UT MARTIN

CAMPUS MASTER PLAN UPDATE

December 2010

Prepared For:

The University of Tennessee

Prepared By:

centric ARCHITECTURE

University of Tennessee at Martin

2010 Master Plan Update
Summary and Recommendations

The University of Tennessee retained the planning and architectural firm of Centric Architecture to meet with University representatives and update the Master Plans previously prepared by this firm. This 2010 Master Plan update focuses on site improvements. Included are pedestrian and vehicular improvements to University Street and Mt. Pelia Road and design solutions for relocating internal parking and creating a new campus quadrangle. In addition, campus-wide guidelines for furniture, screening, site pavement and landscaping are included.

Today the University of Tennessee Martin campus fulltime enrollment is approximately 6720 FTE students, an increase from 5,300 FTE students in 2003. Since 2003 Master Plan update, land parcels have been acquired and buildings have been constructed and renovated. However, many of the 2003 Master Plan assumptions, objectives and conclusions remain valid.

Goals and Objectives

The Master Plan must respond to the policy directions set by the University and the changing needs of the students and faculty in this educational environment. A major goal of this master plan update is to provide UTM with a blueprint for rational expansion of the campus while preserving and renewing existing facilities and reinforcing the positive aspects of the campus. Particular goals are as follows:

- Define current and future facility needs, including renovations, expansions and new buildings that enhance the quality academic programs and support campus community life issues.

- Support UTM's mission of enhancing the educational, cultural and economic life in the region and serving as a focal point for a range of programs and services.

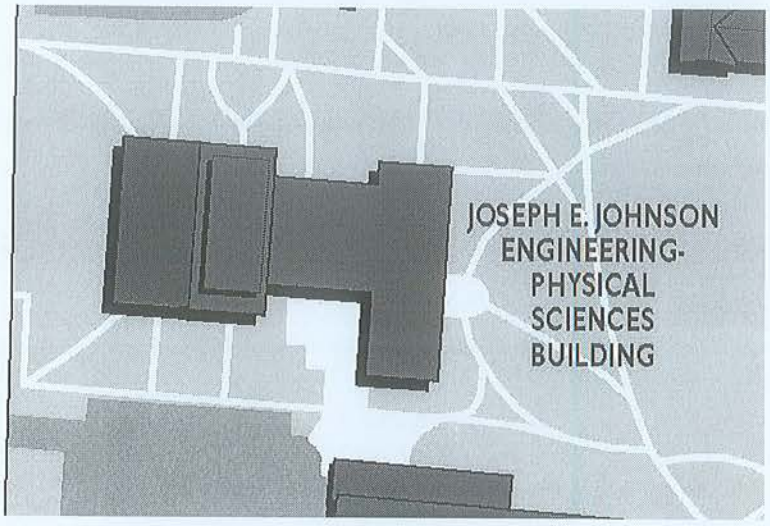
- Provide an overall impression of quality in all aspects of the campus, allowing UTM to recruit and retain the highest quality students and faculty.

- Provide a variety of options for housing to attract and maintain students while supporting and promoting a sense of community interaction on campus.

2010 Master Plan Recommendations

Specific building/renovation projects, adjacent land purchases and site improvements that have been identified as follows:

- **The Joseph E. Johnson Engineering/Physical Sciences Building** should expect to expand by approximately 30,000 sf. This expansion will accommodate future laboratory space and is based on the College of Engineering growth projections from 240 to 360 students.



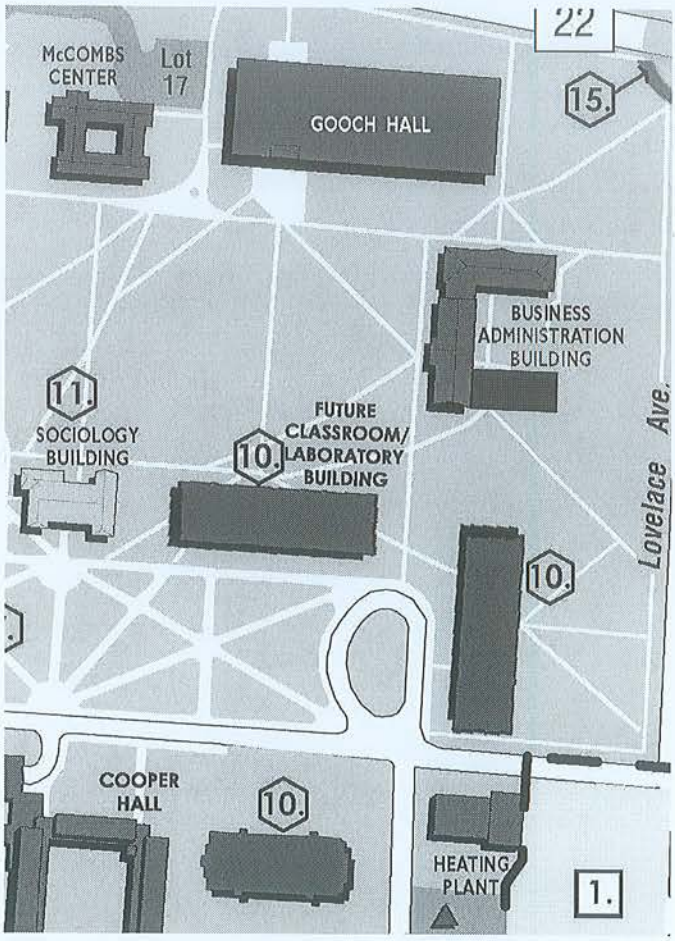
- **Additional Student Housing** is required for future University growth. The Master Plan proposes that existing Y Dorms, Ellington and Browning, accommodating 936 students, be removed. This site will be expanded with a variety of new apartment style housing units similar to units recently constructed. Buildings A-H will house approximately 675 students and the future housing (excluding sorority and fraternity cluster) is proposed to accommodate approximately 1212 students for a total of 1887 housing beds in this complex. University Courts and Grove Apartments are reaching a point of replacement and should be considered as sites for additional future housing.

  As demand for housing increases, existing parking lots 19, 7, 9 and 10 will serve as a site for constructing these additional units. New and displaced parking will be located on Future Land Acquisition Parcel 2. A new east-west access road is proposed to the south of Future Land Acquisition Parcel 2.

- **Additional Food Service Facilities** will be required as the University increases student headcount. These facilities are planned to be placed within or adjacent to future student housing.

- **New Classroom/Laboratory Buildings** will be required to support future growth. The master plan has strategically located these new buildings on the eastern edge of the campus to reinforce the existing historic quadrangle and help define the boundaries of the new quadrangle. Growth in student enrollment is expected to continue. At 8,000 FTE, the University will need an additional 120,000 SF of Classroom, Laboratory and Office space to meet THEC formula requirements.

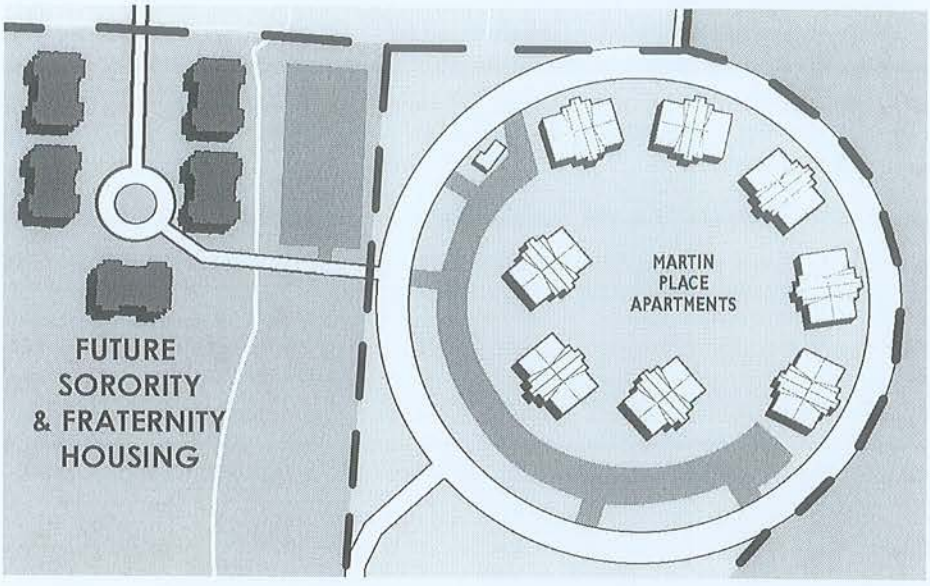
- **The Business Administration Building** is planned to receive an addition of approximately 10,000 SF to support the College of Business and Global Affairs programs.



- The **Sociology Building** is a candidate for renovation and code upgrade to support its long term use as classroom and faculty building.

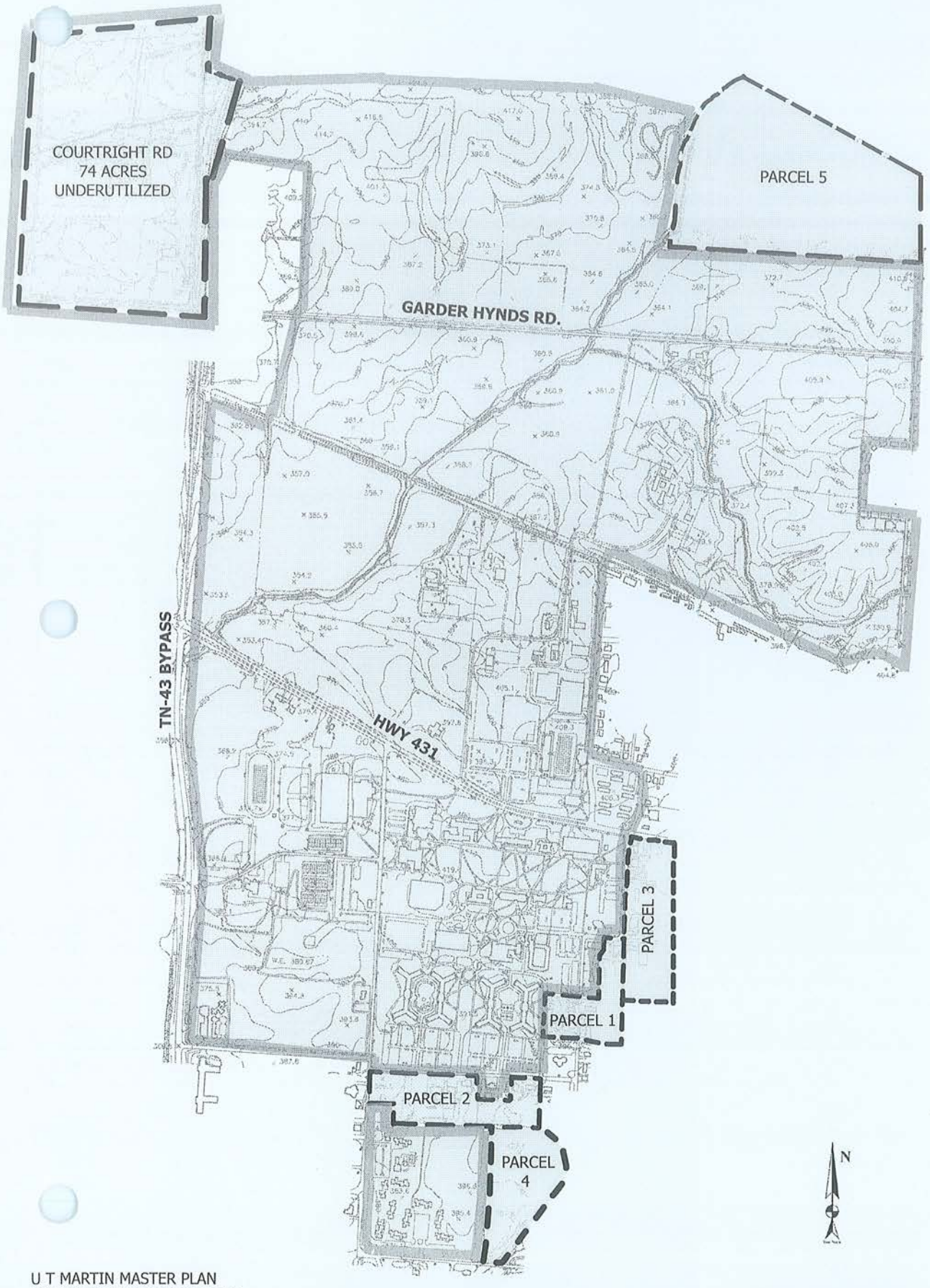
- The **Communications Building** is small, is in need of repair and is slated for removal. In its place, a new Classroom/Laboratory building is planned.

- **Sororities and Fraternities** may consider constructing future housing and/or meeting facilities in building sites adjacent to Martin Place Apartments. At present, the sororities and fraternities are decentralized on the edges of the campus, some along University Street toward Martin downtown. Consolidating the Greek facilities would add to the University's sense of Community.



- **Land Acquisition** of **parcels 1, 2 and 3** would allow for future building footprints, enhance the campus edges, and offer strategic locations for new and displaced parking. If **Parcel 4** were acquired, the University would realize an additional 384 beds in apartment style student housing. We have reviewed the potential disposition of approximately seventy-four (74) acres on Courtright Road that the University currently owns. This property is not contiguous to University property (separated by Martin Bypass) and is presently under utilized. In our opinion, the disposal of this property will have minimal negative impact to the long-range growth of the campus. Conversely, proceeds from the disposal of these 74 acres would allow the University to acquire **parcel 5,** a parcel contiguous to UTM agricultural property. Parcel 5 would support the University's Agriculture program over the long-term.

  The University should maintain ownership and control to the land now occupied by the Mental Health Center at the intersection of Hannings Lane and Martin Bypass. In the future, a gateway entry appropriately designed with signage, landscaping and lighting could serve as a major alternative access to and through the campus from Martin Bypass.



U T MARTIN MASTER PLAN
FUTURE LAND ACQUISITIONS

CENTRIC ARCHITECTURE

- **Clement Hall** remains a surge space utilized during campus building renovations. It continues to serve numerous campus activities and is used as storage for various campus entities. Clement is not ADA accessible.

- **Ceremonial Gateways** are proposed at the main entrances to the campus at the intersections of University Street/Lovelace Avenue and University Street/Mt. Pelia Road, Martin Bypass/Hanning Lane and Martin Bypass/University Street.

- **Improvements are proposed at the University's western entrance to the campus at University Street and Martin Bypass**. The University's rural setting could be enhanced by restoring forest and water presence into the campus and by softening the steel pillars of the existing digital signage through the use of masonry and landscaping. These additions will help to strengthen this major entry into the campus.

- **Pedestrian/Vehicular Safety Improvements,** proposed along University Street, include new signage and crosswalk improvements for the short-term and new traffic signalization for long-term. Along Mt Pelia Road, safety improvements include signage and a raised pedestrian crosswalk for the short-term and of closing a portion of Mt. Pelia Road as a potential long term consideration.

- **Campus Visual Improvements** include new landscaping buffers and canopies along University Avenue in support of the proposed Pedestrian/vehicular safety improvements. In the center of the campus, beginning at the future academic building and ending at the existing Library, a new pedestrian quadrangle is planned with plazas and nodes supporting student activities. Low maintenance attractive plant material supporting sustainable landscape practices are to be incorporated in this new quadrangle.

  See Attached Transportation Master Plan and Campus Landscape Design Guidelines Reports.

University of Tennessee Martin

Business College SF Analysis

04/16/2010

Classroom Requirements								
UTM Class rm #	THEC Class size criteria	UTM avg enrollment	UTM Hrs schedule per wk *	THEC classrooms stations criteria 60% util	NASF/Sta	NASF/CR	Actual sf	
220	15-20	18	37	30	21	630	632	2
33	21-26	25	48	40	18	720	1,081	361
16	27-32	32	45	50	18	900	621	-279
207	27-32	29	45	45	18	900	1116	216
36	33-47	35	48	48	18	1,080	1167	87
135	33-47	33	42	42	18	1,080	966	-114
201	33-47	37	39	39	18	1,080	850	-230
203	33-47	33	42	42	18	1,080	901	-179
				Total CR net assignable sf		7470	7334	-136

*30 hr/wk day & 17 hr/wk evening = 47hr/week max

Laboratory Requirements						
Labs rm #	avg enrollment	Hrs schedule per wk *	80% util	NASF/Sta	NASF/CR	Actual sf
25	14	12	28	40	1,120	1070
227	21	34*	28	40	1,120	1383

THEC recommended service areas 30% NASF			672
Existing Lab s service areas			317
		short	-355

*THEC recommends 20 hr/week

Information utilized based on average use of spaces for one week.
Classrooms should be scheduled 30 hours/week day and 17 hours per week evening.
Classroom Average seat utilization is 60%
Labs should be scheduled 20 hours per week with 80% utilization

University of Tennessee Martin

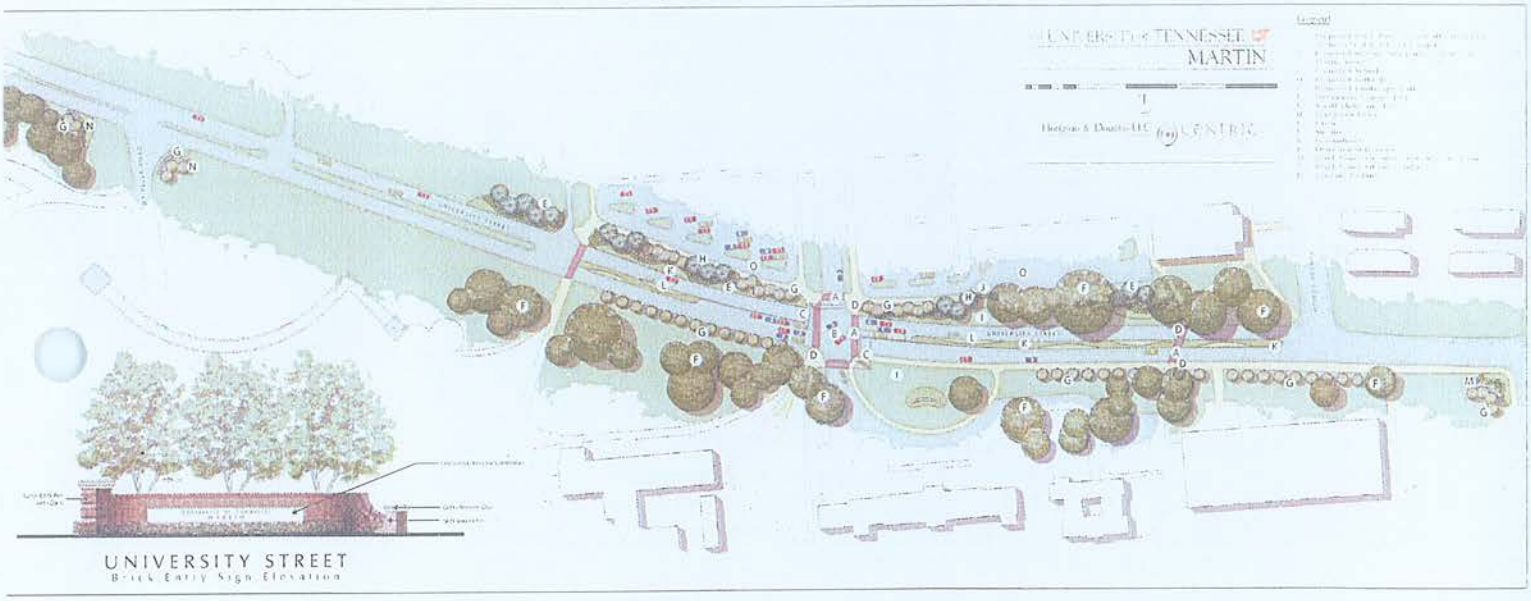
Business College SF Analysis

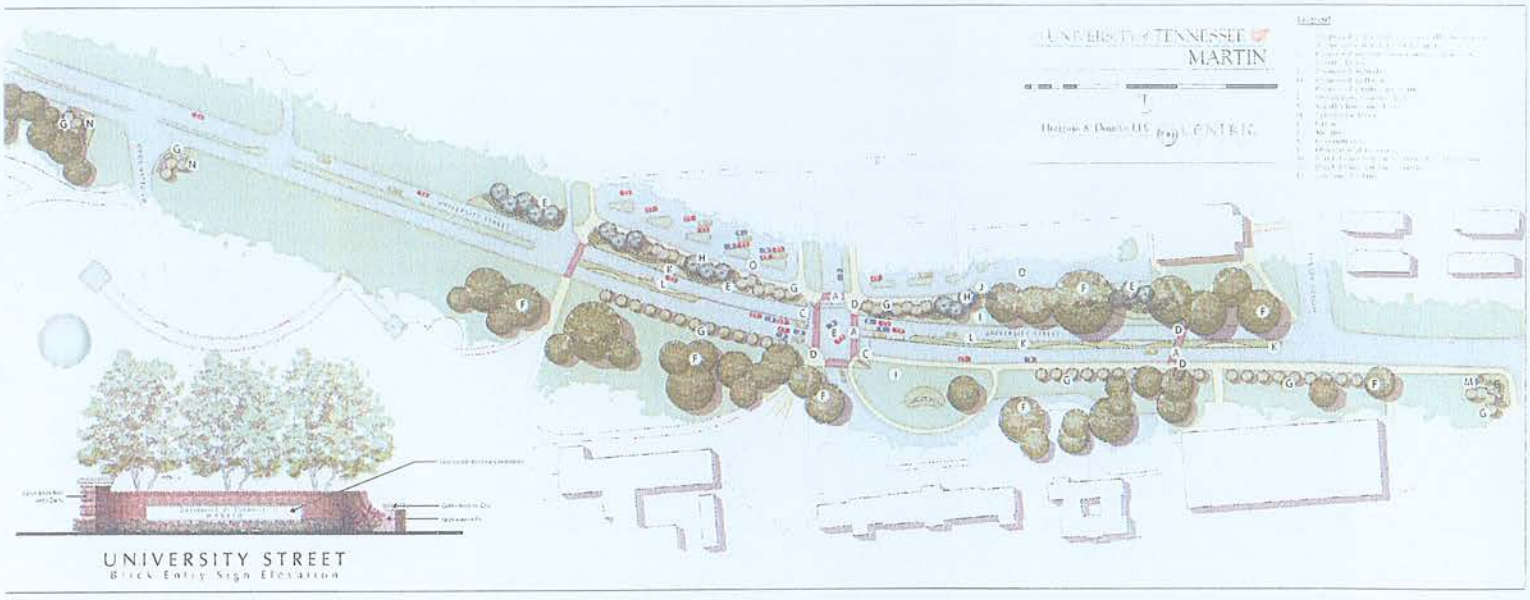
04/16/2010

Office Requirements					
Personnel category	Total FTE	THEC NASF/FTE	THEC Total NASF	Existing work sta	Existing NASF
Staff:Exec/Admin	3.500	120	420		
Faculty - 9 month	1.000	100	100		
Faculty - 12 month	0.770	100	77		
Faculty - 9 month	44.000	100	4400		
Dean - 12 month	1.000	180	180		
Assoc Dean/Dept chair -12 month	1.000	150	150		
Professor, Assoc, Asst - 12 month	1.000	150	150		
Special Appointment	1.300	100	130		
Staff:Hourly Input	1.000	100	100		
Staff:Hourly Input	7.075	100	707.5		
Staff:Hourly NoInput	1.850	100	185		
Staff: Professional	1.000	130	130		
Student: Hourly Input	8.800	60	528		
GradStu: Salary12mth	0.300	60	18		
	73.6		7275.5	74	8940

	existing wk stations	existing NASF
staff/clerical/	13	1,405
faculty	55	6,190
subtotal	68	7,595

office service	660
conf, storage, lounge	1047


TENNESSEE
MARTIN
UNIVERSITY STREET
Brick Entry Sign Elevation


UNIVERSITY OF TENNESSEE
MARTIN
UNIVERSITY STREET
Brick Entry Sign Elevation

THE UNIVERSITY of TENNESSEE
MARTIN

Campus Design Guidelines

27 June 2008

Prepared By: Hodgson & Douglas LLC
HD Project # 07-1360

for

Centric Architecture

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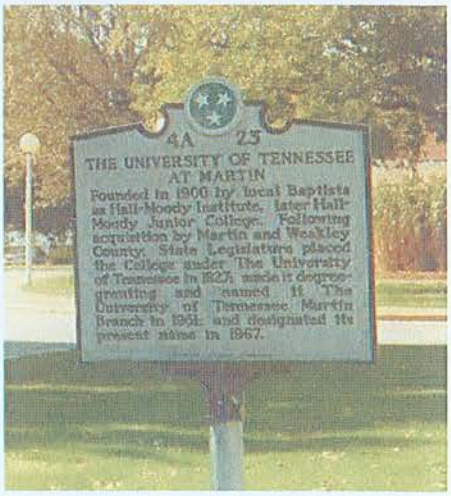
1.0 Introduction

The purpose of these guidelines is to provide consistency for the campus. These standards will assist in unifying the campus and help to create a more attractive visual environment. These standards should be applied to the existing campus as well as future development. Presently the U.T. Martin Campus consists of varied architectural styles and character that reflect different time periods of construction and tastes. Over the years, varied site improvements and site furnishings have been incorporated into new construction projects. This has resulted in somewhat of a "hodge-podge" campus look lacking in consistency and visual attractiveness. The creation of consistent design guidelines will create a unified and organized look for the campus. They can strengthen the campus identity and sense of place.

Often, prospective students form an opinion about a campus within the first 15 minutes of being there. Experiencing a cohesive and attractive campus could go a long way in attracting students in the future.

Every effort should be made to verify that new improvements are compliant with sustainable guidelines and ADA requirements. Site improvements should be reasonable to maintain by campus personnel. Security should always be considered when incorporating site improvements.



1.1 Site Furnishings

Benches

Place on edges of walks, at plazas and gathering points, to enhance interaction.

Standard bench
"Gretchen's Bench" with back and looped arm rests. As manufactured by Landscape Forms. Specify "polysite" (molded from 100% high density polyethylene, derived from post-consumer milk containers), use standard brown color. Benches to be permanently installed to meet manufacturer's standards

Tables and Chairs

Locate on terrace outside of Dining Hall and other student gathering locations. Tables and chairs should be movable to create opportunities for impromptu gathering and seating. Chairs could be stacked and secured at night with cable lock.

Chairs:
"Catena" (Landscape Forms) with powder-coat finish and are stackable.

Tables:
"Catena" (Landscape Forms) powder-coat color to match chairs, quad support.

Seat Walls

Where appropriate, seat walls should be provided in plazas or connected to buildings. They should be approximately 24" in height and 18"-24" wide to provide comfortable seating for campus users. Seat walls should be constructed of brick or stone to match adjacent architecture.

Bicycle Racks

Locate in visually apparent (security) but unobtrusive locations at building entrances. Bicycles should not impede pedestrian or vehicular traffic.

Standard Rack:
"Loop Bike Rack" (Recreation Creations, Inc.) Install per manufacturer's recommendations in black color.

Litter Receptacles

Locate at building entrances, pedestrian gathering points around campus, intersections of walks, and outdoor recreation areas.

Standard Receptacle:
"Gretchen's Litter Receptacle" (Landscape Forms) – side opening (with top) to match benches. Specify "polysite"; include liner. Receptacles are to be attached to pavement, per manufacturer's recommendations.

1.2 Screening

Screening should be used to block unsightly views of adjacent uses such as utility equipment, garbage dumpsters, service areas or parking lots. Care should be taken, particularly in parking lots, not to block views where pedestrians circulate that could result in security problems.

Where space is available, and the site is appropriate, evergreen plant materials should be utilized, which can provide an attractive and visually pleasing screen. Plant materials should be selected that will require a minimum of maintenance, pruning, etc. Size of plant material installed should be adequate to provide immediate screening. Lists of plant materials are included in the landscape section.

Where space is more restrictive or a denser screen is required to block noise, solid masonry screening should be used. These walls should be constructed of brick or stone masonry to complement adjacent buildings.

Where appropriate, wood fences may be incorporated (such as dumpster screening). These may be used in conjunction with brick piers to offer visual and architectural consistency.

Walls should be created tall enough to screen objectionable views. Metal or chain-link fencing should be avoided, as they are not as attractive or durable.

1.3 Site Pavement

An important component in creating a cohesive campus is the selection of walk and drive pavement. Important considerations include maintenance, safety, security, and durability. Every new or renovated project should comply with these guidelines.

Walks

Campus walkways should be constructed of broomswept concrete. They shall be 4" thick for exclusive pedestrian circulation and 6" thick in places where vehicles also will make use of the walks. Scoring joints shall appear 10' o.c. maximum with expansion joints used every 30' o.c. maximum. All walks shall be cross-sloped 1%. Walks should not exceed a lengthwise slope grade greater than 5%. Walks that exceed 5% grade shall be considered ramps and treated in a manner to comply with all currant ADA guidelines. Outside edges of all walks shall be carefully backfilled to level of walk. Scoring of walks shall be provided in a manner to avoid sharp or narrow points that could break off.

Drives

Many drives (particularly in the middle of the campus) that double as pedestrian walks may be poured in concrete as indicated above. This signals the fact that the drive will be used primarily by pedestrians, but could accommodate service, maintenance and emergency vehicles. This approach emphasizes the fact that campus should be primarily pedestrian. Removable steel bollards can also be used at the entrances to such pedestrian vehicular drive/walks. These can be locked and removed as needed to allow vehicles to make use of the drives.

Other cases where drives will serve exclusively for vehicles should be paved in asphalt with concrete curbs or curb and gutter. Pavement thickness shall accommodate large trucks as needed. Where there is pedestrian traffic adjacent to the drive, a separate concrete walk shall be provided. Drives should be constructed with driving lanes at approximately 11' in width. Where pedestrian crosswalks are needed, they should be constructed of concrete pavers or stamped asphalt. The difference in color and texture can prove to be traffic calming and ease pedestrian crossing.

Plazas

Plazas located in front of major buildings, at key walk intersections or outdoor gathering areas may be paved in brick or natural stone to complement the concrete walks found throughout the campus. This change of material to a "richer" pavement fabric suggests to the pedestrian that they are coming to a special or unique place. The pavement selections for these plazas should match or compliment the material of adjacent buildings. Plazas should include seat walls or benches for pedestrian gathering and seating. The special paving (brick or stone) are more costly than the concrete walks, but their use signals that these are important spaces. Limited use to smaller areas can control costs.

1.4 Landscaping

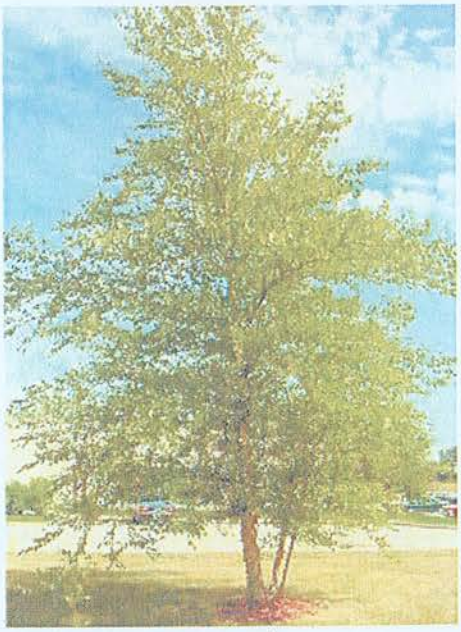
One of the most unique and distinctive characteristics of the U.T. Martin campus is the beautiful grove of mature trees that exist in the historic quadrangle. Because of their size, good health and age, these plantings have come to represent the very character and image of the University. Promotional literature often includes images from this space. Future campus landscape plantings should be established to reinforce open spaces, define views, screen unattractive views and create a comfortable, shady, user friendly natural environment. Placement of trees and plantings within parking lots on certain sides of buildings can reduce heat-island effects, and can actually help conserve heating and cooling costs. As new buildings, parking and walks are constructed, they remain static, but it is the landscaping that constantly changes and evolves as it grows. This changing landscape can define the image of a campus.

Every effort should be made to care for existing plantings by careful pruning and deep root fertilization if needed to prolong their healthy life. Great care should be taken to prevent new construction from entering the dripline zone of existing plantings. If it occurs, a licensed arborist should provide required limb and/or root pruning, followed by a careful program of fertilization and supplemental watering.

Plans should consistently be underway to provide the next generation of campus trees and landscaping, as existing trees move into decline, they will need to be replaced. Following is a description of each type of campus planting. Specific plant material recommendations follow.

Shade Tree - Pin Oak

Shade Tree - White Oak



Shade Tree - River Birch

Trees

Trees should be selected that are either native or indigenous to the area. Exotic trees that might not thrive or appear "foreign" to the campus should be avoided. Most lawn areas should include scattered plantings of trees to create a natural look which characterizes the existing campus. A licensed Landscape Architect should be consulted to insure that trees aren't planted too close together and create root zone competition. Trees should be selected based on their potential for longevity and healthy limb structure. Weak structured trees such as Bradford Pears or Silver Maples should be avoided. New plantings should avoid "mono-cultures" of a single species. This can prove to be problematic if disease or pests are found to attack a specific species. Rows of trees can be planted if that is the desired effect. This is often helpful in creating a focal point. Large deciduous trees should be selected with spreading canopies, and varied Fall leaf color.

Evergreen trees should be planted to provide screening as indicated above. They should be planted in an interspersed manner with shade trees, reflective of the historic quadrangle. Care should be taken to locate evergreens in spaces with adequate room to grow, and not be crowded. Where groupings are used, varied species should be incorporated. Evergreens should not generally be sheared, rather they should be allowed to have a natural growth habit. This will result in a more pleasing look and reduce maintenance requirements.

Small flowering trees should be planted as understory trees under large shade trees. They should be used to emphasize building entrances, campus entrances, pedestrian intersections and plazas. They can also be effective for planting under overhead utility lines. Native trees should be used whenever possible as they will fit in and grow well in the local environment. Groupings of a similar species can create an attractive look.

Shrubs

Shrubs should be planted in large groupings, creating a layering effect, with the larger shrubs in the rear. Where possible, groups of evergreen shrubs should be planted as a backdrop to deciduous flowering shrubs. Preferred locations are at building and campus entrances and at pedestrian plazas. Large evergreen shrubs can provide an effective screening. Sheering of the shrubs should be avoided, rather selective pruning should occur to preserve a soft and natural shape. Avoid circling buildings with foundation shrub plantings, rather plant small groupings of shrubs for a more pleasing effect at entrances and corners.

Groundcover

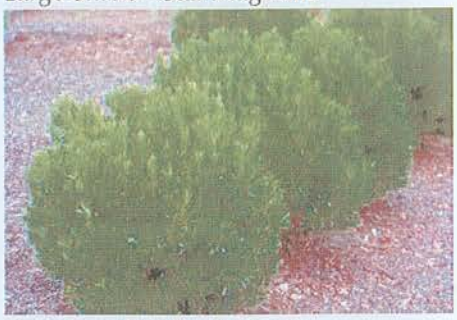
Groundcover plantings should be used primarily in areas with extensive shade where grass is difficult to grow. Large mulch areas can be created in the shaded areas and filled with groundcover for ease of maintenance. Low maintenance groundcover are preferred to planting such as English Ivy or Dwarf Wintergreen that require constant pruning. Groundcovers can effectively be used on slopes that exceed a gradient of 3:1 where lawn mowing can be difficult. Small areas that are impractical for turf are suited for groundcover.

Annuals/Perennials

Due to yearly expense, annuals should be limited to building entrances, entrance signs or gardens in plazas. As an alternative, perennials can be used to provide color and interest, and of course the blooms will reappear yearly.

It is recommended that trees be planted in the dormant season between Nov. 30 and April 1. It will be critical to provide careful maintenance for all newly installed plantings including watering.

Large Shrub - Star Magnolia



Evergreen Shrub - Inkberry

Ornamental Grass - Gulf Muhly

Shade Tree - Fruitless Sweetgum

Parking Lot Planting

All proposed and existing parking lots should be properly screened from the perimeter. Ideal screen height will be about 36" which screens the unattractive grills of cars, while still allowing clear visibility for the pedestrian. Parking lots should be broken up by incorporating islands with trees both for the environmental cooling effect and to visually break up the expanse of pavement. Islands should be planted with shade trees for maximum canopy and shade interest. The ends of the parking lots should be screened with landscape islands. Care should be taken to plant small flowering trees under overhead utility lines.

Plant Material List

Following is a list of recommended plantings to be used on the U.T. Martin Campus. Both existing and proposed trees should be identified with spring mounted tree labels. By using a variety of plants, a campus arboretum could be established and would prove useful as a training tool for classes.

Deciduous Canopy Trees

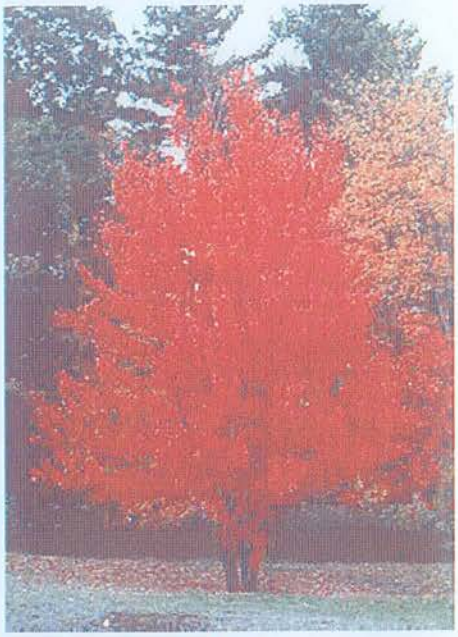
Acer rubrum species	Red maple
Acer saccharum species	Sugar Maple
Aesculus spp.	Buckeye
Betula nigra	River Birch
Carya ovata 'Shagbark Hickory'	Shagbark Hickory
Fagus grandifolia	American Beech
Fraxinus americana	White Ash
Fraxinus pennsylvanica	Green Ash
Ginkgo biloba	Ginkgo Tree
Gymnocladus dioicus	Kentucky Coffeetree
Liquidambar styraciflua	Sweetgum
Liriodendron tulipifera	Tulip Tree
Magnolia acuminate	Cucumber Tree
Nyssa sylvatica	Blackgum
Platanus acerifolia	London Planetree
Quercus acutissima	Sawtooth Oak
Quercus alba	White Oak
Quercus coccinea	Scarlet Oak
Quercus falcata	Southern Red Oak
Quercus lyrata	Overcup Oak
Quercus macrocarpa	Bur Oak
Quercus michauxii	Swamp Chestnut Oak
Quercus muehlenbergii	Chinkapin Oak
Quercus nigra	Water Oak
Quercus nuttalli	Nuttall Oak
Quercus pagoda	Cherrybark Oak
Quercus palustris	Pin Oak
Quercus phellos	Willow Oak
Quercus prinus	Chestnut Oak
Quercus rubra	Northern Red Oak
Quercus shumardii	Shumard Oak
Quercus stellata	Post Oak
Quercus velutina	Black Oak
Sassafras albidum	Sassafras

Deciduous Canopy Trees (cont.)

Taxodium distichum	Bald Cypress
Tilia americana	American Linden
Tilia cordata	Littleleaf Linden
Ulmus parvifolia 'Emer II'	Allee Elm
Ulmus parvifolia	Bosque Elm
Ulmus americana	Princeton Elm
Ulmus parvifolia	Chinese/Lacebark Elm
Zelkova serrata	Japanese Zelkova

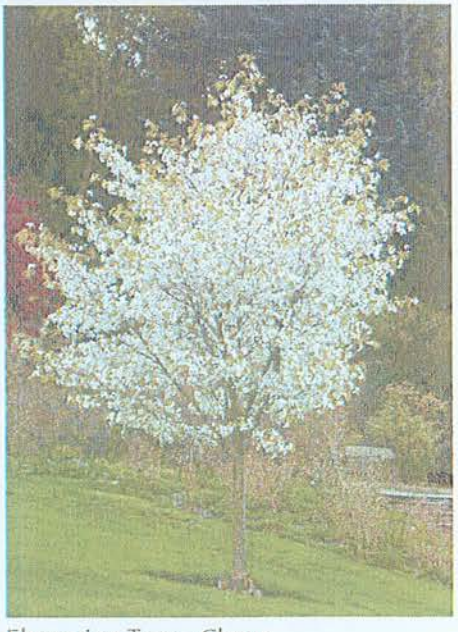
Deciduous Understory Trees

Acer buergeranum	Trident Maple
Acer ginnala	Amur Maple
Acer palmatum	Japanese Maple
Acer pensylvanicum	Striped Maple
Acer spicatum	Mountain Maple
Aesculus pavia	Red Buckeye
Amelanchier arborea	Serviceberry
Bumelia lyciodides	Buckthorn Bumelia
Carpinus betulus	European hornbeam
Carpinus caroliniana	Hornbeam
Cercis canadensis	Eastern Redbud
Chionanthus virginicus	Fringetree
Cladrastis kentukea	Yellowwood
Cornus florida	Flowering Dogwood
Cornus kousa	Kousa Dogwood
Crataegus phaenopyrum	Washington Hawthorne
Crataegus viridis 'Winter King'	Winter King Hawthorne
Franklinia alatamaha	Franklin Tree
Halesia carolina	Carolina Silverbell
Hamamelis virginiana	Witch Hazel
Koelreuteria paniculata	Golden Raintree
Magnolia x soulangiana	Saucer Magnolia
Magnolia stellata	Star Magnolia
Malus species	Crabapple
Oxydendron arboretum	Sourwood
Prunus 'Okame'	Okame Cherry
Prunus x yedoensis	Yoshino Cherry
Styrax spp.	Snowbell



Shade Tree - Red Maple

Flowering Tree - Serviceberry



Flowering Tree - Cherry

Evergreen Tree - Cryptomeria

Evergreen Shrub - Otto Luyken Laurel

Street Trees

Acer rubrum species	Red maple
Acer saccharum species	Sugar Maple
Liquidambar styraciflua 'Rotundiloba'	Fruitless Sweetgum
Platanus acerifolia	London Planetree
Quercus phellos	Willow Oak
Tilia cordata	Littleleaf Linden
Ulmus parvifolia	Bosque Elm

Evergreen Canopy Trees

Cryptomeria japonica	Japanese Cryptomeria
Juniperus virginiana	Eastern Red Cedar
Magnolia grandiflora	Southern Magnolia
Pinus nigra	Austrian Pine
Pinus strobus	White Pine
Pinus thunbergii	Japanese Black Pine
Pinus virginiana	Virginia Pine

Evergreen Understory Trees

Ilex opaca species	American Holly
Ilex latifolia	Lusterleaf holly
Ilex x 'Nellie R. Stevens'	Nellie R. Stevens Holly
Ilex x attenuata 'Fosteri'	Foster Holly
Ilex x attenuate	Savannah Holly
Magnolia virginiana	Sweetbay
Prunus caroliniana	Cherry Laurel

Evergreen Shrubs

Buxus sempervirens	Boxwood
Prunus laurocerasus 'Magnolifolia'	English Laurel
Prunus laurocerasus 'Otto Luyken'	Otto Luyken Laurel
Prunus laurocerasus 'Zabel'	Zabel Laurel
Prunus laurocerasus 'Schipkaensis'	Schip Laurel
Taxus x media 'Densiformis'	Densiformis Yew
Taxus x media 'Hicksii'	Hicks Yew
Viburnum rhytidophyllum	Leatherleaf Viburnum
Viburnum rhytidophyllum	Willowood Viburnum

Flowering Shrubs

Chaenomeles speciosa	Flowering Quince
Hydrangea quercifolia	Oakleaf Hydrangea
Hydrangea species	Hydrangea
Jasminum rudeflorium	Winter Jasmine
Spiraea	Spirea
Viburnum plicatum var. tomentosum	Doublefile Viburnum

Groundcovers

Hedera helix	English Ivy
Hypericum calycinum	St. John's Wart
Liriope muscarii	'Big Blue' Lily Turf
Ophiopogon japonicus	Mondo Grass
Pachysandra terminalis	Pachysandra
Vinca minor	Periwinkle
Vinca major	Periwinkle

Flowering Shrub - Doublefile Viburnum

Groundcover - Leriope

TRANSPORTATION MASTER PLAN

UT MARTIN MASTER PLAN
MARTIN, TENNESSEE

PREPARED FOR:
CENTRIC ARCHITECTURE

Transportation
Consultants, LLC

214 CENTERVIEW DRIVE,
SUITE 240
BRENTWOOD, TN 37027

JUNE 2008

TRANSPORTATION MASTER PLAN
UT MARTIN MASTER PLAN
MARTIN, TENNESSEE

PREPARED FOR:
CENTRIC ARCHITECTURE

PREPARED BY:
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1. INTRODUCTION

The purpose of this study is to analyze the traffic and pedestrian impacts of the proposed Master Plan for the University of Tennessee campus in Martin, Tennessee (UT Martin). The Master Plan has a 10 year planning horizon. This study was prepared in order to address access and pedestrian needs for the campus and to evaluate the traffic impacts of the assumed campus growth.

In this study, the operating characteristics of the intersections in the vicinity of the project site are evaluated. The expected trips generated by the assumed campus growth are estimated and distributed to the roadway network. The intersections are then re-evaluated to determine the anticipated traffic impacts of the growth. Finally, recommendations are presented, including roadway, pedestrian, parking, and/or traffic control improvements that are needed to accommodate the expected traffic growth.

2. PROJECT DESCRIPTION

The location of the UT Martin campus is shown in Figure 1. UT Martin is generally bounded by Volunteer Drive to the north, Hannings Lane to the south, Lovelace and Moody Avenues to the east, and Martin Bypass to the west. Two major streets also transect the campus; University Street runs east-west and Mt. Pelia Road runs north-south through the campus. Because these streets define the most intensive traffic and pedestrian activity, the limits of this study are defined as University Street to the north, Hannings Lane to the south, Lovelace and Moody Avenues to the east, and Mt. Pelia Road to the west. Other property in the vicinity of the campus is a mixture of residential, commercial, and agricultural land uses. Small retail stores and service businesses exist along University Street and residential uses adjoin the eastern side of campus.

In general, the primary traffic impacts of planning for most campuses result from expected increases in student enrollment. For the UT Martin Master Plan, assumed enrollment increases are modest. In Fall 2007, enrollment of UT Martin was 7,173 total students with a full-time equivalent (FTE) enrollment of 6,108 students. Based on information provided by Centric Architecture, an average annual enrollment increase of approximately 1% was assumed for the purposes of this study. The assumed growth was 690 new students for a total enrollment of 7,863 by 2018.

Location of the Project Site
(Not to Scale)

Figure 1.

3. EXISTING SETTING

3.1 Regional and Local Access

Regional and local access to the campus is provided by University Street, Hannings Lane, Lovelace Avenue, Moody Avenue, and Mt. Pelia Road. Two additional local streets that, for the purposes of this study, primarily serve as driveways of major parking lots are Pat Head Summitt Drive and Wayne Fisher Drive. Descriptions of these roadways are as follows:

- **University Street** generally travels in an east-west direction. University Street is designated as State Route 431 and provides a connection between Union City, Tennessee and Martin, Tennessee. Near the project site, University Street provides two travel lanes in each direction divided by a grass median. Sidewalks are provided on the south side of University Street. The posted speed limit is 30 mph. University Street forms the northern boundary of the UT Martin study area.

- **Hannings Lane** generally travels in an east-west direction and provides a connection between State Route 43, to the west, and Moody Avenue, to the east. Hannings Lane consists of one travel lane in each direction with approximately 30 feet of pavement. There are no sidewalks on Hannings Lane and the posted speed limit is 30 mph. Hannings Lane forms the southern boundary of the UT Martin study area.

- **Lovelace Avenue** travels in a north-south direction, extending from Hurt Street to Oxford Street. Lovelace Avenue consists of one 11 foot travel lane in each direction. North of St. Charles Street, Lovelace Avenue has ten foot sidewalks and angled parking on the west side of the street. South of St. Charles Street, there are six foot sidewalks on the west side of the street and parallel parking on both sides of the street. There is no posted speed limit on Lovelace Avenue. Lovelace Avenue forms part of the eastern boundary of the UT Martin study area.

- **Moody Avenue** travels in a north-south direction, extending from Raven Street to Hurt Street where it terminates. Moody Avenue consists of one travel lane in each direction with approximately 25 feet of pavement. Moody Avenue has four foot sidewalks on the east side of the street between Hurt Street and Lee Street. There is no posted speed limit on Moody Avenue. Moody Avenue forms part of the eastern boundary of the UT Martin study area.

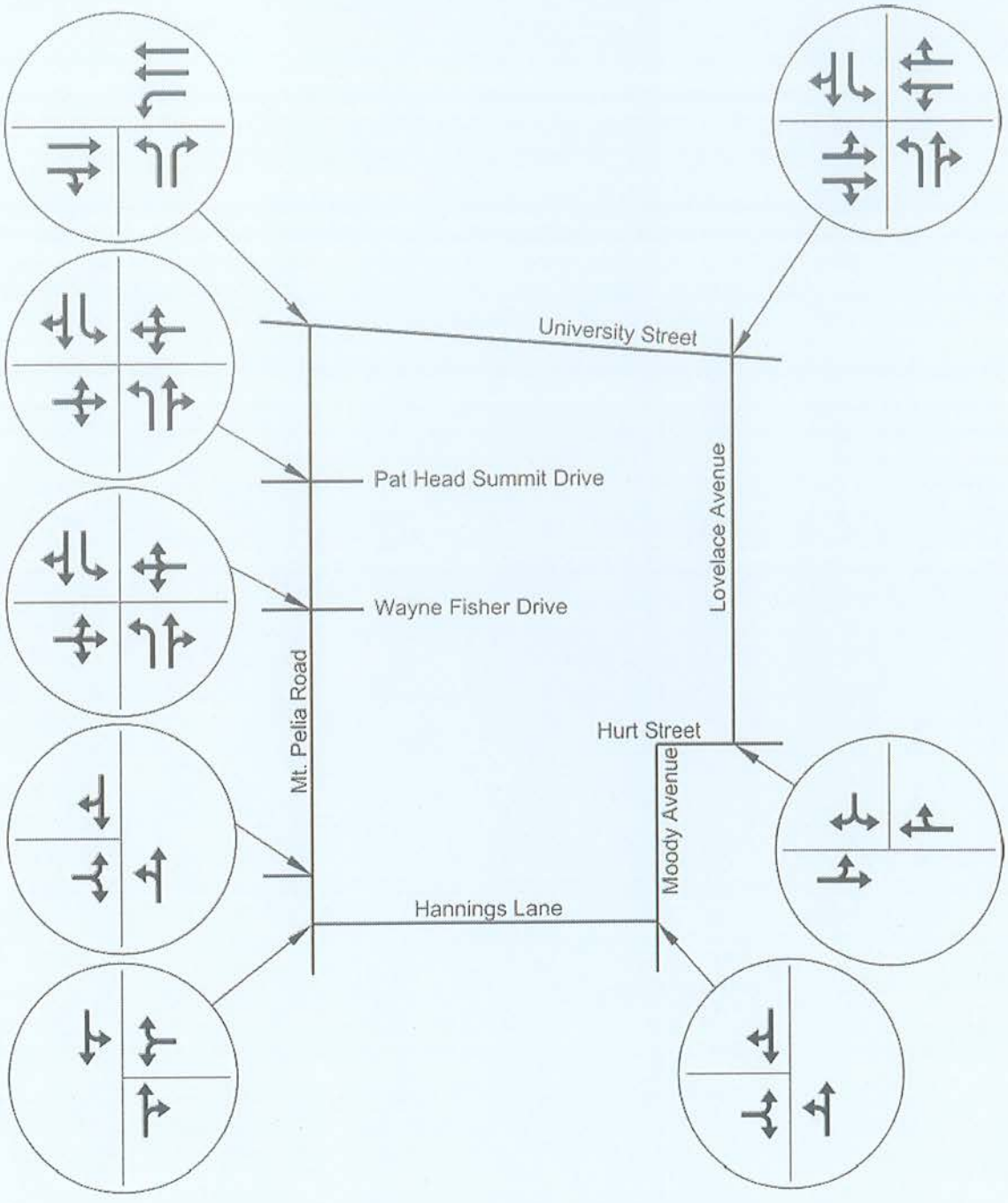
- **Mt. Pelia Road** in the study area travels in a north-south direction through the center of the UT Martin campus. Mt. Pelia Road extends south from University Street to Peach Street where it turns to the west and eventually becomes State Route 216. Mt. Pelia Road consists of one travel lane in each direction with approximately 21 feet of pavement south of Wayne Fisher Drive. North of Wayne Fisher Drive, Mt. Pelia Road consists of one travel lane in each

direction and left turn lanes with approximately 35 feet of pavement. North of Pat Head Summit Drive, six foot sidewalks are provided on the west side of the street. The posted speed limit is 30 mph.

- **Pat Head Summitt Drive** travels in an east-west direction and primarily serves as a driveway to a major parking lot as well as athletic-related areas. Pat Head Summit Drive includes one 10.5 foot travel lane in each direction. Four foot sidewalks are included on the north side of the street. The posted speed limit is 20 mph.

- **Wayne Fisher Drive** travels in an east-west direction and primarily serves as a driveway to a major parking lot and as a service entrance for this part of campus.

Figure 2 shows the existing lane configurations for the intersections within the study area.



Existing Laneage
(Not to Scale)

Figure 2.

3.2 Existing Traffic Operations

To provide data for the traffic impact analysis, manual traffic and pedestrian counts were conducted at the following intersections:

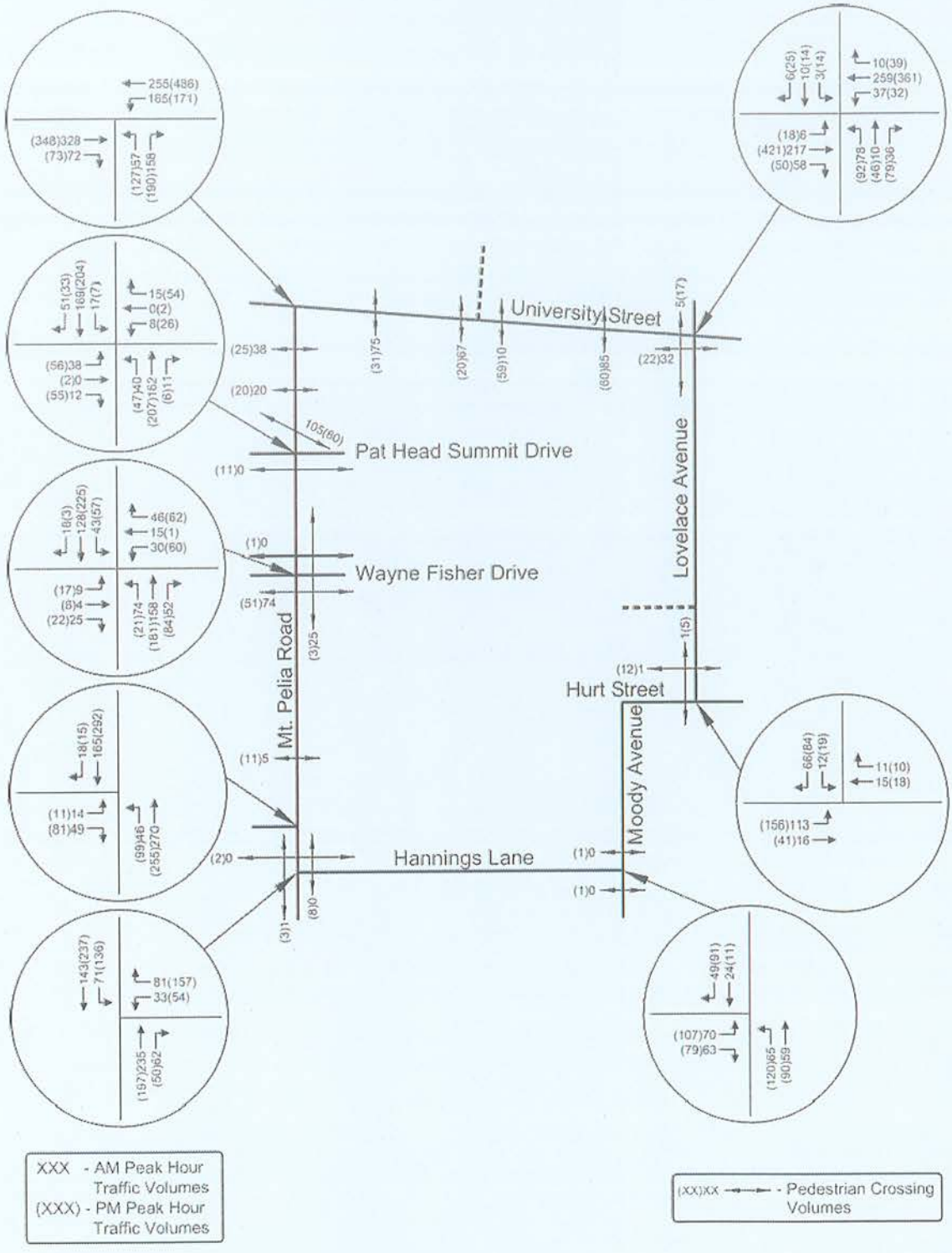
- University Street and Lovelace Avenue
- Lovelace Avenue and Hurt Street
- Moody Avenue and Hannings Lane
- Hannings Lane (east) and Mt. Pelia Road
- Hannings Lane (west) and Mt. Pelia Road
- Mt. Pelia Road and Wayne Fisher Drive
- Mt. Pelia Road and Pat Head Summitt Drive
- Mt. Pelia Road and University Street

Specifically, the traffic counts were conducted from 7:00-10:00 AM and 3:00-6:00 PM on a typical weekday for the purposes of this study. Additional pedestrian counts were also performed at marked crosswalks along Mt. Pelia Road and along University Street within the study area. From the counts obtained, it was determined that the peak hours of traffic flow at the intersections occur from 9:00 – 10:00 AM and 4:45 - 5:45 PM. The existing peak hour turning movement volumes and pedestrian crossing counts for the study area are presented in Figure 3. A detailed summary of the turning movement counts are included in Appendix A.

To determine the current operation of the intersections, capacity analyses were performed for the AM and PM peak hours. The capacity calculations were performed according to the methods outlined in the *Highway Capacity Manual*, TRB 2000.

The capacity analyses result in the determination of a Level of Service (LOS) for an intersection. The LOS is a concept used to describe how well an intersection or roadway operates. LOS A is the best, while LOS F is the worst. The descriptions of LOS for signalized intersections are presented in Table 1, the descriptions of LOS for unsignalized intersections are presented in Table 2.

The results of the capacity analyses for the existing conditions at the intersections studied are presented in Table 3. As shown in Table 3, the signalized intersections and the critical turning movements at the unsignalized intersections operate with a LOS C or better during both peak hours. Appendix B contains the capacity analysis worksheets.



Existing Peak Hour Traffic Volumes
(Not to Scale)

Figure 3.

TABLE 1

DESCRIPTIONS OF LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

Level of Service	Description	Control Delay per Vehicle (sec/veh)
A	Operations with very low delay. This occurs when progression is extremely favorable. Most vehicles do not stop at all.	≤ 10
B	Operations with stable flows. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	>10 and ≤ 20
C	Operations with stable flow. Occurs with fair progression and/or longer cycle lengths. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	>20 and ≤ 35
D	Approaching unstable flow. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop.	>35 and ≤ 55
E	Unstable flow. This is considered to be the limit for acceptable delay. These high delays generally indicate poor progression, long cycle lengths, and high V/C ratios.	>55 and ≤ 80
F	Unacceptable delay. This condition often occurs with oversaturation or with high V/C ratios. Poor progression and long cycle lengths may also cause such delay levels.	>80.0

Source: *Highway Capacity Manual,* TRB 2000

TABLE 2

DESCRIPTIONS OF LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Control Delay (sec/veh)	Description
A	≤ 10.0	Little or no delay
B	>10 and ≤ 15	Short traffic delay
C	>15 and ≤ 25	Average traffic delay
D	>25 and ≤ 35	Long traffic delay
E	>35 and ≤ 50	Very long traffic delay
F	> 50.0	Extreme traffic delay

Source: *Highway Capacity Manual*, TRB 2000

TABLE 3

PEAK HOUR LEVELS OF SERVICE
EXISTING CONDITIONS

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE			
		AM PEAK HOUR		PM PEAK HOUR	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
University Street and Lovelace Avenue	Overall Intersection	A	9.2	A	9.9
Lovelace Avenue and Hurt Street	Eastbound Through/Right Turns	A	7.4	A	7.5
	Southbound Left/ Right Turns	A	9.1	A	9.6
Moody Avenue and Hannings Lane	Northbound Left Turns	A	7.5	A	7.7
	Eastbound Left and Right Turns	B	10.3	B	12.8
Hannings Lane (east) and Mt. Pelia Road	Southbound Left Turns	A	8.1	A	8.1
	Westbound Left and Right Turns	B	12.3	C	15.7
Hannings Lane (west) and Mt. Pelia Road	Northbound Left Turns	A	7.7	A	8.2
	Eastbound Left and Right Turns	B	10.6	B	12.0
Mt. Pelia Road and Wayne Fisher Drive	Northbound Left Turns	A	7.7	A	7.8
	Southbound Left Turns	A	7.8	A	8.0
	Eastbound Left/Through/Right	B	13.8	C	15.7
	Westbound Left/Through/Right	B	11.8	B	14.0
Mt. Pelia Road and Pat Head Summitt Drive	Northbound Left Turns	A	7.8	A	7.9
	Southbound Left Turns	A	7.6	A	7.7
	Eastbound Left/Through/Right	B	10.7	B	12.5
	Westbound Left/Through/Right	B	13.2	B	14.9
Mt. Pelia Road and University Street	Overall Intersection	B	12.7	B	12.3

Note: For two-way stop unsignalized intersections, a LOS is presented for each critical turning movement. For all-way stop and signalized intersections, an overall LOS is presented.

4. BACKGROUND TRAFFIC VOLUMES

4.1 Establishing Background Volumes

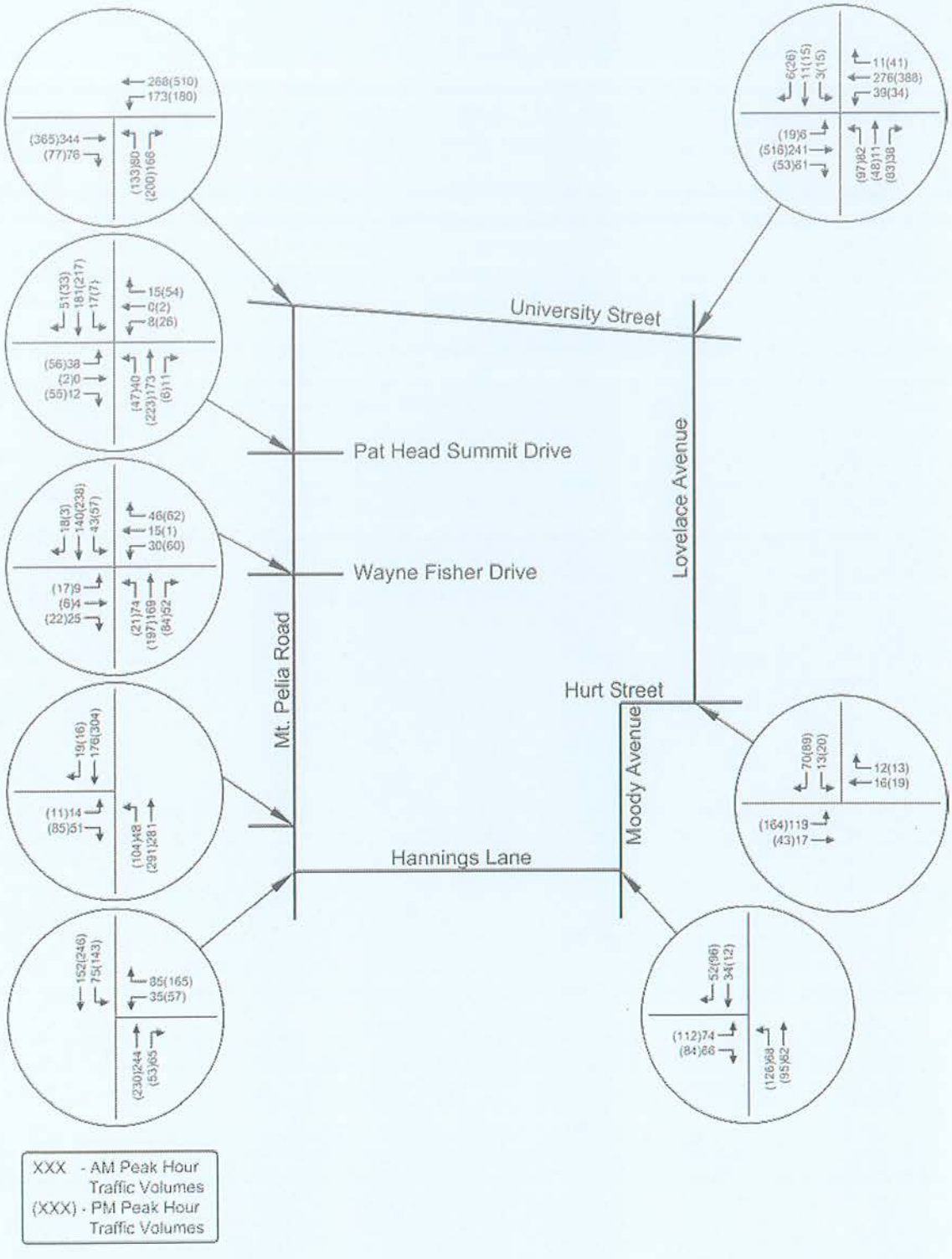
As previously stated, the master plan is expected to be completed over the next 10 years. In order to account for traffic growth prior to the completion of the master plan, background traffic volumes were established. Average Daily Traffic (ADT) volumes obtained from the Tennessee Department of Transportation (TDOT) indicate that the traffic volumes in the vicinity of the project site have fluctuated very little in the past several years. However, to conservatively account for traffic growth that might occur aside from campus growth, the existing traffic volumes were increased by five percent over the ten year planning horizon. The ADT volumes obtained from area TDOT count stations are included in Appendix A.

The background peak hour traffic volumes are shown in Figure 4. These are the traffic volumes expected in the study area by the year 2018, even if the enrollment of UT Martin remained at current levels.

4.2 Background Traffic Operations

To determine the operation of the intersections studied under background conditions, capacity analyses were performed for the AM and PM peak hours. For the background analyses conducted, it was assumed that all intersections will keep the existing roadway geometry and traffic control.

The results of the capacity analyses for the 2018 background conditions at the study intersections are presented in Table 4. As shown in Table 4, the signalized intersections and the critical turning movements at the unsignalized intersections continue to operate with a LOS C or better during both peak hours. Appendix B contains the capacity analysis worksheets.



Background Peak Hour Traffic Volumes
(Not to Scale)

Figure 4.

TABLE 4

PEAK HOUR LEVELS OF SERVICE
BACKGROUND CONDITIONS

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE			
		AM PEAK HOUR		PM PEAK HOUR	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
University Street and Lovelace Avenue	Overall Intersection	A	9.3	B	10.1
Lovelace Avenue and Hurt Street	Eastbound Through/Right Turns	A	7.5	A	7.6
	Southbound Left/ Right Turns	A	9.1	A	9.7
Moody Avenue and Hannings Lane	Northbound Left Turns	A	7.5	A	7.7
	Eastbound Left and Right Turns	B	10.6	B	13.3
Hannings Lane (east) and Mt. Pelia Road	Southbound Left Turns	A	8.1	A	8.3
	Westbound Left and Right Turns	B	12.7	C	17.5
Hannings Lane (west) and Mt. Pelia Road	Northbound Left Turns	A	7.7	A	8.3
	Eastbound Left and Right Turns	B	10.7	B	12.3
Mt. Pelia Road and Wayne Fisher Drive	Northbound Left Turns	A	7.7	A	7.8
	Southbound Left Turns	A	7.8	A	8.0
	Eastbound Left/Through/Right	B	14.2	C	16.3
	Westbound Left/Through/Right	B	12.0	B	14.4
Mt. Pelia Road and Pat Head Summitt Drive	Northbound Left Turns	A	7.8	A	7.9
	Southbound Left Turns	A	7.6	A	7.7
	Eastbound Left/Through/Right	B	10.9	B	12.8
	Westbound Left/Through/Right	B	13.6	C	15.4
Mt. Pelia Road and University Street	Overall Intersection	B	12.8	B	12.4

Note: For two-way stop unsignalized intersections, a LOS is presented for each critical turning movement. For all-way stop and signalized intersections, an overall LOS is presented.

5. IMPACTS

5.1 Trip Generation

A traffic generation process was used to estimate the amount of traffic expected to be generated by the campus growth reflected in the master plan. As mentioned previously, it is expected that the UT Martin enrollment will increase by approximately 690 students to a total of 7,863 students between 2008 and 2018. It is assumed that this growth will be consistent through the 10 year planning horizon. Factors for the trip generation were taken from *Trip Generation*, Seventh Edition, which is a publication of the Institute of Transportation Engineers (ITE). Trip generation calculations are provided in Appendix C.

The assumed campus enrollment increases are expected to generate a total of approximately 1,547 additional trips per day by 2018. The AM and PM peak hour trip generations for the total master plan will each equal approximately 137 trips.

On university campuses, large parking areas are typically the destination for the majority of vehicular trips. Internal trips between buildings are primarily made on foot or by bicycle. As a result, the existing traffic counts and the existing parking locations were used to distribute the trips that will be generated by the new students.

Table 5 shows the daily, AM, and PM peak hour trip generation for the assumed enrollment increase.

TABLE 5

TRIP GENERATION
FOR THE PROPOSED UT MARTIN MASTER PLAN

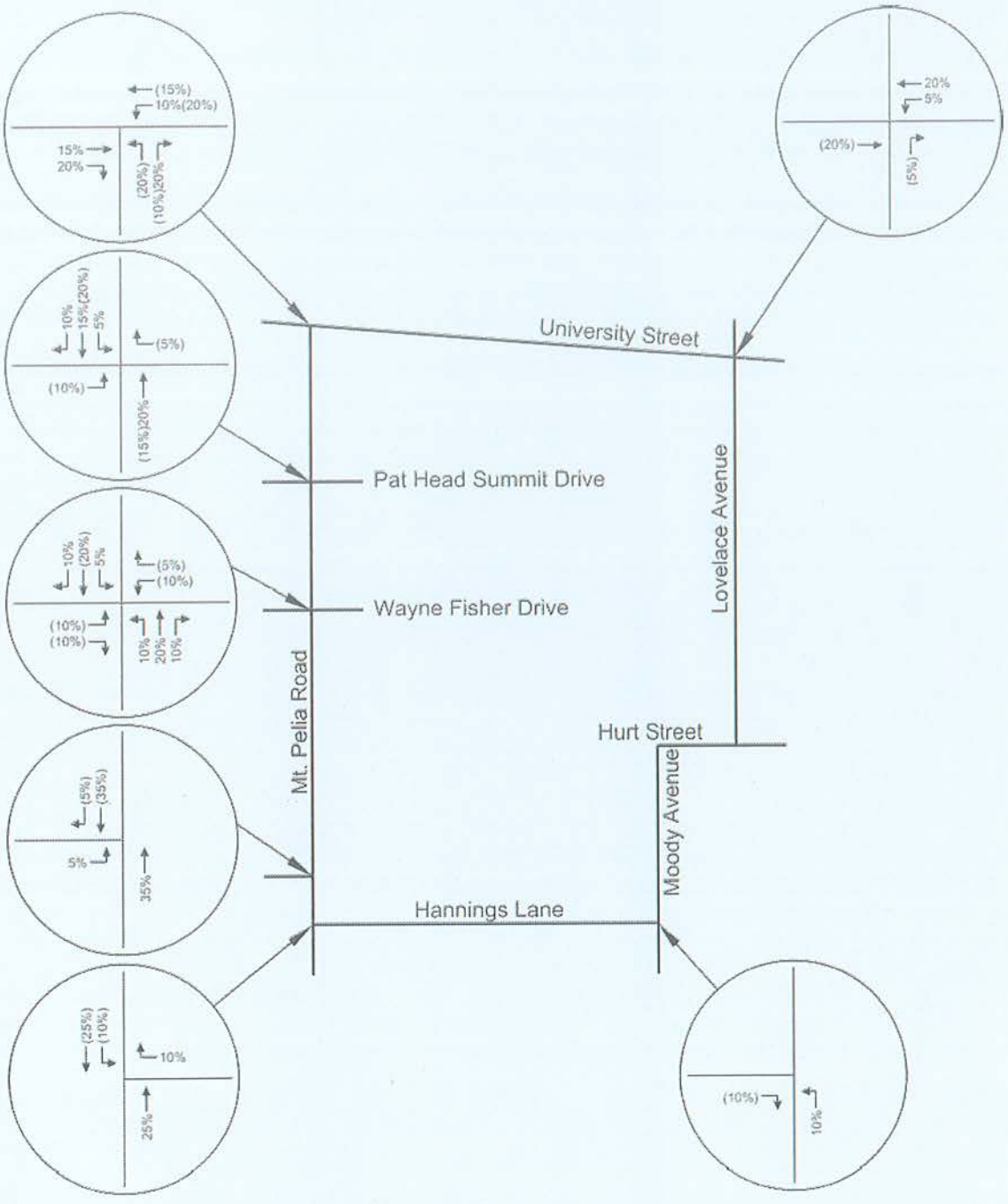
LAND USE	Size		GENERATED TRAFFIC			
		DAILY	AM PEAK HR.		PM PEAK HR.	
		TRAFFIC	ENTER	EXIT	ENTER	EXIT
College/ University	690 student increase	1,547	110	27	41	96
Note: The numbers above are based on the trip generation of new student enrollment and associated faculty and staff increases.						

Source: Trip Generation, Seventh Edition

5.2 Trip Distribution and Traffic Assignment

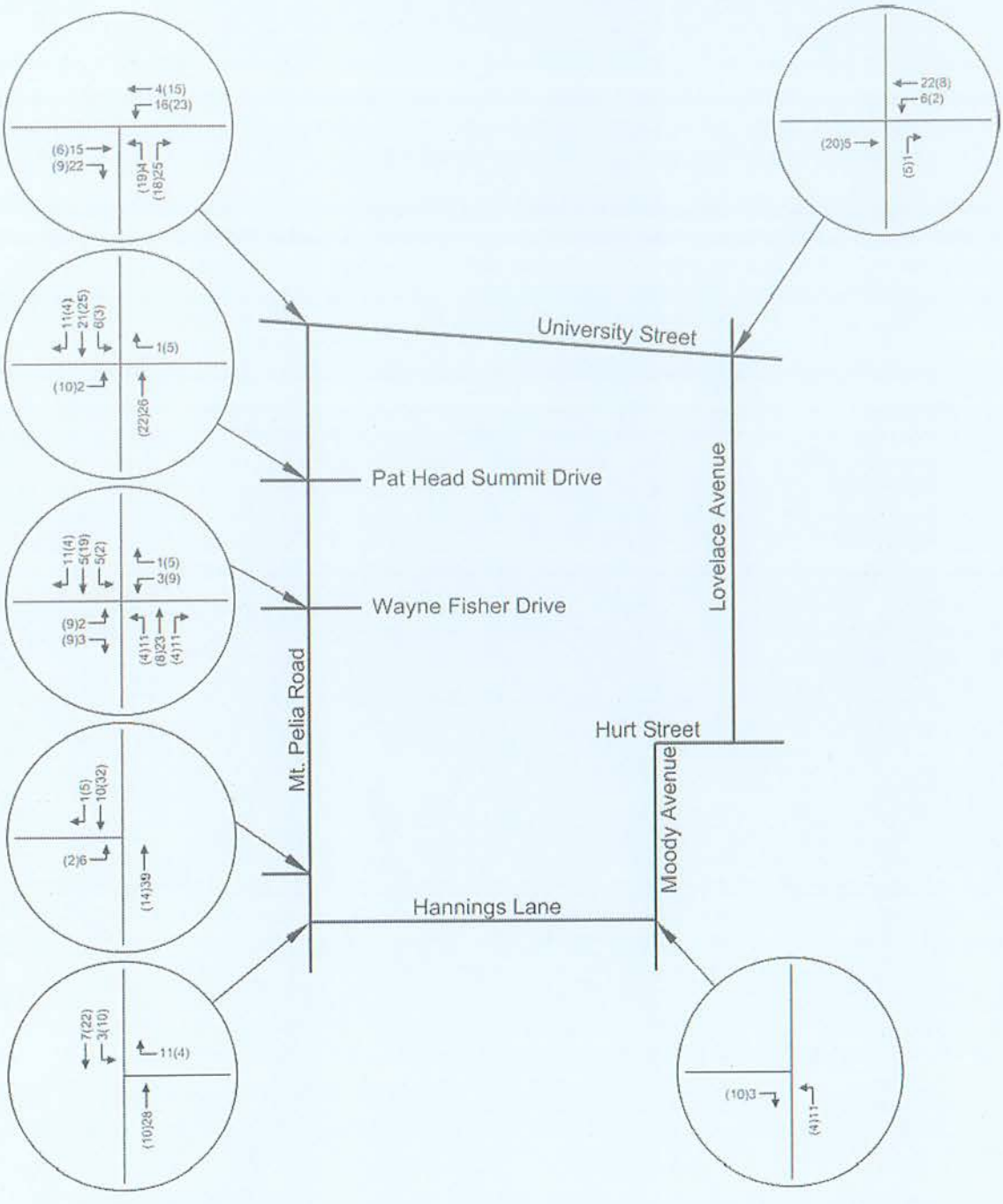
The new trips that will be generated by the campus improvements were added to the roadway system using the general directional distribution shown in Figure 5. This distribution is based primarily on the existing travel patterns in the area as well as locations of major parking areas. As shown by Figure 5, it was assumed that approximately 40% of the new traffic will be oriented west of the site along University Street and Hannings Lane. Approximately 25% is expected to be oriented east of the campus along University Street and approximately 35% is expected to be oriented south of the campus along Mt. Pelia Road and Moody Avenue.

A traffic assignment based on the traffic generation and trip distribution is presented as Figure 6.



Distribution of New Student Traffic
(Not to Scale)

Figure 5.



Assignment of New Student Traffic
(Not to Scale)

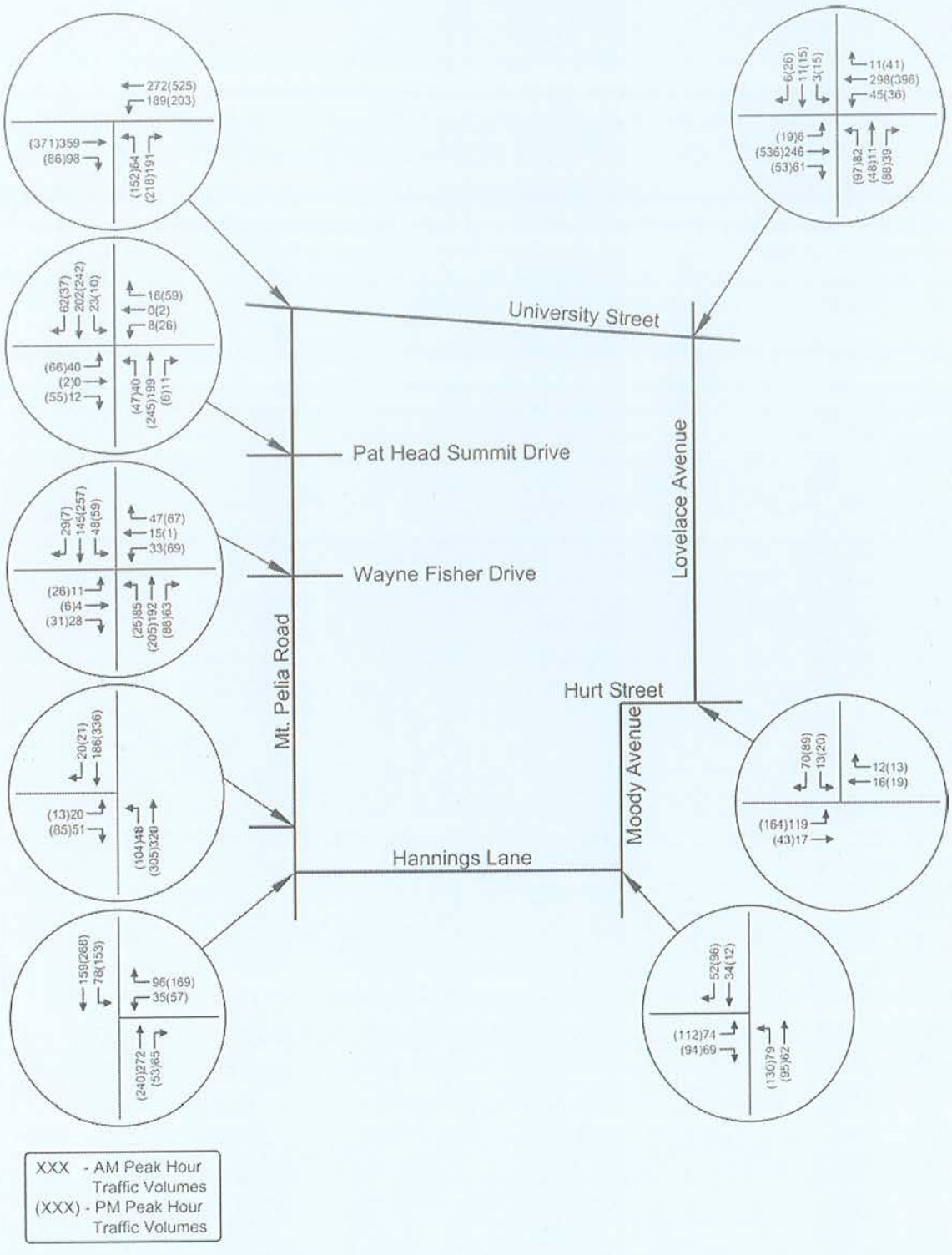
Figure 6.

5.3 Capacity / Level of Service Analyses

The new student generated traffic volumes were added to the background peak hour traffic volumes in order to obtain the total projected traffic volumes for the intersections within the study area. Figure 7 presents the total projected AM and PM peak hour traffic volumes expected at the completion of the master plan.

Capacity analyses were performed in order to determine the impact of the growth on the study intersections. Also, these capacity analyses were used to evaluate the need for roadway and traffic control improvements at the intersections studied. For the analyses conducted, it was assumed that the intersections will keep the existing geometry and traffic control. However, signal timings were optimized.

The results of the capacity analyses for the projected conditions at the study intersections are presented in Table 6. As shown in Table 6, the signalized intersections and the critical turning movements at the unsignalized intersections operate with a LOS C or better during both peak hours. Appendix B contains the capacity analysis worksheets.



Total Projected Peak Hour Traffic Volumes
(Not to Scale)

Figure 7.

TABLE 6

PEAK HOUR LEVELS OF SERVICE
PROJECTED CONDITIONS

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE			
		AM PEAK HOUR		PM PEAK HOUR	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
University Street and Lovelace Avenue	Overall Intersection	A	9.3	B	10.2
Lovelace Avenue and Hurt Street	Eastbound Through/Right Turns	A	7.5	A	7.6
	Southbound Left/ Right Turns	A	9.1	A	9.7
Moody Avenue and Hannings Lane	Northbound Left Turns	A	7.5	A	7.7
	Eastbound Left and Right Turns	B	10.8	B	13.4
Hannings Lane (east) and Mt. Pelia Road	Southbound Left Turns	A	8.2	A	8.3
	Westbound Left and Right Turns	B	13.2	C	18.9
Hannings Lane (west) and Mt. Pelia Road	Northbound Left Turns	A	7.8	A	8.4
	Eastbound Left and Right Turns	B	11.4	B	13.0
Mt. Pelia Road and Wayne Fisher Drive	Northbound Left Turns	A	7.8	A	7.9
	Southbound Left Turns	A	7.9	A	8.0
	Eastbound Left/Through/Right	C	15.8	C	18.7
	Westbound Left/Through/Right	B	12.8	C	15.8
Mt. Pelia Road and Pat Head Summitt Drive	Northbound Left Turns	A	7.9	A	8.0
	Southbound Left Turns	A	7.7	A	7.8
	Eastbound Left/Through/Right	B	11.3	B	13.4
	Westbound Left/Through/Right	B	14.8	C	17.8
Mt. Pelia Road and University Street	Overall Intersection	B	13.1	B	12.6

Note: For two-way stop unsignalized intersections, a LOS is presented for each critical turning movement. For all-way stop and signalized intersections, an overall LOS is presented.

6. CONCLUSIONS AND RECOMMENDATIONS

Overall, traffic operations on the UT Martin campus are good. Analyses have shown that the roadway network will operate with acceptable levels of service through the 10-year planning horizon without any additional roadway or intersection capacity. Even if enrollment growth is heavier than expected during this period, no traffic capacity problems are expected.

Pedestrian activity on campus, while heavy, is well-managed and drivers are generally aware and respectful of pedestrian crossings. Two areas of significant pedestrian activity exist, and these are the focus of improvement recommendations in this study. These are the University Street corridor and the Mt. Pelia Road corridor. To aid in the programming and funding of pedestrian-related improvements at UT Martin, recommendations are presented as near term and long term solutions.

6.1 University Street Corridor, Near Term Recommendations

Near term recommendations for the University Street corridor focus on signing and marking improvements. Currently, drivers are alerted to the presence of the four crosswalks between Dewberry Lane and Moody Avenue by crosswalk warning signs (MUTCD W11A-2[1]) supplemented by continuously flashing incandescent warning beacons. These signs are well-placed and highly visible, although the signs should be replaced with the current pedestrian crossing warning sign (W11-2) and supplemented with the downward arrow plate (W16-7p) on signs at actual crosswalk locations. From the motorist perspective, roadway conditions in this corridor remain constant whether a pedestrian is actually present in the crosswalk or not. This is because the flashing beacon operates continuously, whether a pedestrian is present or not.

Major near term recommendations are based on findings of recent pedestrian research:

- Pedestrian safety can be enhanced by an active warning beacon that flashes only when a pedestrian is present and not at other times.
- Where pedestrian-activated warning beacons are present, a low percentage of pedestrians will use the pushbuttons provided. Futhermore, pedestrians who do use the pushbuttons may erroneously assume that the pushbutton grants them risk-free right-of-way for crossing.
- Compliance with existing laws for motorists to yield to pedestrians in a crosswalk can be enhanced by reminding drivers of the law at the crosswalk location.

[1] Manual on Uniform Traffic Control Devices. Sign W11-A2 was found in the 1988 edition. In the 2000 edition, use of this sign was discontinued. The current application of a crossing warning is sign W11-2 supplemented with a downward arrow plate (W16-7p).

Near term recommendations for the University Street corridor are as follows:

- Update existing crosswalk warning signs with new MUTCD-compliant signs (W11-2 and supplemented with W16-7p as appropriate). Supplement these signs with pedestrian-actuated LED warning beacons.
- Install passive detection devices for pedestrian actuation using a light beam trip system. This is a pair of bollards on either side of the sidewalk leading to the crosswalk that is wired for pedestrian detection. When a pedestrian passes between the bollards, the light beam is tripped and the warning lights are activated.
- Install "State Law" crosswalk signs (R1-6) in the median of University Street.
- Replace existing stop bars on either side of the marked crosswalks with yield lines (as per MUTCD Section 3B.16). These lines should be located approximately 40 feet in advance of the crosswalks. Having traffic yield further from the crosswalk allows pedestrians to be more visible to motorists in both traffic lanes. The application of yield lines must also include posting sign R1-5 at the location of the yield line.

Near term recommendations for the University Street corridor are shown in Figure 8.

6.2 University Street Corridor, Long Term Recommendations

Long term improvement of this corridor centers on providing a centralized crossing location having full traffic control, instead of just a warning. To do this, a new traffic signal is recommended within this segment of University Street. To provide a secondary benefit to campus traffic, the intersection of the University Street parking lot driveway and University Street should be signalized.

Long term recommendations for the University Street corridor are as follows:

- Install a new traffic signal at the intersection of University Street and the driveway to the University Street parking lot. This signal should include standard pedestrian pushbuttons and countdown signals. Furthermore, an innovative signal wiring plan should be designed to allow the light beam trip to continue to operate as an equivalent to the pushbutton at the intersection.
- Relocate the driveway to the Administration Building approximately 290 feet west to create a fourth leg of the proposed signalized intersection. This will provide better access to visitors and parking at the Administration Building. The existing Administration Building driveway should be closed once relocated.
- Allow traffic to exit the University Street parking lot at this intersection by allowing southbound traffic on the driveway. This will require some widening of the driveway. The parking lot driveway should contain three

lanes, each at least 11 feet wide. One lane would be used for entering traffic and two lanes would be used for exiting traffic (one southbound shared left turn/through lane and one southbound right turn lane).

- Construct one eastbound and one westbound left turn lane on University Street in the median at this intersection. The eastbound left turn lane should be at least 200 feet long and the westbound left turn lane should be at least 100 feet long. Tapers for these lanes should be designed in accordance with AASHTO guidelines.

It should be noted that signal installation must be predicated by a documented meeting of MUTCD signal warrants and obtaining a TDOT permit. The City of Martin must also be agreeable to future maintenance of the signal as a City asset. Also, it would be beneficial to interconnect the University Street signals at Moody Avenue (existing), University Street parking lot (proposed), and Mt. Pelia Road (existing) for coordinated traffic operation. Long term recommendations for the University Street corridor are shown in Figure 9.

6.3 Mt. Pelia Road Corridor, Near Term Recommendations

The other campus corridor where pedestrian improvements should be made is the Mt. Pelia Road corridor from University Street to Hannings Lane. Although traffic is not as heavy and the crossings are shorter than on the University Street corridor, higher pedestrian crossing numbers exist due to concentrations of pedestrians at the intersections of Mt. Pelia Road and Pat Head Summitt Drive and Mt. Pelia Road and Wayne Fisher Drive.

Near term recommendations for the Mt. Pelia Road corridor focus on calming all traffic using this street and possibly deterring traffic not bound for the campus from using the street. Near term recommendations are as follows:

- Install a combination of speed humps and raised crosswalks at approximately 300 foot intervals from Skyhawk Fieldhouse to south of the Tennis House. These should be signed and marked appropriately (refer to MUTCD Figures 3B-29 and 30).
- Update existing crosswalk warning signs with new MUTCD-compliant signs (W11-2 and supplemented with W16-7p as appropriate).

Near term recommendations for the Mt. Pelia Road corridor are shown in Figure 10.

6.4 Mt. Pelia Road Corridor, Long Term Recommendations

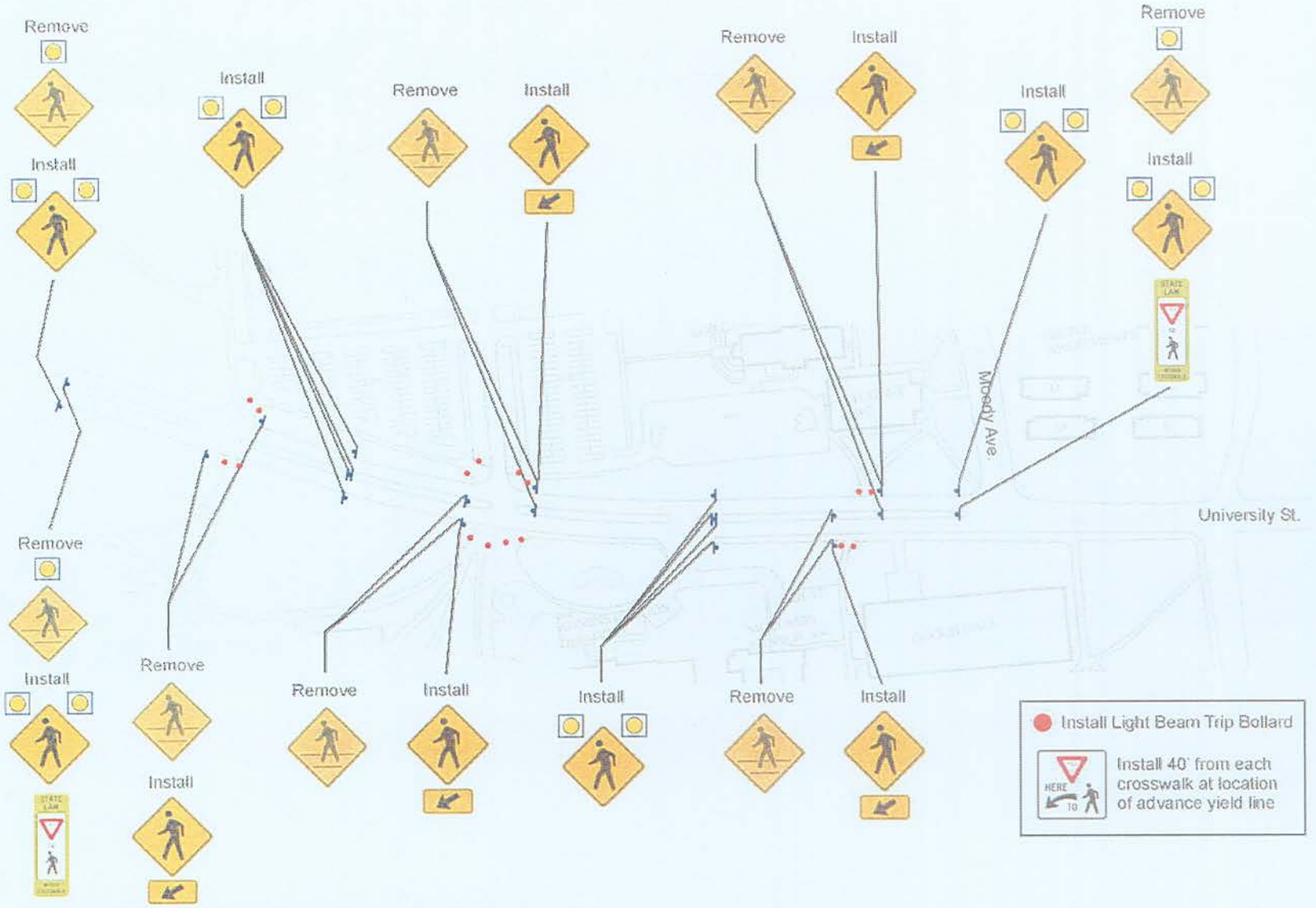
In the long term, and as the UT Martin campus expands westward, consideration should be given to the closure of Mt. Pelia Road to traffic going through this side of campus. Current plans are for a new student recreational

facility to be constructed on currently vacant land south of the Tennis House on the west side of Mt. Pelia Road. This, along with the continued construction of new student housing east of Mt. Pelia Road will promote additional high volumes of pedestrian crossings of Mt. Pelia Road just north of Hannings Lane. Closing Mt. Pelia Road as a through street will allow a continuous pedestrian and recreation-oriented area to be established in this southwest part of campus.

It is recommended that Mt. Pelia Road be closed from the proposed new student recreation/wellness facility driveway to Hannings Lane. Based on traffic counts, it is estimated that less than 300 vehicles during the peak hour use Mt. Pelia Road as a through street. This is a manageable amount of traffic to be diverted to other north-south routes such as Elm Street or the Martin Bypass. Many campuses have used a temporary closure method (using removable bollards, gates, etc.) to evaluate the effect of a street closure on other campus streets before permanently closing the street.

One additional improvement recommended as part of the master plan is to improve the offset intersections of Mt. Pelia Road and Hannings Lane. This should be done by realigning the westbound approach of Hannings Lane to the eastbound approach.

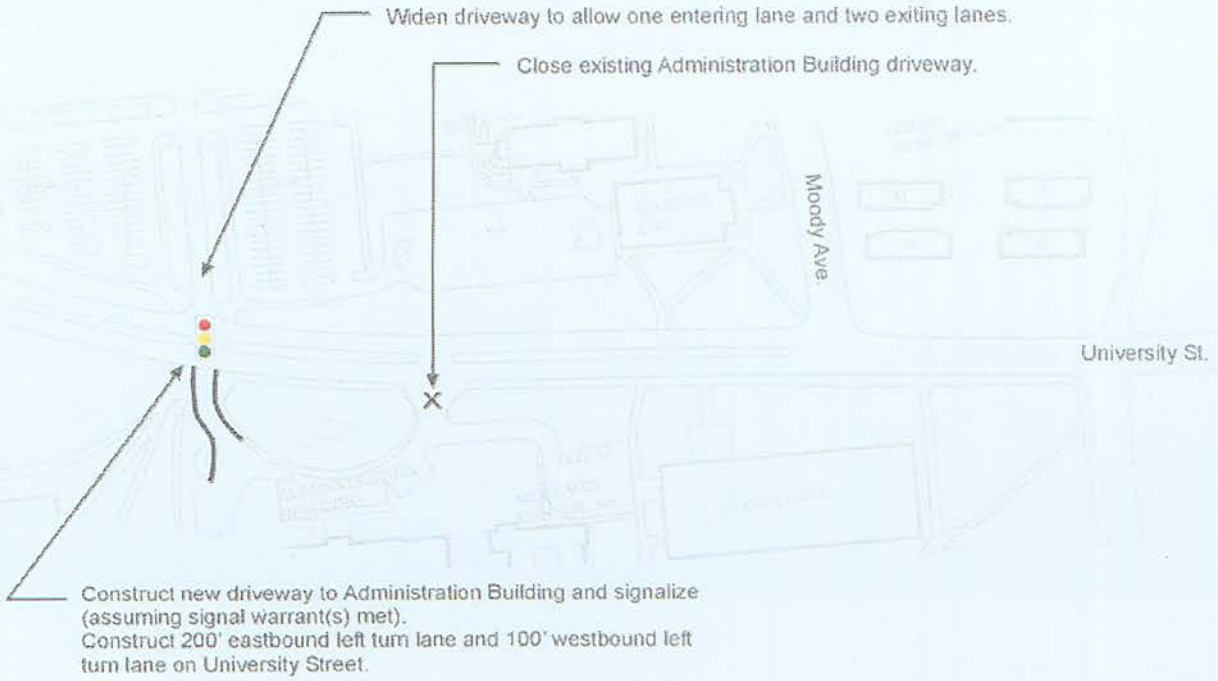
Long term recommendations for the Mt. Pelia Road corridor are shown in Figure 11.



University Street Corridor, Near Term Recommendations

(Not To Scale)

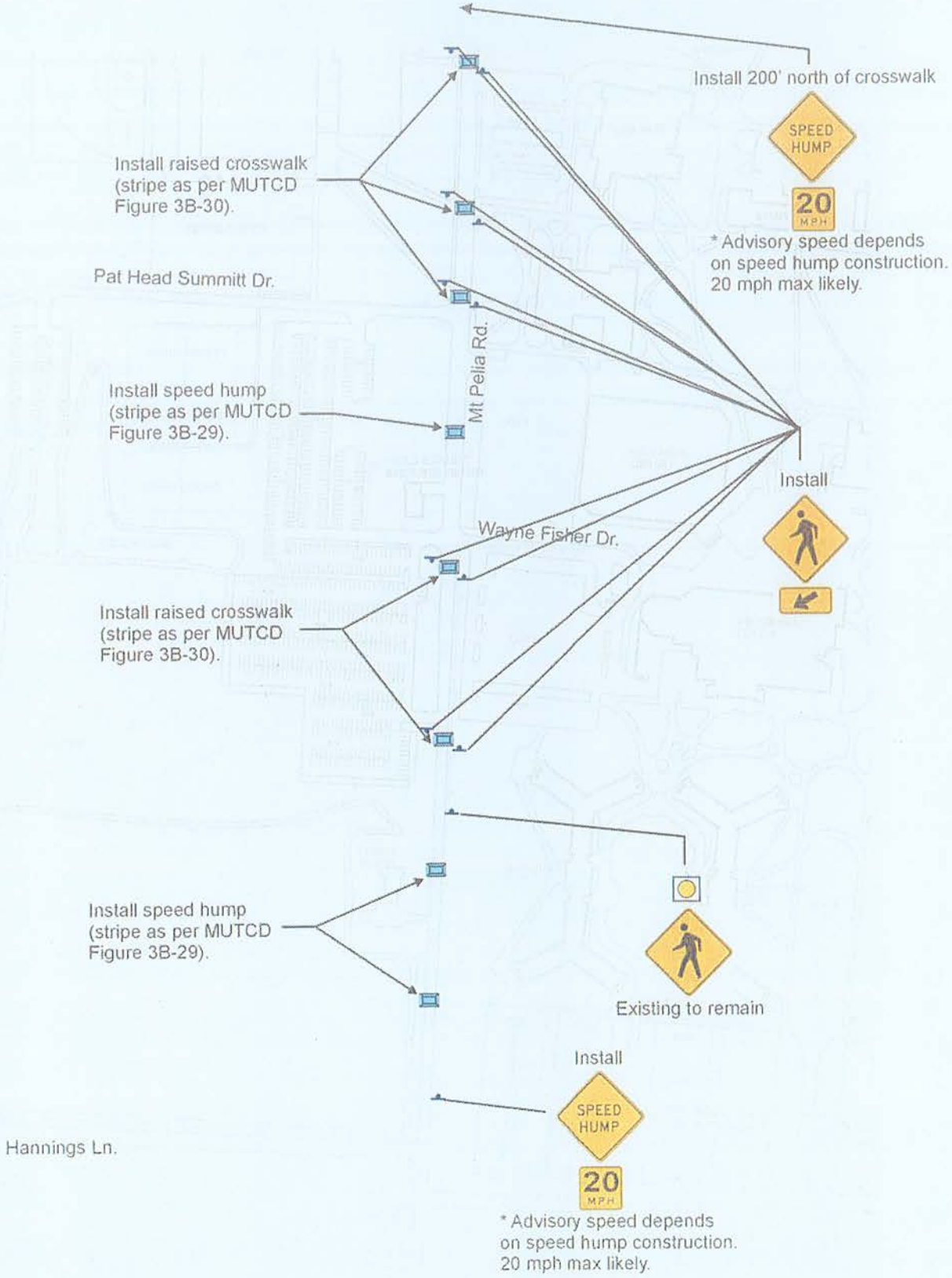
Figure 8.



University Street Corridor, Long Term Recommendations

(Not To Scale)

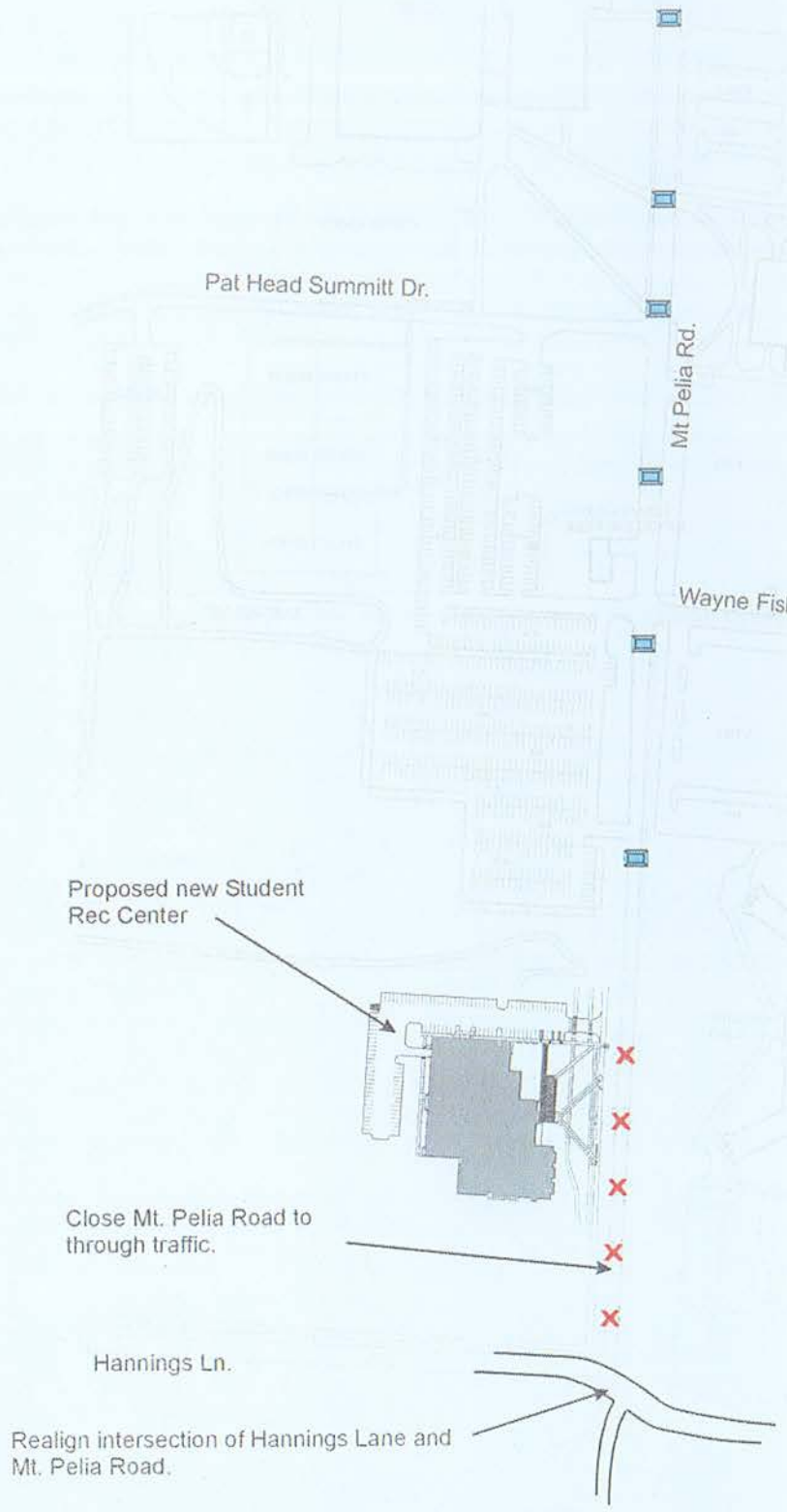
Figure 9.



Mt. Pelia Road Corridor, Near Term Recommendations

(Not To Scale)

Figure 10.



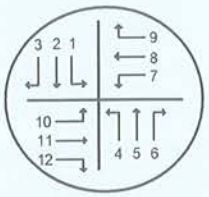
Mt. Pelia Road Corridor, Long Term Recommendations

(Not To Scale)

Figure 11.

APPENDIX A

DETAILED TURNING MOVEMENT COUNTS



North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: University Street(Hwy. 431) at Mt. Pelia Road
DATE: 3/26/08
RECORDER: Traffic Data
NOTES:

	S/B			N/B			W/B			E/B			
LOCATION				Mt. Pelia Road			University Street			University Street			
TIME	1	2	3	4	5	6	7	8	9	10	11	12	
7:00-7:15				3		20	14	36			37	12	824
7:15-7:30				3		20	24	35			59	17	905
7:30-7:45				4		17	47	67			70	31	911
7:45-8:00				4		40	78	45			104	37	815
8:00-8:15				7		27	37	44			75	13	679
8:15-8:30				3		25	18	42			62	14	705
8:30-8:45				5		21	26	35			36	17	871
8:45-9:00				5		22	28	71			39	7	982
9:00-9:15				13		36	30	52			80	18	1,035
9:15-9:30				17		48	64	68			105	28	806
9:30-9:45				14		44	35	68			78	12	476
9:45-10:00				13		30	36	67			65	14	225
10:00-10:15													
10:15-10:30													
10:30-10:45													
10:45-11:00													
11:00-11:15													
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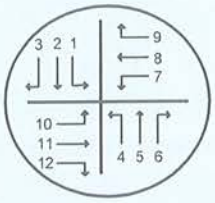
1:15-1:30													
1:30-1:45													
1:45-2:00													
2:00-2:15													
2:15-2:30													333
2:30-2:45													659
2:45-3:00													930
3:00-3:15				50		57	41	109			64	12	1,252
3:15-3:30				18		51	41	119			89	8	1,223
3:30-3:45				17		36	39	90			75	14	1,200
3:45-4:00				15		38	40	131			82	16	1,245
4:00-4:15				25		46	28	114			85	6	1,242
4:15-4:30				25		46	42	99			76	15	1,338
4:30-4:45				23		60	46	90			74	23	1,383
4:45-5:00				25		43	32	111			90	18	1,395
5:00-5:15				49		51	60	144			84	12	1,342
5:15-5:30				31		58	27	117			97	18	942
5:30-5:45				22		38	52	114			77	25	594
5:45-6:00				15		23	39	79			85	25	266
6:00-6:15													
6:15-6:30													
6:30-6:45													
6:45-7:00													
TOTAL				406		897	924	1,947			1,788	412	
AM PK HR				57		158	165	255			328	72	9:00 AM - 10:00 AM
MID PK HR													
PM PK HR				127		190	171	486			348	73	4:45 PM - 5:45 PM



North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Mt. Pelia Road at Pat Head Summit Drive
DATE: 3/26/08
RECORDER: Traffic Data
NOTES:

	S/B			N/B			W/B			E/B		
LOCATION	Mt. Pelia Road			Mt. Pelia Road			Pat Head Summit Drive			Pat Head Summit Drive		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15	7	17	5	1	15	2			3	3		1
7:15-7:30	15	18	4	5	20	2				4		1
7:30-7:45	20	35	14	6	21	10			2	4		3
7:45-8:00	14	50	30	22	55	4	1		2	7		5
8:00-8:15	9	19	14	12	33	4	2		1	8		4
8:15-8:30	6	22	5	7	25	2			2	4		6
8:30-8:45	4	28	4	5	20	5	1	1		6		1
8:45-9:00	4	22	6	7	25	4	3		3	1		4
9:00-9:15	1	31	9	14	35	1	2		3	14		5
9:15-9:30	10	50	27	18	59	6	4		6	10		3
9:30-9:45	3	34	8	4	44	2	2		3	10		3
9:45-10:00	3	31	7	4	34	2			3	4		1
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15												
11:15-11:30												
11:30-11:45												
11:45-12:00												
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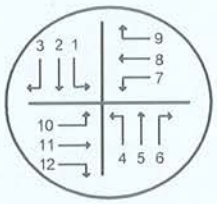
1:15-1:30												
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15		41	9	8	78				2	17		6
3:15-3:30	2	40	5	9	60		2		5	13		13
3:30-3:45	3	43	7	2	39	1	1	1	5	3		3
3:45-4:00	6	48	2	5	37	1	6		8	5		5
4:00-4:15		38	3	1	55	3	4		9	8		3
4:15-4:30	4	45	8	9	58	1	3		7	14		12
4:30-4:45	1	50	14	13	50		3		11	15		8
4:45-5:00	2	37	8	9	50	2	7	1	15	12		7
5:00-5:15		56	15	18	62	1	9		18	14		11
5:15-5:30	1	41	5	8	54	2	6	1	16	16		16
5:30-5:45	4	56	5	12	52	1	4		5	14	2	21
5:45-6:00	4	46	8	8	37	2	3		1	6		12
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
TOTAL	123	898	222	207	1,018	58	63	4	130	212	2	154
AM PK HR	17	146	51	40	172	11	8		15	38		12
MID PK HR												
PM PK HR	7	190	33	47	218	6	26	2	54	56	2	55



North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Mt. Pelia Road at W. Fisher Drive
DATE: 3/26/08
RECORDER: Traffic Data
NOTES:

	S/B			N/B			W/B			E/B		
LOCATION	Mt. Pelia Road			Mt. Pelia Road			W. Fisher Drive			W. Fisher Drive		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15	5	16		2	17	5		1	2			
7:15-7:30	7	14		2	22	10	1		3			
7:30-7:45	24	20	1	11	42	48	3		2			
7:45-8:00	18	24	6	29	69	41	4	1	7	2		
8:00-8:15	12	18	2	5	40	13	1		3			
8:15-8:30	7	24	1	1	25	5	2		3	1		
8:30-8:45	5	13	4	2	28	8	4	1	2	1	1	7
8:45-9:00	11	15	3	8	30	9	6		4	1	2	9
9:00-9:15	10	32	4	17	40	19	3	4	14	5	2	10
9:15-9:30	12	16	13	42	58	17	9	5	19	1		6
9:30-9:45	9	32	1	4	26	6	12	2	5	3		9
9:45-10:00	12	25		11	30	10	6	4	8		2	
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
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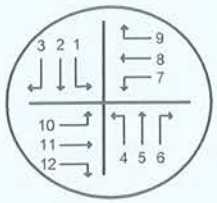
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15	10	31	4	4	39	15	22		19	10	3	2
3:15-3:30	14	38	1	2	42	13	13		15	3	1	4
3:30-3:45	12	38		6	32	15	13		7	2	1	4
3:45-4:00	8	45	1	6	27	12	18	2	14	6	1	8
4:00-4:15	4	43	2	3	37	7	13	1	15	8	2	5
4:15-4:30	10	52		6	49	7	21		18	6	2	13
4:30-4:45	12	42	3	2	40	11	13	1	7	7		11
4:45-5:00	10	44		9	47	16	14		13	12		4
5:00-5:15	13	70	1	4	49	22	23		20	3	2	10
5:15-5:30	10	50		2	44	14	9		13	1	1	2
5:30-5:45	24	57	2	6	51	12	14	1	16	1	3	6
5:45-6:00	20	36	2	10	35	18	16	1	9	1	1	7
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
TOTAL	279	795	51	194	919	353	240	24	238	74	24	117
AM PK HR	43	105	18	74	154	52	30	15	46	9	4	25
MID PK HR												
PM PK HR	57	221	3	21	191	64	60	1	62	17	6	22



North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Mt. Pelia at Hannings Lane Eastbound
DATE: 3/26/08
RECORDER: Traffic Data
NOTES:

	S/B			N/B			W/B			E/B		
LOCATION												
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15		15	1	12	32					2		9
7:15-7:30		15		3	36							11
7:30-7:45		14	2	7	80					3		11
7:45-8:00		39	7	10	156					6		15
8:00-8:15		14	3	8	71					1		7
8:15-8:30		18	1	8	41					1		9
8:30-8:45		22	3	9	40					1		9
8:45-9:00		24	2	11	50					4		5
9:00-9:15		34	3	19	83					3		11
9:15-9:30		42	5	10	132					5		13
9:30-9:45		43	7	4	50					3		8
9:45-10:00		41	3	13	60					3		17
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15												
11:15-11:30												
11:30-11:45												
11:45-12:00												
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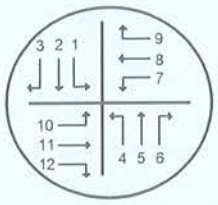
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15		69	8	18	80					2		21
3:15-3:30		58	8	19	71					4		15
3:30-3:45		51	3	37	83					4		14
3:45-4:00		72	7	22	66					1		15
4:00-4:15		60	4	18	53					7		18
4:15-4:30		81	3	16	67					3		18
4:30-4:45		66	9	18	65					5		27
4:45-5:00		63	1	22	75					4		22
5:00-5:15		94	7	22	95					4		22
5:15-5:30		68	2	34	100							20
5:30-5:45		74	5	21	77					3		17
5:45-6:00		59	2	22	82					2		20
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
TOTAL		1,136	96	383	1,745					71		354
AM PK HR		160	18	46	325					14		49
MID PK HR												
PM PK HR		299	15	99	347					11		81



North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Mt. Pelia Road at Hannings Lane Westbound
DATE: 3/26/08
RECORDER: Traffic Data
NOTES:

	S/B			N/B			W/B			E/B		
LOCATION	Mt. Pelia Road			Mt. Pelia Road			Hannings Lane					
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15	8	16			26	7	7		8			
7:15-7:30	16	10			32	11	6		4			
7:30-7:45	12	13			70	19	10		13			
7:45-8:00	16	30			132	32	4		30			
8:00-8:15	11	12			55	12	5		17			
8:15-8:30	9	18			34	8	7		8			
8:30-8:45	11	20			27	5	7		14			
8:45-9:00	12	17			46	12	8		8			
9:00-9:15	14	31			62	17	9		24			
9:15-9:30	19	36			109	24	7		28			
9:30-9:45	16	35			42	8	11		11			
9:45-10:00	22	36			45	13	6		18			
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15												
11:15-11:30												
11:30-11:45												
11:45-12:00												
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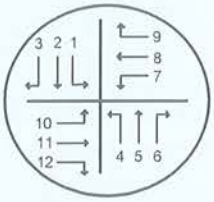
12:15-12:30												
12:30-12:45												
12:45-1:00												
1:00-1:15												
1:15-1:30												
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15	28	62			40	16	21		42			
3:15-3:30	27	46			45	16	12		30			
3:30-3:45	20	45			36	11	14		51			
3:45-4:00	30	57			36	18	24		31			
4:00-4:15	28	50			34	18	23		26			
4:15-4:30	37	62			40	8	12		30			
4:30-4:45	36	57			31	16	15		39			
4:45-5:00	37	48			41	17	15		38			
5:00-5:15	33	83			58	14	17		41			
5:15-5:30	32	56			52	7	18		48			
5:30-5:45	34	57			51	12	4		29			
5:45-6:00	31	48			46	11	13		38			
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
TOTAL	539	945			1,190	332	275		626			
AM PK HR	71	138			258	62	33		81			
MID PK HR												
PM PK HR	138	244			182	54	65		166			



North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Hannings Lane at Moody Avenue
DATE: 3/26/08
RECORDER: Traffic Data
NOTES:

	S/B			N/B			W/B			E/B		
LOCATION	Moody Lane			Moody Lane						Hannings Lane		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15		2	5	4	1					9		2
7:15-7:30		1	13		7					16		1
7:30-7:45		1	11	7	9					26		1
7:45-8:00		3	11	11	18					35		1
8:00-8:15		3	9	2	7					12		5
8:15-8:30		2	5	4	6					8		3
8:30-8:45		2	8	6	4					9		2
8:45-9:00		2	8	1	8					22		3
9:00-9:15		3	15	11	10					15		
9:15-9:30		2	15	8	25					27		8
9:30-9:45		6	11	7	5					12		6
9:45-10:00		2	8	1	10					16		3
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15												
11:15-11:30												
11:30-11:45												
11:45-12:00												
12:00-12:15												
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12:30-12:45												
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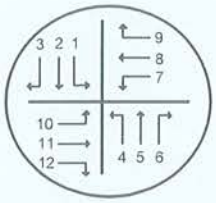
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15		17	21	5	10					27		9
3:15-3:30		3	25	5	8					27		12
3:30-3:45		6	14	2	6					24		12
3:45-4:00		6	25	8	10					32		1
4:00-4:15		3	24	6	2					26		10
4:15-4:30		6	19	6	3					22		12
4:30-4:45		8	20	4	1					35		21
4:45-5:00		15	27	5	8					26		16
5:00-5:15		22	30	6	10					37		8
5:15-5:30		10	24	7	14					21		7
5:30-5:45		7	10	10	6					23		9
5:45-6:00		5	25	7	6					27		10
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
TOTAL		137	383	133	194					534		162
AM PK HR		13	49	27	48					76		17
MID PK HR												
PM PK HR		55	101	22	33					119		52

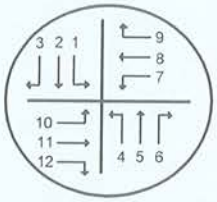


North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Loveless Avenue at Hurt Street
DATE: 3/26/08
RECORDER: Traffic Data
NOTES:

	S/B			N/B			W/B			E/B		
LOCATION	Loveless Avenue						Hurt Street			Hurt Street		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15	1		5					2		4	1	
7:15-7:30			24					8		5		
7:30-7:45			23					10	3	14	2	
7:45-8:00	2		25					13	11	28	3	
8:00-8:15	1		11					3	3	12	3	
8:15-8:30	2		11					3		15	1	
8:30-8:45	1		7					3	2	4	4	
8:45-9:00	3		15					1	2	23	1	
9:00-9:15	6		16					5	5	22	3	
9:15-9:30	3		25					7	6	56	7	
9:30-9:45	2		20					1	3	22	5	
9:45-10:00	1		11					2	2	13	1	
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15												
11:15-11:30												
11:30-11:45												
11:45-12:00												
12:00-12:15												
12:15-12:30												
12:30-12:45												
12:45-1:00												
1:00-1:15												
1:15-1:30												
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15	2		24					4	4	23	11	
3:15-3:30	5		26					3	8	18	4	
3:30-3:45	6		31					7	2	39	7	
3:45-4:00	6		49					10	3	36	14	
4:00-4:15	5		22					10	1	32	7	
4:15-4:30	5		17					3	2	26	11	
4:30-4:45	5		24					2	4	33	6	
4:45-5:00	5		19					4		32	4	
5:00-5:15	5		28					3	3	67	24	
5:15-5:30	7		22					3	6	31	9	
5:30-5:45	2		20					8	1	26	4	
5:45-6:00	5		23					6	3	14	4	
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
TOTAL	80		498					121	74	595	136	
AM PK HR	14		76					14	16	123	16	
MID PK HR												
PM PK HR	22		128					30	14	125	32	



North

INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Loveless Avenue at University Street
DATE: 3/26/08
RECORDER: Traffic Data
NOTES:

	S/B			N/B			W/B			E/B		
LOCATION	Loveless Avenue			Loveless Avenue			University Street			University Street		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15		2	1	2		3	3	34	1	1	39	9
7:15-7:30	1	2		3		1	14	64	2		59	13
7:30-7:45	1	5		7	2	3	27	121	1		30	22
7:45-8:00	2	10	3	8	3	5	15	95	1		41	26
8:00-8:15	1	3	1	4	1	6	3	60	1		31	14
8:15-8:30	2	3	1	3		3	5	66	1		45	16
8:30-8:45	3	7	3	8	1	4	20	86	2	1	39	15
8:45-9:00	1	8	3	18	6	8	13	73			57	29
9:00-9:15	1	2	1	12	1	3	8	51	3	3	43	10
9:15-9:30	1	1	1	12	2	4	6	53	2	1	49	13
9:30-9:45		1	3	24	4	9	16	80	2		52	18
9:45-10:00	1	6	1	30	3	20	7	75	3	2	73	17
10:00-10:15												
10:15-10:30												
10:30-10:45												
10:45-11:00												
11:00-11:15												
11:15-11:30												
11:30-11:45												
11:45-12:00												
12:00-12:15												
12:15-12:30												
12:30-12:45												
12:45-1:00												
1:00-1:15												
1:15-1:30												
1:30-1:45												
1:45-2:00												
2:00-2:15												
2:15-2:30												
2:30-2:45												
2:45-3:00												
3:00-3:15	2	4	5	16	5	24	11	84	3	2	95	13
3:15-3:30	2	8	5	19	2	20	13	97	5	6	94	16
3:30-3:45	5	5	6	17	7	11	12	77		3	84	16
3:45-4:00	2	8	6	22	3	23	13	92	7	4	100	20
4:00-4:15	4	3	4	18	3	15	6	85	3	2	107	12
4:15-4:30	5	4	5	17	3	17	3	74	6	2	90	18
4:30-4:45	4	7	1	25	6	16	4	83	3		92	10
4:45-5:00	2		6	25	6	15	10	83	5	2	96	14
5:00-5:15	6	6	4	35	10	25	10	100	15	5	135	19
5:15-5:30	4	5	6	15	29	22	6	94	14	5	97	12
5:30-5:45	2	3	9	17	1	17	6	84	5	6	93	5
5:45-6:00	5	7	2	11	7	12	10	94	8	1	70	15
6:00-6:15												
6:15-6:30												
6:30-6:45												
6:45-7:00												
TOTAL	57	110	77	368	105	286	241	1,905	93	46	1,711	372
AM PK HR	3	10	6	78	10	36	37	259	10	6	217	58
MID PK HR												
PM PK HR	16	18	17	100	51	78	30	360	37	12	420	55

TDOT Counts
UT Martin Master Plan

Station 93 - University St, east of campus

Year	AADT	Annual Change	Average	
2007	10379	-9%		
2006	11416	7%		
2005	10669	-8%		
2004	11620	8%		
2003	10806	-5%	**-2%**	**5 year Avg.**
2002	11427	3%		
2001	11067	2%		
2000	10848	-5%		
1999	11475	-12%		
1998	13113	27%	**1%**	**10 year Avg.**
1997	10292			

TDOT Counts
UT Martin Master Plan

Station 148 - Mt Pelia Rd, south of University St

Year	AADT	Annual Change	Average	
2007	6056	-13%		
2006	6977	7%		
2005	6496	1%		
2004	6452	8%		
2003	5981	-1%	0%	5 year Avg.
2002	6028	1%		
2001	5982	-2%		
2000	6095	4%		
1999	5870	-12%		
1998	6692	31%	2%	10 year Avg.
1997	5120			

TDOT Counts
UT Martin Master Plan

Station 139 - Hannings Ln, east of Mt Pelia Rd

Year	AADT	Annual Change	Average	
2007	4887	-12%		
2006	5558	3%		
2005	5396	3%		
2004	5239	3%		
2003	5086	-8%	**-2%**	**5 year Avg.**
2002	5538	-7%		
2001	5934	6%		
2000	5593	-5%		
1999	5861	-17%		
1998	7055	0%	**-3%**	**10 year Avg.**
1997	7055			

APPENDIX B

CAPACITY ANALYSES

EXISTING CONDITIONS

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND LOVELACE
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	AM PEAK	Analysis Year	2008

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	0	2	0	0	2	0	1	1	0	1	1	0
Lane Group		LTR			LTR		L	TR		L	TR	
Volume (vph)	6	217	58	37	259	10	78	10	36	3	10	6
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Pretimed/Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time		2.0			2.0		2.0	2.0		2.0	2.0	
Extension of Effective Green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival Type		3			3		3	3		3	3	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour		0			0		0	0		0	0	
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 30.0	G =	G =	G =	G = 22.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 60.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		312			340		87	51		3	18	
Lane Group Capacity		1663			1608		520	615		504	656	
v/c Ratio		0.19			0.21		0.17	0.08		0.01	0.03	
Green Ratio		0.50			0.50		0.37	0.37		0.37	0.37	
Uniform Delay d_1		8.3			8.4		12.8	12.4		12.1	12.2	
Delay Factor k		0.11			0.11		0.11	0.11		0.11	0.11	
Incremental Delay d_2		0.1			0.1		0.2	0.1		0.0	0.0	
PF Factor		1.000			1.000		1.000	1.000		1.000	1.000	
Control Delay		8.3			8.5		13.0	12.5		12.1	12.2	
Lane Group LOS		A			A		B	B		B	B	
Approach Delay		8.3			8.5			12.8			12.2	
Approach LOS		A			A			B			B	
Intersection Delay		9.2			Intersection LOS						A	

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND LOVELACE
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	PM PEAK	Analysis Year	2008

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	0	2	0	0	2	0	1	1	0	1	1	0
Lane Group		LTR			LTR		L	TR		L	TR	
Volume (vph)	18	421	50	32	361	39	92	46	79	14	14	25
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Pretimed/Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time		2.0			2.0		2.0	2.0		2.0	2.0	
Extension of Effective Green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival Type		3			3		3	3		3	3	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour		0			0		0	0		0	0	
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 30.0	G =	G =	G =	G = 22.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		544			480		102	139		16	44	
Lane Group Capacity		1662			1599		507	631		466	630	
v/c Ratio		0.33			0.30		0.20	0.22		0.03	0.07	
Green Ratio		0.50			0.50		0.37	0.37		0.37	0.37	
Uniform Delay d_1		9.0			8.8		13.0	13.1		12.2	12.3	
Delay Factor k		0.11			0.11		0.11	0.11		0.11	0.11	
Incremental Delay d_2		0.1			0.1		0.2	0.2		0.0	0.0	
PF Factor		1.000			1.000		1.000	1.000		1.000	1.000	
Control Delay		9.1			8.9		13.2	13.3		12.2	12.4	
Lane Group LOS		A			A		B	B		B	B	
Approach Delay		9.1			8.9			13.2			12.3	
Approach LOS		A			A			B			B	
Intersection Delay		9.9			Intersection LOS						A	

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	LOVELACE AVE AND HURT ST
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: HURT ST | North/South Street: LOVELACE AVE

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	113	16			15	11
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	125	17	0	0	16	12
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				12		66
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	13	0	73
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	125						86	
C (m) (veh/h)	1599						969	
v/c	0.08						0.09	
95% queue length	0.25						0.29	
Control Delay (s/veh)	7.4						9.1	
LOS	A						A	
Approach Delay (s/veh)	--	--					9.1	
Approach LOS	--	--					A	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	LOVELACE AVE AND HURT ST
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: HURT ST | North/South Street: LOVELACE AVE

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	156	41			18	10
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	173	45	0	0	20	11
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				19		84
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	21	0	93
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	173						114	
C (m) (veh/h)	1595						893	
v/c	0.11						0.13	
95% queue length	0.36						0.44	
Control Delay (s/veh)	7.5						9.6	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.6		
Approach LOS	--	--				A		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	HANNINGS LN AND MOODY AVE
Jurisdiction	MARTIN
Analysis Year	

Project Description: UT MARTIN MASTER PLAN

East/West Street: HANNINGS LANE | North/South Street: MOODY AVE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	65	59			24	49
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	72	65	0	0	26	54
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	70		63			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	77	0	70	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	72						147	
C (m) (veh/h)	1531						821	
v/c	0.05						0.18	
95% queue length	0.15						0.65	
Control Delay (s/veh)	7.5						10.3	
LOS	A						B	
Approach Delay (s/veh)	--	--					10.3	
Approach LOS	--	--					B	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JH	Intersection	
Agency/Co.	RPM	Jurisdiction	MARTIN
Date Performed	4/23/2008	Analysis Year	2008
Analysis Time Period	PM PEAK		

Project Description: UT MARTIN MASTER PLAN

East/West Street: HANNINGS LANE | North/South Street: MOODY AVE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	120	90			11	91
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	133	100	0	0	12	101
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	107		79			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	118	0	87	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	133						205	
C (m) (veh/h)	1489						668	
v/c	0.09						0.31	
95% queue length	0.29						1.30	
Control Delay (s/veh)	7.7						12.8	
LOS	A						B	
Approach Delay (s/veh)	--	--					12.8	
Approach LOS	--	--					B	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN EAST
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: HANNINGS LANE EAST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		235	62	71	143	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	261	68	78	158	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				33		81
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	36	0	90
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		78		126				
C (m) (veh/h)		1242		620				
v/c		0.06		0.20				
95% queue length		0.20		0.76				
Control Delay (s/veh)		8.1		12.3				
LOS		A		B				
Approach Delay (s/veh)	--	--	12.3					
Approach LOS	--	--	B					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN EAST
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: HANNINGS LANE EAST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		197	50	136	237	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	218	55	151	263	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				54		157
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	60	0	174
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		151		234				
C (m) (veh/h)		1302		569				
v/c		0.12		0.41				
95% queue length		0.39		2.00				
Control Delay (s/veh)		8.1		15.7				
LOS		A		C				
Approach Delay (s/veh)	--	--	15.7					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN WEST
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: HANNINGS LANE WEST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	46	270			165	18
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	51	300	0	0	183	20
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	14		49			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	15	0	54	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	51						69	
C (m) (veh/h)	1381						716	
v/c	0.04						0.10	
95% queue length	0.11						0.32	
Control Delay (s/veh)	7.7						10.6	
LOS	A						B	
Approach Delay (s/veh)	--	--				10.6		
Approach LOS	--	--				B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN WEST
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: HANNINGS LANE WEST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	99	255			292	15
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	110	283	0	0	324	16
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	11		81			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	12	0	90	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	110						102	
C (m) (veh/h)	1230						619	
v/c	0.09						0.16	
95% queue length	0.29						0.59	
Control Delay (s/veh)	8.2						12.0	
LOS	A						B	
Approach Delay (s/veh)	--	--					12.0	
Approach LOS	--	--					B	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND WAYNE FISHER
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: WAYNE FISHER DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	74	158	52	43	128	18
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	82	175	57	47	142	20
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	9	4	25	30	15	46
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	10	4	27	33	16	51
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	82	47		100			41	
C (m) (veh/h)	1429	1348		508			572	
v/c	0.06	0.03		0.20			0.07	
95% queue length	0.18	0.11		0.72			0.23	
Control Delay (s/veh)	7.7	7.8		13.8			11.8	
LOS	A	A		B			B	
Approach Delay (s/veh)	--	--	13.8			11.8		
Approach LOS	--	--	B			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND WAYNE FISHER
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: WAYNE FISHER DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	21	181	84	57	225	3
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	23	201	93	63	250	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	17	6	22	60	1	62
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	18	6	24	66	1	68
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	23	63		135			48	
C (m) (veh/h)	1324	1279		469			448	
v/c	0.02	0.05		0.29			0.11	
95% queue length	0.05	0.16		1.18			0.36	
Control Delay (s/veh)	7.8	8.0		15.7			14.0	
LOS	A	A		C			B	
Approach Delay (s/veh)	--	--	15.7			14.0		
Approach LOS	--	--	C			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND PAT SUMMITT
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: PAT HEAD SUMMITT DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	40	162	11	17	169	51
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	44	180	12	18	187	56
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	38	0	12	8	0	15
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	42	0	13	8	0	16
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	44	18		24			55	
C (m) (veh/h)	1335	1394		651			492	
v/c	0.03	0.01		0.04			0.11	
95% queue length	0.10	0.04		0.11			0.38	
Control Delay (s/veh)	7.8	7.6		10.7			13.2	
LOS	A	A		B			B	
Approach Delay (s/veh)	--	--	10.7			13.2		
Approach LOS	--	--	B			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND PAT SUMMITT
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN

East/West Street: PAT HEAD SUMMITT DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	47	207	6	7	204	33
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	52	230	6	7	226	36
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	56	2	55	26	2	54
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	62	2	61	28	2	60
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	52	7		90			125	
C (m) (veh/h)	1314	1343		570			489	
v/c	0.04	0.01		0.16			0.26	
95% queue length	0.12	0.02		0.56			1.01	
Control Delay (s/veh)	7.9	7.7		12.5			14.9	
LOS	A	A		B			B	
Approach Delay (s/veh)	--	--	12.5			14.9		
Approach LOS	--	--	B			B		

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SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND MT PELIA
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	AM PEAK	Analysis Year	2008

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2	0	1	2		1		1			
Lane Group		TR		L	T		L		R			
Volume (vph)		328	72	165	255		57		158			
% Heavy Vehicles		0	0	0	0		0		0			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Pretimed/Actuated (P/A)		A	A	A	A		A		A			
Startup Lost Time		2.0		2.0	2.0		2.0		2.0			
Extension of Effective Green		2.0		2.0	2.0		2.0		2.0			
Arrival Type		3		3	3		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0	16			
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0		0	0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	WB Only	EW Perm	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 18.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		444		183	283		63		158			
Lane Group Capacity		1056		548	1930		602		538			
v/c Ratio		0.42		0.33	0.15		0.10		0.29			
Green Ratio		0.30		0.53	0.53		0.33		0.33			
Uniform Delay d_1		16.8		7.7	7.1		13.8		14.8			
Delay Factor k		0.11		0.11	0.11		0.11		0.11			
Incremental Delay d_2		0.3		0.4	0.0		0.1		0.3			
PF Factor		1.000		1.000	1.000		1.000		1.000			
Control Delay		17.1		8.0	7.1		13.9		15.1			
Lane Group LOS		B		A	A		B		B			
Approach Delay		17.1			7.5			14.7				
Approach LOS		B			A			B				
Intersection Delay		12.7			Intersection LOS						B	

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND MT PELIA
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	PM PEAK	Analysis Year	2008

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2	0	1	2		1		1			
Lane Group		TR		L	T		L		R			
Volume (vph)		348	73	171	486		127		190			
% Heavy Vehicles		0	0	0	0		0		0			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Pretimed/Actuated (P/A)		A	A	A	A		A		A			
Startup Lost Time		2.0		2.0	2.0		2.0		2.0			
Extension of Effective Green		2.0		2.0	2.0		2.0		2.0			
Arrival Type		3		3	3		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0	19			
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0		0	0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	WB Only	EW Perm	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 18.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		468		190	540		141		190			
Lane Group Capacity		1057		536	1930		602		538			
v/c Ratio		0.44		0.35	0.28		0.23		0.35			
Green Ratio		0.30		0.53	0.53		0.33		0.33			
Uniform Delay d_1		17.0		7.8	7.7		14.5		15.1			
Delay Factor k		0.11		0.11	0.11		0.11		0.11			
Incremental Delay d_2		0.3		0.4	0.1		0.2		0.4			
PF Factor		1.000		1.000	1.000		1.000		1.000			
Control Delay		17.2		8.2	7.8		14.7		15.5			
Lane Group LOS		B		A	A		B		B			
Approach Delay		17.2			7.9			15.2				
Approach LOS		B			A			B				
Intersection Delay		12.3			Intersection LOS						B	

BACKGROUND CONDITIONS

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND LOVELACE
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	AM PEAK	Analysis Year	2018

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	0	2	0	0	2	0	1	1	0	1	1	0
Lane Group		LTR			LTR		L	TR		L	TR	
Volume (vph)	6	241	61	39	276	11	82	11	38	3	11	6
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Pretimed/Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time		2.0			2.0		2.0	2.0		2.0	2.0	
Extension of Effective Green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival Type		3			3		3	3		3	3	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour		0			0		0	0		0	0	
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 30.0	G =	G =	G =	G = 22.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		343			362		91	54		3	19	
Lane Group Capacity		1665			1600		519	615		503	658	
v/c Ratio		0.21			0.23		0.18	0.09		0.01	0.03	
Green Ratio		0.50			0.50		0.37	0.37		0.37	0.37	
Uniform Delay d_1		8.4			8.5		12.9	12.4		12.1	12.2	
Delay Factor k		0.11			0.11		0.11	0.11		0.11	0.11	
Incremental Delay d_2		0.1			0.1		0.2	0.1		0.0	0.0	
PF Factor		1.000			1.000		1.000	1.000		1.000	1.000	
Control Delay		8.4			8.5		13.0	12.5		12.1	12.2	
Lane Group LOS		A			A		B	B		B	B	
Approach Delay		8.4			8.5			12.8			12.2	
Approach LOS		A			A			B			B	
Intersection Delay		9.3			Intersection LOS						A	

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND LOVELACE
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	PM PEAK	Analysis Year	2018

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	0	2	0	0	2	0	1	1	0	1	1	0
Lane Group		LTR			LTR		L	TR		L	TR	
Volume (vph)	19	516	53	34	388	41	97	48	83	15	15	26
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Pretimed/Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time		2.0			2.0		2.0	2.0		2.0	2.0	
Extension of Effective Green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival Type		3			3		3	3		3	3	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour		0			0		0	0		0	0	
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 30.0	G =	G =	G =	G = 22.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		653			515		108	145		17	46	
Lane Group Capacity		1667			1580		506	630		463	631	
v/c Ratio		0.39			0.33		0.21	0.23		0.04	0.07	
Green Ratio		0.50			0.50		0.37	0.37		0.37	0.37	
Uniform Delay d_1		9.3			9.0		13.1	13.1		12.2	12.4	
Delay Factor k		0.11			0.11		0.11	0.11		0.11	0.11	
Incremental Delay d_2		0.2			0.1		0.2	0.2		0.0	0.0	
PF Factor		1.000			1.000		1.000	1.000		1.000	1.000	
Control Delay		9.5			9.1		13.3	13.3		12.2	12.4	
Lane Group LOS		A			A		B	B		B	B	
Approach Delay		9.5			9.1			13.3			12.4	
Approach LOS		A			A			B			B	
Intersection Delay		10.1			Intersection LOS						B	

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	LOVELACE AVE AND HURT ST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: HURT ST | North/South Street: LOVELACE AVE

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	119	17			16	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	132	18	0	0	17	13
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				13		70
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	14	0	77
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	132						91	
C (m) (veh/h)	1596						959	
v/c	0.08						0.09	
95% queue length	0.27						0.31	
Control Delay (s/veh)	7.5						9.1	
LOS	A						A	
Approach Delay (s/veh)	--	--					9.1	
Approach LOS	--	--					A	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	LOVELACE AVE AND HURT ST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: HURT ST | North/South Street: LOVELACE AVE

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	164	43			19	13
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	182	47	0	0	21	14
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				20		89
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	22	0	98
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	182						120	
C (m) (veh/h)	1589						883	
v/c	0.11						0.14	
95% queue length	0.39						0.47	
Control Delay (s/veh)	7.6						9.7	
LOS	A						A	
Approach Delay (s/veh)	--	--					9.7	
Approach LOS	--	--					A	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	HANNINGS LN AND MOODY AVE
Jurisdiction	
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: HANNINGS LANE | North/South Street: MOODY AVE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	68	62			34	52
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	75	68	0	0	37	57
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	74		66			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	82	0	73	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	75						155	
C (m) (veh/h)	1513						798	
v/c	0.05						0.19	
95% queue length	0.16						0.72	
Control Delay (s/veh)	7.5						10.6	
LOS	A						B	
Approach Delay (s/veh)	--	--					10.6	
Approach LOS	--	--					B	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	HANNINGS LN AND MOODY AVE
Jurisdiction	MARTIN
Analysis Year	

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: HANNINGS LANE | North/South Street: MOODY AVE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	126	95			12	96
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	140	105	0	0	13	106
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	112		84			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	124	0	93	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	140						217	
C (m) (veh/h)	1482						652	
v/c	0.09						0.33	
95% queue length	0.31						1.46	
Control Delay (s/veh)	7.7						13.3	
LOS	A						B	
Approach Delay (s/veh)	--	--					13.3	
Approach LOS	--	--					B	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN EAST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: HANNINGS LANE EAST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		244	65	75	152	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	271	72	83	168	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				35		85
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	38	0	94
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		83		132				
C (m) (veh/h)		1227		601				
v/c		0.07		0.22				
95% queue length		0.22		0.83				
Control Delay (s/veh)		8.1		12.7				
LOS		A		B				
Approach Delay (s/veh)	--	--	12.7					
Approach LOS	--	--	B					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN EAST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: HANNINGS LANE EAST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		230	53	143	246	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	255	58	158	273	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				57		165
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	63	0	183
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		158		246				
C (m) (veh/h)		1259		530				
v/c		0.13		0.46				
95% queue length		0.43		2.43				
Control Delay (s/veh)		8.3		17.5				
LOS		A		C				
Approach Delay (s/veh)	--	--	17.5					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN WEST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: HANNINGS LANE WEST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	48	281			176	19
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	53	312	0	0	195	21
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	14		51			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	15	0	56	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	53						71	
C (m) (veh/h)	1366						701	
v/c	0.04						0.10	
95% queue length	0.12						0.34	
Control Delay (s/veh)	7.7						10.7	
LOS	A						B	
Approach Delay (s/veh)	--	--					10.7	
Approach LOS	--	--					B	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN WEST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: HANNINGS LANE WEST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	104	291			304	16
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	115	323	0	0	337	17
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	11		85			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	12	0	94	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	115						106	
C (m) (veh/h)	1216						601	
v/c	0.09						0.18	
95% queue length	0.31						0.64	
Control Delay (s/veh)	8.3						12.3	
LOS	A						B	
Approach Delay (s/veh)	--	--				12.3		
Approach LOS	--	--				B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND WAYNE FISHER
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: WAYNE FISHER DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	74	169	52	43	140	18
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	82	187	57	47	155	20
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	9	4	25	30	15	46
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	10	4	27	33	16	51
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	82	47		100			41	
C (m) (veh/h)	1414	1334		492			555	
v/c	0.06	0.04		0.20			0.07	
95% queue length	0.18	0.11		0.75			0.24	
Control Delay (s/veh)	7.7	7.8		14.2			12.0	
LOS	A	A		B			B	
Approach Delay (s/veh)	--	--	14.2			12.0		
Approach LOS	--	--	B			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND WAYNE FISHER
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: WAYNE FISHER DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	21	197	84	57	238	3
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	23	218	93	63	264	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	17	6	22	60	1	62
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	18	6	24	66	1	68
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	23	63		135			48	
C (m) (veh/h)	1308	1261		452			431	
v/c	0.02	0.05		0.30			0.11	
95% queue length	0.05	0.16		1.24			0.37	
Control Delay (s/veh)	7.8	8.0		16.3			14.4	
LOS	A	A		C			B	
Approach Delay (s/veh)	--	--	16.3			14.4		
Approach LOS	--	--	C			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND PAT SUMMITT
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: PAT HEAD SUMMITT DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	40	173	11	17	181	51
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	44	192	12	18	201	56
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	38	0	12	8	0	15
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	42	0	13	8	0	16
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	44	18		24			55	
C (m) (veh/h)	1320	1380		634			473	
v/c	0.03	0.01		0.04			0.12	
95% queue length	0.10	0.04		0.12			0.39	
Control Delay (s/veh)	7.8	7.6		10.9			13.6	
LOS	A	A		B			B	
Approach Delay (s/veh)	--	--	10.9			13.6		
Approach LOS	--	--	B			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND PAT SUMMITT
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - BACKGROUND

East/West Street: PAT HEAD SUMMITT DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	47	223	6	7	217	33
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	52	247	6	7	241	36
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	56	2	55	26	2	54
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	62	2	61	28	2	60
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	52	7		90			125	
C (m) (veh/h)	1298	1324		549			469	
v/c	0.04	0.01		0.16			0.27	
95% queue length	0.13	0.02		0.58			1.06	
Control Delay (s/veh)	7.9	7.7		12.8			15.4	
LOS	A	A		B			C	
Approach Delay (s/veh)	--	--	12.8			15.4		
Approach LOS	--	--	B			C		

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SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND MT PELIA
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	AM PEAK	Analysis Year	2018

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2	0	1	2		1		1			
Lane Group		TR		L	T		L		R			
Volume (vph)		344	76	173	268		60		166			
% Heavy Vehicles		0	0	0	0		0		0			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Pretimed/Actuated (P/A)		A	A	A	A		A		A			
Startup Lost Time		2.0		2.0	2.0		2.0		2.0			
Extension of Effective Green		2.0		2.0	2.0		2.0		2.0			
Arrival Type		3		3	3		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0	17			
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0		0	0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	WB Only	EW Perm	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 18.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		466		192	298		67		166			
Lane Group Capacity		1056		537	1930		602		538			
v/c Ratio		0.44		0.36	0.15		0.11		0.31			
Green Ratio		0.30		0.53	0.53		0.33		0.33			
Uniform Delay d_1		16.9		7.8	7.1		13.8		14.9			
Delay Factor k		0.11		0.11	0.11		0.11		0.11			
Incremental Delay d_2		0.3		0.4	0.0		0.1		0.3			
PF Factor		1.000		1.000	1.000		1.000		1.000			
Control Delay		17.2		8.2	7.2		13.9		15.2			
Lane Group LOS		B		A	A		B		B			
Approach Delay		17.2			7.6			14.8				
Approach LOS		B			A			B				
Intersection Delay		12.8			Intersection LOS						B	

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND MT PELIA
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	PM PEAK	Analysis Year	2018

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2	0	1	2		1		1			
Lane Group		TR		L	T		L		R			
Volume (vph)		365	77	180	510		133		200			
% Heavy Vehicles		0	0	0	0		0		0			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Pretimed/Actuated (P/A)		A	A	A	A		A		A			
Startup Lost Time		2.0		2.0	2.0		2.0		2.0			
Extension of Effective Green		2.0		2.0	2.0		2.0		2.0			
Arrival Type		3		3	3		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0	20			
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0		0	0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	WB Only	EW Perm	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 18.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		492		200	567		148		200			
Lane Group Capacity		1057		525	1930		602		538			
v/c Ratio		0.47		0.38	0.29		0.25		0.37			
Green Ratio		0.30		0.53	0.53		0.33		0.33			
Uniform Delay d_1		17.1		7.9	7.7		14.5		15.2			
Delay Factor k		0.11		0.11	0.11		0.11		0.11			
Incremental Delay d_2		0.3		0.5	0.1		0.2		0.4			
PF Factor		1.000		1.000	1.000		1.000		1.000			
Control Delay		17.4		8.3	7.8		14.7		15.7			
Lane Group LOS		B		A	A		B		B			
Approach Delay		17.4			8.0			15.3				
Approach LOS		B			A			B				
Intersection Delay		12.4			Intersection LOS						B	

PROJECTED CONDITIONS

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND LOVELACE
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	AM PEAK	Analysis Year	2018

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	0	2	0	0	2	0	1	1	0	1	1	0
Lane Group		LTR			LTR		L	TR		L	TR	
Volume (vph)	6	246	61	45	298	11	82	11	39	3	11	6
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Pretimed/Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time		2.0			2.0		2.0	2.0		2.0	2.0	
Extension of Effective Green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival Type		3			3		3	3		3	3	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour		0			0		0	0		0	0	
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 30.0	G =	G =	G =	G = 22.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		348			393		91	55		3	19	
Lane Group Capacity		1665			1584		519	615		502	658	
v/c Ratio		0.21			0.25		0.18	0.09		0.01	0.03	
Green Ratio		0.50			0.50		0.37	0.37		0.37	0.37	
Uniform Delay d_1		8.4			8.6		12.9	12.4		12.1	12.2	
Delay Factor k		0.11			0.11		0.11	0.11		0.11	0.11	
Incremental Delay d_2		0.1			0.1		0.2	0.1		0.0	0.0	
PF Factor		1.000			1.000		1.000	1.000		1.000	1.000	
Control Delay		8.4			8.6		13.0	12.5		12.1	12.2	
Lane Group LOS		A			A		B	B		B	B	
Approach Delay		8.4			8.6			12.8			12.2	
Approach LOS		A			A			B			B	
Intersection Delay		9.3			Intersection LOS						A	

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND LOVELACE
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	PM PEAK	Analysis Year	2018

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	0	2	0	0	2	0	1	1	0	1	1	0
Lane Group		LTR			LTR		L	TR		L	TR	
Volume (vph)	19	536	53	36	396	41	97	48	88	15	15	26
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Pretimed/Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time		2.0			2.0		2.0	2.0		2.0	2.0	
Extension of Effective Green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival Type		3			3		3	3		3	3	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour		0			0		0	0		0	0	
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 30.0	G =	G =	G =	G = 22.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		676			526		108	151		17	46	
Lane Group Capacity		1668			1570		506	629		461	631	
v/c Ratio		0.41			0.34		0.21	0.24		0.04	0.07	
Green Ratio		0.50			0.50		0.37	0.37		0.37	0.37	
Uniform Delay d_1		9.4			9.0		13.1	13.2		12.2	12.4	
Delay Factor k		0.11			0.11		0.11	0.11		0.11	0.11	
Incremental Delay d_2		0.2			0.1		0.2	0.2		0.0	0.0	
PF Factor		1.000			1.000		1.000	1.000		1.000	1.000	
Control Delay		9.6			9.1		13.3	13.4		12.2	12.4	
Lane Group LOS		A			A		B	B		B	B	
Approach Delay		9.6			9.1			13.3			12.4	
Approach LOS		A			A			B			B	
Intersection Delay		10.2			Intersection LOS						B	

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	LOVELACE AVE AND HURT ST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: HURT ST | North/South Street: LOVELACE AVE

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	119	17			16	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	132	18	0	0	17	13
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				13		70
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	14	0	77
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	132						91	
C (m) (veh/h)	1596						959	
v/c	0.08						0.09	
95% queue length	0.27						0.31	
Control Delay (s/veh)	7.5						9.1	
LOS	A						A	
Approach Delay (s/veh)	--	--					9.1	
Approach LOS	--	--					A	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	LOVELACE AVE AND HURT ST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: HURT ST | North/South Street: LOVELACE AVE

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	164	43			19	13
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	182	47	0	0	21	14
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				20		89
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	22	0	98
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	182						120	
C (m) (veh/h)	1589						883	
v/c	0.11						0.14	
95% queue length	0.39						0.47	
Control Delay (s/veh)	7.6						9.7	
LOS	A						A	
Approach Delay (s/veh)	--	--					9.7	
Approach LOS	--	--					A	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	HANNINGS LN AND MOODY AVE
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street:

North/South Street: MOODY AVE

Intersection Orientation: North-South

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	79	62			34	52
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	87	68	0	0	37	57
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	74		69			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	82	0	76	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	87						158	
C (m) (veh/h)	1513						781	
v/c	0.06						0.20	
95% queue length	0.18						0.75	
Control Delay (s/veh)	7.5						10.8	
LOS	A						B	
Approach Delay (s/veh)	--	--				10.8		
Approach LOS	--	--				B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	HANNINGS LN AND MOODY AVE
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: HANNINGS LANE | North/South Street: MOODY AVE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	130	95			12	96
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	144	105	0	0	13	106
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	112		94			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	124	0	104	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	144						228	
C (m) (veh/h)	1482						656	
v/c	0.10						0.35	
95% queue length	0.32						1.55	
Control Delay (s/veh)	7.7						13.4	
LOS	A						B	
Approach Delay (s/veh)	--	--				13.4		
Approach LOS	--	--				B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN EAST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: HANNINGS LANE EAST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		272	65	78	159	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	302	72	86	176	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				35		96
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	38	0	106
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		86		144				
C (m) (veh/h)		1196		581				
v/c		0.07		0.25				
95% queue length		0.23		0.97				
Control Delay (s/veh)		8.2		13.2				
LOS		A		B				
Approach Delay (s/veh)	--	--	13.2					
Approach LOS	--	--	B					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN EAST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: HANNINGS LANE EAST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		240	53	153	268	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	266	58	170	297	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				57		169
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	63	0	187
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		170		250				
C (m) (veh/h)		1247		505				
v/c		0.14		0.50				
95% queue length		0.47		2.71				
Control Delay (s/veh)		8.3		18.9				
LOS		A		C				
Approach Delay (s/veh)	--	--	18.9					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN WEST
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: HANNINGS LANE WEST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	48	320			186	20
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	53	355	0	0	206	22
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	20		51			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	22	0	56	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	53						78	
C (m) (veh/h)	1352						639	
v/c	0.04						0.12	
95% queue length	0.12						0.41	
Control Delay (s/veh)	7.8						11.4	
LOS	A						B	
Approach Delay (s/veh)	--	--				11.4		
Approach LOS	--	--				B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND HANNINGS LN WEST
Jurisdiction	MARTIN
Analysis Year	

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: HANNINGS LANE WEST | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	104	305			336	21
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	115	338	0	0	373	23
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	13		85			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	14	0	94	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	115						108	
C (m) (veh/h)	1174						556	
v/c	0.10						0.19	
95% queue length	0.32						0.71	
Control Delay (s/veh)	8.4						13.0	
LOS	A						B	
Approach Delay (s/veh)	--	--					13.0	
Approach LOS	--	--					B	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND WAYNE FISHER
Jurisdiction	MARTIN
Analysis Year	2008

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: WAYNE FISHER DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	85	192	63	48	145	29
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	94	213	70	53	161	32
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	11	4	28	33	15	47
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	12	4	31	36	16	52
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	94	53		104			47	
C (m) (veh/h)	1392	1291		437			506	
v/c	0.07	0.04		0.24			0.09	
95% queue length	0.22	0.13		0.92			0.31	
Control Delay (s/veh)	7.8	7.9		15.8			12.8	
LOS	A	A		C			B	
Approach Delay (s/veh)	--	--	15.8			12.8		
Approach LOS	--	--	C			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND WAYNE FISHER
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: WAYNE FISHER DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	25	205	88	59	257	7
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	27	227	97	65	285	7
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	26	6	31	69	1	67
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	28	6	34	76	1	74
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	27	65		151			68	
C (m) (veh/h)	1281	1247		412			400	
v/c	0.02	0.05		0.37			0.17	
95% queue length	0.06	0.16		1.65			0.61	
Control Delay (s/veh)	7.9	8.0		18.7			15.8	
LOS	A	A		C			C	
Approach Delay (s/veh)	--	--	18.7			15.8		
Approach LOS	--	--	C			C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	AM PEAK

Site Information

Intersection	MT PELIA AND PAT SUMMITT
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: PAT HEAD SUMMITT DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	40	199	11	23	202	62
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	44	221	12	25	224	68
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	40	0	12	8	0	16
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	44	0	13	8	0	17
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	44	25		25			57	
C (m) (veh/h)	1281	1346		594			423	
v/c	0.03	0.02		0.04			0.13	
95% queue length	0.11	0.06		0.13			0.46	
Control Delay (s/veh)	7.9	7.7		11.3			14.8	
LOS	A	A		B			B	
Approach Delay (s/veh)	--	--	11.3			14.8		
Approach LOS	--	--	B			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JH
Agency/Co.	RPM
Date Performed	4/23/2008
Analysis Time Period	PM PEAK

Site Information

Intersection	MT PELIA AND PAT SUMMITT
Jurisdiction	MARTIN
Analysis Year	2018

Project Description: UT MARTIN MASTER PLAN - PROPOSED

East/West Street: PAT HEAD SUMMITT DR | North/South Street: MT PELIA RD

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	47	245	6	10	242	37
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	52	272	6	11	268	41
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	66	2	55	26	2	59
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	73	2	61	28	2	65
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	52	11		95			136	
C (m) (veh/h)	1263	1296		521			416	
v/c	0.04	0.01		0.18			0.33	
95% queue length	0.13	0.03		0.66			1.40	
Control Delay (s/veh)	8.0	7.8		13.4			17.8	
LOS	A	A		B			C	
Approach Delay (s/veh)	--	--	13.4			17.8		
Approach LOS	--	--	B			C		

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SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND MT PELIA
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	AM PEAK	Analysis Year	2018

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2	0	1	2		1		1			
Lane Group		TR		L	T		L		R			
Volume (vph)		359	98	189	272		64		191			
% Heavy Vehicles		0	0	0	0		0		0			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Pretimed/Actuated (P/A)		A	A	A	A		A		A			
Startup Lost Time		2.0		2.0	2.0		2.0		2.0			
Extension of Effective Green		2.0		2.0	2.0		2.0		2.0			
Arrival Type		3		3	3		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0	19			
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0		0	0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	WB Only	EW Perm	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 18.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 60.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		508		210	302		71		191			
Lane Group Capacity		1050		518	1930		602		538			
v/c Ratio		0.48		0.41	0.16		0.12		0.36			
Green Ratio		0.30		0.53	0.53		0.33		0.33			
Uniform Delay d_1		17.2		8.0	7.1		13.9		15.1			
Delay Factor k		0.11		0.11	0.11		0.11		0.11			
Incremental Delay d_2		0.4		0.5	0.0		0.1		0.4			
PF Factor		1.000		1.000	1.000		1.000		1.000			
Control Delay		17.5		8.5	7.2		14.0		15.5			
Lane Group LOS		B		A	A		B		B			
Approach Delay		17.5			7.7			15.1				
Approach LOS		B			A			B				
Intersection Delay		13.1			Intersection LOS						B	

SHORT REPORT

General Information		Site Information	
Analyst	JH	Intersection	UNIVERSITY AND MT PELIA
Agency or Co.	RPM	Area Type	All other areas
Date Performed	4/23/2008	Jurisdiction	MARTIN
Time Period	PM PEAK	Analysis Year	2018

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2	0	1	2		1		1			
Lane Group		TR		L	T		L		R			
Volume (vph)		371	86	203	525		152		218			
% Heavy Vehicles		0	0	0	0		0		0			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Pretimed/Actuated (P/A)		A	A	A	A		A		A			
Startup Lost Time		2.0		2.0	2.0		2.0		2.0			
Extension of Effective Green		2.0		2.0	2.0		2.0		2.0			
Arrival Type		3		3	3		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0	22			
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0		0	0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	WB Only	EW Perm	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 18.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		508		226	583		169		218			
Lane Group Capacity		1055		518	1930		602		538			
v/c Ratio		0.48		0.44	0.30		0.28		0.41			
Green Ratio		0.30		0.53	0.53		0.33		0.33			
Uniform Delay d_1		17.2		8.1	7.8		14.7		15.4			
Delay Factor k		0.11		0.11	0.11		0.11		0.11			
Incremental Delay d_2		0.3		0.6	0.1		0.3		0.5			
PF Factor		1.000		1.000	1.000		1.000		1.000			
Control Delay		17.5		8.7	7.9		15.0		15.9			
Lane Group LOS		B		A	A		B		B			
Approach Delay	17.5			8.1			15.5					
Approach LOS	B			A			B					
Intersection Delay	12.6			Intersection LOS						B		

APPENDIX C

TRIP GENERATION CALCULATIONS

TRIP GENERATION – UT Martin Master Plan

College/University – 650 new students

Use ITE Land Use Code 550 and associated trip generation rates for 24-hour total trips and peak hour trips.

Average Daily Traffic

Average Rate: T = 2.38 (X)
T = 2.38 (650)
T = 1,547

A.M. Peak Hour - Use the average rate equation for AM Peak Hour of the Adjacent Street (between 7:00 AM and 9:00 AM)

T = 0.21 (X)
T = 0.21 (650)
T = 137

Enter = 0.80 (137) = 110
Exit = 0.20 (137) = 27

P.M. Peak Hour - Use the average rate equation for PM Peak Hour of the Adjacent Street (between 4:00 PM and 6:00 PM)

T = 0.21 (X)
T = 0.21 (650)
T = 137

Enter = 0.30 (137) = 41
Exit = 0.70 (137) = 96