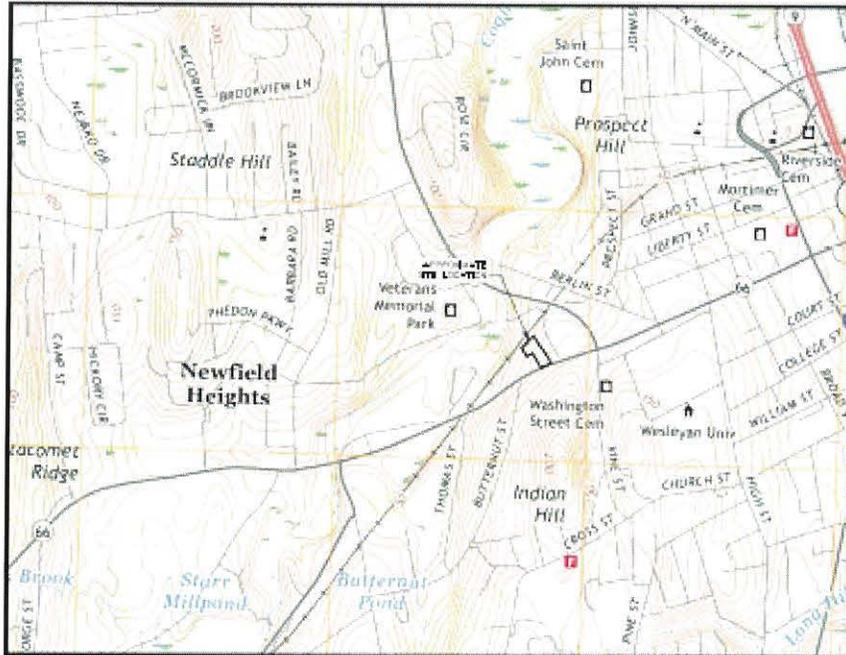


**APPLICATION OF ROOT CENTER FOR ADVANCED RECOVERY
FOR MAP AMENDMENT AND SPECIAL EXCEPTION WITH SITE
PLAN REVIEW FOR 392 WASHINGTON STREET, MIDDLETOWN, CT**

August 6, 2020



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TABLE OF CONTENTS

August 6, 2020

1. Transmittal letter from Shipman & Goodwin
2. Overview letter from Shipman & Goodwin
3. City of Middletown Planning & Zoning Commission Application Forms
4. Root Center for Advanced Recovery Mission Statement and Narrative
5. Traffic Impact Study, prepared by Fuss & O'Neill, Inc., August 2020
6. Excerpt of Stormwater Management Report, prepared by Fuss & O'Neill, Inc., July 24, 2020
7. Deed with Legal Description of the Subject Property to be rezoned
8. Abutters List
9. Authorization letters from Root Center for Advanced Recovery and 392 Washington Middletown LLC
10. Consultant Resumes

SUBMITTED SEPARATELY

6 paper copies, full-size plan set, "Root Center for Advanced Recovery," 392 Washington Street, Middletown, Connecticut, prepared by Fuss & O'Neill, July 24, 2020

2 paper copies, Stormwater Management Report, prepared by Fuss & O'Neill, Inc., June 26, 2020

Design Review and Preservation Board application package, including: original application form and 1 paper copy, full-size plan set, "Root Center for Advanced Recovery," 392 Washington Street, Middletown, Connecticut, prepared by Fuss & O'Neill, July 24, 2020

Application fee, \$435.00



Timothy S. Hollister
Phone: (860) 251-5601
Fax: (860) 251-5318
thollister@goodwin.com

August 6, 2020

HAND DELIVERY

Mr. Stephen Devoto, Chair,
and Commission Members
Planning & Zoning Commission
City of Middletown
245 Dekoven Drive
Middletown, CT 06457

Mr. Marek Kozikowski
City Planner
City of Middletown
245 Dekoven Drive
Middletown, CT 06457

Re: Application of Root Center for Advanced Recovery for Map Amendment and Special Exception with Site Plan Review for 392 Washington Street, Middletown, Connecticut

Dear Chair Devoto, Commission Members, and Mr. Kozikowski:

On behalf of the Root Center for Advanced Recovery, we are pleased to submit this application for zoning map amendment and special exception with site plan review in connection with the proposed redevelopment of the existing building at 392 Washington Street in Middletown. Specifically, Root Center proposes to rezone the Property to the Substance Abuse / Mental Health floating zone, a change of use of the Property to a Clinic for Mental Health and / or Substance Abuse Counseling, Diagnosis and Treatment, and to redevelop the existing building located on the Property for use as a methadone clinic.

This package (original plus 6 copies) contains the following:

1. Transmittal letter from Shipman & Goodwin
2. Overview letter from Shipman & Goodwin
3. City of Middletown Planning & Zoning Commission Application Forms
4. Root Center for Advanced Recovery Mission Statement and Narrative

5. Traffic Impact Study, prepared by Fuss & O'Neill, Inc., August 2020
6. Excerpt of Stormwater Management Report, prepared by Fuss & O'Neill, Inc., July 24, 2020
7. Deed with Legal Description of the Subject Property to be rezoned
8. Abutters List
9. Authorization letters from Root Center for Advanced Recovery and 392 Washington Middletown LLC
10. Consultant Resumes

Also submitted separately are 6 full-sized paper copies of plans entitled, "Root Center for Advanced Recovery," 392 Washington Street, Middletown, Connecticut, prepared by Fuss & O'Neill, July 24, 2020, and 2 paper copies of the Stormwater Management Report, prepared by Fuss & O'Neill, Inc., June 26, 2020. A separate Design Review and Preservation Board application package consisting of the original application form and 1 paper copy, full-size plan set, "Root Center for Advanced Recovery," 392 Washington Street, Middletown, Connecticut, prepared by Fuss & O'Neill, July 24, 2020, is also being filed contemporaneously herewith. As requested, we are also emailing Mr. Kozikowski a Dropbox link with all application materials.

Application fees submitted herewith have been calculated as follows:

Map Amendment	\$180.00
Special Exception	\$230.00
Design Review & Preservation Bd.	\$25.00
<u>TOTAL</u>	<u>\$435.00</u>

If the Commission or staff would like additional paper copies or additional information, please let us know. We look forward to presenting this application.

Very truly yours,



Timothy S. Hollister

August 6, 2020

Page 3

TSH:ekf

Attachments

Cc: Joe Sirko (w/ att.)
Bruce Simons (w/ att.)
Ron Bomengen (w/ att.)
Mark Vertucci (w/ att.)
Ted Cutler (w/ att.)
Paul Tirrell (w/ att.)
Andrea L. Gomes, Esq. (w/ att.)



Timothy S. Hollister
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Fax: (860) 251-5318
thollister@goodwin.com

August 6, 2020

HAND DELIVERY

Mr. Stephen Devoto, Chair,
and Commission Members
Planning & Zoning Commission
City of Middletown
245 Dekoven Drive
Middletown, CT 06457

Mr. Marek Kozikowski
City Planner
City of Middletown
245 Dekoven Drive
Middletown, CT 06457

Re: Application of Root Center for Advanced Recovery for Map Amendment and Special Exception with Site Plan Review for 392 Washington Street, Middletown, Connecticut

Dear Chair Devoto, Commission Members, and Mr. Kozikowski:

On behalf of the Root Center for Advanced Recovery, we are pleased to apply for a zoning map amendment and special exception with site plan review in connection with the redevelopment of the existing building at 392 Washington Street, Middletown, Connecticut (Assessor's Map 23 / Lot 70) (the "Property"). Hartford Dispensary Real Estate Inc., an affiliate of Root Center, is under contract to purchase the Property.

The Site

The Property is approximately 1.11 acres and is located in the Mixed Use "MX" Zone. Pursuant to Section 39C.02 of the Middletown Zoning Code ("Code"), the Property is also located within the areas eligible for the Substance Abuse / Mental Health ("SMH") floating zone, where Clinics for Substance Abuse counseling, diagnosis and treatment are permitted by special exception.

The Property is presently improved with a 7,140 square foot brick building that previously housed Fine Tunes Car Stereo & Complete Auto Repair. The driveway to the Property is located on Washington Street. While associated parking is primarily located to the

rear (north) of the building, patrons of Fine Tunes also parked along the side and front of the building. A variety of commercial uses are located directly to the east, west and north of the Property, including Midtown Tire, Midas Auto Repair, Main Switch Beauty Salon, and Nardelli's Grinder Shoppe. Various residential uses are located further east along Washington Avenue, including several single-family homes and the Birchwood Apartment complex. A wooded area separates the Property from the railroad to the north.

The Property is not located within five hundred (500) feet of an adjoining municipality and is not within an aquifer protection area or the watershed of a water company.

Zoning Regulation Amendments

On April 22, 2020, the Commission unanimously voted to approve Planning, Conservation and Development ("PCD") staff-sponsored amendments to Sections 61 and 40 of the Code to, among other things, remove methadone clinics from the list of prohibited uses in Code Section 61.05 and make them special exception uses. Thus, methadone clinics, which are now included as a Clinic for Mental Health and / or Substance Abuse, are permitted by special exception in the SMH floating zone.

The Proposal

Root Center is proposing to rezone the Property to the SMH floating zone and to redevelop the existing building thereon for use as a methadone clinic. Root Center's mission statement and a narrative summary of its operations and services is at Tab 4.

While the existing building on-site will remain, the exterior will be improved with new siding, signage, and lighting. The front entrance to the proposed clinic will be relocated to the rear of the building (away from Washington Street) and will incorporate an ADA-compliant ramp and walkway, as well as aesthetically-pleasing landscaping. All parking will be relocated to the parking lot at the rear of the building. At the front of the building (along Washington Street), Root Center seeks to construct a staff patio area, which will be surrounded by a 6-foot high vinyl fence and associated landscaping. The same fence will also screen the generator located along the staff patio area. The interior of the building will be remodeled to include various counseling and exam rooms, administrative offices, and rest rooms.

Environmental Site Assessments

ATC Group Services LLC performed a Phase I Environmental Site Assessment and Limited Phase II Subsurface Investigation of the Property in June 2020. ATC concluded that Property is not an "establishment," within the meaning of the Connecticut Transfer Act.

ATC also found a very limited number of recognized environmental conditions which merited additional investigation, including the presence of two hydraulic lifts, which, depending on the age of the hydraulic oil in the lifts, may indicate the presence of polychlorinated biphenyls or PCBs. Although ATC tested the soil in the vicinity of the lifts and found no oil or PCBs, it is possible that when the lifts are dismantled, oil and possibly oil containing PCBs, will be found. However, nothing found at the property at this time suggests that to be the case. In addition,

given the age of the building on the Property, it is likely that there will be asbestos, asbestos-containing materials, and lead paint present. If any such contaminants are found, Root Center will address them in accordance with state and federal statutes and regulations. Compliance with all applicable environmental state and federal statutes and regulations may be a condition of approval here.

Soil Erosion and Sediment Control

The proposed soil erosion and sediment control measures, which include the use of silt fence, the protection of all stormwater collection structures to remove sediment from the run-off prior to entering the receiving drainage systems, and the installation of a construction entrance to prevent tracking of sediment onto state and local roads, will minimize the potential for sediment runoff off-site in accordance with the 2002 Connecticut Department of Energy and Environmental Protection (“DEEP”) Guidelines for Soil Erosion & Sediment Control.

Stormwater Management

The proposed clinic will be constructed with several best management practices and low impact design techniques for stormwater and erosion. An excerpt of the Stormwater Management Report, meeting the State's Guidelines, has been prepared by Fuss & O’Neill and is also part of this package at Tab 6. The full Stormwater Management Report has been submitted separately, as requested by PCD staff.

The stormwater improvements proposed for the site include a proposed stormwater system, hydrodynamic separator and subsurface infiltration system, which will detain and treat runoff on-site. This proposed design will reduce the total flow generated from the site by approximately 16-19 percent for the 2-, 10-, 25-, and 100-year storm events and will provide treatment of stormwater well in excess of the recommended Water Quality Volume standards recommended in the 2004 DEEP Stormwater Quality Manual.

Utilities

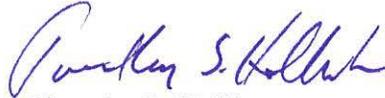
The Property is currently served by municipal sewer and water. Root Center is not proposing any changes to these utilities.

Traffic

A traffic impact study is contained in this application package at Tab 5. The total anticipated traffic from the proposed development totals 10 new vehicle trips during the weekday morning peak hour and 4 less vehicle trips during the weekday afternoon peak hour. The level of service (“LOS”) in the area remains the same post-development, with the lowest LOS being confined to the Property driveway and any queued vehicles waiting to exit the Property without impacting traffic operations on Route 66. Accordingly, the proposed clinic will not impede or adversely affect traffic operations on the adjacent roadway network.

We appreciate the opportunity to present this application to the Commission at its earliest possible meeting. Thank you.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Timothy S. Hollister".

Timothy S. Hollister

TSH:ekf

Cc: Joe Sirko (w/ att.)
Bruce Simons (w/ att.)
Ron Bomengen (w/ att.)
Mark Vertucci (w/ att.)
Ted Cutler (w/ att.)
Paul Tirrell (w/ att.)
Andrea L. Gomes, Esq. (w/ att.)

- SUBDIVISION
- SPECIAL EXCEPTION
- ZONING BOARD OF APPEALS
- SITE PLAN REVIEW

FILE # _____

Please fill out this application in pen only so we will know who you are, what you are applying to do, and how to contact you. With this basic information we will evaluate your project as it relates to City regulations as quickly as possible. Thank you for your cooperation.

GENERAL INFORMATION ABOUT THE PEOPLE INVOLVED Date August 6, 2020
 Applicant: Hartford Dispensary dba Root Center for Advanced Recovery Phone # (860) 643-3208
 Address: 335 Broad Street City Manchester State CT Zip 06040
 Email: joseph.sirko@rootcenter.org Cell Phone # (860) 247-8653
 Agent: Timothy S. Hollister, Esq., Shipman & Goodwin LLP Phone # (860) 251-5601
 Address: One Constitution Plaza City Hartford State CT Zip 06103-1919
 Email: thollister@goodwin.com Cell Phone # (860) 558-1512

WHAT ARE YOU APPLYING TO DO? (CHECK ONE OR MORE)

- Add an addition to a single/two family dwelling to be used for _____
- Construct a single family dwelling (A-2 survey required)
- Add an addition to a multi-family or non-residential building to be used for (A-2 survey required) _____
- Convert an existing building from present use as Automobile repair garage to a new use as Clinic for Mental Health and/or Substance Abuse Counseling, Diagnosis and Treatment
- Construct one or more new buildings to be used for (A-2 survey required) _____
- Subdivide land into building lots (A-2 survey required)
- Change the text of the Zoning Code or amend the Zoning Map
- Install a sign
- Start a Residential Unit Business Pursuit
- Application for Zoning Board of Appeals
- Extract Natural Resources like sand or gravel or fill an area
- Request for a G.S. 14-54 Location Approval (gen. repairer, used car or new car dealer)
- Other _____

FACTS ABOUT LAND PROPOSED FOR USE

Landowner 392 Washington Middletown LLC Location: 392 Washington Street
 Name of Subdivision (if any): _____
 Zone MX Tax ID# R07179 Tax Assessor's Map 23 Lot 70
 Is this project within 500' of a Municipal Boundary? Yes _____ No X
 Is this project located in a FEMA 100 or 500 year flood plain? Yes _____ No X
 Utilities Available: City Water (X); Private Well (); City Sewer (X); Private Septic ()

DESIGN REVIEW BOARD STAFF*

Timothy S. Hollister
 SIGNATURE OF APPLICANT/AGENT**
 See attached authorization letter.

DATE OF REVIEW/APPROVAL _____

SIGNATURE OF OWNER** _____

- PERMIT NOT REQUIRED
- ADMINISTRATIVE APPROVAL
- IWVA REVIEW REQUESTED
- IWVA PERMIT REQUIRED

**Both signatures required. I certify that the above information and plans submitted are true and correct, and that, if required, an application for an Inland/Wetlands permit has been filed before or on the same day as the filing of this application with the P&Z Commission.

SIGNATURE OF IWVA STAFF _____

*Signature by the Design Review Board Staff is required for all designs for exterior rehabilitation or new construction in the business zones.

_____ Meets Zoning Requirements

ZONING ENFORCEMENT OFFICER
 DATE OF APPROVED PLANS _____

Received \$ _____ by _____ check # _____

INITIAL APPLICATION FOR ZONING ENFORCEMENT

SPECIAL EXCEPTION FORM

A. GENERAL INFORMATION ABOUT APPLICANT (please type or print clearly)

Name Hartford Dispensary dba Root Center for Advanced Recovery Date August 6, 2020
Address 335 Broad Street, Manchester, CT 06040 Phone 860-643-3208
Agent Timothy S. Hollister, Esq. Phone 860-251-5601

B. DESCRIPTION OF PREMISES

Owner of Record 392 Washington Middletown LLC
Location 392 Washington Street
Deed Filed in Town Clerk's Office on 11/9/18
Map File# 95-2011 Vol. & Page# 1932 ; 193
Zone Mixed Use (MX) Current Use Automobile Repair Garage
Relevant Zoning Code Provision 44.08.06

NOTE: A legal description of the premises to be affected by the Special Exception must be attached to this form.

C. NATURE OF SPECIAL EXCEPTION

See attached Overview Letter (Tab 2)

NOTE: An approved Special Exception will not be effective until a copy of this certification is recorded in the Middletown Town Clerk's Office.

See attached authorization letter.
Timothy S. Hollister
Signature of Applicant or Agent
See attached authorization letter.
Signature of Owner
*Both Signatures Required

The owner, applicant and/or other authorized agent hereby grant the Middletown Planning and Zoning Commission and/or its agents permission to enter upon the property for which the Special Exception application has been filled out for the purpose of inspection and enforcement of the Regulations of the City of Middletown.

Staff Comments _____

D. CERTIFICATION OF COMMISSION RESPONSE

Dates Legal Notices Published _____ ; _____
Date of Public Hearing _____
Final Action: Disapproved _____ Approved _____
Zoning Regulation of which Special Exception is Granted _____
Date Notice of Decision Published _____
Effective Date _____

E. MATERIAL FILED IN TOWN CLERK'S OFFICE

_____ This Form _____ Site Plan
Other _____ ; Date _____

F.

This is to certify that a Special Exception, as depicted on this form, was granted by the Middletown Planning and Zoning Commission. _____ Chairman

•
•
•
•
•
•
•

CITY OF MIDDLETOWN

Department of Planning, Conservation, and Development

<http://www.middletownplanning.com>

PO Box 1300
245 deKoven Drive
Middletown, CT 06457-1300
(860) 344-3425

Erosion & Sedimentation Control Compliance Agreement

I, (*PRINT NAME*) Timothy S. Hollister, Esq., the applicant's attorney and agent, hereby agree that any tree cutting, land clearing, earth excavation, earth filling or any other construction activity associated with an approved permit at:

(*PROPERTY ADDRESS*) 392 Washington Street • • • •

shall be in compliance with a approved plot/site plan as well and the City of Middletown Erosion & Sedimentation Control Guidelines.

I understand that failure to comply with the City of Middletown Erosion & Sedimentation Control Guidelines shall be deemed a violation and shall result in an enforcement action that may include a \$150 per day municipal citation fine and shall preclude zoning approval required for the issuance of a Certificate of Occupancy.

The City of Middletown reserves the right to implement corrective action for Erosion & Sedimentation Control violations, and in such cases will seek reimbursement for expenses related to any corrective action deemed necessary by the City.

Signed: *Timothy S. Hollister*
Date: *8.5.20*

.....
For Office Use Only

SPR# _____

ROOT CENTER FOR ADVANCED RECOVERY

Who we are:

Root Center for Advanced Recovery (a trade name of Hartford Dispensary) is a private, non-profit, health care agency providing behavioral health treatment and prevention services to eligible and appropriate persons. Originally established in 1871 as an outpatient medical/dental clinic, the Hartford Dispensary changed its focus in 1971 to substance use and mental health services in response to the economic and medical problems associated with opioid dependence in the greater Hartford community.

Root Center for Advanced Recovery seeks to provide clients with prompt, effective, quality care that will assist them in their efforts to achieve their goals.

Our Mission Statement “Compassionate, comprehensive care for sustained recovery”

Our Values: Honor the power in everyone. Renew ourselves to share our strengths.
Embrace new perspectives. Progress is the destination.

What we do:

Root Center is the largest provider and most well-known for our work with Medication Assisted Treatment (MAT) for Substance Use Disorders, specifically Opioid Use Disorders. Our primary service is Methadone Maintenance; however, we offer additional services for substance use as well as treatment and therapy related to mental health. Some of these include outpatient individual and group therapy. We have a team of staff which include physicians, licensed counselors, and nurses who work together to treat the whole person. We work with teens and adults on any behavioral health need on an outpatient basis.

Hours of Operation:

Monday – Friday from 5:30am to 8:30pm

Saturdays from 6:00am to 9:00am

Methadone Maintenance clients are required to be present depending on the individual and the circumstances. One might be permitted to manage doses offsite and visit the clinic less frequently, as treatment continues and progress attained, and others may need to present daily to receive their dose of medication. Each person works with a physician, nurse, and counselor to improve their overall condition.

Intensive Outpatient Program is group talk therapy which meets 3-5 days a week for 3 hours a day. These counseling sessions are led by trained therapists and run from 10:30-1:30 Monday through Friday with an evening track that runs from 5:30pm to 8:30pm, mainly for working professionals.

Mental Health Outpatient Program is counseling paired often with psychiatric evaluation and medication for mental health symptoms. This is often one time a week for 1 hour.

Community Need:

Root Center currently serves approximately 150 Middletown residents in one of our 9 other locations across the state. It was only just this past spring that the Middletown PL&Z commission made a change to their regulations to allow

methadone services to be provided in Middletown within certain zoned areas of the city. As a result, there is currently no other agency in Middletown to provide what is still the most efficacy based treatment for Opioid Use Disorder. Middletown residents have had to travel out of town to receive needed life-saving medications to treat their Opioid Use Disorder. Oftentimes, residents are having to travel daily to receive said medication. Empirically, we know that the longer a person has to travel to receive their treatment, the greater likelihood of disengagement.

According to Connecticut's Department of Public Health, 1,202 people died by an unintentional drug overdose in 2019. The number of deaths in Middletown since 2015 have totaled 88, not including deaths in 2020. The majority of these deaths were White, non-Hispanic, and averaging 45 years of age. Predictions look to be about the same for 2020 despite numerous efforts to reduce this number. In CT, residents are more likely to die from an unintentional drug overdose than a motor vehicle accident. The majority of these deaths are linked to prescription opioid painkillers and illicit opioids.

Our intention is to provide the opportunity for Middletown residents to obtain methadone treatment services in their hometown, that to date, they have had to travel elsewhere to receive. By doing such, we reduce barriers and increase the likelihood of being successful in treatment and decreasing overdose deaths. The stigma is also eliminated for these patients who are no longer faced with having to leave their community to receive disease based care that is openly provided in other communities throughout CT. Methadone is an evidence-based treatment approach that is heavily regulated by the federal government's Drug Enforcement Agency, and SAMHSA (substance abuse and mental health services administration) as well as state governments, Department of Public Health and DMHAS (Department of Mental Health and Addiction Services). Methadone is proven to be effective at reducing illicit opioid use and drug overdose deaths as well at reducing infectious diseases associated with opioid use, and crime.

Methadone is a federally-regulated medication that, by law, is dispensed only by licensed treatment settings when used to treat opioid addiction. It has been studied exhaustively and many of its benefits are undisputed in the research literature. The [Centers for Disease Prevention and Control reports that the benefits of methadone maintenance therapy include:](#)

- reduced or stopped use of injection drugs;
- reduced risk of overdose and of acquiring or transmitting diseases such as HIV, hepatitis B or C, bacterial infections, endocarditis, soft tissue infections, thrombophlebitis, tuberculosis, and STDs;
- reduced mortality – the median death rate of opiate-dependent individuals in MMT is 30 percent of the rate of those not in MMT;
- possible reduction in sexual risk behaviors, although evidence on this point is conflicting;
- reduced criminal activity;
- improved family stability and employment potential; and
- improved pregnancy outcomes.

Community Collaboration

Root Center Is committed to continue to be a partner in the Middletown Community. We currently operate a behavioral health clinic at 520 Saybrook Rd. and have developed several community collaborations with area providers. We joined the Middlesex Chamber of Commerce and pre-Covid-19, had registered and sponsored several events including the Mayor's Ball and Pride 2020. We look forward to more opportunities to work with the

Chamber. Most recently, we supported St. Vincent de Paul's Amazing Grace Food Pantry with an \$8,000 donation to help fill the shelves with meals for families.

Our organization has vital relationships with Middlesex Health, DCF, DMHAS, and CSSD, to provide services to Middletown residents on a daily basis. Middlesex Health has been welcoming, encouraging, and a strong advocate for methadone services in Middletown, as they have recognized this as a long standing need which is lacking in this community. Middlesex Health previously provided a letter of support to allow methadone treatment in the city when this was originally considered for removal from previous PL&Z language.

We look forward to building new relationships and deepening our collaborative efforts with current local businesses in Middletown. We have been actively contributing neighbors in the towns we currently have programs in. Just in this past year, in addition to the Amazing Grace food pantry, we supported Food Share with a \$50,000 donation to help feed CT residents. We have funded a housing program at Immacare, which will provide basic needs, counseling, and housing for 6-20 people annually. Additionally, we donated \$20,000 and created a partnership with the Urban League of Greater Hartford and continue to value that relationship. Root Center is committed to being a good neighbor and active contributor to the needs of this town.

It is important to us that we work to reduce stigma and discrimination associated with individuals needing help to improve their lives. We understand the importance of creating a safe space that not only feels welcoming, but looks like a place anyone would be proud to enter. Root Center has high standards in terms of aesthetics, material, and ambiance not only for those who may drive by, but also for those that may decide to enter. We are committed to being an organization that is trusted and chosen by residents of Middletown to assist their most loved assets, people.

Traffic Impact Study
**Substance Abuse/Mental Health Counseling,
Diagnosis, and Treatment Facility**
392 Washington Street
Middletown, Connecticut

August 2020

City of Middletown Zone Change, Special Exception,
and Site Plan Permit Applications



146 Hartford Road
Manchester, CT 06040

Prepared for:
Mr. Joseph Sirko
Root Center for Advanced Therapy
335 Broad Street
Manchester, CT 06040

Table of Contents

Traffic Impact Study
Substance Abuse/Mental Health Counseling, Diagnosis, and
Treatment Facility
Middletown, Connecticut

Summary Sheet.....	iii
1 Introduction.....	1
2 Existing Condition.....	1
2.1 Site of Development.....	1
2.2 Adjacent Roadway Network.....	1
2.3 Study Area Intersection.....	1
2.4 Traffic Volumes, Speeds and Counts.....	2
3 Background Traffic Conditions.....	2
3.1 Growth Rate.....	2
3.2 Other Developments.....	2
3.3 Planned Roadway Improvement Projects.....	2
4 Proposed Conditions.....	3
4.1 Development.....	3
4.2 Site Access and Circulation.....	3
4.3 Trip Generation.....	3
4.4 Trip Distribution.....	3
4.5 Combined Volumes.....	4
5 Analyses.....	4
5.1 Crash Analysis.....	4
5.2 Sight Distance Analysis.....	4
5.3 Intersection Capacity Analysis.....	5
5.4 Queue Analysis.....	6
6 Conclusions & Recommendations.....	6

Table of Contents

(Continued)

Traffic Impact Study Substance Abuse/Mental Health Counseling, Diagnosis, and Treatment Facility Middletown, Connecticut

Appendices

End of Report

Appendix A - Tables

1. Peak Hour Site Generated Traffic Volumes
2. Intersection Crash Data Summary
3. Unsignalized Intersection Level of Service Summary
4. Weekday Morning Peak Hour Queue Length Summary
5. Weekday Afternoon Peak Hour Queue Length Summary

Appendix B - Figures

1. Site Location Map
2. 2021 Background Traffic Conditions
3. Site Generated Traffic Arrival/Departure Distribution
4. Site Generated Traffic Volumes
5. 2021 Combined Traffic Conditions

Appendix C

Intersection Capacity Analysis Worksheets – Weekday Morning Peak Hour

Appendix D

Intersection Capacity Analysis Worksheets – Weekday Afternoon Peak Hour

Appendix E

Automatic Traffic Recorder (ATR) Data

Appendix F

Crash Data Table

Summary Sheet

As an aid to reviewers, this Summary Sheet has been included to outline the various study parameters utilized in this report. Although a full explanation of the study methodologies is included in the text of the report, this summary can serve as a useful reference for reviewers.

Applicant:

Root Center for Advanced Therapy

Site Acreage:

1.1 acres

Development Size/Type:

7,200 SF Substance Abuse/Mental Health Counseling, Diagnosis, and Treatment Facility

Parking:

45 Spaces

Applications:

City of Middletown Zone Change, Special Exception, and Site Plan Permit Applications

Build Year:

2021

Background Traffic Growth Factor:

0.75%

Traffic Counts:

CTDOT – January 2016 (Automatic Traffic Recorder Counts)

Peak Hours Analyzed:

Weekday Morning Peak Hour – 8:00 AM – 9:00 AM

Weekday Afternoon Peak Hour – 4:00 PM – 5:00 PM

Expected Net Change In Trip Generation:

Weekday Morning Peak Hour – +10 trips (+6 entering, +4 exiting)

Weekday Afternoon Peak Hour – -4 trips (-2 entering, -2 exiting)

Capacity Analysis:

Technique – Highway Capacity Manual, 6th Edition

Execution – Synchro Professional Software, Version 10.0

1 Introduction

Root Center for Advanced Therapy is proposing to convert an occupied 7,200 square foot retail development into a Substance Abuse/Mental Health Counseling, Diagnosis, and Treatment Facility (clinic). The existing building, located at 392 Washington Street (CT Route 66), Middletown, CT, will be renovated and reused. Site access will be provided via the existing full access driveway on Washington Street. The development site is shown on the site location map, *Figure No. 1 of Appendix B*. Site construction is expected to be completed in 2021.

Fuss & O'Neill has been retained to study the impact of the proposed development on traffic conditions on the adjacent roadway network. This report has been prepared to document the findings of the study in support of the development's City land use applications as well as an encroachment permit application to the Connecticut Department of Transportation (CTDOT) District 1 Office.

2 Existing Condition

2.1 Site of Development

The proposed clinic will be located at 392 Washington Street where the Fine Tunes Car Stereo & Complete Auto Repair facility currently exists. The site is bounded by Washington Street to the south, Main Switch Beauty Salon and Midtown Tire to the east, railroad tracks to the north, and Nardelli's Grinder Shoppe to the west.

2.2 Adjacent Roadway Network

The adjacent study area includes Route 66 (Washington Street) which runs east/west across the City of Middletown and provides access to Route 9 less than one mile east of the site. Washington Street carries four travel lanes, two in each direction within the study area, and is classified by the CTDOT as an urban principal arterial road. The land use surrounding Washington Street is primarily commercial, retail, and residential.

2.3 Study Area Intersection

The following intersection was reviewed:

- Route 66 (Washington Street) at Site Driveway

The 3-way unsignalized intersection of Route 66 at the site driveway provides an approach from the east and west on Route 66 and an approach from the north via the site driveway. The Route 66 approach from the east provides one through travel lane and a combined thorough/right turn lane. The Route 66 approach from the west provides one through travel lane and a combined through/left turn lane. The site drive approach from the north provides one combined left/right turn lane onto Route 66.

2.4 Traffic Volumes, Speeds and Counts

The greatest potential for traffic impact on the roadway network by the proposed development will occur during the weekday morning and afternoon peak hours, the period when commuter, clinic, and transit related trips are at their highest levels. In order to determine the traffic impact of the proposed development on adjacent street traffic, the latest available CTDOT automatic traffic recorder counts (ATR's) conducted on Route 66 west of Route 3 were obtained to determine peak hour and 24 hour traffic volumes in the site vicinity. Copies of the count data are provided in Appendix E.

3 Background Traffic Conditions

3.1 Growth Rate

Upon consultation with the Connecticut Department of Transportation (CTDOT) Planning Bureau, the 2016 existing traffic volumes were projected to the 2021 design year using an annual growth rate of 0.75% to account for normal traffic growth in the study area. These design year background traffic volumes (without the proposed clinic traffic) for the weekday morning and afternoon peak hours are shown in *Figure No. 2 of Appendix B*.

3.2 Other Developments

Fuss & O'Neill contacted the CTDOT Bureau of Policy and Planning and the City of Middletown Planning and Zoning offices to identify any other pending or approved developments having site related traffic in the study area. CTDOT advised that the normal traffic growth rates applied in the Background volumes are sufficient to factor in the volumes from other proposed developments outside the study area. Therefore, no other development traffic was added to the Background volumes.

3.3 Planned Roadway Improvement Projects

Fuss & O'Neill contacted the Connecticut Department of Transportation: District 1 office and the City of Middletown Department of Public Works / Engineering office to determine if any roadway improvements are planned in the area of the proposed development. The intersection of Route 66 and Route 3, east of the site driveway, is scheduled for a traffic signal replacement with a final design date of February 2021. This project will improve the safety and efficiency of traffic operations in the study area. No other roadway improvement projects were identified in the study area.

4 Proposed Conditions

4.1 Development

The Root Center for Advanced Therapy has proposed to renovate an existing 7,200 square foot car stereo and auto repair shop and convert it into a clinic. The development will be located at 392 Washington Street in Middletown, CT as shown on the site location map in *Figure No. 1 of Appendix B*. A total of 45 parking spaces will be provided throughout the site.

4.2 Site Access and Circulation

Site access for clients is proposed to be provided via the existing full access driveway on Washington Street which is located approximately 300 feet west of the intersection of Jackson Street and 800 feet west of the signalized intersection with Route 3 (Newfield Street).

Route 66 also provides a sidewalk that spans along the north side of the roadway, including the site frontage, where pedestrian access is provided. Crosswalks and an exclusive pedestrian signal phase exist at the nearby signalized intersection of Route 66 at Route 3 (Newfield Street) to facilitate safe crossing of Route 66.

4.3 Trip Generation

Trip generation for the proposed clinic was calculated using *ITE Trip Generation Manual, 10th Edition 2017*. The site generated traffic was calculated using the ITE land use code 630 “Clinic” which most closely resembles the expected trip generation characteristics of the proposed site use. The ITE manual indicates that the proposed 7,200 square foot clinic is expected to generate 42 morning peak hour trips (24 entering, 18 exiting) and 34 afternoon peak hour trips (16 entering, 18 exiting). This was compared to the existing development’s trip generation. The existing site generated traffic was calculated using the ITE land use code 942 “Automobile Care Center”. The ITE manual indicates that the existing 7,200 square foot car stereo and auto repair shop generates 32 morning peak hour trips (18 entering, 14 exiting) and 38 afternoon peak hour trips (18 entering, 20 exiting). Thus, the proposed development will result in a net increase of 10 site generated trips during the morning peak hour of traffic and a net decrease of four trips during the afternoon peak hour. A summary of the peak hour trip generation information for the proposed development is provided in *Table 1 of Appendix A*.

4.4 Trip Distribution

The distribution of traffic entering and exiting the proposed site was applied to the road network based on the existing regional traffic distributions and the layout of the adjacent roadway network. The arrival/departure distributions of traffic and the site generated traffic volumes from the proposed development are illustrated in *Figure No. 3 of Appendix B*.

4.5 Combined Volumes

The site generated traffic was distributed to the roadway system based on the arrival/departure distributions with the results shown in *Figure No. 4 of Appendix B*. These volumes were then added to the 2021 background condition traffic volumes (with the existing car stereo and auto repair shop volumes subtracted out) to yield the 2021 combined traffic volumes shown in *Figure No. 5 of Appendix B*.

5 Analyses

5.1 Crash Analysis

Crash data was gathered from the University of Connecticut Crash Data Repository along Route 66 (Washington Street) within 200 feet of the site driveway.

The records were gathered for the most recent three years of available data, 2017 through 2019. A summary of the crash data is provided in *Table 2 of Appendix A*. A detailed tabulation of the crash data has been provided in *Appendix F*.

Route 66 (Washington Street) in the vicinity of the site driveway experienced an average of less than four crashes per year. During the three year span the study area experienced four front to rear end crashes, five sideswipes in the same direction, one angled crash, and one crash listed as other. Of these crashes in the vicinity of the site driveway, the majority involved property damage only and one involved a possible injury. It is important to note that there were no angled crashes reported involving a vehicle turning into or out of the site driveway.

The crashes that were recorded are consistent with what is typically experienced along higher volume, multi-lane principal arterial roadways with commercial developments. No abnormal crash patterns or frequencies were identified within the study area.

5.2 Sight Distance Analysis

Intersection sight distances were measured at the existing site driveway location in accordance with criteria set forth in the 2003 CTDOT *Highway Design Manual*. Intersection sight distance is measured from a point 15 feet back from the edge of the traveled way at a height of 3.5 feet, the standard height of a driver's eye.

For vehicles turning right on to a multi-lane roadway with a design speed of 40 miles per hour, 445 feet of intersection sight distance is required for passenger cars. For vehicles turning left onto a four-lane roadway with a design speed of 40 miles per hour, 470 feet of intersection sight distance is required for passenger cars.

Intersection sight distance of 500 feet is provided looking east (left) and greater than 1,000 feet is provided looking west (left) from the existing site driveway, providing safe egress for passenger cars turning onto Route 66.

5.3 Intersection Capacity Analysis

Capacity analysis for the unsignalized intersection of Route 66 at the site driveway was conducted using Synchro Professional Software, version 10.0.

In discussing unsignalized intersection capacity analyses results, level of service (LOS) is used to describe the operating condition of the intersection.

LOS is a measure of the delay experienced by stopped vehicles at an intersection. LOS is rated on a scale from A to F, with A describing a condition of very low delay (less than 10 seconds per vehicle), and F describing a condition where delays will exceed 50 seconds per vehicle for unsignalized intersections. Delay is described as a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Therefore, intersections with longer delay times are less acceptable to most drivers.

These definition for LOS, as well as the methodology for conducting unsignalized intersection capacity analyses, are taken from the “Highway Capacity Manual, 6th Edition” published by the Transportation Research Board.

Using the above referenced methodologies, the weekday morning and afternoon peak hour background and combined capacity analysis was conducted for the unsignalized intersection of Route 66 at the existing site driveway.

Table No. 3 of Appendix A presents a summary of the levels of service at the unsignalized intersection, for both background and combined conditions traffic volume. Copies of the analysis worksheets can be found in *Appendix C & D* for the weekday morning and afternoon peak hours respectively.

The determination of the traffic impact from the proposed development is made through a comparison of the Background Condition LOS (with the current car stereo and auto repair shop development) versus the Combined Condition LOS (with the proposed clinic development).

For the eastbound Route 66 approach, vehicles experience an efficient LOS A operation when turning left into the site. Vehicles travelling westbound on Route 66 and turning right into the site are free flow and also operate at LOS A as they do not experience any delay. The proposed development will result in no reduction in these LOS in the combined condition.

The site driveway approach to Route 66 operates with delay at LOS F under both Background and Combined conditions for both morning and afternoon peak hours. This condition occurs at the majority of the commercial driveway approaches along this corridor. It should be noted that this delay is confined to the site driveway and any queued vehicles waiting to exit are stored on the site without impacting traffic operations on Route 66. The nearby traffic signal at Route 3 does provide regular gaps in traffic as the signal changes phase, which enables vehicles to turn into and out of the site. It is also important to note that this delay exiting the site is significantly less during off peak hours.

Overall, the proposed development will result in a negligible increase in traffic at the intersection during the morning peak hour, when compared to the existing use. This de minimis increase in traffic will have no noticeable impact to existing vehicle operations at the intersection.

5.4 Queue Analysis

Background and Combined Condition 95th percentile (design) queue lengths were reviewed at the study intersection. The 95th percentile (design) vehicle queue lengths represent the maximum queue lengths that can be expected at each of the critical approach lanes of the study intersection. The queue lengths are provided in the Synchro capacity analysis worksheets, which are located in *Appendix C and D*. *Tables 4 & 5 of Appendix A* provide a summary of the queue lengths for the critical lanes at each intersection.

The analysis revealed minimal peak hour queue length increases of one vehicle length or less on each of the site driveway intersection approaches as a result of the proposed development traffic.

6 Conclusions & Recommendations

The purpose of preparing a Traffic Impact Study is to identify the impact of the proposed development's site generated traffic. The study efforts have indicated that the proposed clinic will generate a net increase of only 10 trips (6 entering and 4 exiting) in the weekday morning peak hour and a net decrease of 4 trips (2 entering and 2 exiting) in the weekday afternoon peak hour in comparison to the existing car stereo and auto repair shop use.

Site access is proposed to be provided via the existing site driveway on Route 66 that currently services the car stereo and auto repair shop on site. This intersection is unsignalized with the eastbound and westbound movements along Route 66 being free and the southbound site driveway movement being stop controlled.

Intersection sight distances were measured at the existing site driveway in accordance with criteria set forth in the CT DOT Highway Design Manual. The analysis revealed that adequate intersection sight distance for the design speed is provided on Route 66 from the site driveway looking in both directions, offering safe driveway egress.

A review of crash data revealed that the crashes that were recorded in the vicinity of the site driveway intersection along Route 66 are consistent with what is typically experienced along commercial principal arterial roadways. No abnormal crash patterns or frequencies were identified at the site driveway intersection and there were no crashes reported involving a vehicle turning left into or left out of the site driveway.

Capacity analysis revealed that vehicle turns from Route 66 (Washington Street) into the existing site driveway will operate efficiently at LOS A and experience no change in LOS with the addition of the trips generated by the proposed development in the weekday morning and afternoon peak hours.

The site driveway approach to Route 66 will continue to operate with delay under both Background and Combined conditions for both morning and afternoon peak hours. This condition occurs at the majority

of the commercial driveway approaches along this corridor. It should be noted that this delay is confined to the site driveway and any queued vehicles waiting to exit are stored on the site without impacting traffic operations on Route 66. The nearby traffic signal at Route 3 does provide regular gaps in traffic as the signal changes phase, which enables vehicles to turn into and out of the site. It is also important to note that this delay exiting the site is significantly less during off peak hours.

Overall, proposed the development will result in a minimal increase in traffic at the site driveway intersection during the morning peak hour and a slight decrease in traffic in the afternoon peak hour, in comparison to the traffic being generated by the existing development. This de minimis change in traffic will have no noticeable impact to vehicle operations at the intersection.

The addition of the trips generated by the proposed development will also result in no significant change to existing queues on Route 66 for left turning vehicles into the site. These queues will continue to average less than one vehicle length.

Based on the results of the foregoing analysis, it is the professional opinion of Fuss & O'Neill, Inc. that the proposed development will not have a significant impact to traffic operations within the study area. The site development traffic can be safely and efficiently accommodated on the adjacent road network.

Appendix A

Tables



Table 1

**Peak Hour Site Generated Traffic Volumes
Substance Abuse/Mental Health Counseling, Diagnosis, and Treatment Facility
Middletown, Connecticut**

Land Use	Trip Generation		
	Trips Entering	Trips Exiting	Total Trips
7,200 SF Proposed Medical Clinic			
Morning Peak Hour	24	18	42
Afternoon Peak Hour	16	18	34
7,200 SF Existing Auto Repair			
Morning Peak Hour	18	14	32
Afternoon Peak Hour	18	20	38
Net New Trips			
Morning Peak Hour	+6	+4	+10
Afternoon Peak Hour	-2	-2	-4

Note: Trip generation based on Rate per Land Use Codes 630 "Clinic" and 942 "Automobile Care Center" as published in *Trip Generation*, 10th Editions.

Table 2

**Intersection Crash Data Summary
Substance Abuse/Mental Health Counseling, Diagnosis, and Treatment Facility
Middletown, Connecticut**

Road Segment	Crashes Per Year			
	2017	2018	2019	Average/Year
Route 66 in the vicinity of the site frontage	3*	1	7	<4

*Values indicated are number of crashes within 200 feet of the site driveway intersection during time period shown.
Data provided by the Connecticut Department of Transportation via the UConn repository.

Table 3

**Unsignalized Intersection Level of Service Summary
Substance Abuse/Mental Health Counseling, Diagnosis, and Treatment Facility
Middletown, Connecticut**

Unsignalized Intersections	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour	
	Background	Combined	Background	Combined
	Route 66 at Site Driveway			
<i>EB Left Turn in</i>	LOS A	LOS A	LOS A	LOS A
<i>WB Right Turn in</i>	LOS A	LOS A	LOS A	LOS A
<i>SB Site Driveway Approach</i>	LOS F	LOS F	LOS F	LOS F

Table 4

**Weekday Morning Peak Hour Queue Length Summary
 Substance Abuse/Mental Health Counseling, Diagnosis, and Treatment Facility
 Middletown, Connecticut**

Intersection	Approach Lane	2021 Background Queue	2021 Combined Queue	Storage Length
Route 66 at Site Driveway	EB Left Turn	0 Feet	5 Feet	>50 Feet
	WB Right Turn	0 Feet	0 Feet	>50 Feet
	SB Left/Right Turn	20 Feet	25 Feet	50 Feet

NOTE: Values indicated represent 95th percentile (design) vehicle queue lengths. Values are rounded to the nearest 5 feet.

Table 5

**Weekday Afternoon Peak Hour Queue Length Summary
Substance Abuse/Mental Health Counseling, Diagnosis, and Treatment Facility
Middletown, Connecticut**

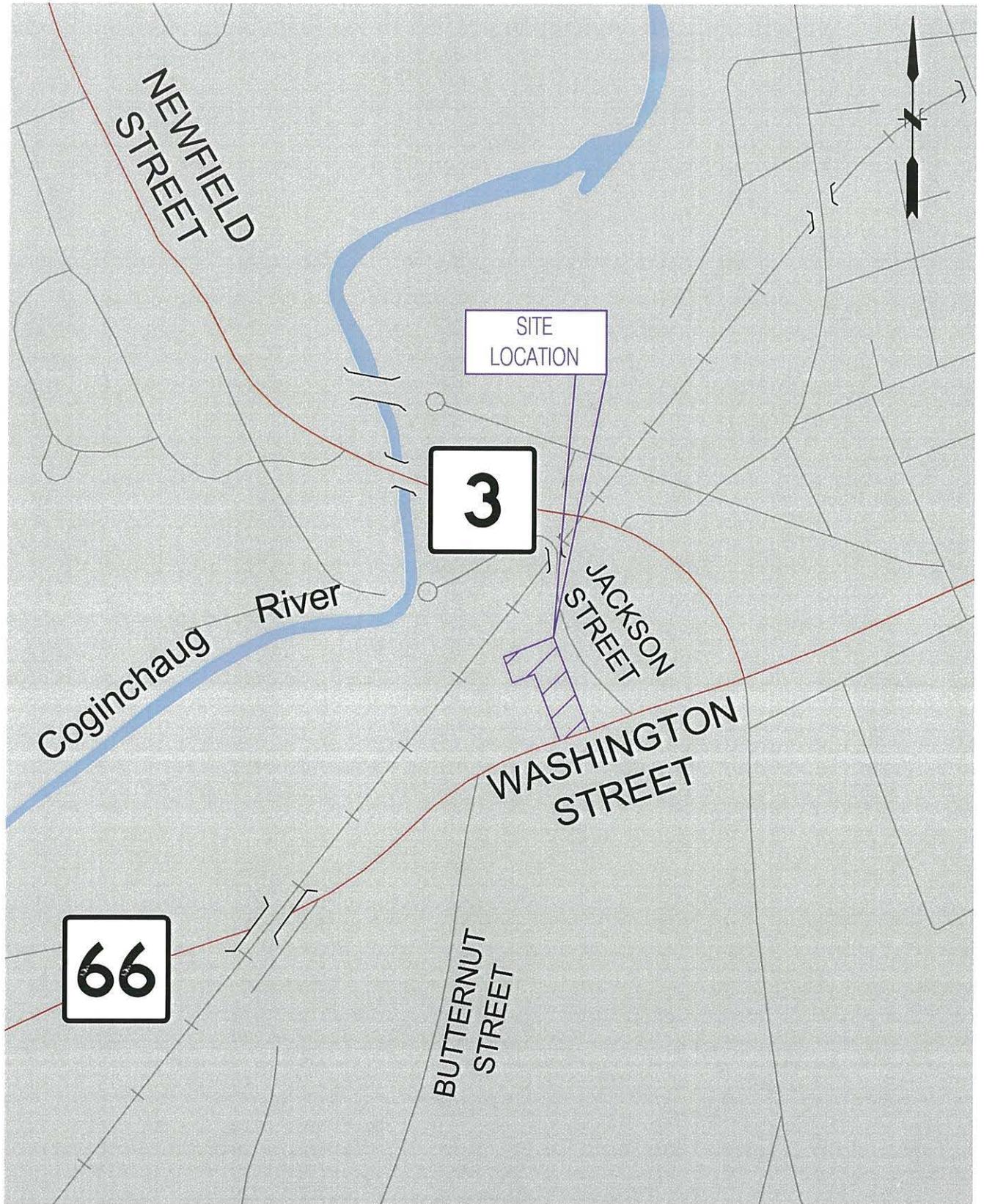
Intersection	Approach Lane	2021 Background Queue	2021 Combined Queue	Storage Length
Route 66 at Site Driveway	EB Left Turn	5 Feet	5 Feet	>50 Feet
	WB Right Turn	0 Feet	0 Feet	>50 Feet
	SB Left/Right Turn	40 Feet	35 Feet	50 Feet

NOTE: Values indicated represent 95th percentile (design) vehicle queue lengths. Values are rounded to the nearest 5 feet.

Appendix B

Figures





FUSS & O'NEILL

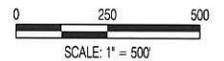
146 HARTFORD ROAD
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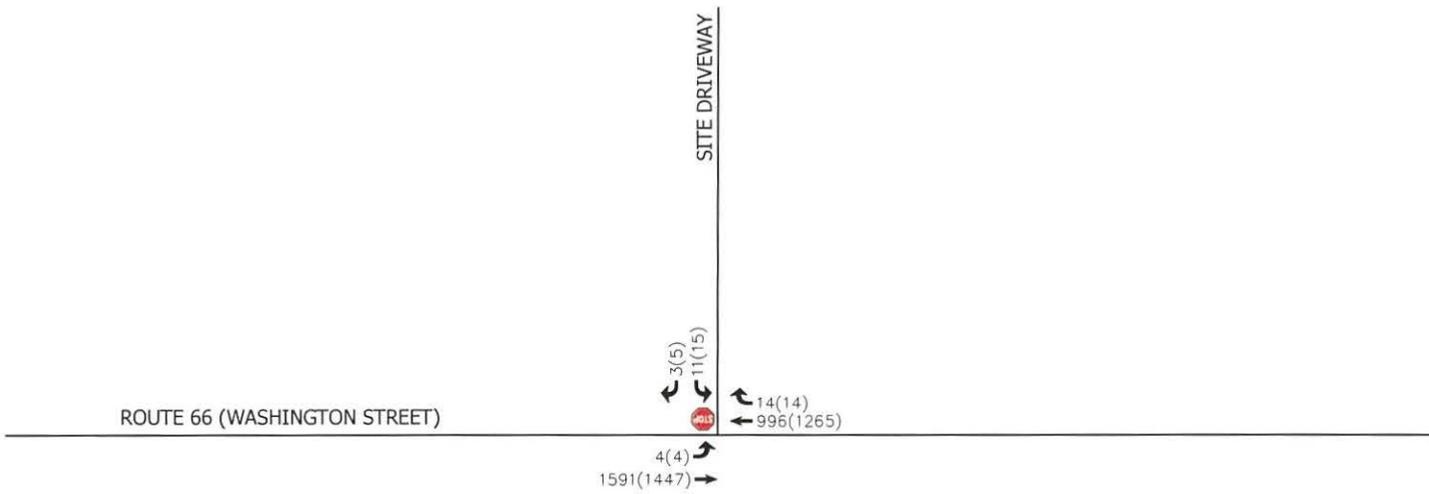
FIGURE 1: SITE LOCATION PLAN

PROJ. NO: 20200586.A10

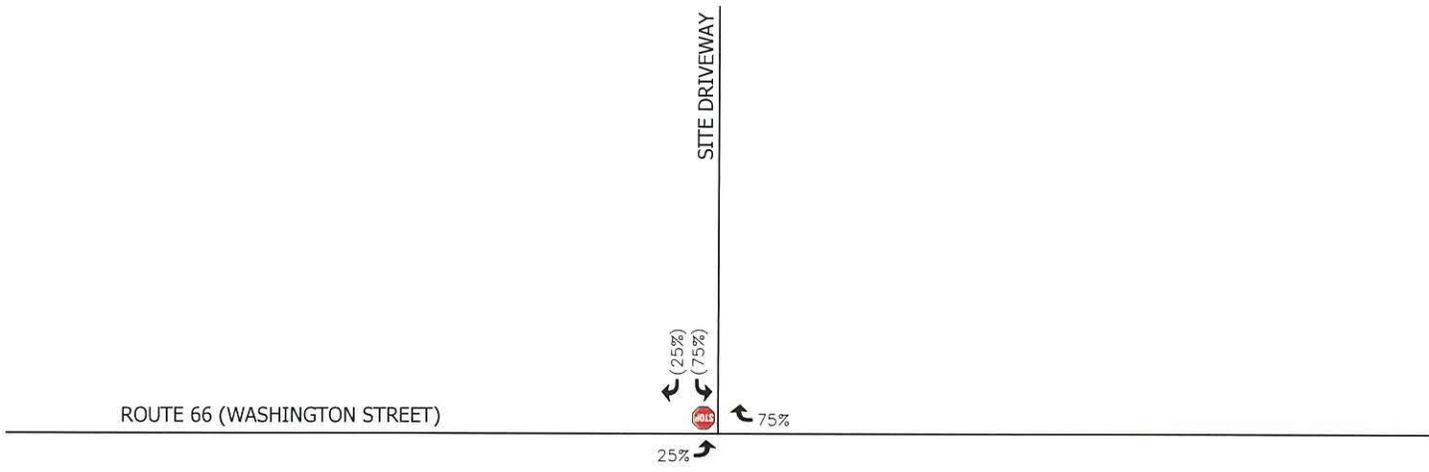
392 WASHINGTON STREET (ROUTE 66) - MIDDLETOWN, CT

AUGUST 2020





XX(XX) = WEEKDAY MORNING PEAK HOUR (WEEKDAY AFTERNOON PEAK HOUR)



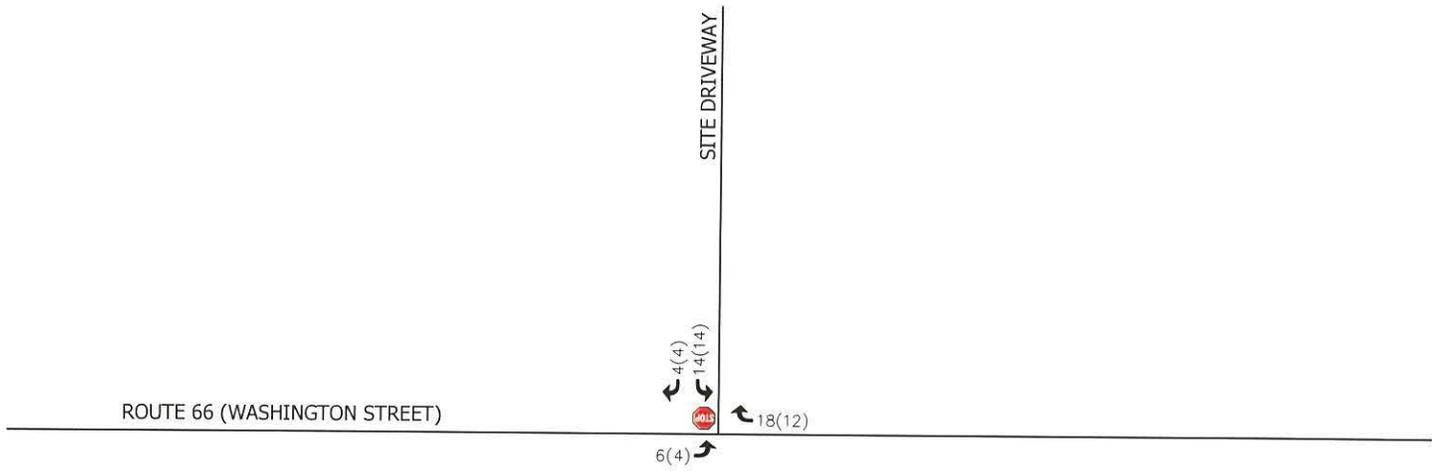
XX(XX) = ENTERING TRAFFIC (EXITING TRAFFIC)

File Path: J:\DWG\2020\0586A10\CivilTraffic\Figures\20200586A10_TVFD1.dwg Layout: FIG. 3 - SITE DISTR Plotted: Tue, August 04, 2020 - 9:13 AM User: AJEET SANDHU



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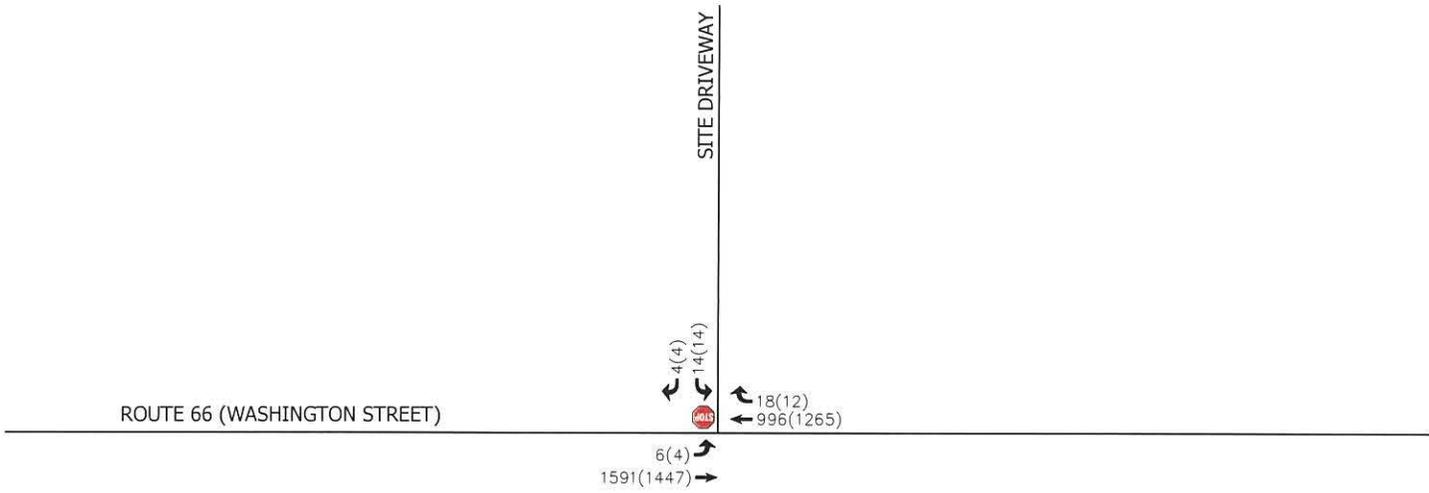
FIGURE 3: ARRIVAL/DEPARTURE DISTRIBUTION
PROJ. NO: 20200586.A10 ROUTE 66 (WASHINGTON ST) AT SITE DRIVEWAY AUGUST 2020



TOTAL SITE GENERATED TRAFFIC VOLUMES			
CODE 630 - CLINIC 7,200 SQUARE FEET			
	ENTER	EXIT	TOTAL
MORNING	24	18	42
AFTERNOON	16	18	34

XX(XX) = WEEKDAY MORNING PEAK HOUR (WEEKDAY AFTERNOON PEAK HOUR)

File Path: J:\DWG\20200586A10\CivilTraffic\Figures\20200586A10_TV\F01.dwg Layout: FIG. 4 - SITE GENER Plotted: Tue, August 04, 2020 - 9:13 AM User: AJEET SANDHU



XX(XX) = WEEKDAY MORNING PEAK HOUR (WEEKDAY AFTERNOON PEAK HOUR)

File Path: J:\DWG\2020\0586A10\CivilTraffic\Figures\20200586A10_TVFD1.dwg Layout: FIG. 5 - COMBINED Plotted: Tue, August 04, 2020 - 9:13 AM User: AJEET SANDHU



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FIGURE 5: COMBINED 2021 TRAFFIC VOLUMES

PROJ. NO: 20200586.A10

ROUTE 66 (WASHINGTON ST) AT SITE DRIVEWAY

AUGUST 2020

Appendix C

Intersection Capacity Analysis Worksheets
2021 Background Traffic Volumes
Weekday Morning Peak Hour

Lanes, Volumes, Timings
 1: Route 66 (Washington St) & Site Driveway

Background
 AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↑	↔↑		↔↓	
Traffic Volume (vph)	4	1591	996	14	11	3
Future Volume (vph)	4	1591	996	14	11	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.973	
Flt Protected					0.962	
Satd. Flow (prot)	0	3539	3532	0	1744	0
Flt Permitted					0.962	
Satd. Flow (perm)	0	3539	3532	0	1744	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		191	204		118	
Travel Time (s)		4.3	4.6		2.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1729	1083	15	12	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1733	1098	0	15	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.8%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Route 66 (Washington St) & Site Driveway

Background
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↕↔		↕↔	
Traffic Volume (veh/h)	4	1591	996	14	11	3
Future Volume (Veh/h)	4	1591	996	14	11	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1729	1083	15	12	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1098				1963	549
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1098				1963	549
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				78	99
cM capacity (veh/h)	631				55	480
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	580	1153	722	376	15	
Volume Left	4	0	0	0	12	
Volume Right	0	0	0	15	3	
cSH	631	1700	1700	1700	67	
Volume to Capacity	0.01	0.68	0.42	0.22	0.22	
Queue Length 95th (ft)	0	0	0	0	19	
Control Delay (s)	0.2	0.0	0.0	0.0	74.0	
Lane LOS	A				F	
Approach Delay (s)	0.1		0.0		74.0	
Approach LOS					F	
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			56.8%		ICU Level of Service	B
Analysis Period (min)			15			

Appendix C

Intersection Capacity Analysis Worksheets
2021 Combined Traffic Volumes
Weekday Morning Peak Hour

Lanes, Volumes, Timings
 1: Route 66 (Washington St) & Site Driveway

Combined
 AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↑	↑↔		↔↓	
Traffic Volume (vph)	6	1591	996	18	14	4
Future Volume (vph)	6	1591	996	18	14	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.997		0.972	
Flt Protected					0.962	
Satd. Flow (prot)	0	3539	3529	0	1742	0
Flt Permitted					0.962	
Satd. Flow (perm)	0	3539	3529	0	1742	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		191	204		118	
Travel Time (s)		4.3	4.6		2.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	1729	1083	20	15	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1736	1103	0	19	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.2%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
1: Route 66 (Washington St) & Site Driveway

Combined
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕	
Traffic Volume (veh/h)	6	1591	996	18	14	4
Future Volume (Veh/h)	6	1591	996	18	14	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	1729	1083	20	15	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1103			1972	552	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1103			1972	552	
tC, single (s)	4.1			6.8	6.9	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	99			72	99	
cM capacity (veh/h)	629			54	478	
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	583	1153	722	381	19	
Volume Left	7	0	0	0	15	
Volume Right	0	0	0	20	4	
cSH	629	1700	1700	1700	66	
Volume to Capacity	0.01	0.68	0.42	0.22	0.29	
Queue Length 95th (ft)	1	0	0	0	26	
Control Delay (s)	0.3	0.0	0.0	0.0	79.9	
Lane LOS	A			F		
Approach Delay (s)	0.1	0.0		79.9		
Approach LOS					F	
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			58.2%	ICU Level of Service	B	
Analysis Period (min)			15			

Appendix D

Intersection Capacity Analysis Worksheets
2021 Background Traffic Volumes
Weekday Afternoon Peak Hour

Lanes, Volumes, Timings
 1: Route 66 (Washington St) & Site Driveway

Background
 PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↑	↔↑		↔↓	
Traffic Volume (vph)	4	1447	1265	14	15	5
Future Volume (vph)	4	1447	1265	14	15	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Fr _t			0.998		0.968	
Fl _t Protected					0.963	
Satd. Flow (prot)	0	3539	3532	0	1736	0
Fl _t Permitted					0.963	
Satd. Flow (perm)	0	3539	3532	0	1736	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		191	204		118	
Travel Time (s)		4.3	4.6		2.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1573	1375	15	16	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1577	1390	0	21	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.8%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Route 66 (Washington St) & Site Driveway

Background
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕↕	
Traffic Volume (veh/h)	4	1447	1265	14	15	5
Future Volume (Veh/h)	4	1447	1265	14	15	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1573	1375	15	16	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1390				2177	695
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1390				2177	695
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				59	99
cM capacity (veh/h)	488				39	385
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	528	1049	917	473	21	
Volume Left	4	0	0	0	16	
Volume Right	0	0	0	15	5	
cSH	488	1700	1700	1700	50	
Volume to Capacity	0.01	0.62	0.54	0.28	0.42	
Queue Length 95th (ft)	1	0	0	0	38	
Control Delay (s)	0.2	0.0	0.0	0.0	122.2	
Lane LOS	A				F	
Approach Delay (s)	0.1		0.0		122.2	
Approach LOS					F	
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			52.8%		ICU Level of Service	A
Analysis Period (min)			15			

Appendix D

Intersection Capacity Analysis Worksheets
2021 Combined Traffic Volumes
Weekday Afternoon Peak Hour

Lanes, Volumes, Timings
 1: Route 66 (Washington St) & Site Driveway

Combined
 PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↑	↑↔		↔↓	
Traffic Volume (vph)	4	1447	1265	12	14	4
Future Volume (vph)	4	1447	1265	12	14	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Flt			0.999		0.972	
Flt Protected					0.962	
Satd. Flow (prot)	0	3539	3536	0	1742	0
Flt Permitted					0.962	
Satd. Flow (perm)	0	3539	3536	0	1742	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		191	204		118	
Travel Time (s)		4.3	4.6		2.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1573	1375	13	15	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1577	1388	0	19	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 52.8%

ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 1: Route 66 (Washington St) & Site Driveway

Combined
 PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕	
Traffic Volume (veh/h)	4	1447	1265	12	14	4
Future Volume (Veh/h)	4	1447	1265	12	14	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1573	1375	13	15	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1388				2176	694
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1388				2176	694
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				62	99
cM capacity (veh/h)	489				39	385
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	528	1049	917	471	19	
Volume Left	4	0	0	0	15	
Volume Right	0	0	0	13	4	
cSH	489	1700	1700	1700	48	
Volume to Capacity	0.01	0.62	0.54	0.28	0.39	
Queue Length 95th (ft)	1	0	0	0	35	
Control Delay (s)	0.2	0.0	0.0	0.0	121.2	
Lane LOS	A				F	
Approach Delay (s)	0.1		0.0		121.2	
Approach LOS					F	
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			52.8%		ICU Level of Service	A
Analysis Period (min)			15			

Appendix E

Automatic Traffic Recorder (ATR) Count Data



MIDT-121 - Combined - e/w

Route 66 - 6.1 mi West of Route 3

High ADT

Town.....Middletown
 Station.....121
 Location..... 41.558824,-72.661701
 2015-Principal Arterial - Other 3...2015-Urban
 Start Report.....20-Jan-2016 03:00AM
 End Report.....21-Jan-2016 03:00AM
 Axle Correction Factor.....None
Annualized ADT.....35100
 24-Hour Count.....34125 * G4(1.03) = 35148.8
 UnRounded AADT.....35148.8 / 1 = 35148.8
 OK 2016 Wed 20-Jan -this report-.....35100
 REV 2013 Tue 06-Aug29100
 REV 2010 Mon 19-Apr28900
 OK 2007 Mon 30-Apr28200

	20-Jan Wed	21-Jan Thu
12:00am		282
01:00am		158
02:00am		119
03:00am	121	
04:00am	269	
05:00am	654	
06:00am	1432	
07:00am	2189	
08:00am	2396	
09:00am	1952	
10:00am	1865	
11:00am	2000	
12:00pm	2270	
01:00pm	2213	
02:00pm	2301	
03:00pm	2374	
04:00pm	2601	
05:00pm	2489	
06:00pm	1970	
07:00pm	1402	
08:00pm	1158	
09:00pm	866	
10:00pm	608	
11:00pm	436	
Totals	33566	559

MIDT-121 - East

Route 66 - 6.1 mi West of Route 3

High ADT

Town.....Middletown
 Station.....121
 Location..... 41.558824,-72.661701
 2015-Principal Arterial - Other 3...2015-Urban
 Start Report.....20-Jan-2016 03:00AM
 End Report.....21-Jan-2016 03:00AM
 Axle Correction Factor.....None
Annualized ADT.....19900
 24-Hour Count.....19292 * G4(1.03) = 19870.8
 UnRounded AADT.....19870.8 / 1 = 19870.8
 OK 2016 Wed 20-Jan -this report-.....35100
 REV 2013 Tue 06-Aug29100
 REV 2010 Mon 19-Apr28900
 OK 2007 Mon 30-Apr28200

	20-Jan Wed	21-Jan Thu
12:00am		127
01:00am		76
02:00am		65
03:00am	67	
04:00am	159	
05:00am	342	
06:00am	795	
07:00am	1230	
08:00am	1533	
09:00am	1150	
10:00am	1077	
11:00am	1129	
12:00pm	1331	
01:00pm	1257	
02:00pm	1310	
03:00pm	1161	
04:00pm	1382	
05:00pm	1394	
06:00pm	1168	
07:00pm	846	
08:00pm	644	
09:00pm	479	
10:00pm	351	
11:00pm	219	
Totals	19024	268

MIDT-121 - West

Route 66 - 6.1 mi West of Route 3

High ADT

Town.....Middletown
 Station.....121
 Location..... 41.558824,-72.661701
 2015-Principal Arterial - Other 3...2015-Urban
 Start Report.....20-Jan-2016 03:00AM
 End Report.....21-Jan-2016 03:00AM
 Axle Correction Factor.....None
Annualized ADT.....15300
 24-Hour Count.....14833 * G4(1.03) = 15278.0
 UnRounded AADT.....15278.0 / 1 = 15278.0
 OK 2016 Wed 20-Jan -this report-.....35100
 REV 2013 Tue 06-Aug29100
 REV 2010 Mon 19-Apr28900
 OK 2007 Mon 30-Apr28200

	20-Jan Wed	21-Jan Thu
12:00am		155
01:00am		82
02:00am		54
03:00am	54	
04:00am	110	
05:00am	312	
06:00am	637	
07:00am	959	
08:00am	863	
09:00am	802	
10:00am	788	
11:00am	871	
12:00pm	939	
01:00pm	956	
02:00pm	991	
03:00pm	1213	
04:00pm	1219	
05:00pm	1095	
06:00pm	802	
07:00pm	556	
08:00pm	514	
09:00pm	387	
10:00pm	257	
11:00pm	217	
Totals	14542	291

Appendix F

Crash Data Table



UCONN Crash Data
Route 66 (Washington Street)
Middletown, Connecticut
1/1/2017-12/31/2019

Date of Crash	Time of Crash	Severity	No. of Veh.	Town	Milemarker	Roadway	Intersecting Roadway	Collision Type	Weather	Light Condition	Road Surface Condition	Contributing Circumstances
1/31/2017	12:05:00	PDO	2	Middletown	5.97	ROUTE 66	396 WASHINGTON ST	Sideswipe, same direction	Snow	Daylight	Snow	Weather Conditions
7/9/2017	18:20:00	PDO	2	Middletown	5.96	ROUTE 66	396 WASHINGTON ST	Front to rear	Clear	Daylight	Dry	None
9/11/2017	7:42:00	PDO	2	Middletown	6.21	ROUTE 66	unknown	Sideswipe, same direction	Clear	Daylight	Dry	None
9/20/2018	19:25:00	PDO	3	Middletown	5.95	ROUTE 66	unknown	Front to rear	Clear	Dark-Lighted	Dry	None
4/25/2019	15:08:00	PDO	2	Middletown	5.95	ROUTE 66	unknown	Sideswipe, same direction	Clear	Daylight	Dry	None
5/22/2019	17:38:00	PDO	2	Middletown	5.96	ROUTE 66	unknown	Front to rear	Clear	Daylight	Dry	None
7/31/2019	10:12:00	PDO	2	Middletown	5.95	ROUTE 66	unknown	Other	Clear	Daylight	Dry	None
11/2/2019	11:50:00	PDO	2	Middletown	5.96	ROUTE 66	unknown	Sideswipe, same direction	Clear	Daylight	Dry	None
11/15/2019	18:30:00	Possible Inj.	2	Middletown	5.97	ROUTE 66	unknown	Angle	Clear	Dark-Lighted	Dry	None
11/22/2019	18:31:00	PDO	2	Middletown	5.97	ROUTE 66	unknown	Front to rear	Clear	Dark-Lighted	Dry	None
12/3/2019	18:24:00	PDO	2	Middletown	5.92	ROUTE 66	396 Washington Street	Sideswipe, same direction	Clear	Dark-Lighted	Wet	None

PDO - Property Damage Only

Stormwater Management Report Root Center for Advanced Recovery

392 Washington Street
Middletown, Connecticut

July 24, 2020



146 Hartford Road
Manchester, CT 06040

Table of Contents

Stormwater Management Report Root Center for Advanced Recovery

1	Executive Summary	1
2	Existing Conditions	1
3	Proposed Conditions	2
4	Construction Stormwater Management and Soil Erosion and Sedimentation Control.....	4
5	Post-Construction Stormwater Management.....	4
6	Methods	5
7	Summary	6

Table of Contents

Stormwater Management Report Root Center for Advanced Recovery

Figures

- 1 Site Location Map
- 2 NRCS Soils Map
- 3 Drainage Basin Map
- 4 FEMA Flood Insurance Map

End of Report

Appendices

- A Existing Watershed Analysis
- B Proposed Watershed Analysis
- C Proposed Stormwater System Analysis
- D Outlet Protection Calculations
- E Water Quality Calculations

End of Report

1 Executive Summary

Root Center for Advanced Recovery proposes to construct a clinic at 392 Washington Street in Middletown, Connecticut. The site is comprised of 1.1 acres with State Route 66 (Washington Street) to the south, Main Switch Beauty Salon and Midtown Tire to the east, railroad to the north, and Nardelli's Grinder Shoppe to the west. The site is currently occupied by Fine Tunes auto repair along with associated parking. A USGS site location map is presented in *Figure 1*.

Fuss & O'Neill evaluated existing (pre-development) and proposed (post-development) hydrologic conditions for the site. This report presents the design calculations for the peak stormwater runoff flow rates leaving the site. This report also discusses proposed water quality improvement measures for the stormwater runoff. The evaluation demonstrates a net decrease in the stormwater peak discharge rate for the proposed development for the 2-, 10-, 25-, and 100-year design storm events. Reductions in the stormwater peak discharge rates were achieved using Low Impact Development (LID) design techniques.

A plan was developed to establish erosion and sediment controls to stabilize the site during construction and protect receiving stormwater systems adjacent to the development. Silt fence, stormwater inlet protection, and other erosion control devices will be used to ensure proper site stabilization during construction. Once construction has been completed and the site is stabilized, water quality of the stormwater runoff will be improved by the use of LID design techniques as well as accepted Best Management Practices (BMPs). These BMPs have been designed using recommendations from the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. These efforts will remove a minimum of 80% of the Total Suspended Solids that may be present in runoff from the developed site. The design meets the guidelines of the City of Middletown and the Connecticut Stormwater Quality Manual (CTSWQM).

2 Existing Conditions

The site is bounded by State Route 66 (Washington Street) to the south, Main Switch Beauty Salon and Midtown Tire to the east, railroad to the north, and Nardelli's Grinder Shoppe to the west. The site consists primarily of existing developed land including a building, driveway, parking lot, walkway, and vegetated area. A small wooded area is present on site. The site has moderate to steep grade changes.

The Natural Resources Conservation Service (NRCS) characterizes the site with the following soil type and hydrological soil group:

- Ludlow silt loam, 3 to 8 percent slopes – Hydrologic Soil Group C
- Wethersfield-Urban land complex, 3 to 8 percent slopes – Hydrologic Soil Group C

An NRCS soil survey map is included as *Figure 2*.

The site is located within the Mattabesset Regional Basin of the Connecticut Major Basin, specifically within the Coginchaug River sub-basin area as presented in *Figure 3*.

The site lies outside of the Regulated Floodway and the 500-year flood plain in an area of minimal flood hazard, denoted as “Zone X”. The relevant FEMA Flood Insurance Rate Map (Map Number 09007C0116G), Effective Date: August 28, 2008) is presented as *Figure 4*.

The existing hydrologic evaluation, included as *Appendix A*, determined that the 1.12 acre drainage area is comprised of two subcatchment areas and two design points.

Existing conditions, drainage characteristics, and discharge locations for the subcatchments are as follows:

- Subcatchment 1S-EX consists of pavement and adjacent grassed area. Stormwater runoff flows to the southwest overland towards Washington Street, design point 1L-EX.
- Subcatchment 2S-EX consists of pavement, building, grassed area, and small woodlands. Stormwater runoff flows to the west overland towards the adjacent property, design point 2L-EX.

3 Proposed Conditions

Root Center for Advanced Recovery proposes to construct a clinic at 392 Washington Street in Middletown, Connecticut. The site is comprised of 1.1 acres with State Route 66 (Washington Street) to the south, Main Switch Beauty Salon and Midtown Tire to the east, railroad to the north, and Nardelli's Grinder Shoppe to the west. In addition to the building, site improvements will include parking, walkways, landscaping, utilities, and stormwater management system.

The project area was analyzed to evaluate proposed hydrologic conditions. The proposed watershed analysis ultimate design points are consistent with the existing watershed analysis. The proposed subsurface infiltration system will provide on-site storage capacity for the attenuation of the peak flows for the design storms.

The proposed hydrologic evaluation, included in *Appendix B*, determined that the project area is comprised of three sub catchment areas, which drain to one of two design points.

Proposed conditions, drainage characteristics, and discharge locations for the subcatchments are as follows:

- Subcatchment 1S-PR consists of pavement and adjacent grassed area. Stormwater runoff flows to the southwest overland towards Washington Street, design point 1L-PR.
- Subcatchment 2SA-PR consists of a parking lot, sidewalks, building, and grassed area. Stormwater runoff flows overland into a proposed stormwater system and through a hydrodynamic separator before being conveyed into the subsurface infiltration system. The subsurface infiltration system discharges outlet controlled stormwater to a scour hole towards the adjacent property, design point 2L-PR.
- Subcatchment 2SB-PR consists of a grassed area to the rear of the site. Stormwater runoff flows to the west overland towards the adjacent property, design point 2L-PR.

Results from modeling pre- and post- development peak flow rates at the design point are shown in the tables below. These results are taken from the HydroCAD models of existing and proposed conditions found in *Appendices A & B*.

2 Year Design Storm				
Design Point	Existing Flow (CFS)	Proposed Flow (CFS)	Net Change (CFS)	Net Change (%)
1L - Washington Street	0.38	0.04	-0.34	-89%
2L - Adjacent Property (Northwest)	2.18	2.03	-0.15	-7%
Total	2.56	2.07	-0.49	-19%

10 Year Design Storm				
Design Point	Existing Flow (CFS)	Proposed Flow (CFS)	Net Change (CFS)	Net Change (%)
1L - Washington Street	0.61	0.08	-0.53	-87%
2L - Adjacent Property (Northwest)	3.72	3.50	-0.22	-6%
Total	4.33	3.58	-0.75	-17%

25 Year Design Storm				
Design Point	Existing Flow (CFS)	Proposed Flow (CFS)	Net Change (CFS)	Net Change (%)
1L - Washington Street	0.78	0.11	-0.67	-86%
2L - Adjacent Property (Northwest)	4.90	4.68	-0.22	-4%
Total	5.68	4.79	-0.89	-16%

100 Year Design Storm				
Design Point	Existing Flow (CFS)	Proposed Flow (CFS)	Net Change (CFS)	Net Change (%)
1L - Washington Street	1.12	0.18	-0.94	-84%
2L - Adjacent Property (Northwest)	7.26	6.62	-0.64	-9%
Total	8.38	6.80	-1.58	-19%

The watershed model predicts a decrease in the calculated proposed development peak flow rates when compared to existing conditions.

Calculations for the storm sewer piping analysis are presented in *Appendix C*. Modeling indicates that the proposed pipes will have adequate capacity to convey the 25-year design storm.

Outlet protection for new pipe discharge point was calculated using the Connecticut Department of Transportation Drainage Manual, Section 11.13 – Outlet Protection, revised dated May 2002. Outlet protection calculations are provided in *Appendix D*.

4 Construction Stormwater Management and Soil Erosion and Sedimentation Control

An erosion and sediment control plan has been prepared for the project. During construction, measures will be taken to reduce erosion and manage sedimentation from disturbed surfaces. The following BMPs will be implemented:

- Stormwater inlet protection will be installed at all stormwater collection structures to remove sediment from the run-off prior to entering the receiving drainage systems.
- Silt fence will be installed at clearing limits and down-gradient perimeter of the disturbed portion of the development.
- Construction entrance will be installed at the main point of entry to prevent tracking of sediment onto state and local roads.

These BMPs will protect downstream stormwater collection systems following construction. E&S control details and plans are provided in the site plans. Erosion and sediment control details and procedures are consistent with the 2002 Guidelines for Soil Erosion and Sedimentation Control (CTDEEP Bulletin 34), and City Requirements.

5 Post-Construction Stormwater Management

The water quality of stormwater runoff from the developed site will be improved using Best Management Practices (BMPs). A proposed hydrodynamic separator and subsurface infiltration system will help achieve the removal of 80% of Total Suspended Solids that may be present in the stormwater runoff.

Water quality volume (WQV) will be achieved through the use of a hydrodynamic separator and subsurface infiltration system. WQV is equivalent to the first inch of rainfall in any storm event that should be captured and treated to remove a majority of the stormwater pollutants on an annual basis. Calculations based on section 7.4.1 of the CTSWQM are provided in *Appendix E*.

To ensure these measures continue to operate adequately over time, the following maintenance procedures should be followed:

- **Hydrodynamic Separator** – The hydrodynamic separator must be inspected at regular intervals and maintained when necessary to ensure optimum performance. At a minimum, inspections should be conducted twice per year; once in the spring and again in the fall. More

inspections may be required during winter months where heavy sanding operations may lead to rapid sediment accumulation within the structure. The structure should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when appreciable level of hydrocarbons and trash has accumulated. Cleaning operations are typically done using a vacuum truck.

- **Scour Hole** – The structures must be inspected annually and after each major rainfall for damage and deterioration. If damaged, repairs to the outlet protection must be completed immediately. Sediment removal operations can be done using a vacuum truck or by hand. Mechanical removal of sediment is not recommended as it may disturb established plantings.
- **Subsurface Infiltration System** - At a minimum, the subsurface infiltration system should be inspected annually, semi-annually for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition. The system incorporates a combination of a standard manhole and strategically located inspection ports to visually inspect the system. The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes. If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the first row of the system, clean-out should be performed, per the manufacturer’s recommendations.

These design measures incorporate commonly used Best Management Practices and follows guidelines set forth by the CTDEEP Stormwater Quality Manual and the Connecticut and federal stormwater regulations.

6 Methods

The existing and proposed drainage analysis for the development was completed using the HydroCAD Software Solutions computer program. The HydroCAD program runoff method selected for the watershed modeling is based on NRCS TR-20 methods. The methods described in the NRCS TR-55 manual were followed to calculate the curve number and time of concentration input data for this model. NOAA Atlas 14, Volume 10, Version 3 precipitation frequency estimates were used for rainfall data.

The following curve numbers were used to model the impervious and pervious surfaces, and are acceptable for surface over Hydrological Group – ‘C’ soils per the NRCS TR-55 Drainage Manual:

Cover Type	Hydrologic Soil Type
	C
Paved Parking	98
Roofs	98
> 75% Grass Cover, Good	74
Woods/Grass Comb., Good	72

The drainage analysis for the proposed stormwater management system was completed using Bentley System's StormCAD computer program. Input information for the model was derived using the Rational Formula. Times of concentration for paved areas was assumed to be the minimal allowable time of 5 minutes. The StormCAD output indicates that all of the proposed pipe and catch basins will have adequate capacity to convey and drain the 25-year design storm.

7 Summary

The proposed development has been design to effectively convey and attenuate the peak discharge flows leaving the site as compared to the existing conditions for the 2-, 10-, 25-, and 100-year design storm event. The subsurface infiltration system have been designed to mitigate the increase in peak flows as well as encourage groundwater recharge. The stormwater management pipe network has been designed to convey the 25-year design storm.

Post-construction water quality improvements for the stormwater runoff will be achieved by the use of BMPs designed to remove 80% of Total Suspended Solids that may be present in runoff from the site.

The stormwater management design meets the guidelines of the Connecticut Stormwater Quality Manual.

Return To: UKS
179 Main Street
100 Plaza Middlesex
Middletown, CT 06457

STATUTORY WARRANTY DEED

TO ALL PEOPLE TO WHOM THESE PRESENTS SHALL COME, GREETING:

KNOW YE, THAT Sebastian F. Marino of 314 NE 5th Avenue, Dania Beach, Florida, for consideration paid in the amount of FOUR HUNDRED THIRTY THOUSAND DOLLARS (\$430,000.00), grants to **392 Washington Middletown LLC**, a Connecticut limited liability company of the Town of Middletown, County of Middlesex and State of Connecticut, with **WARRANTY COVENANTS**, the following described premises:

A certain piece or parcel of land, with all buildings and improvements thereon, situated on the northerly side of Washington Street, in the Town of Middletown, County of Middlesex, and State of Connecticut, and more particularly bounded and described as follows:

Commencing at an iron pin set in the southwest corner of the herein described parcel which point marks the southeast corner of the second piece herein described and the northerly street line of Washington Street, thence N 27°38'26" W for a distance of 185.00' to an iron pin, which point marks the northeast corner of the second piece herein described; thence S 63°02'48" W for a distance of 82.00' to an iron pin, which point marks the northwest corner of the second parcel herein described and the easterly property line of land now or formerly of G & B Middletown Properties, LLC; thence N 27°38'25" W for a distance of 98.00' along land now or formerly of G & B Properties, LLC to an iron pin set in the southerly line of land now or formerly of the N.Y. N.H. & H. Railroad, which point marks the northwest corner of the herein described parcel; thence N 37°43'50" E for a distance of 230.00' along said railroad to a point which marks the northeast corner of the herein described parcel; thence S 23°16'51" E for a distance of 230.46' along land now or formerly of Mid-Town Tire & Supply Inc. to a point; thence S 23°58'17" E for a distance of 149.54' along property now or formerly of Sonia A. Santavenere to an iron pin set in the northerly street line of Washington Street, which point marks the southeast corner of the herein described parcel; thence S 63°02'48" W for a distance of 100.00' along the northerly street line of Washington Street to the point or place of beginning.

Said parcel contains 48,599 S.F. and is depicted as the First Piece on a map entitled "PROPERTY/BOUNDARY SURVEY – DEPICTING – LOT LINE MODIFICATION – PREPARED FOR – PROPERTIES KNOWN AS 392 & 396 WASHINGTON STREET MIDDLETOWN, CONNECTICUT JULY 28, 2011 SCALE 1"=30' By Robert F. Jackowiak L.S.", which map is to be recorded in the Office of the Middletown Town Clerk.

Being a portion of the same premises conveyed to the Grantor herein by Quit Claim Deed dated August 1, 2011 and recorded in Volume 1733 at Page 703 of the Middletown Land Records.

Said premises are conveyed subject to taxes to the Town of Middletown on the List of October 1, 2017 and thereafter, which taxes the Grantee herein assumes and agrees to pay as part consideration for this deed and to a Lot line deviation as shown on Map entitled "Property/Boundary Survey – Depicting – Lot Line Modification – Prepared for – Properties Known as 392 & 396 Washington Street Middletown, Connecticut July 28, 2011 Scale 1"=30'" recorded 8/9/11 as map #95-2011 of the Middletown Land Records.

Signed this 2nd day of November, 2018.

Witnessed by:

[Signature]
James Syke

By: [Signature] L.S.
Sebastian F. Marino

STATE OF FLORIDA)
COUNTY OF Bonard) : ss. Dania Beach (town)

On this the 2nd day of November, 2018, personally appeared Sebastian F. Marino, known to me, or satisfactorily proven, to be the person whose name is subscribed to in the within instrument and acknowledged that he executed the same as his free act and deed, before me.

In witness whereof, I hereunto set my hand.



Austin Jaehring
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG000032
Expires 6/8/2020

[Signature]
Notary Public

SEARCH CRITERIA Selected Names 392 WASHINGTON MIDDLETOWN LLC Firm/Last Name 392 WASHINGTON (BEGINS WITH)

Name Search

Displaying records 1 - 2 of 2 at 4:47 PM ET on 3/17/2020

Index	File Date	Instrument Date	Kind	GRANTORS	GRANTEES	Description	File Number	Book/Page	Ref	Amount	Images
1	LAN	11/09/2018		WAR	MARINO, SEBASTIAN F	392 WASHINGTON MIDDLETOWN LLC	WASHINGTON STREET		1932 / 193		2
2	LAN	11/09/2018		MTG	392 WASHINGTON MIDDLETOWN LLC	MARINO, SEBASTIAN F	392 WASHINGTON STREET		1932 / 195		14

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**PROPERTIES ABUTTING AND ACROSS THE STREET
FROM SUBJECT PROPERTY 392 WASHINGTON STREET
(ASSESSOR'S MAP 23 / LOT 70)
MIDDLETOWN, CONNECTICUT**

SOURCE: MIDDLETOWN GRAND LIST AS OF OCTOBER 1, 2020

MAP // BLOCK / LOT	STREET ADDRESS	MAILING ADDRESS
23//0070//	392 Washington Street	392 Washington Middletown LLC c/o Stone Investment Properties LLC 386 Main Street Middletown, CT 06457
23//0128//	383 Washington Street	The Indian Hill Cemetery Corporation 383 Washington Street Middletown, CT 06457
23//0069//	390 Washington Street	Sonia A. Santavenere 390 Washington Street Middletown, CT 06457
23//0067//	Jackson Street	Mid-Town Tire & Supply Inc. 310 Locust Street Hartford, CT 06114
23//066//	1 Jackson Street	Mid-Town Tire & Supply Inc. 1 Jackson Street Middletown, CT 06457
23//0060//	45 Jackson Street	Rafal Kuras & Iwona Siekierska 45 Jackson Street Middletown, CT 06457
23//0059//	51 Jackson Street	Annmarie Cienava, et al. 14 Landing Road S Higganum, CT 06441
23//0072//	400 Washington Street	Birchwood Realty LLC c/o Development Strategies Company LLC 235 Main Street, Suite 330 White Plains, NY 10601

MAP // BLOCK / LOT	STREET ADDRESS	MAILING ADDRESS
23 // 0071 //	396 Washington Street	Marino Realty Associates LLC 15 Christian Hill Road Higganum, CT 06441

8890485v1

Hartford Dispensary dba
Root Center for Advanced Recovery
335 Broad Street
Manchester, CT 06040

August 3, 2020

Mr. Stephen Devoto, Chair,
and Commission Members
Planning & Zoning Commission
City of Middletown
245 Dekoven Drive
Middletown, CT 06457

Mr. Marek Kozikowski
City Planner
City of Middletown
245 Dekoven Drive
Middletown, CT 06457

Re: Application of Hartford Dispensary dba Root Center for Advanced Recovery for Map Amendment and Special Exception with Site Plan Review for 392 Washington Street, Middletown, Connecticut

Dear Chair Devoto, Commission Members, and Mr. Kozikowski:

Hartford Dispensary dba Root Center for Advanced Recovery (“Root Center”) is filing applications for zoning map amendment and special exception with site plan review with the Middletown Planning & Zoning Commission regarding the property located at 392 Washington Street (Assessor’s Map 23 / Lot 70) in Middletown, Connecticut (the “Property”). With these applications, Root Center proposes to rezone the Property to the Substance Abuse / Mental Health floating zone, a change of use of the Property to a Clinic for Mental Health and / or Substance Abuse Counseling, Diagnosis and Treatment, and to redevelop the interior of the existing building located on the Property for use as a methadone clinic. Hartford Dispensary Real Estate, Inc., an affiliate of Root Center, is under contract to purchase the Property. Root Center will operate the proposed clinic at the Property.

As required by the Commission’s application forms, Root Center hereby certifies that it is familiar with all the information provided in these applications and plans, and that the information and statements contained therein are true to the best of Root Center’s knowledge. In addition, Root Center grants the Middletown Planning and Zoning Commission and/or its agents permission to enter upon the Property for the purpose of inspection and enforcement of the Regulations of the City of Middletown.

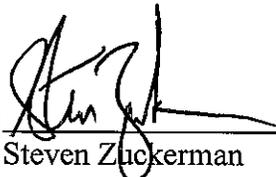
Root Center hereby authorizes Shipman & Goodwin LLP to execute any application forms or other documents in connection with these applications and to submit

and Andrea Gomes of Shipman & Goodwin LLP will be the primary contacts on this matter.

Thank you for your consideration concerning this matter.

Very truly yours,

Hartford Dispensary dba Root Center for
Advanced Recovery

By: 

Steven Zuckerman
CEO/President
Hartford Dispensary dba Root Center for
Advanced Recovery
Duly authorized

392 Washington Middletown LLC
386 Main Street
Middletown, CT 06457

August 4, 2020

Mr. Stephen Devoto, Chair,
and Commission Members
Planning & Zoning Commission
City of Middletown
245 Dekoven Drive
Middletown, CT 06457

Mr. Marek Kozikowski
City Planner
City of Middletown
245 Dekoven Drive
Middletown, CT 06457

Re: Application of Hartford Dispensary dba Root Center for Advanced Recovery for Map Amendment and Special Exception with Site Plan Review for 392 Washington Street, Middletown, Connecticut

Dear Chair Devoto, Commission Members, and Mr. Kozikowski:

392 Washington Middletown LLC (“392 Washington”) is the owner of the parcel of land located at 392 Washington Street (Assessor’s Map 23 / Lot 70) in Middletown, Connecticut (the “Property”). Hartford Dispensary Real Estate, Inc. is under contract to purchase the Property.

392 Washington understands that Hartford Dispensary dba Root Center for Advanced Recovery (“Root Center”), an affiliate of Hartford Dispensary Real Estate Inc., is filing applications for zoning map amendment and special exception with site plan review with the Middletown Planning & Zoning Commission in connection with the proposed rezoning of the Property to the Substance Abuse / Mental Health floating zone, a change of use of the Property to a Clinic for Mental Health and / or Substance Abuse Counseling, Diagnosis and Treatment, and the redevelopment of the existing building located on the Property for use as a methadone clinic. 392 Washington authorizes Root Center to pursue all necessary applications for approvals and permits required from the Town of Middletown regarding the proposed zone change, change of use, and redevelopment.

In addition, 392 Washington grants the Middletown Planning and Zoning Commission and/or its agents permission to enter upon the Property for the purpose of inspection and enforcement of the Regulations of the City of Middletown.

Thank you for your consideration concerning this matter.

Very truly yours,

392 Washington Middletown LLC

By:  _____

Duly authorized



Mark Vertucci, PE, PTOE

Traffic Engineer

“As a child, I drew chalk roads on my driveway and installed paper road signs around my house. I coerced my mother to take me on long day trips just to drive along roads I had never been on before. Transportation has always been a passion of mine. To me, it is not all about the destination. Getting there is half the fun.”

mvertucci@fando.com

800.286.2469 x5381

EDUCATION

BS, Civil Engineering - 1998
Rensselaer Polytechnic Institute

LICENSES & REGISTRATIONS

Professional Engineer CT
Professional Traffic Operations Engineer
Professional Engineer NY
Professional Engineer MA
Professional Engineer RI

PROFESSIONAL AFFILIATIONS

Inst Transportation Engineers

EXPERIENCE

24 Years Professional Experience

Mark is an Associate in our Transportation Business Line. He has many years of experience in traffic engineering, transportation planning, site development, and roadway improvement projects. Throughout his career, he has prepared numerous traffic impact studies, planning studies, corridor studies, parking studies, and traffic management plans.

Mark has extensive experience with traffic signal design projects, roadway design projects, and intelligent transportation systems. Mark is certified by the Institute of Transportation Engineers (ITE) as a Professional Traffic Operations Engineer (PTOE), and is a Past President and current Treasurer of the Connecticut Chapter of ITE.

REPRESENTATIVE PROJECTS:

State Office Building Renovation Traffic/OSTA, CTDAS, Hartford, CT

Harbor Point Development Transportation Planning, Stamford, CT

Traffic Impact Study and State Traffic Commission Major Traffic Generator Certificate Application, University of Connecticut Health Center, Farmington, CT

Mixed-Use Development Planning Study, Windsor Locks, CT

On-call Downtown Parking and Traffic Study, Meriden, CT

Campus-wide Traffic Safety Study, Confidential Aerospace Manufacturer, Windsor Locks, CT

Stamford Transportation Center Parking Garage EIE, CTDOT, Stamford, CT

Traffic Impact Study and State Traffic Commission Major Traffic Generator Certificate Application, University of Connecticut Health Center, Farmington, CT

Traffic Engineering, Eastern Greenwich Civic Center, Greenwich, CT



Ronald Bomengen, PE, LEED AP

Civil Engineer

“What I love about my job is helping our clients develop sustainable solutions for their specific needs. As a LEED accredited professional, I believe civil engineering is much more than providing professional consulting services, it’s also about developing responsible designs that add value to the communities in which we live and work.”

RBomengen@fando.com

800.286.2469 x5253

EDUCATION

BS, Civil Engineering - 2000
University of Hartford

LICENSES & REGISTRATIONS

LEED AP
Professional Engineer CT

PROFESSIONAL AFFILIATIONS

American Society of Civil
Engineers

EXPERIENCE

20 years Professional Experience

Ron is an Associate and the Department Manager of our Community Development Business Line. Throughout his career he has managed projects and provided civil engineering services for commercial and residential site developments, schools, reconstruction, and construction of state highway roads and ramps.

Additionally, he has provided construction inspection services. The following highlights some of his experience related to your needs.

REPRESENTATIVE PROJECTS:

Site and Roadway Design for a New 10-story Office, Lab, Retail Building, and Associated Garage, New Haven, CT

Civil Engineering and Design, Winstanley Enterprises, New Haven, CT

Arburg North American Headquarters, Rocky Hill, CT

Civil/Site Roadway Design, Fairfield Train Station, Fairfield, CT

The Residences at Evergreen Walk, Continental Global Ventures, LLC, South Windsor, CT

Student/Faculty Housing, Westminster School, Simsbury, CT

Site Design and Local Permitting, Tennis Courts and Pavilion, Taft School, Watertown, CT

Site Design, Armour Academic Building, Westminster School, Simsbury, CT

Dining Hall, Westminster School, Simsbury, CT

Civil/Site Design, Cumberland Farms, Bloomfield, CT

PROJECT TEAM



TED CUTLER, AIA, LEED AP

CEO, PRINCIPAL-IN-CHARGE

Ted began his architecture career with Tecton in 1994. His role and responsibility grew with expanding opportunities and he was appointed CEO in 2011. The perspective gained by building a career with a single firm has shaped Ted's leadership approach, instilling a commitment to developing internal talent and identifying emerging leaders. As Project Executive, Ted has managed many of Tecton's most complex and time sensitive projects, with an eye on team composition, consistent communication and overall team performance.

Over the years, Ted has planned a wide range of specialty research and process labs in health care, bio-tech, industry, and academic environments. Classically, the best solution comes from early team consensus.

EDUCATION

Pennsylvania State University
Bachelor of Arts and
Bachelor of Science in Architecture
Harvard Business School
High Potential Leadership Program

REGISTRATIONS

Registered Architect
in Connecticut, Massachusetts,
New Hampshire, New York,
New Jersey, Maryland,
Pennsylvania and Florida
National Council of Architectural
Registration Boards (NCARB)
LEED Accredited Professional

AFFILIATIONS

American Institute
of Architects (AIA)
Chairman of the Board
Nutmeg Big Brothers/Big Sisters
Connecticut Business &
Industry Association (CBIA)
Connecticut Health Council
Construction Institute
Visionaries Forum
MetroHartford Alliance
Southern New England Chapter
of the LEAN Construction Institute
US Green Building Council

RELEVANT PROJECT EXPERIENCE

- Baystate Health | Histology Lab | Springfield, MA
- Baystate Pioneer Valley Life Sciences Institute (PVLISI) | Springfield, MA
- Baystate Health Animal Care Facility (BACF) | Springfield, MA
- Eversource Energy | Service Center Renovations | Hartford, Berlin and Meriden, CT
- Rogers Corporation | US Research & Development Manufacturing Headquarters | Rogers, CT
- Arburg International | Sales and Service Center | Rocky Hill, CT
- Chemtura Research Center | Naugatuck, CT
- State of Connecticut | Consolidation of Government Offices | Hartford, CT
- Emhart Glass | Research & Development Manufacturing Locations | CT, FL and NY
- Hartford Hospital | Center for Education, Simulation and Innovation | Hartford, CT
- King Industries | New Campus Master Plan and Manufacturing Buildings | Waterbury, CT
- Pitney Bowes Global Technology Center | Danbury, CT
- Pratt & Whitney | Center for Quality and Process Engineering | East Hartford, CT
- State of Connecticut | Forensic Science Laboratory Meriden, CT
- Trumpf, Inc. | US Manufacturing Headquarters | Farmington, CT

PROJECT TEAM



PAUL TIRRELL

ASSOCIATE PRINCIPAL, SENIOR PROJECT MANAGER

Paul has worked with Tecton for close to 40 years and currently leads many of Tecton's most complex healthcare projects. His specialized knowledge and experience are key elements when serving as a liaison between the owner, general contractor and architect. His experience in design, document review, specification writing, zoning regulation and code review, client/consultant coordination, product research, budget review/conformance, existing condition review, building surveys and cost estimate compilation provide a tremendous resource to Tecton and clients alike.

EDUCATION

Porter School of Design
Associate of Science in Architecture

AFFILIATIONS

Construction Specifications Institute
Porter & Chester Institute
Program Advisor
Construction Institute
Birch Grove School
Building Committee
Tolland, CT

RELEVANT PROJECT EXPERIENCE

- State of Connecticut | Department of Administrative Services / Division of Construction Services On-Call Services | Multiple Locations, CT
- State of Connecticut | Forensic Science Laboratory | Meriden, CT
- State of Connecticut | Southern Connecticut State University | School of Business | New Haven, CT
- Middlesex Hospital Behavioral Health Emergency Department | Middletown, CT
- Natchaug Hospital | Journey House Addition | Mansfield, CT
- The Lurie Center for Research and Development | Rogers, CT
- Genesis Health Ventures | Multiple Locations
- Health Bridge | Milford, CT
- Athena Healthcare | Multiple Locations
- DaVita Dialysis Centers | Princeton, NJ
- DaVita Dialysis Centers | Elmira, NY
- DaVita Dialysis Centers | New York, NY
- DaVita Dialysis Centers | East Rochester, NY
- DaVita Dialysis Centers | Peekskill, NY
- DaVita Dialysis Centers | Jamaica, NY
- DaVita Dialysis Centers | South Bronx, NY
- DaVita Dialysis Centers | Hackettstown, NJ
- DaVita Dialysis Centers | Fort Washington, MD
- DaVita Dialysis Centers | Syosett, NY