

Town of Waynesville, NC Board of Aldermen – Regular Meeting

Town Hall, 9 South Main Street, Waynesville, NC 28786

Date: **August 11, 2015** Time: **6:30 p.m.**

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(828) 452-2491

aowens@waynesvillenc.gov

A. CALL TO ORDER - Mayor Gavin Brown

1. Welcome/Calendar/Announcements
 - August 18 – Boards & Commissions Reception/Orientation, 5:30 PM, Rec Center
2. Adoption of Minutes

Motion: To approve the minutes of the July 28, 2015 regular meeting as presented [or as corrected].

B. REPORTS/PRESENTATION

- 3 After Action Report/Improvement Plan from Waynesville Full Scale Fire Emergency Exercise on June 5/6, 2015
 - Roland Hamrick, SCSLLC Consulting
 - Greg Shuping, Haywood County Emergency Management
 - Joey Webb, Fire Chief

C. DISCUSSION ITEMS

4. Report on Chestnut Park
 - Woody Griffin, Town Attorney
 - Bill Hollingsed, Police Chief
5. Russ Avenue Corridor/NCDOT Cross Section Update
 - Elizabeth Teague, Development Services Director
 - David Foster, Public Services Director

TOWN OF WAYNESVILLE – REGULAR SESSION AGENDA

August 11, 2015

- 2 -

- Preston Gregg, Town Engineer

D. COMMUNICATIONS FROM STAFF

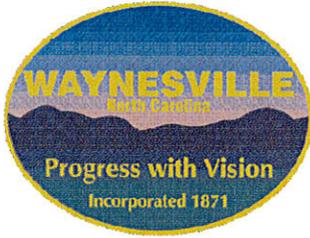
6. Town Manager – Marcy Onieal
 - S141 Update
 - Electric Services Contract Negotiations
 - Career Track Progress
 - Administrative Services/Mgr's Office Staffing
 - WWTP Project Updates
 - Cell Tower Updates
 - Home-based Occupation/Parking Ban-190 Hemlock Street
 - Moody Drive/Old Golf Course Road Drainage Issue
 - Frog Level Updates – Open Door Mediation/HFLMA Vision
 - Business Execs Monthly Meeting
 - Development Services Advisory Update
 - Historic Preservation Funding Request
 - Tuscola 50th Anniversary Celebration
 - United Way Pacesetter Campaign
 - Thank-yous from Partner Agencies
 - Employee Achievements
 - Board Retreat-January

7. Town Attorney – Woody Griffin

E. COMMUNICATIONS FROM MAYOR & BOARD OF ALDERMEN

F. CALL ON THE AUDIENCE

G. ADJOURN



TOWN OF WAYNESVILLE

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 16 South Main Street
 Waynesville, NC 28786
 Phone (828) 452-2491 • Fax (828) 456-2000
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CALENDAR August 11, 2015

2015	
Fri, Aug 7 5:00 PM – 9:00 PM Main Street & Frog Level	Art After Dark – Waynesville Gallery Association
Fri, Aug 7 6:30 PM – 9:00 PM Historic Courthouse Lawn	Mountain Street Dance – Downtown Waynesville Association sponsored event
Sat. Aug 8 9:00 AM	Commission for a Clean County – Haywood County Clean Up Day – Radio Hill in Canton to Clyde Town Limits
Tues, Aug 11 6:30 PM Board Room, 9 S. Main Street	Board of Aldermen Meeting – Regular Session
We-Sa, Aug 12-15 Shulhofer Property	U.S. Police Canine Association Southeast Regional K-9 Trials Hosted by Waynesville Police Department
Thur, Aug 13 3:00 PM to 5:00 PM HRMC Side B Cafeteria	Until We Meet Again Reception for Teresa Reynolds at HRMC Side B of the Cafeteria
Sat, Aug 15 Bethea Welcome Center Lake Junaluska	6 th Annual Blue Ridge Breakaway Cycling Event Packet pick-up: August 14, 4-8 PM Registration: August 15, 6-7 AM
Sat, Aug 15 Noon – 5:00 PM American Legion Field	Waynesville Beer Faire
Tue, Aug 18 5:30 PM Waynesville Rec Center	Boards and Commissions Appreciation Reception & Orientation (all board and commission members and candidates for office invited to attend)
Fri, Aug 21 6:30 PM Main Street	5 th Annual Main Street Mile – Benefitting Shriner’s Hospital for Children Street Closure – Main Street
Mon, Aug 24 5:30 PM Haywood County – HHS Building	Haywood County Council of Governments (COG) meeting Haywood County Hosting
Tues, Aug 25 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – Regular Session
Fr-Sa, Sep 4-5 Stuart Auditorium, Lake Junaluska	45 th Annual Smoky Mountain Folk Festival, Lake Junaluska

Fri, Sep 4 5:00 PM – 9:00 PM Main Street & Frog Level	Art After Dark – Waynesville Gallery Association
Mon, Sep 7	Labor Day Holiday Town Offices Closed
Mon, Sep 7 10:00 AM Champion Drive, Canton	Canton Labor Day Parade – elected officials have been asked to participate; need to decide by August 15th
Tues, Sep 8 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – Regular Session
Sat. Sep 12 9:00 AM	Commission for a Clean County – Maggie Valley Clean Up Day
Sat. Sep 19 10:00 AM to 2:00 PM Lake Junaluska Open Air Gym	Communities Rallying for Recovery – sponsored by Drugs in Our Midst
Sat, Sep 19 5:00 PM Main Street	Block Party – Downtown Waynesville Association sponsored event <i>(NOTE: Date changed from Sept 5)</i>
Tues, Sep 22 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – Regular Session
Thu, Sep 24 Noon Davis Cove Road	Habitat for Humanity Groundbreaking Ceremony Walton Woods
Fr-Sun, Sep 25-27 Waynesville Recreation Center	2015 Cycle North Carolina Mountains-to-the-Coast Ride Waynesville serving as Host Start City Cyclists depart 8:00 AM Sunday morning
Sa-Sa, Sep 26-Oct 3	Waynesville Recreation Center Closed to the Public for one week - Annual Facility Maintenance
Mon, Sep 28 6:30 PM Location TBD	Southwestern Commission Region A Regular Meeting
Fri, Oct 2 5:00 PM – 9:00 PM Main Street & Frog Level	Art After Dark – Waynesville Gallery Association
Sat, Oct 10 10:00 AM – 5:00 PM Church Street	32 nd Annual Church Street Art and Craft Show Street Closure – Church Street
Tues, Oct 13 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – Regular Session
Su-Tu, Oct 11-13	NCLM Annual Conference: City Vision 2015 Winston-Salem
Sat, Oct 17 10:00 AM – 5:00 PM Main Street	27 th Annual Apple Harvest Festival – Chamber of Commerce Street Closure – Main Street

Thu, Oct 22 8:30 AM 63 Elmwood Way, Suite A	One Stop Voting Begins – Municipal Elections Haywood County Board of Elections
Tues, Oct 27 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – Regular Session
Mon, Oct 26 5:30 PM Waynesville – location TBD	Haywood County Council of Governments (COG) meeting Town of Waynesville Hosting
Sat, Oct 31 1:00 PM 63 Elmwood Way, Suite A	One Stop Voting Ends – Municipal Elections, Haywood County
Sat, Oct 31 5:00 PM – 7:00 PM Main Street	Treats on the Street – Downtown Waynesville Merchants
Tue, Nov 3 6:30 AM – 7:30 PM	Election Day – Haywood County Municipal Elections (All municipal precincts)
We-Sa, Nov 4-7	National League of Cities Annual Congress of Cities & Exposition Nashville, TN
Fri, Nov 6 5:00 PM – 9:00 PM Main Street & Frog Level	Art After Dark – Waynesville Gallery Association
Tues, Nov 10 11:00 AM 63 Elmwood Way, Suite A	Canvass of Election – Haywood County Board of Elections
Tue, Nov 10 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – Regular Session
Wed, Nov 11	Veterans Day Holiday Town Offices Closed
Mon, Nov 23 6:30 PM Location TBD	Southwestern Commission Region A Regular Meeting
Tue, Nov 24 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – Regular Session
Thur – Fri, Nov 26-27	Thanksgiving Holiday Town Offices Closed
Th-Fr, Dec 3-11 One-Day Training Workshops Locations TBD	NCLM New Mayors' Orientation Training One Day Workshops - Various locations across the state
Fr-Mo, Dec 4-7 Downtown Waynesville	Holly Days Seasonal Events in Downtown Waynesville throughout the weekend, beginning with Art after Dark on Friday evening, culminating with the Holiday Parade on Monday evening
Fri, Dec 4 5:00 PM – 9:00 PM Main Street & Frog Level	Art After Dark – Waynesville Gallery Association

Mon, Dec 7 6:00 PM Main Street	Waynesville Christmas Parade – Downtown Waynesville Association sponsored event Street Closure – Main Street
Tues, Dec 8 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – ORGANIZATIONAL MEETING
Sat, Dec 12 6:00 PM – 9:00 PM Main Street	A Night Before Christmas – Downtown Waynesville Association sponsored event
Su-Th, Dec 13-24	Twelve Days of Christmas – Downtown Waynesville Association Holiday Sales & Event Promotions
Tues, Dec 22 6:30 PM Board Room, 9 S. Main	Board of Aldermen Meeting – Regular Session
We – Fri, Dec 23-25	Christmas Holiday Town Offices Closed

2016

Fri, Jan 1	New Years Day Holiday Town Offices Closed
Fr-Sa, Jan 8-9 2 full days Hickory, NC	Essentials of Municipal Government, sponsored jointly by the NC League of Municipalities & UNC School of Government Training for Newly Elected Officials – various locations
Mon, Jan 18	Martin Luther King Jr Holiday Town Offices Closed
We-Th, Jan 20-21 2 full days Chapel Hill, NC	Essentials of Municipal Government, sponsored jointly by the NC League of Municipalities & UNC School of Government Training for Newly Elected Officials – various locations
Tu-We, Feb 9-10 2 full days Sunset Beach, NC	Essentials of Municipal Government, sponsored jointly by the NC League of Municipalities & UNC School of Government Training for Newly Elected Officials – various locations
We-Th, Feb 17-18 2 full days Asheville, NC	Essentials of Municipal Government, sponsored jointly by the NC League of Municipalities & UNC School of Government Training for Newly Elected Officials – various locations
Fr-Sa, Mar 4-5 2 full days New Bern, NC	Essentials of Municipal Government, sponsored jointly by the NC League of Municipalities & UNC School of Government Training for Newly Elected Officials – various locations
We-Fr, Mar 16-18	NC Main Street Conference Goldsboro, NC
Fri, Mar 25	Good Friday Holiday Town Offices Closed

Mon, May 30	Memorial Day Holiday Town Offices Closed
Mon, Jul 4	Independence Day Holiday Town Offices Closed
Mon, Sep 5	Labor Day Holiday Town Offices Closed
Fri, Nov 11	Veterans' Day Holiday Town Offices Closed
Th-Fr, Nov 24-25	Thanksgiving Holiday Town Offices Closed
Fr-Tu, Dec 23, 26-27	Christmas Holiday Town Offices Closed

Board and Commission Meetings – August/September 2015

ABC Board	ABC Office – 52 Dayco Drive	August 20 3 rd Tuesdays 10:00 AM
Board of Adjustment	Town Hall – 9 S. Main Street	September 1 1 st Tuesdays 5:30 PM
Community Action Forum	Police Department Training Room – 9 S. Main Street	Meets Quarterly or as called; <i>No meeting currently scheduled</i>
Downtown Waynesville Association	UCB Board Room – 165 North Main	August 27 4 th Thursdays 12 Noon
Firefighter's Relief Fund Board	Fire Station 1 – 1022 N. Main Street	Meets as needed; <i>No meeting currently scheduled</i>
Historic Preservation Commission	Town Hall – 9 S. Main Street	September 2 1 st Wednesdays 2:00 PM
Planning Board	Town Hall – 9 S. Main Street	August 17 3 rd Mondays 5:30 PM
Public Art Commission	Town Hall – 9 S. Main Street	August 13 2 nd Thursdays 4:00 PM
Recreation & Parks Advisory Commission	Rec Center Office – 550 Vance Street	August 18 3 rd Tuesdays 5:30 PM
Waynesville Housing Authority	Waynesville Towers – 65 Church Street	September 2 1 st Wednesdays 5:30 PM

BOARD/STAFF SCHEDULE

Su – Tu, Oct 11-13	Mayor & Aldermen Manager & Clerk	NCLM Annual Conference: CityVision 2015 Winston – Salem, NC
Sa-Sa, Oct 17-24	Town Manager	Vacation
We-Fr, Feb 3-5, 2016	Town Manager	NCCCMA Manager's Continuing Ed - Winter Seminar
Th-Sa, Jun 23-25, 2016	Town Manager	NCCCMA Manager's Continuing Ed - Summer Seminar



*The Town of Waynesville
Cordially invites you to a
Boards and Commissions Reception*

On Tuesday, August 18, 2015

At 5:30 p.m.

At the Waynesville Recreation Center

This event is an opportunity to celebrate the work of the various boards and commissions, and allows us the honor of thanking the outgoing members for their service, and to welcome our newest members by providing an overview of the duties of the boards and commissions and their importance to the Town of Waynesville

Please RSVP to Amie Owens, Town Clerk by email at aowens@waynesvillenc.gov or via telephone at 828-452-2491.

IT'S A...

RECEPTION!

FOR: Teresa Reynolds

DATE: Thursday, August 13, 2015

TIME: 3:00pm-5:00pm

WHERE: Side B Café

Please join us as we say “Until We Meet Again” to Teresa Reynolds and wish her the best on her exciting new endeavor.

Teresa has been part of the Haywood family for almost 7 years.

Best Wishes Teresa – you will be greatly missed!!

MINUTES OF THE TOWN OF WAYNESVILLE BOARD OF ALDERMEN
REGULAR MEETING
July 28, 2015

THE WAYNESVILLE BOARD OF ALDERMEN held a regular meeting on Tuesday, July 28, 2015 at 6:30 p.m. in the board room of Town Hall, 9 South Main Street, Waynesville, NC.

A. CALL TO ORDER

Mayor Brown called the meeting to order at 6:30 p.m. with the following members present:

Mayor Gavin Brown
Alderman Gary Caldwell
Alderman Julia Freeman
Alderman LeRoy Roberson

Alderman J. Wells Greeley was not present due to a scheduling conflict.

The following staff members were present:

Marcy Onieal, Town Manager
Woodrow Griffin, Town Attorney
Amie Owens, Town Clerk
Joey Webb, Fire Chief
Elizabeth Teague, Development Services Director
Catherine Hughes, MPA Intern

The following media representatives were present:

Mary Ann Enloe, the Mountaineer

1. Welcome /Calendar/Announcements

Mayor Gavin Brown welcomed everyone to the meeting. He noted that he would be celebrating his birthday this weekend.

Mayor Brown commented that Sarge's Annual Downtown Dog Walk was scheduled for Saturday, August 1 and asked Alderman Freeman to tell about the event. Alderman Freeman explained that this is the 10th anniversary and the largest ever celebration to date. She noted that while canine flu has been a concern, there have been no cases in Haywood County. Registration for the dog walk is at 9:00 a.m. with the walk beginning at 10:00 a.m. The Mayor will be in attendance and encouraged participation by all.

Mayor Brown noted that there was an Art after Dark and Mountain Street Dance on August 7th with the Blue Ridge Break Away Cycling event on August 15th.

Manager Onieal called attention to the following events:

- July 31 - Southwestern Commission Region A Annual Dinner – noting that she, the Mayor and MPA Intern, Catherine Hughes, would be in attendance.

- August 5 – Issues and Eggs – event sponsored by the Haywood County Chamber of Commerce – speaker Joe Stewart from the NC Free Enterprise Foundation would be the keynote speaker. Manager Onieal noted that she had had the opportunity to hear Mr. Stewart speak in Raleigh and that he gives an outstanding non-partisan analysis of the national and statewide political landscape and forecast and she encouraged members to attend.
- August 18 – Boards and Commissions Overview – this event is held to recognize the outgoing board members as well as provide a brief orientation to new members. The candidates for aldermen and mayor will also be invited to attend. A reception will be held beginning at 5:30 p.m. with orientation at 6:00 p.m. She noted that the mayor and board chairs would each be invited to address the group.

2. Adoption of Minutes

There were two amendments to the minutes of the June 22, 2015 special called meeting requested by Alderman Roberson.

Original statement – page 4 paragraph 3:

Alderman Roberson noted that at the retreat that the electric division did not have a formal safety program.

Amended statement:

Alderman Roberson noted that at the retreat that UTECH said the electric division did not have a formal safety program.

Original statement – page 5 paragraph 4:

Alderman Roberson asked if the Finance Officer had to approve or co-sign contracts over a certain threshold.

Amended statement:

Alderman Roberson asked if the Finance Officer had to approve or co-sign contracts.

Alderman Roberson made a motion, seconded by Alderman Caldwell, to approve the minutes of the June 22, 2015 special called meeting, as amended, and to approve the minutes of the June 23, 2015 regular meeting, as presented. The motion carried unanimously.

B. REPORTS/PRESENTATION

3. Fiscal Year End Reports, as of June 30, 2015

a. Sale of Fixed Assets Report

Asset Services Manager Julie Grasty presented the annual report of sale of assets. She explained that all of the vehicles that were declared surplus were sold through GovDeals. The water meters and implements were through Biltmore Iron in Asheville. Ms. Grasty noted that the police dog was retired and sold to the handler. Manager Onieal added that each vehicle for

surplus comes with a full report from fleet manager as to why it is being declared surplus based on maintenance costs, mileage, age, and justification that the vehicle has exceeded its useful life or cost benefit. Alderman Roberson inquired about the F-800 vehicle. Ms. Grasty explained that it was an old flat bed truck used by the street department.

Mayor Brown inquired if there was a competitor to GovDeals. Ms. Grasty noted that there were other competitors. Manager Onieal added that there were smaller agencies that provide similar services, but that GovDeals has been used by the Town for several years with good results and is recognized nationally as the electronic auction site of choice for municipalities with arguably the largest audience of potential buyers.

Manager Onieal noted as a related item that the new explosives canine, Luke, was now on staff. Luke was paid for by all of the municipalities for use throughout the county, but will be trained, owned, maintained by the Waynesville Police Department. Alderman Roberson asked when a canine is retired, does that handler receive the canine. Manager Onieal confirmed that a canine is typically surplused for the nominal sum of \$1 and retired to its handler.

No action was required for this agenda item as it was a year-ending report.

b. Disclosure of Payments

Manager Onieal explained that small local governments (less than 15,000 population) could contract with a member of the governing board, but only under very specific statutorily defined procedures. She noted the distribution of the statute with the agenda packet and part of the procedure being the annual disclosure of payments involving aldermen with a financial interest in business being done with the Town. Two meetings were held at the Wells Event Center in Fiscal Year 2014-15. While there was no direct payment to Alderman Greeley, as the owner of the establishment, he would have benefitted from such payment and disclosure of the payment is being provided. The total cost for the two meetings was \$650.00. Manager Onieal added that such payments are required to be updated quarterly and posted; they are to remain posted for one year.

No action was required for this agenda item as it was a year-ending report.

4. Intern Activity Report to the Board

Manager Onieal commented she was pleased to have Catherine Hughes with the Town this summer as an intern from the UNC-Chapel Hill Master of Public Administration Program. She has one more week of her internship and she will be reporting to the board regarding two specific projects she completed this summer.

Ms. Hughes noted that she worked primarily on two projects – development of emergency action plans (EAP) for each of the town-owned facilities and National Incident Management System (NIMS) training and tracking program. Ms. Hughes provided an overview of the EAP including the various sections covered and emergency scenarios for each building. She has begun providing training to all departments regarding the EAP.

Ms. Hughes explained that NIMS compliance is required for all public safety employees (fire and police) but that training is available for non-public safety areas. During her internship, Ms. Hughes developed a training plan for all departments and noted that it was suggested that board members also take the overview course. She noted that FEMA funding following a disaster hinges strongly on NIMS compliance. Ms. Hughes initiated a tracking program for NIMS training which will be used by Human Resources going forward.

Ms. Hughes added that she took part in the table top planning exercise and the full scale disaster drill in June. The simulation was a fire in the downtown area at Massie Furniture Company. Ms. Hughes played the role of the town manager and assisted with communication regarding traffic control and evacuation. In this role, she determined with others that declaration of a state of emergency was not warranted. As her chosen discipline is Emergency Management, Ms. Hughes was able to see first hand the need for collaboration and preparatory exercises when dealing with emergency response.

Ms. Hughes assisted with other projects involving communications, social media and topic specific research. She concluded her presentation by noting the various lessons learned during her time with the Town including:

- How much preparation goes into the budget process
- The different ways that the legislature can impact local processes
- Need for collaboration during emergency situations and the coordination of emergency response
- How fast-paced and quick-changing local government can be

Fire Chief Joey Webb commended Ms. Hughes noting she had been great asset to the town. She is well organized and the development of the EAP template for all buildings has ensured uniformity and ease of training. Chief Webb explained that Ms. Hughes also assisted Folkmoot in developing an EAP for the Folkmoot Center and took the time to provide training to their staff and volunteers. He added that the NIMS training program should help when applying for various grants which is a large benefit to the Town.

Ms. Hughes thanked the board and Manager Onieal for the opportunity to work with the Town. She commented that she hoped the EAP and NIMS training would be helpful for all. Mayor Brown added that he has often told others that the biggest asset for the town is the employees. He thanked Ms. Hughes and noted that he appreciated her spending summer interning with the Town.

C. NEW BUSINESS

5. Award of Three-Year Contract for Independent Financial Reporting and Auditing Services for the Town of Waynesville for Fiscal Years 2015 – 17

Manager Onieal explained that an audit proposal from Ray, Bumgarner, Kingshill and Associates had been received. She noted that if members were satisfied with the amount on the proposal, they could approve for the entire period or for a shorter period. The cost has remained the same for the previous twelve years. Manager Onieal added that the cost annually is \$27,500. Mayor Brown asked

members if they wished to obtain other quotes. Members concurred that they were happy with the terms of the quote. Mayor Brown commented that the Town was appreciative of Bruce Kingshill's service.

Alderman Roberson made a motion, seconded by Alderman Caldwell to approve the proposal to provide independent financial reporting and financial services for the Town of Waynesville for fiscal years 215 – 2017 as presented by Ray, Bumgarner, Kingshill and Associates, PA, and authorizing the mayor and/or town manager to execute the contract on behalf of the Town, as presented. The motion carried unanimously.

6. Street Closure Request – Waynesville First Methodist Church

Manager Onieal noted that a request had been received regarding a street closure for Academy Street on Saturday, September 19 beginning at 2 p.m. for the Hog Wars fundraising event for the Kory Wawanaca Children's Home in Bolivia, South America. Mayor Brown noted that he was aware of this project which included building orphanages in underdeveloped nations. The event was held in Asheville last year with good results. The event begins at 4:00 p.m. but the request to close the street begins at 2:00 p.m. to allow for safe set up and pedestrian traffic.

Alderman Roberson made a motion, seconded by Alderman Freeman to approve the requested street closure of Academy Street from Haywood Street to Tate Street on Saturday, September 19 beginning at 2:00 p.m. through 7:00 p.m., as presented. The motion carried unanimously.

7. Lease Option and Agreement between Prime Tower and the Town of Waynesville (request of John Behnke, Site Acquisition Services on behalf of Prime Tower)

Manager Onieal began by reminding members that this was for a cell tower to be located on Mosaic Street. Discussions have been ongoing on this issue since the fall and that the conditional use permit has been granted with all proper zoning notices posted. She noted that in the ordinance, one requirement is that a cell tower must be located on public property. John Behnke, Site Acquisition Services, had reviewed a number of sites, but none met the needs. In an effort to continue to meet the ordinance requirements, Prime Tower has negotiated for the purchase of a private property and will donate it to the town. Manager Onieal explained that this proposed donation of property has gone before the Planning Board and received Planning Board approval. She explained that the action requested was to approve the lease and the Resolution Accepting the Proposal for Option and Lease and Authorizing Upset Bid Process. The initial lease term is for five years with a right to extend the lease for ten additional five-year terms.

Manager Onieal added that while this agreement is unique because we do not technically own the property, Prime Tower has negotiated an option for purchase that has been assigned to the Town of Waynesville which gives the Town the right to lease the property. Manager Onieal also noted that the lease terms were identical to the terms for the US Cellular contract approved in March. The monthly payment is \$18,250 which increases by 3% annually.

Alderman Roberson asked the exact location of the property. Manager Onieal answered that it is next to the Giles Chemical warehouse, across from the urgent care center. Mr. Behnke provided a large scale plat for review.

Alderman Roberson asked if there was any liability for the town if the tower fell. Mr. Behnke addressed the board and explained that all insurances will be in place and the tower is engineered to fall within the leasehold area. Town Attorney Woody Griffin added that all insurances and indemnification language is in the agreement. Mayor Brown reminded members that the ordinance was changed to require this type of tower to mitigate risk to adjacent properties. He continued explaining that the ordinance was written with the intention to limit the number of cell towers to avoid having cell towers all over town. Currently, there are only three towers within the town limits.

Mr. Behnke explained that there were two reasons for this request. The primary reason for this request is to tie in with emergency management planning for the 9-1-1 component, and the other is to ensure robust wireless coverage for citizens and visitors. Mr. Behnke concluded by thanking everyone at the town of Waynesville for their assistance in developing this agreement.

Alderman Caldwell made a motion, seconded by Alderman Freeman to adopt the Resolution Accepting the Proposal for Option and Lease and Authorizing Upset Bid Process and approving the Lease Option and Agreement between Prime Tower and the Town of Waynesville, and authorizing the mayor and/or town manager to execute the agreement on behalf of the town, as presented. The motion carried unanimously.

8. Appointments to Waynesville Public Art Commission

Mayor Brown noted that there were two vacancies on the Waynesville Public Art Commission. Two applications were received for a three-year term ending June 30, 2018. Applicants were Elizabeth "Libba" Feichter and Teri Siewert.

Alderman Caldwell made a motion, seconded by Alderman Roberson, to appoint Elizabeth "Libba" Feichter and Teri Siewert to the Waynesville Public Art Commission for a three-year term ending on June 30, 2018. The motion carried unanimously.

D. COMMUNICATIONS FROM STAFF

11. Town Manager – Marcy Onieal

Parking Issue

Manager Onieal introduced an item to the board noting that no action was being sought at this meeting. A request has been received from resident Carolyn Ray, 190 Hemlock Street. Her residence is located behind the County solid waste convenience center and is next door to a home-based lawn mower repair business. Parking has become an issue on that street. Manager Onieal explained that the request has been to eliminate parking on that side of the street. She noted that after staff has completed their review of traffic and the home-based business, an action item restricting parking on that side of the street on Hemlock may be brought back to the board.

Stipend information

Manager Onieal provided a handout of information as a follow up to a request from the board at the June 23, 2015 regular meeting regarding the stipends of other elected officials in other municipalities and counties.

Frog Level/Open Door Mediation

Manager Onieal noted that an initial meeting had been held between the Frog Level Merchants Association (FLMA), Open Door and the Town in June. No additional meetings have been held as the FLMA had recently changed officers. Mountain Mediation is engaged as part of the discussion and a meeting will be scheduled soon.

Lake Junaluska Merger

Manager Onieal reported that SB141 was pulled from the agenda at the last minute on July 20. Representative Ross (from the annexation committee) was carrying the bill for the Town. During the Republican caucus there was discussion about the bill. Unfortunately, incorrect information such as rumors of triple taxation and exaggerated lake maintenance costs were presented. Manager Onieal clarified that the lake is private property of Lake Junaluska Assembly, Inc. which has provided and intends to continue providing maintenance of the lake and dam in a responsible manner. No fees from residents are ever used to maintain the lake; no residents will have to maintain the lake. Rather than risk having the bill fail if put to a vote on the floor, Representative Ross pulled the bill.

Manager Onieal provided copies of information that was prepared in an effort to assure correct information was shared about the proposed merger. Information included a timeline of events, the number of media articles, the number of meetings held where the issue was discussed and specific materials that address the misinformation that is being circulated and set the record straight. Manager Onieal added that Senator Davis is being allowed to present to the Republican caucus of the House.

Mayor Brown noted that the time and effort to this situation individually and collectively has been great and that the board has been very open about this issue. He asked if there was a concrete deadline regarding this bill. Manager Onieal explained that time is getting short on the session, but there is still time for this to be voted on by the House. She noted that the Haywood County Board of Elections is already prepared with precinct lists prepared by legal description to be annexed, and lists of voter registrations as of June 15th. While the ballots are not printed, the question has been prepared and can be added easily. The Board of Elections is ready for this referendum.

Mayor Brown asked if McGill Associates had completed their report. Manager Onieal explained that she is awaiting the revised/updated annexation memorandum.

Development Services Director

Manager Onieal introduced Elizabeth Teague, the new Development Services Director. Ms. Teague's resume was provided to all members present and Ms. Onieal provided some of Ms. Teague's biographical information. Ms. Teague thanked the board and noted her excitement to work for the town of Waynesville and offered to answer any questions from the board.

Mayor Brown explained that the board had charged Manager Onieal to have someone in place to head the department who would be willing to work to spur economic development and show everyone that Waynesville is business friendly and not anti-development. Mayor Brown wished Ms. Teague the best of luck and added that he looked forward to working together. Manager Onieal added

that Ms. Teague has been meeting with various local agency directors, and chairs of the Planning Board and Historic Preservation Commission. The Development Services Advisory Board is going to be reactivated and Ms. Teague will be meeting with that group as well.

12. Town Attorney – Woody Griffin

Attorney Griffin had no business to discuss.

E. COMMUNICATIONS FROM MAYOR & BOARD OF ALDERMEN

F. CALL ON THE AUDIENCE

No one addressed the board.

G. CLOSED SESSION

Mayor Brown noted that the board would be going into closed session to discuss litigation matters in the case of Shuler v. Town of Waynesville under North Carolina General Statute §143.318.11 (a)(3).

Alderman Roberson made a motion, seconded by Alderman Freeman to enter into closed session. The motion carried unanimously.

The board entered closed session at 7:30 p.m.

The board returned from closed session at 7:45 p.m.

H. ADJOURN

There being no further business to discuss, Alderman Roberson made a motion, seconded by Alderman Caldwell, to adjourn the meeting at 7:46 p.m. The motion carried unanimously.

ATTEST

Gavin A. Brown, Mayor

Marcia D. Onieal, Town Manager

Waynesville Conflagration Full Scale Exercise 2015

After-Action Report/Improvement Plan

June 30, 2015

The After-Action Report/Improvement Plan (AAR/IP) aligns exercise objectives with preparedness doctrine to include the National Preparedness Goal and related frameworks and guidance. Exercise information required for preparedness reporting and trend analysis is included; users are encouraged to add additional sections as needed to support their own organizational needs.

EXERCISE OVERVIEW

Exercise Name	Waynesville Conflagration Full Scale Exercise 2015
Exercise Dates	June 5-6, 2015
Scope	The exercise is a full scale exercise set in downtown Waynesville at Massie Furniture Store (45 North Main St.)
Mission Area(s)	Protection, Mitigation, Response
Core Capabilities	Operation Coordination, Situational Awareness
Objectives	<p>Evaluate Waynesville Fire Department's response capabilities to a major fire in their primary business district.</p> <p>Evaluate multi-agency coordination during a major incident requiring mutual aid and town services.</p> <p>Evaluate water supply capabilities including tender shuttle and drafting from secondary water sources.</p> <p>Evaluate the town of Waynesville's ability to establish and function within the Incident Command System.</p> <p>Evaluate Haywood Counties EMS ability to provide triage, treatment and transportation services.</p> <p>Evaluate the ability of the local health care facilities to implement their surge capability.</p>
Threat or Hazard	Major fire in downtown Waynesville
Scenario	Waynesville Fire Department is dispatched to a structure fire at Massie Furniture Company, 45 North Main St. Waynesville, NC. On arrival the manager advises they have several injured personnel on the back porch. Heavy smoke is showing from the front and rear entrance of the building.

Sponsor	North Carolina Emergency Management Haywood County Local Emergency Planning Committee
Participating Organizations	Waynesville Police Department Junaluska Fire Department Maggie Valley Vol. Fire Department Haywood Rescue Squad Waynesville Fire Department Lake Logan Cecil Vol. Fire Department Haywood County Incident Management Team Town of Waynesville Administration American Red Cross Saunook Vol. Fire Department Haywood County Sheriff's Office Clyde Fire Department Sylva Fire Department Haywood Regional Medical Center Haywood County Emergency Management Haywood County Emergency Medical Services Haywood County Administration Total of 110 personnel participated in the exercise
Point of Contact	Joey Webb, Fire Chief Waynesville Fire Department 16 South Main St. PO. Box 100 Waynesville, NC. 28786 Phone: 828-452-2491 jwebb@waynesvillenc.gov

ANALYSIS OF CORE CAPABILITIES

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
<p>Evaluate Waynesville Fire Department's response capabilities to a major fire in their primary business district.</p> <p>Evaluate water supply capabilities including tender shuttle and drafting from secondary water sources.</p>	<p>Operational Coordination</p> <p>Operational Coordination</p>		<p>(S)</p> <p>(S)</p>		
<p>Evaluate multi-agency coordination during a major incident requiring mutual aid and town services.</p>	<p>Situational Assessment/ Operational Coordination</p>		<p>(S)</p>		
<p>Evaluate the town of Waynesville's ability to establish and function within the Incident</p>	<p>Operational Coordination</p>		<p>(S)</p>		

Command System.					
Evaluate Haywood Counties EMS ability to provide triage, treatment and transportation services.	Operational Coordination		(S)		
Evaluate the ability of the local health care facilities to implement their surge capability.	Operational Coordination	(P)			
<p>Ratings Definitions:</p> <ul style="list-style-type: none"> • Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. • Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified. • Performed with Major Challenges (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws. • Unable to be Performed (U): The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s). 					

Table 1. Summary of Core Capability Performance

The following sections provide an overview of the performance related to each exercise objective and associated core capability, highlighting strengths and areas for improvement

Core Capability

Operational Coordination

Objective: Evaluate Waynesville Fire Department's response capabilities to a major fire in their primary business district

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: The fire department personnel worked diligently to setup the needed assets to accomplish the objectives of the exercise.

Strength 2: Waynesville Fire Department has the necessary equipment to preform their duties and responsibilities to the town.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Currently the Waynesville Fire Department has two stations that respond to emergency calls within its district.

As of May 13th. The department has answered the following calls for 2015

Fire: 232

Medical: 638

Three pieces of apparatus and on call volunteers respond to structure fires. The apparatus is staffed with one person each. When the apparatus is dispatched to an emergency and before arrival at the scene a number of tasks need to be completed in an expedient manner. Such tasks include but are not limited to: looking up address and routing in the map book, looking up the location in the pre-incident survey book, driving the apparatus, operating the siren, operating the radio, dressing the hydrant, forward or reverse hose lays, scene size-up, connecting the supply line to the Engine, stretching and charging attack lines, apparatus placement, donning self contained breathing apparatus, search and rescue, fire suppression until others arrive. **(It would be interesting to know how many times in the past several years that the Engine arrived on scene of a working structure fire and how much time elapsed before sufficient personnel arrived to safely place a hose line in place for interior attack)**

Let's take a look at (29CFR 1910.134) Occupational Safety and Health Administrations (OSHA'S) Respiratory Protection Standard; "Procedures for Interior Structural Firefighting", specifically, the requirement for two stand-by personnel and two fire suppression personnel on-scene prior to the commencement of fire suppression activities (2in/2out). This of course can be forgiven if there is a rescue involved, or a known victim is in the burning building.

NFPA 1720 contains staffing standards that addresses volunteer and combination departments,

NFPA 1720 applies to volunteers who typically don't have personnel on-duty in stations and instead respond to page-out from home, work, or elsewhere. It is this fact of volunteer response that introduces a key variable into the picture. Volunteers cannot guarantee availability like career; on-duty staff can do unless the volunteers are in the station when actually alerted. In this standard response goal criteria are very different and intended to reflect the nature of a volunteer response system.

In general, 1720 provides the following benchmarks:

- **Urban Zones** with >1000 people/sq. mi. calls for 15 staff to assemble an attack in 9 minutes, 90% of the time.
- **Suburban Zones** with 500-1000 people/sq. mi. call for 10 staff to assemble an attack in 10 minutes, 80% of the time.
- **Rural Zones** with <500 people/sq. mi. call for 6 staff to assemble an attack in 14 minutes, 80% of the time.
- **Remote Zones** with a travel distance =8 mi. call for 4 staff, once on scene, to assemble an attack in 2 minutes, 90% of the time.

Of course the evaluators for the exercise can only comment on the capabilities of Waynesville Fire Department as evaluated during the exercise. The Fire Department deployed their first line in 13 minutes of arrival. One person manned the initial arriving Engine Company. That person stopped at the hydrant and dressed the fire hydrant. The Police Department serviced the hydrant. The officer on the Engine attempted to do a size up of the scene and reported his finding via radio to the other in bound Engines and personnel. It was approximately 20 minutes before the Engine in front of the building could have safely made an interior attack on the structure maintaining industry standards. During a free burning phase of a fire, that would be too little too late to save the property.

Recommendation: Develop a plan to have a minimum staffing of 4 personnel on duty at all times. Two personnel on each Engine responding. That way you could assemble 4 personnel on scene for effective attack until other personnel arrive.

Area for Improvement 2: Additional ICS training for command staff, including implementing ICS with automatic aid departments during multi-agency training drills.

Area for Improvement 3: Train with Haywood Counties Incident Management Team to understand each other's responsibilities during the incident.

Area for Improvement 4: Train and exercise with automatic aid partners for municipal water supplies. The automatic aid departments did not appear to be as effective utilizing municipal water supply as they would using drop tanks or nursing from tenders.

Area for Improvement 5: Revise alarm assignment for downtown response.

Area for Improvement 6: Revise pre-plans for commercial building in response area. Apparently they was a large opening through the fire wall of Mast General store that was not on the pre-fire plan.

Objective: Evaluate water supply capabilities including tender shuttle and drafting from secondary water sources.

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

Strength: Great job by fire department to relay water from the creek down the street to furnish the Ladder truck in the rear of the building.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: You have a 6-inch line running down Main St., which during the exercise would not provide sufficient water to extinguish the prescribed fire. It was providing around 400gpm. with zero residual. If you go to one of the back streets and affect a lay from the 10-inch lines we could flow considerably more water. However let's remember that we only have one person on the apparatus, and effective hose lay from a back street takes time. Working that hose lay through your street during the day would be challenging with the traffic from visitors you have uptown.

A couple things need to be immediately looked at. Check your line valves and hydrant valves in the area to see if they maybe partially cut off. Work with the Water Department to determine a cost effective way to improve the water line on Main St. There was some conversation that the last hydrant tests were better than the supply was during the exercise.

Area for Improvement 2: Train and exercise with automatic aid partners for municipal water supplies. The automatic aid departments did not appear to be as effective utilizing municipal water supply as they would using drop tanks for nursing from tenders.

Area for Improvement 3: Review hydrant maintenance policies and procedures, attempt to meet ISO standards.

Objective: Evaluate multi-agency coordination during a major incident requiring mutual aid and town services.

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

Strength: Working relationships, all evaluators commented on the working relationship among the organizations involved in the exercise.

Areas for Improvement:

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Radio communications was identified early on in the exercise. Apparently each agency was on its individual radio channel and created confusion during all phases of the operation. You need to identify a common channel to work major incidents and establish a Communications network onsite. (Telecommunicator)

Area for Improvement 2: The Police Department did a great job assisting the Fire Department with the incident downtown, connecting to the hydrant, evacuation and traffic control. Identified the need for additional law enforcement personnel during a major incident downtown. The ICP identified they would need an additional 8 to 10 officers to effectively meet the needs of the incident. This could be accomplished by calling in off duty officers in a timely manner.

Area for Improvement 3: Public Services are a major player during a significant incident downtown. They properly deployed signage downtown before and during the incident. They identified the need for additional signage in their inventory for future incident response.

Area for Improvement 4: Include all agencies of municipal government in ICS training.

Area for Improvement 5: Town of Waynesville should develop and Emergency Operations Plan annex to respond to major and complex incidents within their town limits.

Objective: Evaluate Haywood Counties EMS ability to provide triage, treatment and transportation services.

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

Strength: Initial Engine Company contact with victims requested all that could walk follow them.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Non-walking victims were left in place under the porch canopy of the fire building. No responders were left with the victims. Fire Department personnel did not provide any medical care.

Area for Improvement 2: EMS did not treat any victims on scene. Victims transported on ATV's the vehicles was basically a taxi. A triage area was setup in a safe location across the street from the fire building, but did not take treatment of victims seriously. Patient #7 had bilateral ankle fractures and was walked to the ATV.

Objective: Evaluate the ability of the local health care facilities to implement their surge capability.

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

Strength: Great Teamwork, Nursing Supervisor very engaged in HICS process and interested in learning more about HICS, Both ACS and Command Center were coordinated professionally and organized very well.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Continue with HICS education for administrative team.

Area for Improvement 2: Portable Telemetry,

Analysis: Need a dedicated telemetry tech to monitor the system assigned ahead of time, also need additional practice of setup for all ED and ICU nursing staff.

Reference: EOP and Nursing telemetry monitoring procedures.

Area for Improvement 3: Advance notice from field

Analysis: Hospital ED did not receive notification of incident from EMS until 12:17, a situation like this would be best to be called into ED as soon as possible so the Administrator on call and Nursing Supervisor can determine when to implement HICS

Area for Improvement 4: Vehicle Logistics for Moving Equipment

Analysis: Noted that the golf cart headlights did not work which is a safety issue, fueling of vehicles to be kept at a minimum predetermined level since the primary transport vehicle only had a quarter of tank left in it.

Reference: HRMC Vehicle Policies

Analysis: Implement safety checklist for golf carts and implement a minimum fuel level on all facility vehicles at the end of shift including OR equipment transport vehicle.

Waynesville Conflagration Full-Scale Exercise 2015

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for Town of Waynesville as a result of full -scale Exercise conducted on June 6, 2015.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element ¹	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Operational Coordination 1: Evaluate Waynesville Fire Department's response capabilities to a major fire in their primary business district.	1. Staffing	Develop Plan for Staffing needs	Planning				
	2. Additional ICS training for command staff, including implementing ICS with automatic aid departments during multi-agency training drills	ICS	Training				

¹ Capability Elements are: Planning, Organization, Equipment, Training, or Exercise.

Waynesville Conflagration Full-Scale Exercise 2015

<p>Evaluate water supply capabilities including tender shuttle and drafting from secondary water sources.</p>	<p>6. Revise pre-plans for commercial buildings in response area.</p> <p>1. Check in line valves to see if partially closed.</p> <p>2. Work to improve pressure and capacity on line on main street.</p> <p>3. Review hydrant maintenance policies and procedures.</p>	<p>Maintenance</p>	<p>Equipment</p>				
		<p>Maintenance</p>	<p>Equipment</p>				
<p>Evaluate multi-agency coordination during a major incident requiring mutual</p>	<p>1. Common radio channels</p> <p>2. Call back of Police officers</p>	<p>Interoperability</p>	<p>Training, Equipment</p>				

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aid and town services.	early during a major incident.		Policy review				
	3. Additional signage inventory	Equipment	Equipment				
	4. All municipal government agencies ICS review training	ICS	Training				
	5. Town of Waynesville develop EOP annex for major incident within town limits.	Develop Plan	Policy				
Evaluate Haywood Counties EMS ability to provide triage, treatment and transportation services.	1. Mass Casualty training	Triage, Treatment Training	Training				
Evaluate the ability of the local health care facilities to implement their surge capability.	1. Continue with HICS education for administrative team.	HICS Training	Training				
	2. Portable Telemetry	Develop Plan	Policy				

Waynesville Conflagration Full-Scale Exercise 2015

	Tech assigned a head of time.						
	3. Advance notice from field.	Policy Training	Training				
	4. Vehicle Logistics for moving equipment	Maintenance	Equipment				

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations	
State	
	North Carolina Emergency Management
	American Red Cross
Local	
	Waynesville Fire Department
	Town of Waynesville Public Services
	Lake Logan Cecil Vol. Fire Department
	Waynesville Police Department
	Haywood County Rescue Squad
	Clyde Fire Department
	Sylva Fire Department
	Haywood County Incident Management Team
	Haywood County Sheriff's Office
	Haywood County Administration
	Junaluska Fire Department
	Saunook Fire Department
	Haywood County Emergency Management
	Maggie Valley Fire Department
	Haywood County Regional Medical Center
	Waynesville Town Administration including City Services

APPENDIX C: EXERCISE PARTICIPANT FEEDBACK ANALYSIS

- 1. Based on the exercise and the tasks you participated in; list the top 3 issues and/or areas that need improvement.**

Manpower, Water Supply, Communications
No Telecommunicator on scene with IMT, Limited Situational Awareness during initial response, Difficult communications between PD/FD/ IMT
Manpower, Manpower, Manpower
Manpower, Communications
Manpower, water, communications
Mutual aid departments not on scene with appropriate apparatus, Communication issues between different agencies, Lack of personnel
Quicker line deployment, Quicker water source establishment, Lack of resources!!
Personnel
No issues
Information flow
Have a dozen or so traffic flow signs, really wasn't deployed well
Help, Water
Manpower, Water Supply
Water supply, Hydrant, Not enough smoke
Water, Hydrant, Manpower
Communications, Communications, Communications
I feel the exercise as a whole went well. Need a little better communications between fire and medical.
Water flow, Traffic control, Hydrant issue
Radio reception
Miss information, Radio communications
Radio traffic was spotty at times
No issues
Water, Manpower
Communications as to the details.
Manpower, Communications
Manpower
Communications, More manpower, Did not have anymore issues
Some down time in passing information
Water, Manpower
Placement of Rehab area, Kinds of participant needs address and range of supplies available.
Communication issues, More manpower
Communications, Getting resources in a timely manner

No real issues, we did not see many firefighters to provide snacks and water to since it was an exercise this was expected.

Manpower, Water supply

Clearer timeline for media contact

Everything went well

More people

No issues

Not a lot of personnel

2. **Identify the action steps that should be taken to address the issues identified above.**

Real world we would have called additional departments, Keep working and telling our story for additional staff, Work with Public Services to resolve water issues and try to improve system. Continue improvements to address radio communications.

Amend IMT activation policy to include Telecommunicator, IMT Leader/OPS/PSC immediately respond to scene, while Logistics brings IMT equipment.

Education to the people that will give us more firefighters.

Hire personnel, practice

Hire more personnel, Check for additional water source. Just have to work on it.

Confirm with mutual aid what is needed, Every agency on same radio channel, Comms on site.

Increase personnel

No issues

Planning reference to IMT operations, IMT involvement primary

More available resources, automatic aid

Have town fix main water line and replace hydrant.

Better water lines, More manpower

I wish I knew

Ramp up pressure options for town, Increased sign inventory, Hydrant service

Radio checked for problems

The town should allow the fire department to add more personnel to shift which would allow personnel to tend to one job instead of multiple jobs. Communications is hard to improve in large scale incidents

Talk more about what is going on staff more appropriately

Better supply of water system, Hire people

Earlier integration into planning, More thought on day versus night traffic flow(human) in area.

NA as a real situation would provide us with hungry firefighters

Recruit more people, Volunteers and paid personnel

Release of info after first briefing, took a little bit longer for recording of reverse 911 with the number of radios in the room.

Call for help

Everything was good from where I was

Talk about this exercise

3. List the equipment, training or plans/procedures that should be reviewed, revised, or developed.

Create alarm assignment plan for downtown, Work on training and pre-plans to improve response.

IMT activation policy, Additional C&G courses for team, EM ordinance for town.

Need to again educate the people that will hire help! Manpower for Waynesville Fire Department

I would like to see a RIT on site

Should be more aerials on scene

Train on large line deployment

More on what to have Engines and Responders stage at. I had to have St. 28 which was portable air supply due to the fact Engine laying lines, and EMS transporting patients.

On call for water, Additional sign inventory

More training, Look at fire loads on Comm. Buildings

All looked good

Pre planning, train in large scale incidents.

More rehab equipment

Budget more employees, Water main, recon structure

Better lighting, more practice

NA for our services

Continue working with code red system

We need to do more exercises and stay on top of every situation

Town hire more people

4. What changes would you make to improve this exercise?

Very well organized. Exceeded my expectations very "Real World" feel

Great exercise, but should have invited more people (manpower), Next time we will find a building where more interior operations can be done to.

As for the company that was hired, A great job, learned a lot. No changes

Nothing or maybe a large residential structure

Use of acquired structure if possible. More actual FF task. Would not have been actually able to man lines with available resources.

Onsite or simulated Comms.

Manpower

More help

Responding from own station

I think everything went well, I don't think that I would change anything about the exercise.

More drills

More Manpower, More water supply

More personnel for drill

Make it more actual

Co-locate both recovery tent and Red Cross tent together

Better communication, more equipment

Nothing they are all great learning experiences.

Practice with different scenarios.

Expand the exercise to include other types of services such as sheltering w/ DSS and Red Cross folks etc.

As PIO need additional information for follow up (i.e. after the fire)

Everything went great we had no problems with the Charlie side of the building.

Everyone worked great. Very pleased to be a part of this exercise.

More training like this.

Please rate, on a scale of 1 to 5, your overall assessment of the exercise relative to the statements provided, with 1 indicating strong disagreement and 5 indicating strong agreement.

The exercise was well structured and organized.

1= 1 2= 3= 1 4= 12 5= 30

The exercise scenario was plausible and realistic.

1= 1 2= 3= 1 4= 5 5= 35

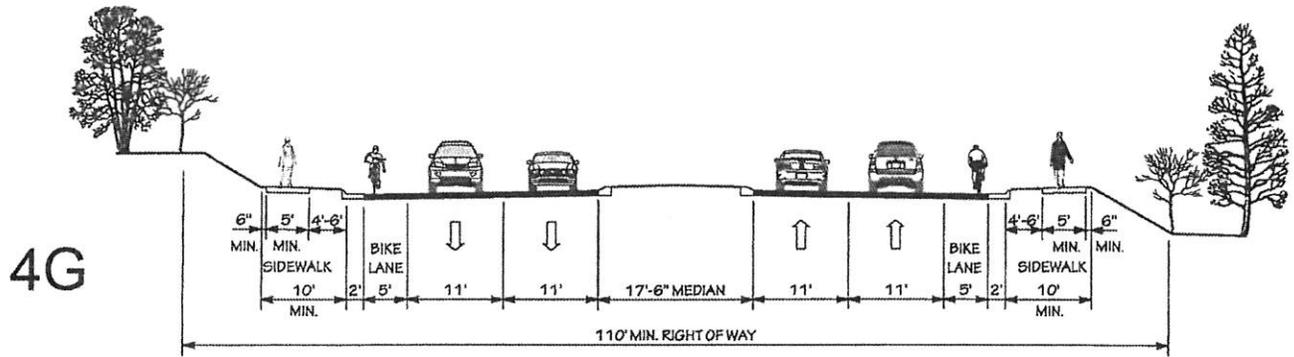
Participation in the exercise was appropriate for someone in my position.

1= 2 2= 3= 4= 7 5= 32

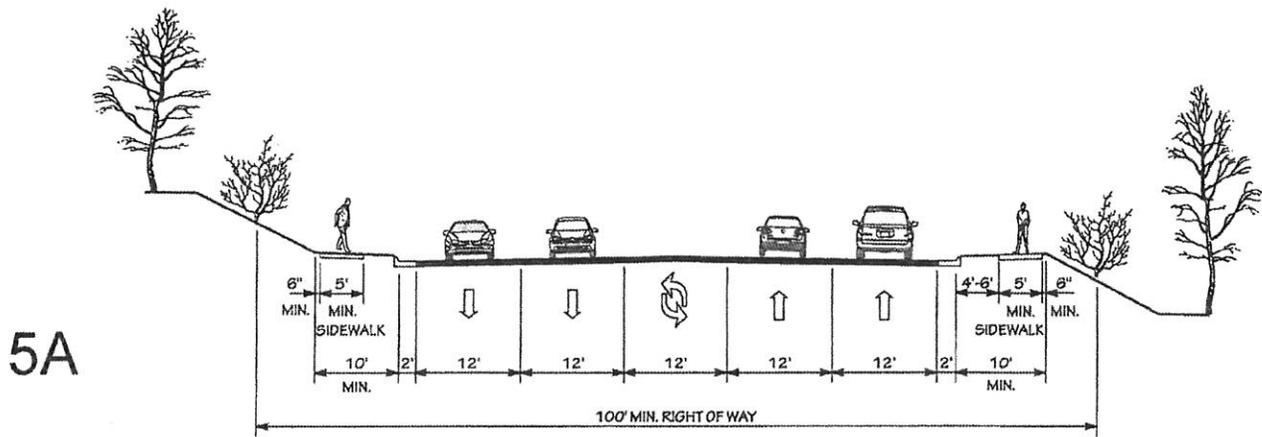
U-5839, NCDOT/RPO/Local Government Representatives Scoping
US 276, Russ Avenue from US 23/74 to US 23 Business
August 3, 2015

- I. Introductions
- II. Purpose of the Meeting
- III. Review of Project Status
 - A. Funded in NCDOT's Statewide Transportation Improvement Program (STIP).
 - B. Right of Way Acquisition and Utility Relocations in FY 2020 (\$6.95 Million). Construction to begin in FY 2022 (\$10.8 Million). State Trust Funds.
 - C. Should be "locked in" and not subject to re-ranking for next STIP.
- IV. Project Background and Prior Planning Work
 - A. Review of the French Broad River Comprehensive Transportation Plan (CTP) recommendations. Adopted 2008
 - B. Review of the Town of Waynesville's Russ Avenue Corridor Study recommendations. Adopted 2010.
 - C. Project Ranking Data from 2014.
- V. Scoping Discussion
 - A. Design Speed.
 - B. Level of Service.
 - C. Cross sections to consider.
 - D. Public Transit considerations.
 - E. Bicycle accommodations.
 - F. Pedestrian Facility requirements and accommodations.
 - 1. To replace existing 100% NCDOT on standard berm (10 feet).
 - 2. <10,000, 20% match (if standard) for new.
 - 3. >10,000, <50,000, 30% match (if standard) for new.
 - 4. Town's standards compared to NCDOT standards & additional cost to Town.
 - G. Local obligations for utility relocations.
 - H. Other?
- VI. Conclusions/Wrap up

"TYPICAL" HIGHWAY CROSS SECTIONS



4 LANE DIVIDED (17'-6" RAISED MEDIAN) WITH CURB & GUTTER, BIKE LANES, AND SIDEWALKS
 POSTED SPEED 35-45 MPH



4 LANE WITH TWO WAY LEFT TURN LANE, CURB & GUTTER, AND SIDEWALKS
 POSTED SPEED 35-45 MPH

CORRIDOR STUDY

For

Russ Avenue

Waynesville, North Carolina

Prepared For:



Town of Waynesville, North Carolina

Prepared By:



421 Fayetteville Street, Suite 1303
Raleigh, North Carolina 27601
919.755.0583

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February 28, 2010

(WSA Project No. 102706)

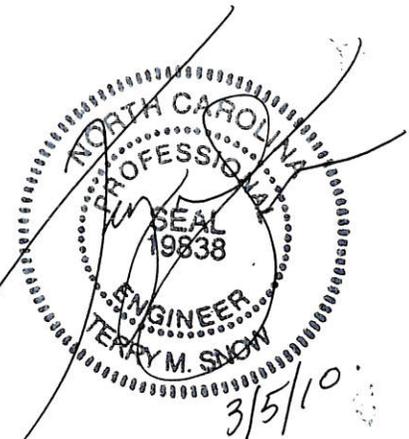


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I. EXECUTIVE SUMMARY

The Town of Waynesville, North Carolina has identified the need to improve the Russ Avenue Corridor from the Great Smoky Mountains Expressway (US 23-74) interchange to Walnut Street. The purpose of this study is develop a feasible corridor plan which includes plans for future travel demand; intersection improvements; access configuration and management; median and edge landscaping; and pedestrian, bicycle, and public transportation facilities along the Russ Avenue corridor. Planning level project cost estimates will also be developed for use by the Town of Waynesville in its transportation planning process. This study is the initial step in the planning process for this project and is not the product of detailed environmental or design analysis.

Russ Avenue is a part of the major north-south transportation corridor through Waynesville and forms the major eastern gateway into the town from the Great Smoky Mountains Expressway (US 23-74). As such, the efficiency and attractiveness of the road shape many visitors' first impression of the town and the quality of many residents' daily lives.

Russ Avenue currently functions with a dual purpose: 1) to provide through access from the Great Smoky Mountains Expressway into the heart of Waynesville, and 2) to provide access to a variety of retail stores and restaurants that line the roadway. This dual purpose with heavy through volumes, combined with heavy turning movements can cause congestion and driver confusion, particularly in the peak hours. The developments along the corridor are supportive of primarily automobile use, with few sidewalk connections and bicycle and pedestrian amenities.

As Waynesville's most heavily travelled thoroughfare, Russ Avenue experiences extended periods of congestion, specifically during the morning and afternoon peak hours. Due to numerous driveways along Russ Avenue, there is a significant amount of left-turning movements throughout the corridor, which creates additional congestion and driver confusion, decreasing safety

The development of concepts for the area that meet the goals established for this project was an extremely iterative process that included a significant amount of stakeholder and public input. A wide variety of transportation options were considered, including:

- Roundabouts
- 6-lane section
- 2-lane section
- 4-lane section
- Parallel facilities

As part of the development of concepts for the area, several meetings were held during the process of this study in order to obtain input from the Town of Waynesville staff and public officials, as well as the citizens of Waynesville.

A detailed traffic analysis was performed of the existing conditions, expected future conditions without any roadway improvements, and future conditions with the recommended alternative.

Existing levels of service were calculated for the study area intersections using the existing lane configurations and signal timings. With the exception of Barber Boulevard in the PM peak hour, there were no major capacity problems identified in the study area. The poor level-of-service at Barber Road was expected, as a high number of accidents were reported at this intersection in 2006 and 2007. The 2008 AM and PM existing conditions capacity analyses results for the Russ Avenue corridor is included in Table 2.

Not included in the capacity analysis is the effect of the multiple driveways along Russ Avenue. These driveways serve to increase congestion, lowering level of service and decreasing safety. The five-lane undivided cross section with continuous two-way left turn lane coupled with the multiple driveways has a dramatic effect on traffic operations due to the absence of any access control.

Most major intersections in the project area are expected to continue operating at acceptable LOS during the 2030 AM & PM No-Build Scenario. However the LOS did worsen the unacceptable LOS at the Russ Avenue intersections with Barber Boulevard, Dellwood Road / Howell Mill Road (in the PM peak), and US 23/74 Northbound ramp (in the PM peak, in the westbound approach). The 2030 No-Build Scenario Condition analyses results for the AM & PM peak hours for the Russ Avenue corridor is included in Table 2.

As with the existing conditions, the five-lane undivided cross section with continuous two-way left turn lane coupled with the multiple driveways will continue to cause increased traffic congestion and decreased safety as through and turning movement volumes grow in the study area.

The 2030 Buildout Conditions assumes the redistribution of some of the through volumes on Russ Avenue to connectors between Waynesville Plaza and Howell Mill Road and between Barber Boulevard and Frazier Street, in order to alleviate some of the congestion at these intersections along the Russ Avenue corridor. The 2030 Buildout Condition capacity analyses results for the AM and PM peak hours for the study area intersections including the recommendations developed through the public involvement process are included in Table 2.

This analysis indicates that all study area intersections should operate with a reasonable level of service and delay in 2030 with the recommended improvements. Additionally, the addition of a median along Russ Avenue should greatly increase safety and congestion at the driveways between the major study area intersections. Appropriate pedestrian and bicycle accommodations should also encourage multi-modal travel in the area, encouraging people to leave their vehicle at one location and walk to their destinations, and to walk from some of the adjacent residential neighborhoods to destinations within the study area.

To accommodate for the projected design year 2030 traffic volumes along Russ Avenue, the following improvements are recommended:

NEW CONNECTOR ROADS

- Construct a connector road that extends from Frazier Street to the intersection of Russ Avenue and Barber Boulevard to form a 4-leg intersection.
- Construct a connector road from Frazier Street (behind the Shell Gas Station) to Russ Avenue where the existing abandoned Long John Silver restaurant sits. This new connector road would be located behind McDonalds and CVS.
- Construct a connector road / back access road to connect the Waffle House, Arby's, and Pizza Hut to Barber Boulevard.
- Construct a connector road / back access road to connect the Sears Shopping Center to Howell Mill Road.
- Construct a bridge over Richland Creek to connect the Sears Shopping Center to Marshall Street. This bridge should be of sufficient length to allow for a greenway underneath the structure.

BRIDGES

- Construct a new 5-lane bridge over Richland Creek to allow for northbound and southbound left turn lanes. This bridge should be of sufficient length to allow for a greenway underneath the structure.
- Construct a new 5-lane bridge over the rail line to allow for northbound and southbound left turn lanes.

RUSS AVENUE

- Construct a 4-lane landscaped median divided, curb and gutter roadway with turn lanes at key intersections.
- Construct sidewalks along both sides of the roadway.
- Construct bicycle lanes along both sides of the roadway.

❖ *Frazier Street Intersection*

- Construct a southbound left turn lane on Russ Avenue with 100 feet of storage.
- Construct an eastbound shared left turn / through lane and a right turn lane with 100 feet of storage on Frazier Street.
- Construct a westbound shared left/through/right turn lane on the new Frazier Street connector.
- Construct a traffic signal.

❖ *Barber Boulevard Intersection*

- Construct an eastbound left turn lane with 150 feet of storage a through lane and a right turn lane with 100 feet of storage on Barber Boulevard.
- Construct a westbound left turn lane with 150 feet of storage and shared through/right turn lane on Barber Boulevard.
- Construct a northbound left turn lane with 200 feet of storage and a right turn lane with 100 feet of storage on Russ Avenue.

Probable costs for the recommended roadway improvements were developed using cost estimates provided by the Capital Area Metropolitan Planning Organization and quantities developed from the conceptual design plans. A summary of the planning level cost estimates for the proposed improvements are included in the table below.

Opinion of Probable Cost Russ Avenue Corridor Study	
Russ Avenue Improvements	
Preliminary Engineering	\$1,300,000
Construction	\$8,610,000
Right-of-Way	\$5,670,000
Side Streets / Connectors	
Preliminary Engineering	\$413,000
Construction	\$2,880,000
Right-of-Way	\$2,800,000
Total Cost	
	\$21,673,000

The Russ Avenue Corridor Study is the initial step in the planning and design process for the development of a project. The public, Town of Waynesville and the French Broad River Metropolitan Planning Organization all contributed greatly in the development of a future plan for the Russ Avenue corridor that can safely and efficiently accommodate all modes of travel and will enhance the aesthetics of the corridor.

II. INTRODUCTION

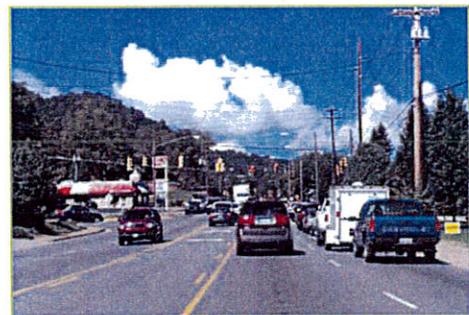
The Town of Waynesville, North Carolina has identified the need to improve the Russ Avenue Corridor from the Great Smoky Mountains Expressway (US 23-74) interchange to Walnut Street. The purpose of this study is develop a feasible corridor plan which includes plans for future travel demand; intersection improvements; access configuration and management; median and edge landscaping; and pedestrian, bicycle, and public transportation facilities along the Russ Avenue corridor. Planning level project cost estimates will also be developed for use by the Town of Waynesville in its transportation planning process. This study is the initial step in the planning process for this project and is not the product of detailed environmental or design analysis. The general location and project study area are shown in Figure 1.

Russ Avenue is a part of the major north-south transportation corridor through Waynesville and forms the major eastern gateway into the town from the Great Smoky Mountains Expressway (US 23-74). As such, the efficiency and attractiveness of the road shape many visitors' first impression of the town and the quality of many residents' daily lives.

The goals for this project, as developed by the Town of Waynesville and the French Broad River Metropolitan Planning Organization are as follows:

1. Analyze roadway capacity and future travel demand
2. Analyze and design intersection improvements
3. Analyze and design access from abutting properties
4. Analyze and design pedestrian and bicycle facilities
5. Analyze and design opportunities for landscaped median and street tree planting strips
6. Address aesthetics, gateway features, and context-sensitive roadway design
7. Obtain community input as to current problems and desired solutions
8. Develop recommendations for improvements designed to meet community goals
9. Develop a priority listing of implementation strategies
10. Develop perspective illustrations of streetscape improvements and plan view renderings of roadway improvements
11. Produce a document that can be used as a blueprint for public and private sector decisions concerning road improvements and development of adjacent properties

This report includes improvements to Russ Avenue from the Great Smoky Mountains Expressway from the north to Walnut Street in the south. The study also includes considerations of improvements to major intersections and adjacent and parallel surface streets within the study area to improve traffic flow along the corridor. While the study primarily focuses on improvements to Russ Avenue, it also includes pedestrian and bicycle facilities and side street connections which may be implemented to provide a safer and more efficient roadway network.



Russ Avenue congestion

III. BACKGROUND INFORMATION

Study Area Description

Russ Avenue (US 276) is a major north-south thoroughfare that connects US 19 to the north and Walnut Street to the south. The segment between the Great Smoky Mountains Expressway (US 23/74) and Walnut Street (approximately 0.8 miles) serves as a gateway into Waynesville. As such, the efficiency and attractiveness of the road shape a great deal of visitors' first impression of the town and the quality of many residents' everyday lives.

Russ Avenue currently functions with a dual purpose: 1) to provide through access from the Great Smoky Mountains Expressway into the heart of Waynesville, and 2) to provide access to a variety of retail stores and restaurants that line the roadway. This dual purpose with heavy through volumes, combined with heavy turning movements can cause congestion and driver confusion, particularly in the peak hours. The developments along the corridor are supportive of primarily automobile use, with few sidewalk connections and bicycle and pedestrian amenities.

The study area consists of the US 23-74 / Russ Avenue partial cloverleaf interchange and nearby roadways intersecting Russ Avenue. The minor roadways evaluated in the study area include Frazier Street, Betsy Acres Lane, Barber Boulevard, Dellwood Road/Howell Mill Road, Border Street (Shopping Center Access), Waynesville Plaza driveway (Shopping Center Access), Lee Street, West Marshall Street, and Walnut Street. The intersections along Russ Avenue at Phillips Road, Barber Boulevard, Dellwood Road/Howell Mill Road, West Marshall Street, and Walnut Street are currently signalized. All other intersections are stop-controlled on the minor side-street approaches. Figure 1 shows the project study area.

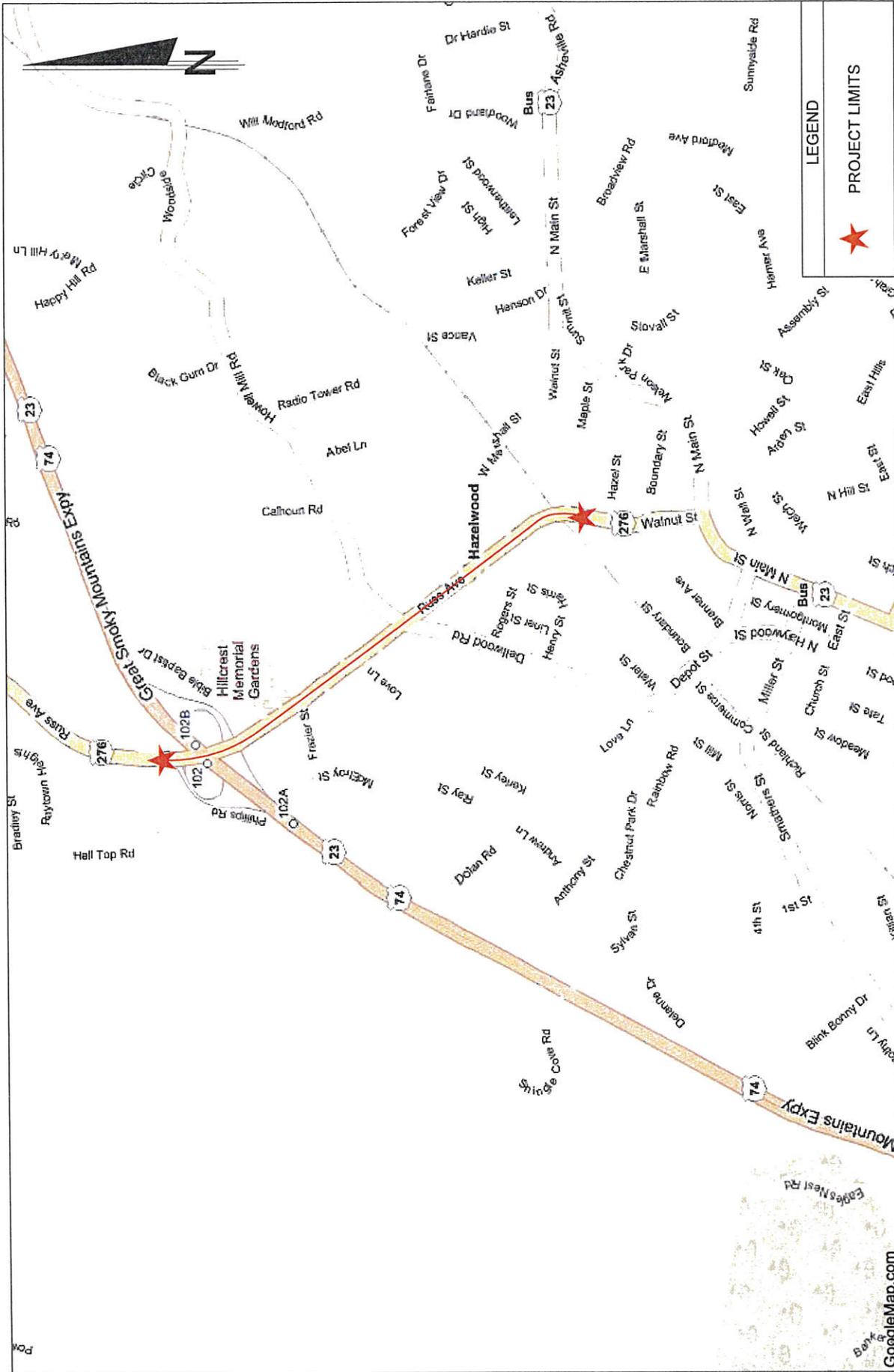
Existing Conditions

As Waynesville's most heavily travelled thoroughfare, Russ Avenue experiences extended periods of congestion, specifically during the morning and afternoon peak hours. Due to numerous driveways along Russ Avenue, there is a significant amount of left-turning movements throughout the corridor, which creates additional congestion and driver confusion, decreasing safety.

The following is a description of the study area roadways, crash statistics, projected roadway improvements, and land uses.

A. Study Area Roadways

Figure 1 shows the project study area along Russ Avenue. The existing geometrics and intersection traffic control for existing roadways and intersections within the study area are shown schematically in Figure 2. The following is a brief description of existing roadways and intersections within the study area:



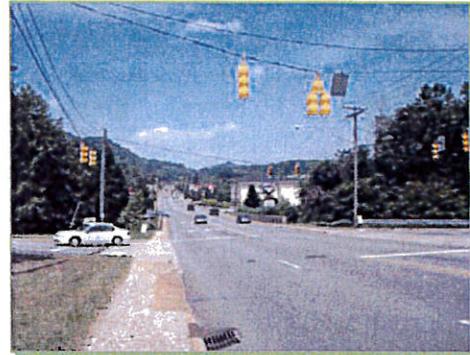
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STUDY LOCATION MAP

FIGURE: 1
 SCALE: NONE

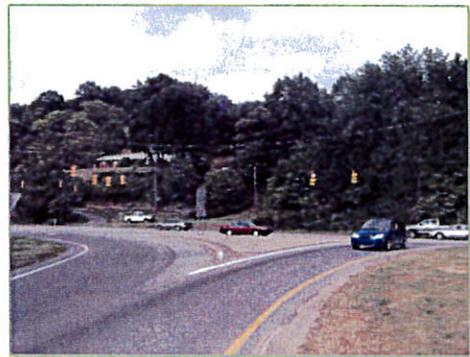
Russ Avenue (US 276) is a major northbound-southbound thoroughfare located in the Town of Waynesville. Within the study area, Russ Avenue is a five-lane roadway section, with a continuous two-way center left-turn lane and multiple driveway cuts from the beginning limits of the project (US 23 / 74) to its end in the southern direction at Walnut Street. Not only does Russ Avenue provide direct access to Waynesville, it also serves as the primary access to Lake Junaluska.



Russ Avenue looking northbound

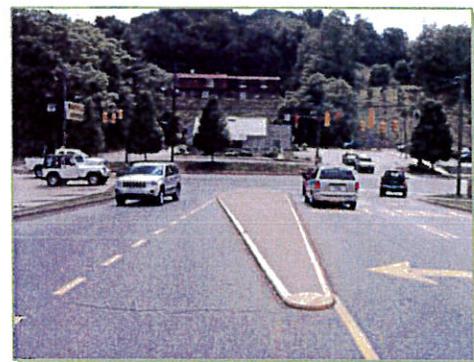
The Town of Waynesville has identified Russ Avenue as a roadway that needs to be physically enhanced, both functionally and aesthetically. The 2008 Annual Average Daily Traffic (AADT) volume on Russ Avenue was approximately 17,000 Vehicles Per Day (VPD) just north of the US 23 / 73 Interchange, and 23,000 VPD south of Frazier Street and north of Betsy Acres Lane, as published on the *North Carolina Department of Transportation (NCDOT) Traffic Volume (AADT) Maps*¹. The posted speed limit along the study corridor is 35 miles per hour (MPH).

US 23 / 74 (Great Smoky Mountains Expressway) is a US Highway which runs north-south along the northern limits of the project study area. US 23 / 74 is a four lane divided highway with a concrete jersey barrier separating the north/south travel lanes. US 23 / 74 connects Waynesville to Asheville (approximately 30 miles northeast) and to Bryson City (approximately 35 miles southwest). US 23/74 splits in Sylva with US 23 extending into Georgia while US 74 extends to Bryson City. The 2008 AADT volume on US 23 / 74 as published by NCDOT is approximately 30,000 VPD north and south of the Russ Avenue interchange. The posted speed limit on US 23 / 74 along the study corridor is 60 MPH.



Looking eastbound @ US23/74 westbound on ramp.

Betsy Acres Lane is a private driveway which provides access to private residence west of Russ Avenue. In addition, Betsy Acres Lane provides access for McDonald's and CVS Pharmacy. Betsy Acres Lane is an unmarked two-lane drive. No AADT data is available on Barber Boulevard, nor is a speed limit posted.



Barber Street/Russ Ave intersection looking westbound.

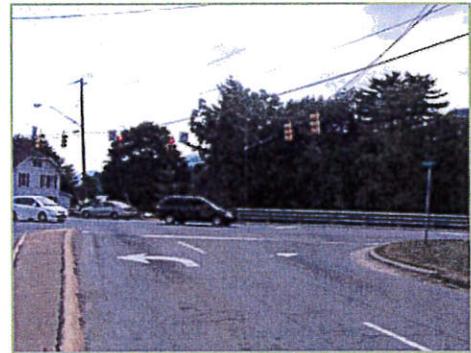
Barber Boulevard is a shopping center driveway, providing access for Ingles, Belk, and other businesses to Russ Avenue and Howell Mill Road. Barber Boulevard is an unmarked two-lane drive. No AADT data is available on Barber Boulevard, nor is a speed limit posted.

Dellwood Drive (SR 1247) / Howell Mill Road (SR 1184) are major connector roads within the project study area. Dellwood Drive primarily serves as a connector street linking Russ Avenue to the Frog Level area and provides a secondary access to downtown Waynesville via Depot Street. Primary development along Dellwood Drive is a mostly commercial with some minor residential developments. There is no published AADT data available on Dellwood Drive. The posted speed limit on Dellwood Drive is 30 MPH.

Howell Mill Road serves as a major connector from Russ Avenue to Asheville Road (Business US 23). Primary development along Howell Mill Road is a mixture of residential, retail, and commercial. The 2008 AADT volume on Howell Mill Road as published by NCDOT is approximately 4,700 VPD just east of its intersection with Russ Avenue. The posted speed limit on Howell Mill Road is 35 MPH east of Russ Avenue.

West Marshall Street is a connector road within the project study area. This connector's western leg begins on the southern end of Russ Avenue and continues to North Main Street (US 23 Business) on its eastern leg. No AADT data is available on West Marshall Street and no speed limit is posted. Since it is a local town street, the speed limit is assumed to be 35 MPH.

Walnut Street is a connector road on the southern end of the project study area. Walnut Street begins where Russ Avenue ends just south of its bridge over the Norfolk Southern Railroad, and continues southward into the downtown Waynesville area. The 2008 AADT volume on Walnut Street, as published by NCDOT, is approximately 5,900 VPD just north of its intersection with North Main Street and at its southern end. The posted speed limit on Walnut Street is 20 MPH.



*Walnut Street looking westbound @
Russ Avenue.*



*Pedestrian facilities at Ingles
driveway.*

Pedestrian and Bicycle Facilities

There are no designated bicycle facilities along the Russ Avenue corridor. Sidewalks exist along the majority of Russ Avenue and are typically located immediately adjacent to the curb. There are few crosswalks along the corridor and no crosswalks are provided for individuals wishing to cross Russ Avenue. Traffic signals do not contain pedestrian signal heads or actuation.

Bridges

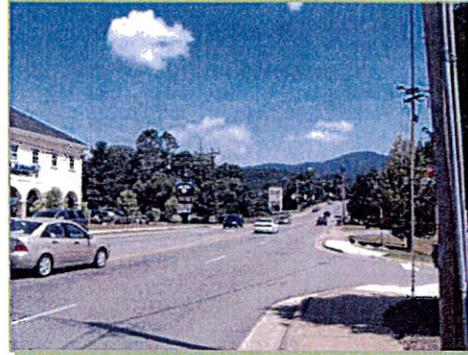
Bridge No. 870184 is located over the Norfolk Southern Railroad line. This steel structure was constructed in 1968. According to NCDOT, the bridge is currently functionally obsolete with a sufficiency rating of 73.3%. It qualifies for replacement due to substandard load carrying capacity or substandard bridge roadway geometry.

Bridge No. 870186 is located over Richland Creek. This pre-stressed concrete structure was constructed in 1967. According to NCDOT, the bridge is functionally obsolete with a sufficiency rating of 75.6%. It qualifies for replacement due to substandard load carrying capacity or substandard bridge roadway geometry.

Existing Lane Configurations and Traffic Control are illustrated on Figure 2.

B. Crash Data

According to the Town of Waynesville Police Department accident report archives, multiple accidents have occurred on Russ Avenue in recent years. One-hundred five (105) accidents were reported in 2006 and ninety-four (94) in 2007. Of those accidents, those with reported injuries included fifteen (15) in 2006 and twenty-one (21) in 2007. Estimated damages were \$160,600 in 2006 and \$179,219 in 2007. In 2006, the majority of the accidents reported occurred at the McDonalds driveway, Barber Boulevard, Dellwood Road, and Howell Mill Road. In 2007, the majority of the accidents reported occurred at Barber Boulevard, Howell Mill Road, and the Kmart driveway, coinciding with some of the areas of densest development within the study area. See Appendix A for a detailed breakdown of the reported accidents.

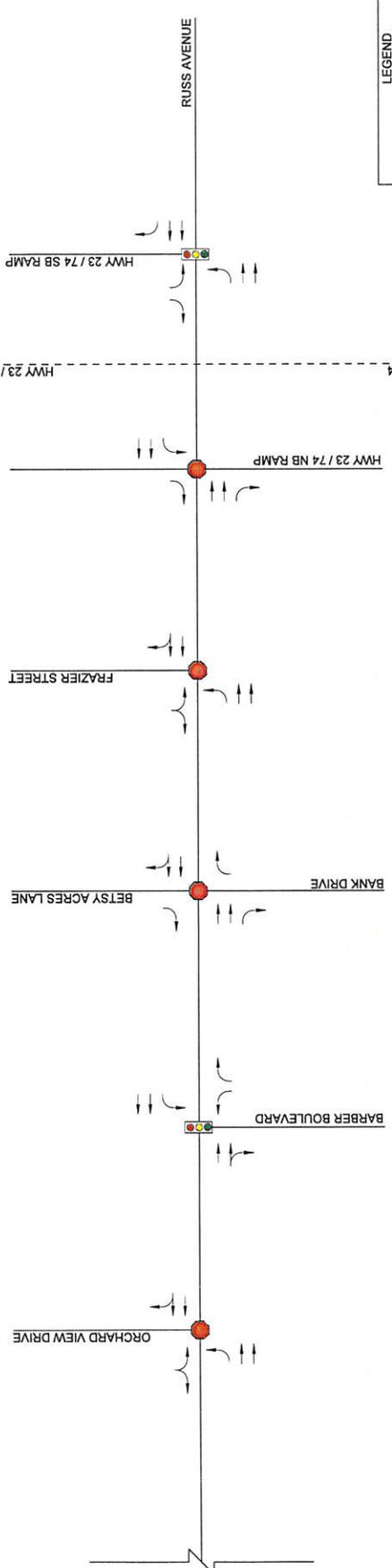
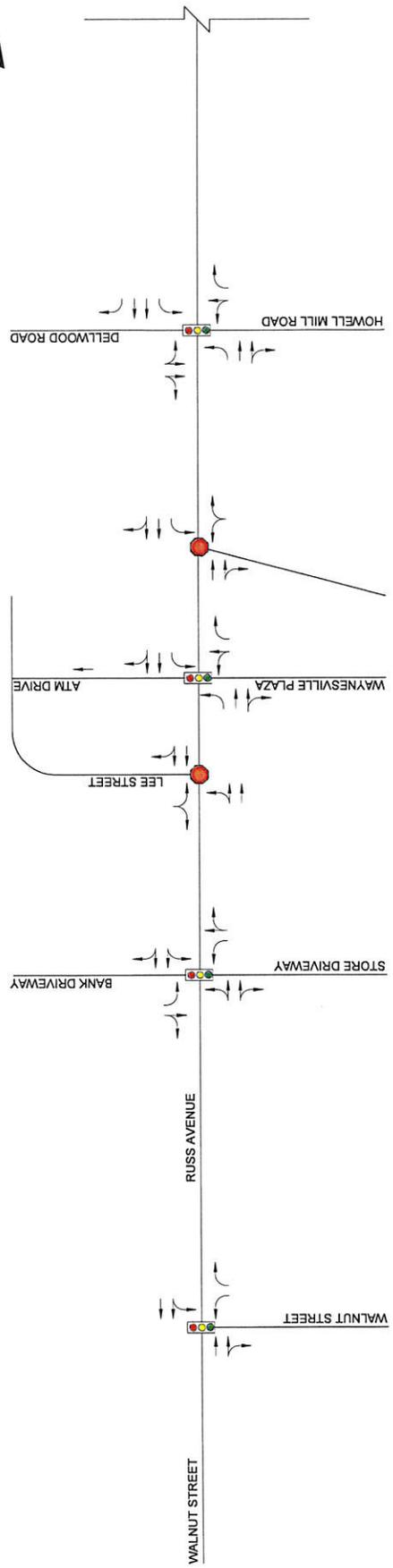


Russ Avenue looking southbound with Richland Creek Bridge and Railroad Bridge in background.

C. Projected Roadway Improvements

Based on the *2009-2015 State Transportation Improvement Program (TIP)*², there is one project in the vicinity of the Russ Avenue study area. A brief description of the project is included below:

TIP Project No. U-4412: Waynesville, Haywood County. SR 1184 (Howell Mill Road), US 276 to US 23 Business. Upgrade two lanes and construct railroad grade separation. At the time of this study, the right-of-way is scheduled for December 2009 with construction in January 2012.



LEGEND

- EXISTING TRAVEL LANE
- STOP SIGN CONTROLLED
- SIGNAL CONTROLLED

SCALE: NONE

FIGURE: 2

EXISTING LANE CONFIGURATIONS AND TRAFFIC CONTROL

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D. Land Uses

Land uses along the corridor are primarily retail and restaurant oriented. Immediately adjacent to the US 23/74/Russ Avenue interchange are several motels including the Lodge and Days Inn located along the west side of Russ Avenue with the Hillcrest Memorial Gardens located southeast of the interchange.

Sit-down restaurants such as Sagebrush Steakhouse, Pizza Hut, and Zaxby's as well as numerous fast food establishments such as McDonalds, Wendy's, KFC, Arby's, and Hardee's are all located along the Russ Avenue corridor with most having individual driveway accesses to Russ Avenue. There is one Shell gas station in the southwest quadrant of Russ Avenue and Frazier Street. Several pharmacies such as CVS and Rite Aid are located along the corridor. Three shopping centers, anchored by Ingle's and Belk, with specialty restaurants and other retail shops are located along the east side of Russ Avenue. Other land uses located along the corridor include banks, ATM machines, AutoBell Car Wash, Sear's, Enterprise Rental Car, and Taylor Motors Company.

Most businesses along Russ Avenue have an individual driveway access and in some cases, have multiple driveway curb cuts. This is one of the main causes of the high frequency of crashes along Russ Avenue.

IV. ALTERNATIVES DEVELOPMENT AND PUBLIC INVOLVEMENT

The development of concepts for the area that meet the goals established for this project was an extremely iterative process that included a significant amount of stakeholder and public input. A wide variety of transportation options were considered, including;

Roundabouts - a system of single lane and 2-lane roundabouts were considered along Russ Avenue. Traffic analysis of these roundabouts is included later in the report. Roundabouts would likely provide an attractive alternative by providing options for aesthetic improvements within the center of the roundabouts and would improve pedestrian connectivity along and across Russ Avenue.

6-lane section - a 6-lane cross section with a narrow center median was also considered to increase through capacity along Russ Avenue. This alternative was rejected due to the additional right-of-way need for the additional through lanes as well as the need for left turn lanes at strategic locations along the corridor. This alternative would also not be aesthetically pleasing with the narrow concrete center median.

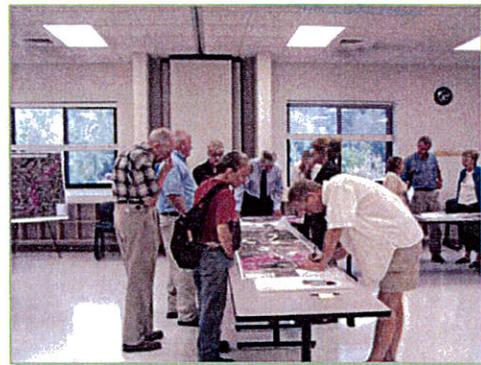
2-lane section - a 2-lane section was also considered, which would allow for a striped bike lane, a wide center median, and expanded sidewalks. This option was eliminated from consideration due to the capacity needed for through volumes along Russ Avenue

Parallel facilities – attempts were made to develop a system of parallel facilities that would work to relieve much of the local access traffic from Russ Avenue. The variety of stream crossings and challenging grades in the area made the development of a true parallel road system difficult, but the final alternative includes several connections that utilize existing roadways and shopping centers to provide alternative routes for local access traffic.

As part of the development of concepts for the area, several meetings were held during the process of this study in order to obtain input from the Town of Waynesville staff and public officials, as well as the citizens of Waynesville. Minutes from each of the meetings are attached in Appendix C. A Kick-off Meeting and two (2) Public Workshops were held in addition to the several project team meetings.

A. *1st Public Workshop*

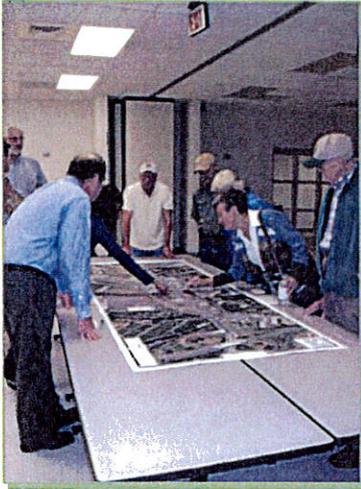
The 1st Public Workshop was held on August 21, 2008 at the Waynesville Recreation Center, from 5:00 pm to 7:00 pm. Twenty-four (24) citizens signed the attendance sheet. The purpose of this workshop was to get the citizens assistance in identifying issues and concerns, and in gathering suggestions on how to improve upon them. Sixteen (16) written comments were received from Town of Waynesville residents concerning the issues the perceived along Russ Avenue. The following is a summary of some of the general suggestions, comments, and concerns regarding the corridor.



- Address the median and center turn lane along Russ Avenue in front of McDonalds and CVS
- Correct the intersection alignment of Russ Avenue/Barber Boulevard/Long John Silver
- Need crosswalks and pedestrian signal heads
- Consider a parallel street to Russ Avenue to allow for one-way traffic northbound and southbound
- Improve aesthetics and bury utilities underground
- Do not need bicycle or pedestrian facilities
- Construct a bridge over the creek to connect the Bi-Lo and the Staples/Sears shopping centers

B. *2nd Public Workshop*

The 2nd Public Workshop was held on October 8, 2009 at the Waynesville Recreation Center, from 5:00 pm to 7:00 pm. Invitations to the public meeting were mailed to the residents in the project vicinity. A news article was also posted in the local newspaper to notify the public of the time and date of the meeting. A total of twenty-six (26) citizens signed the attendance form at the door for the 2nd public session. The purpose of this informational workshop was to present the some alternatives to the citizens based on their comments from the previous public workshop and gather input on which should be the preferred alternative.



The Project Team discussed project details with each citizen who attended, explaining the planning process and soliciting comments. Project maps illustrating the all potential alternatives were provided to help the public visualize the changes. Comment sheets were available for input from the meeting.

A total of twelve (12) comments were received as a result of the public workshop and of those, seven (7) noted that overall they like the Russ Avenue Corridor Plan.

A summary of the Public Workshops and written comments received from both of the Public Workshops are included in Appendix C.

V. TRAFFIC VOLUMES

A. Existing Traffic Volumes

To aid in determining the level of service of current traffic operations, morning (7-9 am) and afternoon (4-6pm) peak hour traffic counts were provided by WSA at the following locations:

- Russ Avenue / US 23/74 Southbound Ramps
- Russ Avenue / US 23/74 Northbound Ramps
- Russ Avenue / North Frazier Street
- Russ Avenue / Betsy Acres Lane
- Russ Avenue / Barber Boulevard
- Russ Avenue / Dellwood Road/Howell Mill Road
- Russ Avenue / Border Street (Shopping Center Access)
- Russ Avenue / Waynesville Plaza (Shopping Center Access)
- Russ Avenue / Lee Street
- Russ Avenue / West Marshall Street
- Russ Avenue / Walnut Street

Existing morning and afternoon peak hour traffic counts are shown on Figure 3. Raw count data is included in Appendix A.

B. 2030 No-Build Traffic Volumes

No-build traffic volumes are the volumes expected along the corridor if no roadway improvements are developed. Long-range traffic volumes forecasts are typically developed by utilizing a regional travel demand model. Since the updated 2030 traffic forecast model prepared by the French Broad River MPO was not completed during the time of this study, an annual growth rate was applied to the base 2008 traffic volumes to forecast future 2030 traffic volumes. Based on historic traffic trends, a 2.0% per year growth rate was applied to the base 2008 traffic volumes within the study area to estimate the projected 2030 traffic volumes to be used in the analysis of this study.

2030 No-Build morning and afternoon peak hour traffic counts are shown on Figure 4.

C. 2030 Buildout Traffic Volumes

The 2030 Buildout Traffic Volumes were determined utilizing the alternatives roadway alignments developed as part of this study. Specifically, these volumes were developed by rerouting the 2030 No-Build traffic volumes along Russ Avenue to new connectors between Waynesville Plaza and Howell Mill Road, and between Barber Boulevard and Frazier Street. The distribution percentages were determined from current traffic volumes accessing these roadways from either the north or southbound direction on Russ Avenue. Twenty percent of the through traffic along Russ Avenue between Waynesville Plaza and Howell Mill Road was redistributed to the Waynesville Plaza / Howell Mill Road connector. Forty percent of the through traffic along Russ Avenue in the northbound direction between Barber Boulevard and Frazier Street was redistributed to the Barber Street / Frazier Street connector.

The re-distribution percentages are illustrated on Figure 5. The final 2030 Buildout morning and afternoon peak hour traffic volumes are illustrated on Figures 6 and 7.

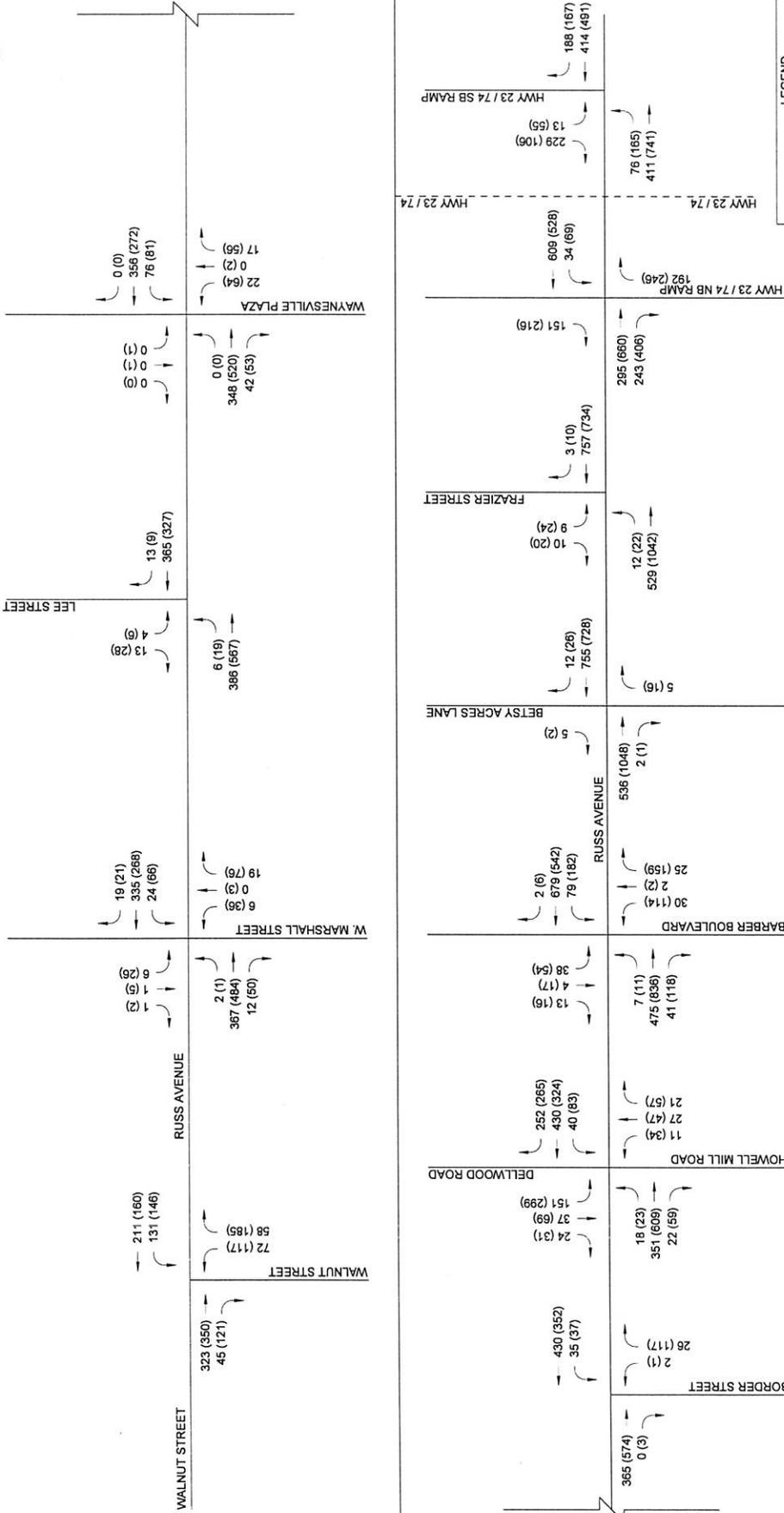
VI. CAPACITY ANALYSES

A. Level of Service Calculations

The study area intersections were analyzed using the methods outlined in the *Highway Capacity Manual*³ and Synchro Version 7.0 Software. The Highway Capacity Manual defines capacity as “the maximum rate of flow at which persons or vehicles can be reasonably expected to traverse a point or uniform section of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions, usually expressed as vehicles per hour or persons per hour”.

Level of service (LOS) is a term used to represent different traffic conditions, and is defined as a “qualitative measure describing operational conditions within a traffic stream, and their perception by motorist/or passengers”. Level of Service varies from Level A, representing free flow, to Level F where traffic breakdown conditions are evident. Level B represents good progression with minimal congestion. At Level C, the number of vehicles stopping is significant, although many still pass through the intersection without stopping. Level D represents more congestion, but the overall operations are acceptable. At Level E, freedom to maneuver within the traffic stream is extremely difficult with driver frustration being generally high.

For signalized intersections, service levels pertain to each approach as well as an overall value. The unsignalized intersection analysis method in the Highway Capacity Manual assigns LOS values for each movement that yields the right-of-way, but not to the overall intersection. This movement is generally a secondary movement from a minor street. At an unsignalized intersection, the primary traffic on the main roadway is virtually uninterrupted. Therefore, the overall level of service is usually much greater than what is represented by the results of the minor street movements. Synchro Version 7.0 will calculate an amount of delay for the overall intersection, but will not assign a LOS value.



LEGEND
 DIRECTIONAL MOVEMENT
 XX AM PEAK HOUR
 (XX) PM PEAK HOUR

FIGURE: 3

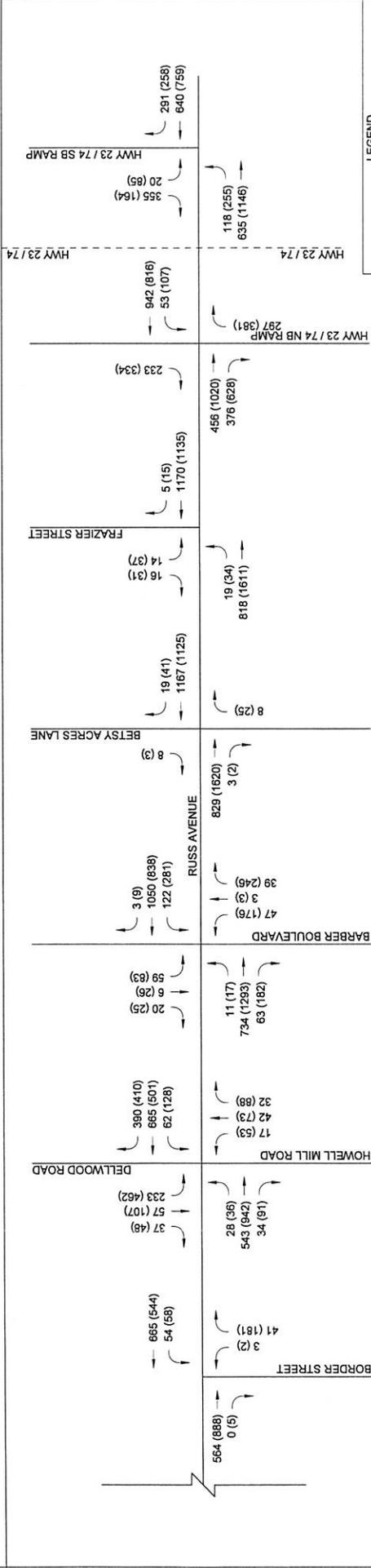
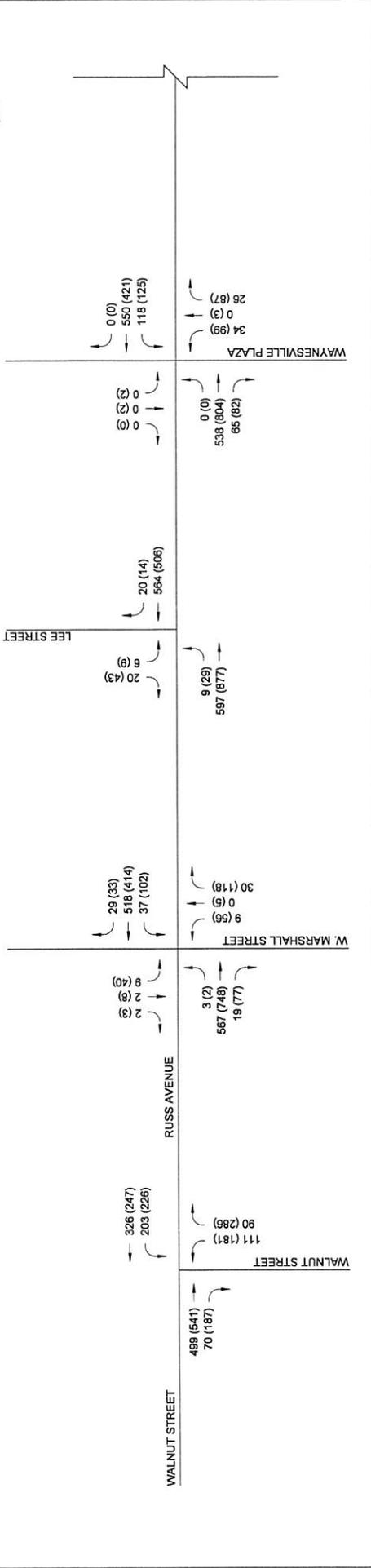
2008 AM AND PM BALANCED PEAK HOUR TRAFFIC VOLUMES

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SCALE: NONE



LEGEND

DIRECTIONAL MOVEMENT

XX AM PEAK HOUR

(XX) PM PEAK HOUR

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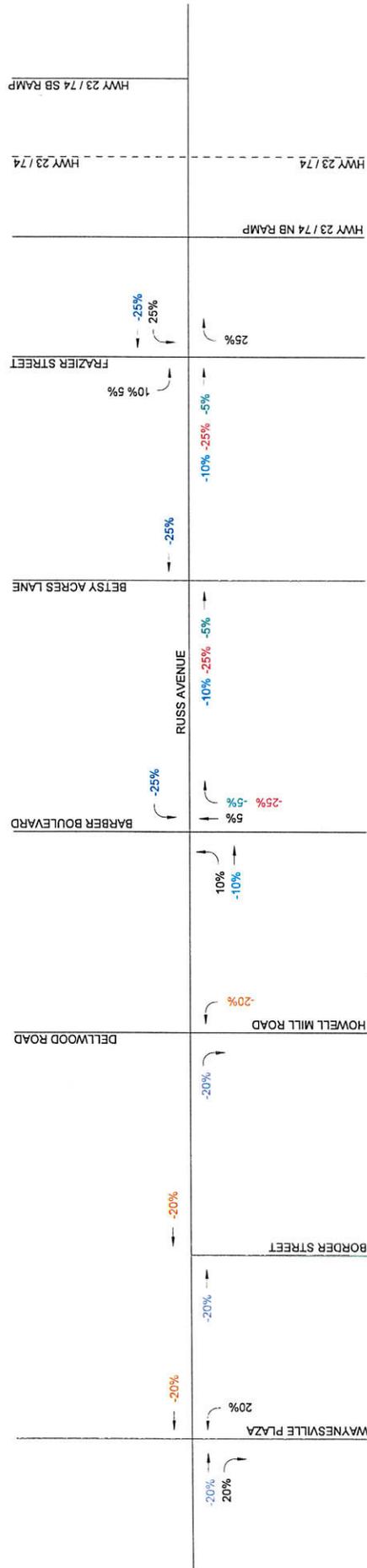
WilburSmith
 CONSULTANTS

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2030 AM AND PM NO BUILD
 PEAK HOUR TRAFFIC VOLUMES

FIGURE: 4

SCALE: NONE



LEGEND	
→	DIRECTIONAL MOVEMENT
XX	TRAFFIC DISTRIBUTION

FEASIBILITY STUDY RUSS AVENUE CORRIDOR WAYNESVILLE, NORTH CAROLINA	FIGURE 5	SCALE: NONE
421 FAYETTEVILLE STREET, SUITE 1303 RALEIGH, NORTH CAROLINA 27601 TELEPHONE: 919.755.0583 FAX: 919.832.8798		



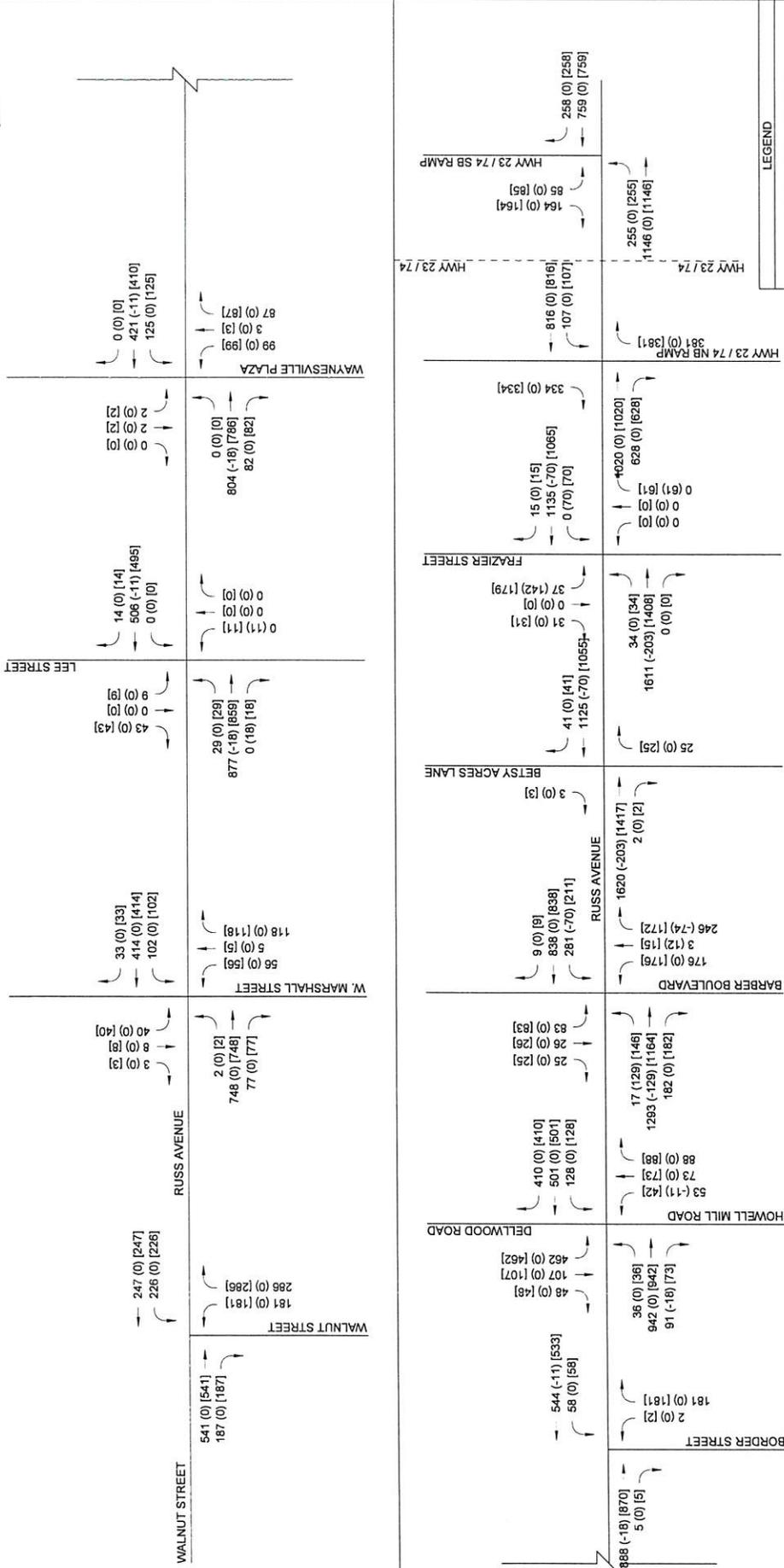


FIGURE: 7

SCALE: NONE

Generally, Level of Service D is considered acceptable for signalized intersections in suburban areas during peak periods. With the current method of reporting levels of service for unsignalized intersections, it is not uncommon for some of the minor street movements to be operating at a LOS F during the peak hours.

Table 1 presents criteria of each level of service as indicated in the *Highway Capacity Manual*³.

TABLE 1: LEVEL OF SERVICE CRITERIA

<i>SIGNALIZED INTERSECTIONS</i>		<i>UNSIGNALIZED INTERSECTIONS</i>	
<u>Level of Service</u>	<u>Stopped Delay Per Vehicle (sec)</u>	<u>Level of Service</u>	<u>Average Total Delay (sec/veh)</u>
A	≤10.0	A	≤10
B	>10.0 and ≤20.0	B	>10 and ≤15
C	>20.0 and ≤35.0	C	>15 and ≤25
D	>35.0 and ≤55.0	D	>25 and ≤35
E	>55.0 and ≤80.0	E	>35 and ≤50
F	>80.0	F	>50

Source: *Highway Capacity Manual*³ Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 1998

Synchro Version 7.0 calculates the level of service and delay for each intersection using methods outlined in the *Highway Capacity Manual*³. Table 2 summarizes the capacity analyses.

B. Existing Conditions

Existing levels of service were calculated for the study area intersections using the existing lane configurations and signal timings. With the exception of Barber Boulevard in the PM peak hour, there were no major capacity problems identified in the study area. The poor level-of-service at Barber Road was expected, as a high number of accidents were reported at this intersection in 2006 and 2007. The 2008 AM and PM existing conditions capacity analyses results for the Russ Avenue corridor is included in Table 2.

Not included in the capacity analysis is the effect of the multiple driveways along Russ Avenue. These driveways serve to increase congestion, lowering level of service and decreasing safety. The five-lane undivided cross section with continuous two-way left turn lane coupled with the multiple driveways has a dramatic effect on traffic operations due to the absence of any access control.

C. 2030 No-Build Conditions

Most major intersections in the project area are expected to continue operating at acceptable LOS during the 2030 AM & PM No-Build Scenario. However the LOS did worsen the unacceptable LOS at the Russ Avenue intersections with Barber Boulevard, Dellwood Road / Howell Mill Road (in the PM peak), and US 23/74 Northbound ramp (in the PM peak, in the westbound approach). The 2030 No-Build Scenario Condition analyses results for the AM & PM peak hours for the Russ Avenue corridor is included in Table 2.

As with the existing conditions, the five-lane undivided cross section with continuous two-way left turn lane coupled with the multiple driveways will continue to cause increased traffic congestion and decreased safety as through and turning movement volumes grow in the study area.

D. 2030 Buildout Conditions

The 2030 Buildout Conditions assumes the redistribution of some of the through volumes on Russ Avenue to connectors between Waynesville Plaza and Howell Mill Road and between Barber Boulevard and Frazier Street, in order to alleviate some of the congestion at these intersections along the Russ Avenue corridor. The 2030 Buildout Condition capacity analyses results for the AM and PM peak hours for the study area intersections including the recommendations developed through the public involvement process are included in Table 2.

This analysis indicates that all study area intersections should operate with a reasonable level of service and delay in 2030 with the recommended improvements. Additionally, the addition of a median along Russ Avenue should greatly increase safety and congestion at the driveways between the major study area intersections. Appropriate pedestrian and bicycle accommodations should also encourage multi-modal travel in the area, encouraging people to leave their vehicle at one location and walk to their destinations, and to walk from some of the adjacent residential neighborhoods to destinations within the study area.

TABLE 2: LEVEL OF SERVICE SUMMARY
Russ Avenue Corridor Study

Intersection	2008 Existing		2030 No-Build		2030 Build Out	
	AM	PM	AM	PM	AM	PM
Russ Avenue & Highway 23/74 Southbound Ramp	A (9.9) 35.6%*	A (8.3) 41.0%*	B (12.7) 49.7%*	B (12.2) 54.8%*	B (13.5) 49.7%*	B (12.4) 54.8%*
Russ Avenue & Highway 23/74 Northbound Ramp	# (2.7) B (11.9) EB B (10.6) WB 32.9%*	# (3.2) B (11.7) EB B (14.7) WB 40.1%*	# (3.2) B (12.9) EB B (13.3) WB 47.1%*	# (6.8) B (11.5) EB E (45.2) WB 58.5%*	# (3.2) B (12.9) EB B (13.3) WB 47.1%*	# (4.7) B (11.5) EB D (26.8) WB 58.5%*
Russ Avenue & Frazier Street	# (0.3) B (13.2) EB 31.0%*	# (0.4) B (13.9) EB 38.8%*	# (0.4) C (18.9) EB 42.5%*	# (0.7) C (23.0) EB 55.1%*	B (10.7) 75.6%*	B (15.3) 74.4%*
Russ Avenue & Betsy Acres Lane	# (0.1) B (11.2) EB A (9.0) WB 31.3%*	# (0.1) B (11.1) EB A (9.6) WB 39.0%*	# (0.1) B (13.9) EB A (9.0) WB 42.9%*	# (0.1) B (13.6) EB B (11.1) WB 54.8%*	# (0.1) A (9.4) EB A (9.1) WB 42.0%*	# (0.1) A (9.2) EB B (10.5) WB 49.2%*
Russ Avenue & Barber Boulevard	B (17.4) 50.8%*	C (33.7) 65.2%*	C (21.9) 62.8%*	F (211.8) 88.2%*	D (45.6) 61.2%*	C (32.8) 82.8%*
Russ Avenue & Dellwood Road / Howell Mill Road	C (20.0) 45.2%*	C (29.4) 53.7%*	C (24.0) 52.0%*	D (39.5) 73.1%*	C (23.7) 51.8%*	D (39.2) 73.4%*
Russ Avenue & Border Street	# (0.6) A (9.3) WB 26.8%*	# (1.4) B (10.1) WB 36.6%*	# (0.7) A (9.6) WB 32.3%*	# (1.5) B (10.3) WB 49.4%*	# (0.7) A (9.3) WB 32.1%*	# (1.5) B (10.6) WB 48.9%*
Russ Avenue & Waynesville Plaza	A (4.5) 32.1%*	A (7.7) 36.9%*	A (5.5) 40.4%*	B (11.1) 55.1%*	B (11.3) 42.1%*	B (13.9) 59.5%*
Russ Avenue & Lee Street	# (0.3) A (9.8) EB 24.9%*	# (0.5) A (9.8) EB 38.9%*	# (0.3) B (10.6) EB 32.9%*	# (0.6) B (10.4) EB 52.9%*	N/A	N/A
Russ Avenue & West Marshall Street	A (2.9) 40.6%*	A (7.1) 47.2%*	A (3.3) 53.5%*	A (7.6) 69.7%*	A (3.3) 53.4%*	A (7.6) 69.7%*
Russ Avenue & Walnut Street	A (9.3) 41.3%*	B (13.6) 44.1%*	B (10.2) 52.5%*	B (15.6) 59.8%*	B (10.2) 52.5%*	B (15.6) 59.8%*

Note:
- No letter value assigned by Synchro, only overall intersection delay
* - Intersection Capacity Utilization (ICU) Calculations

Capacity analyses for all studied intersections are included in Appendix B.

E. Roundabout

During the public involvement process, questions were raised regarding the feasibility of removing the traffic signals along Russ Avenue and replacing them with roundabouts. To address the questions, a roundabout analysis was completed for all the major signalized intersections along Russ Avenue for the 2030 Buildout conditions. This included: Hwy 23/74 NB ramp; Frazier Street; Barber Boulevard; Dellwood Road/Howell Mill Road; Waynesville Plaza/Lee Street; West Marshall Street; and Walnut Street. The following table summarizes the level-of-service and volume to capacity (v/c) ratio if a 2-lane roundabout is constructed at each of the intersections.

TABLE 3: LEVEL OF SERVICE SUMMARY - ROUNDABOUT		
Russ Avenue Corridor Study		
Intersection	2030 Buildout	
	AM	PM
Russ Avenue & Highway 23/74 Northbound Ramp	A (4.7) 0.362*	B (10.5) 0.892*
Russ Avenue & Frazier Street	A (5.1) 0.375*	B (10.6) 0.693*
Russ Avenue & Barber Boulevard	A (6.2) 0.444*	B (19.6) 0.910*
Russ Avenue & Dellwood Road / Howell Mill Road	A (6.9) 0.400*	C (26.9) 1.200*
Russ Avenue & Waynesville Plaza / Lee Street	A (5.2) 0.233*	A (6.6) 0.364*
Russ Avenue & West Marshall Street	A (4.3) 0.204*	A (5.9) 0.333*
Russ Avenue & Walnut Street	A (6.7) 0.262*	A (8.8) 0.640*

Note: * Volume to Capacity (v/c) ratio

The table shows that all intersections will operate at acceptable levels-of-service. However, the v/c ratio for the Russ Avenue / Dellwood Road / Howell Mill Road intersection is projected to be 1.200 during the PM peak. A v/c ratio over 1.0 indicates that traffic flow is unstable and excessive delay and queuing is expected. Therefore, the Russ Avenue / Dellwood Road / Howell Mill Road intersection should not be considered for installation of a roundabout due to capacity. A v/c ratio less than 0.85 generally indicate that adequate capacity is available and vehicles are not expected to experience significant queues and delays.

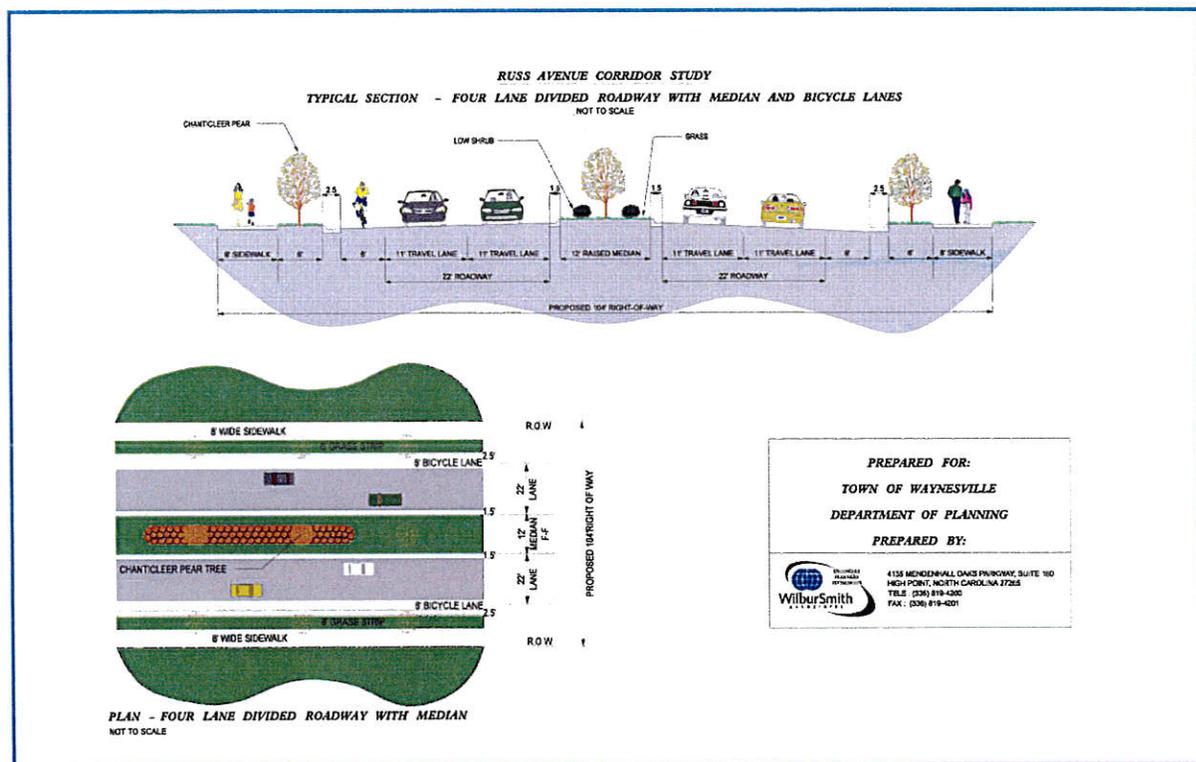
Additionally, the Russ Avenue / Walnut Street intersection may not be a candidate for installation of a roundabout due to the proximity to the railroad bridge on Russ Avenue. All other intersections could be considered for installation of a 2-lane roundabout; however it could result in major impacts to properties and businesses due to the size of a 2-lane roundabout.

VII. RECOMMENDATIONS

As discussed previously, the recommendations for the Russ Avenue corridor were developed through an iterative process involving Town, MPO, and NCDOT staff, and the public. Multiple options were considered for not only Russ Avenue, but for other roadways and connections throughout the study area that would alleviate some of the turning movement traffic on Russ Avenue, and would allow vehicles to travel through the area without utilizing Russ Avenue. At the end of the process, a variety of improvements are recommended to provide safe and efficient travel through the area.

The typical section for the Russ Avenue corridor was determined based on the Town of Waynesville *Land Development Articles and Summaries - Article VII General Development, Site and Performance Standards*⁴ using the street design standards for a Boulevard. The following lists the features of the 4-lane median divided roadway:

- 104 ft right-of-way
- 8 ft wide sidewalk on both sides
- 6 ft grass/planting strip on both sides
- 6 ft bicycle lane on both sides
- 11 ft travel lanes
- 12 ft median



The Recommended Lane Configurations & Traffic Control is shown on Figure 8.

To accommodate for the projected design year 2030 traffic volumes along Russ Avenue, the following improvements are recommended:

NEW CONNECTOR ROADS

- Construct a connector road that extends from Frazier Street to the intersection of Russ Avenue and Barber Boulevard to form a 4-leg intersection.
- Construct a connector road from Frazier Street (behind the Shell Gas Station) to Russ Avenue where the existing abandoned Long John Silver restaurant sits. This new connector road would be located behind McDonalds and CVS.
- Construct a connector road / back access road to connect the Waffle House, Arby's, and Pizza Hut to Barber Boulevard.
- Construct a connector road / back access road to connect the Sears Shopping Center to Howell Mill Road.
- Construct a bridge over Richland Creek to connect the Sears Shopping Center to Marshall Street. This bridge should be of sufficient length to allow for a greenway underneath the structure.

BRIDGES

- Construct a new 5-lane bridge over Richland Creek to allow for northbound and southbound left turn lanes. This bridge should be of sufficient length to allow for a greenway underneath the structure.
- Construct a new 5-lane bridge over the rail line to allow for northbound and southbound left turn lanes.

RUSS AVENUE

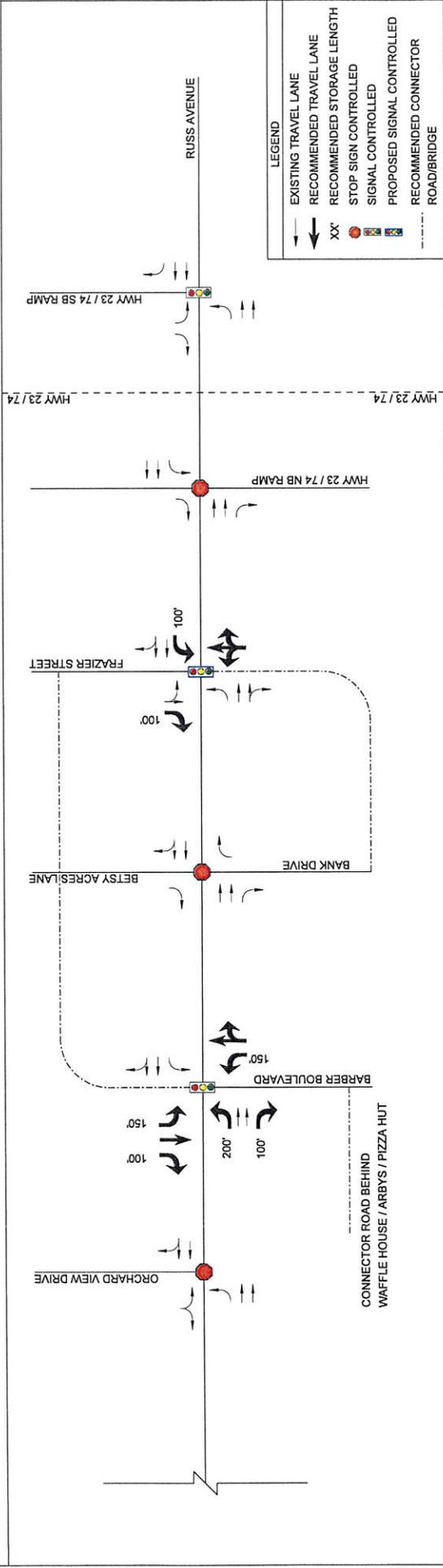
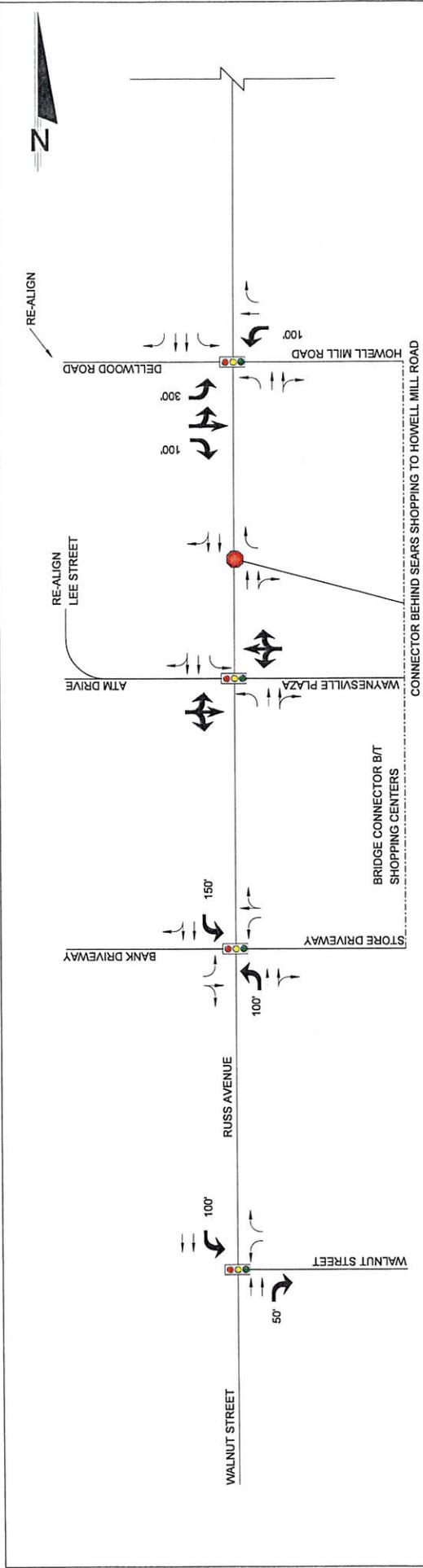
- Construct a 4-lane landscaped median divided, curb and gutter roadway with turn lanes at key intersections.
- Construct sidewalks along both sides of the roadway.
- Construct bicycle lanes along both sides of the roadway.

❖ *Frazier Street Intersection*

- Construct a southbound left turn lane on Russ Avenue with 100 feet of storage.
- Construct an eastbound shared left turn / through lane and a right turn lane with 100 feet of storage on Frazier Street.
- Construct a westbound shared left/through/right turn lane on the new Frazier Street connector.
- Construct a traffic signal.

❖ *Barber Boulevard Intersection*

- Construct an eastbound left turn lane with 150 feet of storage a through lane and a right turn lane with 100 feet of storage on Barber Boulevard.
- Construct a westbound left turn lane with 150 feet of storage and shared through/right turn lane on Barber Boulevard.
- Construct a northbound left turn lane with 200 feet of storage and a right turn lane with 100 feet of storage on Russ Avenue.



<p>421 FAYETTEVILLE STREET, SUITE 1303 RALEIGH, NORTH CAROLINA 27601 TELEPHONE: 919.755.0583 FAX: 919.832.8798</p>	<p>FEASIBILITY STUDY RUSS AVENUE CORRIDOR WAYNESVILLE, NORTH CAROLINA</p>	<p>RECOMMENDED LANE CONFIGURATIONS AND TRAFFIC CONTROL</p>	<p>FIGURE: 8</p>	<p>SCALE: NONE</p>
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❖ *Dellwood Road/Howell Mill Road Intersection*

- Construct an eastbound left turn lane with 300 feet of storage, a shared left/through turn lane, and right turn lane with 100 feet of storage on Dellwood Road.
- Construct a westbound left turn lane with 100 feet of storage on Howell Mill Road.

❖ *Lee Street/Waynesville Plaza Intersection*

- Construct an eastbound shared left/through/right turn lane on the newly realigned Lee Street.
- Construct a westbound shared left/through/right turn lane on the entrance to the Waynesville Plaza.

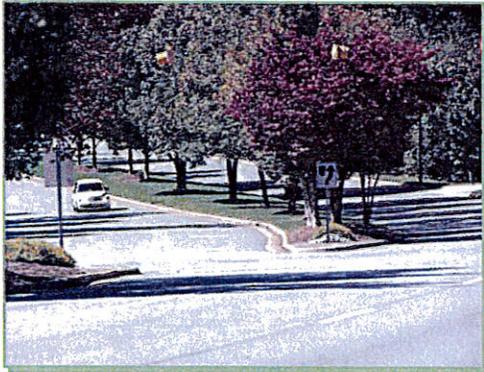
❖ *Bi-Lo/Wachovia Bank Intersection*

- Construct a northbound left turn lane with 100 feet of storage on Russ Avenue.
- Construct a southbound left turn lane with 150 feet of storage on Russ Avenue.

❖ *Walnut Street Intersection*

- Construct a northbound right turn lane with 50 feet of storage on Russ Avenue.
- Construct a southbound left turn lane with 100 feet of storage on Russ Avenue.

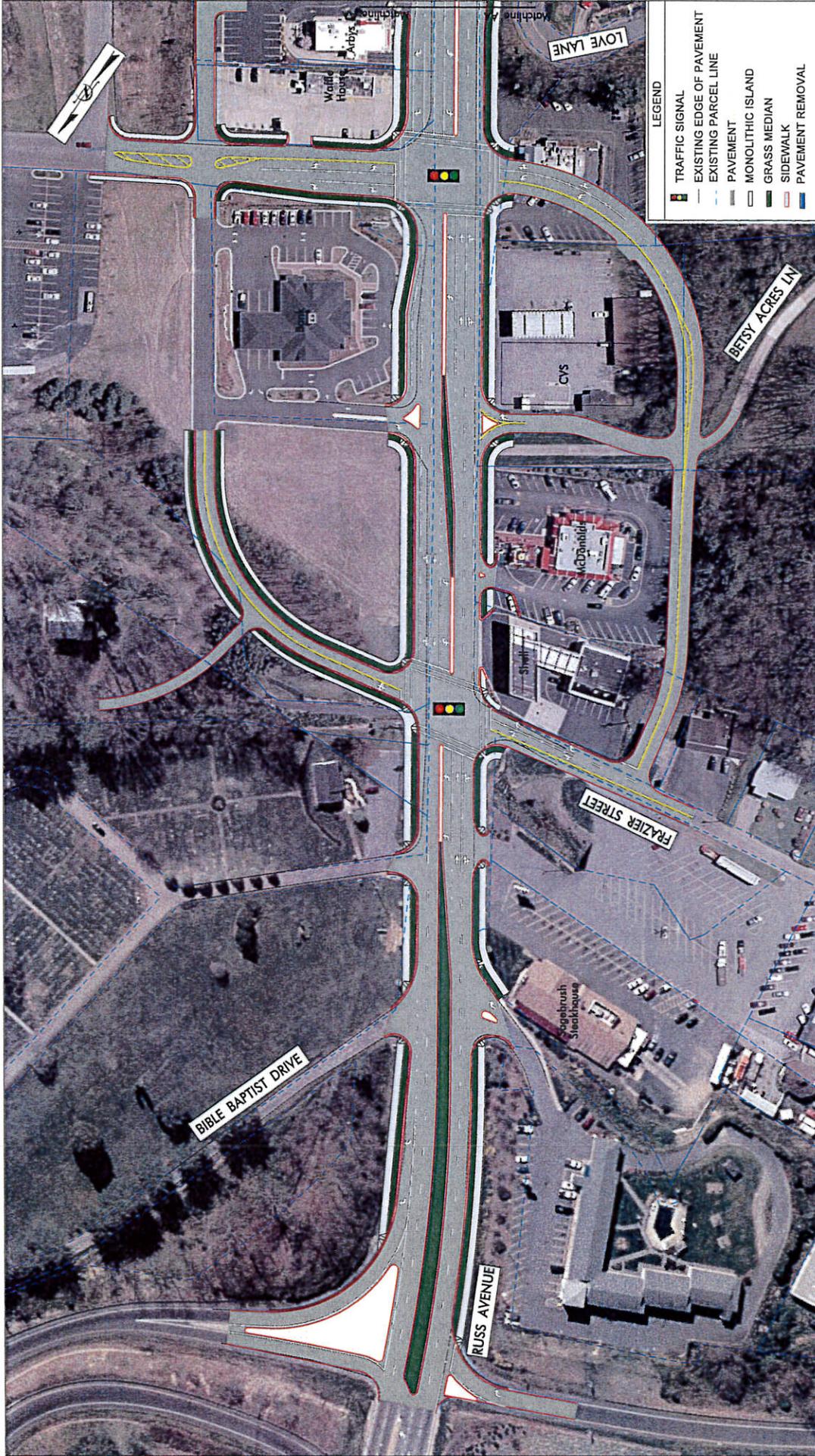
Some design features to enhance vehicular and pedestrian safety and aesthetics include:



Example landscaped median

- 4-lane divided roadway
- Landscaped median
- Sidewalks along both sides
- Crosswalks and pedestrian signal heads
- Bicycle lanes
- Connector roads

A half scale conceptual design of the proposed improvements is illustrated on Figures 9A – 9E.



- LEGEND**
- TRAFFIC SIGNAL
 - EXISTING EDGE OF PAVEMENT
 - EXISTING PARCEL LINE
 - PAVEMENT
 - MONOLITHIC ISLAND
 - GRASS MEDIAN
 - SIDEWALK
 - PAVEMENT REMOVAL

0 25 50 100'

RECOMMENDED LANE CONFIGURATIONS AND TRAFFIC CONTROL

FEASIBILITY STUDY
 RUSS AVENUE CORRIDOR
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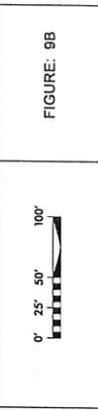


FIGURE: 9A



LEGEND

	TRAFFIC SIGNAL
	EXISTING EDGE OF PAVEMENT
	EXISTING PARCEL LINE
	PAVEMENT
	MONOLITHIC ISLAND
	GRASS MEDIAN
	SIDEWALK
	PAVEMENT REMOVAL

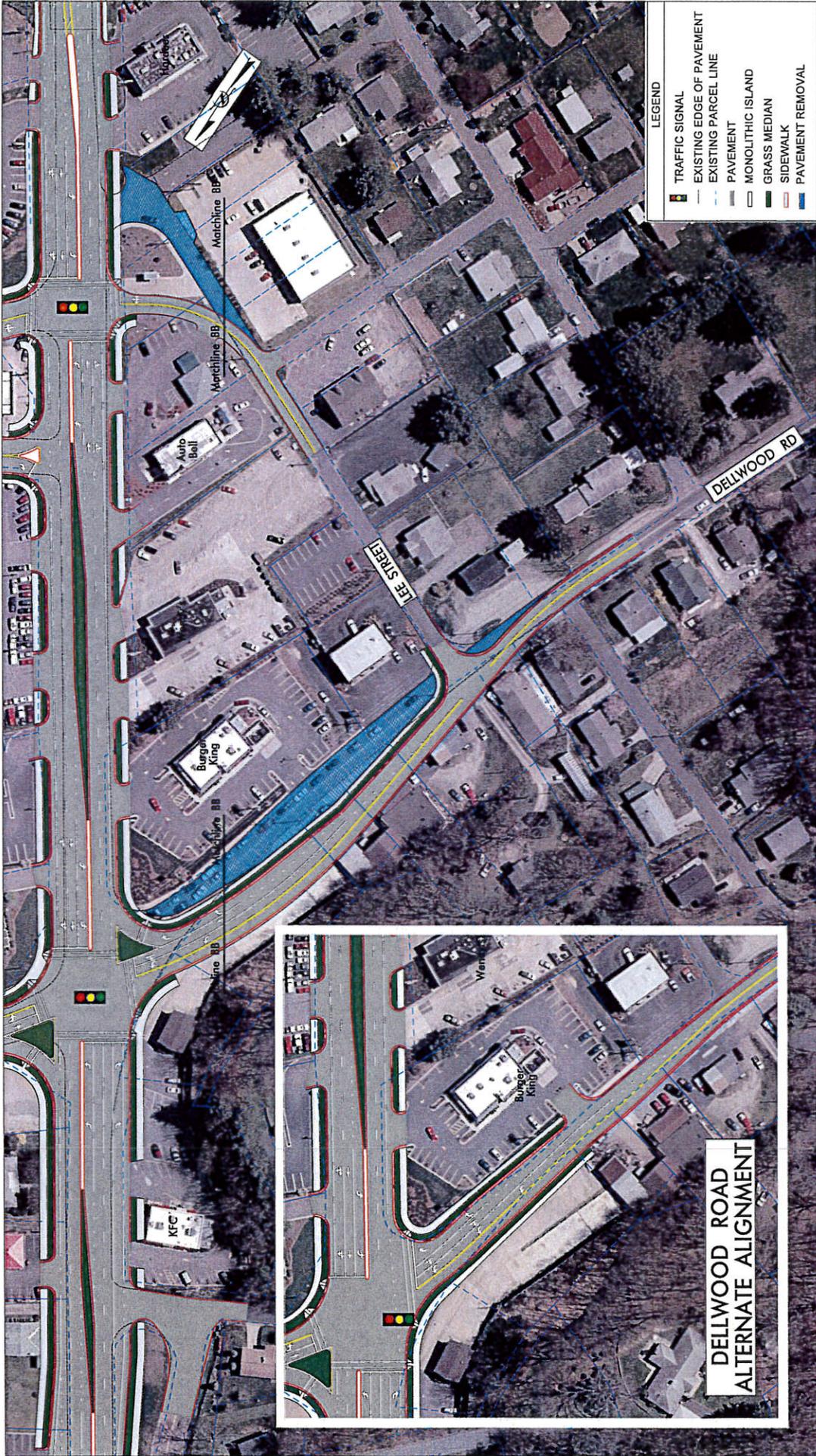


RECOMMENDED LANE CONFIGURATIONS
AND TRAFFIC CONTROL

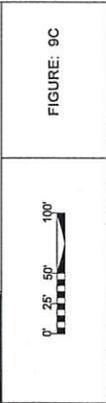
FEASIBILITY STUDY
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- LEGEND**
- TRAFFIC SIGNAL
 - EXISTING EDGE OF PAVEMENT
 - EXISTING PARCEL LINE
 - PAVEMENT
 - MONOLITHIC ISLAND
 - GRASS MEDIAN
 - SIDEWALK
 - PAVEMENT REMOVAL



RECOMMENDED LANE CONFIGURATIONS
AND TRAFFIC CONTROL

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**DELLWOOD ROAD
ALTERNATE ALIGNMENT**





RECOMMENDED LANE CONFIGURATIONS
AND TRAFFIC CONTROL

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 WAYNESVILLE, NORTH CAROLINA

RECOMMENDED LANE CONFIGURATIONS
 AND TRAFFIC CONTROL

FIGURE: 9E

OPINION OF PROBABLE COST

Probable costs for the recommended roadway improvements were developed using cost estimates provided by the Capital Area Metropolitan Planning Organization and quantities developed from the conceptual design plans. A summary of the planning level cost estimates for the proposed improvements are included in the Table 4. Detailed cost estimating spreadsheets are included in Appendix D.

Table 4: Opinion of Probable Cost Russ Avenue Corridor Study	
Russ Avenue Improvements	
Preliminary Engineering	\$1,300,000
Construction	\$8,610,000
Right-of-Way	\$5,670,000
Side Streets / Connectors	
Preliminary Engineering	\$413,000
Construction	\$2,880,000
Right-of-Way	\$2,800,000
Total Cost	
	\$21,673,000

IX. IMPLEMENTATION STRATEGIES

The largest improvements in traffic flow, safety, and aesthetics along the Russ Avenue corridor will result from the construction of a center median throughout the study area. The installation of this median and associated turn lanes should be the primary focus for the town within the corridor. The next steps in the process are to perform an environmental analysis, detailed roadway design, and permitting. Funding for this analysis, design, and permitting should be requested from NCDOT and the French Broad River MPO. Funding should also be requested for construction, although funding for this project may likely be several years away.

The Town should also begin to pursue the construction of the various connections within the study area that could alleviate congestion along Russ Avenue. These connections can be designed, permitted, and constructed in a much shorter timeframe than Russ Avenue, and will provide immediate, but localized benefits.

Pedestrian accommodations should also be considered as opportunities arise, particularly as a result of new construction or redevelopment of existing parcels. Any future developments should be required to install pedestrian facilities in conformance with the conceptual designs included in this plan that connect with adjacent parcels.

A summary of funding and financing options and programs for transportation that have been used by municipalities in North Carolina is included in Appendix E. This summary was prepared as part of a collaborative effort with the Regional Transportation alliance and includes options for public-private partnerships, and existing and potential state and federal programs and grants.

X. CONCLUSIONS

The Russ Avenue Corridor Study is the initial step in the planning and design process for the development of a project. The public, Town of Waynesville and the French Broad River Metropolitan Planning Organization all contributed greatly in the development of a future plan for the Russ Avenue corridor that can safely and efficiently accommodate all modes of travel and will enhance the aesthetics of the corridor.

XI. REFERENCES

¹*2008 Annual Average Daily Traffic Volumes*, North Carolina Department of Transportation, 2008.

²*2009-2015 State Transportation Improvement Program*, North Carolina Department of Transportation, 2009.

³*Highway Capacity Manual* Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 1998.

⁴*Land Development Articles and Summaries - Article VII General Development, Site and Performance Standards*, Town of Waynesville, North Carolina,
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