. The future background morning and afternoon peak hour traffic volumes are shown in Figure 5.

The site-generated traffic was added to the background traffic volumes to develop the combined peak hour traffic volume conditions. These are presented in Figure 6.

Operational analyses were performed using the SYNCHRO software package for future background and combined peak hour conditions at each of the study intersections. Based on the analysis

findings, the overall intersection levels of service will remain unchanged. All intersections will experience an overall LOS C or better, which is considered a good condition. From the background to the combined condition, the operations will mostly remain unchanged for the intersection movements. In the cases where the level of service will degrade, it will not do so beyond LOS D. A summary of the analysis results is shown in Table 2.

Table 2

Level of Services Summary

Intersection	Approach	Lane	Level of Service			
			AM Peak Hour		PM Peak Hour	
			Background	Combined	Background	Combined*
Storrs Road (Rte 195)/ North Eaglesville Rd (Rte 430)	Eastbound	Left	F	F	F	E
		Right	B	B	B	B
	Northbound	Left	C	C	C	C
		Through	A	A	A	B
	Southbound	Through	B	C	D	D
		Right	A	A	A	A
	OVERALL		B	B	C	C
Storrs Road (Rte 195)/ Gurleyville Road	Westbound	Left	E	D	F	F
		Right	B	B	B	B
	Northbound	Through/Right	B	B	C	C
	Southbound	Left	A	A	A	A
		Through	A	A	A	A
	OVERALL		B	B	C	C
North Eaglesville Rd (Rte 430)/ North Hillside Road	Eastbound	Left	B	B	B	B
		Through	B	B	B	B
		Right	A	A	A	A
	Westbound	Left	A	A	B	B
		Through/Right	A	A	A	A
	Northbound	Left	B	B	B	B
		Through/Right	B	B	A	B
	Southbound	Left	B	B	B	B
		Through/Right	B	B	B	B
	OVERALL		A	A	B	B

*Indicates operations following adjustments to signal timing.

Based on these findings, the proposed research and development center will have minimal impacts on the traffic operations in the area.

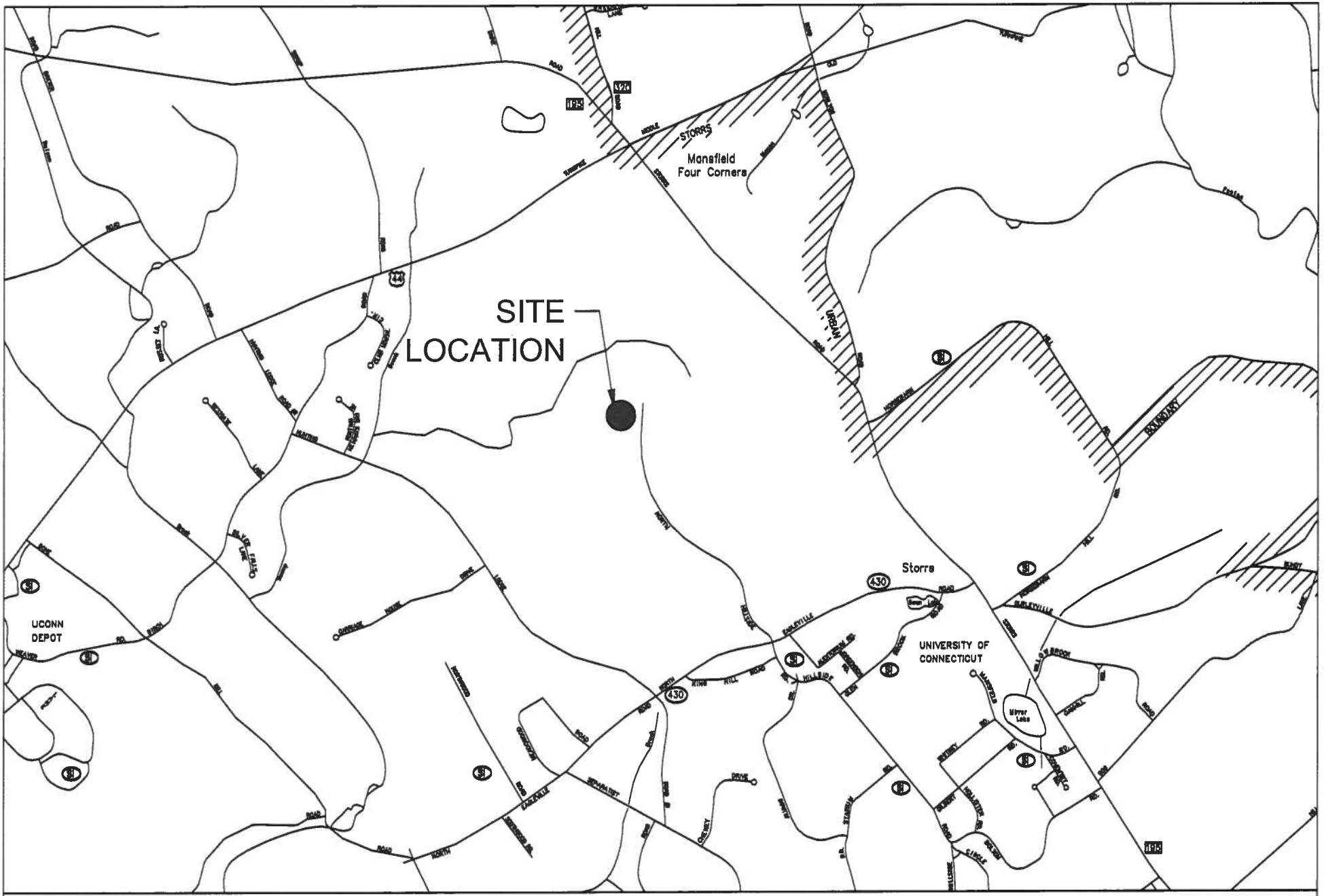
The proposed site driveways do not intersect with State-owned roadways. Therefore, Intersection Sight Distance (ISD) information is not required as part of this submission.

In addition to this traffic assessment summary, operational analysis worksheets are appended. An overall site plan has also been included in this submission. The Legal Traffic Authority concurrence is forthcoming. Since this is a State project and does not require local Planning and Zoning Commission approval, a local approval letter has not been included. We trust these documents will provide you with ample information to update the existing certificate. Should you have any questions, please do not hesitate to contact us.

Sincerely,

Nicholas M. Fomenko, PE, PTOE
Senior Project Engineer

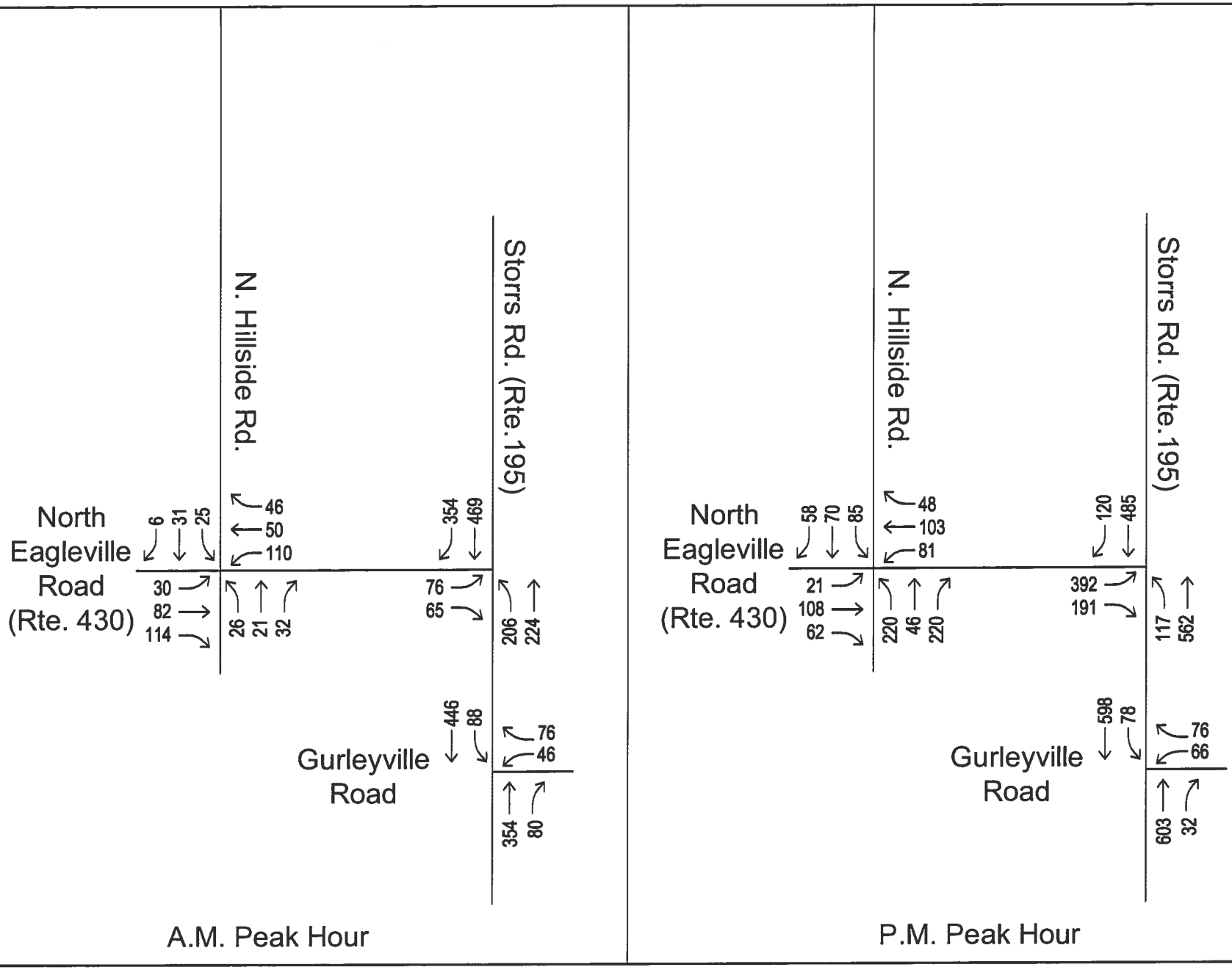
CC: Mr. Paul Ferri, UConn
Mr. Matthew Hart, LTA



BETA

UConn Innovative Partnership Building
OSTA Administrative Decision
Storrs, Connecticut

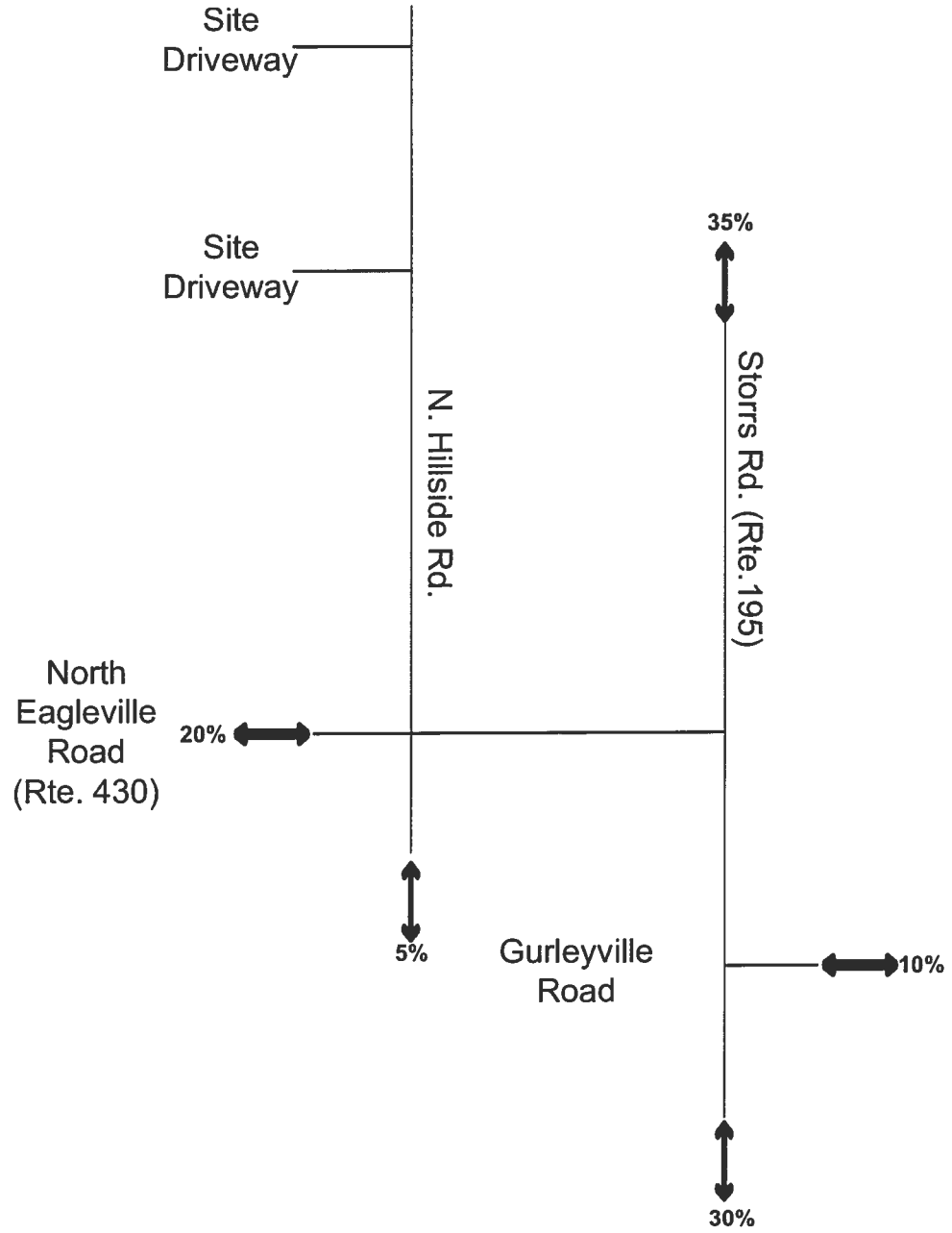
Figure 1
Site Location Map



BETA

UConn Innovative Partnership Building
OSTA Administrative Decision
Storrs, Connecticut

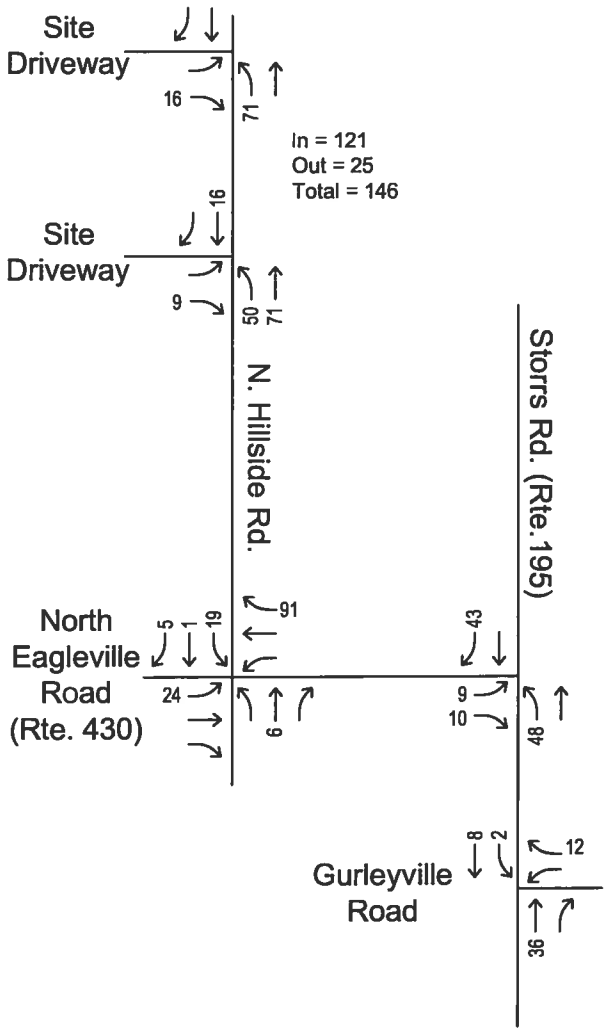
Figure 2
Existing (2013)
Turning Movement Volumes



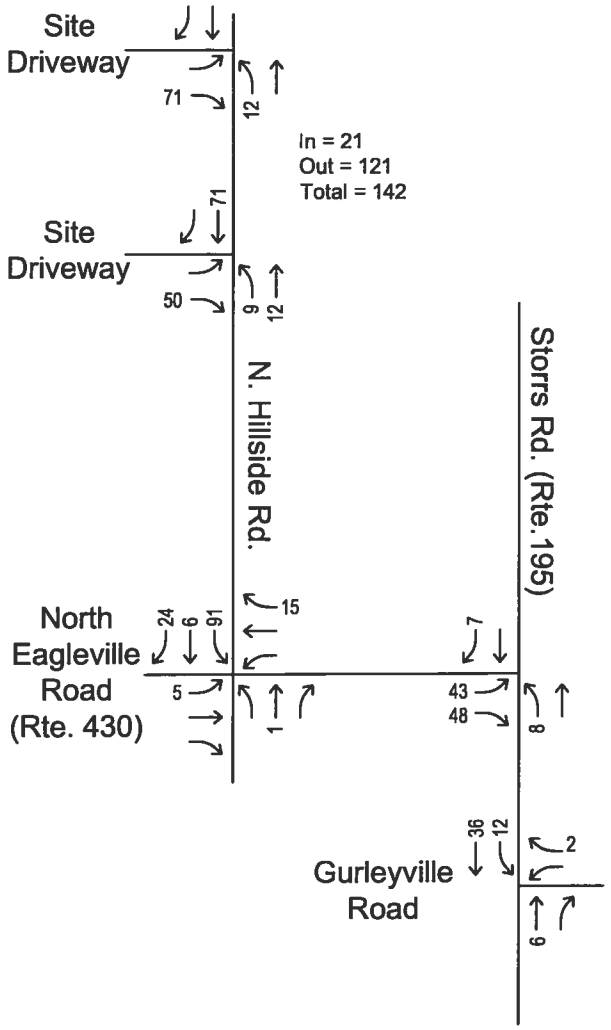
BETA

UConn Innovative Partnership Building
OSTA Administrative Decision
Storrs, Connecticut

Figure 3
Trip Distribution



A.M. Peak Hour



P.M. Peak Hour

BETA

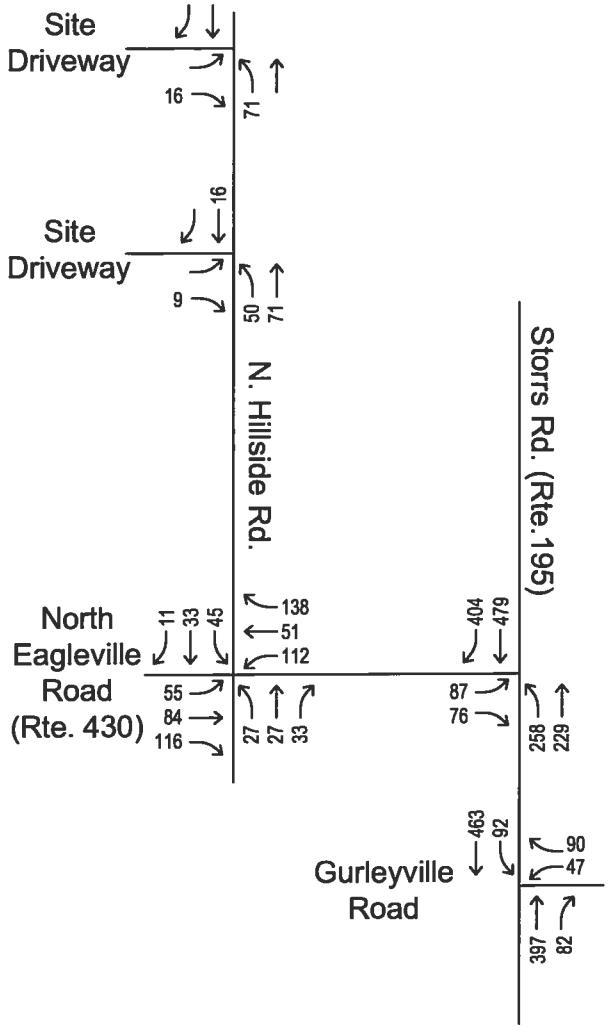
UConn Innovative Partnership Building
OSTA Administrative Decision
Storrs, Connecticut

Figure 4
Trip Assignment

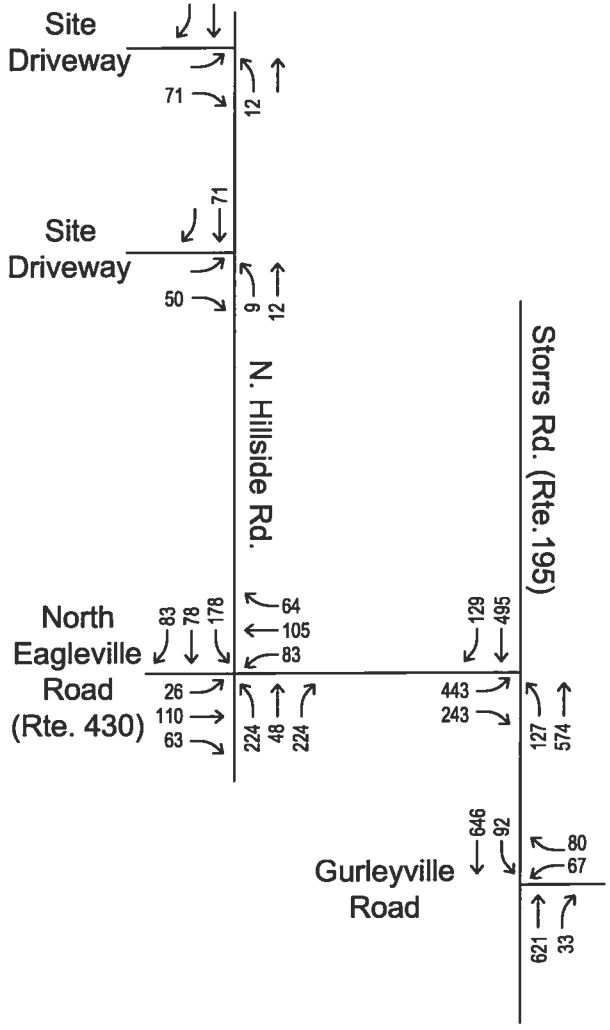
BETA

UConn Innovative Partnership Building
OSTA Administrative Decision
Storrs, Connecticut

Figure 5
Background(2015)
Turning Movement Volumes



A.M. Peak Hour



P.M. Peak Hour

BETA

UConn Innovative Partnership Building
OSTA Administrative Decision
Storrs, Connecticut

Figure 6
Combined (2015)
Turning Movement Volumes

STATE OF CONNECTICUT
Office of the State Traffic Administration
Department of Transportation
2800 Berlin Turnpike
P.O. Box 317546 Newington, CT 06131-7546
Phone: (860) 594-3020 Fax: (860) 594-2377

MAJOR TRAFFIC GENERATOR
ADMINISTRATIVE DECISION REQUEST/CHECKLIST
(To be used where no state highway mitigation/safety measures are proposed)

Date: Jan 13, 2014

(PLEASE FILL OUT COMPLETELY)

DEVELOPMENT INFORMATION

Name of Facility: Innovative Partnership Building

Location (complete street address; if none, provide map/block/lot information): North Hillside Road

Town and Zip Code: Storrs, CT 06269

Proposed Gross Floor Area (GSF) and Land Use of Expansion: 111,767 s.f.

Proposed GSF and Land Use of Land Use Change (i.e. xx retail to xx office, etc.): 111,767 s.f. research and development facility

Total Gross Floor Area Categorized By Land Use: 10,065,467 s.f. university campus

Existing Parking Spaces: 11,632 Parking Spaces Added by Expansion/Land Use Change: 250

Total Parking Spaces: 11,882 Number Designated Handicapped: 148

Land Owner's Corporate Name*: State of Connecticut, University of Connecticut

Land Owner Contact for Written Correspondence: Mr. Paul Ferri

Land Owner's Address: 31 Leydoyt Rd

Town, State, & Zip Code: Storrs, CT 06269

Tel: 860-486-9295

Land Owner's E-Mail: Paul.Ferri@Uconn.Edu

Full Time Permanent Jobs Created: 128

CONSULTANT INFORMATION

Company Name: BETA Group, Inc.

Contact Person: Mr. Nicholas M. Fomenko, PE, PTOE

Address: 1010 Wethersfield Avenue

Town, State, and Zip Code: Hartford, CT 06114

Phone: 860-513-1503

FAX Number: 860-513-1582

E-Mail: nfomenko@beta-inc.com

*** As noted in the municipal land records. If there is more than one land owner, a separate form shall be provided for each.**

ADMINISTRATIVE DECISION SUBMISSION GUIDELINES

- All of the information listed below shall be submitted for the review of new major traffic generators that do not substantially affect the state highway system (i.e. mitigation or safety measures regarding state highways are not necessary to accommodate traffic generated the new major traffic generator).
- The information is also required for the review of proposed expansions or land use changes to existing major traffic generators that predate the Office of the State Traffic Administration (OSTA) certification process and those that were previously certified that do not substantially affect the state highway system.

If changes to the state highway system are being proposed to mitigate the impact of the traffic associated with a new major traffic generator or a proposed expansion or land use change to an existing major traffic generator then the development will be considered to have a substantial impact on the state highway system **DO NOT USE THIS CHECKLIST**. Formal OSTA action will be required and a major traffic generator certificate application and the information on its associated checklist must be submitted.

This completed checklist shall accompany the administrative decision request. Copies of any information submitted but not considered pertinent to the application will be discarded.

Five (5) paper copies and one (1) DVD of the information deemed appropriate to the development shall be submitted to the OSTA, with an additional set of the information forwarded by the developer to the Local Traffic Authority of each involved municipality. The DVD shall contain all required information in digital (i.e. not scanned) .pdf format and the original data files for the traffic and drainage analysis.

The request will not be considered complete until all of the applicable information is received.

SUBMITTED	N/A	
☑	☐	I. Site Plan:

An overall site plan showing the entire OSTA certifiable area, including the administrative decision review area uniquely identified as such, shall be provided, sized to fit on a single 2' x 3' plan sheet, that identifies all buildings (including gross floor area and land use for each), parking spaces, property lines, internal connections to abutting properties, names of all property owners (including the abutting property owners), and the complete street address(es) for all properties within the certifiable area. If street address information is not available, show map / block / lot information. An aerial photograph may be used.

The entire OSTA certifiable area shall include all parcels whose traffic must use the review development's access drive(s) and shall be distinguishable by a distinct peripheral property line with the call out "OSTA Certifiable Area". Refer to the OSTA web site to view sample overall site plans.

The overall site plan must show the Intersection Sight Distances (ISD) that will be provided and maintained for any existing and proposed drives onto a state highway that were not part of a previous OSTA certificate. The ISD may be shown directly on the drives or listed in a tabular format.

	☑	If any state highway driveway ISD encroach on property not owned by the AD developer, OSTA certification will be required and the development proposal will not qualify for an AD. The N/A box must be checked here to verify there is no such encroachment.

SUBMITTED	N/A	
☑	☐	II. Site Location Plan - Showing State highways and major intersecting Town roads in the vicinity of the site.
		III. Traffic Information - Contact the Trip Analysis Section at (860) 594-2025 with any questions regarding trip generation or distribution. The amount of traffic information required will be based on the expected number of new trips associated with the development/expansion/land use change.
☐	☑	If 50 or fewer new trips, submit only information noted in Item D-1 below.
☐	☑	If more than 50 but less than100 new trips, submit all information noted under Item C below as well as the information noted in Item D-1 and D-2 for all site driveways.
☑	☐	If approximately 100 or more new trips, or 50 or more new trips to an individual intersection left turn movement, then submit all information noted under Items A through G below for site access driveways and any other intersections where approximately 100 or more new trips are being added, or 50 or more new trips to an individual intersection left turn movement.
		A. Existing Traffic Volumes
☑	☐	1. Flow diagrams showing the appropriate existing peak hour traffic volumes for the proposed development, inclusive of all site drives. Diagrams must indicate date of submission and date of existing traffic.
☑	☐	2. Identify the hours of the day, day of week and how the peak hours were determined in relation to the proposed development.
		The morning/afternoon weekday and weekend midday peak hours are the most typical time periods analyzed. Depending on the type of proposed development, all or some combination of these hours will be required. In some cases, the peak hour of the generator may be needed (e.g. movie theatre – evenings, school – dismissal peak).
		Approach volumes must be totaled and checked for accuracy before submission. Traffic volumes between intersections shall be balanced or an explanation for the break in traffic flow provided.
		Areas experiencing a significant recreational peak shall be counted during the peak season. When this is not possible, traffic volumes may be seasonally adjusted to reflect the heaviest peak hour volume.
		B. Background Traffic
☑	☐	1. Identify other developments, including those previously approved by the OSTA, or pending, but not yet operational, and include their volume in the background traffic.
☑	☐	2. Identify any annual growth or seasonal adjustment factors used and justify their selection.

SUBMITTED	N/A	
☑	☐	3. Provide flow diagrams showing the appropriate background peak hour traffic volumes for the proposed development as determined in the existing condition. Diagrams must indicate date of submission and date of background traffic. Background traffic flow diagrams must be consistent with existing traffic diagrams.

Approach volumes must be totaled and checked for accuracy before submission. Traffic volumes between intersections shall be balanced or an explanation for the break in traffic flow provided.

If there are overlapping intersections with a recent, previously approved MTG, the combined traffic figures from the prior MTG shall be used as base traffic for the new project.

C. Trip Distribution

☑	☐	1. Provide flow diagrams showing the percent distribution of generated traffic, by direction, for each major road leading to the area and at all access points. Diagrams must include date of submission. Flow diagrams shall be consistent with the peak hours analyzed in the existing and background traffic conditions.
☑	☐	2. Provide a description of the methodology used to develop the trip distribution. Any differences in the approach and departure distribution shall be explained.

D. Site Generated Traffic / Combined Traffic Volumes

☑		1. Submit a narrative regarding logic used for the trip generation.
☑	☐	2. Provide flow diagrams for the applicable peak hour(s) for the generated traffic volumes.
☑	☐	3. Provide flow diagrams for the applicable peak hour(s) for the combined traffic volumes (the sum of the background and generated traffic volumes). Diagrams must include date of submission and date of combined traffic.

In most cases, trip generation data derived from the latest ITE Trip Generation Report will be acceptable. Approved ConnDOT studies are currently utilized to derive trip generation data for, super food stores and Dunkin' Donuts locations. Other studies will be taken into consideration, but will be subject to approval.

Out parcels contained within retail developments shall utilize the most specific land use code available via ITE or other acceptable study data. For restaurants, indicate whether it is a fast- food or sit-down style service, and if there is a drive-up window proposed.

Trip generation for the Christmas Season, as defined by ITE, is not currently required. Trip generation shall reflect a successful day, not abnormally high-peak periods such as holiday weekends.

For retail developments, Friday afternoon and Saturday midday peak are required study periods. For apartments, condominiums, hotels and motels, the number of 1-, 2- and 3-bedroom units, and the square foot area of each type of unit shall be noted. For hotels and motels, list the number of rooms.

SUBMITTED	N/A	
		E. Capacity Analysis, including all input data, supportive computation sheets and/or charts shall be submitted. The format for the submitted analysis shall be in accordance with Transportation Research Board's Highway Capacity Manual (HCM 2000). Inquiries about the format of the analysis may be directed to the Division of Traffic Engineering (860) 594-2710. Analysis should be provided for intersections, interchanges, or expressways for the following time periods and traffic conditions:
☑	☐	1. Background Traffic and Combined Traffic – Analyze same peak hours as shown in the traffic flow diagrams.
☑	☐	2. Morning and afternoon peak hour of the generator, if different than the morning and afternoon peak hour of the adjacent highway.
		F. Storage / Queue Analysis - The submission of a storage and/or queue analysis supporting the background and combined traffic capacity analysis provided under Sections III-E.1 and III-E.2 is usually necessary under the following conditions:
☐	☑	1. When exclusive turning lanes exist, there is potential through lane blockage of turn lane or visa verse.
☐	☑	2. When there is a potential for vehicular backups affecting operation of nearby intersections, major drives and/or nearby rail crossings.
☐	☑	3. When there is limited stopping sight distance on a signalized approach.
☐	☑	4. Off-ramp approaches to signalized intersections.
☐	☑	5. Other conditions may be identified during the review by the engineer which would require a storage/queue analysis.
☑	☐	G. Supply information on the latest available three years of accident experience. A narrative for all existing site drives and off-site impacted locations is required. A table of data or collision diagram may be used to demonstrate the crash history.

IV. Drainage Requirements

For developments that do not have frontage on a state highway or state railroad, no drainage information will be required.

For those that do have frontage on a state highway, the amount of drainage information required will be based on an assessment of the drainage impact to the state highway system associated with the development/expansion/land use change. See attached form " *OSTA Administrative Decision Request – Drainage* " to determine if this project will qualify for an exemption of drainage information or if further drainage information as shown below will be required.

☐	☑	A. Drainage Report - A well-documented Drainage Report will facilitate the drainage review process. Failure to provide the Drainage Report will delay the review and approval process until the document is received. Inquiries regarding submissions may be directed to the Division of Design Services - Hydraulics and Drainage, (860)594-3238.

SUBMITTED	N/A	
☐	☑	1. Locate the MTG site on an 8.5" x 11" excerpt of a USGS topographic quadrangle map (Scale 1:24,000). Indicate the quadrangle name and number on this plan.
☐	☑	2. Locate the MTG site on the relevant portion of the FEMA Flood Insurance Rate Map (FIRM) and Floodway Map. Indicate the panel number, scale, and effective date of the map(s).
☐	☑	3. A detailed narrative specifically relating the proposed drainage design to existing State drainage facilities, (roadways, railroads, etc.), describing any potential impacts consequent to the proposed construction is required. The narrative must contain a definitive conclusion on whether there is any drainage impact to State facilities. The narrative should also include a discussion of existing and proposed drainage patterns. It is desirable to maintain the existing drainage patterns. Diversions of storm runoff to State drainage facilities are generally not acceptable unless appropriate drainage rights are obtained from all affected downstream owners.
☐	☑	4. Contour plans depicting tributary drainage areas both within and, where applicable, beyond the MTG boundaries are required. In some cases, the entire MTG site may drain away from the State transportation facility. In this instance, the report narrative identified in Item No. 3 above should so indicate. This will negate the requirement for drainage design computations; however, contour plans are still needed to verify the drainage patterns.
☐	☑	5. Submit drainage layout and details of existing and proposed storm sewer as well as hydraulic structure designs and their relationships to any adjacent State drainage facilities. All proposed outlets connecting or discharging to State maintained facilities must be clearly indicated. Further, existing State maintained drainage facilities that are located adjacent to development property and/or are potentially affected by the proposed construction must be shown on the plans. Copies of "as-built" plans showing the location of these State systems are acceptable providing that the appropriate pipe sizes, type of pipe, invert elevations, drainage structure types, and top of frame elevations are obtained for hydraulic computations, where required.
☐	☑	6. Existing and proposed drainage rights and easements of the MTG site and contiguous State properties must be identified on the plans and described in the drainage report narrative. If there are no existing drainage rights or easements recorded for the MTG or contiguous State property, the drainage report narrative must indicate same.
		7. For development sites that: • Connect or discharge to existing State drainage facilities – a. and b. below are required. • Receive discharge from existing State drainage facilities – a. and b. below are required. • Propose pavement widening on State roadways – a., b., and c. below are required.

SUBMITTED	N/A	
☐	☑	a. Supporting computations and electronic data files for gutter flow, storm sewer, hydraulic grade line (water surface profile) and outlet protection, as appropriate for the development.
☐	☑	b. An analysis, including computations and electronic data files for gutter flow, storm sewer, hydraulic grade line (water surface profile) and outlet protection, as appropriate for the State facilities, shall be performed to its terminus or to a distinct hydraulic control to verify its adequacy. This analysis must consider the relative times-to-peak of the site and State maintained drainage systems and is required even if a reduction in peak flows from the site itself is anticipated.
☐	☑	c. A visual inspection of the existing State drainage facilities (pipes and structures) shall be performed to verify its condition and documented. The condition of existing ditches and outlets of the State drainage systems shall also be field inspected to verify their stability, need for cleaning, and to ensure no erosion or sediment problems exist.
☐	☑	8. Design plans and computations (including electronic data files) for any proposed storm water detention (above or below grade), retention or infiltration facilities. These plans must indicate sizes, dimensions, elevations and construction materials for the facility and its proposed outlet. At a minimum, design requirements must meet the standards set forth in the Department's Drainage Manual. Where failure of these facilities could impact adjoining State systems or structures, an Inspection/Maintenance plan must be prepared by the developer. This plan, together with any formal agreements or related documents, are normally filed in the town land records.
☐	☑	9. Indicate the location and type of any features included in the proposed drainage design to treat storm runoff and thereby enhance storm water quality. Treatment shall be accomplished prior to discharging to State drainage systems.
☐	☑	10. For sites which contain regulated floodplain or floodway areas as defined by the relevant Flood Insurance Study documents, within their boundaries, the applicant must depict the limits of same on the development site plan(s). Additionally, any proposed encroachments within these regulated areas must be evaluated, at least in a qualitative sense, for potential impacts upon upstream or downstream State facilities. Ultimately, a detailed hydraulic evaluation of floodplain or floodway encroachments may be required.

V. Planning and / or Zoning Approval

☐	☑	Provide a copy of local Planning and or Zoning approval and date received, or documentation that it is not required. If the Planning and or Zoning approval does not specify the size of the development, land use and parking which has been approved, or does not reference a site plan with the same information, then written confirmation from the Planning and or Zoning Office will also be required specifically indicating what has been approved.

SUBMITTED	N/A	
☐	☑	If approval is required, the town must be in receipt of an appropriate application prior to the submission of the AD request to the OSTA. If the approval has not been granted, a statement indicating the anticipated schedule for obtaining Planning and or Zoning approval must be supplied. Upon approval, a copy thereof must be submitted.

VI. Local Traffic Authority Concurrence

☑		Written confirmation from the Local Traffic Authority indicating concurrence with the assessment of no substantial impact to the state highway system contingent on the Department's agreement with said assessment must be provided.

OFFICE OF THE STATE TRAFFIC ADMINISTRATION (OSTA) - ADMINISTRATIVE DECISION REQUEST - DRAINAGE

Name of Facility	Town	State Route(s)
INNOVATIVE PARTNERSHIP BUILDING	Storrs	N/A

Location (complete street address; if none, provide map/block/lot information)

NORTH HILLSIDE ROAD

Stormwater Runoff (*at least one of the following must be checked to qualify):*

☐ The proposed project will not increase impervious area at the site.

☑ Stormwater runoff from the site does not drain nor is directed to State property or State owned/maintained drainage facilities. (State defined as DOT, not UCONN on this form)

Diversions (*the following must be checked to qualify):*

☑ Proposed drainage patterns on the site are maintained as closely as possible to the existing site conditions. No diversion of stormwater or stream flow is proposed that will potentially affect State or private property.

State Drainage System Modifications (*the following must be checked to qualify):*

☑ There are no new connections or modifications to State owned/maintained drainage systems.

☑ There are no modifications to the development drainage system that a State drainage connects or discharges to.

Drainage Rights/Easements (*Check all that apply. Response will be used to determine if new/additional ROW is required):*

☑ State drainage facilities are not located on the subject site.

☑ Runoff from any adjacent State highway or railroad facility does not discharge onto the subject site.

☑ Existing and /or proposed site drainage does not connect to a State owned/maintained drainage facility.

☐ Existing site drainage connects to a State owned/ maintained drainage facility. A record of the connection
A record of the connection - ☐ exists - ☐ does not exist at the DOT District office.

☑ Land records were searched and no State drainage rights/easements were found for the subject site.

☐ A State " drainage right of way " or " easement " is recorded on the land records for the property.

Description of State drainage right of way or easement (*type & location*)

☐ The proposed project will not affect an existing State drainage right of way or easement on the subject property.

Flood History (*the following must be checked to qualify*):

☑ The subject site does not have a history of flooding or known drainage problems. The applicant has consulted with the municipality and the DOT District Drainage office regarding any flood history or known drainage problems at the site. A copy of the meeting/telephone report is attached.

Other Approvals

Has the drainage design and stormwater management for the project been approved at the local level? ☐ Yes ☑ No

Professional Engineer Certification

I have conducted a site investigation and reviewed the proposed project plans relative to the information required for this document. Based on my review and reasonable Investigation, including my inquiry of those individuals responsible for obtaining the in formation, I hereby certify that the information provided on this document is complete and true.

Name	PE Number
Christopher Cardany, PE	21995
Signature	Date: 1/10/14

Affix P.E. Stamp Here

Kathryn Lynch

From: Miller, Norman <Norman.Miller@ct.gov>
Sent: Wednesday, January 08, 2014 11:58 AM
To: Kathryn Lynch
Subject: RE: UConn OSTA AD Inquiry

Katy,

I checked our records, and went out to the site, and found no record or indication that there is any kind of drainage issues on SR 430 in that area.

Norm Miller, PE & LS
DOT District 2 Drainage Engineer
860-823-3243

From: Kathryn Lynch [mailto:klynch@Langan.com]
Sent: Tuesday, January 07, 2014 2:57 PM
To: Miller, Norman
Subject: UConn OSTA AD Inquiry

Hi Norm,

As discussed on the phone, attached are aerials of the site (a zoom out and a zoom in) that we're working on. If you need any additional information please let me know.

Thanks for your help!

Katy Lynch, PE, LEED AP
Project Engineer
Direct: 203.784.3046
Mobile: 860.916.6744

LANGAN
Phone: 203.562.5771 Fax: 203.789.6142
Long Wharf Maritime Center
555 Long Wharf Drive
New Haven, CT 06511-6107
www.langan.com

CONNECTICUT NEW JERSEY NEW YORK PENNSYLVANIA OHIO WASHINGTON, DC VIRGINIA FLORIDA NORTH DAKOTA CALIFORNIA ABU DHABI ATHENS DOHA DUBAI ISTANBUL

RECORD OF TELEPHONE CONVERSATION

Date: 10 January 2014 **Job No.:** 140065901

Time: 9 AM

From: Grant Metzler, Assistant Town Engineer **Of:** Mansfield

To: Matt Carbone **Phone No.:** 860-429-3334

Subject: UConn IPB – OSTA AD

Conversation with Grant Metzler, Assistant Town Engineer of the Town of Mansfield, confirmed that there are no known flooding or drainage problems at the site of the proposed Innovative Partnership Building at the UConn North Campus.

By: Matt Carbone

LANGAN

APPENDIX

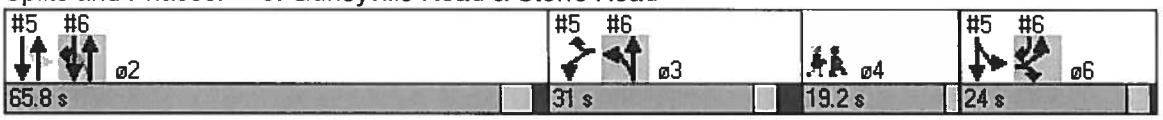
SYNCHRO ANALYSIS WORKSHEETS

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø4
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	10	13	10	13	
Storage Length (ft)	100	0		0	80		
Storage Lanes	1	1		0	1		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	28	28	154		80	200	
Trailing Detector (ft)	-6	-6	148		76	194	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	
Frt		0.850	0.972				
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1652	1583	3211	0	1652	1925	
Flt Permitted	0.950				0.409		
Satd. Flow (perm)	1652	1583	3211	0	711	1925	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		85	25				
Headway Factor	1.09	1.00	1.09	0.96	1.09	0.96	
Link Speed (mph)	30		30			30	
Link Distance (ft)	779		205			415	
Travel Time (s)	17.7		4.7			9.4	
Volume (vph)	47	78	361	82	90	455	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	51	85	392	89	98	495	
Lane Group Flow (vph)	51	85	481	0	98	495	
Turn Type		Prot			D.P+P		
Protected Phases	3	3	2		6	2 6	4
Permitted Phases					2		
Detector Phases	3	3	2				
Minimum Initial (s)	6.0	6.0	20.0		6.0		1.0
Minimum Split (s)	12.0	12.0	25.8		10.0		19.2
Total Split (s)	31.0	31.0	65.8	0.0	24.0	89.8	19.2
Total Split (%)	22.1%	22.1%	47.0%	0.0%	17.1%	64.1%	14%
Maximum Green (s)	25.0	25.0	60.0		20.0		17.2
Yellow Time (s)	3.0	3.0	3.9		3.0		2.0
All-Red Time (s)	3.0	3.0	1.9		1.0		0.0
Lead/Lag	Lead	Lead					Lag
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	1.0	1.0	3.0		1.5		0.2
Recall Mode	None	None	C-Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							10.0
Pedestrian Calls (#/hr)							60
Act Effct Green (s)	15.2	15.2	86.6		97.6	101.6	
Actuated g/C Ratio	0.11	0.11	0.62		0.70	0.73	
v/c Ratio	0.28	0.34	0.24		0.17	0.35	
Control Delay	59.9	14.4	13.6		3.5	3.5	
Queue Delay	0.0	0.0	0.0		0.0	0.2	
Total Delay	59.9	14.4	13.6		3.5	3.6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø4
LOS	E	B	B		A	A	
Approach Delay	31.4		13.6			3.6	
Approach LOS	C		B			A	
Queue Length 50th (ft)	43	0	99		9	45	
Queue Length 95th (ft)	83	50	158		13	49	
Internal Link Dist (ft)	699		125			335	
Turn Bay Length (ft)	100				80		
Base Capacity (vph)	319	374	1995		570	1397	
Starvation Cap Reductn	0	0	0		0	273	
Spillback Cap Reductn	0	0	0		0	0	
Storage Cap Reductn	0	0	0		0	0	
Reduced v/c Ratio	0.16	0.23	0.24		0.17	0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 34.2 (24%), Referenced to phase 2:NBSB, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 10.7		Intersection LOS: B	
Intersection Capacity Utilization 36.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Gurleyville Road & Storrs Road



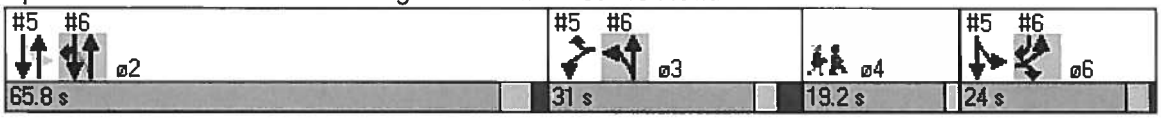
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	10	13	11	11	
Storage Length (ft)	80	0	0			200	
Storage Lanes	1	1	1			1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	30	30	30	240	240	180	
Trailing Detector (ft)	0	0	0	234	234	174	
Turning Speed (mph)	15	9	15			9	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850				0.850	
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1770	1583	1652	1925	1801	1531	
Flt Permitted	0.950		0.215				
Satd. Flow (perm)	1770	1583	374	1925	1801	1531	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		79				430	
Headway Factor	1.00	1.00	1.09	0.96	1.04	1.04	
Link Speed (mph)	30			30	30		
Link Distance (ft)	2808			415	2799		
Travel Time (s)	63.8			9.4	63.6		
Volume (vph)	78	66	210	229	479	361	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	
Adj. Flow (vph)	93	79	250	273	570	430	
Lane Group Flow (vph)	93	79	250	273	570	430	
Turn Type		Prot	D.P+P			pt+ov	
Protected Phases	6	6	3	2 3	2	2 6	4
Permitted Phases			2				
Detector Phases	6	6	3		2	2	
Minimum Initial (s)	6.0	6.0	6.0		20.0		1.0
Minimum Split (s)	10.0	10.0	12.0		25.8		19.2
Total Split (s)	24.0	24.0	31.0	96.8	65.8	89.8	19.2
Total Split (%)	17.1%	17.1%	22.1%	69.1%	47.0%	64.1%	14%
Maximum Green (s)	20.0	20.0	25.0		60.0		17.2
Yellow Time (s)	3.0	3.0	3.0		3.9		2.0
All-Red Time (s)	1.0	1.0	3.0		1.9		0.0
Lead/Lag			Lead				Lag
Lead-Lag Optimize?			Yes				Yes
Vehicle Extension (s)	1.5	1.5	1.0		3.0		0.2
Recall Mode	None	None	None		C-Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							10.0
Pedestrian Calls (#/hr)							60
Act Effct Green (s)	11.0	11.0	101.8	105.8	86.6	101.6	
Actuated g/C Ratio	0.08	0.08	0.73	0.76	0.62	0.73	
v/c Ratio	0.67	0.40	0.61	0.19	0.51	0.35	
Control Delay	84.4	17.9	21.0	1.7	19.7	1.6	
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	
Total Delay	84.4	17.9	21.0	1.9	19.7	1.6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4
LOS	F	B	C	A	B	A	
Approach Delay	53.8			11.1	11.9		
Approach LOS	D			B	B		
Queue Length 50th (ft)	84	0	53	18	296	0	
Queue Length 95th (ft)	129	42	111	21	435	24	
Internal Link Dist (ft)	2728			335	2719		
Turn Bay Length (ft)	80					200	
Base Capacity (vph)	253	294	548	1454	1114	1229	
Starvation Cap Reductn	0	0	0	653	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.27	0.46	0.34	0.51	0.35	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 34.2 (24%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 15.9 Intersection LOS: B
Intersection Capacity Utilization 51.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: North Eagleville Road & Storrs Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	13	11	15	12	11	12	8	12	15	12
Storage Length (ft)	60		0	180		0	200		0	200		0
Storage Lanes	1		1	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	88	88	88	20	72		20	20		20	20	
Trailing Detector (ft)	82	82	82	-10	66		-10	14		-10	14	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.928			0.909			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1739	1636	1711	1901	0	1711	1693	0	1770	2000	0
Flt Permitted	0.657			0.638			0.717			0.701		
Satd. Flow (perm)	1183	1739	1636	1149	1901	0	1291	1693	0	1306	2000	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			187		70			53			10	
Headway Factor	1.04	1.09	0.96	1.04	0.88	1.00	1.04	1.00	1.20	1.00	0.88	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1433			2808			685			1383	
Travel Time (s)		32.6			63.8			15.6			31.4	
Volume (vph)	31	84	116	112	51	47	27	21	33	26	32	6
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Adj. Flow (vph)	50	135	187	181	82	76	44	34	53	42	52	10
Lane Group Flow (vph)	50	135	187	181	158	0	44	87	0	42	62	0
Turn Type	Perm		Perm	D.P+P			pm+pt			pm+pt		
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		
Detector Phases		2	2	1	2		3	8		7	4	
Minimum Initial (s)	15.0	15.0	15.0	5.0			5.0	6.0		5.0	6.0	
Minimum Split (s)	20.0	20.0	20.0	8.0			8.0	11.0		8.0	11.0	
Total Split (s)	20.0	20.0	20.0	11.0	31.0	0.0	9.0	15.0	0.0	9.0	15.0	0.0
Total Split (%)	26.7%	26.7%	26.7%	14.7%	41.3%	0.0%	12.0%	20.0%	0.0%	12.0%	20.0%	0.0%
Maximum Green (s)	15.0	15.0	15.0	8.0			6.0	10.0		6.0	10.0	
Yellow Time (s)	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	0.0			0.0	2.0		0.0	2.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	2.0			2.0	3.0		2.0	3.0	
Recall Mode	Max	Max	Max	None			None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	26.4	26.4	26.4	31.5	37.5		9.4	8.6		9.4	8.6	
Actuated g/C Ratio	0.51	0.51	0.51	0.59	0.73		0.17	0.15		0.17	0.15	
v/c Ratio	0.08	0.15	0.20	0.24	0.11		0.17	0.28		0.16	0.19	
Control Delay	12.8	11.9	3.5	6.4	3.8		15.0	12.2		14.8	17.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.8	11.9	3.5	6.4	3.8		15.0	12.2		14.8	17.1	

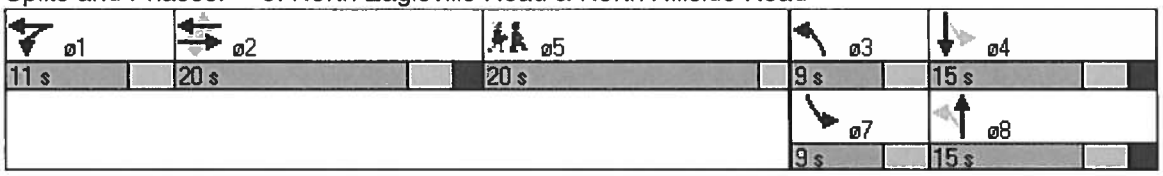
Lane Group	ø5
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Peak Hour Factor	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phases	
Minimum Initial (s)	1.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	27%
Maximum Green (s)	18.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	0.2
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	A	A	A		B	B		B	B	
Approach Delay		7.8			5.2			13.1			16.2	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	7	19	0	13	6		9	7		8	10	
Queue Length 95th (ft)	22	45	10	38	21		17	22		17	26	
Internal Link Dist (ft)		1353			2728			605			1303	
Turn Bay Length (ft)	60			180			200			200		
Base Capacity (vph)	608	893	931	770	1404		264	387		271	415	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.08	0.15	0.20	0.24	0.11		0.17	0.22		0.15	0.15	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 51.4
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.28
Intersection Signal Delay: 8.5 Intersection LOS: A
Intersection Capacity Utilization 33.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 9: North Eagleville Road & North Hillside Road



Lane Group	ø5
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

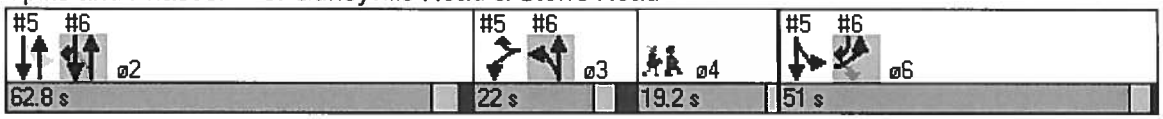
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø4
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	10	13	10	13	
Storage Length (ft)	100	0		0	80		
Storage Lanes	1	1		0	1		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	28	28	154		80	200	
Trailing Detector (ft)	-6	-6	148		76	194	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	
Frt		0.850	0.992				
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1652	1583	3277	0	1652	1925	
Flt Permitted	0.950				0.263		
Satd. Flow (perm)	1652	1583	3277	0	457	1925	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		81	4				
Headway Factor	1.09	1.00	1.09	0.96	1.09	0.96	
Link Speed (mph)	30		30			30	
Link Distance (ft)	779		194			415	
Travel Time (s)	17.7		4.4			9.4	
Volume (vph)	67	78	615	33	80	610	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	70	81	641	34	83	635	
Lane Group Flow (vph)	70	81	675	0	83	635	
Turn Type		Prot			D.P+P		
Protected Phases	3	3	2		6	2 6	4
Permitted Phases					2		
Detector Phases	3	3	2				
Minimum Initial (s)	6.0	6.0	20.0		6.0		1.0
Minimum Split (s)	12.0	12.0	25.8		10.0		19.2
Total Split (s)	22.0	22.0	62.8	0.0	51.0	113.8	19.2
Total Split (%)	14.2%	14.2%	40.5%	0.0%	32.9%	73.4%	12%
Maximum Green (s)	16.0	16.0	57.0		47.0		17.2
Yellow Time (s)	3.0	3.0	3.9		3.0		2.0
All-Red Time (s)	3.0	3.0	1.9		1.0		0.0
Lead/Lag	Lead	Lead					Lag
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	1.0	1.0	3.0		1.5		0.2
Recall Mode	None	None	C-Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							10.0
Pedestrian Calls (#/hr)							60
Act Effct Green (s)	12.1	12.1	72.6		115.7	119.7	
Actuated g/C Ratio	0.08	0.08	0.47		0.75	0.77	
v/c Ratio	0.54	0.41	0.44		0.12	0.43	
Control Delay	83.7	18.7	31.4		3.9	4.3	
Queue Delay	0.0	0.0	0.0		0.0	0.4	
Total Delay	83.7	18.7	31.4		3.9	4.7	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø4
LOS	F	B	C		A	A	
Approach Delay	48.8		31.4			4.6	
Approach LOS	D		C			A	
Queue Length 50th (ft)	70	0	250		8	68	
Queue Length 95th (ft)	121	53	343		m21	132	
Internal Link Dist (ft)	699		114			335	
Turn Bay Length (ft)	100				80		
Base Capacity (vph)	192	255	1537		674	1487	
Starvation Cap Reductn	0	0	0		0	383	
Spillback Cap Reductn	0	0	0		0	0	
Storage Cap Reductn	0	0	0		0	0	
Reduced v/c Ratio	0.36	0.32	0.44		0.12	0.58	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 155
Offset: 34.2 (22%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 20.6 Intersection LOS: C
Intersection Capacity Utilization 43.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Gurleyville Road & Storrs Road



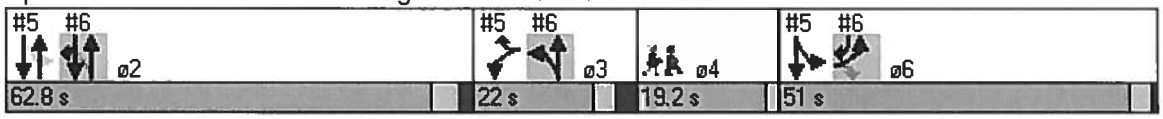
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	10	13	11	11	
Storage Length (ft)	80	0	0			200	
Storage Lanes	1	1	1			1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	30	30	30	240	240	180	
Trailing Detector (ft)	0	0	0	234	234	174	
Turning Speed (mph)	15	9	15			9	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850				0.850	
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1770	1583	1652	1925	1801	1531	
Flt Permitted	0.950		0.140				
Satd. Flow (perm)	1770	1583	243	1925	1801	1531	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		179				140	
Headway Factor	1.00	1.00	1.09	0.96	1.04	1.04	
Link Speed (mph)	30			30	30		
Link Distance (ft)	2808			415	2799		
Travel Time (s)	63.8			9.4	63.6		
Volume (vph)	400	195	119	574	495	122	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	
Adj. Flow (vph)	460	224	137	660	569	140	
Lane Group Flow (vph)	460	224	137	660	569	140	
Turn Type		Perm	D.P+P			pt+ov	
Protected Phases	6		3	2 3	2	2 6	4
Permitted Phases		6	2				
Detector Phases	6	6	3		2	2	
Minimum Initial (s)	6.0	6.0	6.0		20.0		1.0
Minimum Split (s)	10.0	10.0	12.0		25.8		19.2
Total Split (s)	51.0	51.0	22.0	84.8	62.8	113.8	19.2
Total Split (%)	32.9%	32.9%	14.2%	54.7%	40.5%	73.4%	12%
Maximum Green (s)	47.0	47.0	16.0		57.0		17.2
Yellow Time (s)	3.0	3.0	3.0		3.9		2.0
All-Red Time (s)	1.0	1.0	3.0		1.9		0.0
Lead/Lag			Lead				Lag
Lead-Lag Optimize?			Yes				Yes
Vehicle Extension (s)	1.5	1.5	1.0		3.0		0.2
Recall Mode	None	None	None		C-Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							10.0
Pedestrian Calls (#/hr)							60
Act Effct Green (s)	43.2	43.2	84.6	88.6	72.6	119.7	
Actuated g/C Ratio	0.28	0.28	0.55	0.57	0.47	0.77	
v/c Ratio	0.93	0.39	0.57	0.60	0.67	0.12	
Control Delay	80.8	11.7	26.4	8.8	40.7	1.1	
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	
Total Delay	80.8	11.7	26.4	9.0	40.7	1.1	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4
LOS	F	B	C	A	D	A	
Approach Delay	58.1			12.0	32.9		
Approach LOS	E			B	C		
Queue Length 50th (ft)	452	34	45	144	469	0	
Queue Length 95th (ft)	555	93	103	157	651	18	
Internal Link Dist (ft)	2728			335	2719		
Turn Bay Length (ft)	80					200	
Base Capacity (vph)	549	614	306	1101	843	1215	
Starvation Cap Reductn	0	0	0	73	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.84	0.36	0.45	0.64	0.67	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 155
Offset: 34.2 (22%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 33.2 Intersection LOS: C
Intersection Capacity Utilization 64.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: North Eagleville Road & Storrs Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	13	11	15	12	11	12	8	12	15	12
Storage Length (ft)	60		0	180		0	200		0	200		0
Storage Lanes	1		1	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	88	88	88	20	72		20	20		20	20	
Trailing Detector (ft)	82	82	82	-10	66		-10	14		-10	14	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.953			0.876			0.932	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1739	1636	1711	1953	0	1711	1632	0	1770	1910	0
Flt Permitted	0.649			0.636			0.568			0.267		
Satd. Flow (perm)	1169	1739	1636	1145	1953	0	1023	1632	0	497	1910	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			70		29			246			42	
Headway Factor	1.04	1.09	0.96	1.04	0.88	1.00	1.04	1.00	1.20	1.00	0.88	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1433			2808			685			1383	
Travel Time (s)		32.6			63.8			15.6			31.4	
Volume (vph)	21	110	63	83	105	49	224	47	224	87	72	59
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	122	70	92	117	54	249	52	249	97	80	66
Lane Group Flow (vph)	23	122	70	92	171	0	249	301	0	97	146	0
Turn Type	Perm		Perm	D.P+P			pm+pt			pm+pt		
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		
Detector Phases		2	2	1	2		3	8		7	4	
Minimum Initial (s)	15.0	15.0	15.0	5.0			5.0	6.0		5.0	6.0	
Minimum Split (s)	20.0	20.0	20.0	8.0			8.0	11.0		8.0	11.0	
Total Split (s)	20.0	20.0	20.0	11.0	31.0	0.0	15.0	19.0	0.0	15.0	19.0	0.0
Total Split (%)	23.5%	23.5%	23.5%	12.9%	36.5%	0.0%	17.6%	22.4%	0.0%	17.6%	22.4%	0.0%
Maximum Green (s)	15.0	15.0	15.0	8.0			12.0	14.0		12.0	14.0	
Yellow Time (s)	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	0.0			0.0	2.0		0.0	2.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	2.0			2.0	3.0		2.0	3.0	
Recall Mode	Max	Max	Max	None			None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	21.2	21.2	21.2	21.0	26.2		18.2	13.9		12.9	9.5	
Actuated g/C Ratio	0.44	0.44	0.44	0.41	0.54		0.36	0.27		0.25	0.19	
v/c Ratio	0.04	0.16	0.09	0.17	0.16		0.51	0.48		0.36	0.37	
Control Delay	17.6	17.6	6.1	11.5	9.2		15.3	8.1		15.2	18.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.6	17.6	6.1	11.5	9.2		15.3	8.1		15.2	18.8	

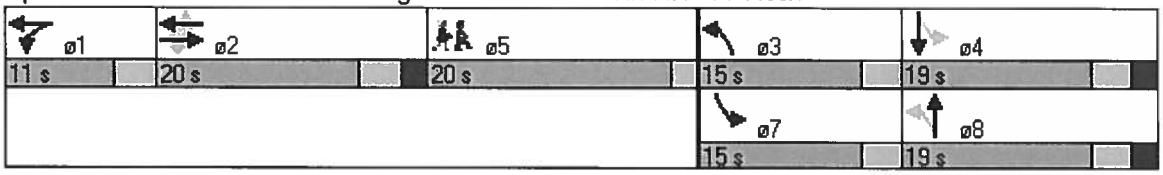
Lane Group	ø5
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Peak Hour Factor	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phases	
Minimum Initial (s)	1.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	24%
Maximum Green (s)	18.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	0.2
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	A	B	A		B	A		B	B	
Approach Delay		13.8			10.0			11.4			17.4	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	6	31	0	16	26		55	15		20	31	
Queue Length 95th (ft)	23	77	26	45	66		106	72		45	78	
Internal Link Dist (ft)		1353			2728			605			1303	
Turn Bay Length (ft)	60			180			200			200		
Base Capacity (vph)	513	763	757	534	1072		544	679		421	558	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.16	0.09	0.17	0.16		0.46	0.44		0.23	0.26	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 48.4
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 48.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 9: North Eagleville Road & North Hillside Road



Lane Group	ø5
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

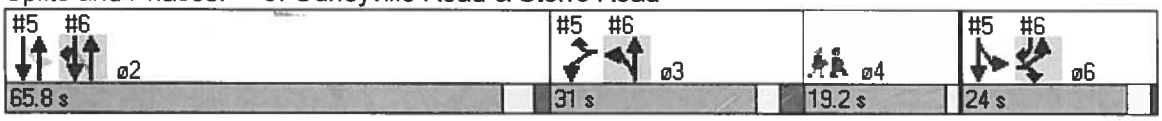
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø4
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	10	13	10	13	
Storage Length (ft)	100	0		0	80		
Storage Lanes	1	1		0	1		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	28	28	154		80	200	
Trailing Detector (ft)	-6	-6	148		76	194	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	
Frt		0.850	0.974				
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1652	1583	3217	0	1652	1925	
Flt Permitted	0.950				0.384		
Satd. Flow (perm)	1652	1583	3217	0	668	1925	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		98	22				
Headway Factor	1.09	1.00	1.09	0.96	1.09	0.96	
Link Speed (mph)	30		30			30	
Link Distance (ft)	779		205			415	
Travel Time (s)	17.7		4.7			9.4	
Volume (vph)	47	90	397	82	92	463	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	51	98	432	89	100	503	
Lane Group Flow (vph)	51	98	521	0	100	503	
Turn Type		Prot			D.P+P		
Protected Phases	3	3	2		6	2 6	4
Permitted Phases					2		
Detector Phases	3	3	2				
Minimum Initial (s)	6.0	6.0	20.0		6.0		1.0
Minimum Split (s)	12.0	12.0	25.8		10.0		19.2
Total Split (s)	31.0	31.0	65.8	0.0	24.0	89.8	19.2
Total Split (%)	22.1%	22.1%	47.0%	0.0%	17.1%	64.1%	14%
Maximum Green (s)	25.0	25.0	60.0		20.0		17.2
Yellow Time (s)	3.0	3.0	3.9		3.0		2.0
All-Red Time (s)	3.0	3.0	1.9		1.0		0.0
Lead/Lag	Lead	Lead					Lag
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	1.0	1.0	3.0		1.5		0.2
Recall Mode	None	None	C-Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							10.0
Pedestrian Calls (#/hr)							60
Act Effct Green (s)	20.1	20.1	80.8		92.7	96.7	
Actuated g/C Ratio	0.14	0.14	0.58		0.66	0.69	
v/c Ratio	0.22	0.32	0.28		0.19	0.38	
Control Delay	53.2	11.5	17.0		4.1	4.1	
Queue Delay	0.0	0.0	0.0		0.0	0.2	
Total Delay	53.2	11.5	17.0		4.1	4.3	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø4
LOS	D	B	B		A	A	
Approach Delay	25.8		17.0			4.3	
Approach LOS	C		B			A	
Queue Length 50th (ft)	42	0	123		10	50	
Queue Length 95th (ft)	79	50	193		14	53	
Internal Link Dist (ft)	699		125			335	
Turn Bay Length (ft)	100				80		
Base Capacity (vph)	319	384	1866		526	1330	
Starvation Cap Reductn	0	0	0		0	259	
Spillback Cap Reductn	0	0	0		0	0	
Storage Cap Reductn	0	0	0		0	0	
Reduced v/c Ratio	0.16	0.26	0.28		0.19	0.47	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 34.2 (24%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 12.0 Intersection LOS: B
Intersection Capacity Utilization 36.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Gurleyville Road & Storrs Road



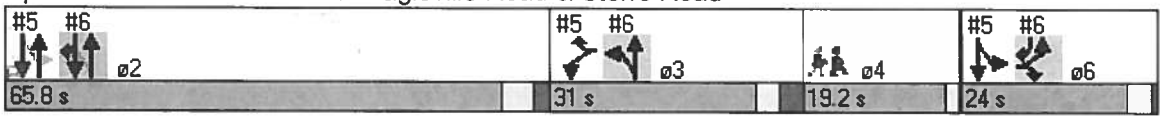
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	10	13	11	11	
Storage Length (ft)	80	0	0			200	
Storage Lanes	1	1	1			1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	30	30	30	240	240	180	
Trailing Detector (ft)	0	0	0	234	234	174	
Turning Speed (mph)	15	9	15			9	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850				0.850	
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1770	1583	1652	1925	1801	1531	
Flt Permitted	0.950		0.215				
Satd. Flow (perm)	1770	1583	374	1925	1801	1531	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		90				481	
Headway Factor	1.00	1.00	1.09	0.96	1.04	1.04	
Link Speed (mph)	30			30	30		
Link Distance (ft)	2808			415	2799		
Travel Time (s)	63.8			9.4	63.6		
Volume (vph)	87	76	258	229	479	404	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	
Adj. Flow (vph)	104	90	307	273	570	481	
Lane Group Flow (vph)	104	90	307	273	570	481	
Turn Type		Prot	D.P+P			pt+ov	
Protected Phases	6	6	3	2 3	2	2 6	4
Permitted Phases			2				
Detector Phases	6	6	3		2	2	
Minimum Initial (s)	6.0	6.0	6.0		20.0		1.0
Minimum Split (s)	10.0	10.0	12.0		25.8		19.2
Total Split (s)	24.0	24.0	31.0	96.8	65.8	89.8	19.2
Total Split (%)	17.1%	17.1%	22.1%	69.1%	47.0%	64.1%	14%
Maximum Green (s)	20.0	20.0	25.0		60.0		17.2
Yellow Time (s)	3.0	3.0	3.0		3.9		2.0
All-Red Time (s)	1.0	1.0	3.0		1.9		0.0
Lead/Lag			Lead				Lag
Lead-Lag Optimize?			Yes				Yes
Vehicle Extension (s)	1.5	1.5	1.0		3.0		0.2
Recall Mode	None	None	None		C-Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							10.0
Pedestrian Calls (#/hr)							60
Act Effct Green (s)	11.9	11.9	100.9	104.9	80.8	96.7	
Actuated g/C Ratio	0.08	0.08	0.72	0.75	0.58	0.69	
v/c Ratio	0.69	0.41	0.68	0.19	0.55	0.40	
Control Delay	84.5	16.7	28.2	1.7	24.1	1.9	
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	
Total Delay	84.5	16.7	28.2	2.0	24.1	1.9	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4
LOS	F	B	C	A	C	A	
Approach Delay	53.1			15.9	13.9		
Approach LOS	D			B	B		
Queue Length 50th (ft)	94	0	101	19	330	0	
Queue Length 95th (ft)	142	44	170	22	483	27	
Internal Link Dist (ft)	2728			335	2719		
Turn Bay Length (ft)	80					200	
Base Capacity (vph)	253	303	535	1442	1040	1207	
Starvation Cap Reductn	0	0	0	639	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.41	0.30	0.57	0.34	0.55	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 34.2 (24%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 18.7 Intersection LOS: B
Intersection Capacity Utilization 54.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: North Eagleville Road & Storrs Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	13	11	15	12	11	12	8	12	15	12
Storage Length (ft)	60		0	180		0	200		0	200		0
Storage Lanes	1		1	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	88	88	88	20	72		20	20		20	20	
Trailing Detector (ft)	82	82	82	-10	66		-10	14		-10	14	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.890			0.918			0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1739	1636	1711	1824	0	1711	1710	0	1770	1971	0
Flt Permitted	0.574			0.638			0.711			0.694		
Satd. Flow (perm)	1034	1739	1636	1149	1824	0	1280	1710	0	1293	1971	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			187		204			53			18	
Headway Factor	1.04	1.09	0.96	1.04	0.88	1.00	1.04	1.00	1.20	1.00	0.88	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1433			2808			685			1383	
Travel Time (s)		32.6			63.8			15.6			31.4	
Volume (vph)	55	84	116	112	51	138	27	27	33	45	33	11
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Adj. Flow (vph)	89	135	187	181	82	223	44	44	53	73	53	18
Lane Group Flow (vph)	89	135	187	181	305	0	44	97	0	73	71	0
Turn Type	Perm		Perm	D.P+P			pm+pt			pm+pt		
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		
Detector Phases		2	2	1	2		3	8		7	4	
Minimum Initial (s)	15.0	15.0	15.0	5.0			5.0	6.0		5.0	6.0	
Minimum Split (s)	20.0	20.0	20.0	8.0			8.0	11.0		8.0	11.0	
Total Split (s)	20.0	20.0	20.0	11.0	31.0	0.0	9.0	15.0	0.0	9.0	15.0	0.0
Total Split (%)	26.7%	26.7%	26.7%	14.7%	41.3%	0.0%	12.0%	20.0%	0.0%	12.0%	20.0%	0.0%
Maximum Green (s)	15.0	15.0	15.0	8.0			6.0	10.0		6.0	10.0	
Yellow Time (s)	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	0.0			0.0	2.0		0.0	2.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	2.0			2.0	3.0		2.0	3.0	
Recall Mode	Max	Max	Max	None			None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	28.4	28.4	28.4	34.2	40.4		11.1	9.2		12.3	11.4	
Actuated g/C Ratio	0.50	0.50	0.50	0.58	0.71		0.18	0.15		0.20	0.19	
v/c Ratio	0.17	0.16	0.21	0.25	0.23		0.17	0.32		0.24	0.19	
Control Delay	14.3	12.8	3.6	7.1	3.1		14.4	13.4		14.4	15.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.3	12.8	3.6	7.1	3.1		14.4	13.4		14.4	15.0	

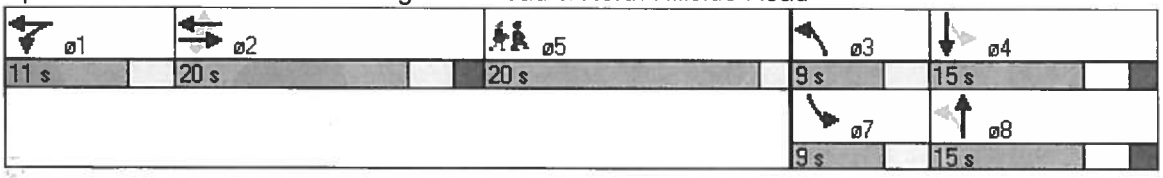
Lane Group	ø5
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Peak Hour Factor	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phases	
Minimum Initial (s)	1.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	27%
Maximum Green (s)	18.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	0.2
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	A	A	A		B	B		B	B	
Approach Delay		8.9			4.6			13.7			14.7	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	20	29	0	26	14		9	12		15	11	
Queue Length 95th (ft)	34	45	10	39	21		17	25		25	27	
Internal Link Dist (ft)		1353			2728			605			1303	
Turn Bay Length (ft)	60			180			200			200		
Base Capacity (vph)	513	864	906	746	1348		277	369		315	437	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.17	0.16	0.21	0.24	0.23		0.16	0.26		0.23	0.16	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 57.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.32
Intersection Signal Delay: 8.4 Intersection LOS: A
Intersection Capacity Utilization 42.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 9: North Eagleville Road & North Hillside Road



Lane Group	ø5
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

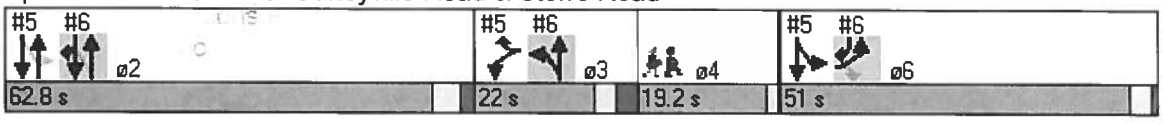
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø4
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	10	13	10	13	
Storage Length (ft)	100	0		0	80		
Storage Lanes	1	1		0	1		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	28	28	154		80	200	
Trailing Detector (ft)	-6	-6	148		76	194	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	
Frt		0.850	0.993				
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1652	1583	3280	0	1652	1925	
Flt Permitted	0.950				0.260		
Satd. Flow (perm)	1652	1583	3280	0	452	1925	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		83	4				
Headway Factor	1.09	1.00	1.09	0.96	1.09	0.96	
Link Speed (mph)	30		30			30	
Link Distance (ft)	779		194			415	
Travel Time (s)	17.7		4.4			9.4	
Volume (vph)	67	80	621	33	92	646	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Adj. Flow (vph)	70	83	647	34	96	673	
Lane Group Flow (vph)	70	83	681	0	96	673	
Turn Type		Prot			D.P+P		
Protected Phases	3	3	2		6	2 6	4
Permitted Phases					2		
Detector Phases	3	3	2				
Minimum Initial (s)	6.0	6.0	20.0		6.0		1.0
Minimum Split (s)	12.0	12.0	25.8		10.0		19.2
Total Split (s)	22.0	22.0	62.8	0.0	51.0	113.8	19.2
Total Split (%)	14.2%	14.2%	40.5%	0.0%	32.9%	73.4%	12%
Maximum Green (s)	16.0	16.0	57.0		47.0		17.2
Yellow Time (s)	3.0	3.0	3.9		3.0		2.0
All-Red Time (s)	3.0	3.0	1.9		1.0		0.0
Lead/Lag	Lead	Lead					Lag
Lead-Lag Optimize?	Yes	Yes					Yes
Vehicle Extension (s)	1.0	1.0	3.0		1.5		0.2
Recall Mode	None	None	C-Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							10.0
Pedestrian Calls (#/hr)							60
Act Effct Green (s)	12.2	12.2	67.2		115.6	119.6	
Actuated g/C Ratio	0.08	0.08	0.43		0.75	0.77	
v/c Ratio	0.54	0.41	0.48		0.13	0.45	
Control Delay	83.0	18.4	34.8		3.9	4.3	
Queue Delay	0.0	0.0	0.0		0.0	0.5	
Total Delay	83.0	18.4	34.8		3.9	4.8	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø4
LOS	F	B	C		A	A	
Approach Delay	47.9		34.8			4.7	
Approach LOS	D		C			A	
Queue Length 50th (ft)	70	0	284		10	72	
Queue Length 95th (ft)	120	54	346		m23	137	
Internal Link Dist (ft)	699		114			335	
Turn Bay Length (ft)	100				80		
Base Capacity (vph)	192	257	1427		712	1486	
Starvation Cap Reductn	0	0	0		0	381	
Spillback Cap Reductn	0	0	0		0	0	
Storage Cap Reductn	0	0	0		0	0	
Reduced v/c Ratio	0.36	0.32	0.48		0.13	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 155
Offset: 34.2 (22%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 21.6 Intersection LOS: C
Intersection Capacity Utilization 45.7% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Gurleyville Road & Storrs Road



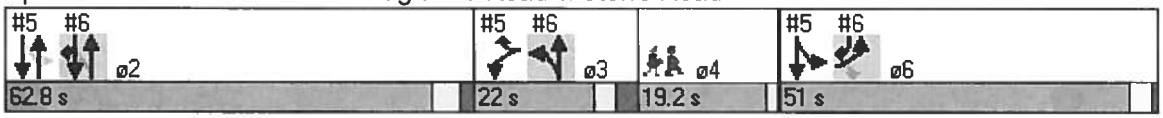
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	10	13	11	11	
Storage Length (ft)	80	0	0			200	
Storage Lanes	1	1	1			1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	30	30	30	240	240	180	
Trailing Detector (ft)	0	0	0	234	234	174	
Turning Speed (mph)	15	9	15			9	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.850				0.850	
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1770	1583	1652	1925	1801	1531	
Flt Permitted	0.950		0.140				
Satd. Flow (perm)	1770	1583	243	1925	1801	1531	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		201				148	
Headway Factor	1.00	1.00	1.09	0.96	1.04	1.04	
Link Speed (mph)	30			30	30		
Link Distance (ft)	2808			415	2799		
Travel Time (s)	63.8			9.4	63.6		
Volume (vph)	443	243	127	574	495	129	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	
Adj. Flow (vph)	509	279	146	660	569	148	
Lane Group Flow (vph)	509	279	146	660	569	148	
Turn Type		Perm	D.P+P			pt+ov	
Protected Phases	6		3	2 3	2	2 6	4
Permitted Phases		6	2				
Detector Phases	6	6	3		2	2	
Minimum Initial (s)	6.0	6.0	6.0		20.0		1.0
Minimum Split (s)	10.0	10.0	12.0		25.8		19.2
Total Split (s)	51.0	51.0	22.0	84.8	62.8	113.8	19.2
Total Split (%)	32.9%	32.9%	14.2%	54.7%	40.5%	73.4%	12%
Maximum Green (s)	47.0	47.0	16.0		57.0		17.2
Yellow Time (s)	3.0	3.0	3.0		3.9		2.0
All-Red Time (s)	1.0	1.0	3.0		1.9		0.0
Lead/Lag			Lead				Lag
Lead-Lag Optimize?			Yes				Yes
Vehicle Extension (s)	1.5	1.5	1.0		3.0		0.2
Recall Mode	None	None	None		C-Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							10.0
Pedestrian Calls (#/hr)							60
Act Effct Green (s)	48.5	48.5	79.3	83.3	67.2	119.6	
Actuated g/C Ratio	0.31	0.31	0.51	0.54	0.43	0.77	
v/c Ratio	0.92	0.44	0.62	0.64	0.73	0.12	
Control Delay	73.8	13.9	30.6	10.0	45.9	1.1	
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	
Total Delay	73.8	13.9	30.6	10.3	45.9	1.1	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4
LOS	E	B	C	B	D	A	
Approach Delay	52.6			14.0	36.6		
Approach LOS	D			B	D		
Queue Length 50th (ft)	470	54	63	162	527	0	
Queue Length 95th (ft)	#684	132	114	152	651	18	
Internal Link Dist (ft)	2728			335	2719		
Turn Bay Length (ft)	80					200	
Base Capacity (vph)	569	645	297	1035	782	1217	
Starvation Cap Reductn	0	0	0	75	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.89	0.43	0.49	0.69	0.73	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 155
Offset: 34.2 (22%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 34.2 Intersection LOS: C
Intersection Capacity Utilization 67.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: North Eagleville Road & Storrs Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	13	11	15	12	11	12	8	12	15	12
Storage Length (ft)	60		0	180		0	200		0	200		0
Storage Lanes	1		1	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	88	88	88	20	72		20	20		20	20	
Trailing Detector (ft)	82	82	82	-10	66		-10	14		-10	14	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.943			0.876			0.923	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1739	1636	1711	1932	0	1711	1632	0	1770	1891	0
Flt Permitted	0.639			0.636			0.484			0.267		
Satd. Flow (perm)	1151	1739	1636	1145	1932	0	872	1632	0	497	1891	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			70		38			242			54	
Headway Factor	1.04	1.09	0.96	1.04	0.88	1.00	1.04	1.00	1.20	1.00	0.88	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1433			2808			685			1383	
Travel Time (s)		32.6			63.8			15.6			31.4	
Volume (vph)	26	110	63	83	105	64	224	48	224	178	78	83
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	122	70	92	117	71	249	53	249	198	87	92
Lane Group Flow (vph)	29	122	70	92	188	0	249	302	0	198	179	0
Turn Type	Perm		Perm	D.P+P			pm+pt			pm+pt		
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		
Detector Phases		2	2	1	2		3	8		7	4	
Minimum Initial (s)	15.0	15.0	15.0	5.0			5.0	6.0		5.0	6.0	
Minimum Split (s)	20.0	20.0	20.0	8.0			8.0	11.0		8.0	11.0	
Total Split (s)	20.0	20.0	20.0	11.0	31.0	0.0	15.0	19.0	0.0	15.0	19.0	0.0
Total Split (%)	23.5%	23.5%	23.5%	12.9%	36.5%	0.0%	17.6%	22.4%	0.0%	17.6%	22.4%	0.0%
Maximum Green (s)	15.0	15.0	15.0	8.0			12.0	14.0		12.0	14.0	
Yellow Time (s)	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	0.0			0.0	2.0		0.0	2.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	2.0			2.0	3.0		2.0	3.0	
Recall Mode	Max	Max	Max	None			None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	21.3	21.3	21.3	20.8	26.2		16.8	10.9		15.3	10.2	
Actuated g/C Ratio	0.44	0.44	0.44	0.40	0.54		0.33	0.21		0.30	0.20	
v/c Ratio	0.06	0.16	0.09	0.18	0.18		0.58	0.56		0.58	0.43	
Control Delay	18.2	18.2	6.3	12.1	9.3		17.1	10.4		18.4	18.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.2	18.2	6.3	12.1	9.3		17.1	10.4		18.4	18.5	

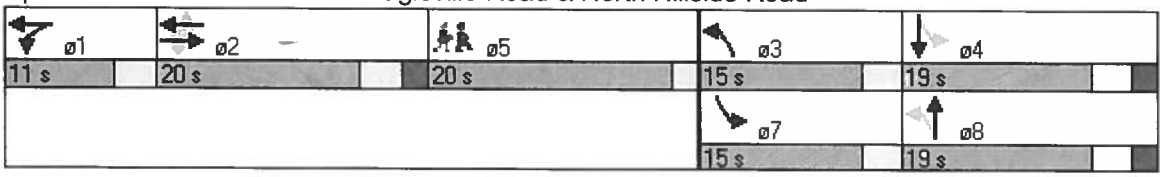
Lane Group	ø5
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Peak Hour Factor	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phases	
Minimum Initial (s)	1.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	24%
Maximum Green (s)	18.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	0.2
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	A	B	A		B	B		B	B	
Approach Delay		14.4			10.2			13.4			18.5	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	7	32	0	17	28		55	17		43	38	
Queue Length 95th (ft)	28	80	27	47	73		105	81		83	90	
Internal Link Dist (ft)		1353			2728			605			1303	
Turn Bay Length (ft)	60			180			200			200		
Base Capacity (vph)	500	756	751	524	1054		510	634		453	566	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.06	0.16	0.09	0.18	0.18		0.49	0.48		0.44	0.32	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 48.9
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 14.3 Intersection LOS: B
Intersection Capacity Utilization 57.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: North Eagleville Road & North Hillside Road

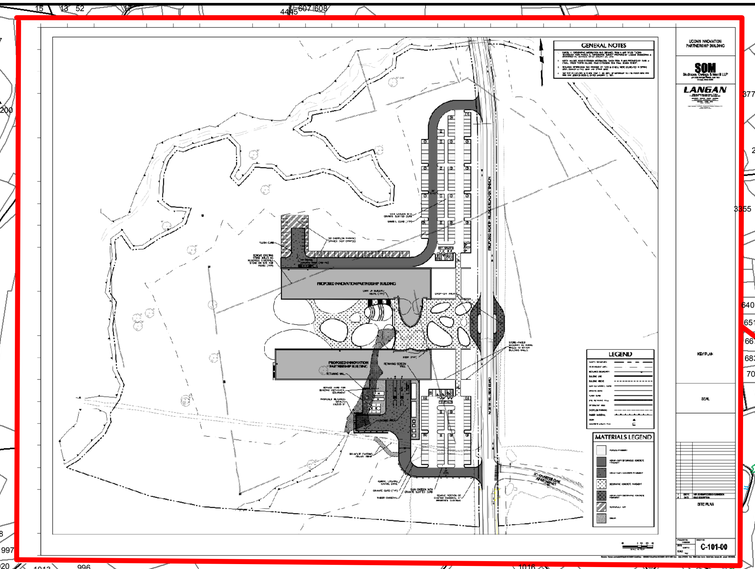


Lane Group	ø5
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

University of Connecticut
Mansfield, Connecticut

SITE PLAN
OSTA
Major Traffic Generator
Administrative Decision Request



LEGEND

- Parking (UConn)
- Drives (UConn)
- Roads
- Buildings (UConn)
- Town Boundary
- Parcels (ID)
- OSTA Certified Property Limits
- Abutters

N

0 500 1,000 2,000

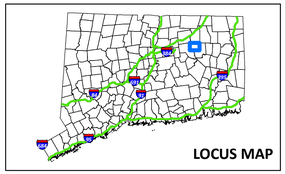
Feet

DRAFT

ID	PARCELID	LOCATION ADDRESS	OWNER
488	3.10.8-1	MIDDLE TPKE	JOSHUAS TRACT CONSERVATION and HISTORIC TRUST INC
488	3.10.8	139 OLD TURNPIKE RD	WARD LYDIA MAEVE
489	3.10.9	93 OLD TURNPIKE RD	ROGERS STEVEN H and DEPRAY BARBARA J
490	3.10.10	85 OLD TURNPIKE RD	HOMEWORKS PROPERTIES LLC
493	3.25.1	116 MOULTON RD	POWERS RICHARD A
500	3.25.9	54 OLD TURNPIKE RD	WASSMUNDT ELIZABETH T REVOCABLE TRUST THE
502	3.25.11	OLD TURNPIKE RD	FISH HELEN M
503	3.25.12	204 OLD TURNPIKE RD	BRUBACHER JOHN W and HARRIET W
504	4.25.1	343 CODFISH FALLS RD	BANK OF BOSTON TRUSTEE RAWITSCHER MARY EST
508	4.25.5	257 CODFISH FALLS RD	NELSON SARA M and EMILY LOUISE MERCER
746	8.23.3	10 RIDGE CR	WATERS JAMES D and JANE E
562	8.23.1	596 MIDDLE TPKE	CAMPUS CROSSING LLC
563	8.23.2	574 MIDDLE TPKE	CAMPUS CROSSING LLC
996	8.23.15-1	1 PENNER PLACE	CELERON SQUARE ASSOCIATES LLC C/O FLAGSHIP MGT SERVICES INC
997	8.23.16-2	HUNTING LODGE RD	CELERON SQUARE ASSOCIATES LLC C/O FLAGSHIP MGT SERVICES INC
1178	9.23.1	MIDDLE TPKE	O D S ASSOCIATES LLC JAVIT MAX C/O
1182	9.23.7	STORRS RD	BROWN RICHARD A
1183	9.23.8	1621 STORRS RD	BROWN RICHARD A
1184	9.23.10	1581 STORRS RD	ROTTER DOFFIE H and JULIAN B
1185	9.23.11	1569 STORRS RD	HAIDOUS NICHOLAS and GEORGIA
1186	9.23.13	1527 STORRS RD	BARLOW JEAN T
1187	9.23.14	1521 STORRS RD	STORRS ROAD PROPERTIES LLC MANSFIELD SUPPLY C/O
1188	9.23.21	2 NO EAGLEVILLE RD	STORRS CONGREGATIONAL CHURCH
1192	9.23.23	40 NO EAGLEVILLE RD	ST THOMAS AQUINAS CHAPEL
1193	9.23.24	54 NO EAGLEVILLE RD	BNAI BRITH HILLEL FOUNDATION
1194	9.23.25	NO EAGLEVILLE RD	STORRS CEMETERY ASSOCIATION INC
1195	9.23.26	134 NO EAGLEVILLE RD	SANDERSON OWEN and FREDA
1225	9.24.1	23 MOULTON RD	SHVARTSMAN ALEXANDER and SANYA
1226	9.24.2	1546 STORRS RD	BM REAL ESTATE VENTURES LLC
1227	9.24.3	1556 STORRS RD	NE CTR FOR YOUTH and FAMILIES INC
1231	9.24.7	1584 STORRS RD	THAMER THOMAS J and THAMER AMANDA
1232	9.24.9	1594 STORRS RD	BEYOR BUILDERS INC
1233	9.24.10	1608 STORRS RD	TAVAR THOMAS A and PENNY A
1234	9.24.11	1614 STORRS RD	LOVOZA JAMES J and ASHLEY L
1259	9.24.37	97 MOULTON RD	PALMER MARY S TRUSTEE
1260	9.24.38	65 MOULTON RD	SEPE CAROLYN M
1261	9.24.39	55 MOULTON RD	RAYNOR JAMES J and PATRICIA J TRUSTEES RAYNOR PATRICIA J REV TRUST
1263	9.24.1-2	15 MOULTON RD	WITTENZELLNER ROBERT E and WITTENZELLNER MICHELE A
1264	9.24.1-3	31 MOULTON RD	BILODEAU RONALD L and LISA J
1265	9.24.1-3A	MOULTON RD	RAYNOR JAMES J and PATRICIA J TRUSTEES RAYNOR PATRICIA J REVOCABLE TRUST
1267	9.25.2-1	4 MOULTON RD	BROWN MONICA
1268	9.25.3	42 MOULTON RD	JORDAN CAREY L and EDWARD W JR
1269	9.25.4	54 MOULTON RD	NADEAU PAUL R and DIANE F
1270	9.25.5	90 MOULTON RD	MELLOR STEVEN
1271	9.25.6	98 MOULTON RD	SNYDER RALPH B
1272	9.25.7	102 MOULTON RD	SMITH ANDREW W
1274	9.25.7-1	MOULTON RD	SILVA JAMES L and MARY L
1322	10.25.1	263 CODFISH FALLS RD	HARRINGTON CORDELIA T
1326	10.25.5	CODFISH FALLS RD	LACAFTA RICHARD G JR
1327	10.25.6	225 CODFISH FALLS RD	LACAFTA RICHARD G JR and KATHLEEN M
1328	10.25.7	211 CODFISH FALLS RD	FRIEDMAN ROBERT M and WINIFRED
1329	10.25.8	197 CODFISH FALLS RD	SOJA JULEANN and SOJA EDWARD EST OF
1330	10.25.9	CODFISH FALLS RD	KESSEL QUENTIN C and MARGARET M
1333	10.37.1	97 GURLEYVILLE RD	KOCHENBURGER PETER R and DAVIS SUSANNE M
1334	10.37.2	105 GURLEYVILLE RD	FLYNN IDANA M
1335	10.37.3	115 GURLEYVILLE RD	GARDINER ANDREW and KRISTIN
1336	10.37.4	121 GURLEYVILLE RD	BECKERT KARL L
1337	10.37.5	127 GURLEYVILLE RD	FAZZINA SCOTT M and MORGAN KRISTINA H
1338	10.37.6	131 GURLEYVILLE RD	JOHN MARTHA S COCCHI HORACIO
1339	10.37.7	141 GURLEYVILLE RD	CATALANO JEFFREY T
1340	10.37.9	223 GURLEYVILLE RD	COLLINS MICHAEL F and ROSEN RACHEL M
1341	10.37.10	217 GURLEYVILLE RD	BALOCKI WILLIAM C SR and JUNE P
1349	10.38.1-2	122 GURLEYVILLE RD	WELSH STEPHANIE L and MIRKO MARK L
1354	10.42.1	227A GURLEYVILLE RD	FOTINI MARTIN REVOC LIVING TRUST MARTIN FOTINI TRUSTEE
1355	10.42.2	227 GURLEYVILLE RD	JACOBSEN DANIEL LUKE and JACOBSEN JULIUS GEORGE H EST OF
1357	10.42.5	287 GURLEYVILLE RD	MOSKOWITZ ROBERT
1362	10.42.10	17 CODFISH FALLS RD	RAWN KENNETH H and RAWN NANCY L
1364	10.42.12	27 CODFISH FALLS RD	SKITA VICTOR
1365	10.42.13	51 CODFISH FALLS RD	WAXMAN FAMILY LIVING TRUST
1368	10.42.15	97 CODFISH FALLS RD	KESSEL QUENTIN and MARGARET M

ID	PARCELID	LOCATION ADDRESS	OWNER
1369	10.43.1	15 BUNDY LA	AHERN-MOGAYZEL JEANNE M and MOGAYZEL MARK
1370	10.43.2	23 BUNDY LA	ELSMAKHS HISHAM S and JENNIFER C
1372	10.43.4	11 HOLLY DR	TOLOKAN TIMOTHY M and DIANE L
1374	10.43.6	GURLEYVILLE RD	MANSFIELD TOWN OF OPEN SPACE GURLEYVILLE ROAD
1376	10.43.8	208 GURLEYVILLE RD	MILLER RICHARD A and BONITA M
1379	10.43.11	216 GURLEYVILLE RD	COLLINS HELEN J
1403	10.43.34	266 GURLEYVILLE RD	PELTO PERTTI J
1406	10.43.35-1	GURLEYVILLE RD	MANSFIELD TOWN OF OPEN SPACE GURLEYVILLE ROAD
1850	15.23.7	HUNTING LODGE RD	ELYAS MOHAMMAD
1860	15.23.8	80 HUNTING LODGE RD	SATARI K SHAH
1861	15.23.9	140 NO EAGLEVILLE RD	CONNECTICUT LIGHT and POWER COMPANY C/ainDP
1935	15.30.32	143 SEPARATIST RD	GUO CHANG SHENG and LI LING
1936	15.30.33	137 SEPARATIST RD	YANG XUSHENG and LAN HE
1937	15.30.34	127 SEPARATIST RD	JOHNSTON RUTH A
1938	15.30.35	113 SEPARATIST RD	JOHNSTON R RUSSELL JR
1939	15.30.36	2 LYNWOOD RD	SOLTYS JOSEPH T TRUST SOLTYS JOSEPH T and MICHAEL J CO TRUSTEES
1977	15.30.74	89 SEPARATIST RD	SCHWEPPE JAMES M and WILMA H
1993	15.30.90	71 SEPARATIST RD	LIN MIN and ZHANG BI
2033	15.32.1	29 KING HILL RD	CORRIDOR PROPARK LLC
2034	15.32.2	29A KING HILL RD	CORRIDOR PROPARK LLC
2036	15.32.4	17 KING HILL RD	CORRIDOR PROPARK LLC
2037	15.32.5	HUNTING LODGE RD	CORRIDOR PROPARK LLC
2043	15.32.11	SEPARATIST RD	SATARI KHALID D
2047	15.32.16	84 SEPARATIST RD	BRASWELL EMORY H and FRIMA B
2048	15.32.17	74 SEPARATIST RD	BROWN JOSEPH N and ELAINE L
2049	15.32.18	64 SEPARATIST RD	HAGGAN TIMOTHY T and KATHRYN B
2050	15.32.19	48 SEPARATIST RD	VAN GELDER JUSTIN A and VAN GELDER MARIELLE A
2051	15.32.21	38 SEPARATIST RD	LAMB GERTRUDE
2031	15.33.1	48 KING HILL RD	PESARCIK LLC
2103	15.33.3	28 KING HILL RD	HOMEWORKS PROPERTIES LLC
2104	15.33.4	22 KING HILL RD	SANDERSON OWEN and FREDA
2105	15.33.5	125 NO EAGLEVILLE RD	K BROTHERS LLC
2106	15.33.6	16 KING HILL RD	KING HILL REALTY LLC
2108	16.32.1	8 SEPARATIST RD	AZIMI TALAT and FAKHREDDIN
2109	16.32.18	SEPARATIST RD	AZIMI FAKHREDDIN and TALAT
2111	16.32.2	164 SO EAGLEVILLE RD	LAMAR BURRIS D and FRANCIS MARY
2112	16.32.3	SO EAGLEVILLE RD	FRANCIS MARY G and LAMAR BURRIS D
2114	16.32.5	128 SO EAGLEVILLE RD	RUECKI JAY G and BROWN JULIE M
2115	16.32.6	114 SO EAGLEVILLE RD	ING US STUDENTS NO 8 LLC C/O CONOVER MANAGEMENT
2116	16.32.7	108 SO EAGLEVILLE RD	BIRKENHOLZ THOMAS H and SCHREIER BARRY A
2117	16.32.8	102 SO EAGLEVILLE RD	STALLMAN VIRGINIA M
2119	16.32.10	7 WESTWOOD RD	HUSKY HOUSING LLC
2120	16.32.11	9 WESTWOOD RD	HUEY BRYAN D and TINA A
2122	16.32.13	13 WESTWOOD RD	KOGAN MITCH
2123	16.32.14	15 WESTWOOD RD	SEIDENBERG GERHARD and BARBARA
2124	16.32.15	17 WESTWOOD RD	SEIDENBERG DAVID and BARBARA J
2125	16.32.16	19 WESTWOOD RD	LIU LANBO and PU JINGHE
2126	16.32.18	9 HILLSIDE CR	LIPSKY SUE M and LESTER
2127	16.32.19	7 HILLSIDE CR	MANDIN JOHN J
2128	16.32.20	5 HILLSIDE CR	SIMSON WALTER H LIVING TRUST
2129	16.32.21	3 HILLSIDE CR	TILTON ROBERT S and CONNOLLY-TILTON RITA A
2130	16.32.23	23 WESTWOOD RD	COLOMBO CAROL F
2142	16.35.5	12 WESTWOOD RD	HUSKY HOUSING LLC
2145	16.35.8	6 WESTWOOD RD	THATCHER MARY E
2146	16.35.9	4 WESTWOOD RD	GOODRICH GEORGE W and GOODRICH GEORGE W
2147	16.35.10	2 WESTWOOD RD	JARA BARNABY T and AGUSTA JARA NIELY S and SABRINA E
2148	16.35.11	1A EASTWOOD RD	HAIDOUS EMMANUEL
2158	16.36.2	23 HILLSIDE CR	PICKERING SAMUEL F JR and PICKERING VICTORIA J
2159	16.36.3	21 HILLSIDE CR	HERNANDEZ GARTON E and ROJAS ELIANA D
2160	16.36.4	19 HILLSIDE CR	WATT JAMES and WELCH ALICIA
2161	16.36.5	17 HILLSIDE CR	COOLEY JOHN R
2162	16.36.6	22 EASTWOOD RD	FREUDMANN LILLIAN
2163	16.36.7	20 EASTWOOD RD	SEVILLA ELENA H
2164	16.36.8	18 EASTWOOD RD	LOUGEE ROBERT W and GRACE H
2165	16.36.9	16 EASTWOOD RD	GANT DAVID R
2166	16.36.11	12 EASTWOOD RD	CHEN ZHIHUA and PEI XIAOMING
2167	16.36.12	10 EASTWOOD RD	KURZ EDWARD A and DORGAN KATHLEEN
2168	16.36.13	8 EASTWOOD RD	KATZ LEWIS and SHIRLEY R
2169	16.36.14	6 EASTWOOD RD	AUSTIN GERHARD and AUSTIN ELIZABETH R
2170	16.36.15	4 EASTWOOD RD	LOWE DAVID B

ID	PARCELID	LOCATION ADDRESS	OWNER
2171	16.36.16	2 EASTWOOD RD	DOUVILLE DONALD D and HANNAH H
2173	16.36.18	4 SO EAGLEVILLE RD	MANSFIELD TOWN OF TOWN OFFICE BUILDINGS
2174	16.36.17-1	1235 STORRS RD	REGIONAL SCHOOL DISTRICT 19 BOS HIGH SCHOOL
2175	16.36.18-1	SO EAGLEVILLE RD	REGION 19 BRD OF EDUCATION MANSFIELD WILLINGTON ASHFORD
2246	16.38.2	25 WILLOWBROOK RD	SCHURIN RONALD G and SCHURIN EMILY VAN NESS
2247	16.38.3	31 WILLOWBROOK RD	SOROKA JAMES M and SOROKA JACQUELINE M
2248	16.38.4	39 WILLOWBROOK RD	SMITH DOLORES S
2249	16.38.5	47 WILLOWBROOK RD	KINO JOSEPHINE A B
2250	16.38.6	57 WILLOWBROOK RD	BERGMAN THEODORE L and BERGMAN PATRICIA S
2251	16.38.7	67 WILLOWBROOK RD	BANSAL RAJEEN and SUZANNE SINGER BANSAL REVOCABLE TRUST
2252	16.38.8	85 WILLOWBROOK RD	SCHWAB RICHARD L and SCHWAB KRISTIN E
2253	16.38.9	96 GURLEYVILLE RD	MARTINSON JURI and MARTINSON EVE
2262	16.38.9-1	79 DOG LA	MUSIEK FRANK E and SHEILA J
2263	16.38.11-1	88 GURLEYVILLE RD	LODEWICK PHILIP H and CHRISTINE
2270	16.39.1	24 WILLOWBROOK RD	BELL TIMOTHY J and BELL PAULETTE MARIE
2271	16.39.2	28 WILLOWBROOK RD	LEBOWITZ GERALD M and ANITA ZOE
2272	16.39.3	34 WILLOWBROOK RD	POCIASK JAMIE D H and BARRY J
2273	16.39.4	33 OAK HILL RD	WARDWELL ELIZABETH TRUE EXECTURIX WARDWELL WALTER IRVING EST OF
2274	16.39.5	19 OAK HILL RD	OBRIEN CARAGH M and LOTOCKO JOSEPH J
2278	16.40.1	1298 STORRS RD	SOUTHERN N E TELEPHONE CO ATTN TAX
2279	16.40.2	32 OAK HILL RD	COOK DARREN M and PAUL A
2280	16.40.3	52 WILLOWBROOK RD	NORRIS ELIZABETH
2281	16.40.4	58 WILLOWBROOK RD	RYAN PATRICIA
2282	16.40.5	64 WILLOWBROOK RD	WRIGHT BRADLEY R E and CATHRYN E
2283	16.40.6	76 WILLOWBROOK RD	BECKER PHILIP and KARINA A
2284	16.40.7	82 WILLOWBROOK RD	MCCARTHY PAUL S and TINA M
2285	16.40.8	95 DOG LA	HELENIC SOCIETY PANDEIA INC
2286	16.40.9	13 DOG LA	ROGERS STEVEN H and DONALDSON DOUGLAS P BOB RANDALL B
2301	16.41.9	1188 STORRS RD	ROSCOE E JOYCE WEEKS
2318	16.41.14	1232 STORRS RD	HAIDOUS NICHOLAS and GEORGIA and HAIDOUS FAMILY TRUST
2319	16.41.15	1244 STORRS RD	STORRS ASSOCIATES LLC
2320	16.41.16	10 DOG LA	WARZOCHA ESTHER EST OF C/O WARZOCHA GARY and BRIAN
2321	16.41.18	18 DOG LA	ROBARGE RICHARD JR and ROBARGE LESLIE D
2322	16.41.19	62 DOG LA	CORP OF NEW ENG DISTRICT OF LUTHERAN CHURCH MISSOURI SY
2329	16.41.8-1	1182 STORRS RD	CAPERSBARB LLC
2340	16.57.1	101 SO EAGLEVILLE RD	ING US STUDENTS NO 8 LLC C/O CONOVER MANAGEMENT
2345	16.57.5	113 SO EAGLEVILLE RD	CHAK PHILLIP and LEWIS PATRICIA C
2363	16.61.1	1156 STORRS RD	MARKLAND SAMUEL C
2364	16.61.2	STORRS RD	MARKLAND ALICE
2365	16.61.3	1132 STORRS RD	LIBERTY BANK
2366	16.61.4	17 FLAHERTY RD	MAKUCH and OO
2367	16.61.5	11 FLAHERTY RD	MARKLAND G THOMAS and TERRI
2368	16.61.2-1	FLAHERTY RD	MARKLAND ALICE
2369	16.61.3-1	STORRS RD	LIBERTY BANK
2377	16.62.1	STORRS RD	MARKLAND ALICE
2378	16.62.13	STORRS RD	MARKLAND ALICE
2459	16.41.8	101 COURTYARD LA	RICE SARAH C
3139	22.57.3	212 DAVIS RD	BURNS ROBERT L
3140	22.57.4	192 DAVIS RD	BABCOCK PATRICIA and SMITH LAURA J
3143	22.57.7	BIRCHWOOD HGHTS RD	MANSFIELD TOWN OF OPEN SPACE BIRCHWOOD HEIGHTS
3144	22.57.8	102 BIRCHWOOD HGHTS RD	GOSSELIN JEAN W
3145	22.57.10	92 BIRCHWOOD HGHTS RD	DAVIS II RIDGWAY and MARGARET
3146	22.57.11	78 BIRCHWOOD HGHTS RD	OCONNOR MICHAEL J and OCONNOR PATRICIA M
3147	22.57.12	70 BIRCHWOOD HGHTS RD	WEINER ROBIN S
3148	22.57.13	64 BIRCHWOOD HGHTS RD	HALL JOAN JOFFE
3149	22.57.14	58 BIRCHWOOD HGHTS RD	ROSE DALE A J
3150	22.57.15	44 BIRCHWOOD HGHTS RD	GONZALEZ JANE L
3151	22.57.17	40 BIRCHWOOD HGHTS RD	EMMERT FRED H and PEARL L
3152	22.57.18	28 BIRCHWOOD HGHTS RD	MACIUKA BENEDICT V and GRAZINA
3153	22.57.19	24 BIRCHWOOD HGHTS RD	EDENS DAVID G and SANDRA J
3154	22.57.4-1	196 DAVIS RD	FREEMAN RUTH E and JOE
3265	22.59.44	1105 STORRS RD	MEEHAN DONNA L



LOCUS MAP

	Existing	Proposed	Future Total
Square Footage	9,953,700 s.f.	111,767 s.f.	10,065,467 s.f.
Parking	11,632 spaces	250 spaces	11,882 spaces

NOTE:

Map data should not be interpreted as the actual field survey data. This data should not be used for legal description or conveyance purposes.

BETA ENGINEERING SUCCESS TOGETHER