



TOWN OF VERNON PLANNING & ZONING COMMISSION (PZC)

APPLICATION

(Revised March 2021)

The PZC may require additional information to be provided by the applicant in the course of reviewing the application and during the monitoring of the project. Provide all the information requested.

APPLICANT (S)

NAME: Benjamin W. Tinsley
COMPANY: Prime Wellness of Connecticut, LLC
ADDRESS: 366 Madison Ave., 14th Fl., New York, NY 10017
TELEPHONE: 720-808-3857 E-MAIL: ben.tinsley@acreageholdings.com

PROPERTY OWNER (S)

NAME: Pritam LLC
ADDRESS: 36 Cardinal Way, South Windsor, CT 06074
TELEPHONE: 860-647-8840 EMAIL: atwood3460@yahoo.com

If the applicant is not the property owner, include a letter from the property owner authorizing the applicant to seek approval by the PZC, if no signature accompanies the application. (ZR Section 2.3)

PROPERTY

ADDRESS: 234 Talcottville Road

ASSESSOR'S ID CODE: MAP # 10 BLOCK # 15 R LOT/PARCEL # 40 G

LAND RECORD REFERENCE TO DEED DESCRIPTION: VOLUME: 2787 PAGE 315

DOES THIS SITE CONTAIN A WATERCOURSE AND/OR WETLANDS? (SEE THE INLAND WETLANDS MAP AND REGULATIONS)

☒ NO ☐ YES

☐ NO REGULATED ACTIVITY WILL BE DONE

☐ REGULATED ACTIVITY WILL BE DONE

☐ IWC APPLICATION HAS BEEN SUBMITTED

ZONING DISTRICT Commercial

IS THIS PROPERTY LOCATED WITHIN FIVE HUNDRED (500) FEET OF A MUNICIPAL BOUNDARY?

☒ NO
☐ YES: _____

CHECK IF HISTORIC STATUS APPLIES:

☐ LOCATED IN HISTORIC DISTRICT: _____

☐ INDIVIDUAL HISTORIC PROPERTY

PROJECT SUMMARY

Describe the project briefly in regard to the purpose of the project and the activities that will occur. Attach to this application a complete and detailed description with maps and documentation as required by the "Town of Vernon Zoning Regulations" and "Town of Vernon Subdivision Regulations".

PURPOSE: Hybrid cannabis dispensary and cannabis retailer

GENERAL ACTIVITIES: Receipt, storage, display, dispensing, and sale of medical cannabis and adult

use cannabis products to qualifying and registered patients, caregivers, and consumers with valid identification

approved by the State of Connecticut, with office space and parking to support the foregoing activities.

APPROVAL REQUESTED

 SUBDIVISION OR RESUBDIVISION

- SUBDIVISION (SUB. SEC. 4, 5, 6)
- RESUBDIVISION (SUB. SEC. 4, 5, 6)
- MINOR MODIFICATION OF SUBDIVISION OR RESUBDIVISION (SUB. SEC. 4.6)
- AMENDMENT OF SUBDIVISION REGULATIONS (SUB. SEC. II)

SEE SUBDIVISION REGULATIONS SEC. 4 FOR APPLICATION FEE SCHEDULES.

 X **SOIL EROSION AND SEDIMENT CONTROL PLAN (ESCP)** (ZR SEC. 2.117; 18) (SUB. 6.14)

 X **SITE PLAN OF DEVELOPMENT (POD)** (ZR SEC. 14)

- X POD APPROVAL (ZR SEC. 14.1.1.1; 14.1.2)
- MODIFICATION OF AN APPROVED POD (ZR SEC. 14.1.1.1)
- MINOR MODIFICATION OF A SITE POD (ZR SEC. 14.1.1.2)

 X **SPECIAL PERMIT(S)** (ZR SECTION 17.3) SECTION: 4.9.4.10 & 4.9.4.15.6

 OTHER SPECIAL PERMIT(S). CITE ZR SECTION AND DESCRIBE ACTIVITY:

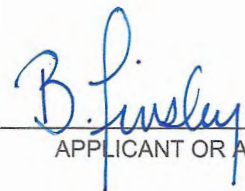
 ZONING:

- SITE SPECIFIC CHANGE OF ZONING DISTRICT AND MAP (ZR SEC. 1.2; 1.3; 4)
- AMENDMENT OF ZONING REGULATIONS (SEC. 1.2; 1.3; 4)

CERTIFICATION AND SIGNATURE

The applicant, undersigned, has reviewed the "Town of Vernon Planning and Zoning Regulations" and completed the application with complete and accurate information:

Property Owner, Applicant, or Applicant's Agent:



APPLICANT OR AGENT SIGNATURE

Benjamin W. Tinsley

PRINTED NAME

1-17-2023

DATE

OWNER'S SIGNATURE, IF DIFFERENT

See attached letter from Pritam LLC

PRINTED NAME

12-20-2022


DATE

Landlord's Consent

To: Vernon, CT Planning and Zoning Commission
From: Pritam LLC

1. Pritam LLC owns the real property located at 234 Talcottville Road in the Town of Vernon, Parcel ID 10-015R-0040G.
2. Pritam LLC has leased this property to Prime Wellness of Connecticut, LLC.
3. Pritam LLC has authorized the tenant to seek approval of a site plan and special permit from the Vernon Planning and Zoning Commission for development and operation of a hybrid cannabis establishment and cannabis retailer on the leased property under the Vernon Zoning Regulations.

Pritam LLC:

By: 
Name: Jagdev Toor
Title: Member

Date: 12-20-2022

10-015R-00041
260 TALCOTTVILLE LLC
260 TALCOTTVILLE RD
VERNON CT 06066

10-015R-0040I-0101
PAHORE DANIYAL & SEHRISH
242-101 TALCOTTVILLE RD
VERNON CT 06066-4633

10-015R-0040I-0409
ELCO GARY
242-409 TALCOTTVILLE RD
VERNON CT 06066-4635

10-015R-00039
218 TALCOTT LLC
218 TALCOTTVILLE RD
VERNON CT 06066

10-015R-0040I-0102
SANCHEZ MARIBEL
242-102 TALCOTTVILLE RD
VERNON CT 06066-4633

10-015R-00045
LETENDRE ROBERT P JR & ANN C
29 GOTTIER DR
VERNON CT 06066-4604

10-015R-0040I-0401
BURGESS SCOTT D
242-401 TALCOTTVILLE RD
VERNON CT 06066

10-015R-00046
MUZSI IREN
33 GOTTIER DR
VERNON CT 06066

10-015R-0040I-0402
MYERS DIANE
242-402 TALCOTTVILLE RD
VERNON CT 06066

03-0004-00010
TEDESCHI PROPERTIES LLC
PO BOX 508
VERNON CT 06066

10-015R-0040I-0403
RAMOS WILLIAM
242-403 TALCOTTVILLE RD
VERNON CT 06066-4635

03-0004-0010A
ZYA PROPERTIES LLC
8 BURNHAM ST STE 1B
TERRYVILLE CT 06786

10-015R-0040I-0404
COLLIN CARMEN E & RAYMOND
38 HAYES AVE
ELLINGTON CT 06029

10-015R-0040F
MAFFE INVESTMENTS LLC
624 HEBRON AVE
GLASTONBURY CT 06033

10-015R-0040I-0405
KANE PHILIP G JR & MARILYN B
242 TALCOTTVILLE RD U 405
VERNON CT 06066

10-015R-0040I-0406
ALBANO NICHOLAS
242-406 TALCOTTVILLE RD
VERNON CT 06066

10-015R-0040H
260 TALCOTTVILLE LLC
260 TALCOTTVILLE RD
VERNON CT 06066

10-015R-0040I-0407
CHAUDHRY MUHAMMAD & FAROOQ WALEED
242-407 TALCOTTVILLE RD
VERNON CT 06066

10-0004-0009B
253 TALCOTTVILLE LLC
1555 POST RD EAST STE 102
WESTPORT CT 06880

10-015R-0040I-0408
UPTON HEATHER
242-408 TALCOTTVILLE RD
VERNON CT 06066

10015R0040I0101
PAHORE DANIYAL & SEHRISH,
242-101 TALCOTTVILLE RD
VERNON,CT 06066-4633

10015R0040I0102
SANCHEZ MARIBEL,
242-102 TALCOTTVILLE RD
VERNON,CT 06066-4633

10015R0040I0103
DONLIN KAREN C,
242-103 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0104
CARPENTER LINDA L,
242-104 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0105
ROGERS MARK G,
242-105 TALCOTTVILLE RD
VERNON,CT 06066-4633

10015R0040I0106
MORIN CHANTEL A,
242-106 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0107
SZLANGA ANDRZEJ & MARIOLA K,
242-107 TALCOTTVILLE RD
VERNON,CT 06066-4633

10015R0040I0108
BLACK TODD,
242-108 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0109
ABRAHAMSON CHARLENE K,
242-109 TALCOTTVILLE RD
VERNON,CT 06066-4633

10015R0040I0201
FENN GENEVIEVE A,
242-201 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0202
WAGAR CHARLES C,
242-202 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0203
MARCOVICI MAIK & MOCOFAN SIMONA E,
242-203 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0204
RAHMAN KAZI & NAZ SHAMIYA,
242-204 TALCOTTVILLE RD
VERNON,CT 06066-4634

10015R0040I0205
BESAW DANIEL & RENIE & BESAW EMILY
242-205 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0206
PALERMO NICHOLAS J TRUSTEE, THE
NICHOLAS J PALERMO REVOC TRUST 2019
1559 DIAMOND LAKE RD
GLASTONBURY,CT 06033

10015R0040I0207
KAUFMANN JAMES E & JENNIFER A,
242-207 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0208
BURKETT CHARLES & KATHLEEN,
242-208 TALCOTTVILLE RD
VERNON,CT 06066-4634

10015R0040I0209
SPEGAL MICHAEL,
242-209 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0301
KINGSLEY SHEILA J,
242-301 TALCOTTVILLE RD
VERNON,CT 06066-4634

10015R0040I0302
YOUNG DONALD,
144 TRACY DR
VERNON,CT 06066

10015R0040I0303
SPIRIO JOSEPH,
242-303 TALCOTTVILLE RD
VERNON,CT 06066-4634

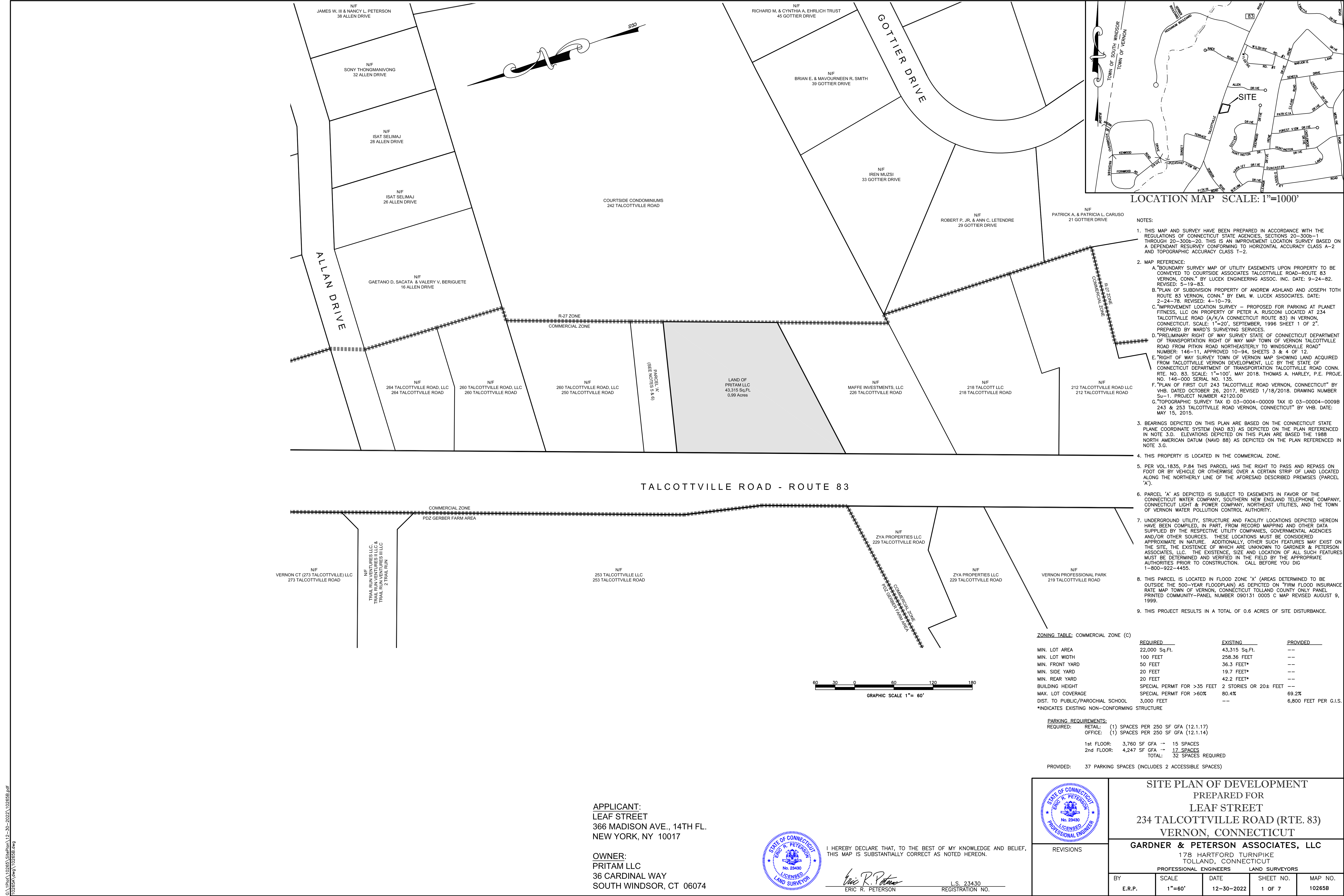
10015R0040I0304
GELINAS SANDRA DEE,
242-304 TALCOTTVILLE RD
VERNON,CT 06066

10015R0040I0305
SIBILIO MICHAEL T & DANIELLE M,
242-305 TALCOTTVILLE RD
VERNON,CT 06066

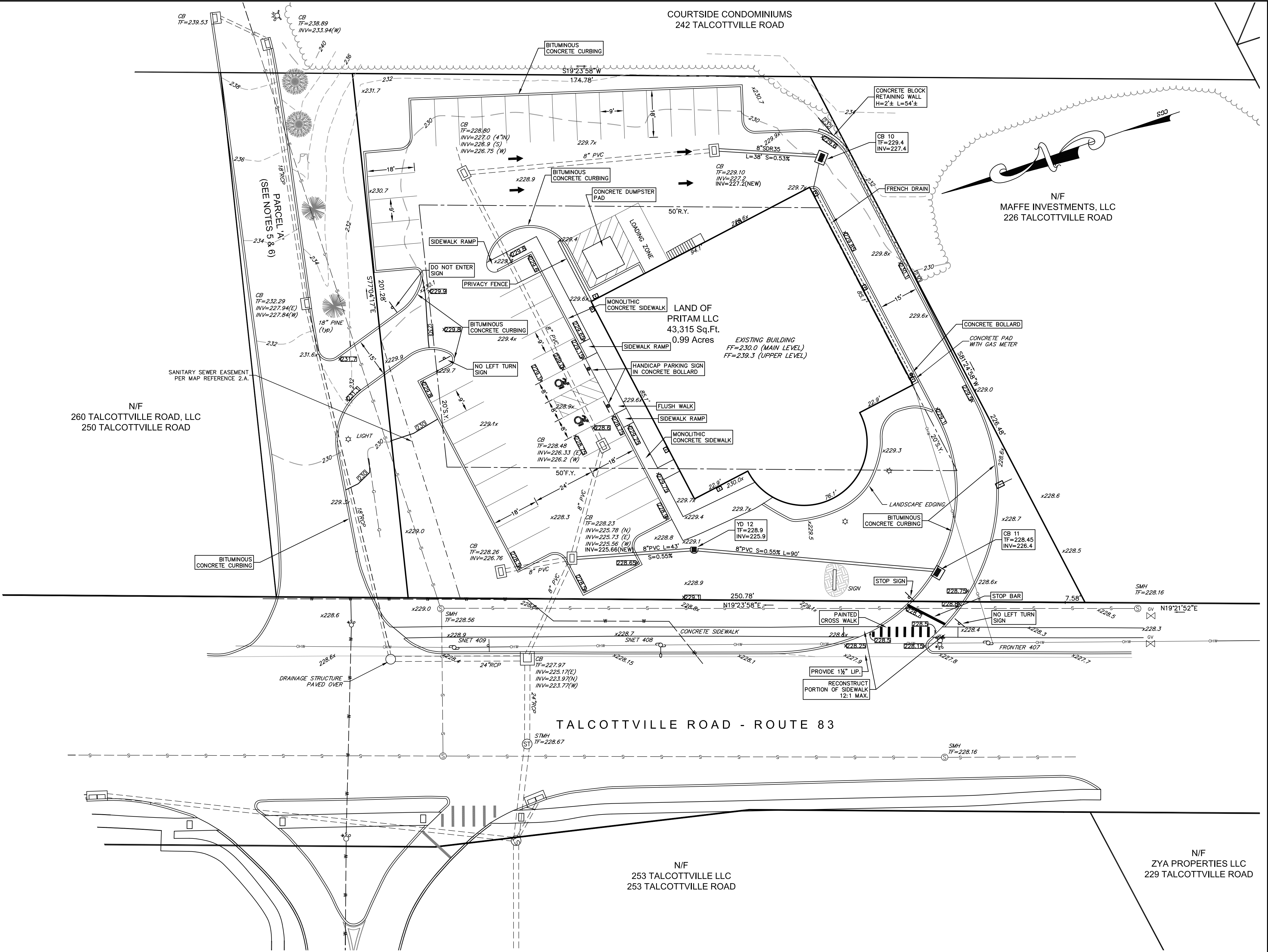
10015R0040I0306
EVANS ROBERT M,
242-306 TALCOTTVILLE RD
VERNON,CT 06066-4635

242 Talcottville Rd
* Courthouse Condos *
abutters list

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102658.dwg (10/26/2022)

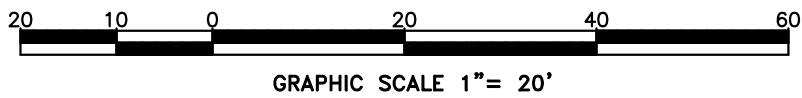


LEGEND	
PROPERTY LINE	=====
ZONING SETBACK	-----
OVERHEAD WIRES	-----
EDGE PAVEMENT	-----
BITUMINOUS CURB	=====
CATCH BASIN	□
SEWER MANHOLE	⊙
WATER GATE	⊕
UTILITY POLE	⊙
EXISTING CONTOUR	- - - - -
EXISTING ELEVATION	228.9x
APPX. WATERLINE	-----
APPX. GAS	-----
EXISTING TREELINE	~~~~~
LIGHT POST	⊙
PROPOSED CURB	=====
PROPOSED ELEVATION	229.3x
PROPOSED CONTOUR	- - - - -
PROPOSED CATCH BASIN	⊙
PROPOSED YARD DRAIN	⊙
PROPOSED DRAINAGE	-----
PROPOSED LIGHT	⊙



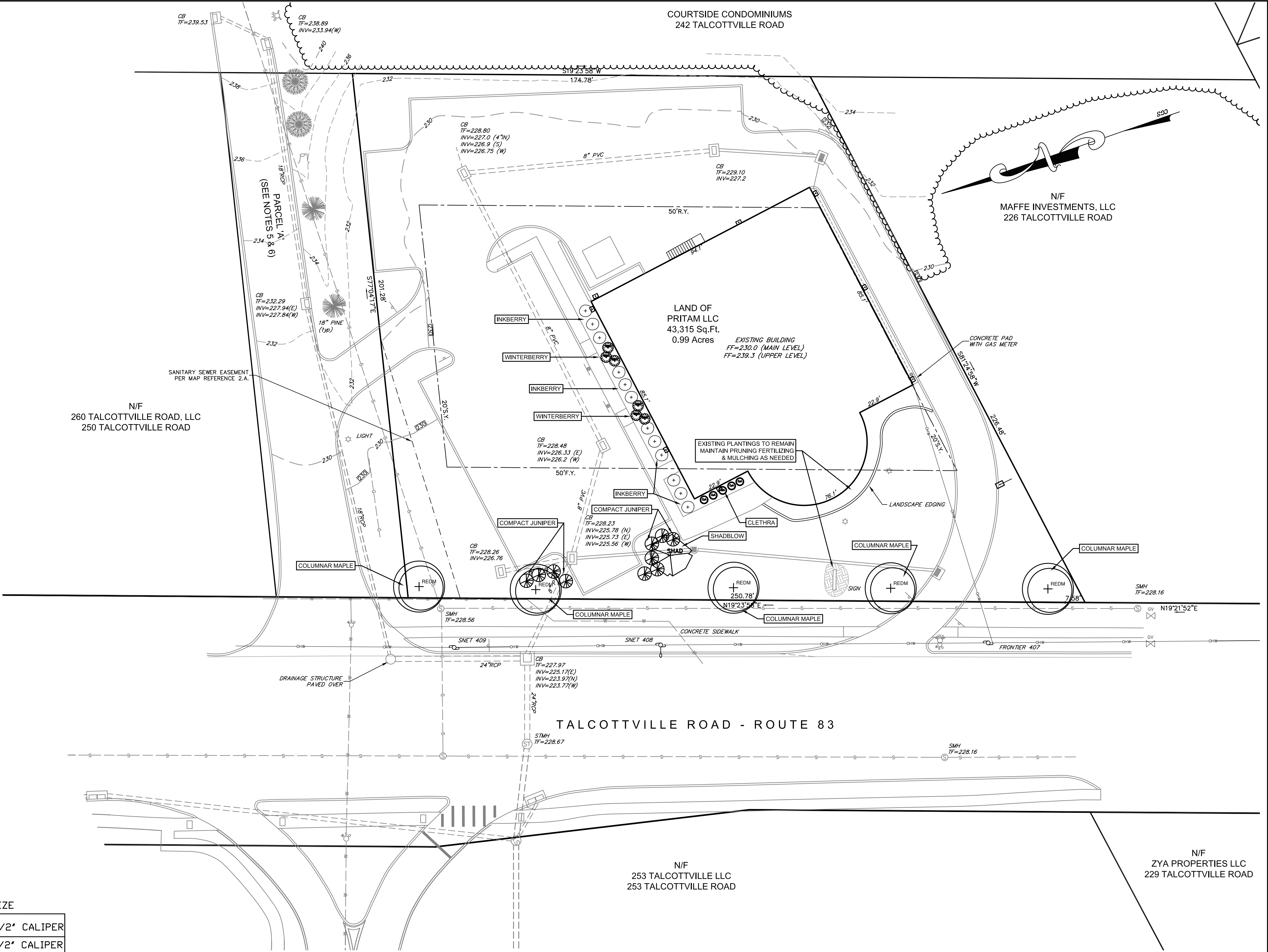
- NOTES:
- THIS MAP AND SURVEY HAVE BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20. THIS IS AN IMPROVEMENT LOCATION SURVEY BASED ON A DEPENDANT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS T-2.
 - MAP REFERENCE:
 - "BOUNDARY SURVEY MAP OF UTILITY EASEMENTS UPON PROPERTY TO BE CONVEYED TO COURTSIDE ASSOCIATES TALCOTTVILLE ROAD-ROUTE 83 VERNON, CONN." BY LUCEK ENGINEERING ASSOC. INC. DATE: 9-24-82. REVISED: 3-19-83.
 - "PLAN OF SUBDIVISION PROPERTY OF ANDREW ASHLAND AND JOSEPH TOTI ROUTE 83 VERNON, CONN." BY EMIL W. LUCEK ASSOCIATES. DATE: 2-24-78. REVISED: 4-10-79.
 - "IMPROVEMENT LOCATION SURVEY - PROPOSED FOR PARKING AT PLANET FITNESS, LLC ON PROPERTY OF PETER A. RUSCONI LOCATED AT 234 TALCOTTVILLE ROAD (A/K/A CONNECTICUT ROUTE 83) IN VERNON, CONNECTICUT. SCALE: 1"=20', SEPTEMBER, 1996 SHEET 1 OF 2". PREPARED BY WARD'S SURVEYING SERVICES.
 - "PRELIMINARY RIGHT OF WAY SURVEY STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP TOWN OF VERNON TALCOTTVILLE ROAD FROM PITKIN ROAD NORTHEASTERLY TO WINDSORVILLE ROAD" NUMBER: 146-11, APPROVED 10-94, SHEETS 3 & 4 OF 12.
 - "RIGHT OF WAY SURVEY TOWN OF VERNON MAP SHOWING LAND ACQUIRED FROM TALCOTTVILLE VERNON DEVELOPMENT, LLC BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION TALCOTTVILLE ROAD CONN. RTE. NO. 83. SCALE: 1"=100'. MAY 2018. THOMAS A. HARLEY, P.E. PROJ. NO. 146-000 SERIAL NO. 135.
 - "PLAN OF FIRST CUT 243 TALCOTTVILLE ROAD VERNON, CONNECTICUT" BY VHB. DATED OCTOBER 26, 2017, REVISED 1/18/2018. DRAWING NUMBER Su-1. PROJECT NUMBER 42120.00
 - "TOPOGRAPHIC SURVEY TAX ID 03-0004-00009 TAX ID 03-0004-0009B 243 & 253 TALCOTTVILLE ROAD VERNON, CONNECTICUT" BY VHB. DATE: MAY 15, 2015.
 - BEARINGS DEPICTED ON THIS PLAN ARE BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD 83) AS DEPICTED ON THE PLAN REFERENCED IN NOTE 3.D. ELEVATIONS DEPICTED ON THIS PLAN ARE BASED THE 1988 NORTH AMERICAN DATUM (NAVD 88) AS DEPICTED ON THE PLAN REFERENCED IN NOTE 3.G.
 - THIS PROPERTY IS LOCATED IN THE COMMERCIAL ZONE.
 - PER VOL.1835, P.84 THIS PARCEL HAS THE RIGHT TO PASS AND REPASS ON FOOT OR BY VEHICLE OR OTHERWISE OVER A CERTAIN STRIP OF LAND LOCATED ALONG THE NORTHERLY LINE OF THE AFORESAID DESCRIBED PREMISES (PARCEL 'A').
 - PARCEL 'A' AS DEPICTED IS SUBJECT TO EASEMENTS IN FAVOR OF THE CONNECTICUT WATER COMPANY, SOUTHERN NEW ENGLAND TELEPHONE COMPANY, CONNECTICUT LIGHT & POWER COMPANY, NORTHEAST UTILITIES, AND THE TOWN OF VERNON WATER POLLUTION CONTROL AUTHORITY.
 - UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPINGS AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO GARDNER & PETERSON ASSOCIATES, LLC. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
 - THIS PARCEL IS LOCATED IN FLOOD ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN) AS DEPICTED ON "FIRM FLOOD INSURANCE RATE MAP TOWN OF VERNON, CONNECTICUT TOLLAND COUNTY ONLY PANEL PRINTED COMMUNITY-PANEL NUMBER 090131 0005 C MAP REVISED AUGUST 9, 1998.
 - THIS PROJECT RESULTS IN A TOTAL OF 0.6 ACRES OF SITE DISTURBANCE.
- I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

Eric R. Peterson
ERIC R. PETERSON
L.S. 23430
REGISTRATION NO.



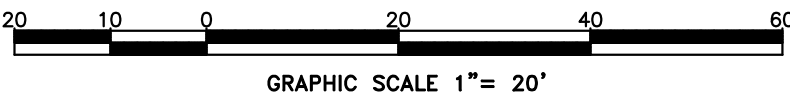
IMPROVEMENT LOCATION SURVEY				
SITE PLAN OF DEVELOPMENT				
PREPARED FOR				
LEAF STREET				
234 TALCOTTVILLE ROAD (RTE. 83)				
VERNON, CONNECTICUT				
GARDNER & PETERSON ASSOCIATES, LLC				
178 HARTFORD TURNPIKE				
TOLLAND, CONNECTICUT				
PROFESSIONAL ENGINEERS		LAND SURVEYORS		
BY	SCALE	DATE	SHEET NO.	MAP NO.
E.R.P.	1"=20'	12-30-2022	2 OF 7	10265A

LEGEND	
PROPERTY LINE	=====
ZONING SETBACK	-----
OVERHEAD WIRES	-----○-----
EDGE PAVEMENT	=====
BITUMINOUS CURB	=====
CATCH BASIN	□
SEWER MANHOLE	⊙
WATER GATE	⊕
UTILITY POLE	⊙
EXISTING CONTOUR	- - - - -
APPX. WATERLINE	- - - - -
APPX. GAS	- - - - -
LIGHT POST	⊙
TREELINE	~~~~~
PROPOSED CURB	=====
PROPOSED CONTOUR	=====
PROPOSED CATCH BASIN	□
PROPOSED YARD DRAIN	⊙
PROPOSED DRAINAGE	=====
PROPOSED LIGHT	⊙





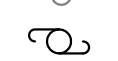
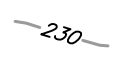




CBVD:
UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO GARDNER & PETERSON ASSOCIATES, LLC. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

PLANTING SPECIFICATIONS			
SYMBOL	SCIENTIFIC/ COMMON NAME	QUANTITY	SIZE
	ACER RUBRUM 'COLUMNARE'/ COLUMNAR RED MAPLE	5	3 - 3 1/2' CALIPER
	AMELANCHIER CANADENSIS/ SHADBLOW, SERVICEBERRY	1	3 - 3 1/2' CALIPER
	CLETHRA ALNIFOLIA 'HUMMINGBIRD'/ SUMMERSWEET CLETHRA	5	18 - 21'
	ILEX GLABRA /INKBERRY	12	3 - 4'
	ILEX VERTICILLATA 'RED SPRITE'/ WINTERBERRY	6	18 - 21'
	JUNIPERUS CHINENSIS PF. PLUMOSA/ COMPACT JUNIPER	10	24'-36'
<ol style="list-style-type: none"> LAWN AREAS TO BE THE FOLLOWING MIX: 25% PERENNIAL RYE, 25% CHEWINGS FESCUE, 25% CREEPING RED FESCUE, 25% KENTUCKY BLUEGRASS ALL DISTURBED AREAS NOT COVERED BY BUILDING, PAVING, PLANTING BEDS, OR OTHER IMPROVEMENTS SHALL BE GRADED, TOPSOILED TO A DEPTH OF 6" AND FERTILIZED. PLANT BEDS SHALL BE TOPSOILED TO A DEPTH OF 12". CONTRACTOR SHALL MULCH ALL PLANT BEDS TO A DEPTH OF 2" WITH SHREDDED BARK MULCH. ALL PLANT SPECIES TO CONFORM TO AAN MOST RECENT PLANT SPECIFICATIONS. 			



LANDSCAPING PLAN

SITE PLAN OF DEVELOPMENT PREPARED FOR LEAF STREET 234 TALCOTTVILLE ROAD (RTE. 83) VERNON, CONNECTICUT				
REVISIONS	GARDNER & PETERSON ASSOCIATES, LLC 178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT			
	BY	SCALE	DATE	SHEET NO.
	E.R.P.	1"=20'	12-30-2022	3 OF 7
				MAP NO.
				10265A

LEGEND	
PROPERTY LINE	=====
ZONING SETBACK	-----
OVERHEAD WIRES	-----
EDGE PAVEMENT	=====
BITUMINOUS CURB	=====
CATCH BASIN	
SEWER MANHOLE	
WATER GATE	
UTILITY POLE	
EXISTING CONTOUR	-----
APPX. WATERLINE	-----
APPX. GAS	-----
LIGHT POST	
TREELINE	=====
PROPOSED CURB	=====
PROPOSED CONTOUR	-----
PROPOSED CATCH BASIN	
PROPOSED YARD DRAIN	
PROPOSED DRAINAGE	-----
PROPOSED LIGHT	



D-Series Size 1 LED Area Luminaire



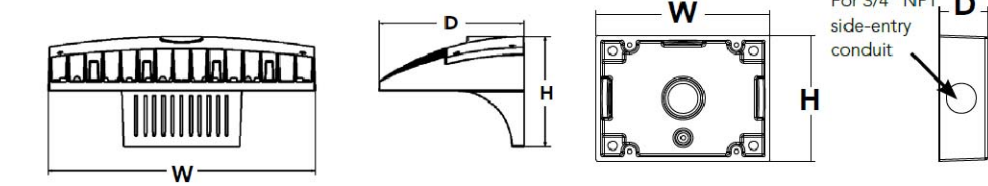
EPA:	0.69 ft ² (0.06 m ²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)



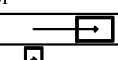

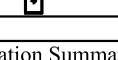
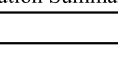
D-Series Size 2 LED Wall Luminaire



Specifications Luminaire		Back Box (BBW)	
Width:	18-1/2" (47.0 cm)	Width:	5-1/2" (14.0 cm)
Depth:	10" (25.4 cm)	Depth:	1-1/2" (3.8 cm)
Height:	7-5/8" (19.4 cm)	Height:	4" (10.2 cm)
Weight:	21 lbs (9.5 kg)	Weight:	1 lb (0.5 kg)



Filename: Prime Wellness - 242 Talcottville Road Site Lighting - Vernon - REV 1.AGI

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Luminaire Lumens	Luminaire Watts	LLF	Description
	1	SL4H	Single	10337	102.17	0.900	Lithonia DSX1 LED P3 40K 70CRI BLC4 MVOLT SPA PIR FINISH - SSS 20 4C DM19AS FINISH 20FT POLE
	3	W1-2	Single	1521	13.3	0.900	Lithonia DSXW1 LED 10C 350 40K T2S MVOLT BBW PIR FINISH
	2	W1-4	Single	3944	38.8	0.900	Lithonia DSXW1 LED 10C 1000 40K TFTM MVOLT BBW PIR FINISH
	3	W2-4	Single	11119	109	0.900	Lithonia DSXW2 LED 30C 1000 40K TFTM MVOLT BBW PIR FINISH

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Min
SITE	Illuminance	Fc	0.50	5.5	0.0	N.A.
NORTH PARKING	Illuminance	Fc	1.70	5.4	0.3	5.67
WEST PARKING	Illuminance	Fc	0.95	5.5	0.1	9.50

Greg Loda
Lighting Affiliates
1208 Cromwell Ave
Rocky Hill, CT 06067
website: www.lightingaffiliates.com
Voice Number: (860) 721-1171 x 219
Email Address: gloda@lightingaffiliates.com



CBVD:
UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO GARDNER & PETERSON ASSOCIATES, LLC. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

EXTERIOR LIGHTING PLAN

SITE PLAN OF DEVELOPMENT
PREPARED FOR
LEAF STREET
234 TALCOTTVILLE ROAD (RTE. 83)
VERNON, CONNECTICUT

GARDNER & PETERSON ASSOCIATES, LLC

178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

BY	SCALE	DATE	SHEET NO.	MAP NO.
E.R.P.	1"=20'	12-30-2022	4 OF 7	10265A

LEGEND	
PROPERTY LINE	
ZONING SETBACK	
OVERHEAD WIRES	
EDGE PAVEMENT	
BITUMINOUS CURB	
CATCH BASIN	
SEWER MANHOLE	
WATER GATE	
UTILITY POLE	
EXISTING CONTOUR	
EXISTING ELEVATION	
APPX. WATERLINE	
APPX. GAS	
EXISTING TREELINE	
PROPOSED CURB	
PROPOSED CONTOUR	
PROPOSED CATCH BASIN	
PROPOSED YARD DRAIN	
PROPOSED DRAINAGE	
SEDIMENT BARRIER	

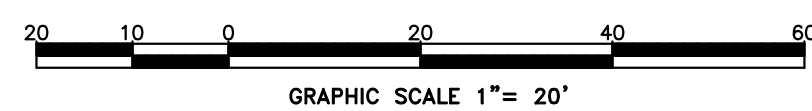
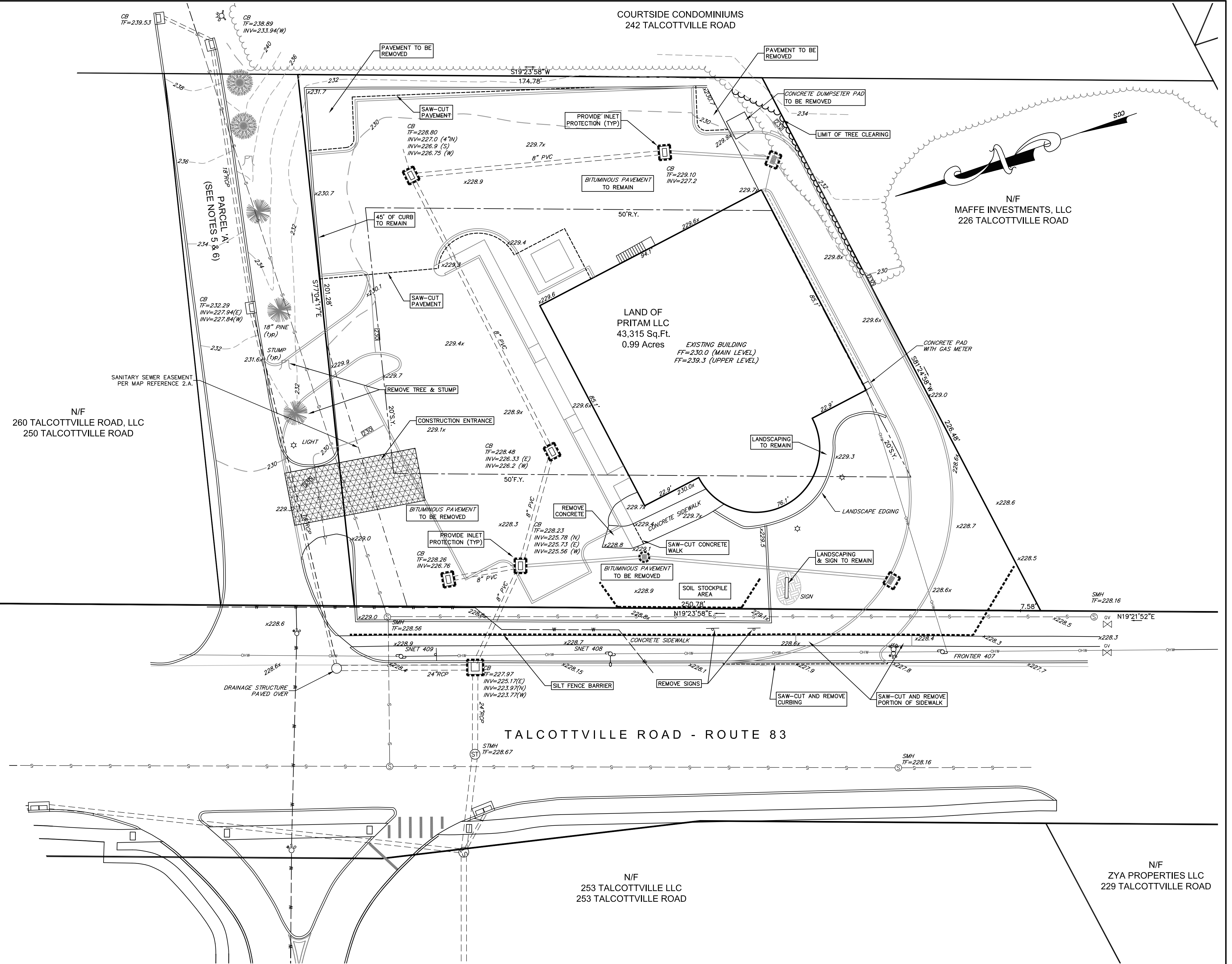
NOTES:

- THIS MAP AND SURVEY HAVE BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300B-1 THROUGH 20-300B-20. THIS IS AN IMPROVEMENT LOCATION SURVEY BASED ON A DEPENDANT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS 1-2.
2. MAP REFERENCE:
- A. "BOUNDARY SURVEY MAP OF UTILITY EASEMENTS UPON PROPERTY TO BE CONVEYED TO COURTSIDE ASSOCIATES TALLCOTTVILLE ROAD-ROUTE 83 VERNON, CONN.," BY LUCEK ENGINEERING ASSOC. INC. DATE: 9-24-82. REVISED: 5-19-83.
- B. "BOUNDARY SURVEY OF THE PROPERTY OF ANDREW KASHLAND AND JOSEPH TETZL ROUTE 83 VERNON, CONN.," BY EMIL W. LUCEK ASSOCIATES. DATE: 2-24-78. REVISED: 4-10-79.
- C. "IMPROVEMENT LOCATION SURVEY - PROPOSED FOR PARKING AT PLANET FITNESS, LLC, THE PROPERTY OF PETER A. RUSCONI LOCATED AT 234 TALLCOTTVILLE ROAD (A/K/A CONNECTICUT ROUTE 83) IN VERNON, CONNECTICUT. SCALE: 1"=20'. SEPTEMBER, 1996 SHEET 1 OF 2". PREPARED BY WARD'S SURVEYING SERVICES.
- D. "PRELIMINARY RIGHT OF WAY SURVEY STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP TOWN OF VERNON TALLCOTTVILLE ROAD FROM PITKIN ROAD NORTHEASTERLY TO WINDSORVILLE ROAD" NUMBER: 146-11, APPROVED 10-94, SHEETS 3 & 4 OF 12.
- E. "RIGHT OF WAY SURVEY TOWN OF VERNON MAP SHOWING LAND ACQUIRED FROM TALLCOTTVILLE DEVELOPMENT, LLC BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION TALLCOTTVILLE ROAD CONN. RITE NO. 83. SCALE: 1"=100'. MAY 2018. THOMAS A. HARLEY, P.E. PROJE. NO. 146-000 SERIAL NO. 135.
- F. "PLAN OF FIRST CUT 234 TALLCOTTVILLE ROAD VERNON, CONNECTICUT" BY VHB. DATED OCTOBER 26, 2017, REVISED 1/18/2018. DRAWING NUMBER Su-1. PROJECT NUMBER 41220-00.
- G. "TOPOGRAPHIC SURVEY TAX ID 03-00004-00009 TAX ID 03-00004-0009B 243 & 253 TALLCOTTVILLE ROAD VERNON, CONNECTICUT" BY VHB. DATE: MAY 15, 2015.
3. BEARINGS DEPICTED ON THIS PLAN ARE BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD 83) AS DEPICTED ON THE PLAN REFERENCED IN NOTE 3.D. ELEVATIONS DEPICTED ON THIS PLAN ARE BASED THE 1988 NORTH AMERICAN DATUM (NAVD 88) AS DEPICTED ON THE PLAN REFERENCED IN NOTE 3.G.
4. THIS PROPERTY IS LOCATED IN THE COMMERCIAL ZONE.
5. PER VOL.1835, P.84 THIS PARCEL HAS THE RIGHT TO PASS AND REPASS ON FOOT OR BY VEHICLE OR OTHERWISE OVER A CERTAIN STRIP OF LAND LOCATED ALONG THE NORTHERLY LINE OF THE AFORESAID DESCRIBED PREMISES (PARCEL 'A').
6. PARCEL 'A' AS DEPICTED IS SUBJECT TO EASEMENTS IN FAVOR OF THE CONNECTICUT WATER COMPANY, SOUTHERN NEW ENGLAND TELEPHONE COMPANY, CONNECTICUT LIGHT & POWER COMPANY, NORTHEAST UTILITIES, AND THE TOWN OF VERNON WATER POLLUTION CONTROL AUTHORITY.
7. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN OBTAINED FROM RECORD MAPS AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO THE ENGINEER. THEREFORE, THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
8. THIS PARCEL IS LOCATED IN FLOOD ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN) AS DEPICTED ON "FIRM FLOOD INSURANCE RATE MAP TOWN OF VERNON CONN. COUNTY OF FLETCHER HARTSHORN P.C. PRINTED COMMUNITY-PAN PROJECT NUMBER 090311 0005 C MAP REVISED AUGUST 9, 1999.
9. THIS PROJECT RESULTS IN A TOTAL OF 0.6 ACRES OF SITE DISTURBANCE.
- I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

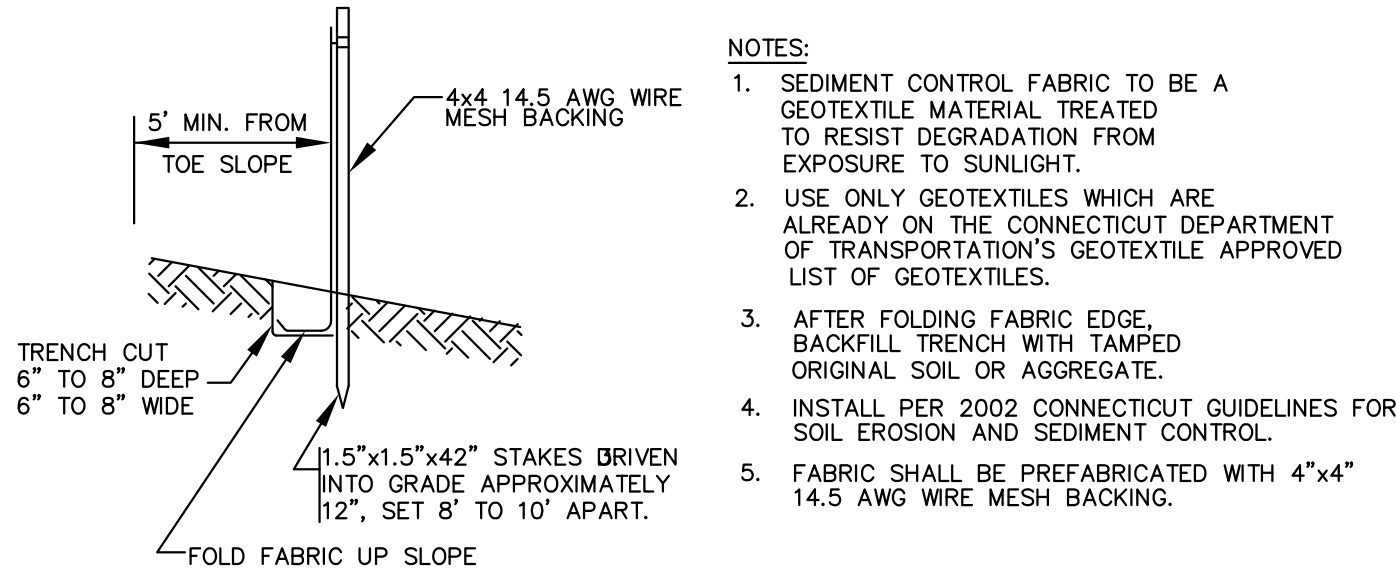
I HEREBY DECLARE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF
THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

Eric R. Peterson
ERIC R. PETERSON

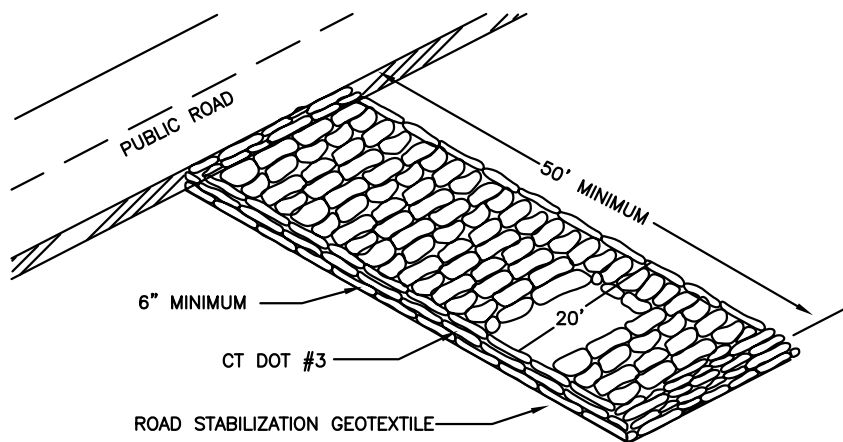
L.S. 23430
REGISTRATION NO.



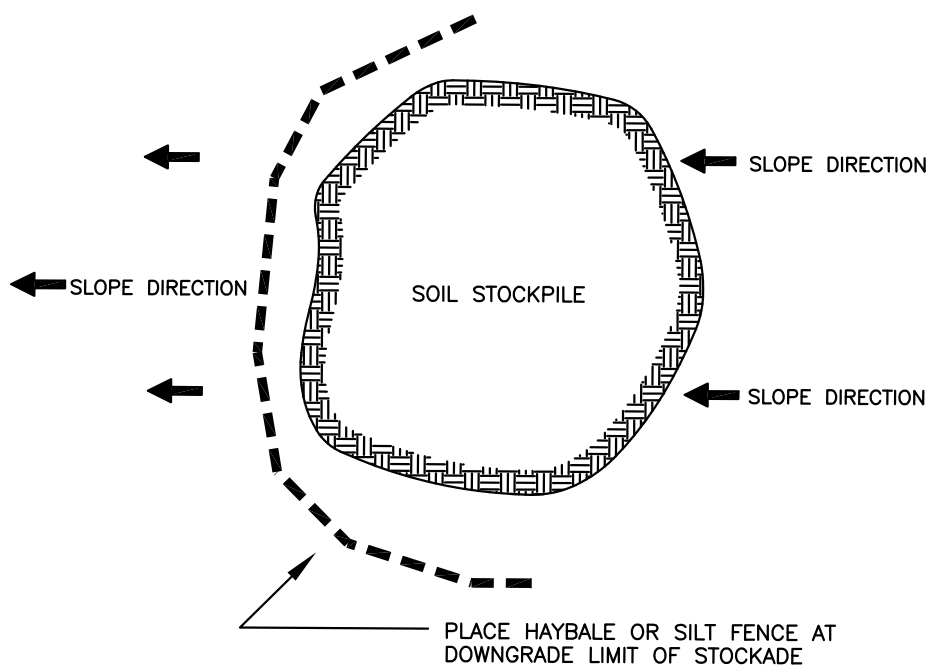
<p style="text-align: center;">IMPROVEMENT LOCATION SURVEY</p> <p style="text-align: center;">EROSION & SEDIMENT CONTROL PLAN</p> <p style="text-align: center;">PREPARED FOR</p> <p style="text-align: center;">LEAF STREET</p> <p style="text-align: center;">234 TALCOTTVILLE ROAD (RTE. 83)</p> <p style="text-align: center;">VERNON, CONNECTICUT</p>				
<p>REVISIONS</p>		<p style="text-align: center;">GARDNER & PETERSON ASSOCIATES, LLC</p> <p style="text-align: center;">178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT</p> <p style="text-align: center;">PROFESSIONAL ENGINEERS LAND SURVEYORS</p>		
<p>BY</p> <p>E.R.P.</p>	<p>SCALE</p> <p>1"=20'</p>	<p>DATE</p> <p>12-30-2022</p>	<p>SHEET NO.</p> <p>5 OF 7</p>	<p>MAP NO.</p> <p>10265A</p>



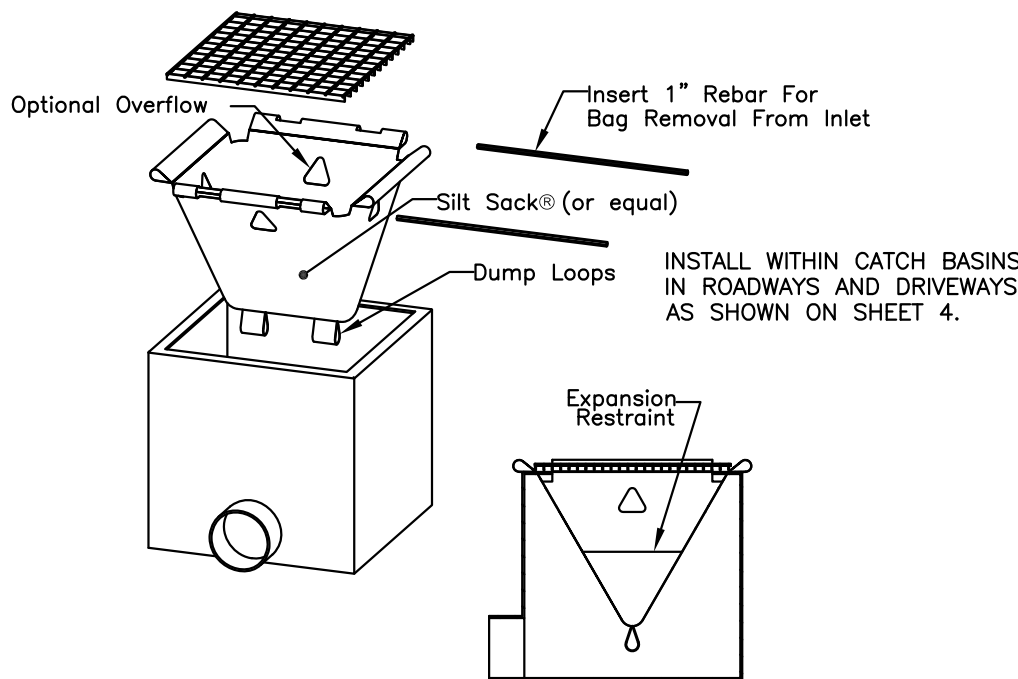
SILT FENCE INSTALLATION



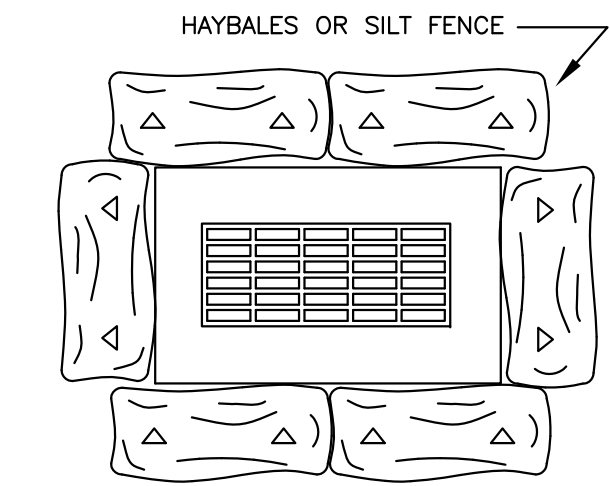
CONSTRUCTION ENTRANCE



STOCKPILE EROSION PROTECTION DETAIL



CATCH BASIN INLET PROTECTION



CATCH BASIN AT LOW POINT

Stormwater System Maintenance Schedule

Maintenance Item	Frequency	Maintenance
Catch Basins	Monthly	<ul style="list-style-type: none">Inspect grates for litter and debris and remove as needed
	Annually	<ul style="list-style-type: none">Remove sediment in sumps immediately after spring snowmelt

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.
- ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE THE FINISHED GRADING OF ALL EXPOSED AREAS.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO MINIMIZE EROSION, SLIPPAGE, AND SETTLEMENT. FILL INTENDED TO SUPPORT STRUCTURES, DRAINAGE, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH THE APPROPRIATE STATE AND/OR LOCAL SPECIFICATIONS.
- FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, LARGE ROCKS, LOGS, STUMPS, BUILDING MATERIAL, COMPRESSIBLE MATERIAL, AND OTHER MATERIALS WHICH MAY INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIAL OR SOFT MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION.
- ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH SOUND CONSTRUCTION PRACTICE.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISH GRADING. IF FINISH GRADING IS TO BE DELAYED FOR MORE THAN 30 DAYS AFTER DISTURBANCE IS COMPLETE, TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED. AREAS LEFT OVER 30 DAYS SHALL BE CONSIDERED "LONG TERM" AND SHALL RECEIVE TEMPORARY SEEDING WITHIN THE FIRST 15 DAYS.
- SITE IS TO BE GRADED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCHING, AND MAINTENANCE UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- CUT AND FILL SLOPES SHALL NOT BE STEEPER THAN 2:1. TOPSOIL SHALL BE SPREAD TO A MINIMUM DEPTH OF 4". ADDITIONAL TOPSOIL MAY BE REQUIRED TO MEET MINIMUM DEPTHS. NO TOPSOIL SHALL BE REMOVED FROM THIS SITE.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4" TO 1/2" INCH. HYDROSEEDING WHICH IS MULCHED MAY BE LEFT ON THE SOIL SURFACE.
- WHERE FEASIBLE, EXCEPT WHERE EITHER A CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING WITH A ROLLER OR LIGHT DRAG.
- FERTILIZER AND LIME ARE TO BE WORKED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISC OPERATION SHOULD BE ALONG THE CONTOUR.
- REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER. REMOVE ALL OTHER DEBRIS SUCH AS WIRE, TREE ROOTS, PIECES OF CONCRETE, OR OTHER UNSUITABLE MATERIALS.
- INSPECT SEEDBED BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED BEFORE SEEDING, THEN FIRMED AS DESCRIBED ABOVE.
- WHERE GRASSES PREDOMINATE, FERTILIZE ACCORDING TO SOIL ANALYSIS, OR SPREAD 300 POUNDS OF 10-10-10 OR EQUIVALENT PER ACRE (7.5 POUNDS PER 1000 S.F.).
- CALCIUM CHLORIDE WILL BE AVAILABLE FOR DUST CONTROL ON GRAVEL TRAVEL SURFACES.

TURF MANAGEMENT PLAN

- Soil Testing**
A composite soil sample from the subject property will be collected and delivered to a University of Connecticut Cooperative Extension office for testing of soil nutrient levels (i.e., pH, nitrogen, phosphorus, calcium, magnesium, potassium) prior to a fertilizer application. The Extension office will recommend a fertilizer application rate based upon these test results. The actual fertilizer application rate will follow this recommendation. This will ensure against an excessive fertilizer application, which could lead to chemical leaching or export.
- Slow-Release Fertilizers**
Slow-release fertilizers will be applied to lawns, planted trees and shrubs. These can include, but are not limited to, organic-based fertilizers. A variety of commercial slow-release nitrogen fertilizer products are available (e.g., Milorganite, isobutylidene diurea, coated ureas, etc.). Advantages of slow-release fertilizers include the supply of a steady nitrogen source, and reduced nitrogen leaching. By combining small amounts of soluble nitrogen sources with slow release nitrogen products, nitrogen availability can be extended without a threat of leaching.
- Fertilizer Application Schedule**
Fertilizer will be applied three times annually to the subject property: early to late May (after the threat of cool, wet weather has passed), late August to early September, and mid-September to mid-October. If the soil test indicates a need for lime, it will be applied at the last fertilization date.
- Integrated Pest Management (IPM)**
IPM is an integrated, preventative approach to maintaining healthy turf and landscape plants. IPM recognizes that, although chemicals are an important component of a turf management plan, other strategies are available to maintain a healthy lawn. A central premise of IPM is to treat pest problems as they arise on an as-needed basis only, using a variety of biological (e.g., natural predators), chemical and cultural (e.g., disease-resistant seed) practices.

To be successful, IPM requires periodic monitoring by an experienced practitioner to detect pest problems at an early stage and develop an effective, environmentally responsible action plan. It is recommended that the contractor that is hired to maintain the grounds have training and experience in the practice of IPM.

CONSTRUCTION SCHEDULE & EROSION & SEDIMENT CONTROL CHECKLIST

PROJECT NAME: LEAF STREET

LOCATION: 234 TALCOTTVILLE ROAD - VERNON, CT

PROJECT DESCRIPTION: CANNABIS DISPENSARY

PARCEL AREA: 0.99 AC.

RESPONSIBLE PERSONNEL: B. TINSLEY 646-600-9181

WORK DESCRIPTION	EROSION & SEDIMENT CONTROL MEASURES	DATE INSTALLED	INITIALS
CLEAR TREES AND BRUSH	INSTALL ANTI-TRACKING PAD		
REMOVE STUMPS	INSTALL SILT FENCE BARRIERS DOWNGRADE OF CONSTRUCTION ACTIVITY AS SHOWN		
CUT PAVEMENT	INSTALL INLET PROTECTION IN EXISTING CATCH BASINS		
INSTALL DRAINAGE	INSPECT AND MAINTAIN SEDIMENT BARRIERS WEEKLY AND AFTER RAIN EVENTS OVER 0.5-INCH.		
ROUGH GRADE SITE	INSTALL HAYBALES AROUND NEW CATCH BASIN INLETS ONCE INSTALLED		
POUR CONCRETE			
FINAL GRADE AND FINAL PAVE	TOPSOIL, SEED AND MULCH SITE		
	REMOVE SEDIMENT FROM DRAINAGE STRUCTURES		
	REMOVE EROSION CONTROLS WHEN SITE IS STABILIZED		

PROJECT DATES:

DATE OF CONSTRUCTION START MARCH 1, 2023

DATE OF CONSTRUCTION COMPLETION SEPTEMBER 1, 2023

EROSION AND SEDIMENT CONTROL PROCEDURES SHALL ESSENTIALLY BE IN ACCORDANCE WITH THESE PLANS, AS REQUIRED BY TOWN REGULATIONS, AND THE MANUAL, "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" FOR CONNECTICUT, BY THE COUNCIL ON SOIL AND WATER CONSERVATION, 1985, REVISED TO 2002.

PROJECT NARRATIVE

The purpose of this project is to convert the existing building on-site to a cannabis dispensary and utilize the existing utilities to service the building. The building is serviced by public water and sanitary sewer. A new curb cut off the existing shared site drive will be used to access the site and a new curb cut on Talcottville Road will be construct for vehicles to exit the site.

Construction activities shall commence with the installation of the construction entrance followed by tree cutting. Sedimentation barriers shall be installed prior to stumping.

Installation of the drainage structures, and piping shall proceed as the construction schedule allows. Leave grade 6" below catch basin tops to prevent silt laden runoff from entering the drainage system.

Completion of storm drainage is to be followed by placing processed gravel, and final grading of the paved areas. All erosion control measures shall be maintained and upgraded, as needed until stable vegetative growth has been established. At all times erosion of exposed and stockpiled materials shall be prevented using measures specified in these plans. Once the site is stabilized, sediment within the drainage system will be erosion control measures can be removed.

Proposed soil erosion and sediment control measures were designed using criteria set forth by the "Connecticut Guidelines for Soil Erosion and Sediment Control", revised to 2002.

TEMPORARY SEEDING SCHEDULE:

SPECIES	LBS/ACRE	LBS/1000SF	SEEDING DATES
ANNUAL RYEGRASS	40	1.0	3/1-6/15, 8/1-10/15
WINTER RYE	120	3.0	4/15-7/1, 8/15-10/15
SUDANGRASS	30	0.7	5/15-8/1

TEMPORARY SEEDING IS NOT LIMITED TO THE SPECIES SHOWN. OTHER SPECIES RECOMMENDED BY THE SCS OR AS LIMITED BY SITE CONDITIONS MAY BE USED.

STRAW MULCH IS TO BE APPLIED TO SEEDED AREA AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE, 70 TO 90 LBS. PER 1000 SQ. FT.

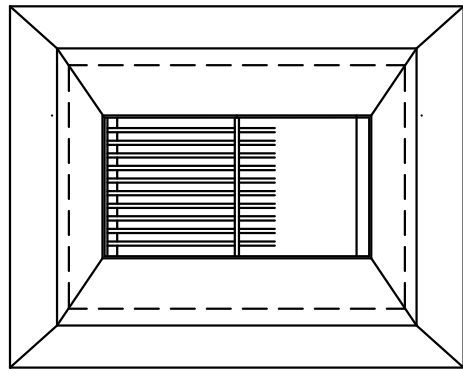
FINAL SEEDING SCHEDULE:

PROVIDE 4 INCHES OF TOPSOIL MINIMUM, FREE OF ROOTS, LARGE STONES, AND OTHER OBJECTS.

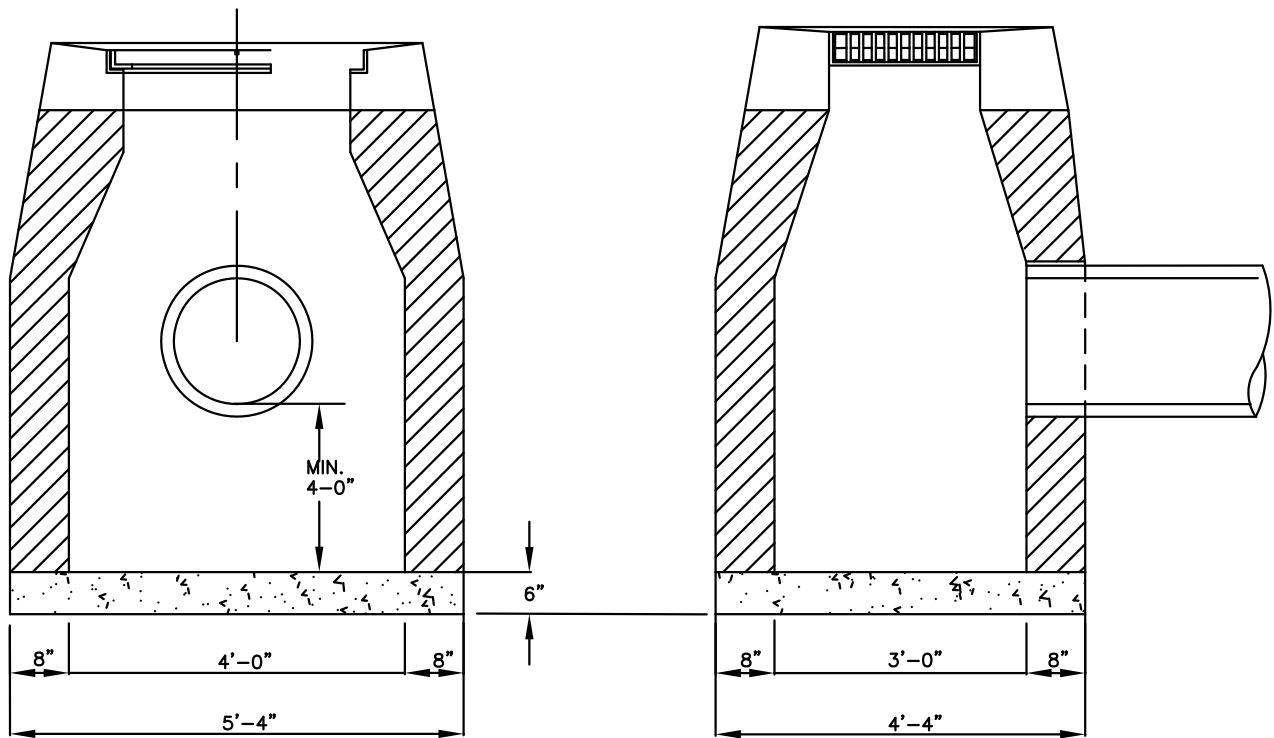
SPECIES	LBS/ACRE	LBS/1000SF	SEEDING DATES
KENTUCKY BLUEGRASS	20	0.45	4/1-6/15, 8/15-10/1
CREeping RED FESCUE	20	0.45	4/1-6/15, 8/15-10/1
PERENNIAL RYEGRASS	5	0.10	4/1-6/15, 8/15-10/1
TOTAL	45	1.00	

EROSION & SEDIMENT CONTROL DETAILS

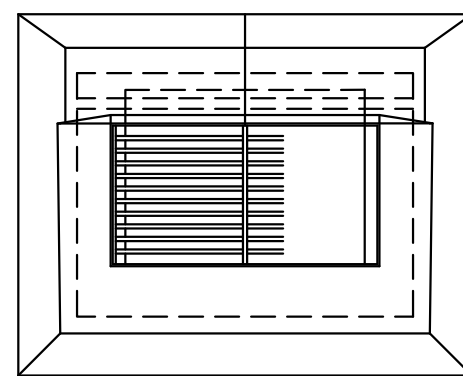
SITE PLAN OF DEVELOPMENT PREPARED FOR LEAF STREET 234 TALCOTTVILLE ROAD (RTE. 83) VERNON, CONNECTICUT					
REVISIONS	GARDNER & PETERSON ASSOCIATES, LLC 178 HARTFORD TURNPIKE TOLLAND, CONNECTICUT				
	PROFESSIONAL ENGINEERS		LAND SURVEYORS		
	BY E.R.P.	SCALE N.T.S.	DATE 12-30-2022	SHEET NO. 6 OF 7	MAP NO. 10265B



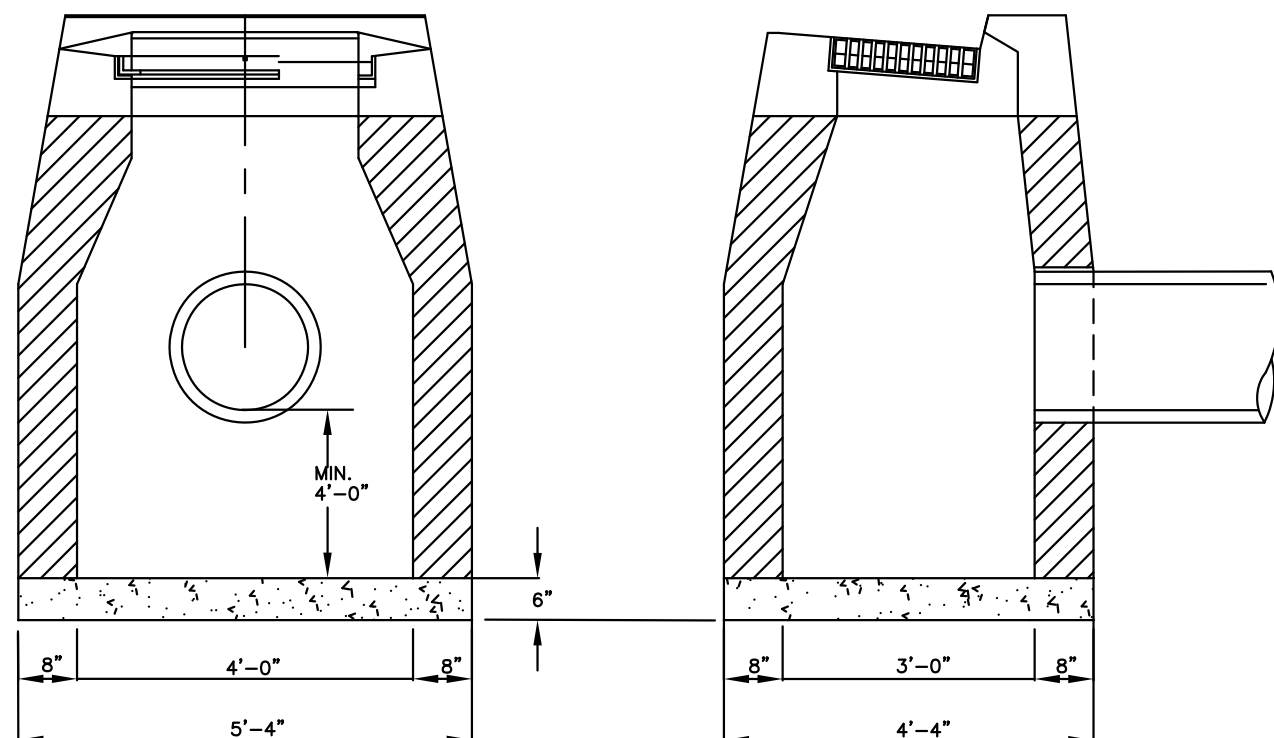
- NOTES:
1. TYPE "C-L" CATCH BASIN TOPS SHALL CONFORM TO CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION M. 08. 02-4.
 2. STRUCTURE TO BE PRECAST CLASS 'A' CONCRETE, OR MASONRY CONCRETE UNITS. WHERE MASONRY CONCRETE UNITS ARE USED CORBELLING WILL BE PERMITTED. MAXIMUM CORBEL TO BE 3".
 3. SUMPS TO BE PRECAST CONCRETE OR CONSTRUCTED ON A CONCRETE SLAB. WHERE PRECAST UNIT IS USED FOR SUMP, THE TOP OF THE UNIT SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE OUTLETING FROM THE CATCH BASIN.
 4. WHERE CATCH BASIN IS CONSTRUCTED ON A SLOPE, GUTTER TO MATCH PAVEMENT SLOPE.



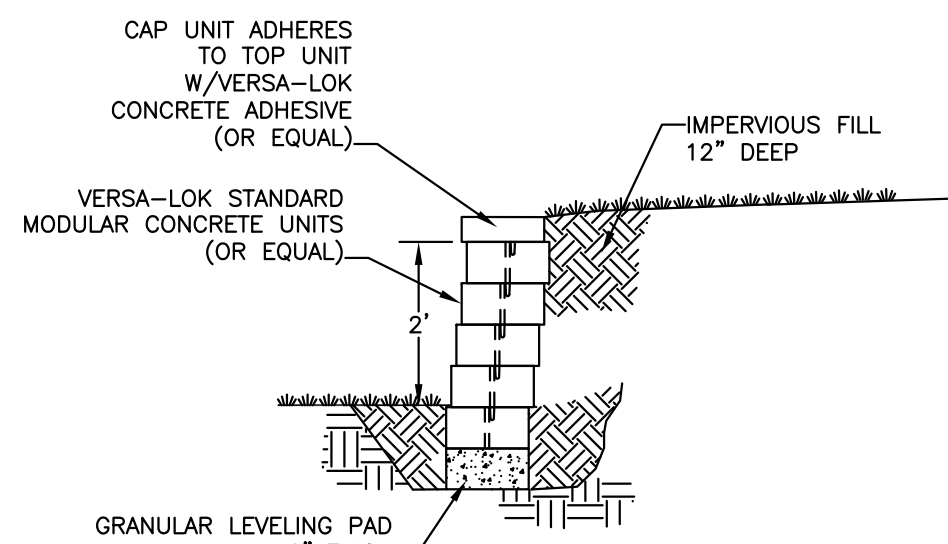
TYPE "C-L" CATCH BASIN



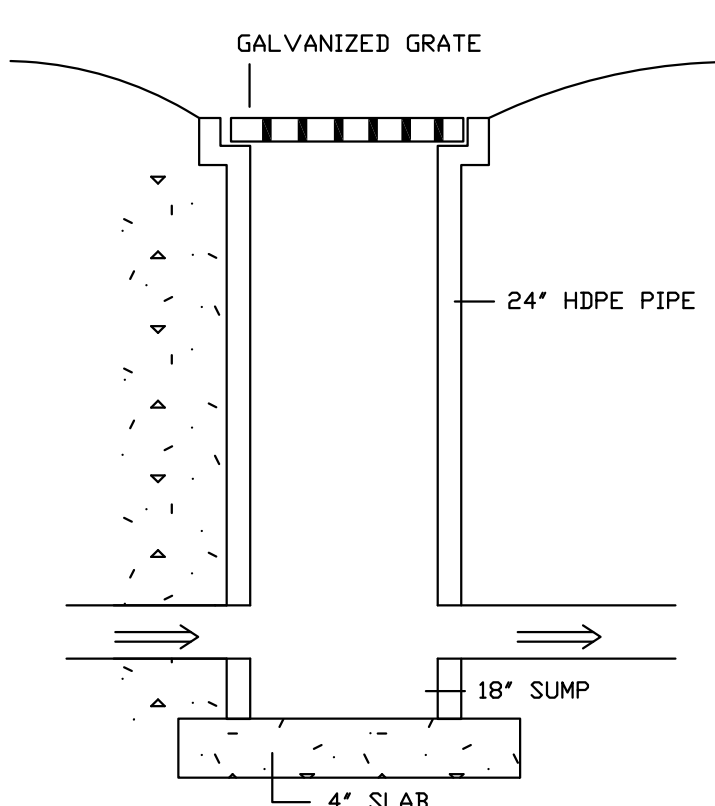
- NOTES:
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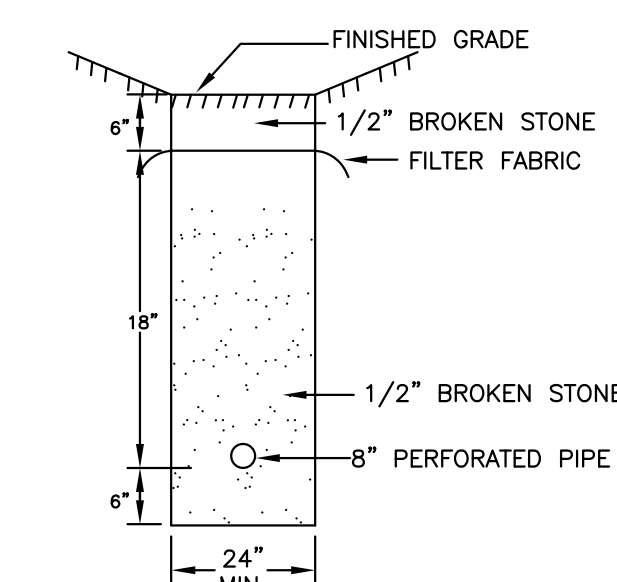
TYPE "C" CATCH BASIN



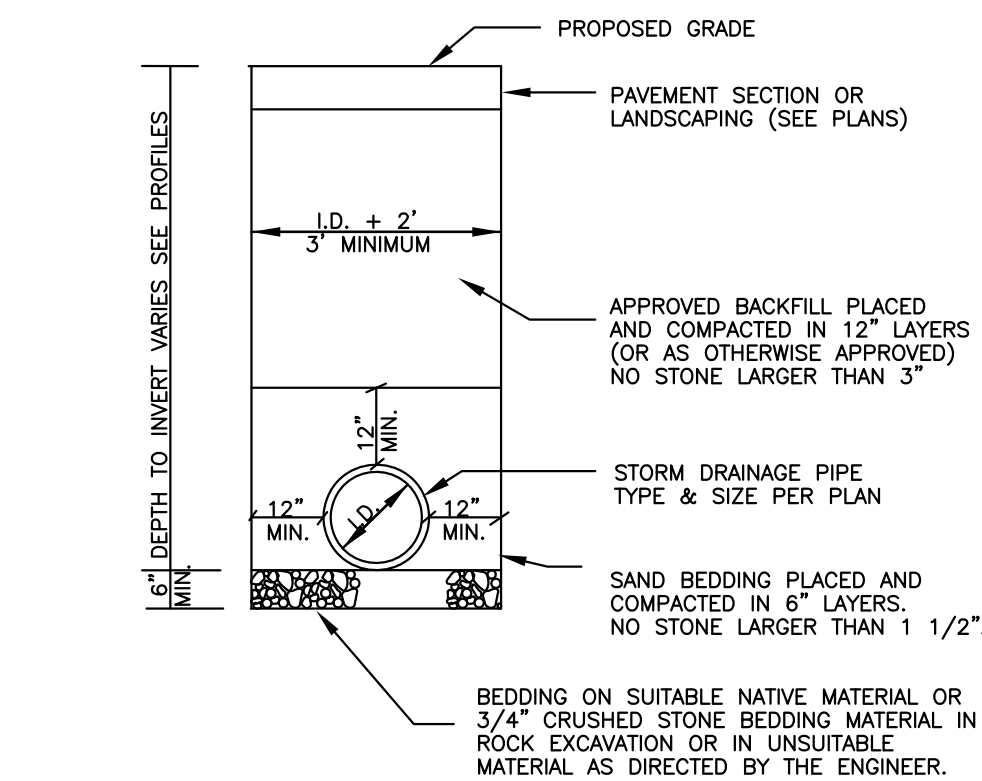
TYPICAL SECTION-UNREINFORCED RETAINING WALL



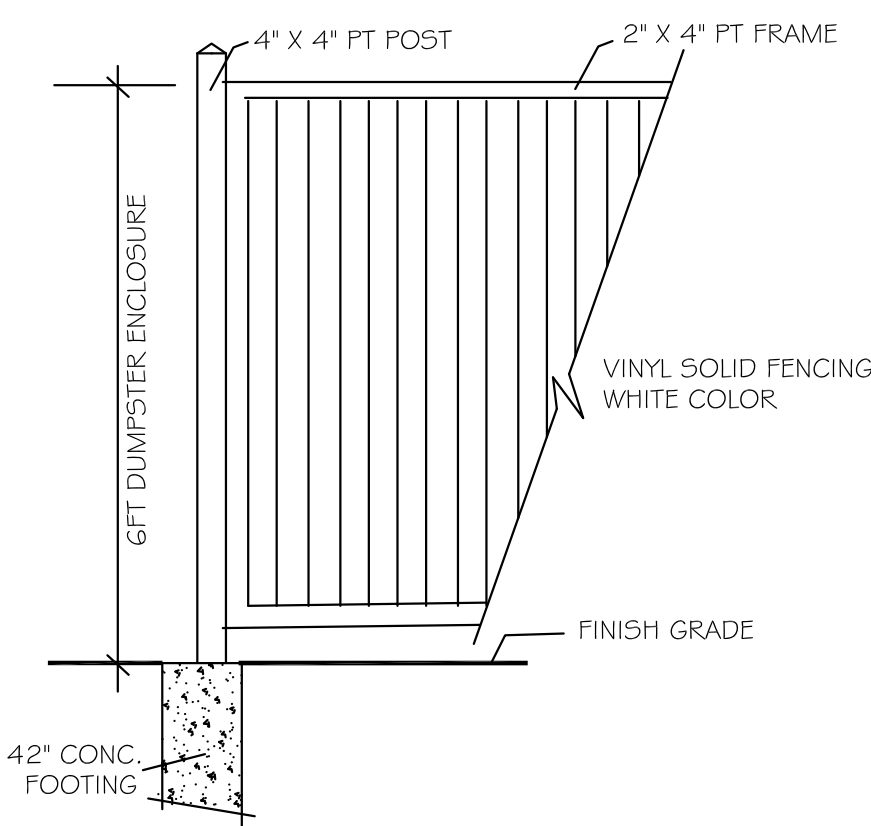
YARD DRAIN



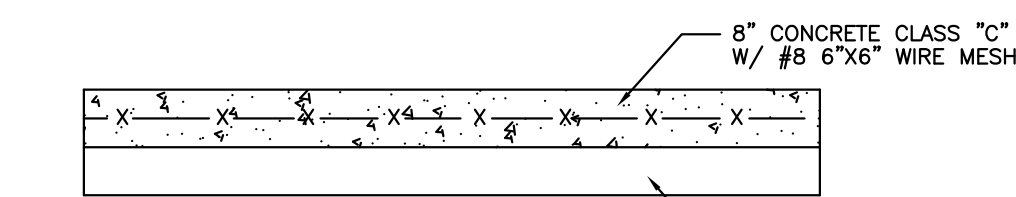
FRENCH DRAIN



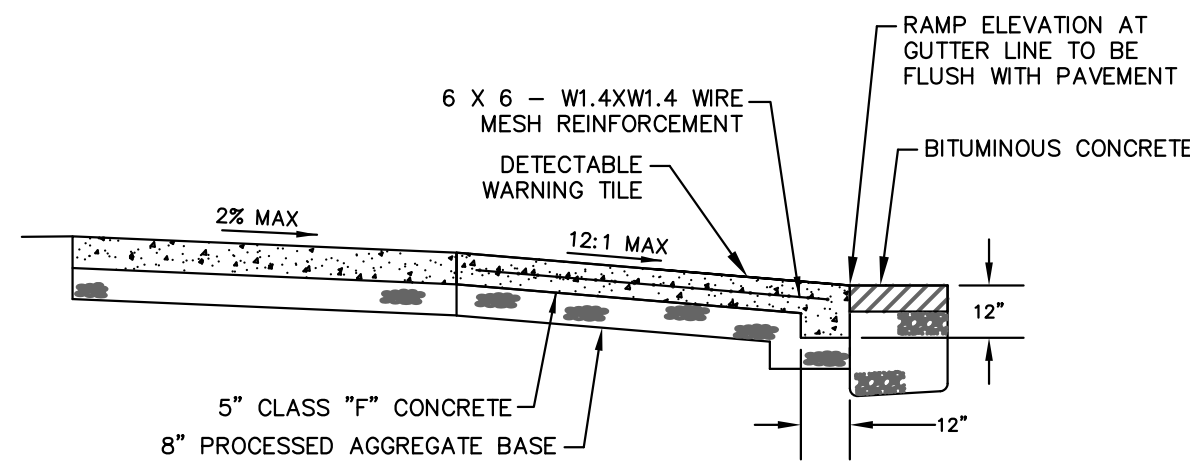
STORM DRAIN TRENCH DETAIL



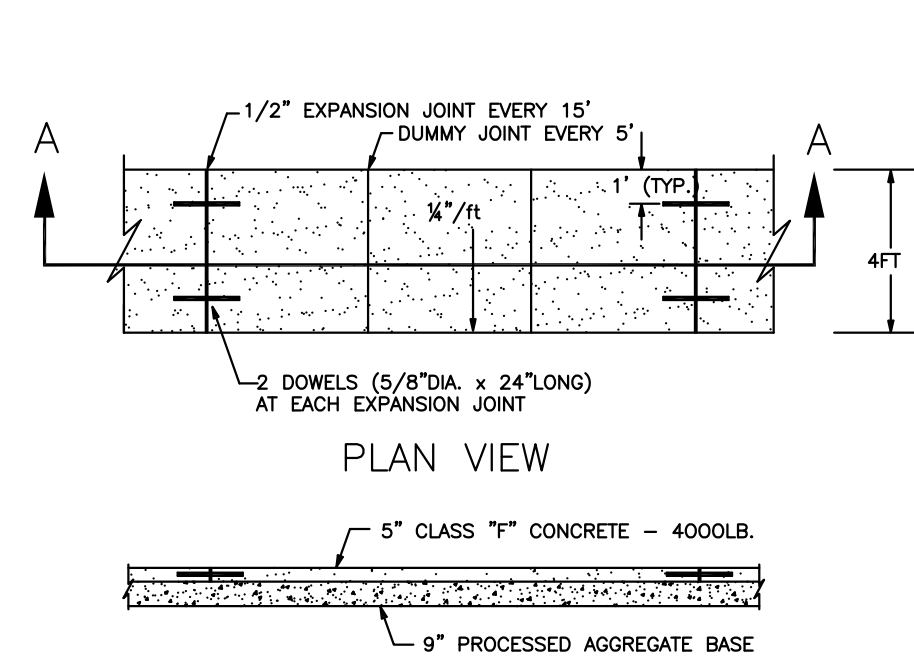
DUMPSTER ENCLOSURE DETAIL



CONCRETE DUMPSTER PAD DETAIL

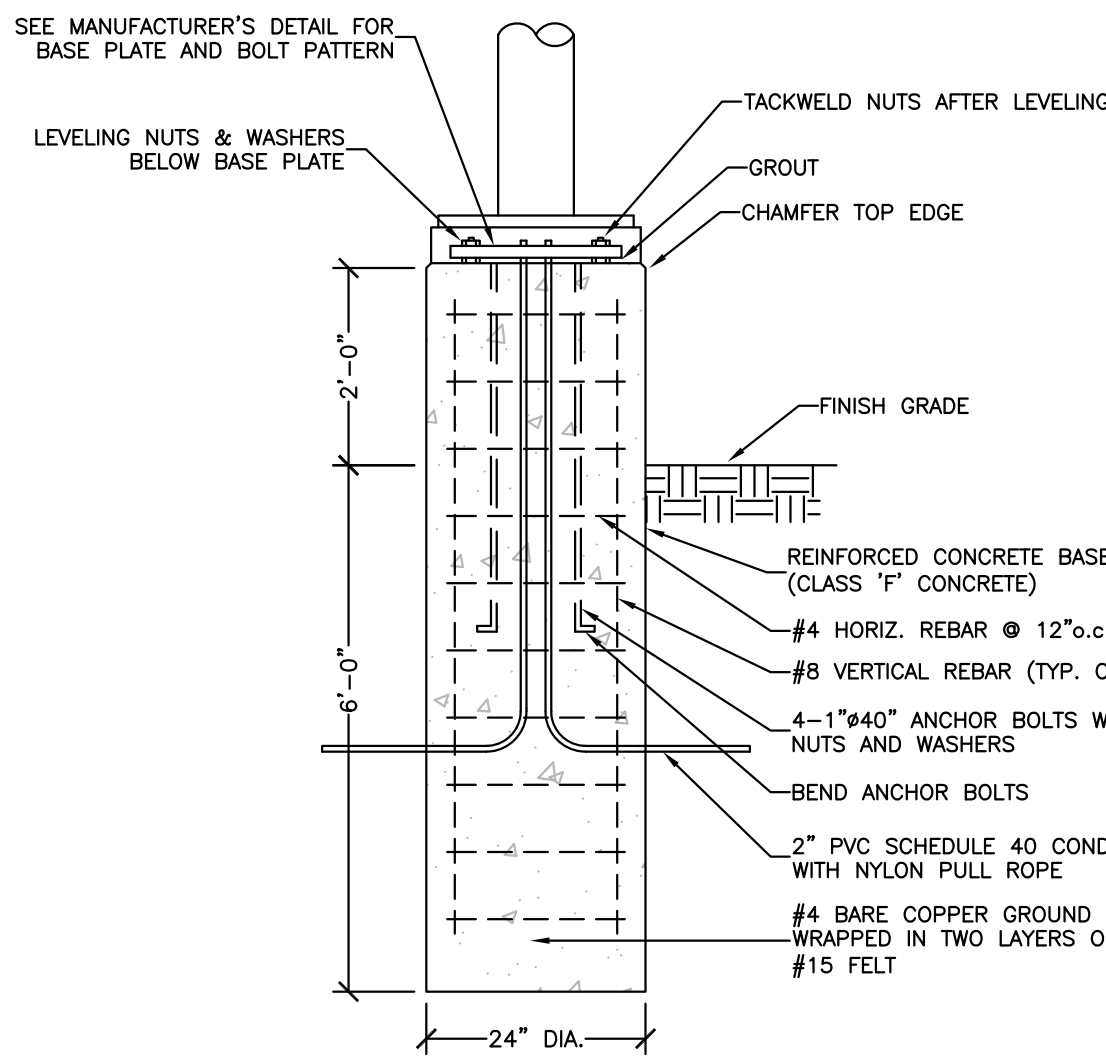


SIDEWALK RAMP DETAIL

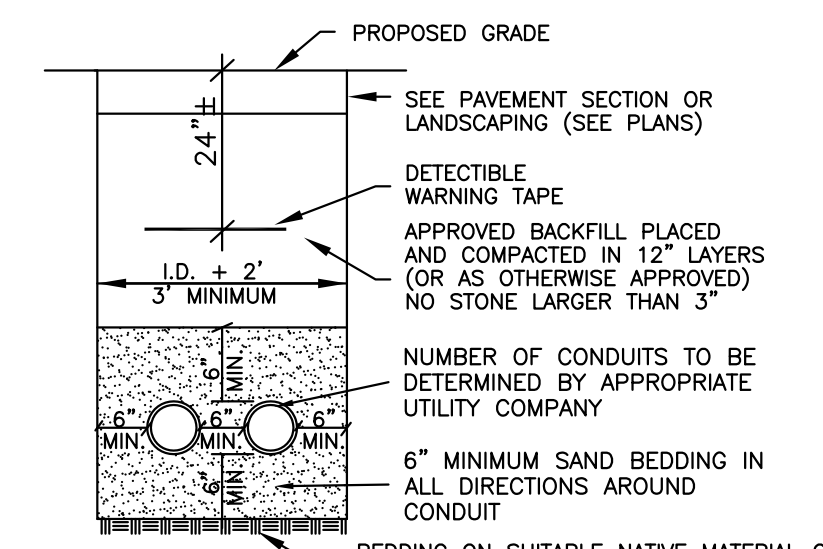


SECTION "A-A"

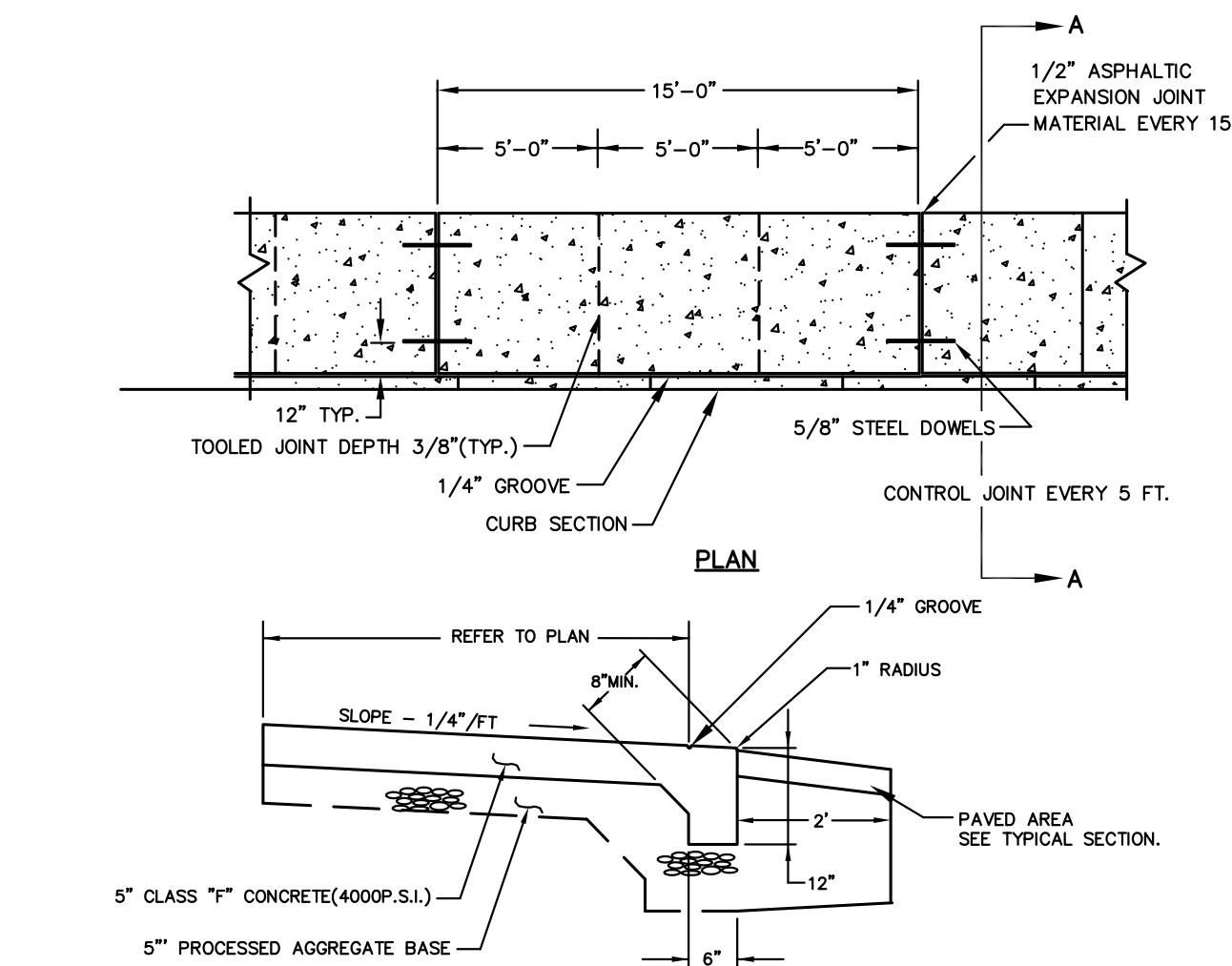
4" CONCRETE SIDEWALK



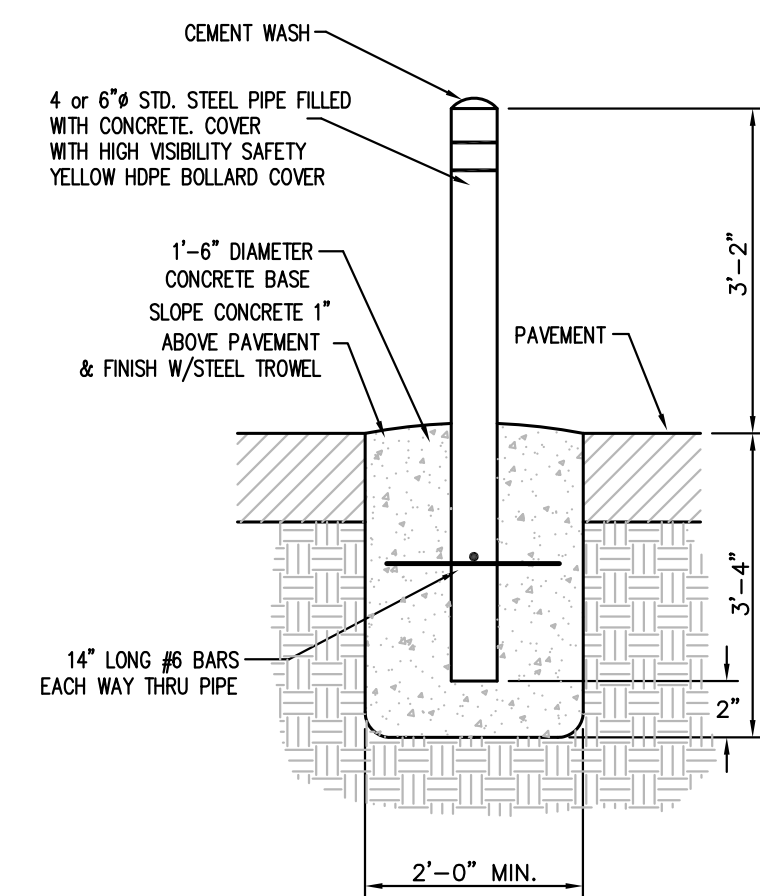
CAST-IN-PLACE LIGHT POLE BASE DETAIL



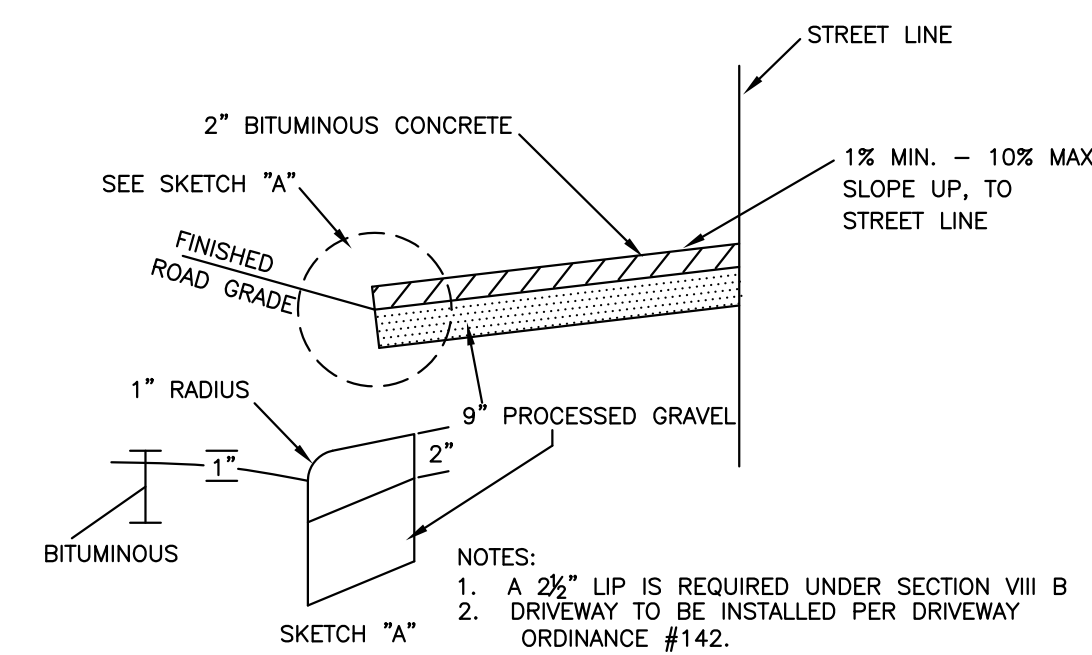
CONDUIT TRENCH DETAIL



MONOLITHIC SIDEWALK DETAIL

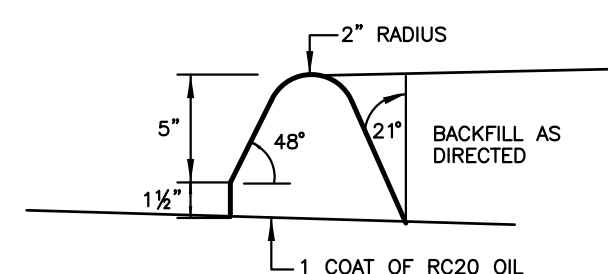


BOLLARD DETAIL

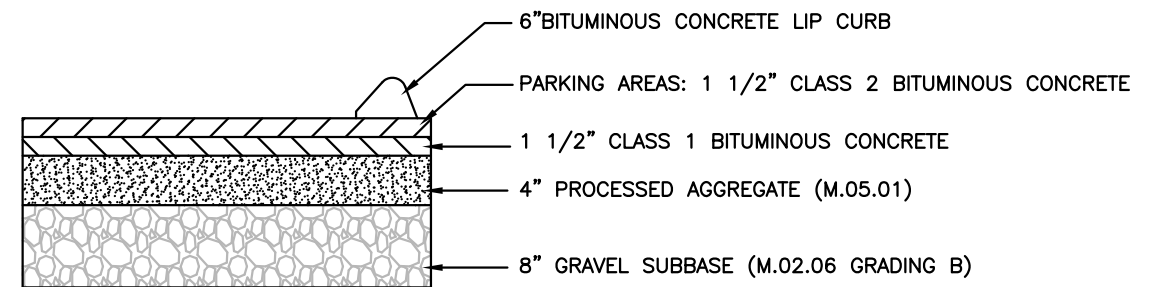


TYPICAL TOWN DRIVEWAY DETAIL

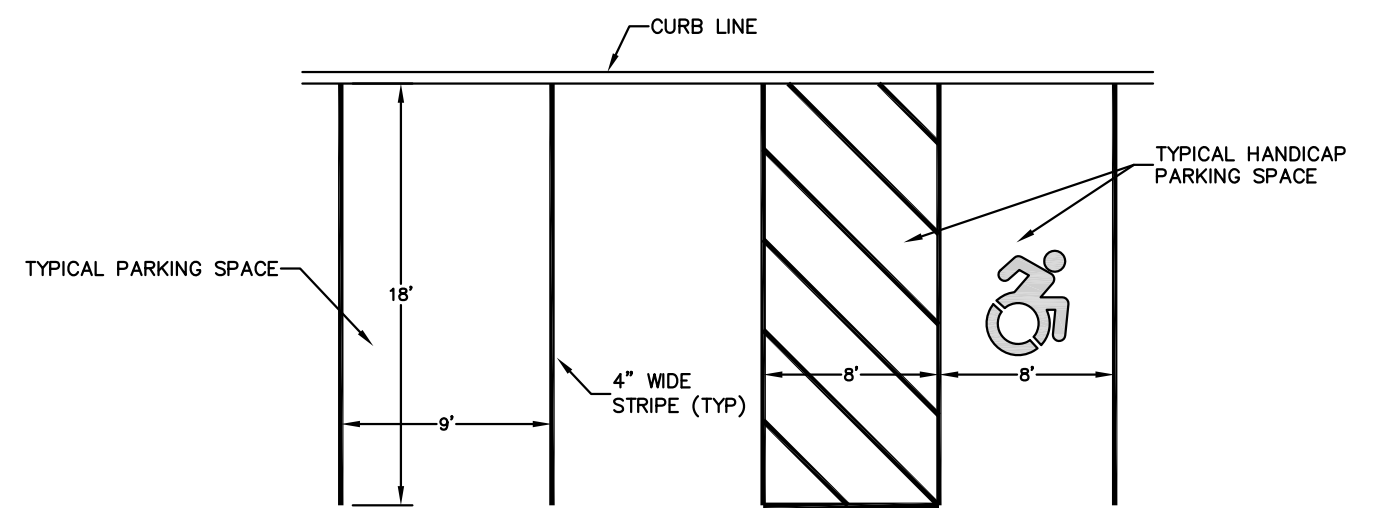
(ENTRANCE DRIVE ONLY)



BIT. CONC. CURB



BITUMINOUS PAVEMENT CROSS SECTION



- PAVEMENT MARKING NOTES:
1. All work to conform to Form 816, Section 12.09 and the manufacturer's instructions and recommendations for application.
 2. Lines shall be four (4) inches wide, except as noted, and 15 mils thick, colored white, except as noted.
 3. Paint shall be either white or tinted ready-mixed paint conforming to AASHTO M70, Type 1.
 4. Epoxy Resins shall conform to Form 816 and project requirements for layout of crosswalks. Install glass beads by free fall method.
 5. Prior to painting, sweep pavement with power broom supplemented with hand brooms to eliminate loose material and dust.
 6. After applying paint, erect suitable barriers to prevent tracking of paint before drying. Retouch and paint all markings which become smeared, discolored, worn, or otherwise marred before final acceptance of the project. Remove any evidence of smearing of paint.

PAINTED PARKING STALL DETAIL



NOTE: ALL STRIPES TO BE 4" PAINTED WHITE



ACCESSIBLE PARKING AND SIGNAGE STANDARDS

SITE CONSTRUCTION DETAILS
SITE PLAN OF DEVELOPMENT
PREPARED FOR
LEAF STREET
234 TALCOTTVILLE ROAD (RTE. 83)
VERNON, CONNECTICUT

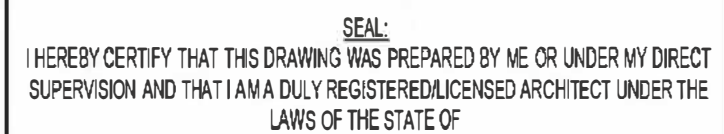
GARDNER & PETERSON ASSOCIATES, LLC

178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

BY	SCALE	DATE	SHEET NO.	MAP NO.
E.R.P.	N.T.S.	12-30-2022	7 OF 7	10265A

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THE GENERAL CONTRACTOR AND/OR ALL SUB-CONTRACTORS WORKING FROM THESE PLANS AND SPECIFICATIONS ARE NOT TO SCALE SUCH INFORMATION BUT TO CONTACT THE ARCHITECT OR HIS REPRESENTATIVE REGARDING MEASUREMENTS, IF SUCH MEASUREMENTS DO NOT APPEAR CORRECT, ADD UP PROPERLY OR SCALE CORRECTLY TO THE INDICATED SIZE.

[illegible]

Vernon, CT

Project Number	2343
----------------	------

Date _____

Drawn by	Author
----------	--------

Checked by	Checker
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Scale	As indicated
-------	--------------



NON-CANNABIS STORAGE	14	2312 SF
		2312 SF
Office		
Consult Area	04	81 SF
Employee Zone	05	554 SF
Break Area	20	334 SF
Fulfillment	06	398 SF
RECEIVING	12	236 SF
OFFICE	11	81 SF
OFFICE	13	111 SF
OFFICE	08	58 SF
Cash Office	01	34 SF
		1408 SF
Retail Storage		
Vault	05	384 SF
STORAGE	23	49 SF
		482 SF
Grand total: 25		7467 SF

- Common
- Mercantile
- Non-Retail Storage
- Office
- Retail Storage

[illegible]

1/9/2023 2:54:00 PM



Name	Area
GROUND LEVEL GROSS AREA	8420 SF

REV 09/22/22
REV 11/15/22

LEGEND	
PROPERTY LINE	=====
ZONING SETBACK	-----
OVERHEAD WIRES	-----○-----
EDGE PAVEMENT	=====
BITUMINOUS CURB	=====
CATCH BASIN	□
SEWER MANHOLE	⊙
WATER GATE	⊕
UTILITY POLE	⊙
EXISTING CONTOUR	- - - - -
APPX. WATERLINE	- - - - -
APPX. GAS	- - - - -
LIGHT POST	⊙
TREELINE	=====
PROPOSED CURB	=====
PROPOSED CONTOUR	230
PROPOSED CATCH BASIN	□
PROPOSED YARD DRAIN	⊙
PROPOSED DRAINAGE	-----
PROPOSED LIGHT	⊙

ZONING TABLE: COMMERCIAL ZONE (C)

	REQUIRED	EXISTING	PROVIDED
MIN. LOT AREA	22,000 Sq.Ft.	43,315 Sq.Ft.	---
MIN. LOT WIDTH	100 FEET	258.36 FEET	---
MIN. FRONT YARD	50 FEET	36.3 FEET*	---
MIN. SIDE YARD	20 FEET	19.7 FEET*	---
MIN. REAR YARD	20 FEET	42.2 FEET*	---
BUILDING HEIGHT	SPECIAL PERMIT FOR >35 FEET	2 STORIES OR 20± FEET	---
MAX. LOT COVERAGE	SPECIAL PERMIT FOR >60%	80.4%	69.2%
DIST. TO PUBLIC/PAROCHIAL SCHOOL	3,000 FEET	---	6,800 FEET PER G.I.S.
*INDICATES EXISTING NON-CONFORMING STRUCTURE			

PARKING REQUIREMENTS:

REQUIRED: RETAIL: (1) SPACES PER 250 SF GFA (12.1.17)
OFFICE: (1) SPACES PER 250 SF GFA (12.1.14)

1st FLOOR: 3,760 SF GFA → 15 SPACES
2nd FLOOR: 4,247 SF GFA → 17 SPACES
TOTAL: 32 SPACES REQUIRED

PROVIDED: 37 PARKING SPACES (INCLUDES 2 ACCESSIBLE SPACES)

PLANTING SPECIFICATIONS

SYMBOL	SCIENTIFIC/ COMMON NAME	QUANTITY	SIZE
+	ACER RUBRUM 'COLUMNARE'/ COLUMNAR RED MAPLE	5	3 - 3 1/2" CALIPER
+	AMELANCHIER CANADENSIS/ SHADBLOW, SERVICEBERRY	1	3 - 3 1/2" CALIPER
+	CLETHRA ALNIFOLIA 'HUMMINGBIRD'/ SUMMERSWEET CLETHRA	5	18 - 21"
+	ILEX GLABRA /INKBERRY	12	3 - 4'
+	ILEX VERTICILLATA 'RED SPRITE'/ WINTERBERRY	6	18 - 21"
+	JUNIPERUS CHINENSIS PF. PLUMOSA/ COMPACT JUNIPER	10	24"-36"

- LAWN AREAS TO BE THE FOLLOWING MIX:
25% PERENNIAL RYE, 25% CHEWINGS FESCUE, 25% CREEPING RED FESCUE, 25% KENTUCKY BLUEGRASS
- ALL DISTURBED AREAS NOT COVERED BY BUILDING, PAVING, PLANTING BEDS, OR OTHER IMPROVEMENTS SHALL BE GRADED, TOPSOILED TO A DEPTH OF 6" AND FERTILIZED. PLANT BEDS SHALL BE TOPSOILED TO A DEPTH OF 12".
- CONTRACTOR SHALL MULCH ALL PLANT BEDS TO A DEPTH OF 2" WITH SHREDDED BARK MULCH.
- ALL PLANT SPECIES TO CONFORM TO AAN MOST RECENT PLANT SPECIFICATIONS.



CBVD:
UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO GARDNER & PETERSON ASSOCIATES, LLC. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

LANDSCAPING PLAN

SITE PLAN OF DEVELOPMENT
PREPARED FOR
LEAF STREET
234 TALCOTTVILLE ROAD (RTE. 83)
VERNON, CONNECTICUT

GARDNER & PETERSON ASSOCIATES, LLC
178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

BY	SCALE	DATE	SHEET NO.	MAP NO.
E.R.P.	1"=20'	12-30-2022	3 OF 7	10265A

**LEAF STREET
234 Talcottville Road
Vernon, Connecticut**

STORMWATER MANAGEMENT REPORT

December 30, 2022

PREPARED FOR: Leaf Street
366 Madison Ave., 14th Fl.
New York, NY 10017

PREPARED BY: Gardner & Peterson Associates, LLC
178 Hartford Turnpike
Tolland, CT 06084

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Leaf Street

234 Talcottville Road

Summary:

This application proposes modifications to the existing parking and site drives for the use of a new cannabis retail establishment within the existing building at 234 Talcottville Road. The building is served by the existing public water and public sanitary sewer services and access to the site is currently through an easement from a shared site drive to a neighboring condominium complex to the north. The site access is proposed to be modified to meet the needs of the new use.

Existing Conditions:

This parcel consists of 0.99 acres and contains a two-story building and a parking area to the north, east and west of the building. The remainder of the site is grassland with a small wooded area at the southeast corner. A drainage system consisting of 5 catch basins is located within the existing parking lot that discharges to a catch basin located near the northwest corner of this parcel on the easterly side of Talcottville Road (Route 83). This drainage system within Route 83 continues westerly through 253 Talcottville Road, eventually discharging on the rear portion of 2 Trail Run. At its terminus a precast concrete level spreader has been installed to reduce runoff velocity and dissipate flow. Runoff from the southwest portion of this parcel runs overland to another catch basin on the easterly side of Talcottville Road, approximately 130-feet south of this parcel.

According to the NRCS Web Soil Survey, this entire parcel is classified as Enfield silt loam, 3 to 8 percent slopes (Hydrologic Soil Group 'B'), which typically is a well-drained soil with an average restrictive feature between 16 and 39 inches. This site is located within Flood Zone 'X' (areas determined to be outside the 500-year floodplain) as depicted on "FIRM Flood Insurance Rate Map Town of Vernon, Connecticut, Tolland County, Community-Panel Number 090131 0005 C, Map Revised August 9, 1999", and is not located within the Level A Aquifer Protection Area as depicted on the Zoning Map, Vernon, CT dated 2/02/2020.

Stormwater Management:

This site has been designed to manage stormwater by reducing the impervious coverage by almost 5,000 square feet or roughly 11% of the parcel area. The "*Low Impact Development Stormwater Quality Manual Town of Vernon, February 2013*" discusses utilizing the LID approach when designing a site for development which includes minimizing impervious areas and revegetating disturbed areas, which this design does both. The existing parking lot on this site appears to have been designed with excess paved areas that do not conform to the setbacks to property lines required by the Vernon Zoning Regulations. The proposed parking will provide the required parking for the proposed use, provide a proper assessable route to the building, and reduce the paved areas. Furthermore, a new site entrance has been designed further east on the

existing shared drive to the north, and a new exit drive has been designed to direct all traffic exiting the site around the building to the south side of the site where traffic will only be directed northbound onto Talcottville Road. Two new catch basins will be installed in the new exit drive to direct runoff into the existing on-site drainage system.

Pages 16 & 17 of this report provide a pre and post development analysis of the on-site drainage system and the resulting flow to the existing catch basin (#6) located in front of this site in the easterly gutter of Route 83. The analysis indicates that the re-development of this site results in a decrease in peak flow from this site to CB #6 from 4.0 cfs to 3.8 cfs. The piping in the on-site drainage system is undersized to today's standards, but the capacity analysis indicates that all new piping installed will convey the design flow from each new structure, and the flow in the existing piping will either remain as is or will be reduced due to this re-development of this parcel. Even though the piping is undersized the headwater calculations indicate that the headwater in each on-site structure will not reach the grate of the structure, therefore the system will function without overflowing into the parking lot.

Lastly, a runoff analysis to an existing catch basin (CB #7) located south of this site in the easterly gutter of Route 83 has been provided on sheets 18-22 of this report. This analysis also indicates that the redevelopment of this site will reduce peak flows to CB #7 from 0.95 cfs to 0.86 cfs. Therefore, the redevelopment of this project should have no adverse effect on the width of the Route 83 gutter flow or the capacity of the existing drainage systems.

Erosion & Sediment Control:

The erosion & sediment control plan for this site consists of the use of a soil stockpile area and silt fencing down gradient of all disturbed areas. An anti-tracking pad will be installed at the entrance to the site. A more detailed E&S narrative is included in the plan set. All sediment and erosion control procedures and construction of all stormwater drainage structures shall be in accordance with the "2002 Connecticut Guidelines For Soil Erosion and Sediment Control" by the Connecticut Council on Soil and Water Conservation.



A handwritten signature in blue ink that reads "Eric R. Peterson".

Eric R. Peterson, P.E. 23430

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GARDNER & PETERSON ASSOCIATES, LLC

178 HARTFORD TURNPIKE

TOLLAND, CT 06084

TEL: 860-871-0808

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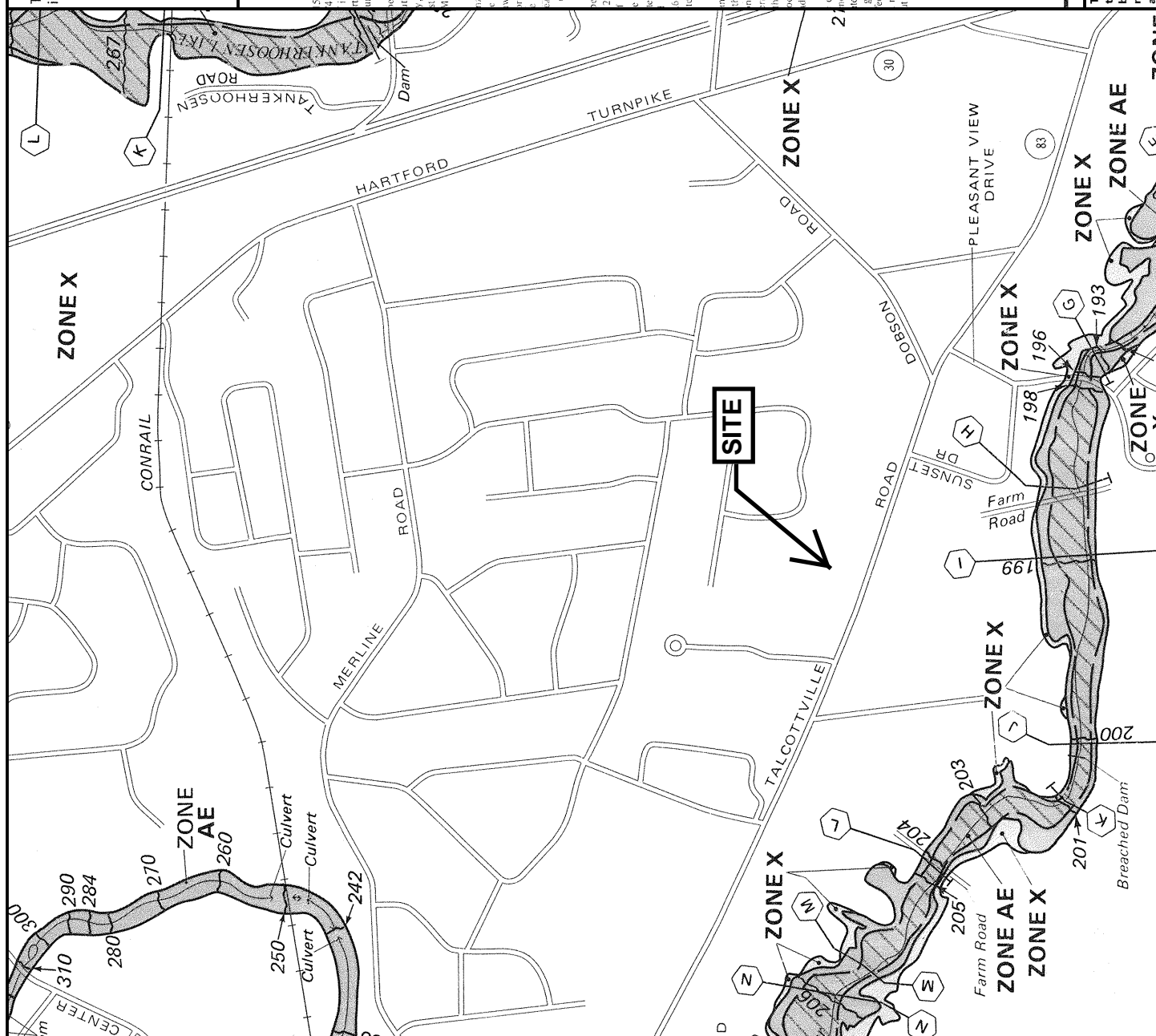
Job: 10265 – Leaf Street

Sheet No: 4 of 23

Calculated By: ERP Date 12/30/2022

Checked By: Rev.





This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



6

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
704A	Enfield silt loam, 0 to 3 percent slopes	0.0	1.0%
704B	Enfield silt loam, 3 to 8 percent slopes	1.5	99.0%
Totals for Area of Interest		1.5	100.0%

Hyd. No. 1

CB 1 Ex

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.400	0.011	0.011				
Flow length (ft)	= 100.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00				
Land slope (%)	= 16.00	0.00	0.00				
Travel Time (min)	= 9.35	+	0.00	+	0.00	=	9.35
Shallow Concentrated Flow							
Flow length (ft)	= 48.00	27.00	0.00				
Watercourse slope (%)	= 11.00	3.00	0.00				
Surface description	= Unpaved	Paved	Paved				
Average velocity (ft/s)	= 5.35	3.52	0.00				
Travel Time (min)	= 0.15	+	0.13	+	0.00	=	0.28
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	= 0.00	0.00	0.00				
Flow length (ft)	= 0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc					9.62 min		

Hyd. No. 2

CB 2 Ex

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.400	0.011	0.011	
Flow length (ft)	= 78.0	22.0	0.0	
Two-year 24-hr precip. (in)	= 3.20	3.20	0.00	
Land slope (%)	= 25.00	2.50	0.00	
Travel Time (min)	= 6.41	+	0.33	+
			0.00	= 6.74
Shallow Concentrated Flow				
Flow length (ft)	= 38.00	0.00	0.00	
Watercourse slope (%)	= 2.50	0.00	0.00	
Surface description	= Paved	Paved	Paved	
Average velocity (ft/s)	= 3.21	0.00	0.00	
Travel Time (min)	= 0.20	+	0.00	+
			0.00	= 0.20
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	= 0.00	+	0.00	+
			0.00	= 0.00
Total Travel Time, Tc				6.94 min

Hyd. No. 8

CB 10 Proposed

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.400	0.011	0.011				
Flow length (ft)	= 100.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00				
Land slope (%)	= 16.00	0.00	0.00				
Travel Time (min)	= 9.35	+	0.00	+	0.00	=	9.35
Shallow Concentrated Flow							
Flow length (ft)	= 34.00	10.00	0.00				
Watercourse slope (%)	= 5.00	2.00	0.00				
Surface description	= Unpaved	Paved	Paved				
Average velocity (ft/s)	= 3.61	2.87	0.00				
Travel Time (min)	= 0.16	+	0.06	+	0.00	=	0.22
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	= 0.00	0.00	0.00				
Flow length (ft)	= 0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc					9.56 min		

Hyd. No. 9

CB 1 Proposed

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.400	0.011	0.011				
Flow length (ft)	= 100.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00				
Land slope (%)	= 17.00	0.00	0.00				
Travel Time (min)	= 9.12	+	0.00	+	0.00	=	9.12
Shallow Concentrated Flow							
Flow length (ft)	= 24.00	15.00	0.00				
Watercourse slope (%)	= 16.00	3.00	0.00				
Surface description	= Unpaved	Paved	Paved				
Average velocity (ft/s)	= 6.45	3.52	0.00				
Travel Time (min)	= 0.06	+	0.07	+	0.00	=	0.13
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	= 0.00	0.00	0.00				
Flow length (ft)	= 0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc					9.26 min		

Hyd. No. 10

CB 2 Proposed

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.400	0.011	0.011	
Flow length (ft)	= 78.0	22.0	0.0	
Two-year 24-hr precip. (in)	= 3.20	3.20	0.00	
Land slope (%)	= 25.00	2.50	0.00	
Travel Time (min)	= 6.41	+	0.33	+
			0.00	= 6.74
Shallow Concentrated Flow				
Flow length (ft)	= 38.00	0.00	0.00	
Watercourse slope (%)	= 2.50	0.00	0.00	
Surface description	= Paved	Paved	Paved	
Average velocity (ft/s)	= 3.21	0.00	0.00	
Travel Time (min)	= 0.20	+	0.00	+
			0.00	= 0.20
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	= 0.00	+	0.00	+
			0.00	= 0.00
Total Travel Time, Tc				6.94 min

Hyd. No. 12

CB 4 Proposed

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.240	0.011	0.011				
Flow length (ft)	= 66.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00				
Land slope (%)	= 2.50	0.00	0.00				
Travel Time (min)	= 9.36	+	0.00	+	0.00	=	9.36
Shallow Concentrated Flow							
Flow length (ft)	= 0.00	0.00	0.00				
Watercourse slope (%)	= 0.00	0.00	0.00				
Surface description	= Paved	Paved	Paved				
Average velocity (ft/s)	= 0.00	0.00	0.00				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	= 0.00	0.00	0.00				
Flow length (ft)	= 0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc					9.36 min		

Hyd. No. 13

CB 11 Proposed

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.240	0.240	0.011	
Flow length (ft)	= 70.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00	
Land slope (%)	= 1.40	0.00	0.00	
Travel Time (min)	= 12.37	+	0.00	+
				= 12.37
Shallow Concentrated Flow				
Flow length (ft)	= 0.00	0.00	0.00	
Watercourse slope (%)	= 0.00	0.00	0.00	
Surface description	= Paved	Paved	Paved	
Average velocity (ft/s)	= 0.00	0.00	0.00	
Travel Time (min)	= 0.00	+	0.00	+
				= 0.00
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	= 0.00	+	0.00	+
				= 0.00
Total Travel Time, Tc				12.37 min

Hyd. No. 14

YD 12 Proposed

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.240	0.011	0.011				
Flow length (ft)	= 53.0	0.0	0.0				
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00				
Land slope (%)	= 2.00	0.00	0.00				
Travel Time (min)	= 8.59	+	0.00	+	0.00	=	8.59
Shallow Concentrated Flow							
Flow length (ft)	= 0.00	0.00	0.00				
Watercourse slope (%)	= 0.00	0.00	0.00				
Surface description	= Paved	Paved	Paved				
Average velocity (ft/s)	= 0.00	0.00	0.00				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	= 0.00	0.00	0.00				
Flow length (ft)	= 0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc					8.59 min		

178 HARTFORD TURNPIKE
TOLLAND, CT 06084
TEL: 860-871-0808
FAX: 860-875-2086

SHEET NO. 16 OF 23
 CALCULATED BY ERP DATE 12/30/2022
 CHECKED BY _____ DATE _____

AI Entering Catch Basin			0.16	0.21	0.24	0.05	0.19									0.03	0.13	0.19	0.24	0.01	0.09	0.03	0.12	
AI Bypassing Inlet			0	0	0	0	0									0	0	0	0	0	0	0	0	
Q Bypassing Inlet (cfs)			0	0	0	0	0									0	0	0	0	0	0	0	0	
Width of Flow (ft)																								
Depth of Flow at Gutter (ft)																								
Cross Slope fo Shoulder			LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT									LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT	
Grade of Gutter (ft/ft)			LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT									LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT	LOW POINT	
Q To Inlet (cfs)	EXISTING CONDITIONS		0.8	1.2	1.4	0.3	1.1									0.1	0.7	1.0	1.4	0.1	0.3	0.2	0.7	
10yr Rainfall Intensity(in/hr)			4.8	5.5	6.0	6.0	6.0									4.8	5.1	5.5	6.0	5.1	3.5	5.1	6.0	
Total AI			0.16	0.21	0.24	0.05	0.19									0.03	0.13	0.19	0.24	0.01	0.09	0.03	0.12	
Sum AI			0	0	0	0	0									0	0	0	0	0	0	0	0	
AI			0.16	0.21	0.24	0.05	0.19									0.03	0.13	0.19	0.24	0.01	0.09	0.03	0.12	
Runoff Coeficient			0.47	0.59	0.90	0.81	0.83									0.44	0.47	0.54	0.88	0.35	0.62	0.44	0.73	
Area (Acres)			0.33	0.36	0.27	0.06	0.23									0.07	0.28	0.36	0.27	0.04	0.14	0.06	0.16	
Time To Inlet (Min)			10	7	5	5	5									10	9	7	5	9	21	9	5	
Inlet Number			CB 1	CB 2	CB 3	CB 4	CB 5									CB 10	CB 1	CB 2	CB 3	CB 4	CB 11	YD 12	CB 5	

178 HARTFORD TURNPIKE
TOLLAND, CT 06084
TEL: 860-871-0808
FAX: 860-875-2086

JOB		<u>10265 – Leaf Street</u>	
SHEET NO.	<u>17</u>	OF	<u>23</u>
CALCULATED BY	<u>ERP</u>	DATE	<u>12/30/2022</u>
CHECKED BY		DATE	

[illegible]

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
1	Rational	0.954	1	20	1,145	-----	-----	-----	CB 7 Existing
2	Rational	0.864	1	22	1,140	-----	-----	-----	CB 7 Proposed
10265-PW-83.gpw					Return Period: 10 Year			Friday, Dec 30, 2022	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Friday, Dec 30, 2022

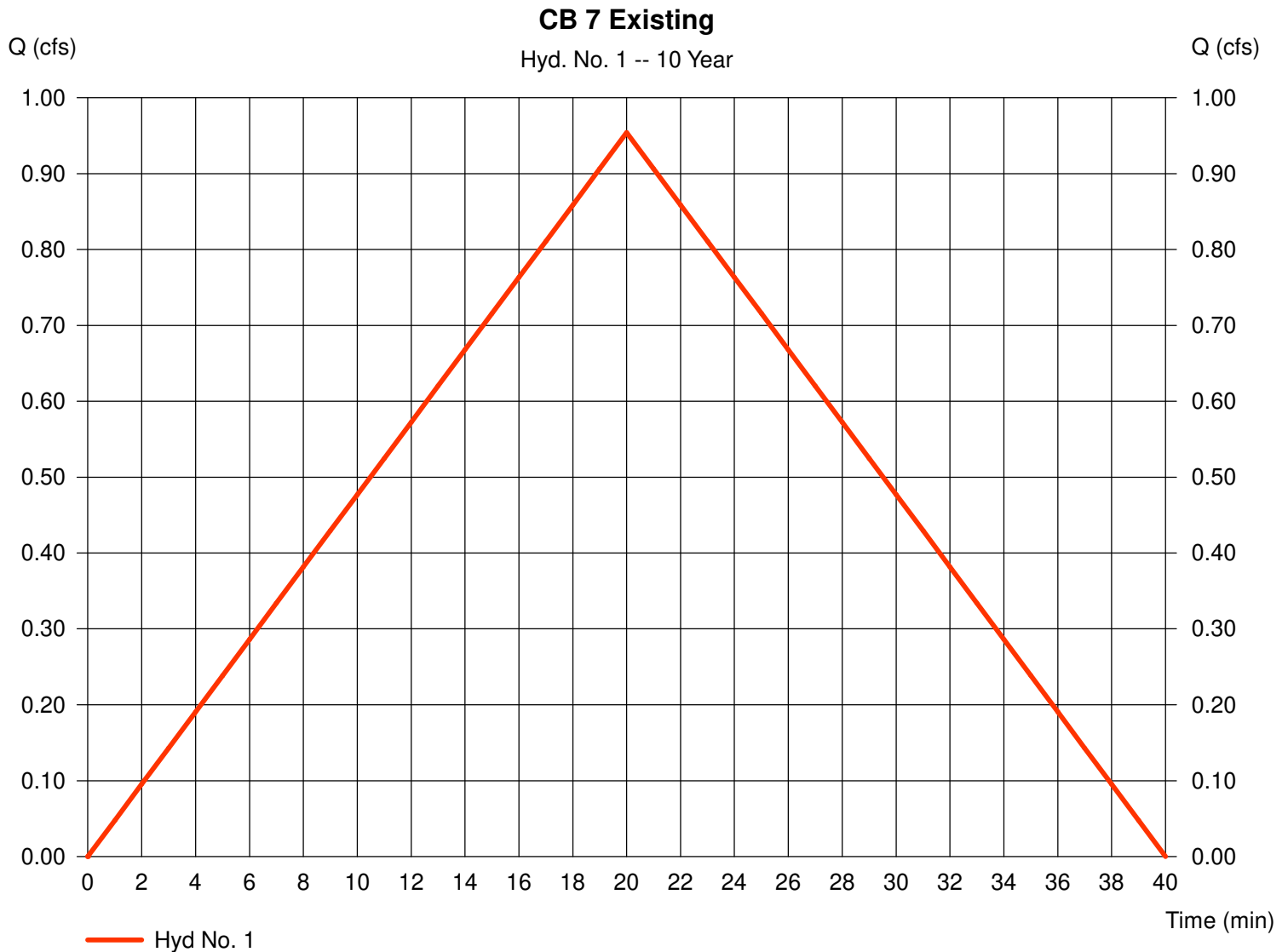
Hyd. No. 1

CB 7 Existing

Hydrograph type = Rational
 Storm frequency = 10 yrs
 Time interval = 1 min
 Drainage area = 0.400 ac
 Intensity = 3.508 in/hr
 IDF Curve = CT-DOT.IDF

Peak discharge = 0.954 cfs
 Time to peak = 20 min
 Hyd. volume = 1,145 cuft
 Runoff coeff. = 0.68*
 Tc by TR55 = 20.00 min
 Asc/Rec limb fact = 1/1

* Composite (Area/C) = $[(0.240 \times 0.90) + (0.160 \times 0.35)] / 0.400$



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 1

CB 7 Existing

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>		
Sheet Flow						
Manning's n-value	= 0.240	0.011	0.240			
Flow length (ft)	= 100.0	0.0	0.0			
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00			
Land slope (%)	= 1.00	0.00	0.00			
Travel Time (min)	= 18.83	+	0.00	+	0.00	= 18.83
Shallow Concentrated Flow						
Flow length (ft)	= 40.00	95.00	0.00			
Watercourse slope (%)	= 0.60	0.50	0.00			
Surface description	= Unpaved	Paved	Paved			
Average velocity (ft/s)	= 1.25	1.44	0.00			
Travel Time (min)	= 0.53	+	1.10	+	0.00	= 1.63
Channel Flow						
X sectional flow area (sqft)	= 0.00	0.00	0.00			
Wetted perimeter (ft)	= 0.00	0.00	0.00			
Channel slope (%)	= 0.00	0.00	0.00			
Manning's n-value	= 0.015	0.015	0.015			
Velocity (ft/s)	= 0.00	0.00	0.00			
Flow length (ft)	= 0.0	0.0	0.0			
Travel Time (min)	= 0.00	+	0.00	+	0.00	= 0.00
Total Travel Time, Tc					20.00 min	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

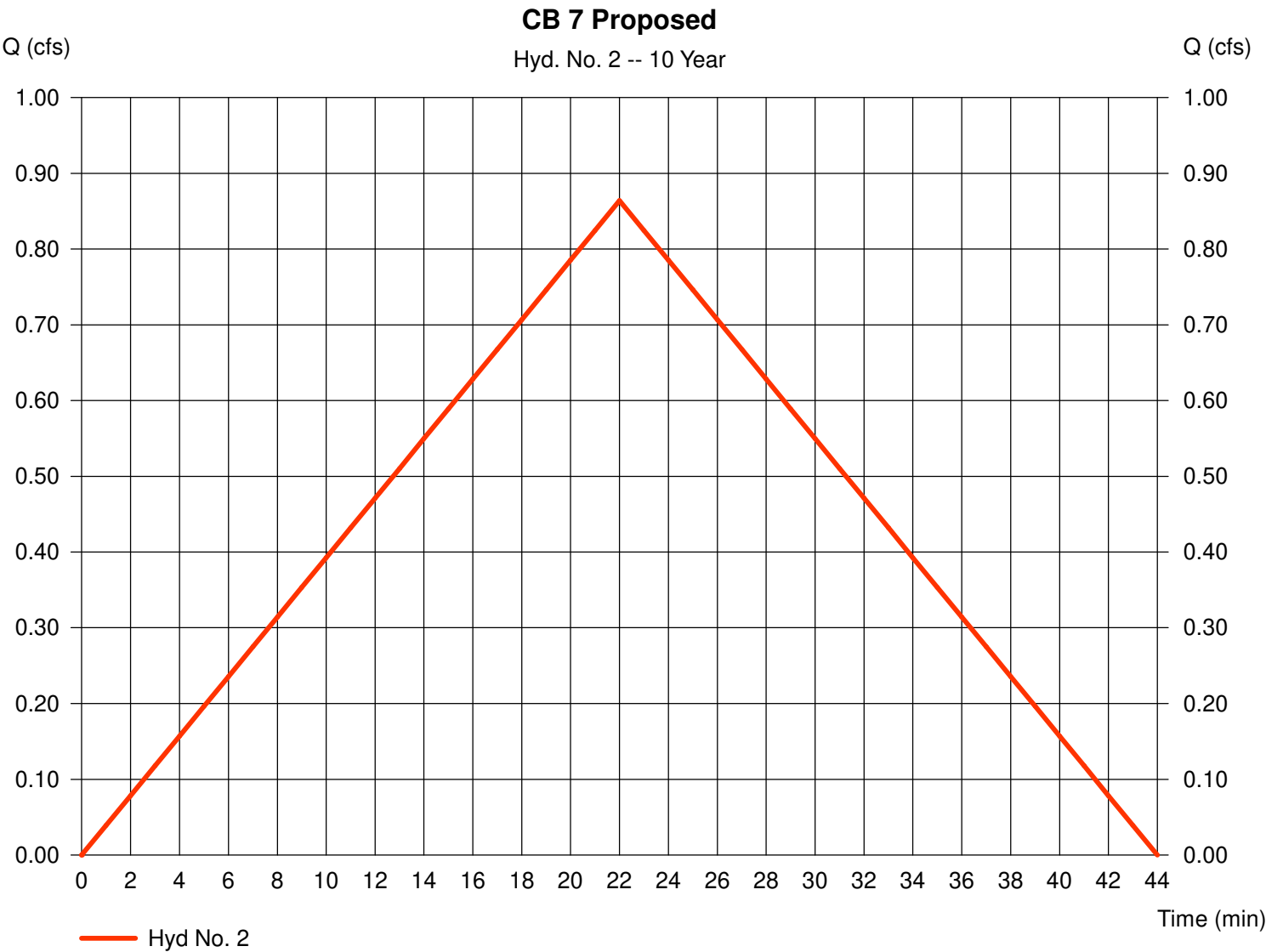
Friday, Dec 30, 2022

Hyd. No. 2

CB 7 Proposed

Hydrograph type	= Rational	Peak discharge	= 0.864 cfs
Storm frequency	= 10 yrs	Time to peak	= 22 min
Time interval	= 1 min	Hyd. volume	= 1,140 cuft
Drainage area	= 0.350 ac	Runoff coeff.	= 0.74*
Intensity	= 3.335 in/hr	Tc by TR55	= 22.00 min
IDF Curve	= CT-DOT.IDF	Asc/Rec limb fact	= 1/1

* Composite (Area/C) = [(0.250 x 0.90) + (0.100 x 0.35)] / 0.350



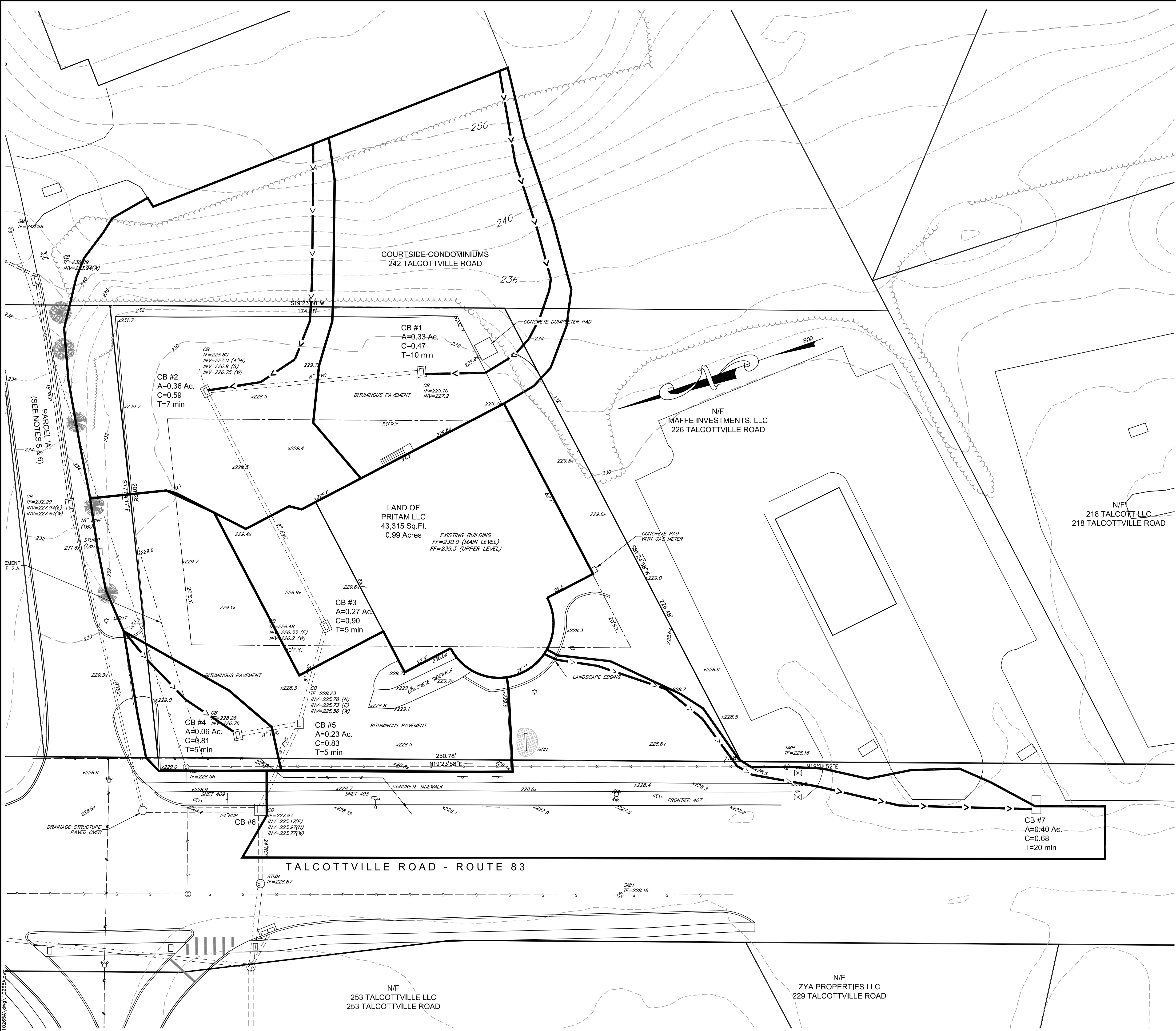
TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 2

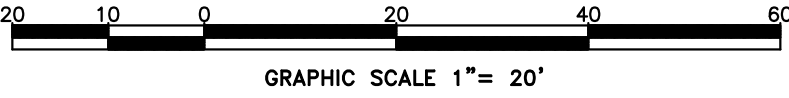
CB 7 Proposed

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.240	0.011	0.011				
Flow length (ft)	= 85.0	15.0	0.0				
Two-year 24-hr precip. (in)	= 3.20	3.20	0.00				
Land slope (%)	= 0.60	0.50	0.00				
Travel Time (min)	= 20.28	+	0.46	+	0.00	=	20.74
Shallow Concentrated Flow							
Flow length (ft)	= 80.00	0.00	0.00				
Watercourse slope (%)	= 0.50	0.00	0.00				
Surface description	= Paved	Paved	Paved				
Average velocity (ft/s)	= 1.44	0.00	0.00				
Travel Time (min)	= 0.93	+	0.00	+	0.00	=	0.93
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	= 0.00	0.00	0.00				
Flow length (ft)	= 0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc					22.00 min		



LEGEND

- DRAINAGE AREA
- TRAVEL TIME PATH



EXISTING DRAINAGE AREA MAP
PREPARED FOR
LEAF STREET
234 TALCOTTVILLE ROAD (RTE. 83)
VERNON, CONNECTICUT

GARDNER & PETERSON ASSOCIATES, LLC
178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

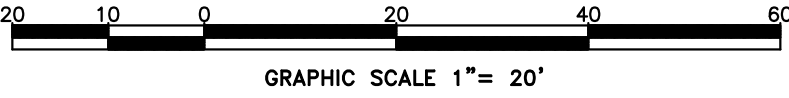
PROFESSIONAL ENGINEERS LAND SURVEYORS

BY	SCALE	DATE	SHEET NO.	MAP NO.
E.R.P.	1"=20'	12-30-2022	A1	10265A



LEGEND

- DRAINAGE AREA
- TRAVEL TIME PATH



PROPOSED DRAINAGE AREA MAP
PREPARED FOR
LEAF STREET
234 TALCOTTVILLE ROAD (RTE. 83)
VERNON, CONNECTICUT

GARDNER & PETERSON ASSOCIATES, LLC
178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

BY	SCALE	DATE	SHEET NO.	MAP NO.
E.R.P.	1"=20'	12-30-2022	A2	10265A

GARDNER & PETERSON ASSOCIATES, LLC

PROFESSIONAL ENGINEERS • LAND SURVEYORS

178 HARTFORD TURNPIKE
TOLLAND, CONNECTICUT 06084

KENNETH R. PETRESON, L.S.
ERIC R. PETERSON, P.E., L.S.
MARK A. PETERSON, P.E.

TELEPHONE: (860) 871-0808
info@GardnerPeterson.com
www.GardnerPeterson.com

January 16, 2023

Ashley Stephens
Town Planner
Town of Vernon Planning & Development
55 West Main Street, 2nd Floor
Vernon, Connecticut 06066

Re: Leaf Street
234 Talcottville Road

Dear Ashley:

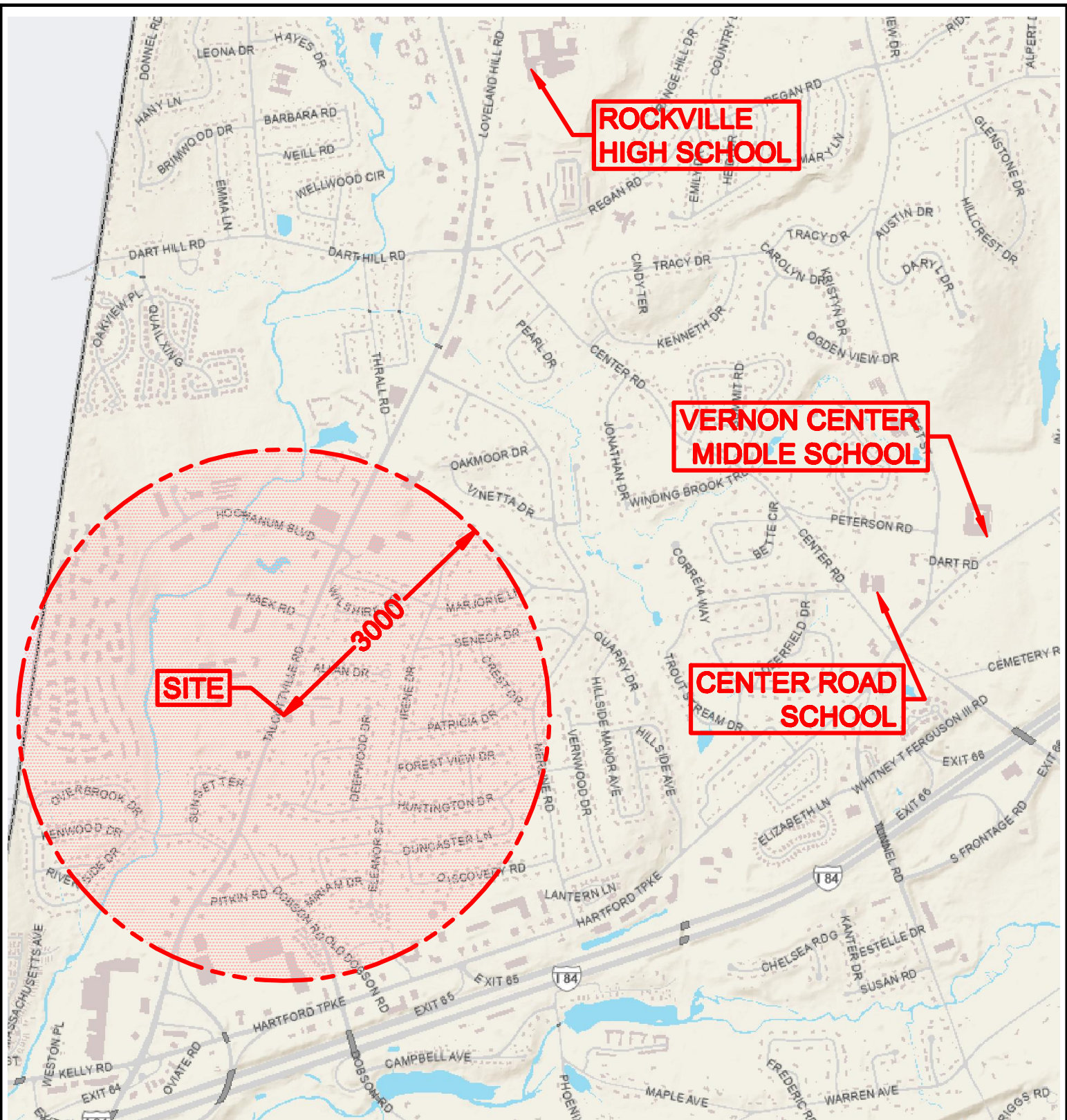
Pursuant to section 17.1.4 of the Vernon Zoning Regulations a cannabis retail establishment must be separated from all public or parochial schools by a distance of at least 3,000 feet, whereas section 2.99 of the Vernon Zoning Regulations defines a school as *"an institution of formalized instruction, given by state certified instructors who follow prescribed curriculum. The institution must be licensed by a governing body and the instruction must ultimately lead to a formal graduation and granting of a diploma or degree"*.

Gardner & Peterson Associates, LLC has utilized the measuring tool in the Town of Vernon Geographic Information Systems (GIS) to determine that the proposed cannabis retail use is further than 3,000 feet from any public or parochial school. For clarity, the following figure depicts the location of the project site, the three schools closest to the project, and the measured distance from the main entry of the proposed use to each school's main entry, which all exceed 3,000 feet.

Yours truly,



Eric R. Peterson, P.E., P.L.S.



DATA SOURCE: <https://gis.vernon-ct.gov/newviewer/index.html>

SCHOOL	DISTANCE FROM USE
CENTER ROAD SCHOOL	6,850 L.F.
ROCKVILLE HIGH SCHOOL	7,900 L.F.
VERNON CENTER MIDDLE SCHOOL	8,200 L.F.

DISTANCES MEASURED FROM VERNON GIS

PUBLIC / PAROCHIAL SCHOOL SETBACK
LEAF STREET
234 TALCOTTVILLE ROAD
VERNON, CONNECTICUT

GARDNER & PETERSON ASSOCIATES, LLC
 178 HARTFORD TURNPIKE
 TOLLAND, CONNECTICUT

PROFESSIONAL ENGINEERS LAND SURVEYORS

Hybrid Medical/Retail Marijuana Dispensary

234 Talcottville Road
Vernon, Connecticut

PREPARED FOR

Prime Wellness, LLC

PREPARED BY



100 Great Meadow Road, Suite 200
Wethersfield, CT 06109
860.807.4300

December 2022

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1

Introduction

Vanasse Hangen Brustlin, Inc. (VHB) has been retained by Prime Wellness, LLC to conduct a Transportation Impact Assessment (TIA) for a proposed hybrid medical and retail marijuana dispensary to be located at 234 Talcottville Road in Vernon, Connecticut. VHB has evaluated existing traffic operations in the area, assessed the impacts of this redevelopment, and summarized the results in this report.

Project Description and Background

The Project site is located at 234 Talcottville Road in Vernon, Connecticut. The site is currently occupied by a vacant 13,167 square foot, two-floor building. The proposed project will renovate this existing building to accommodate an approximately 5,665 square-foot hybrid medical and retail marijuana dispensary on the first floor. Under a future phase, the remaining portion of the building (7,502± square-feet) is planned to be converted to corporate office space. Although this corporate office space will not be occupied as part of the current proposal, this traffic impact study accounts for the traffic generated by the future office space in order to provide a conservative analysis of the potential traffic impacts associated with the full occupancy of this building.

Access to the existing site is provided by a full access driveway that connects to the Courtside Condominiums driveway on Talcottville Road (Route 83). Under the proposed project, the existing site driveway connecting to the Courtside Condominiums driveway will be relocated further from Talcottville Road and converted to provide entrance only access to the project



site. Additionally, a new right-out only driveway is proposed onto Talcottville Road. These proposed modifications in site access are intended to provide adequate access to the project site while minimizing impacts to the Courtside Condominiums residents. It should be noted that the proposed driveway onto Route 83 will be subject to the review and approval of the Connecticut Department of Transportation (CTDOT).

Study Methodology

This traffic study was conducted in three stages. The first stage involved an assessment of existing traffic conditions in the study area and included an inventory of roadway geometrics, crash history, and observations of traffic flow.

In the second stage of the study, future traffic conditions both with and without the project were estimated and analyzed. This study assessed specific travel demand forecasts for the project, and the estimated background growth unrelated to this project.

The third and final stage involved conducting traffic analyses to identify both existing and projected future roadway capacity and demand. From this information and other factors, the likely traffic impacts associated with the project can be determined. This analysis was used as the basis for determining if any resulting roadway improvements or measures would be required in support of the site-generated traffic.

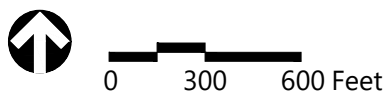
Study Area

Based on a review of the project location and likely travel routes to the site, the following intersections were identified as the most likely to be impacted by the proposed project and were included in the study area:

- Talcottville Road (Route 83) at Allan Drive and Trail Run (signalized);
- Talcottville Road (Route 83) at Site Drive and Trail Run Driveway (unsignalized); and,
- Talcottville Road (Route 83) at Dobson Road (signalized)

An inventory of the existing conditions for the study intersections is provided in the following chapter.

A location map depicted the project site and study intersections is provided on Figure 1.



Site and Study Intersection Location
Proposed Retail Marijuana and Office
234 Talcottville Road
Vernon, CT

Figure 1



2

Existing Conditions Assessment

Effective evaluation of the transportation impacts associated with the proposed development project requires a thorough understanding of the existing transportation system surrounding the project study area. A complete inventory of the existing transportation system was conducted and is presented in this section. The analysis of existing transportation conditions is based on the existing network, roadway and intersection geometry, traffic control, existing traffic volumes, traffic safety, and pedestrian facilities.

Roadway Network

The principal roadways and intersections in the study area are described below.

Roadways

The description of the roadways includes the physical characteristics, geometric conditions, adjacent land uses, and current operating conditions.

Route 83 (Talcottville Road)

Route 83 is a four-lane (two lanes in each direction) north-south principal arterial roadway with auxiliary turning lanes provided at major intersections and commercial driveways. The posted speed limiting along Route 83 is 40 miles per hour north of Allan Drive, 35 miles per hour between Allan Drive and the Route 30 junction, and 40 miles per hour south of the Route



30 junction. Land use along Route 83 consists primarily of commercial/residential development.

Allan Drive

Allan Drive is a two-lane (one lane in each direction) local roadway with no outlet. Allan Drive provides access to a residential neighborhood located east of Route 83.

Dobson Road

Dobson Road is a two-lane (one lane in each direction) north-south collector roadway with a posted speed limit of 30 miles per hour. Land use along Dobson Road consists primarily of residential development.

Intersections

The description of the intersections includes the physical characteristics, geometric conditions, and current operating conditions.

Route 83 at Allan Drive and Trail Run

Route 83 intersected by Allan Drive from the east and Trail Run from the west to form a 4-leg signalized intersection. The northbound and southbound approaches each provide an exclusive left-turn lane, a through lane, and a shared through/right-turn lane. The westbound approach provides a single lane. Eastbound, Trail Run provides a shared left-turn/through lane and a right-turn lane. Crosswalks are provided across the eastbound and southbound approaches of the intersection.

Route 83 at Courtside Condominiums Driveway/Trail Run Driveway

Route 83 is intersected by the Courtside Condominiums driveway from the east and by a right-in/right-out driveway to the Trail Run Apartments from the west to form a four-leg unsignalized intersection. The eastbound Trail Run Driveway provides a single right-turn only egress operating under stop-control. The westbound Courtside Condominiums driveway provides a single multi-purpose lane that operates under stop-control. Route 83 provides two through lanes in each direction that operate with free flow.

Route 83 at Dobson Road

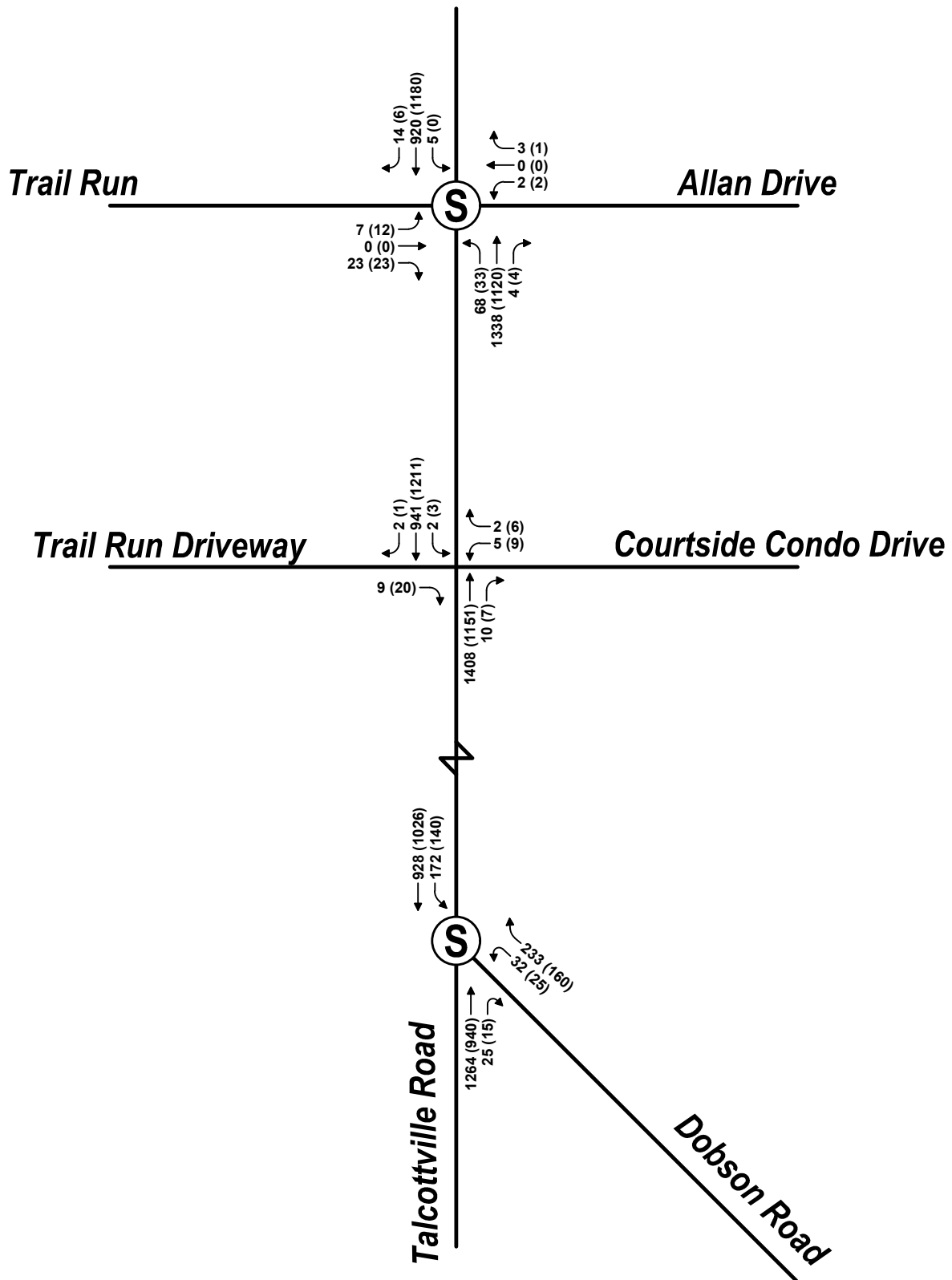
Route 83 is intersected by Dobson Road from the east to form a 3-leg signalized intersection. The northbound approach consists of a through lane and a shared through/right-turn lane. The southbound approach consists of a left-turn lane and two through lanes. The westbound approach consists of a shared left-turn/right-turn lane. Pedestrians are accommodated by pushbuttons, signal heads, and a painted crosswalk across the southbound approach. Traffic is controlled by an actuated coordinated traffic control signal.



Traffic Volumes

VHB collected manual turning movement and classification (TMC) counts at the study area intersections during the typical weekday evening peak hours (4:00 – 6:00 AM), and typical Saturday midday peak hours (11:00 AM – 2:00 PM). Included in these counts are passenger vehicles, heavy vehicles, buses, and pedestrians. These counts were conducted on October 20th and October 22nd, 2022. Within these periods, the peak hours of the intersection generally occurred from 4:00 PM to 5:00 PM during a typical weekday evening, and 11:45 AM to 12:45 PM during a typical Saturday midday.

The 2022 Existing conditions weekday evening and Saturday midday peak hour traffic volume networks are summarized in Figure 2.



Weekday Afternoon Peak Hour
(Saturday Midday Peak Hour)



Not to Scale



2022 Existing Conditions
Peak Hour Traffic Volumes
Proposed Retail Marijuana and Office
Vernon, CT

Figure 2



Safety Assessment

To identify potential vehicle crash trends and/or roadway deficiencies within the study area, VHB conducted a review of the UConn Crash Database to document the number of geolocated vehicular collisions that have taken place over the most recent three-year period (2019-2021). It should be noted that only collisions that result in death, injury, or property damage in excess of \$1,000 are required to be reported.

Table 1 presents the number of crashes and crash characteristics for the study intersections. As shown in this table, 19 crashes were reported at the intersection of Talcottville Road at Dobson Road. Injuries were reported in four of these crashes (21%), while the remaining 15 crashes involved property damage only. The most common collision types were rear-end (37%), angle (26%), and sideswipe (26%).

Only five crashes were reported at the intersection of Talcottville Road at Allan Drive, and two were reported at the Courtside Condominium/Trail Run driveways during the three-year analysis period.



Table 1 Crash Analysis Summary

	Talcottville Road at Allan Drive/Trail Run	Talcottville Road at Trail Run Driveway and Site Drive	Talcottville Road at Dobson Road
Year			
2019	2	1	5
2020	1	1	7
<u>2021</u>	<u>2</u>	<u>0</u>	<u>7</u>
Total	5	2	19
Collision Type			
Angle	1	0	5
Head-on	0	1	1
Rear-end	2	1	7
Sideswipe, same direction	2	0	5
<u>Unknown</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	5	2	19
Severity			
Fatal Injury	0	0	0
Non-Fatal Injury	1	1	4
Property Damage Only	4	1	15
<u>Not Reported/Unknown</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	5	2	19
Time of day			
Weekday, 7:00 AM - 9:00 AM	0	0	2
Weekday, 4:00 - 6:00 PM	1	0	3
Saturday, 11:00 AM - 2:00 PM	0	0	0
Weekday, other time	3	2	10
<u>Weekend, other time</u>	<u>1</u>	<u>0</u>	<u>4</u>
Total	5	2	19
Season			
Dec - Feb	0	2	4
Mar - May	2	0	1
June - Aug	1	0	6
<u>Sept - Nov</u>	<u>2</u>	<u>0</u>	<u>8</u>
Total	5	2	19
Pavement Conditions			
Dry	5	2	15
Wet	0	0	3
Snow	0	0	1
<u>Ice</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	5	2	19
Light Conditions			
Daylight	5	1	14
Dawn/Dusk	0	0	1
Dark, Not Lighted	0	0	0
<u>Dark, Lighted</u>	<u>0</u>	<u>1</u>	<u>4</u>
Total	5	2	19
Non-Motorist (Bike, Pedestrian)	0	0	0

Source: UConn Connecticut Crash Data Repository 2019-2021.

3

Future Conditions

To determine the impacts of the future site-generated traffic volumes on the roadway network when the site is fully operational, traffic conditions were projected to the year 2023. Future traffic projections include regional background traffic growth and planned roadway improvements. Consideration of these factors resulted in the development of the 2023 No-Build traffic volumes. Anticipated Future Site-generated traffic volumes were then added to the 2023 No-Build traffic flow networks to reflect the 2023 Build scenario with the proposed development.

No-Build Traffic Volumes

Traffic growth on area roadways is a function of the expected land development, economic activity, and changes in demographics. A frequently used procedure is to estimate traffic that could be generated by planned new major developments, potentially affecting the project study area roadways. Another procedure is to estimate an overall area annual percentage increase and apply that increase to study area traffic volumes. As detailed further below, both methods were assessed for this study.



Background Projects

The Town of Vernon indicated that there are planned developments at 273 and 274 Talcottville Road that are expected to generate increase future traffic volumes within the study area network. A 10,474 square-foot daycare facility is proposed at 273 Talcottville Road, and a 1,726 square foot hair salon is proposed at 274 Talcottville Road. Additionally, the Trail Run development, which is located across the street from the project site, is a previously approved developed that has not yet been fully tenanted.

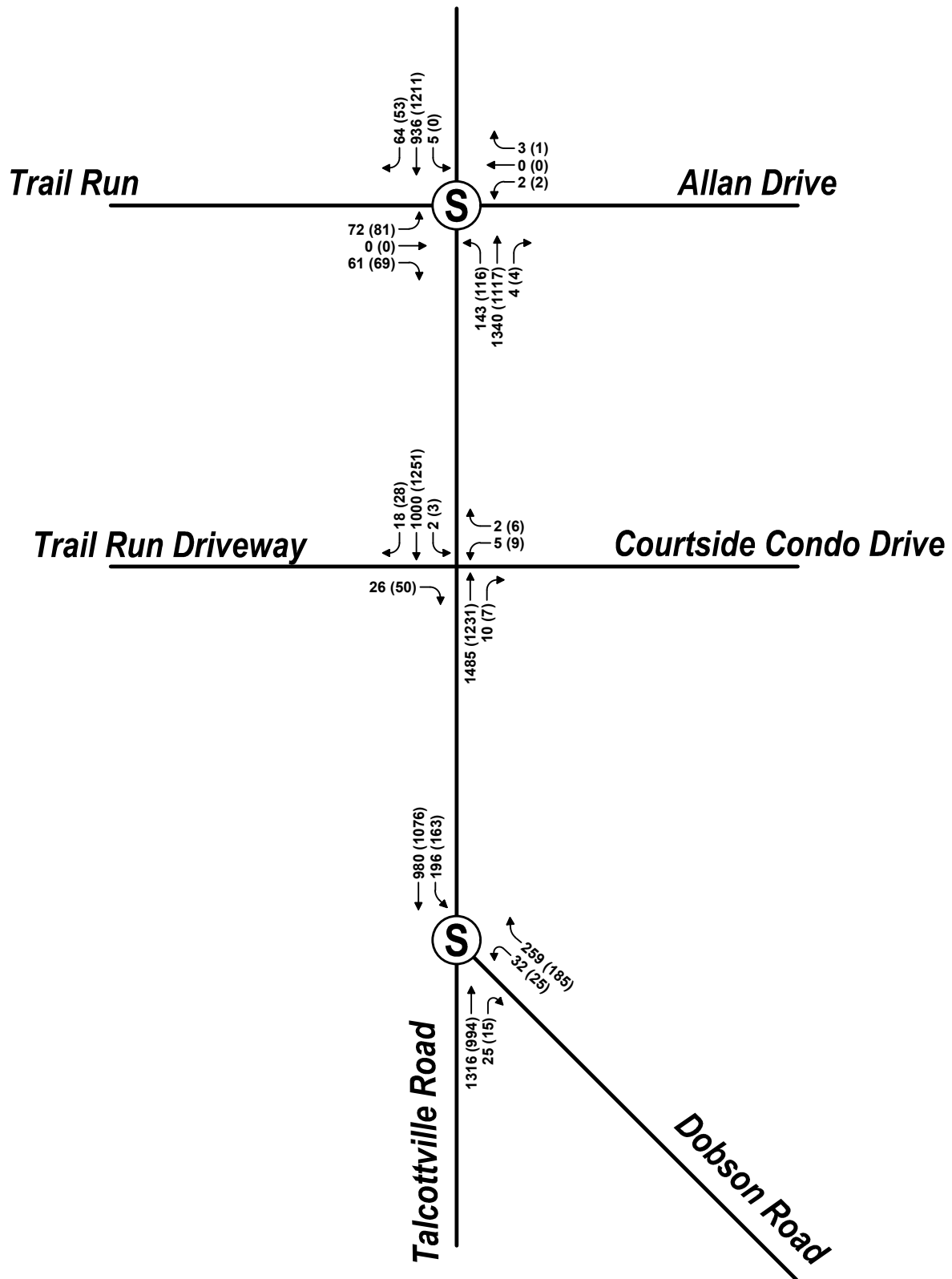
Trip generation calculations were conducted to forecast the traffic volumes to be generated by the full occupancy of each of the above developments, and these volumes were included in the future No-Build traffic volume networks. These calculations are included in the Appendix.

Historic Growth

As recommended by the CTDOT forecasting unit, a 0.7-percent annual growth rate was utilized to account for future traffic growth unrelated to planned developments, such as population growth or changes in demographics.

2023 No-Build Traffic Volumes

The 2023 No-Build traffic volumes were forecast by adding the volumes from the background developments and by applying the 0.7-percent annual growth rate to the existing traffic volume networks. The resulting 2023 No-Build traffic volumes networks are presented on Figure 3.



Weekday Afternoon Peak Hour
(Saturday Midday Peak Hour)



Not to Scale



2023 No-Build Conditions
Peak Hour Traffic Volumes
Proposed Retail Marijuana and Office
Vernon, CT

Figure 3



Build Condition

Build traffic volumes for study area roadways were determined by estimating site generated traffic volumes and distributing these volumes over the study area roadways.

Site Generated Traffic

The Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition was used to estimate vehicle trips to be generated by the proposed development. The following ITE land use codes (LUC) were used to account for the proposed future conditions:

- LUC 710 "General Office Building" was used to estimate the vehicle trips for the proposed 7,502 square feet of office space proposed at a later stage of development, and;
- LUC 822 "Marijuana Dispensary" was used to estimate the vehicle trips for the proposed 5,665 square feet dispensary

Table 2 presents the resulting net new trips for the weekday evening peak hour and Saturday midday peak hour for the proposed development. This development is anticipated to generate approximately 126 trips (56 entering, 70 exiting) during the evening peak hour and 168 trips (84 entering, 84 exiting) during the Saturday midday peak hour. The ITE Trip Generation data are included in the Appendix.

Table 2 Trip Generation Summary

Time Period	Marijuana Dispensary Trips ¹ (LUC 882)	Office Space ² (LUC 710)	Net New Trips
Weekday Evening Peak Hour ^b			
Enter	53	3	56
<u>Exit</u>	<u>54</u>	<u>16</u>	<u>70</u>
Total	107	19	126
Saturday Midday Peak Hour ^b			
Enter	82	2	84
<u>Exit</u>	<u>82</u>	<u>2</u>	<u>84</u>
Total	164	4	168

a Vehicles per day

b Vehicles per hour

1 Trip generation calculated using ITE methodology, based on LUC 882 Marijuana Dispensary for 5,665 SF

2 Trip generation calculated using ITE methodology, based on LUC 710 General Office Building for 7,502 SF



Trip Distribution

The anticipated distribution of the site generated traffic was forecast based on nearby travel patterns and a review of recent traffic studies in the vicinity of the project.

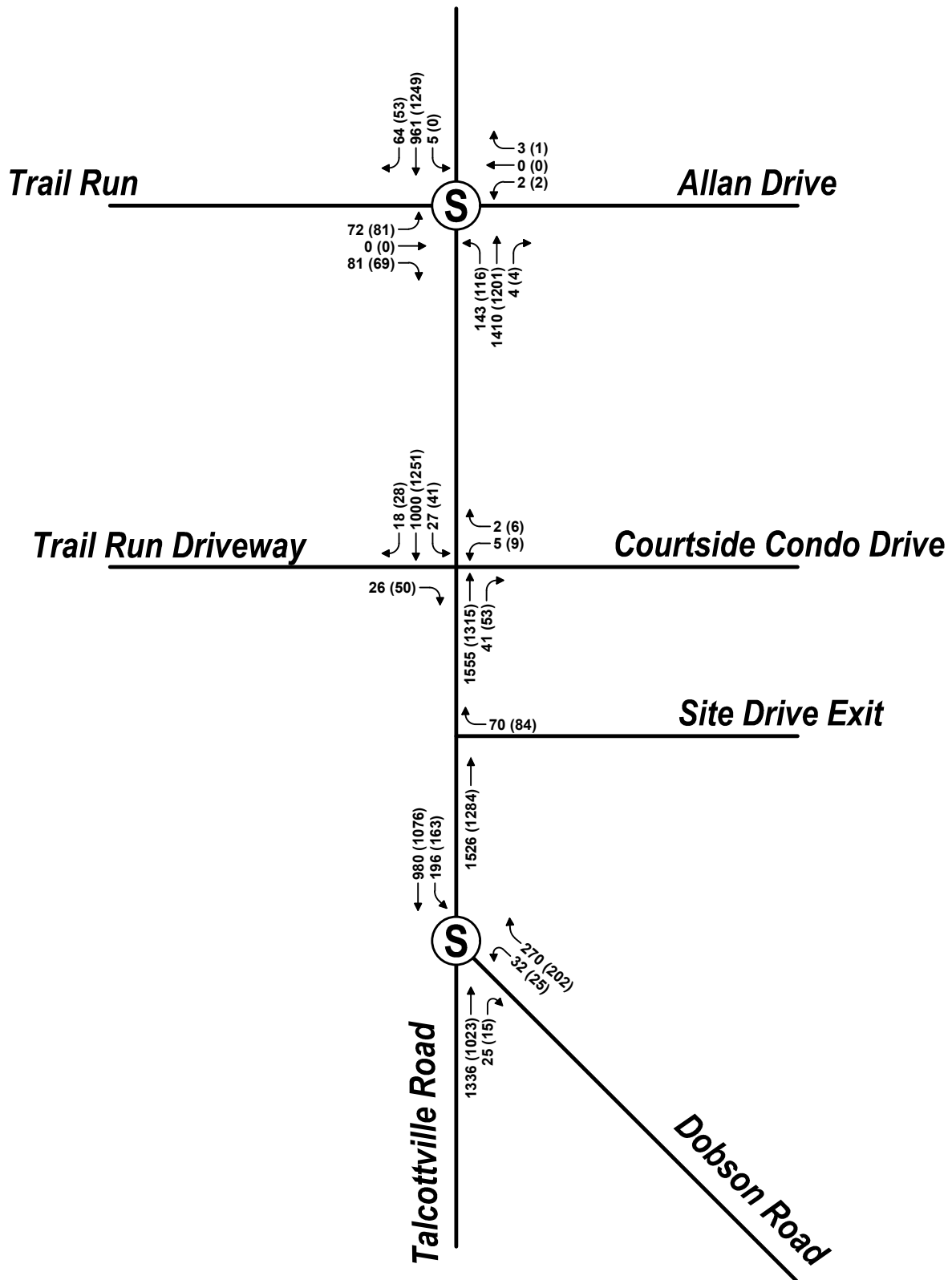
It was assumed that site-generated traffic would be allocated across the major routes in the area based on the traffic percentages that are summarized in Table 3. A figure depicting the distribution patterns can be seen in the Appendix.

Table 3 Trip Distribution Summary

Roadway	Direction [From/To]	Site Generated Trip Distribution ^a
Talcottville Road	North	45%
Talcottville Road	South	35%
<u>Dobson Road</u>	<u>East</u>	<u>20%</u>
Total		100%

Build Conditions Traffic Volumes

The future site-generated volumes were assigned to the roadway network according to the distribution and travel patterns previously described and combined with the 2023 No-Build traffic volumes to develop the 2023 Build peak hour networks, which are presented on Figure 4.



Weekday Afternoon Peak Hour
(Saturday Midday Peak Hour)



Not to Scale



2023 Build Conditions
Peak Hour Traffic Volumes
Proposed Retail Marijuana and Office
Vernon, CT

Figure 4

4

Traffic Operations Analysis

Measuring existing traffic volumes and projecting future traffic volumes quantifies traffic flow within the study area. To assess the roadway and intersection capacity, analyses were conducted with respect to existing traffic volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed on them. The following sections describe the methodology used to evaluate the study area intersections and summarize the results of the analyses.

Level of Service and Delay Criteria

The evaluation criteria used to analyze area intersections in this traffic study are based on the 2000 Highway Capacity Manual (HCM). The term 'Level of service' (LOS) is used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure that considers a number of factors including roadway geometry, speed, travel delay and freedom to maneuver. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level-of-service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

In addition to LOS, two other measures of effectiveness (MOEs) are typically used to quantify the traffic operations at intersections; volume-to-capacity ratio (v/c) and delay (expressed in



seconds per vehicle). For example, an existing v/c ratio of 0.9 for an intersection indicates that the intersection is operating at 90 percent of its available capacity. A delay of 15 seconds for a particular vehicular movement or approach indicates that vehicles on the movement or approach will experience an average additional travel time of 15 seconds. It should be noted that v/c and delay could have a range of values for a given LOS letter designation. Comparison of intersection capacity results therefore requires that, in addition to the LOS, the other MOEs should also be considered.

The level-of-service designations, which are based on delay, are reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, however, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus, the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or site driveway. Table 4 shows the level of service criteria for both signalized intersections and unsignalized intersections.

It should be noted that the analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters, such as long critical gaps. Actual field observations indicate that drivers on minor streets generally accept shorter gaps in traffic than those used in the analysis procedures and therefore experience less delay than reported by the analysis software. The analysis methodologies also do not fully take into account the beneficial grouping effects caused by nearby signalized intersections. The net effect of these analysis procedures is the over-estimation of calculated delays at unsignalized intersections in the study area. Cautious judgment should therefore be exercised when interpreting the capacity analysis results at unsignalized intersections.

Table 4 Level of Service Criteria

Level of Service	Signalized Intersection	Unsignalized Intersection
A	0 to 10 seconds	0 to 10 seconds
B	10 to 20 seconds	10 to 15 seconds
C	20 to 35 seconds	15 to 25 seconds
D	35 to 55 seconds	25 to 35 seconds
E	55 to 80 seconds	35 to 50 seconds
F	Greater than 80 seconds	Greater than 50 seconds

Source: 2000 Highway Capacity Manual Exhibits 16-2 and 17-2



Intersection Capacity Analysis

Signalized Intersection Capacity Analysis

The signalized intersections of Talcottville Road (Route 83) at Allan Drive/Trail Run and Talcottville Road (Route 83) at Dobson Road currently operate at an overall LOS B or better condition during the peak traffic periods. Both signalized intersections are expected to continue operating at overall LOS B or better under future No-Build and Build conditions. The traffic generated by the proposed development is expected to have a negligible impact on overall traffic operating conditions.

The results of the signalized intersection capacity analysis are shown in Table 5.

Unsignalized Intersection Capacity Analysis

Unsignalized intersection capacity analyses were conducted for the Trail Run/Courtside Condominiums driveways and the proposed right-out site driveway on Route 83. The unsignalized intersection capacity analyses are summarized in Table 6.

Based on these capacity analysis results, the proposed right-out site driveway on Route 83 is expected to operate at an acceptable LOS C during the peak traffic periods.

The Courtside Condominiums driveway currently operates at LOS F during the weekday evening and Saturday midday peak traffic periods under existing conditions, and this driveway is projected to continue operating at LOS F under future No-Build and Build conditions. These delays are caused by the high conflicting traffic volumes on Route 83, as motorists attempting to turn left out of this driveway during the peak traffic periods experience long delays waiting for an acceptable gap in traffic. There is no practical method to reduce these delays, since this driveway does not warrant installation of a traffic signal. However, as previously noted, the analysis methodologies used to analyze unsignalized intersections are conservative, since they do not fully account for the gaps in traffic created by the nearby traffic signal when it changes phases. Therefore, it is likely that the actual delays experienced by motorists exiting the Courtside Condominiums driveway will be less than those reported in Table 6.



Table 5 Signalized Intersection Capacity Analysis Summary

		2022 Existing Conditions					2023 No-Build Conditions					2023 Build Conditions				
Intersection	Lane Group	V/C ¹	Delay ²	LOS ³	50 th 4	95 th 5	V/C	Delay	LOS	50 th	95 th	V/C	Delay	LOS	50th	95th
Route 83 at Allan Drive																
Weekday Evening Peak Hour																
Trail Run	EB L/T	0.10	41.8	D	4	18	0.55	42.8	D	42	83	0.55	42.8	D	42	83
Trail Run	EB R	0.02	41.2	D	0	0	0.06	36.7	D	0	35	0.06	36.7	D	0	35
Allan Drive	WB L/T/R	0.00	41.1	D	0	0	0.00	36.4	D	0	0	0.00	36.4	D	0	0
Route 83	NB L	0.47	45.4	D	42	m43	0.60	36.8	D	80	m76	0.60	37.0	D	81	m77
Route 83	NB T/R	0.54	6.9	A	166	508	0.59	10.4	B	246	530	0.62	10.8	B	274	556
Route 83	SB L	0.24	60.2	E	2	m7	0.24	49.6	D	2	m6	0.24	49.6	D	2	m6
Route 83	SB T/R	0.43	12.4	B	322	346	0.56	21.0	C	351	373	0.57	21.3	C	360	382
	Overall	0.53	10.8	B	-	-	0.61	17.7	B	-	-	0.63	17.8	B	-	-
Saturday Midday Peak Hour																
Trail Run	EB L/T	0.26	42.6	D	11	21	0.75	52.6	D	77	85	0.75	52.6	D	77	85
Trail Run	EB R	0.03	40.6	D	0	0	0.08	34.3	C	0	8	0.08	34.3	C	0	8
Allan Drive	WB L/T/R	0.00	40.4	D	0	0	0.00	33.8	C	0	0	0.00	33.8	C	0	0
Route 83	NB L	0.36	43.2	D	19	47	0.55	40.0	D	67	117	0.55	40.0	D	67	117
Route 83	NB T/R	0.44	2.9	A	86	131	0.48	5.6	A	127	165	0.52	5.9	A	144	185
Route 83	SB L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Route 83	SB T/R	0.53	3.6	A	282	71	0.72	14.4	B	405	113	0.74	15.0	B	422	129
	Overall	0.52	4.8	A	-	-	0.70	14.6	B	-	-	0.73	14.7	B	-	-
Route 83 at Dobson Road																
Weekday Evening Peak Hour																
Dobson Road	WB L/R	0.33	37.1	D	19	91	0.35	37.1	D	19	93	0.35	37.2	D	19	93
Route 83	NB T/R	0.80	12.1	B	202	238	0.85	13.3	B	211	247	0.86	13.6	B	215	251
Route 83	SB L	0.70	50.7	D	78	145	0.76	46.4	D	91	170	0.76	44.5	D	87	165
Route 83	SB T/R	0.37	2.9	A	14	61	0.40	4.3	A	17	157	0.40	4.4	A	22	163
	Overall	0.72	13.7	B	-	-	0.76	14.8	B	-	-	0.77	14.9	B	-	-
Saturday Midday Peak Hour																
Dobson Road	WB L/R	0.29	42.1	D	18	69	0.31	42.1	D	18	71	0.32	42.1	D	18	72
Route 83	NB T/R	0.47	9.4	A	151	263	0.51	10.4	B	173	304	0.53	10.7	B	181	320
Route 83	SB L	0.37	4.6	A	14	38	0.44	5.7	A	17	46	0.45	6.0	A	17	47
Route 83	SB T/R	0.41	3.9	A	86	158	0.43	4.1	A	93	177	0.43	4.2	A	93	181
	Overall	0.45	9.5	A	-	-	0.48	10.3	B	-	-	0.50	10.6	B	-	-

1 V/C – Volume-to-capacity ratio
2 Delay – Control delay per vehicle
3 LOS – Level-of-Service
4 50th – 50th percentile queue length estimate, in feet
5 95th – 95th percentile queue length estimate, in feet
95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; L = left-turn; T = through; R = right-turn



Table 6 Unsignalized Intersection Capacity Analysis Summary

Location	Peak Period	Movement	2022 Existing				2023 No-Build				2023 Build			
			Dem ^a	v/c ^b	Delay ^c	LOS ^d	Dem	v/c	Delay	LOS	Dem	v/c	Delay	LOS
Route 83 at Trail Run and Courtside Condo Driveways	Weekday Evening	EB-R	9	0.01	10.2	B	26	0.04	9.5	A	26	0.04	9.5	A
		WB LTR	7	0.31	119.2	F	7	0.39	157.2	F	7	0.57	>200	F
		NB-LTR	1418	0.60	0.0	A	1495	0.63	0.0	A	1596	0.66	0.0	A
		SB-LTR	945	0.33	0.1	A	1020	0.36	0.2	A	1045	0.36	3.0	A
	Saturday Midday	EB-R	20	0.04	10.7	B	50	0.08	10.1	B	50	0.09	10.3	B
		WB LTR	15	0.48	130.2	F	15	0.58	177.2	F	15	1.10	>200	F
		NB-LTR	1158	0.55	0.0	A	1238	0.59	0.0	A	1368	0.63	0.0	A
		SB-LTR	1205	0.43	0.3	A	1275	0.46	0.3	A	1320	0.46	4.6	A
Route 83 at Exit Only Site Drive	Weekday Evening	WB R	-	-	-	-	-	-	-	-	70	0.24	20.1	C
		NB T	-	-	-	-	-	-	-	-	1526	0.49	0.0	-
		SB T	-	-	-	-	-	-	-	-	1031	0.33	0.0	-
	Saturday Midday	WB R	-	-	-	-	-	-	-	-	84	0.24	17.3	C
		NB T	-	-	-	-	-	-	-	-	1284	0.41	0.0	-
		SB T	-	-	-	-	-	-	-	-	1310	0.42	0.0	-

- a traffic demand in vehicles per hour;
b volume-to-capacity ratio for the critical movement
c delay of critical approach only
d level of service of the critical movement
EB, WB Eastbound, westbound
NB, SB Northbound, southbound
L left-turn movement
R right-turn movement
T through-movement

5

Conclusions

This study has been prepared to evaluate the traffic impacts associated with a proposed hybrid medical/retail marijuana dispensary, to be located at 234 Talcottville Road (Route 83) in Vernon, Connecticut. The site is currently occupied by a vacant 13,167 square foot, two-floor building. The proposed project will renovate this existing building to accommodate an approximately 5,665 square-foot hybrid medical and retail marijuana dispensary on the first floor. Under a future phase, the remaining portion of the building (7,502± square-feet) is planned to be converted to corporate office space. Although this corporate office space will not be occupied as part of the current proposal, this traffic impact study accounts for the traffic generated by the future office space in order to provide a conservative analysis of the potential traffic impacts associated with the full occupancy of this building.

Access to the existing site is provided by a full access driveway that connects to the Courtside Condominiums driveway on Talcottville Road (Route 83). Under the proposed project, the existing site driveway connecting to the Courtside Condominiums driveway will be relocated further from Talcottville Road and converted to provide entrance only access to the project site. Additionally, a new right-out only driveway is proposed onto Talcottville Road. These proposed modifications in site access are intended to provide adequate access to the project site while minimizing impacts to the Courtside Condominiums residents. It should be noted that the proposed driveway onto Route 83 will be subject to the review and approval of the Connecticut Department of Transportation (CTDOT).



The proposed development (including the future corporate office space) is expected to generate approximately 126 trips (56 entering, 70 exiting) during the evening peak hour and 168 trips (84 entering, 84 exiting) during the Saturday midday peak hour.

Capacity analyses indicate that the signalized study intersections of Route 83 at Dobson Road and Route 83 at Allan Drive are projected to operate at an overall acceptable LOS B or better during the peak traffic periods under future No-Build and Build conditions. The additional traffic generated by the proposed project is expected to have a negligible impact on these intersections.

The proposed right-out site driveway on Route 83 is expected to operate at an acceptable LOS C during the peak traffic periods.

The Courtside Condominiums driveway currently operates at LOS F during the peak traffic periods under existing conditions, and this driveway is projected to continue operating at LOS F under future No-Build and Build conditions. The F LOS is caused by the high conflicting traffic volumes on Route 83, as motorists attempting to turn left out of this driveway during the peak traffic periods experience long delays waiting for an acceptable gap in traffic. There is no practical method to reduce these delays, since this driveway does not warrant installation of a traffic signal. However, as previously noted, the analysis methodologies used to analyze unsignalized intersections are conservative, since they do not fully account for the gaps in traffic created by the nearby traffic signal when it changes phases. Therefore, it is likely that the actual delays experienced by motorists exiting the Courtside Condominiums driveway will be less than those reported.

It is the conclusion of this study that the additional traffic generated by the project will not have a significant negative impact on surrounding traffic operating conditions, and no off-site transportation improvements are recommended. Additionally, the proposed driveways will provide adequate access to the site.



Appendix

Appendix No. & Title

Attachment A – Traffic Counts

Attachment B – Background Developments

Attachment C – Crash Data

Attachment D – Trip Generation & Distribution

Attachment E – Capacity Analyses



Attachment A – Traffic Counts

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Talcotville Rd at 234 Talcottville Rd
Vernon, Connecticut

File Name : 23556
Site Code : 23556
Start Date : 10/20/2022
Page No : 1

Groups Printed- Lights - Trucks - Buses

	Talcottville Road From North					234 Talcottville Road From East					Talcottville Road From South					Private Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	2	229	1	0	232	0	0	2	0	2	3	413	0	0	416	2	0	0	0	2	652
04:15 PM	0	253	0	0	253	2	0	1	0	3	4	322	0	0	326	1	0	0	0	1	583
04:30 PM	0	234	1	0	235	0	0	1	0	1	2	270	0	0	272	6	1	0	0	7	515
04:45 PM	0	183	0	0	183	0	0	1	0	1	1	338	0	0	339	0	0	0	0	0	523
Total	2	899	2	0	903	2	0	5	0	7	10	1343	0	0	1353	9	1	0	0	10	2273
05:00 PM	1	285	0	0	286	1	0	0	0	1	1	399	2	0	402	6	0	0	0	6	695
05:15 PM	3	206	2	0	211	0	0	0	1	1	0	315	0	0	315	6	0	0	0	6	533
05:30 PM	0	205	0	0	205	0	0	0	0	0	3	376	1	0	380	6	0	0	0	6	591
05:45 PM	0	254	0	0	254	0	0	0	0	0	3	371	0	0	374	3	0	0	0	3	631
Total	4	950	2	0	956	1	0	0	1	2	7	1461	3	0	1471	21	0	0	0	21	2450
Grand Total	6	1849	4	0	1859	3	0	5	1	9	17	2804	3	0	2824	30	1	0	0	31	4723
Apprch %	0.3	99.5	0.2	0		33.3	0	55.6	11.1		0.6	99.3	0.1	0		96.8	3.2	0	0		
Total %	0.1	39.1	0.1	0	39.4	0.1	0	0.1	0	0.2	0.4	59.4	0.1	0	59.8	0.6	0	0	0	0.7	
Lights	6	1826										2786									
% Lights	100	98.8	100	0	98.8	100	0	100	100	100	100	99.4	100	0	99.4	100	100	0	0	100	99.1
Trucks	0	13	0	0	13	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	20
% Trucks	0	0.7	0	0	0.7	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0.4
Buses	0	10	0	0	10	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	21
% Buses	0	0.5	0	0	0.5	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0.4

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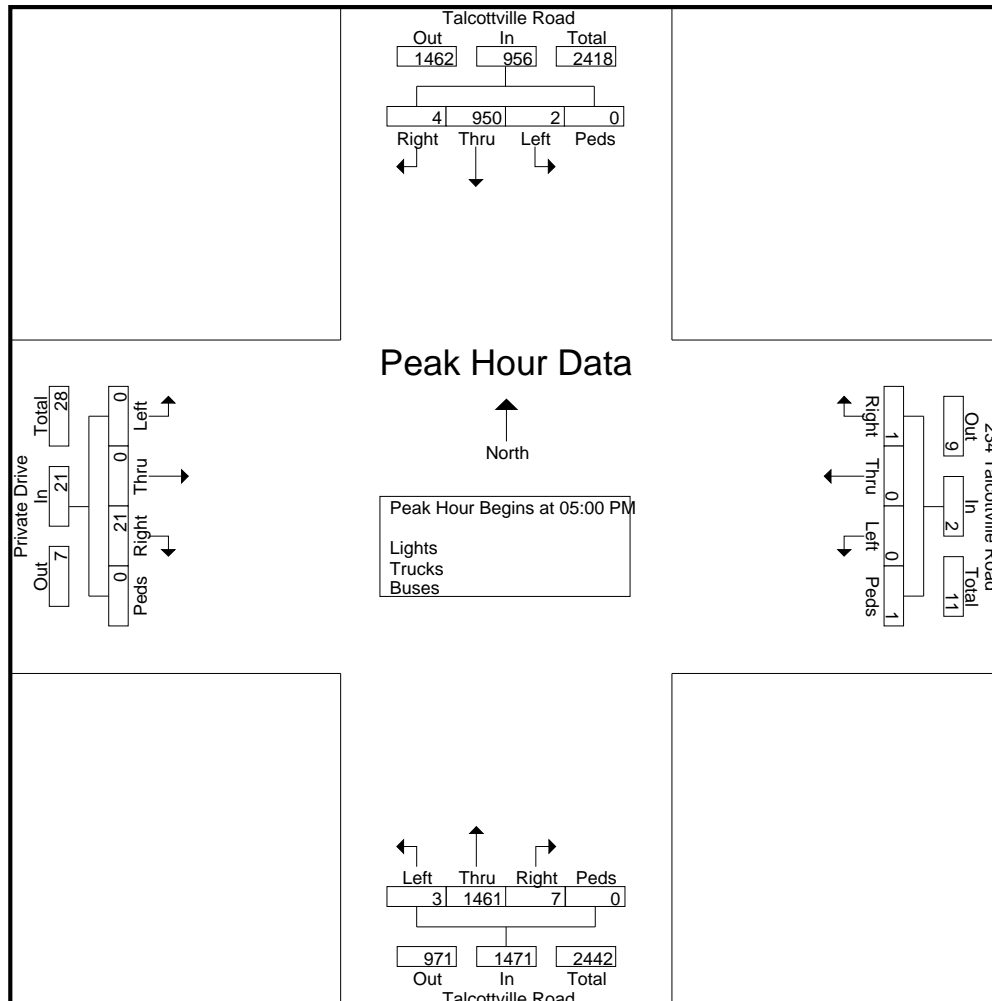
File Name : 23556
Site Code : 23556
Start Date : 10/20/2022
Page No : 2

	Talcottville Road From North					234 Talcottville Road From East					Talcottville Road From South					Private Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	1	285	0	0	286	1	0	0	0	1	1	399	2	0	402	6	0	0	0	6	695
05:15 PM	3	206	2	0	211	0	0	0	1	1	0	315	0	0	315	6	0	0	0	6	533
05:30 PM	0	205	0	0	205	0	0	0	0	0	3	376	1	0	380	6	0	0	0	6	591
05:45 PM	0	254	0	0	254	0	0	0	0	0	3	371	0	0	374	3	0	0	0	3	631
Total Volume	4	950	2	0	956	1	0	0	1	2	7	1461	3	0	1471	21	0	0	0	21	2450
% App. Total	0.4	99.4	0.2	0		50	0	0	50		0.5	99.3	0.2	0		100	0	0	0		
PHF	.333	.833	.250	.000	.836	.250	.000	.000	.250	.500	.583	.915	.375	.000	.915	.875	.000	.000	.000	.875	.881



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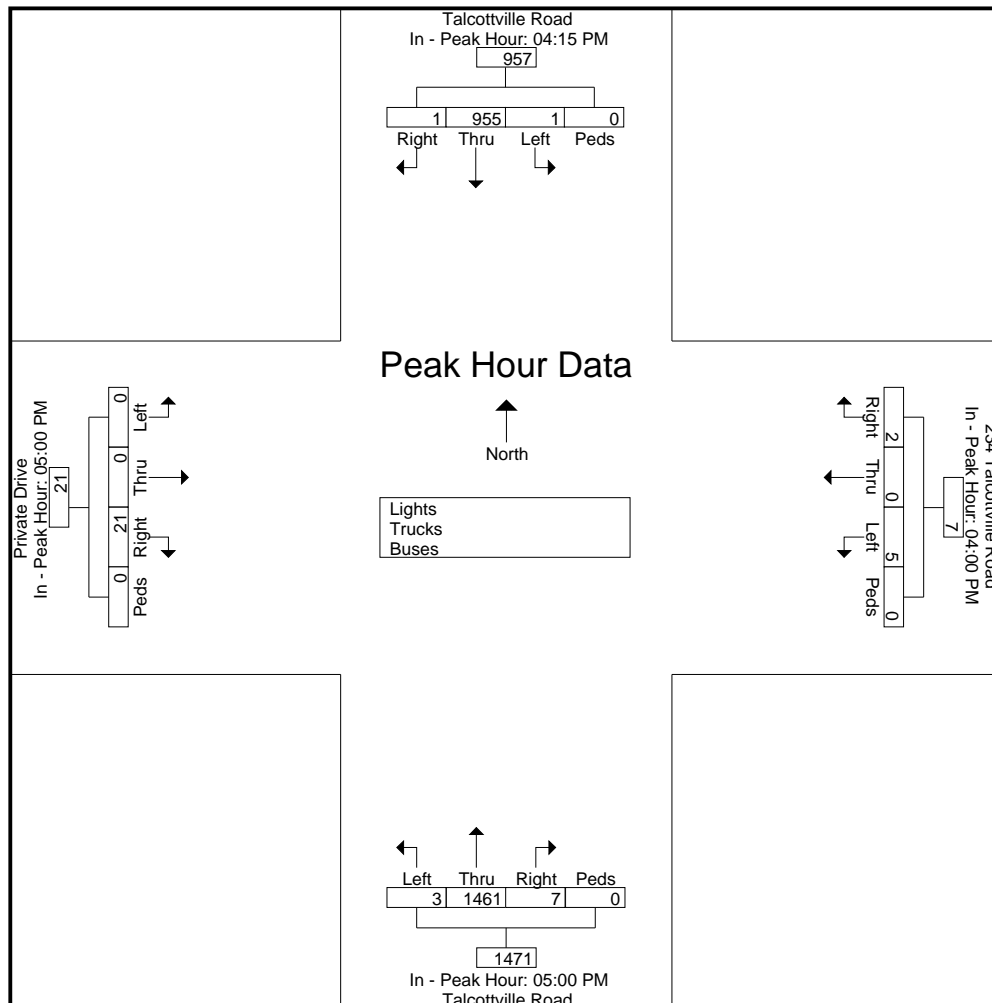
File Name : 23556
Site Code : 23556
Start Date : 10/20/2022
Page No : 3

	Talcottville Road From North					234 Talcottville Road From East					Talcottville Road From South					Private Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM					04:00 PM					05:00 PM					05:00 PM					
+0 mins.	0	253	0	0	253	0	0	2	0	2	1	399	2	0	402	6	0	0	0	6	
+15 mins.	0	234	1	0	235	2	0	1	0	3	0	315	0	0	315	6	0	0	0	6	
+30 mins.	0	183	0	0	183	0	0	1	0	1	3	376	1	0	380	6	0	0	0	6	
+45 mins.	1	285	0	0	286	0	0	1	0	1	3	371	0	0	374	3	0	0	0	3	
Total Volume	1	955	1	0	957	2	0	5	0	7	7	1461	3	0	1471	21	0	0	0	21	
% App. Total	0.1	99.8	0.1	0		28.6	0	71.4	0		0.5	99.3	0.2	0		100	0	0	0		
PHF	.250	.838	.250	.000	.837	.250	.000	.625	.000	.583	.583	.915	.375	.000	.915	.875	.000	.000	.000	.875	



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Talcottville Rdf at 234 Talcottville Rd
Vernon, Connecticut

File Name : 23557
Site Code : 23557
Start Date : 10/22/2022
Page No : 1

Groups Printed- Lights - Trucks - Buses

	Talcottville Road From North					234 Talcottville Road From East					Talcottville Road From South					Private Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	1	287	2	0	290	1	0	3	0	4	2	249	0	0	251	3	0	0	0	3	548
11:15 AM	0	247	1	0	248	0	0	1	0	1	0	274	0	0	274	9	0	0	0	9	532
11:30 AM	0	327	1	0	328	1	0	1	0	2	3	340	0	0	343	7	0	0	0	7	680
11:45 AM	0	219	0	0	219	1	0	2	0	3	3	257	0	0	260	9	0	0	0	9	491
Total	1	1080	4	0	1085	3	0	7	0	10	8	1120	0	0	1128	28	0	0	0	28	2251
12:00 PM	1	210	1	0	212	2	0	2	0	4	1	199	0	0	200	6	0	0	0	6	422
12:15 PM	0	261	2	0	263	2	0	4	0	6	1	304	0	0	305	2	0	0	0	2	576
12:30 PM	0	293	0	0	293	1	0	1	0	2	2	250	0	0	252	3	0	0	0	3	550
12:45 PM	1	225	0	0	226	1	0	1	1	3	3	214	0	0	217	7	0	0	0	7	453
Total	2	989	3	0	994	6	0	8	1	15	7	967	0	0	974	18	0	0	0	18	2001
01:00 PM	1	252	0	0	253	0	0	2	0	2	1	288	1	0	290	3	0	0	0	3	548
01:15 PM	0	270	0	0	270	2	0	1	0	3	2	274	0	0	276	2	0	0	0	2	551
01:30 PM	1	240	1	0	242	2	0	1	0	3	1	245	0	0	246	4	0	0	0	4	495
01:45 PM	0	243	2	0	245	0	0	3	0	3	2	274	0	0	276	3	1	0	0	4	528
Total	2	1005	3	0	1010	4	0	7	0	11	6	1081	1	0	1088	12	1	0	0	13	2122
Grand Total	5	3074	10	0	3089	13	0	22	1	36	21	3168	1	0	3190	58	1	0	0	59	6374
Apprch %	0.2	99.5	0.3	0		36.1	0	61.1	2.8		0.7	99.3	0	0		98.3	1.7	0	0		
Total %	0.1	48.2	0.2	0	48.5	0.2	0	0.3	0	0.6	0.3	49.7	0	0	50	0.9	0	0	0	0.9	
Lights	5	3068										3159									
% Lights	100	99.8	100	0	99.8	100	0	100	100	100	100	99.7	100	0	99.7	100	100	0	0	100	99.8
Trucks	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10
% Trucks	0	0.2	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0.2
Buses	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1

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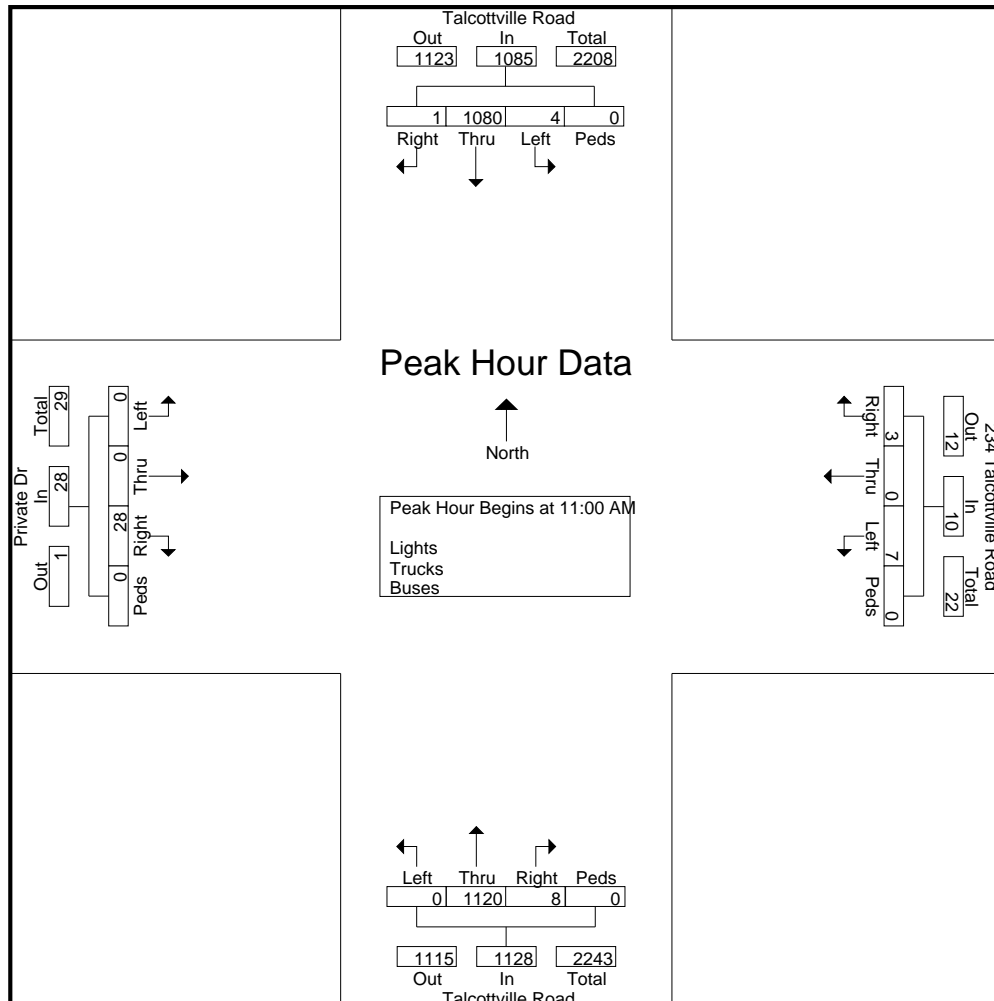
File Name : 23557
Site Code : 23557
Start Date : 10/22/2022
Page No : 2

	Talcottville Road From North					234 Talcottville Road From East					Talcottville Road From South					Private Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:00 AM

11:00 AM	1	287	2	0	290	1	0	3	0	4	2	249	0	0	251	3	0	0	0	3	548
11:15 AM	0	247	1	0	248	0	0	1	0	1	0	274	0	0	274	9	0	0	0	9	532
11:30 AM	0	327	1	0	328	1	0	1	0	2	3	340	0	0	343	7	0	0	0	7	680
11:45 AM	0	219	0	0	219	1	0	2	0	3	3	257	0	0	260	9	0	0	0	9	491
Total Volume	1	1080	4	0	1085	3	0	7	0	10	8	1120	0	0	1128	28	0	0	0	28	2251
% App. Total	0.1	99.5	0.4	0		30	0	70	0		0.7	99.3	0	0		100	0	0	0		
PHF	.250	.826	.500	.000	.827	.750	.000	.583	.000	.625	.667	.824	.000	.000	.822	.778	.000	.000	.000	.778	.828



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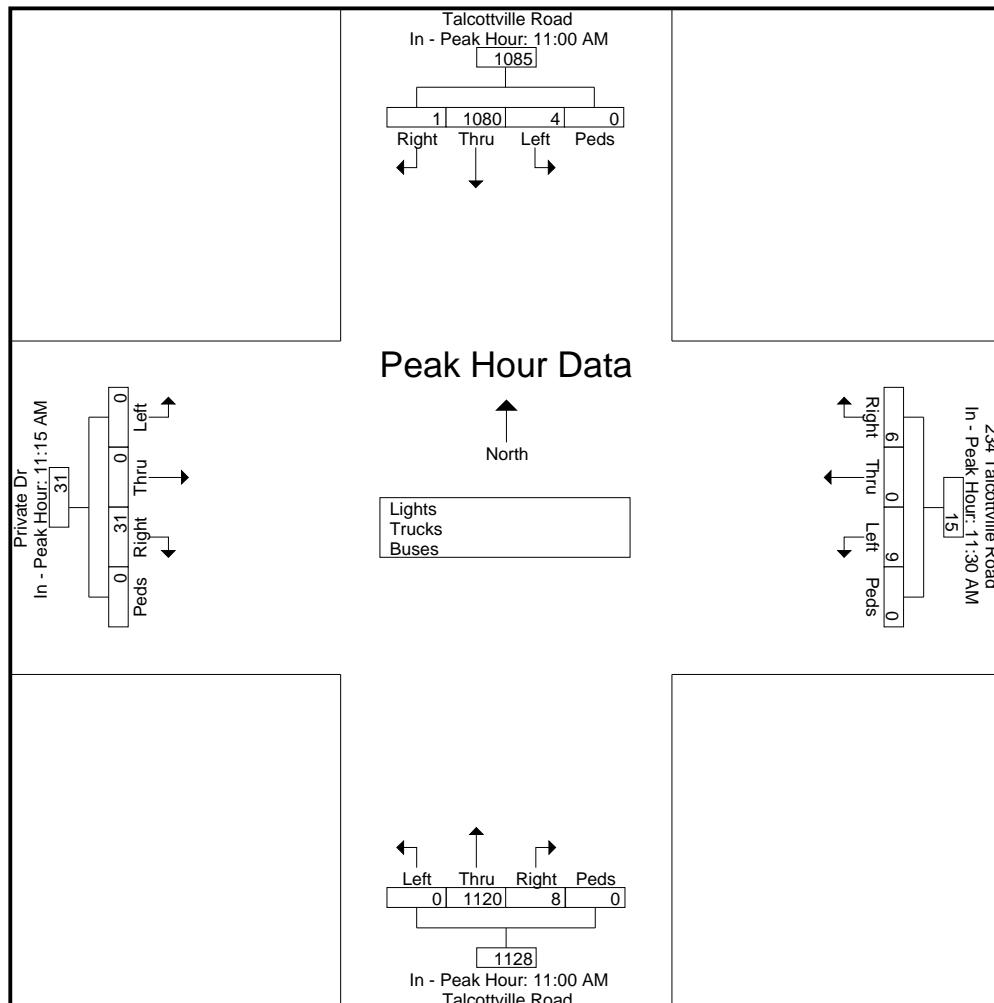
File Name : 23557
 Site Code : 23557
 Start Date : 10/22/2022
 Page No : 3

	Talcottville Road From North					234 Talcottville Road From East					Talcottville Road From South					Private Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	11:00 AM					11:30 AM					11:00 AM					11:15 AM				
+0 mins.	1	287	2	0	290	1	0	1	0	2	2	249	0	0	251	9	0	0	0	9
+15 mins.	0	247	1	0	248	1	0	2	0	3	0	274	0	0	274	7	0	0	0	7
+30 mins.	0	327	1	0	328	2	0	2	0	4	3	340	0	0	343	9	0	0	0	9
+45 mins.	0	219	0	0	219	2	0	4	0	6	3	257	0	0	260	6	0	0	0	6
Total Volume	1	1080	4	0	1085	6	0	9	0	15	8	1120	0	0	1128	31	0	0	0	31
% App. Total	0.1	99.5	0.4	0		40	0	60	0		0.7	99.3	0	0		100	0	0	0	
PHF	.250	.826	.500	.000	.827	.750	.000	.563	.000	.625	.667	.824	.000	.000	.822	.861	.000	.000	.000	.861



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Talcottville Rd at Allan/Trail Run Dr
Vernon, Connecticut

File Name : 23558
Site Code : 23558
Start Date : 10/20/2022
Page No : 1

Groups Printed- Lights - Trucks - Buses

	Talcottville Road From North					Allan Drive From East					Talcottville Road From South					Trail Run Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	2	271	3	0	276	0	0	0	0	0	3	331	22	0	356	8	0	0	0	8	640
04:15 PM	6	235	2	0	243	1	0	1	0	2	0	337	19	0	356	8	0	7	0	15	616
04:30 PM	0	220	0	0	220	0	0	0	0	0	0	322	11	0	333	4	0	0	0	4	557
04:45 PM	6	194	0	0	200	2	0	1	0	3	1	348	16	0	365	3	0	0	2	5	573
Total	14	920	5	0	939	3	0	2	0	5	4	1338	68	0	1410	23	0	7	2	32	2386
05:00 PM	3	266	2	0	271	1	0	1	0	2	0	339	15	0	354	5	0	3	0	8	635
05:15 PM	3	237	0	0	240	0	0	1	1	2	2	374	20	0	396	4	0	3	0	7	645
05:30 PM	4	228	1	0	233	1	0	0	0	1	1	350	18	0	369	8	0	1	0	9	612
05:45 PM	5	227	0	0	232	2	0	0	0	2	1	313	17	0	331	7	0	2	0	9	574
Total	15	958	3	0	976	4	0	2	1	7	4	1376	70	0	1450	24	0	9	0	33	2466
Grand Total	29	1878	8	0	1915	7	0	4	1	12	8	2714	138	0	2860	47	0	16	2	65	4852
Apprch %	1.5	98.1	0.4	0		58.3	0	33.3	8.3		0.3	94.9	4.8	0		72.3	0	24.6	3.1		
Total %	0.6	38.7	0.2	0	39.5	0.1	0	0.1	0	0.2	0.2	55.9	2.8	0	58.9	1	0	0.3	0	1.3	
Lights	28	1851										2695									
% Lights	96.6	98.6	100	0	98.5	100	0	100	100	100	100	99.3	100	0	99.3	100	0	100	100	100	99
Trucks	1	13	0	0	14	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	24
% Trucks	3.4	0.7	0	0	0.7	0	0	0	0	0	0	0.4	0	0	0.3	0	0	0	0	0	0.5
Buses	0	14	0	0	14	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	23
% Buses	0	0.7	0	0	0.7	0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0.5

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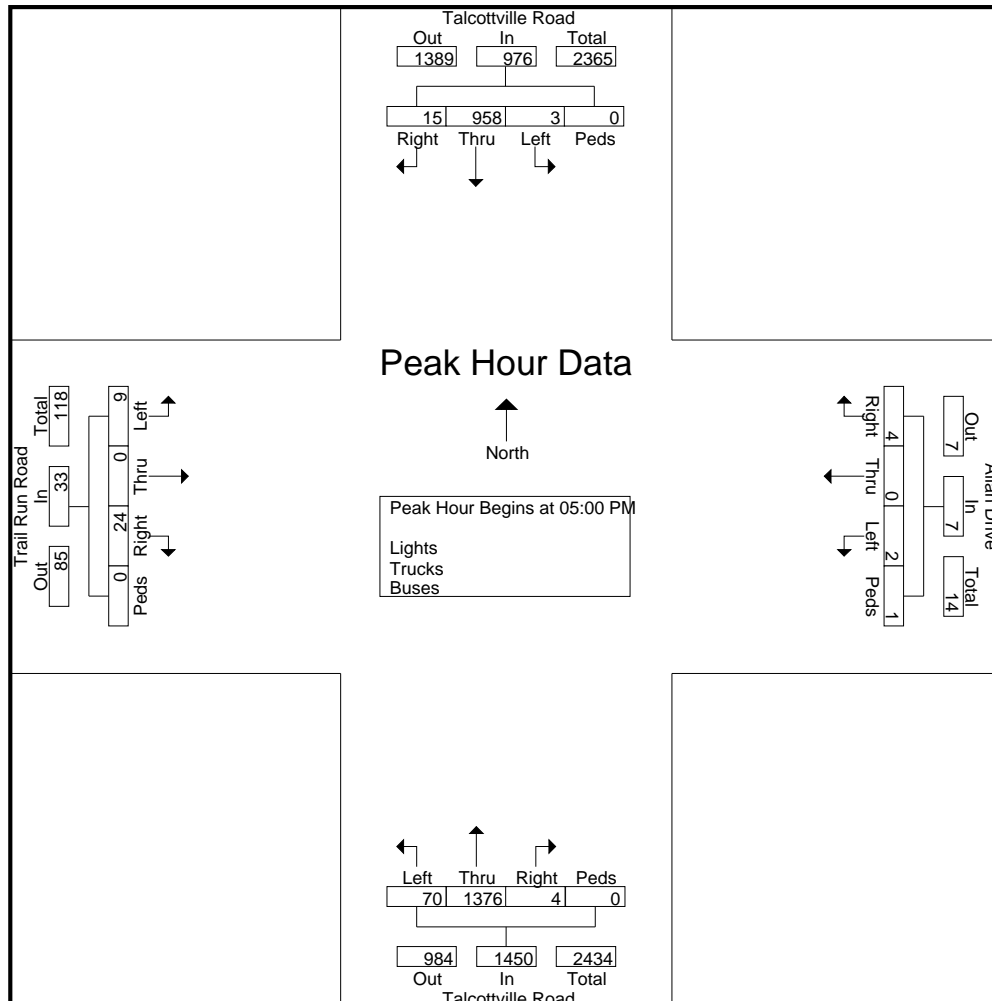
File Name : 23558
Site Code : 23558
Start Date : 10/20/2022
Page No : 2

	Talcottville Road From North					Allan Drive From East					Talcottville Road From South					Trail Run Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	3	266	2	0	271	1	0	1	0	2	0	339	15	0	354	5	0	3	0	8	635
05:15 PM	3	237	0	0	240	0	0	1	1	2	2	374	20	0	396	4	0	3	0	7	645
05:30 PM	4	228	1	0	233	1	0	0	0	1	1	350	18	0	369	8	0	1	0	9	612
05:45 PM	5	227	0	0	232	2	0	0	0	2	1	313	17	0	331	7	0	2	0	9	574
Total Volume	15	958	3	0	976	4	0	2	1	7	4	1376	70	0	1450	24	0	9	0	33	2466
% App. Total	1.5	98.2	0.3	0		57.1	0	28.6	14.3		0.3	94.9	4.8	0		72.7	0	27.3	0		
PHF	.750	.900	.375	.000	.900	.500	.000	.500	.250	.875	.500	.920	.875	.000	.915	.750	.000	.750	.000	.917	.956



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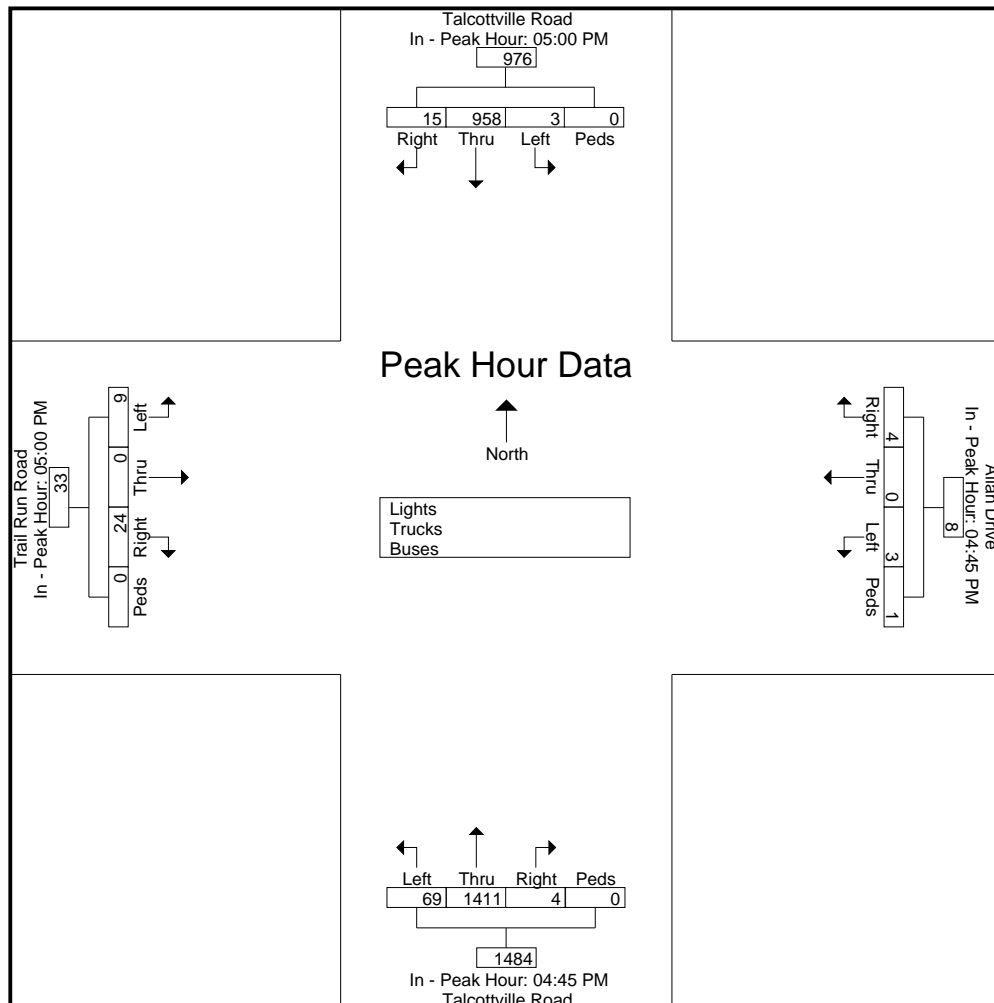
File Name : 23558
Site Code : 23558
Start Date : 10/20/2022
Page No : 3

	Talcottville Road From North					Allan Drive From East					Talcottville Road From South					Trail Run Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM					04:45 PM					04:45 PM					05:00 PM				
+0 mins.	3	266	2	0	271	2	0	1	0	3	1	348	16	0	365	5	0	3	0	8
+15 mins.	3	237	0	0	240	1	0	1	0	2	0	339	15	0	354	4	0	3	0	7
+30 mins.	4	228	1	0	233	0	0	1	1	2	2	374	20	0	396	8	0	1	0	9
+45 mins.	5	227	0	0	232	1	0	0	0	1	1	350	18	0	369	7	0	2	0	9
Total Volume	15	958	3	0	976	4	0	3	1	8	4	1411	69	0	1484	24	0	9	0	33
% App. Total	1.5	98.2	0.3	0		50	0	37.5	12.5		0.3	95.1	4.6	0		72.7	0	27.3	0	
PHF	.750	.900	.375	.000	.900	.500	.000	.750	.250	.667	.500	.943	.863	.000	.937	.750	.000	.750	.000	.917



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Talcottville Road at Allan/Trail Run Dr
Vernon, Connecticut

File Name : 23559
Site Code : 23559
Start Date : 10/22/2022
Page No : 1

Groups Printed- Lights - Trucks - Buses

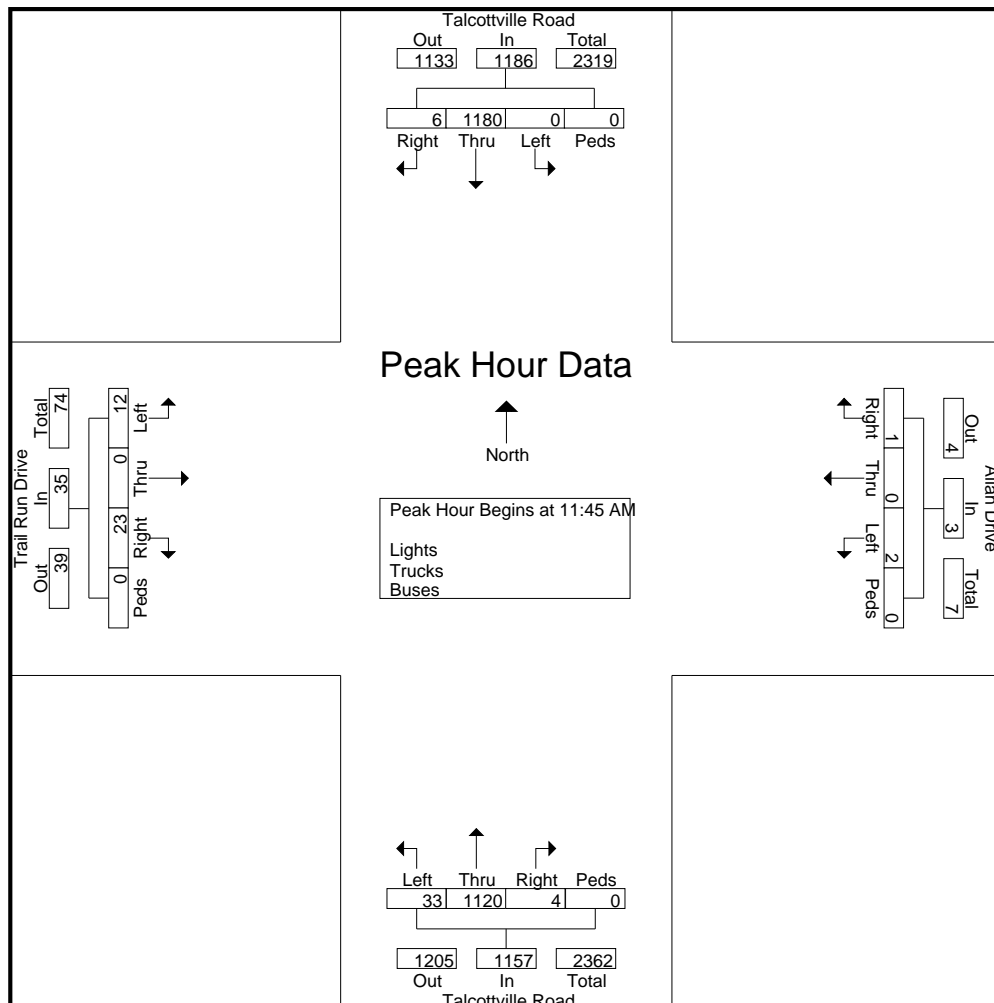
	Talcottville Road From North					Allan Drive From East					Talcottville Road From South					Trail Run Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	2	295	1	0	298	2	0	2	0	4	2	238	9	0	249	3	0	1	0	4	555
11:15 AM	2	303	0	0	305	0	0	1	0	1	0	267	12	0	279	5	0	1	0	6	591
11:30 AM	1	217	1	0	219	2	0	1	0	3	0	205	6	0	211	5	0	1	0	6	439
11:45 AM	5	282	0	0	287	1	0	0	0	1	1	270	8	0	279	4	0	7	0	11	578
Total	10	1097	2	0	1109	5	0	4	0	9	3	980	35	0	1018	17	0	10	0	27	2163
12:00 PM	1	321	0	0	322	0	0	0	0	0	1	298	8	0	307	5	0	0	0	5	634
12:15 PM	0	277	0	0	277	0	0	1	0	1	0	295	7	0	302	2	0	2	0	4	584
12:30 PM	0	300	0	0	300	0	0	1	0	1	2	257	10	0	269	12	0	3	0	15	585
12:45 PM	4	210	0	0	214	2	0	1	0	3	0	219	2	0	221	7	0	2	0	9	447
Total	5	1108	0	0	1113	2	0	3	0	5	3	1069	27	0	1099	26	0	7	0	33	2250
01:00 PM	6	257	0	0	263	2	0	1	0	3	1	269	3	0	273	3	0	2	0	5	544
01:15 PM	1	260	1	0	262	0	0	0	0	0	1	253	7	0	261	4	0	2	0	6	529
01:30 PM	1	224	1	1	227	0	0	2	1	3	2	232	8	0	242	3	0	4	0	7	479
01:45 PM	5	265	0	0	270	1	0	0	0	1	0	297	10	0	307	2	0	0	0	2	580
Total	13	1006	2	1	1022	3	0	3	1	7	4	1051	28	0	1083	12	0	8	0	20	2132
Grand Total	28	3211	4	1	3244	10	0	10	1	21	10	3100	90	0	3200	55	0	25	0	80	6545
Apprch %	0.9	99	0.1	0		47.6	0	47.6	4.8		0.3	96.9	2.8	0		68.8	0	31.2	0		
Total %	0.4	49.1	0.1	0	49.6	0.2	0	0.2	0	0.3	0.2	47.4	1.4	0	48.9	0.8	0	0.4	0	1.2	
Lights	28	3202										3092									
% Lights	100	99.7	100	100	99.7	100	0	100	100	100	100	99.7	100	0	99.8	100	0	100	0	100	99.7
Trucks	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	12
% Trucks	0	0.2	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0.2
Buses	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
% Buses	0	0.1	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1

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File Name : 23559
Site Code : 23559
Start Date : 10/22/2022
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	Talcottville Road From North					Allan Drive From East					Talcottville Road From South					Trail Run Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	5	282	0	0	287	1	0	0	0	1	1	270	8	0	279	4	0	7	0	11	578
12:00 PM	1	321	0	0	322	0	0	0	0	0	1	298	8	0	307	5	0	0	0	5	634
12:15 PM	0	277	0	0	277	0	0	1	0	1	0	295	7	0	302	2	0	2	0	4	584
12:30 PM	0	300	0	0	300	0	0	1	0	1	2	257	10	0	269	12	0	3	0	15	585
Total Volume	6	1180	0	0	1186	1	0	2	0	3	4	1120	33	0	1157	23	0	12	0	35	2381
% App. Total	0.5	99.5	0	0		33.3	0	66.7	0		0.3	96.8	2.9	0		65.7	0	34.3	0		
PHF	.300	.919	.000	.000	.921	.250	.000	.500	.000	.750	.500	.940	.825	.000	.942	.479	.000	.429	.000	.583	.939



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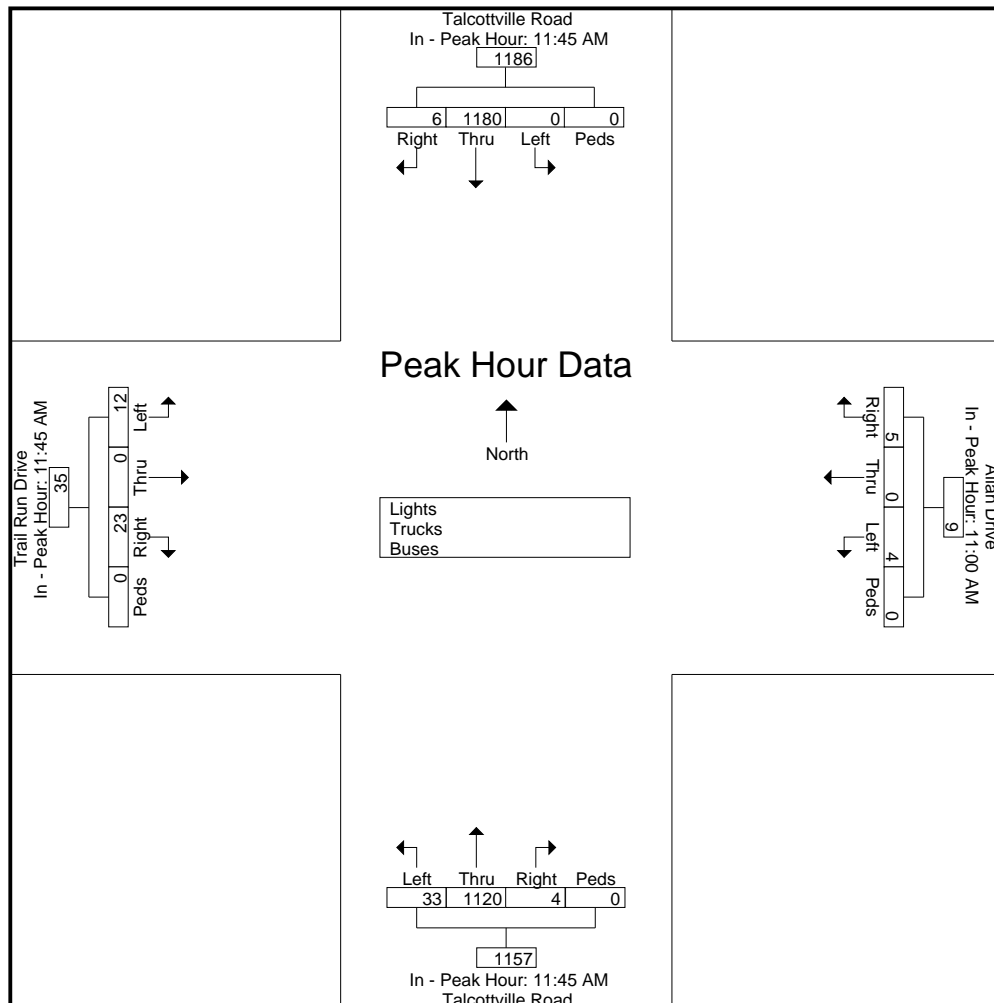
File Name : 23559
Site Code : 23559
Start Date : 10/22/2022
Page No : 3

	Talcottville Road From North					Allan Drive From East					Talcottville Road From South					Trail Run Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	11:45 AM					11:00 AM					11:45 AM					11:45 AM				
+0 mins.	5	282	0	0	287	2	0	2	0	4	1	270	8	0	279	4	0	7	0	11
+15 mins.	1	321	0	0	322	0	0	1	0	1	1	298	8	0	307	5	0	0	0	5
+30 mins.	0	277	0	0	277	2	0	1	0	3	0	295	7	0	302	2	0	2	0	4
+45 mins.	0	300	0	0	300	1	0	0	0	1	2	257	10	0	269	12	0	3	0	15
Total Volume	6	1180	0	0	1186	5	0	4	0	9	4	1120	33	0	1157	23	0	12	0	35
% App. Total	0.5	99.5	0	0		55.6	0	44.4	0		0.3	96.8	2.9	0		65.7	0	34.3	0	
PHF	.300	.919	.000	.000	.921	.625	.000	.500	.000	.563	.500	.940	.825	.000	.942	.479	.000	.429	.000	.583



Connecticut Counts LLC

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Talcottville Road at Dobson Road
Vernon, Connecticut

File Name : 23560
Site Code : 23560
Start Date : 10/20/2022
Page No : 1

Groups Printed- Lights - Trucks - Buses

	Talcottville Road From North					Dobson Road From East					Talcottville Road From South					Private Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	204	42	0	246	55	0	3	0	58	2	320	0	0	322	0	0	1	0	1	627
04:15 PM	0	233	33	0	266	44	0	9	1	54	5	307	0	0	312	0	1	0	0	1	633
04:30 PM	0	250	43	0	293	53	1	11	0	65	7	299	0	0	306	0	0	0	0	0	664
04:45 PM	0	241	54	0	295	81	0	9	0	90	11	338	0	0	349	0	0	0	0	0	734
Total	0	928	172	0	1100	233	1	32	1	267	25	1264	0	0	1289	0	1	1	0	2	2658
05:00 PM	0	211	36	0	247	54	0	6	0	60	7	272	0	0	279	0	0	0	0	0	586
05:15 PM	0	192	36	0	228	50	0	13	1	64	1	260	0	0	261	0	0	0	0	0	553
05:30 PM	0	185	39	0	224	54	0	4	0	58	11	257	0	0	268	0	0	0	0	0	550
05:45 PM	0	222	36	0	258	66	0	7	0	73	1	266	1	1	269	0	0	1	0	1	601
Total	0	810	147	0	957	224	0	30	1	255	20	1055	1	1	1077	0	0	1	0	1	2290
Grand Total	0	1738	319	0	2057	457	1	62	2	522	45	2319	1	1	2366	0	1	2	0	3	4948
Apprch %	0	84.5	15.5	0		87.5	0.2	11.9	0.4		1.9	98	0	0		0	33.3	66.7	0		
Total %	0	35.1	6.4	0	41.6	9.2	0	1.3	0	10.5	0.9	46.9	0	0	47.8	0	0	0	0	0.1	
Lights	0	1727										2306									
% Lights	0	99.4	99.1	0	99.3	98	100	100	100	98.3	97.8	99.4	100	100	99.4	0	100	100	0	100	99.3
Trucks	0	6	1	0	7	4	0	0	0	4	1	7	0	0	8	0	0	0	0	0	19
% Trucks	0	0.3	0.3	0	0.3	0.9	0	0	0	0.8	2.2	0.3	0	0	0.3	0	0	0	0	0	0.4
Buses	0	5	2	0	7	5	0	0	0	5	0	6	0	0	6	0	0	0	0	0	18
% Buses	0	0.3	0.6	0	0.3	1.1	0	0	0	1	0	0.3	0	0	0.3	0	0	0	0	0	0.4

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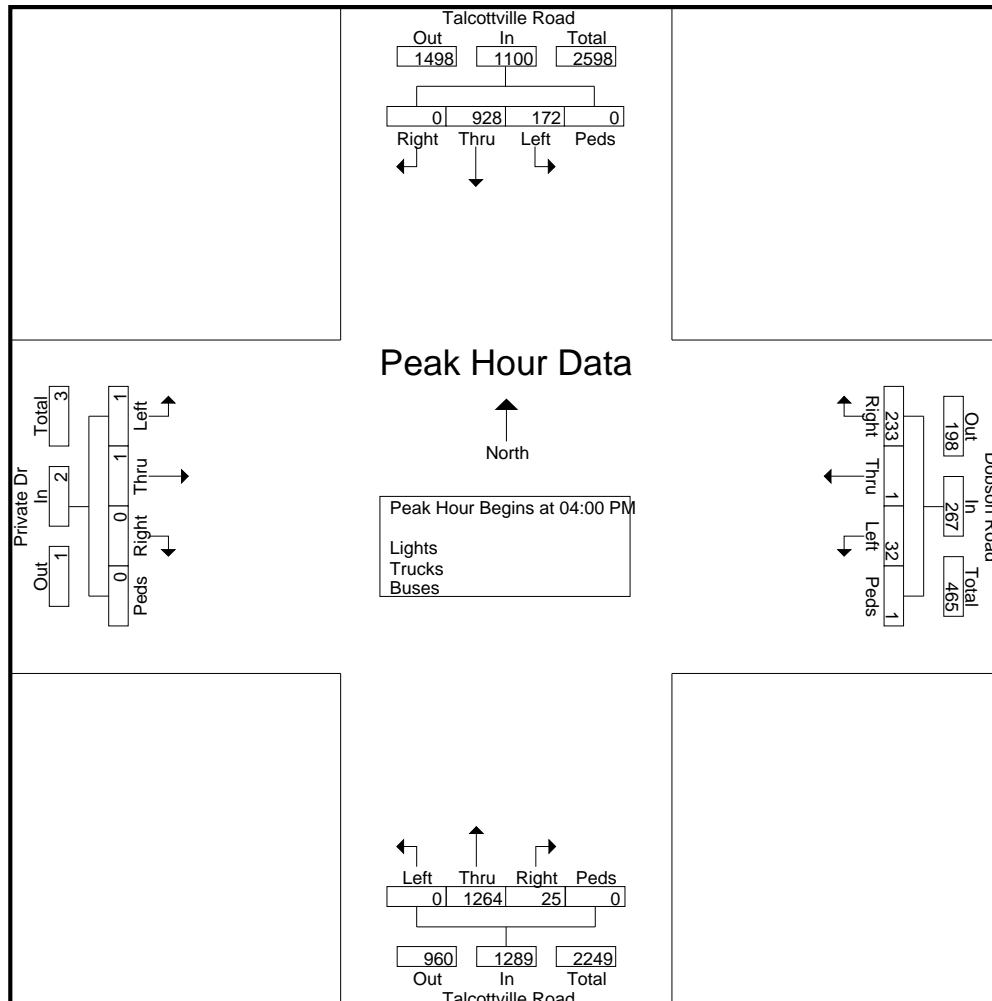
File Name : 23560
Site Code : 23560
Start Date : 10/20/2022
Page No : 2

	Talcottville Road From North					Dobson Road From East					Talcottville Road From South					Private Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	0	204	42	0	246	55	0	3	0	58	2	320	0	0	322	0	0	1	0	1	627
04:15 PM	0	233	33	0	266	44	0	9	1	54	5	307	0	0	312	0	1	0	0	1	633
04:30 PM	0	250	43	0	293	53	1	11	0	65	7	299	0	0	306	0	0	0	0	0	664
04:45 PM	0	241	54	0	295	81	0	9	0	90	11	338	0	0	349	0	0	0	0	0	734
Total Volume	0	928	172	0	1100	233	1	32	1	267	25	1264	0	0	1289	0	1	1	0	2	2658
% App. Total	0	84.4	15.6	0		87.3	0.4	12	0.4		1.9	98.1	0	0		0	50	50	0		
PHF	.000	.928	.796	.000	.932	.719	.250	.727	.250	.742	.568	.935	.000	.000	.923	.000	.250	.250	.000	.500	.905



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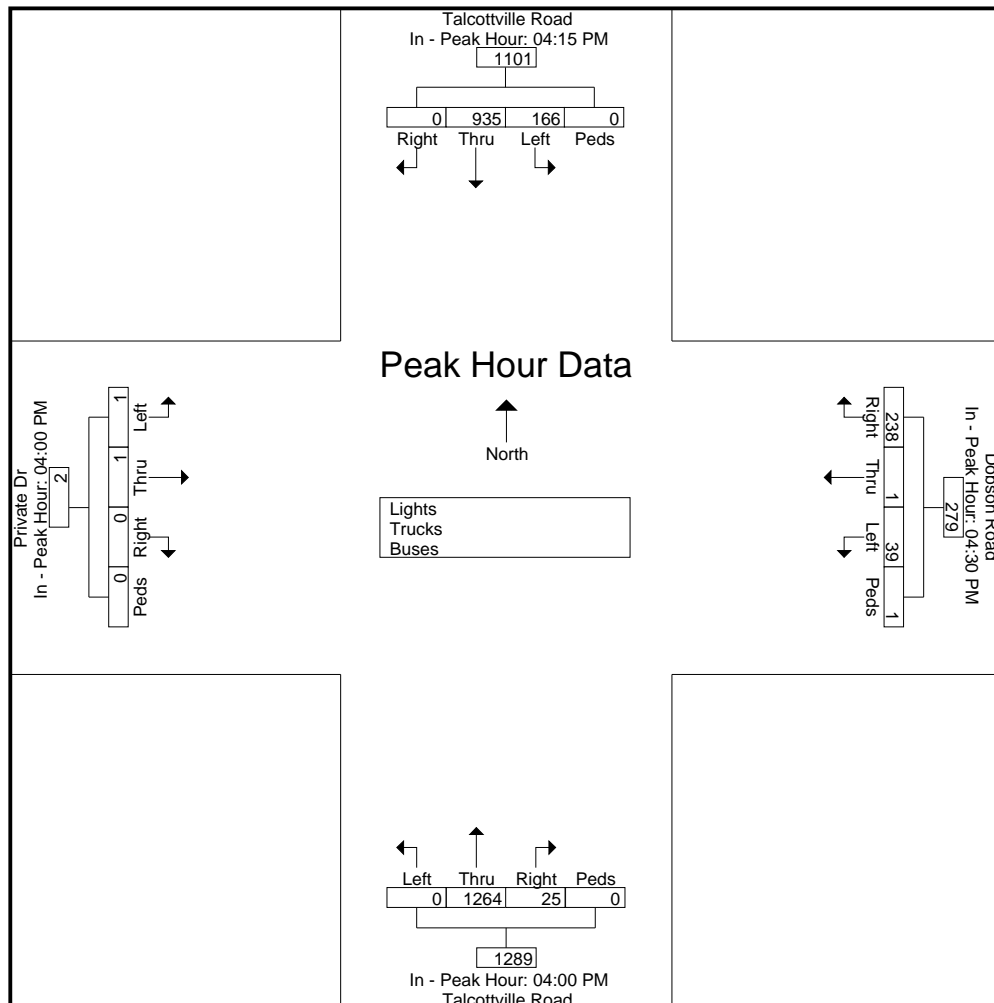
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 Site Code : 23560
 Start Date : 10/20/2022
 Page No : 3

	Talcottville Road From North					Dobson Road From East					Talcottville Road From South					Private Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM					04:30 PM					04:00 PM					04:00 PM				
+0 mins.	0	233	33	0	266	53	1	11	0	65	2	320	0	0	322	0	0	1	0	1
+15 mins.	0	250	43	0	293	81	0	9	0	90	5	307	0	0	312	0	1	0	0	1
+30 mins.	0	241	54	0	295	54	0	6	0	60	7	299	0	0	306	0	0	0	0	0
+45 mins.	0	211	36	0	247	50	0	13	1	64	11	338	0	0	349	0	0	0	0	0
Total Volume	0	935	166	0	1101	238	1	39	1	279	25	1264	0	0	1289	0	1	1	0	2
% App. Total	0	84.9	15.1	0		85.3	0.4	14	0.4		1.9	98.1	0	0		0	50	50	0	
PHF	.000	.935	.769	.000	.933	.735	.250	.750	.250	.775	.568	.935	.000	.000	.923	.000	.250	.250	.000	.500



File Name : 23561
Site Code : 23561
Start Date : 10/22/2022
Page No : 1

Groups Printed- Lights - Trucks - Buses																					
	Talcottville Road From North					Dobson Road From East					Talcottville Road From South					Private Drive From West					
Start Time	Right	Thru	Left	Peds	App.Total	Right	Thru	Left	Peds	App.Total	Right	Thru	Left	Peds	App.Total	Right	Thru	Left	Peds	App.Total	Int. Total
11:00 AM	0	277	33	1	311	48	0	3	0	51	6	215	0	0	221	1	0	0	0	1	584
11:15 AM	0	251	46	0	297	42	0	7	0	49	7	257	0	0	264	0	0	0	0	0	610
11:30 AM	0	249	38	0	287	33	0	5	0	38	5	221	0	0	226	1	0	0	0	1	552
11:45 AM	0	235	27	0	262	38	0	8	0	46	4	238	0	0	242	0	0	0	0	0	550
Total	0	1012	144	1	1157	161	0	23	0	184	22	931	0	0	953	2	0	0	0	2	2296
12:00 PM	0	238	37	0	275	42	0	4	0	46	3	227	0	0	230	0	0	0	0	0	551
12:15 PM	0	295	37	0	332	42	0	4	0	46	3	267	0	0	270	0	0	0	0	0	648
12:30 PM	0	258	39	0	297	38	0	9	0	47	5	208	0	2	215	1	0	0	0	1	560
12:45 PM	1	238	41	0	280	36	0	7	0	43	3	225	1	0	229	0	0	0	0	0	552
Total	1	1029	154	0	1184	158	0	24	0	182	14	927	1	2	944	1	0	0	0	1	2311
01:00 PM	0	247	42	1	290	46	0	12	0	58	5	223	0	0	228	0	0	0	1	1	577
01:15 PM	0	229	27	0	256	36	1	4	1	42	3	198	0	0	201	1	0	0	0	1	500
01:30 PM	0	198	21	0	219	33	0	2	0	35	0	179	0	0	179	0	0	0	0	0	433
01:45 PM	0	189	29	0	218	37	0	4	0	41	2	187	0	0	189	1	0	0	0	1	449
Total	0	863	119	1	983	152	1	22	1	176	10	787	0	0	797	2	0	0	1	3	1959
Grand Total	1	2904	417	2	3324	471	1	69	1	542	46	2645	1	2	2694	5	0	0	1	6	6566
Apprch %	0	87.4	12.5	0.1		86.9	0.2	12.7	0.2		1.7	98.2	0	0.1		83.3	0	0	16.7		
Total %	0	44.2	6.4	0	50.6	7.2	0	1.1	0	8.3	0.7	40.3	0	0	41	0.1	0	0	0	0.1	
Lights	1	2900										2642									
% Lights	100	99.9	99.5	100	99.8	99.2	100	98.6	100	99.1	100	99.9	100	100	99.9	100	0	0	100	100	99.8
Trucks	0	4	1	0	5	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	9
% Trucks	0	0.1	0.2	0	0.2	0	0	1.4	0	0.2	0	0.1	0	0	0.1	0	0	0	0	0	0.1
Buses	0	0	1	0	1	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5
% Buses	0	0	0.2	0	0	0.8	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0.1

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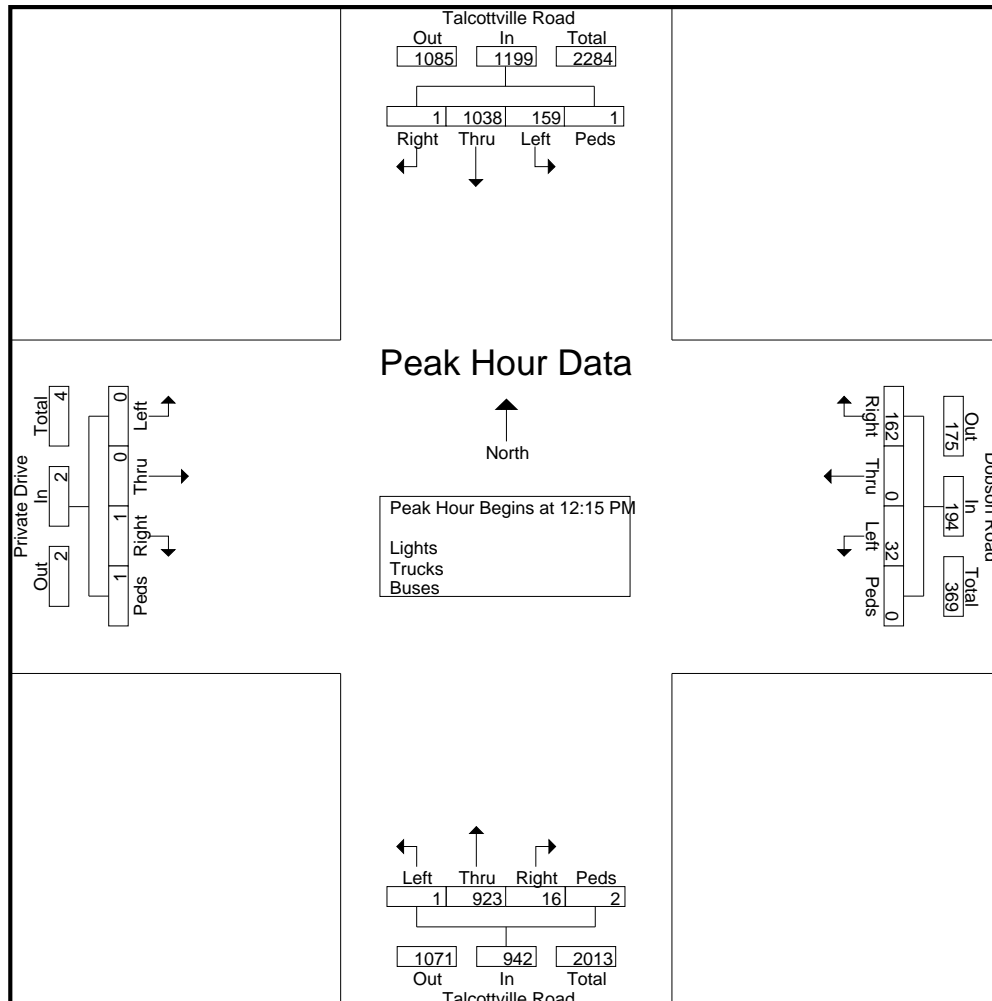
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Site Code : 23561
Start Date : 10/22/2022
Page No : 2

	Talcottville Road From North					Dobson Road From East					Talcottville Road From South					Private Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:15 PM

12:15 PM	0	295	37	0	332	42	0	4	0	46	3	267	0	0	270	0	0	0	0	0	648
12:30 PM	0	258	39	0	297	38	0	9	0	47	5	208	0	2	215	1	0	0	0	1	560
12:45 PM	1	238	41	0	280	36	0	7	0	43	3	225	1	0	229	0	0	0	0	0	552
01:00 PM	0	247	42	1	290	46	0	12	0	58	5	223	0	0	228	0	0	0	1	1	577
Total Volume	1	1038	159	1	1199	162	0	32	0	194	16	923	1	2	942	1	0	0	1	2	2337
% App. Total	0.1	86.6	13.3	0.1		83.5	0	16.5	0		1.7	98	0.1	0.2		50	0	0	50		
PHF	.250	.880	.946	.250	.903	.880	.000	.667	.000	.836	.800	.864	.250	.250	.872	.250	.000	.000	.250	.500	.902



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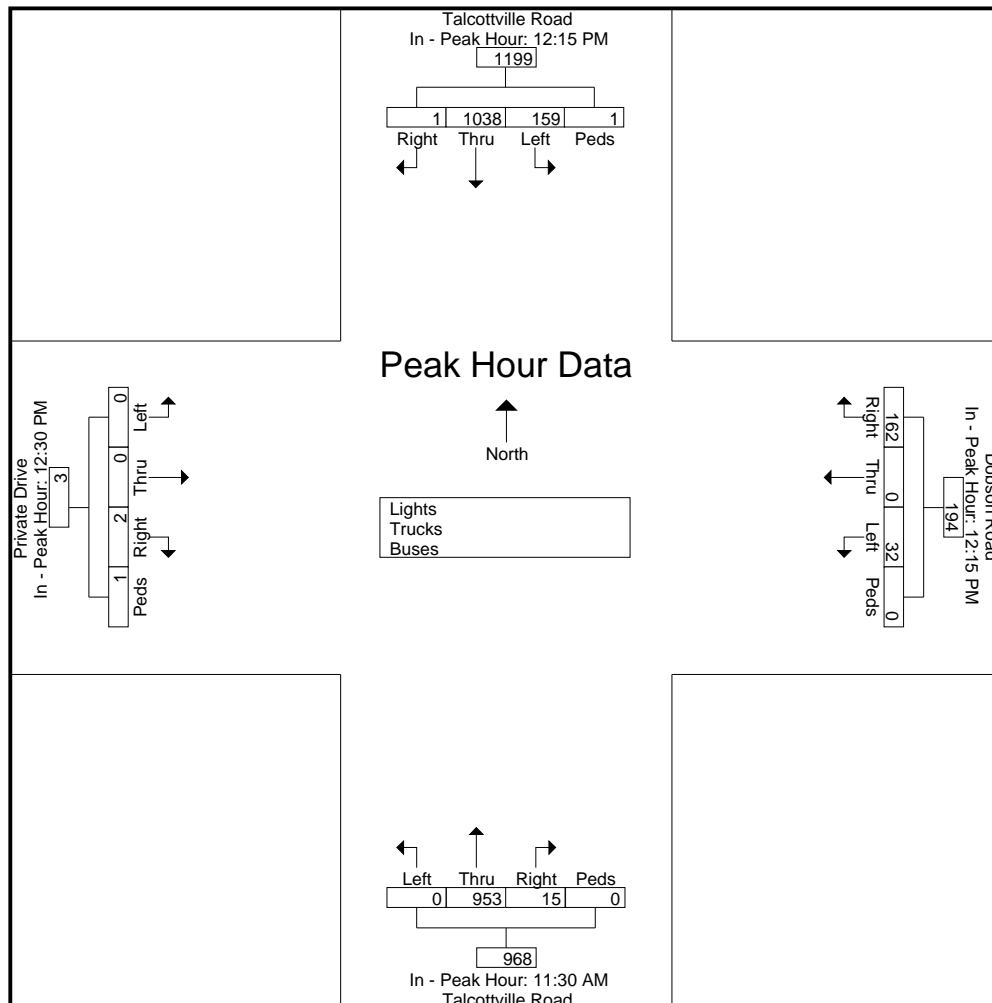
File Name : 23561
 Site Code : 23561
 Start Date : 10/22/2022
 Page No : 3

	Talcottville Road From North					Dobson Road From East					Talcottville Road From South					Private Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:15 PM					12:15 PM					11:30 AM					12:30 PM				
+0 mins.	0	295	37	0	332	42	0	4	0	46	5	221	0	0	226	1	0	0	0	1
+15 mins.	0	258	39	0	297	38	0	9	0	47	4	238	0	0	242	0	0	0	0	0
+30 mins.	1	238	41	0	280	36	0	7	0	43	3	227	0	0	230	0	0	0	1	1
+45 mins.	0	247	42	1	290	46	0	12	0	58	3	267	0	0	270	1	0	0	0	1
Total Volume	1	1038	159	1	1199	162	0	32	0	194	15	953	0	0	968	2	0	0	1	3
% App. Total	0.1	86.6	13.3	0.1		83.5	0	16.5	0		1.5	98.5	0	0		66.7	0	0	33.3	
PHF	.250	.880	.946	.250	.903	.880	.000	.667	.000	.836	.750	.892	.000	.000	.896	.500	.000	.000	.250	.750





Attachment B – Background Developments

Background Traffic Generation

The Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition was used to estimate vehicle trips to be generated by background developments unrelated to the current project. The following ITE land use codes (LUC) were used to account for the proposed no-build conditions on the network:

- LUC 565 "Daycare Center" was used to estimate the vehicle trips for the proposed 10,474 square feet of daycare proposed at 273 Talcottville Road, and;
- LUC 918 "Hair Salon" was used to estimate the vehicle trips for the proposed 1,726 square feet of salon proposed at 274 Talcottville Road

Table 2 presents the resulting net new trips for the weekday evening peak hour and Saturday midday peak hour for the proposed background developments. These developments are anticipated to generate approximately 119 trips (55 entering, 64 exiting) during the evening peak hour and 27 trips (14 entering, 13 exiting) during the Saturday midday peak hour. The ITE Trip Generation data are included in the Appendix.

Table 2 Trip Generation Summary

Time Period	Daycare ¹ (LUC 565)	Hair Salon ² (LUC 918)	Net New Trips
Weekday Evening Peak Hour ^b			
Enter	55	0	55
<u>Exit</u>	<u>62</u>	<u>2</u>	<u>64</u>
Total	117	2	119
Saturday Midday Peak Hour ^b			
Enter	11	3	14
<u>Exit</u>	<u>7</u>	<u>6</u>	<u>13</u>
Total	18	9	27

a Vehicles per day

b Vehicles per hour

1 Trip generation calculated using ITE methodology, based on LUC 565 Day Care Center for 10,474 SF

2 Trip generation calculated using ITE methodology, based on LUC 918 Hair Salon for 1,726 SF

Additionally, the Trail Run development on Talcottville Road has not yet been fully tenanted and the retail, restaurant, and bank uses were included in the No-Build condition as a background project. Table 3 below indicates the trip generation associated with the additional Trail Run uses.

Table 3 Retail Trip Generation Summary

	A	B	C	D	E	F	G
Time Period	General Retail (12,400 S.F.) ¹	Restaurant (6,100 S.F.) ²	Bank (3,600 S.F.) ³	Internal Capture ⁴	Total External Retail Trips	Pass-by ⁵	Net New (Primary) Retail Trips
Weekday Evening Peak Hour ⁶							
Enter	20	33	38	(5)	86	(16)	70
Exit	<u>22</u>	<u>22</u>	<u>38</u>	<u>(4)</u>	<u>78</u>	<u>(16)</u>	<u>62</u>
Total	42	55	76	(9)	164	(32)	132
Saturday Midday Peak Hour ⁶							
Enter	71	35	48	(8)	146	(28)	118
Exit	<u>65</u>	<u>33</u>	<u>47</u>	<u>(7)</u>	<u>138</u>	<u>(28)</u>	<u>110</u>
Total	136	68	95	(15)	284	(56)	228

¹ Based on ITE Land Use Code 820 (Shopping Center <40 ksf) for 12,400 S.F. gross floor area

² Based on ITE Land Use Code 932 (High-Turnover (Sit-Down) Restaurant) for 6,100 S.F. gross floor area

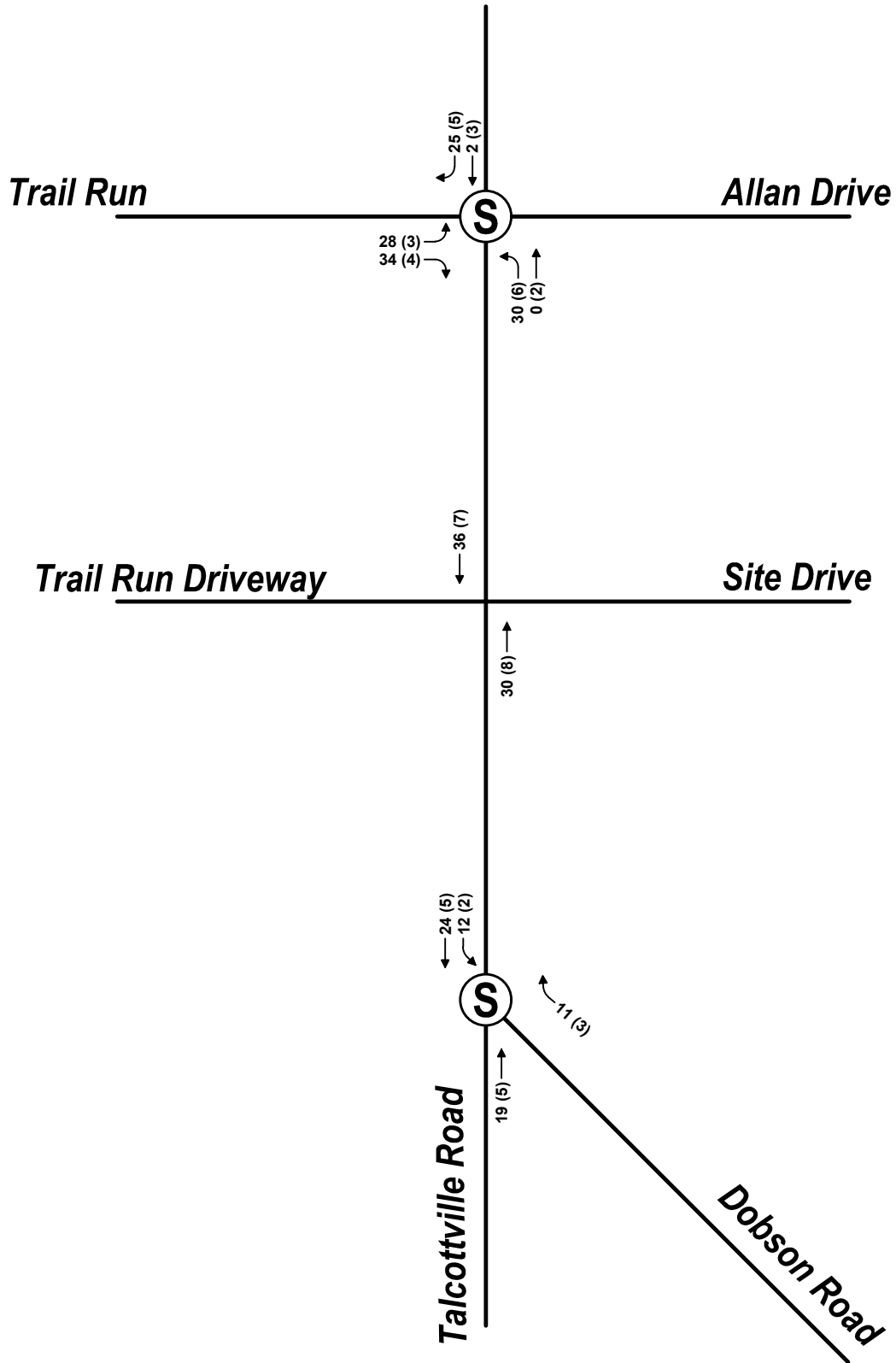
³ Based on ITE Land Use Code 912 (Drive-In Bank) for 3,600 S.F. gross floor area

⁴ Assumes a 5% internal capture rate of total trips generated

⁵ Assumes a 20% pass-by traffic rate of total external retail trips, calculated using ITE methodology

⁶ Traffic volumes expressed in vehicles per hour

Note: E=A+B+C-D; G=E-F



Weekday Afternoon Peak Hour
(Saturday Midday Peak Hour)



Not to Scale



Site-Generated Trip Distribution
Background Projects
Proposed Daycare and Hair Salon
Vernon, CT

Figure

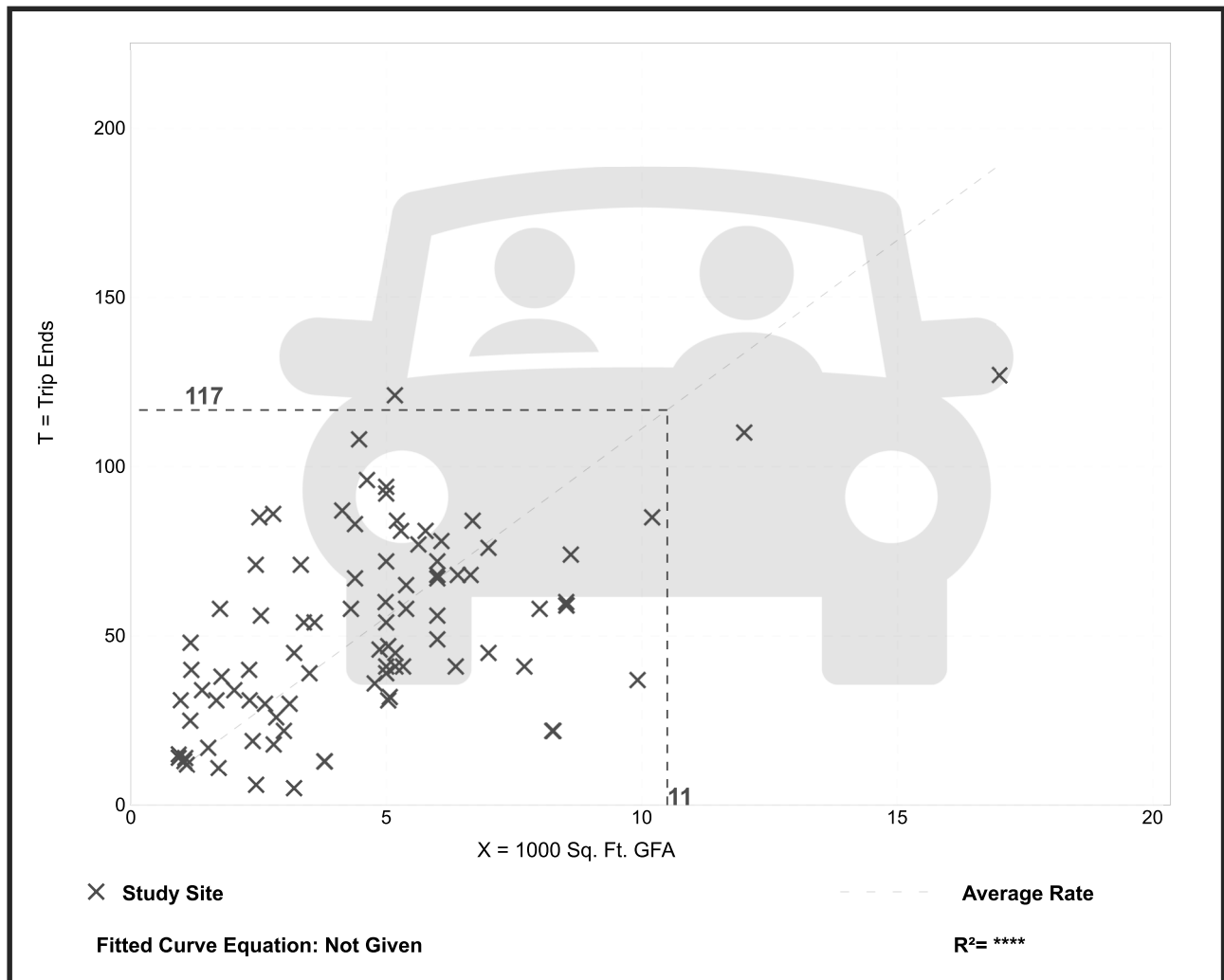
Day Care Center (565)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 90
 Avg. 1000 Sq. Ft. GFA: 5
 Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.12	1.56 - 40.85	6.28

Data Plot and Equation



Day Care Center (565)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

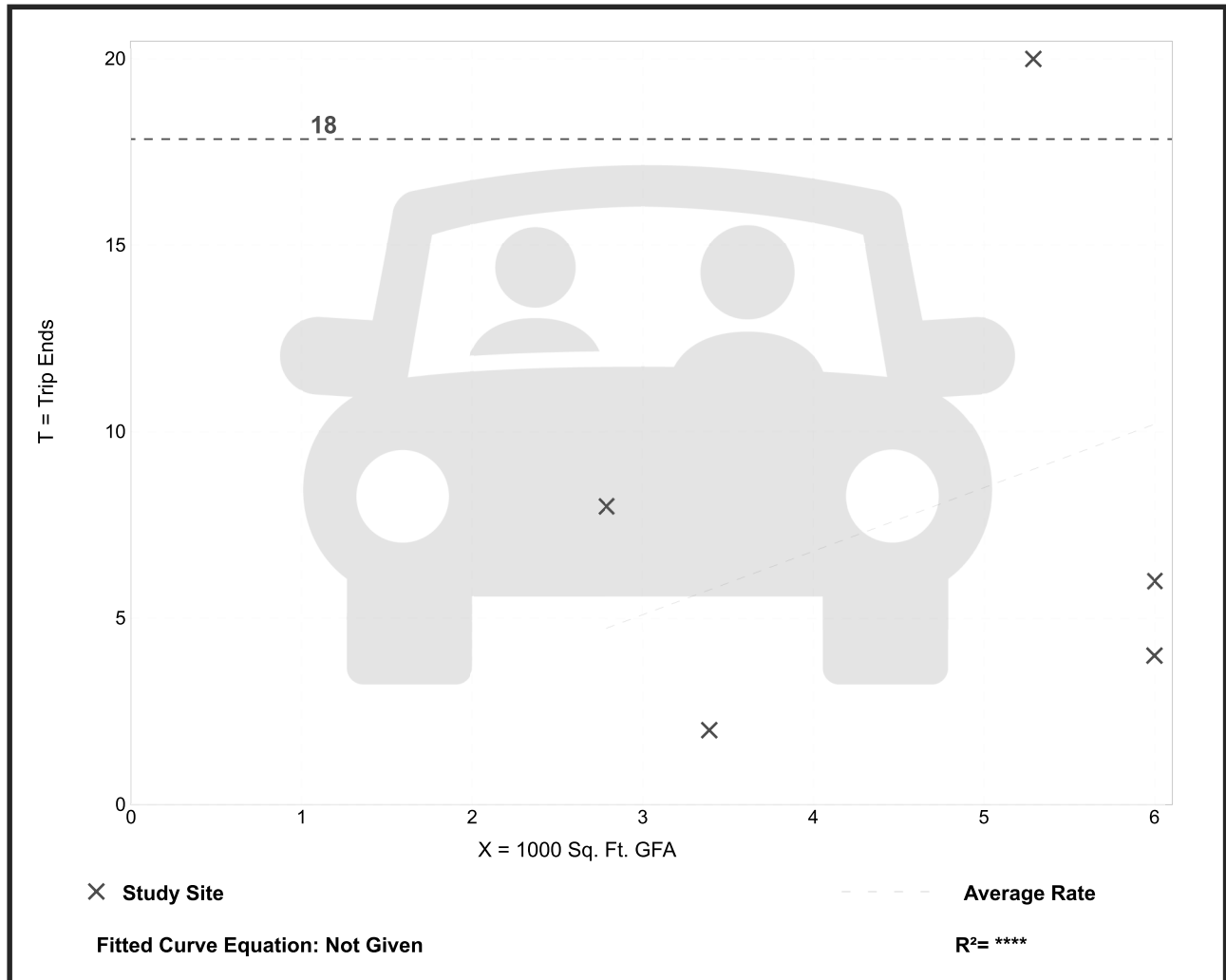
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.70	0.59 - 3.78	1.46

Data Plot and Equation

Caution – Small Sample Size



Hair Salon (918)

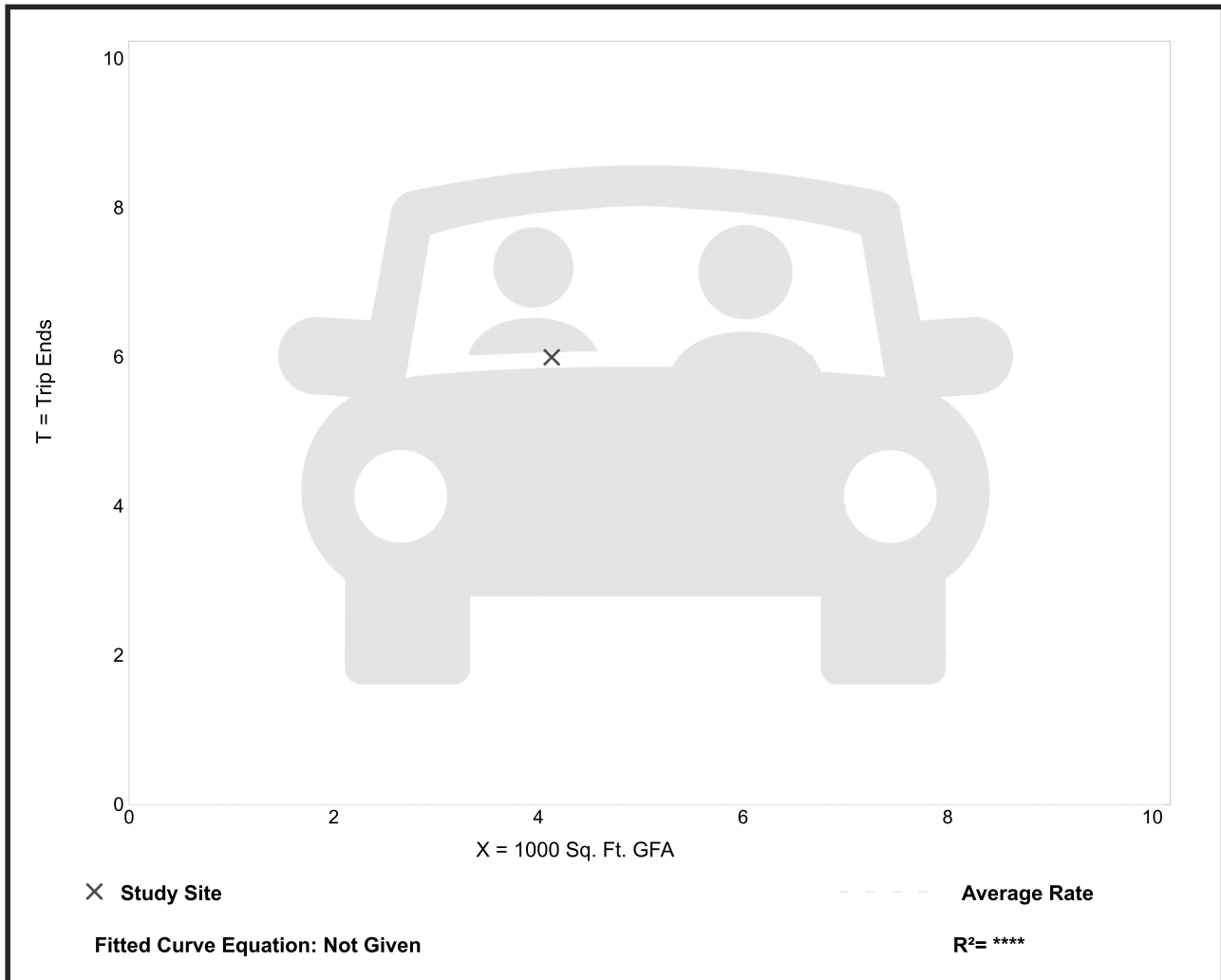
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 1
 Avg. 1000 Sq. Ft. GFA: 4
 Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.45	1.45 - 1.45	*

Data Plot and Equation

Caution – Small Sample Size



Hair Salon (918)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

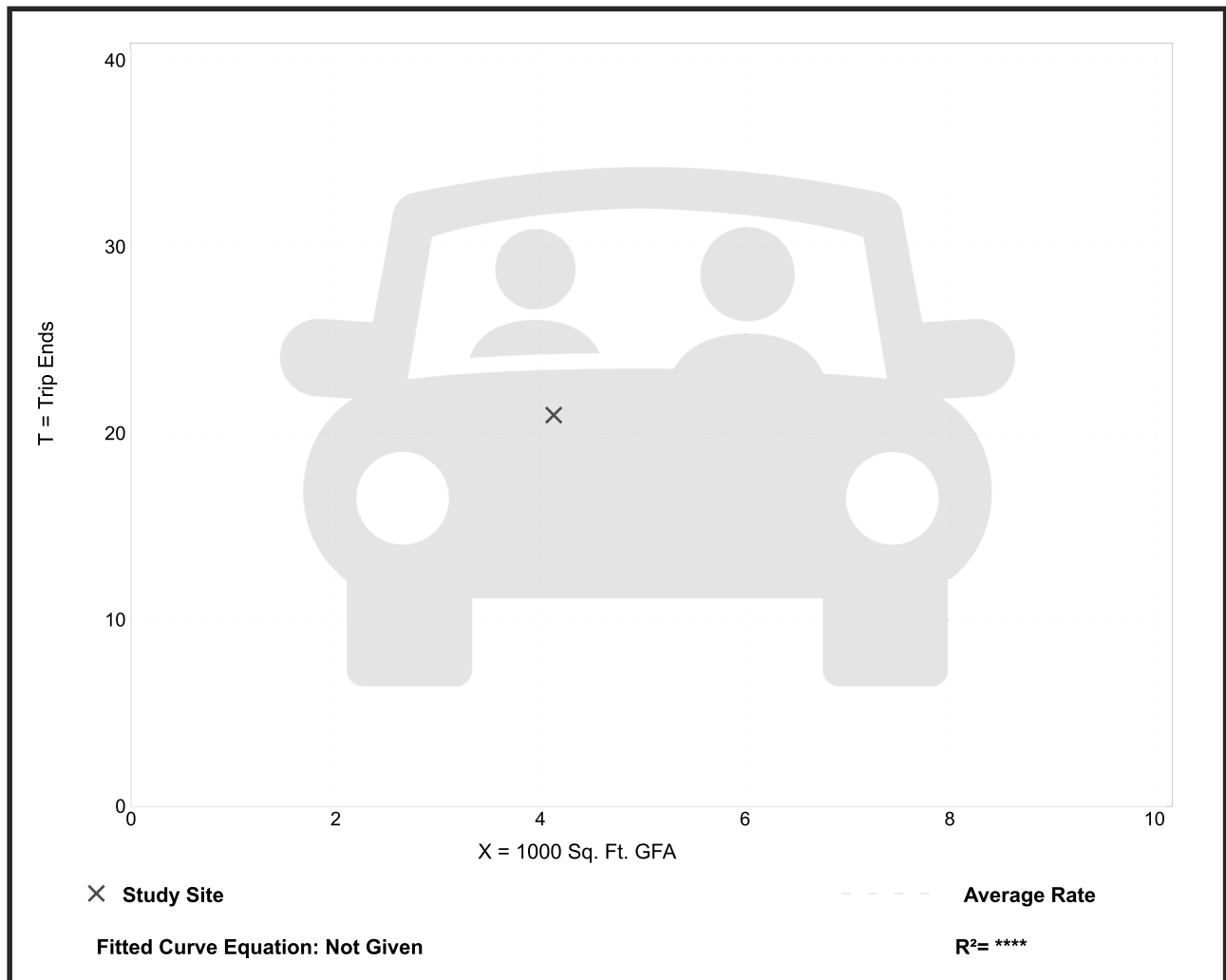
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 36% entering, 64% exiting

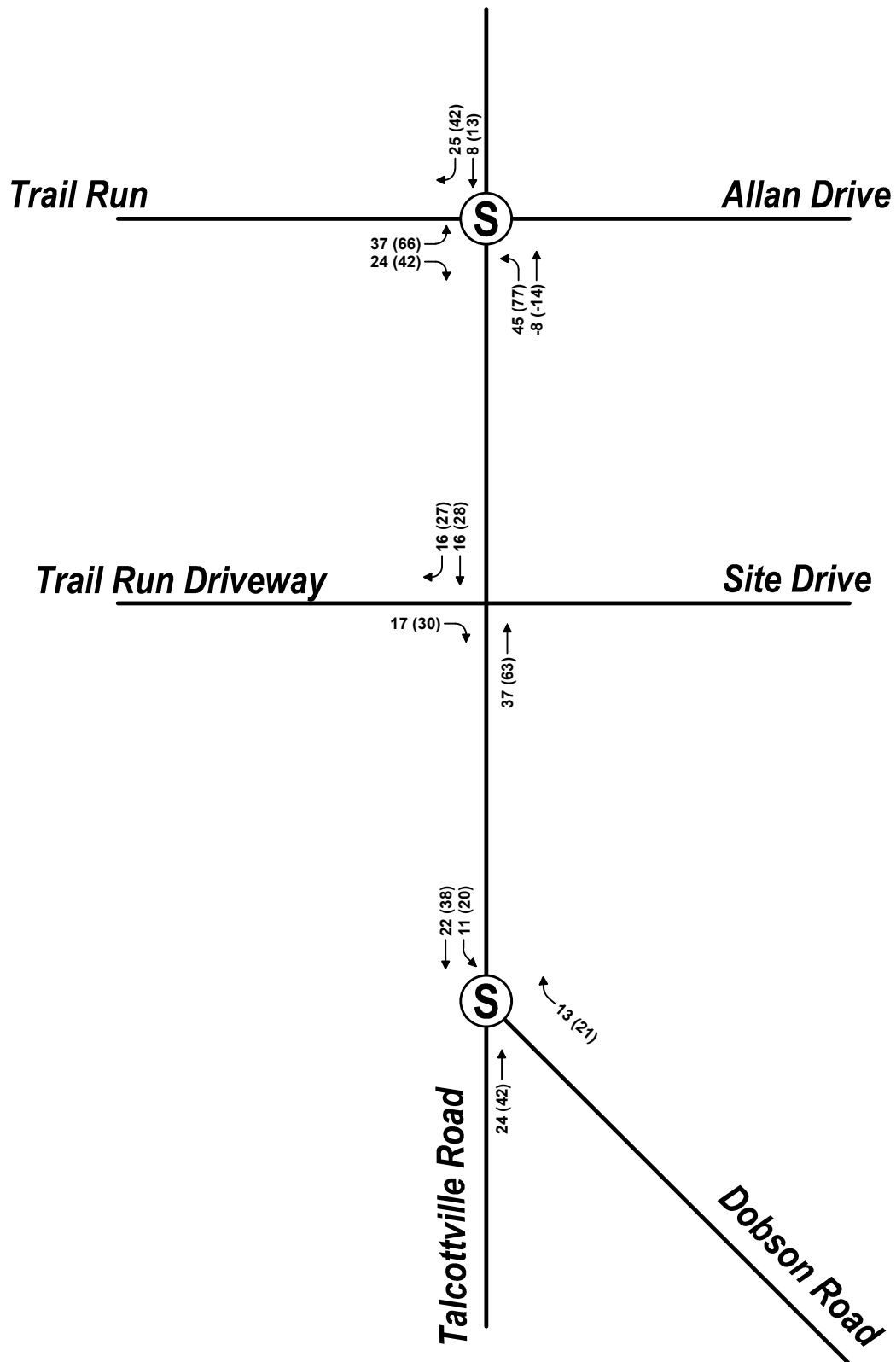
Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
5.08	5.08 - 5.08	*

Data Plot and Equation

Caution – Small Sample Size





Weekday Afternoon Peak Hour
(Saturday Midday Peak Hour)



Not to Scale



Site-Generated Trip Distribution
Background Projects
Proposed Retail, Restaurant, Bank
Vernon, CT

Figure



Attachment C – Crash Data

2019-2021 Crash Data: Talcottville Road at Allan Drive

CrashId	Town Name	Date Of Crash	Time of Crash	Crash Severity	Manner of Crash / Collision Impact	Light Condition	Road Surface Condition
541207	Vernon	5/3/2019	13:21:00	Injury of any type (Serious, Minor, Possible)	Angle	Daylight	Dry
547663	Vernon	5/16/2019	9:28:00	Property Damage Only	Sideswipe, same direction	Daylight	Dry
709482	Vernon	8/6/2020	16:53:00	Property Damage Only	Front to rear	Daylight	Dry
853078	Vernon	10/1/2021	13:27:00	Property Damage Only	Sideswipe, same direction	Daylight	Dry
859043	Vernon	10/9/2021	10:15:00	Property Damage Only	Front to rear	Daylight	Dry

2019-2021 Crash Data: Talcottville Road at Site Drive and Trail Run

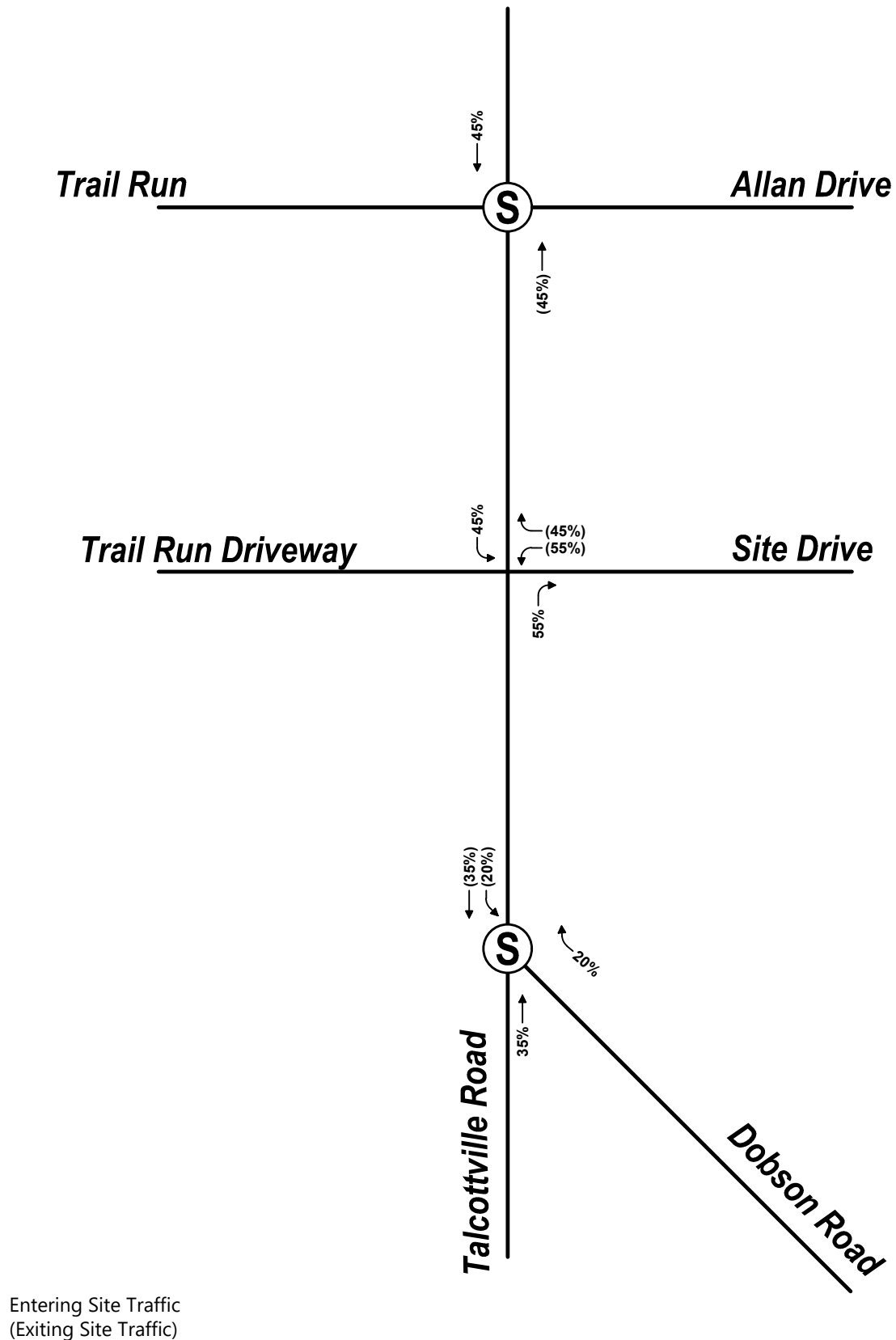
CrashId	Town Name	Date Of Crash	Time of Crash	Crash Severity	Manner of Crash / Collision Impact	Light Condition	Road Surface Condition
505844	Vernon	1/11/2019	14:29:00	Property Damage Only	Front to rear	Daylight	Dry
767101	Vernon	12/7/2020	18:20:00	Injury of any type (Serious, Minor, Possible)	Front to front	Dark-Lighted	Dry

2019-2021 Crash Data: Talcottville Road at Dobson Road

CrashId	Town Name	Date Of Crash	Time of Crash	Crash Severity	Manner of Crash / Collision Impact	Light Condition	Road Surface Condition
514087	Vernon	2/10/2019	12:34:00	Property Damage Only	Sideswipe, same direction	Daylight	Dry
550964	Vernon	6/2/2019	15:15:00	Property Damage Only	Front to rear	Daylight	Dry
560556	Vernon	6/18/2019	18:09:00	Injury of any type (Serious, Minor, Possible)	Angle	Daylight	Wet
591665	Vernon	9/19/2019	16:10:00	Property Damage Only	Front to front	Daylight	Dry
618925	Vernon	11/20/2019	17:29:00	Property Damage Only	Front to rear	Dark-Lighted	Wet
703107	Vernon	7/14/2020	18:19:00	Property Damage Only	Angle	Daylight	Dry
713612	Vernon	8/19/2020	20:33:00	Property Damage Only	Not Applicable	Dark-Lighted	Dry
727542	Vernon	9/17/2020	14:44:00	Property Damage Only	Sideswipe, same direction	Daylight	Dry
728515	Vernon	10/4/2020	14:41:00	Injury of any type (Serious, Minor, Possible)	Front to rear	Daylight	Dry
757506	Vernon	11/16/2020	8:31:00	Property Damage Only	Angle	Daylight	Dry
763775	Vernon	12/3/2020	14:07:00	Injury of any type (Serious, Minor, Possible)	Front to rear	Daylight	Dry
772958	Vernon	12/20/2020	15:55:00	Property Damage Only	Sideswipe, same direction	Daylight	Slush
809376	Vernon	5/4/2021	11:52:00	Property Damage Only	Angle	Daylight	Dry
828911	Vernon	7/5/2021	22:16:00	Property Damage Only	Angle	Dark-Lighted	Dry
839268	Vernon	8/16/2021	13:07:00	Injury of any type (Serious, Minor, Possible)	Front to rear	Daylight	Dry
848449	Vernon	9/14/2021	15:51:00	Property Damage Only	Front to rear	Daylight	Dry
849463	Vernon	9/16/2021	8:27:00	Property Damage Only	Front to rear	Daylight	Wet
875993	Vernon	11/29/2021	6:17:00	Property Damage Only	Sideswipe, same direction	Dawn	Dry
880768	Vernon	12/16/2021	17:16:00	Property Damage Only	Sideswipe, same direction	Dark-Lighted	Dry



Attachment D – Trip Generation & Distribution



Not to Scale



Site-Generated Trip Distribution

Figure

Proposed Retail Marijuana and Office
Vernon, CT

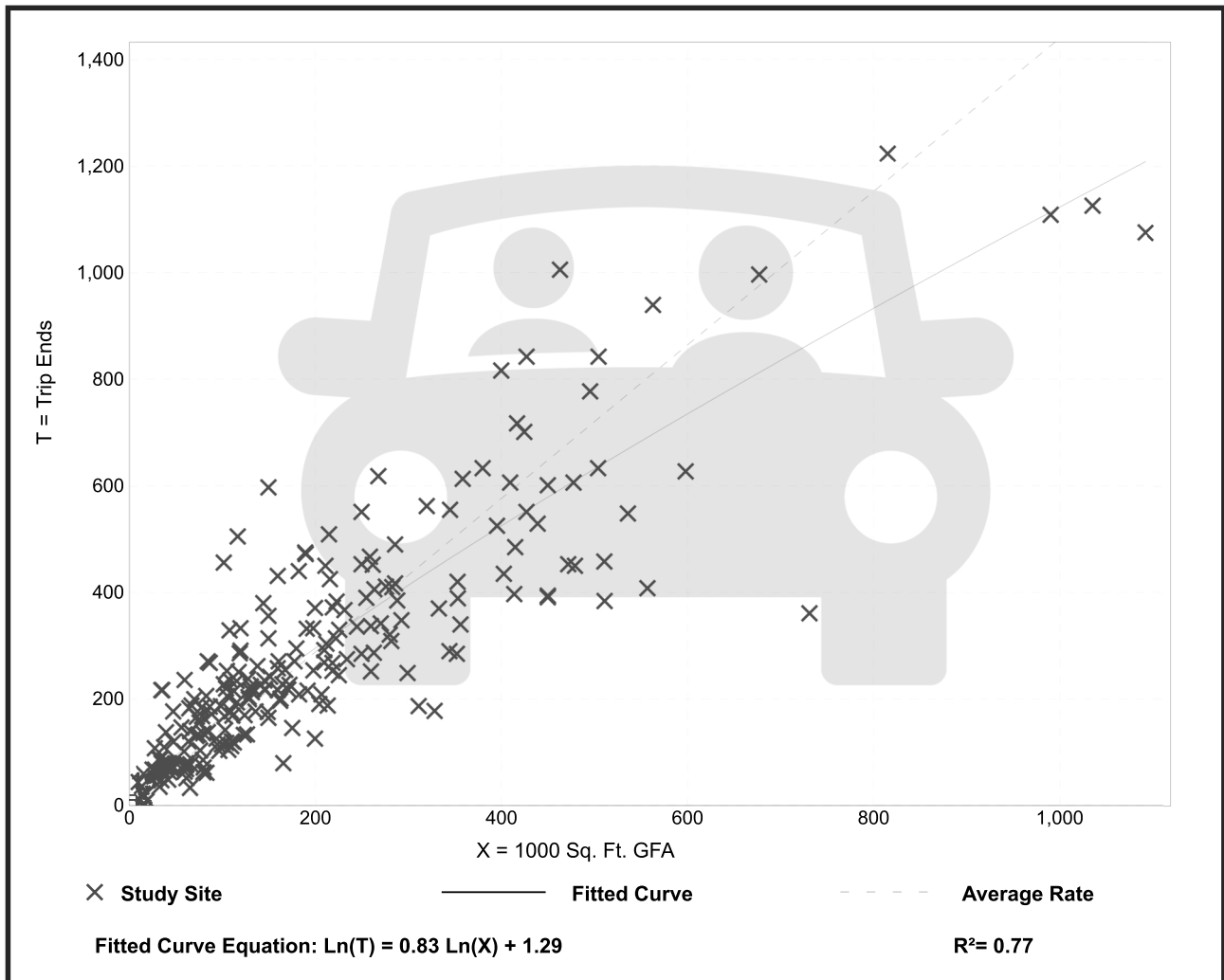
General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 232
 Avg. 1000 Sq. Ft. GFA: 199
 Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

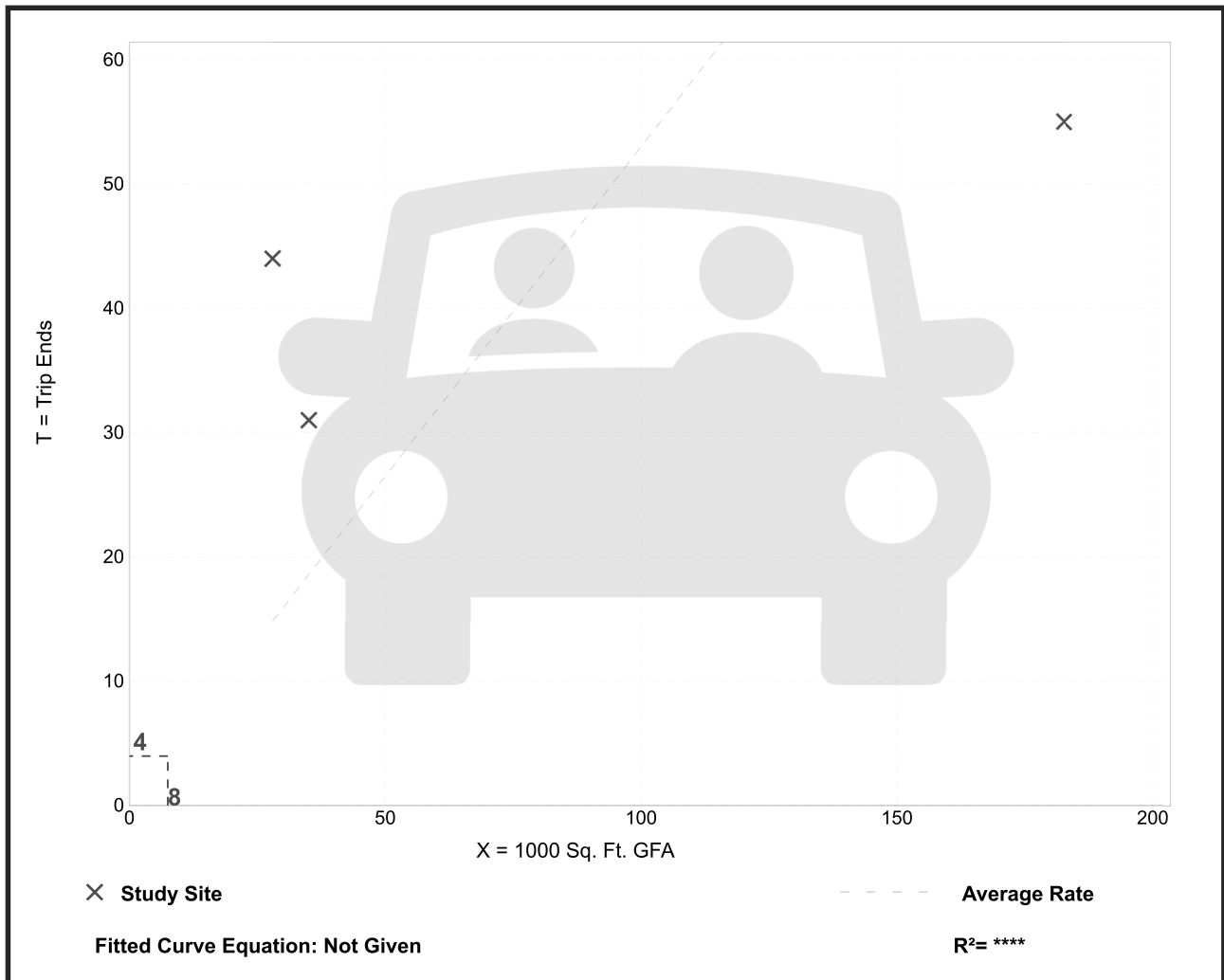
Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. 1000 Sq. Ft. GFA: 82
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.53	0.30 - 1.57	0.52

Data Plot and Equation

Caution – Small Sample Size



Marijuana Dispensary

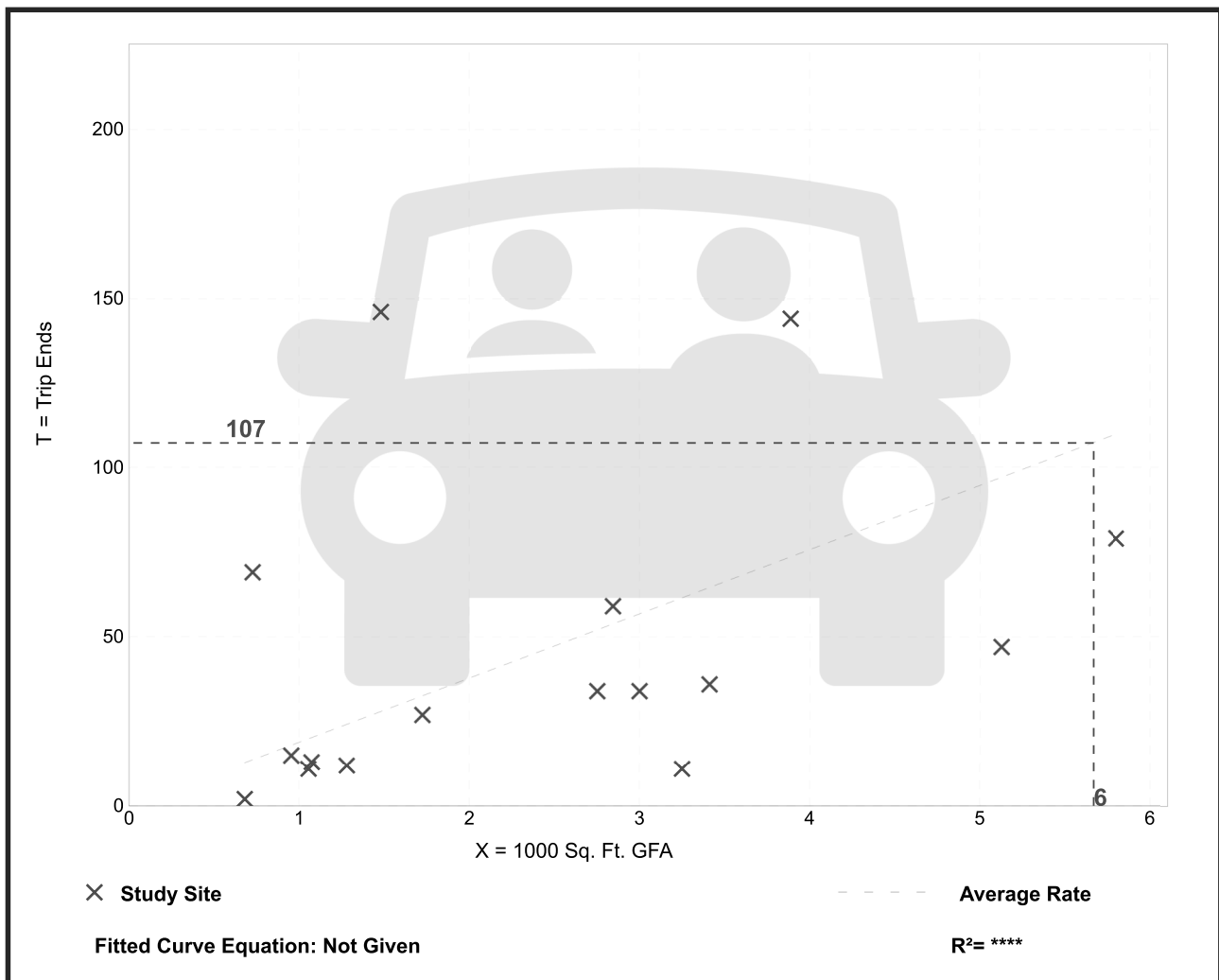
(882)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 16
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
18.92	2.94 - 98.65	21.73

Data Plot and Equation



Marijuana Dispensary (882)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

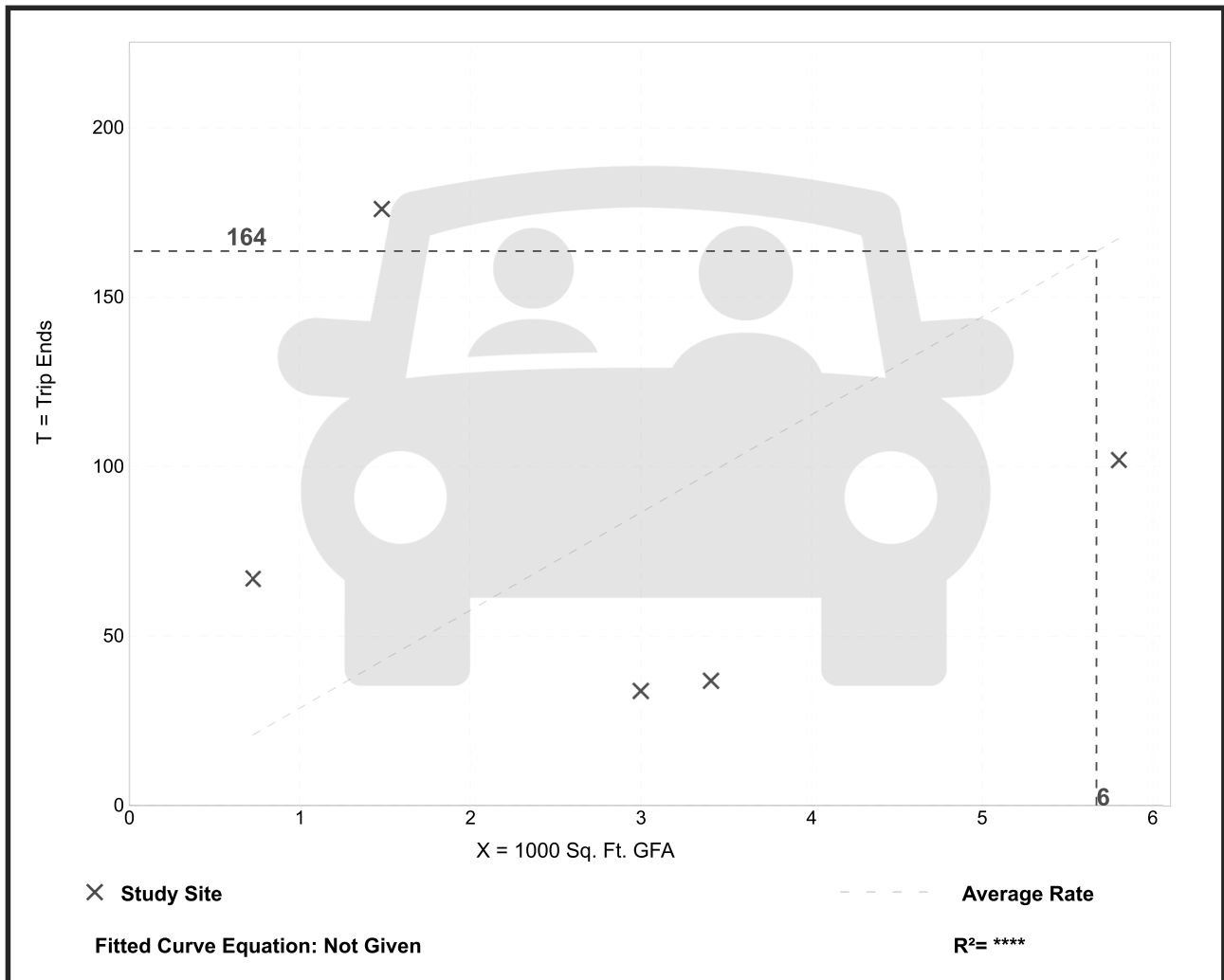
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

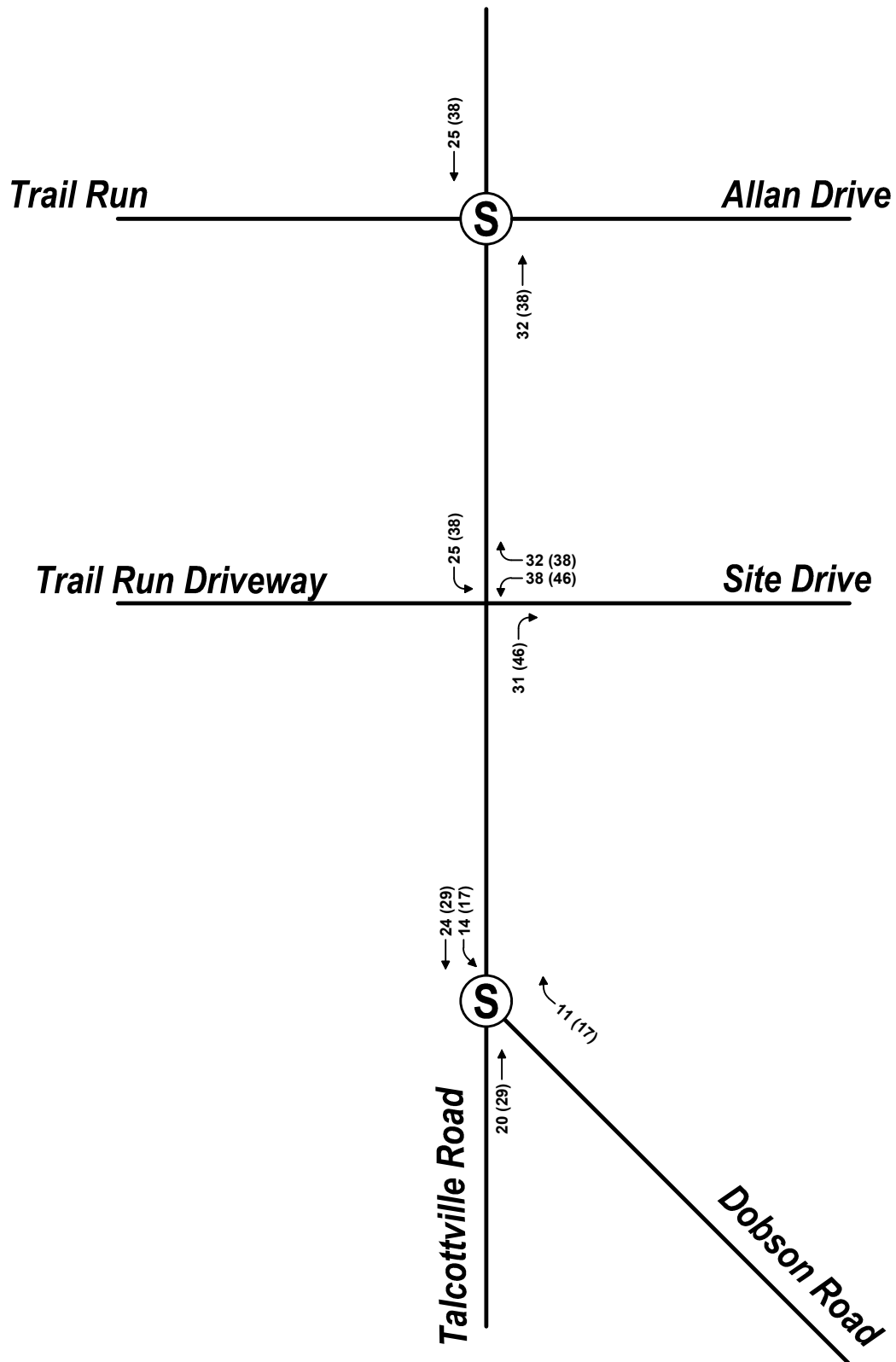
Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
28.85	10.85 - 118.92	39.14

Data Plot and Equation

Caution – Small Sample Size





Site-Generated Trips
Peak Hour Traffic Volumes
Proposed Retail Marijuana and Office
Vernon, CT

















Figure



Attachment E – Capacity Analyses

Queues
6: Route 83 & Allan Drive

2022 Existing Conditions
Weekday Evening Peak Hour

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	7	0	23	2	0	68	1338	5	920
Future Volume (vph)	7	0	23	2	0	68	1338	5	920
Lane Group Flow (vph)	0	8	25	0	5	74	1458	6	1038
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	9.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	23.0	45.0	23.0	45.0
Total Split (%)	24.4%	24.4%	24.4%	24.4%	24.4%	25.6%	50.0%	25.6%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	5.0	6.0	5.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio		0.06	0.13		0.03	0.42	0.48	0.05	0.40
Control Delay		39.7	1.3		0.2	46.4	5.7	50.6	13.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		39.7	1.3		0.2	46.4	5.7	50.6	13.3
Queue Length 50th (ft)		4	0		0	42	166	2	322
Queue Length 95th (ft)		18	0		0	m43	508	m7	346
Internal Link Dist (ft)		184			1042		345		481
Turn Bay Length (ft)								75	
Base Capacity (vph)		331	361		348	354	3038	354	2577
Starvation Cap Reductn		0	0		0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0
Reduced v/c Ratio		0.02	0.07		0.01	0.21	0.48	0.02	0.40

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

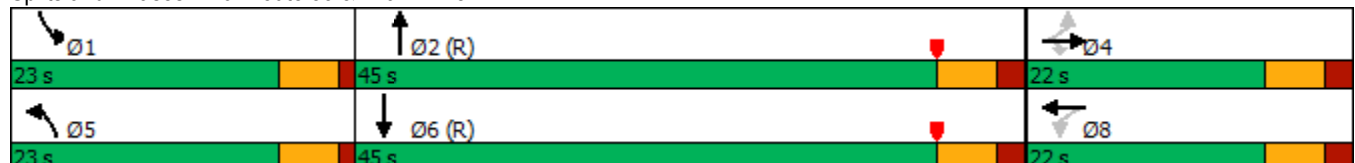
Offset: 39 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.






















Splits and Phases: 6: Route 83 & Allan Drive



HCM Signalized Intersection Capacity Analysis

6: Route 83 & Allan Drive

















2022 Existing Conditions
Weekday Evening Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	23	2	0	3	68	1338	4	5	920	14
Future Volume (vph)	7	0	23	2	0	3	68	1338	4	5	920	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		5.0	6.0		5.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1712		1770	3573		1770	3531	
Flt Permitted		1.00	1.00		0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1863	1583		1512		1770	3573		1770	3531	
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.90	0.90	0.90
Adj. Flow (vph)	8	0	25	2	0	3	74	1454	4	6	1022	16
RTOR Reduction (vph)	0	0	24	0	5	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	8	1	0	0	0	74	1458	0	6	1037	0
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	1%	1%	2%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		4.0	4.0		4.0		8.0	67.7		1.3	61.0	
Effective Green, g (s)		4.0	4.0		4.0		8.0	67.7		1.3	61.0	
Actuated g/C Ratio		0.04	0.04		0.04		0.09	0.75		0.01	0.68	
Clearance Time (s)		6.0	6.0		6.0		5.0	6.0		5.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		82	70		67		157	2687		25	2393	
v/s Ratio Prot							c0.04	c0.41		0.00	0.29	
v/s Ratio Perm		c0.00	0.00		0.00							
v/c Ratio		0.10	0.02		0.00		0.47	0.54		0.24	0.43	
Uniform Delay, d1		41.3	41.1		41.1		39.0	4.7		43.9	6.6	
Progression Factor		1.00	1.00		1.00		1.13	1.37		1.27	1.79	
Incremental Delay, d2		0.5	0.1		0.0		1.4	0.5		4.5	0.5	
Delay (s)		41.8	41.2		41.1		45.4	6.9		60.2	12.4	
Level of Service		D	D		D		D	A		E	B	
Approach Delay (s)		41.3			41.1			8.8			12.6	
Approach LOS		D			D			A			B	
Intersection Summary												
HCM 2000 Control Delay			10.8				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			17.0		
Intersection Capacity Utilization			57.9%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis









7: Route 83 & Site Drive/Private Drive

2022 Existing Conditions
Weekday Evening Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	9	5	0	2	0	1408	10	2	941	2
Future Volume (Veh/h)	0	0	9	5	0	2	0	1408	10	2	941	2
Sign Control	Stop				Stop				Free		Free	
Grade	0%				0%				0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.50	0.50	0.50	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	10	10	0	4	0	1530	11	2	1120	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												425
pX, platoon unblocked	0.86	0.86	0.86	0.86	0.86		0.86					
vC, conflicting volume	1894	2666	561	2100	2662	770	1122			1541		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1721	2614	178	1958	2608	770	827			1541		
tC, single (s)	7.7	6.7	7.1	7.5	6.5	6.9	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	70	100	99	100			100		
cM capacity (veh/h)	45	18	699	33	21	347	691			422		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	10	14	1020	521	562	562						
Volume Left	0	10	0	0	2	0						
Volume Right	10	4	0	11	0	2						
cSH	699	45	1700	1700	422	1700						
Volume to Capacity	0.01	0.31	0.60	0.31	0.00	0.33						
Queue Length 95th (ft)	1	27	0	0	0	0						
Control Delay (s)	10.2	119.2	0.0	0.0	0.1	0.0						
Lane LOS	B	F			A							
Approach Delay (s)	10.2	119.2	0.0		0.1							
Approach LOS	B	F										
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			49.2%		ICU Level of Service				A			
Analysis Period (min)			15									

Queues
8: Route 83 & Dobson Road

2022 Existing Conditions
Weekday Evening Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	32	1264	172	928
Future Volume (vph)	32	1264	172	928
Lane Group Flow (vph)	288	1742	185	998
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	9.0	15.0	5.0	15.0
Minimum Split (s)	21.0	22.0	9.0	22.0
Total Split (s)	32.0	40.0	18.0	58.0
Total Split (%)	35.6%	44.4%	20.0%	64.4%
Yellow Time (s)	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	6.0
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	Min	C-Max	None	C-Max
v/c Ratio	0.68	0.80	0.69	0.37
Control Delay	16.1	14.3	43.8	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.1	14.3	43.8	3.1
Queue Length 50th (ft)	19	202	78	14
Queue Length 95th (ft)	91	238	145	61
Internal Link Dist (ft)	654	822		1482
Turn Bay Length (ft)			240	
Base Capacity (vph)	666	2166	354	2674
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.80	0.52	0.37

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 60 (67%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated


Splits and Phases: 8: Route 83 & Dobson Road



HCM Signalized Intersection Capacity Analysis















8: Route 83 & Dobson Road

2022 Existing Conditions
Weekday Evening Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Volume (vph)	32	233	1264	25	172	928
Future Volume (vph)	32	233	1264	25	172	928
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		6.0		4.0	6.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.88		1.00		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1632		3564		1770	3539
Flt Permitted	0.99		1.00		0.07	1.00
Satd. Flow (perm)	1632		3564		127	3539
Peak-hour factor, PHF	0.92	0.92	0.74	0.74	0.93	0.93
Adj. Flow (vph)	35	253	1708	34	185	998
RTOR Reduction (vph)	222	0	1	0	0	0
Lane Group Flow (vph)	66	0	1741	0	185	998
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	11.0		54.7		68.0	68.0
Effective Green, g (s)	11.0		54.7		68.0	68.0
Actuated g/C Ratio	0.12		0.61		0.76	0.76
Clearance Time (s)	5.0		6.0		4.0	6.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	199		2166		265	2673
v/s Ratio Prot	c0.04		c0.49		c0.07	0.28
v/s Ratio Perm					0.45	
v/c Ratio	0.33		0.80		0.70	0.37
Uniform Delay, d1	36.1		13.5		22.0	3.7
Progression Factor	1.00		0.77		1.97	0.68
Incremental Delay, d2	1.0		1.7		7.4	0.4
Delay (s)	37.1		12.1		50.7	2.9
Level of Service	D		B		D	A
Approach Delay (s)	37.1		12.1			10.4
Approach LOS	D		B			B
Intersection Summary						
HCM 2000 Control Delay			13.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.72			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	15.0
Intersection Capacity Utilization			73.9%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

Queues
6: Route 83 & Allan Drive

2022 Existing Conditions
Saturday Midday Peak Hour

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø1
Lane Configurations									
Traffic Volume (vph)	12	0	23	2	0	33	1120	1190	
Future Volume (vph)	12	0	23	2	0	33	1120	1190	
Lane Group Flow (vph)	0	21	40	0	4	35	1195	1300	
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	NA	
Protected Phases		4			8	5	2	6	1
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	6	
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	9.0	22.0	22.0	9.0
Total Split (s)	19.0	19.0	19.0	19.0	19.0	20.0	51.0	51.0	20.0
Total Split (%)	21.1%	21.1%	21.1%	21.1%	21.1%	22.2%	56.7%	56.7%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	5.0	6.0	6.0	
Lead/Lag						Lead	Lag	Lag	Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None
v/c Ratio		0.17	0.19		0.02	0.24	0.41	0.48	
Control Delay		41.3	2.0		0.3	42.3	2.9	3.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay		41.3	2.0		0.3	42.3	2.9	3.8	
Queue Length 50th (ft)		11	0		0	19	86	282	
Queue Length 95th (ft)		21	0		0	47	131	71	
Internal Link Dist (ft)		184			1042		345	481	
Turn Bay Length (ft)									
Base Capacity (vph)		228	311		286	295	2924	2702	
Starvation Cap Reductn		0	0		0	0	0	171	
Spillback Cap Reductn		0	0		0	0	0	0	
Storage Cap Reductn		0	0		0	0	0	0	
Reduced v/c Ratio		0.09	0.13		0.01	0.12	0.41	0.51	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 9 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated






















Splits and Phases: 6: Route 83 & Allan Drive

 Ø1	 Ø2 (R)	 Ø4
20 s	51 s	19 s
 Ø5	 Ø6 (R)	 Ø8
20 s	51 s	19 s

HCM Signalized Intersection Capacity Analysis

6: Route 83 & Allan Drive

















2022 Existing Conditions
Saturday Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	23	2	0	1	33	1120	4	0	1190	6
Future Volume (vph)	12	0	23	2	0	1	33	1120	4	0	1190	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		5.0	6.0			6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frt		1.00	0.85		0.97		1.00	1.00			1.00	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1770	1583		1770		1770	3372			3469	
Flt Permitted		0.85	1.00		0.77		0.95	1.00			1.00	
Satd. Flow (perm)		1585	1583		1407		1770	3372			3469	
Peak-hour factor, PHF	0.58	0.58	0.58	0.75	0.75	0.75	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	21	0	40	3	0	1	35	1191	4	0	1293	7
RTOR Reduction (vph)	0	0	38	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	21	2	0	0	0	35	1195	0	0	1300	0
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	7%	7%	4%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		4.7	4.7		4.7		5.0	73.3			63.3	
Effective Green, g (s)		4.7	4.7		4.7		5.0	73.3			63.3	
Actuated g/C Ratio		0.05	0.05		0.05		0.06	0.81			0.70	
Clearance Time (s)		6.0	6.0		6.0		5.0	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		82	82		73		98	2746			2439	
v/s Ratio Prot							0.02	c0.35			c0.37	
v/s Ratio Perm		c0.01	0.00		0.00							
v/c Ratio		0.26	0.03		0.00		0.36	0.44			0.53	
Uniform Delay, d1		41.0	40.5		40.4		41.0	2.4			6.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00			0.46	
Incremental Delay, d2		1.7	0.1		0.0		2.2	0.5			0.7	
Delay (s)		42.6	40.6		40.4		43.2	2.9			3.6	
Level of Service		D	D		D		D	A			A	
Approach Delay (s)		41.3			40.4			4.0			3.6	
Approach LOS		D			D			A			A	
Intersection Summary												
HCM 2000 Control Delay			4.8				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			17.0		
Intersection Capacity Utilization			54.8%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis









7: Route 83 & Site Drive/Private Drive

2022 Existing Conditions
Saturday Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	20	9	0	6	0	1151	7	3	1201	1
Future Volume (Veh/h)	0	0	20	9	0	6	0	1151	7	3	1201	1
Sign Control	Stop				Stop				Free		Free	
Grade	0%				0%				0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.63	0.63	0.63	0.82	0.82	0.82	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	26	14	0	10	0	1404	9	4	1447	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage veh												
Upstream signal (ft)												425
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81		0.81					
vC, conflicting volume	2168	2868	724	2140	2864	706	1448			1413		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1979	2839	207	1945	2834	706	1096			1413		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	96	55	100	97	100			99		
cM capacity (veh/h)	30	14	656	31	14	383	488			468		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	26	24	936	477	728	724						
Volume Left	0	14	0	0	4	0						
Volume Right	26	10	0	9	0	1						
cSH	656	50	1700	1700	468	1700						
Volume to Capacity	0.04	0.48	0.55	0.28	0.01	0.43						
Queue Length 95th (ft)	3	45	0	0	1	0						
Control Delay (s)	10.7	130.2	0.0	0.0	0.3	0.0						
Lane LOS	B	F			A							
Approach Delay (s)	10.7	130.2	0.0		0.1							
Approach LOS	B	F										
Intersection Summary												
Average Delay			1.2									
Intersection Capacity Utilization			50.0%	ICU Level of Service					A			
Analysis Period (min)			15									

Queues
8: Route 83 & Dobson Road

2022 Existing Conditions
Saturday Midday Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	25	940	140	1026
Future Volume (vph)	25	940	140	1026
Lane Group Flow (vph)	220	1097	156	1140
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	9.0	15.0	5.0	15.0
Minimum Split (s)	21.0	22.0	9.0	22.0
Total Split (s)	36.0	44.0	20.0	64.0
Total Split (%)	36.0%	44.0%	20.0%	64.0%
Yellow Time (s)	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	6.0
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	Min	C-Max	None	C-Max
v/c Ratio	0.65	0.47	0.36	0.41
Control Delay	18.5	10.2	4.8	4.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.5	10.2	4.8	4.2
Queue Length 50th (ft)	18	151	14	86
Queue Length 95th (ft)	69	263	38	158
Internal Link Dist (ft)	654	822		1482
Turn Bay Length (ft)			240	
Base Capacity (vph)	627	2312	530	2772
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.47	0.29	0.41

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated


Splits and Phases: 8: Route 83 & Dobson Road



HCM Signalized Intersection Capacity Analysis

















8: Route 83 & Dobson Road

2022 Existing Conditions
Saturday Midday Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Volume (vph)	25	160	940	15	140	1026
Future Volume (vph)	25	160	940	15	140	1026
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		6.0		4.0	6.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.88		1.00		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1603		3531		1770	3539
Flt Permitted	0.99		1.00		0.21	1.00
Satd. Flow (perm)	1603		3531		385	3539
Peak-hour factor, PHF	0.84	0.84	0.87	0.87	0.90	0.90
Adj. Flow (vph)	30	190	1080	17	156	1140
RTOR Reduction (vph)	170	0	1	0	0	0
Lane Group Flow (vph)	50	0	1096	0	156	1140
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	10.7		65.4		78.3	78.3
Effective Green, g (s)	10.7		65.4		78.3	78.3
Actuated g/C Ratio	0.11		0.65		0.78	0.78
Clearance Time (s)	5.0		6.0		4.0	6.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	171		2309		424	2771
v/s Ratio Prot	c0.03		c0.31		0.03	c0.32
v/s Ratio Perm					0.26	
v/c Ratio	0.29		0.47		0.37	0.41
Uniform Delay, d1	41.2		8.7		4.1	3.5
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	1.0		0.7		0.5	0.5
Delay (s)	42.1		9.4		4.6	3.9
Level of Service	D		A		A	A
Approach Delay (s)	42.1		9.4			4.0
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay			9.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.45			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	15.0
Intersection Capacity Utilization			58.0%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Queues
6: Route 83 & Allan Drive

2023 No-Build Conditions
Weekday Evening Peak Hour

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	72	0	61	2	0	143	1339	5	936
Future Volume (vph)	72	0	61	2	0	143	1339	5	936
Lane Group Flow (vph)	0	78	66	0	5	155	1459	6	1111
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	9.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	23.0	45.0	23.0	45.0
Total Split (%)	24.4%	24.4%	24.4%	24.4%	24.4%	25.6%	50.0%	25.6%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	5.0	6.0	5.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio		0.49	0.25		0.02	0.60	0.53	0.05	0.55
Control Delay		46.6	5.6		0.2	39.8	9.9	41.2	23.5
Queue Delay		0.9	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		47.6	5.6		0.2	39.8	9.9	41.2	23.5
Queue Length 50th (ft)		42	0		0	80	245	2	350
Queue Length 95th (ft)		83	19		0	m76	528	m6	372
Internal Link Dist (ft)		184			1042		345		481
Turn Bay Length (ft)							75		
Base Capacity (vph)		249	361		350	354	2736	354	2028
Starvation Cap Reductn		0	0		0	0	0	0	0
Spillback Cap Reductn		58	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0
Reduced v/c Ratio		0.41	0.18		0.01	0.44	0.53	0.02	0.55

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 39 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.






















Splits and Phases: 6: Route 83 & Allan Drive



HCM Signalized Intersection Capacity Analysis

6: Route 83 & Allan Drive

















2023 No-Build Conditions
Weekday Evening Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	0	61	2	0	3	143	1339	4	5	936	64
Future Volume (vph)	72	0	61	2	0	3	143	1339	4	5	936	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		5.0	6.0		5.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.92		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1712		1770	3573		1770	3505	
Flt Permitted		0.75	1.00		0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1405	1583		1521		1770	3573		1770	3505	
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.90	0.90	0.90
Adj. Flow (vph)	78	0	66	2	0	3	155	1455	4	6	1040	71
RTOR Reduction (vph)	0	0	59	0	4	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	78	7	0	1	0	155	1459	0	6	1107	0
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	1%	1%	2%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		9.1	9.1		9.1		13.1	62.6		1.3	50.8	
Effective Green, g (s)		9.1	9.1		9.1		13.1	62.6		1.3	50.8	
Actuated g/C Ratio		0.10	0.10		0.10		0.15	0.70		0.01	0.56	
Clearance Time (s)		6.0	6.0		6.0		5.0	6.0		5.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		142	160		153		257	2485		25	1978	
v/s Ratio Prot							c0.09	c0.41		0.00	0.32	
v/s Ratio Perm		c0.06	0.00		0.00							
v/c Ratio		0.55	0.04		0.00		0.60	0.59		0.24	0.56	
Uniform Delay, d1		38.5	36.5		36.4		36.0	7.0		43.9	12.5	
Progression Factor		1.00	1.00		1.00		0.96	1.39		1.03	1.60	
Incremental Delay, d2		4.3	0.1		0.0		2.3	0.6		4.5	1.0	
Delay (s)		42.8	36.6		36.4		36.8	10.4		49.6	21.0	
Level of Service		D	D		D		D	B		D	C	
Approach Delay (s)		40.0			36.4			12.9			21.2	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			17.5				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			17.0		
Intersection Capacity Utilization			63.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis









7: Route 83 & Site Drive/Private Drive

2023 No-Build Conditions
Weekday Evening Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	26	5	0	2	0	1485	10	2	1000	18
Future Volume (Veh/h)	0	0	26	5	0	2	0	1485	10	2	1000	18
Sign Control	Stop				Stop				Free		Free	
Grade	0%				0%				0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.50	0.50	0.50	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	30	10	0	4	0	1614	11	2	1190	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												425
pX, platoon unblocked	0.80	0.80	0.80	0.80	0.80		0.80					
vC, conflicting volume	2016	2830	606	2218	2834	812	1211			1625		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1770	2787	9	2024	2793	812	765			1625		
tC, single (s)	7.7	6.7	7.1	7.5	6.5	6.9	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	96	63	100	99	100			99		
cM capacity (veh/h)	38	13	836	27	15	326	675			392		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	30	14	1076	549	597	616						
Volume Left	0	10	0	0	2	0						
Volume Right	30	4	0	11	0	21						
cSH	836	36	1700	1700	392	1700						
Volume to Capacity	0.04	0.39	0.63	0.32	0.01	0.36						
Queue Length 95th (ft)	3	32	0	0	0	0						
Control Delay (s)	9.5	157.2	0.0	0.0	0.2	0.0						
Lane LOS	A	F			A							
Approach Delay (s)	9.5	157.2	0.0		0.1							
Approach LOS	A	F										
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			51.4%		ICU Level of Service				A			
Analysis Period (min)			15									

Queues
8: Route 83 & Dobson Road

2023 No-Build Conditions
Weekday Evening Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	32	1316	196	980
Future Volume (vph)	32	1316	196	980
Lane Group Flow (vph)	317	1812	211	1054
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	9.0	15.0	5.0	15.0
Minimum Split (s)	21.0	22.0	9.0	22.0
Total Split (s)	32.0	40.0	18.0	58.0
Total Split (%)	35.6%	44.4%	20.0%	64.4%
Yellow Time (s)	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	6.0
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	Min	C-Max	None	C-Max
v/c Ratio	0.71	0.85	0.75	0.40
Control Delay	15.9	15.8	41.4	4.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.9	15.8	41.4	4.7
Queue Length 50th (ft)	19	211	91	17
Queue Length 95th (ft)	93	247	168	154
Internal Link Dist (ft)	654	822		1482
Turn Bay Length (ft)			240	
Base Capacity (vph)	686	2132	355	2667
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.85	0.59	0.40

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 60 (67%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated


Splits and Phases: 8: Route 83 & Dobson Road



HCM Signalized Intersection Capacity Analysis

8: Route 83 & Dobson Road

2023 No-Build Conditions
Weekday Evening Peak Hour
















						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Volume (vph)	32	259	1316	25	196	980
Future Volume (vph)	32	259	1316	25	196	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		6.0		4.0	6.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.88		1.00		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1630		3564		1770	3539
Flt Permitted	0.99		1.00		0.07	1.00
Satd. Flow (perm)	1630		3564		129	3539
Peak-hour factor, PHF	0.92	0.92	0.74	0.74	0.93	0.93
Adj. Flow (vph)	35	282	1778	34	211	1054
RTOR Reduction (vph)	247	0	1	0	0	0
Lane Group Flow (vph)	70	0	1811	0	211	1054
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	11.2		53.8		67.8	67.8
Effective Green, g (s)	11.2		53.8		67.8	67.8
Actuated g/C Ratio	0.12		0.60		0.75	0.75
Clearance Time (s)	5.0		6.0		4.0	6.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	202		2130		279	2666
v/s Ratio Prot	c0.04		c0.51		c0.08	0.30
v/s Ratio Perm					0.49	
v/c Ratio	0.35		0.85		0.76	0.40
Uniform Delay, d1	36.1		14.8		24.6	3.9
Progression Factor	1.00		0.74		1.48	1.00
Incremental Delay, d2	1.0		2.4		10.1	0.4
Delay (s)	37.1		13.3		46.5	4.3
Level of Service	D		B		D	A
Approach Delay (s)	37.1		13.3			11.3
Approach LOS	D		B			B
Intersection Summary						
HCM 2000 Control Delay			14.8		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.76			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	15.0
Intersection Capacity Utilization			78.3%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

Queues

6: Route 83 & Allan Drive

2023 No-Build Conditions

Saturday Midday Peak Hour

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø1
Lane Configurations									
Traffic Volume (vph)	81	0	69	2	0	116	1339	1204	
Future Volume (vph)	81	0	69	2	0	116	1339	1204	
Lane Group Flow (vph)	0	140	119	0	4	123	1428	1367	
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	NA	
Protected Phases		4			8	5	2	6	1
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	6	
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	9.0	22.0	22.0	9.0
Total Split (s)	19.0	19.0	19.0	19.0	19.0	20.0	51.0	51.0	20.0
Total Split (%)	21.1%	21.1%	21.1%	21.1%	21.1%	22.2%	56.7%	56.7%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	5.0	6.0	6.0	
Lead/Lag						Lead	Lag	Lag	Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None
v/c Ratio		0.75	0.38		0.01	0.55	0.58	0.72	
Control Delay		62.4	10.7		0.0	45.9	6.9	15.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.1	
Total Delay		62.4	10.7		0.0	45.9	6.9	15.4	
Queue Length 50th (ft)		77	0		0	67	172	402	
Queue Length 95th (ft)		85	8		0	117	222	112	
Internal Link Dist (ft)		184			1042		345	481	
Turn Bay Length (ft)									
Base Capacity (vph)		203	330		294	295	2474	1910	
Starvation Cap Reductn		0	0		0	0	0	61	
Spillback Cap Reductn		0	0		0	0	0	0	
Storage Cap Reductn		0	0		0	0	0	0	
Reduced v/c Ratio		0.69	0.36		0.01	0.42	0.58	0.74	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 9 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated





















Splits and Phases: 6: Route 83 & Allan Drive

 Ø1	 Ø2 (R)	 Ø4
20 s	51 s	19 s
 Ø5	 Ø6 (R)	 Ø8
20 s	51 s	19 s

HCM Signalized Intersection Capacity Analysis

6: Route 83 & Allan Drive

















2023 No-Build Conditions
Saturday Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	0	69	2	0	1	116	1339	4	0	1204	53
Future Volume (vph)	81	0	69	2	0	1	116	1339	4	0	1204	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		5.0	6.0			6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frt		1.00	0.85		0.97		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1770	1583		1770		1770	3372			3452	
Flt Permitted		0.76	1.00		0.80		0.95	1.00			1.00	
Satd. Flow (perm)		1407	1583		1465		1770	3372			3452	
Peak-hour factor, PHF	0.58	0.58	0.58	0.75	0.75	0.75	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	140	0	119	3	0	1	123	1424	4	0	1309	58
RTOR Reduction (vph)	0	0	103	0	3	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	140	16	0	1	0	123	1428	0	0	1364	0
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	7%	7%	4%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		11.3	66.0			49.7	
Effective Green, g (s)		12.0	12.0		12.0		11.3	66.0			49.7	
Actuated g/C Ratio		0.13	0.13		0.13		0.13	0.73			0.55	
Clearance Time (s)		6.0	6.0		6.0		5.0	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		187	211		195		222	2472			1906	
v/s Ratio Prot							0.07	c0.42			c0.40	
v/s Ratio Perm		c0.10	0.01		0.00							
v/c Ratio		0.75	0.08		0.00		0.55	0.58			0.72	
Uniform Delay, d1		37.5	34.1		33.8		37.0	5.6			14.9	
Progression Factor		1.00	1.00		1.00		1.00	1.00			0.83	
Incremental Delay, d2		15.1	0.2		0.0		3.0	1.0			1.9	
Delay (s)		52.6	34.3		33.8		40.0	6.5			14.3	
Level of Service		D	C		C		D	A			B	
Approach Delay (s)		44.2			33.8			9.2			14.3	
Approach LOS		D			C			A			B	
Intersection Summary												
HCM 2000 Control Delay			14.3				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				17.0		
Intersection Capacity Utilization			61.7%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis









7: Route 83 & Site Drive/Private Drive

2023 No-Build Conditions
Saturday Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	50	9	0	6	0	1231	7	3	1244	28
Future Volume (Veh/h)	0	0	50	9	0	6	0	1231	7	3	1244	28
Sign Control	Stop		Stop		Free		Free		Free		Free	
Grade	0%		0%		0%		0%		0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.63	0.63	0.63	0.82	0.82	0.82	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	64	14	0	10	0	1501	9	4	1499	34
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage veh												
Upstream signal (ft)											425	
pX, platoon unblocked	0.70	0.70	0.70	0.70	0.70	0.70						
vC, conflicting volume	2284	3034	766	2263	3046	755	1533				1510	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1982	3048	0	1951	3066	755	912				1510	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3				4.2	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3				2.2	
p0 queue free %	100	100	92	44	100	97	100				99	
cM capacity (veh/h)	25	9	767	25	9	356	496				429	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	64	24	1001	509	754	784						
Volume Left	0	14	0	0	4	0						
Volume Right	64	10	0	9	0	34						
cSH	767	41	1700	1700	429	1700						
Volume to Capacity	0.08	0.58	0.59	0.30	0.01	0.46						
Queue Length 95th (ft)	7	53	0	0	1	0						
Control Delay (s)	10.1	177.2	0.0	0.0	0.3	0.0						
Lane LOS	B	F			A							
Approach Delay (s)	10.1	177.2	0.0	0.1								
Approach LOS	B	F										
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			52.0%		ICU Level of Service				A			
Analysis Period (min)			15									

Queues
8: Route 83 & Dobson Road

2023 No-Build Conditions
Saturday Midday Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	25	994	163	1076
Future Volume (vph)	25	994	163	1076
Lane Group Flow (vph)	250	1160	181	1196
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	9.0	15.0	5.0	15.0
Minimum Split (s)	21.0	22.0	9.0	22.0
Total Split (s)	36.0	44.0	20.0	64.0
Total Split (%)	36.0%	44.0%	20.0%	64.0%
Yellow Time (s)	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	6.0
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	Min	C-Max	None	C-Max
v/c Ratio	0.68	0.51	0.43	0.43
Control Delay	18.0	11.6	5.8	4.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.0	11.6	5.8	4.4
Queue Length 50th (ft)	18	173	17	93
Queue Length 95th (ft)	71	304	46	177
Internal Link Dist (ft)	654	822		1482
Turn Bay Length (ft)			240	
Base Capacity (vph)	647	2266	504	2764
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.39	0.51	0.36	0.43

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated


Splits and Phases: 8: Route 83 & Dobson Road



HCM Signalized Intersection Capacity Analysis

8: Route 83 & Dobson Road

















2023 No-Build Conditions
Saturday Midday Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Volume (vph)	25	185	994	15	163	1076
Future Volume (vph)	25	185	994	15	163	1076
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		6.0		4.0	6.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.88		1.00		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1600		3531		1770	3539
Flt Permitted	0.99		1.00		0.19	1.00
Satd. Flow (perm)	1600		3531		345	3539
Peak-hour factor, PHF	0.84	0.84	0.87	0.87	0.90	0.90
Adj. Flow (vph)	30	220	1143	17	181	1196
RTOR Reduction (vph)	196	0	1	0	0	0
Lane Group Flow (vph)	54	0	1159	0	181	1196
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	10.9		64.1		78.1	78.1
Effective Green, g (s)	10.9		64.1		78.1	78.1
Actuated g/C Ratio	0.11		0.64		0.78	0.78
Clearance Time (s)	5.0		6.0		4.0	6.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	174		2263		411	2763
v/s Ratio Prot	c0.03		c0.33		0.04	c0.34
v/s Ratio Perm					0.30	
v/c Ratio	0.31		0.51		0.44	0.43
Uniform Delay, d1	41.1		9.6		4.9	3.6
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	1.0		0.8		0.8	0.5
Delay (s)	42.1		10.4		5.7	4.1
Level of Service	D		B		A	A
Approach Delay (s)	42.1		10.4			4.3
Approach LOS	D		B			A
Intersection Summary						
HCM 2000 Control Delay			10.3		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.48			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	15.0
Intersection Capacity Utilization			62.3%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Queues

6: Route 83 & Allan Drive

2023 Build Conditions
Weekday Evening Peak Hour

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	72	0	61	2	0	143	1371	5	961
Future Volume (vph)	72	0	61	2	0	143	1371	5	961
Lane Group Flow (vph)	0	78	66	0	5	155	1494	6	1139
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	9.0	22.0	9.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	23.0	45.0	23.0	45.0
Total Split (%)	24.4%	24.4%	24.4%	24.4%	24.4%	25.6%	50.0%	25.6%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	5.0	6.0	5.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio		0.49	0.25		0.02	0.60	0.55	0.05	0.56
Control Delay		46.6	5.6		0.2	40.0	9.8	41.2	23.9
Queue Delay		1.1	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		47.7	5.6		0.2	40.0	9.8	41.2	23.9
Queue Length 50th (ft)		42	0		0	81	256	2	360
Queue Length 95th (ft)		83	19		0	m77	538	m6	381
Internal Link Dist (ft)		184			1042		345		481
Turn Bay Length (ft)								75	
Base Capacity (vph)		249	361		350	354	2736	354	2029
Starvation Cap Reductn		0	0		0	0	0	0	0
Spillback Cap Reductn		62	0		0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0
Reduced v/c Ratio		0.42	0.18		0.01	0.44	0.55	0.02	0.56

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 39 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Route 83 & Allan Drive
























HCM Signalized Intersection Capacity Analysis

6: Route 83 & Allan Drive

2023 Build Conditions

















Weekday Evening Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	0	61	2	0	3	143	1371	4	5	961	64
Future Volume (vph)	72	0	61	2	0	3	143	1371	4	5	961	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		5.0	6.0		5.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.92		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1712		1770	3573		1770	3506	
Flt Permitted		0.75	1.00		0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1405	1583		1521		1770	3573		1770	3506	
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.90	0.90	0.90
Adj. Flow (vph)	78	0	66	2	0	3	155	1490	4	6	1068	71
RTOR Reduction (vph)	0	0	59	0	4	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	78	7	0	1	0	155	1494	0	6	1135	0
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	1%	1%	2%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		9.1	9.1		9.1		13.1	62.6		1.3	50.8	
Effective Green, g (s)		9.1	9.1		9.1		13.1	62.6		1.3	50.8	
Actuated g/C Ratio		0.10	0.10		0.10		0.15	0.70		0.01	0.56	
Clearance Time (s)		6.0	6.0		6.0		5.0	6.0		5.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		142	160		153		257	2485		25	1978	
v/s Ratio Prot							c0.09	c0.42		0.00	0.32	
v/s Ratio Perm		c0.06	0.00		0.00							
v/c Ratio		0.55	0.04		0.00		0.60	0.60		0.24	0.57	
Uniform Delay, d1		38.5	36.5		36.4		36.0	7.2		43.9	12.6	
Progression Factor		1.00	1.00		1.00		0.96	1.35		1.03	1.60	
Incremental Delay, d2		4.3	0.1		0.0		2.4	0.6		4.5	1.1	
Delay (s)		42.8	36.6		36.4		37.0	10.3		49.6	21.3	
Level of Service		D	D		D		D	B		D	C	
Approach Delay (s)		40.0			36.4			12.8			21.5	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			17.5		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					17.0		
Intersection Capacity Utilization			64.1%		ICU Level of Service					C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

7: Route 83 & Site Drive/Private Drive









2023 Build Conditions
Weekday Evening Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	26	38	0	32	0	1485	41	27	1000	18
Future Volume (Veh/h)	0	0	26	38	0	32	0	1485	41	27	1000	18
Sign Control	Stop				Stop				Free		Free	
Grade	0%				0%				0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.50	0.50	0.50	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	30	76	0	64	0	1614	45	32	1190	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												425
pX, platoon unblocked	0.79	0.79	0.79	0.79	0.79		0.79					
vC, conflicting volume	2136	2924	606	2296	2912	830	1211	1659				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1909	2903	0	2111	2888	830	743	1659				
tC, single (s)	7.7	6.7	7.1	7.5	6.5	6.9	4.1	4.2				
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	100	100	96	0	100	80	100	92				
cM capacity (veh/h)	22	10	839	21	12	318	682	380				
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	30	140	1076	583	627	616						
Volume Left	0	76	0	0	32	0						
Volume Right	30	64	0	45	0	21						
cSH	839	37	1700	1700	380	1700						
Volume to Capacity	0.04	3.77	0.63	0.34	0.08	0.36						
Queue Length 95th (ft)	3	Err	0	0	7	0						
Control Delay (s)	9.4	Err	0.0	0.0	2.7	0.0						
Lane LOS	A	F			A							
Approach Delay (s)	9.4	Err	0.0		1.3							
Approach LOS	A	F										
Intersection Summary												
Average Delay			456.3									
Intersection Capacity Utilization			58.4%	ICU Level of Service					B			
Analysis Period (min)			15									

Queues

8: Route 83 & Dobson Road

2023 Build Conditions
Weekday Evening Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	32	1336	210	1004
Future Volume (vph)	32	1336	210	1004
Lane Group Flow (vph)	328	1839	226	1080
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	9.0	15.0	5.0	15.0
Minimum Split (s)	21.0	22.0	9.0	22.0
Total Split (s)	32.0	40.0	18.0	58.0
Total Split (%)	35.6%	44.4%	20.0%	64.4%
Yellow Time (s)	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	6.0
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	Min	C-Max	None	C-Max
v/c Ratio	0.71	0.87	0.77	0.41
Control Delay	15.8	16.7	43.0	4.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.8	16.7	43.0	4.8
Queue Length 50th (ft)	19	215	98	20
Queue Length 95th (ft)	93	251	178	163
Internal Link Dist (ft)	654	822		1482
Turn Bay Length (ft)			240	
Base Capacity (vph)	693	2108	356	2664
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.47	0.87	0.63	0.41

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 60 (67%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated






Splits and Phases: 8: Route 83 & Dobson Road



HCM Signalized Intersection Capacity Analysis
















8: Route 83 & Dobson Road

2023 Build Conditions
Weekday Evening Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	270	1336	25	210	1004
Future Volume (vph)	32	270	1336	25	210	1004
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		6.0		4.0	6.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.88		1.00		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1629		3564		1770	3539
Flt Permitted	0.99		1.00		0.07	1.00
Satd. Flow (perm)	1629		3564		130	3539
Peak-hour factor, PHF	0.92	0.92	0.74	0.74	0.93	0.93
Adj. Flow (vph)	35	293	1805	34	226	1080
RTOR Reduction (vph)	257	0	1	0	0	0
Lane Group Flow (vph)	71	0	1838	0	226	1080
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	11.2		53.3		67.8	67.8
Effective Green, g (s)	11.2		53.3		67.8	67.8
Actuated g/C Ratio	0.12		0.59		0.75	0.75
Clearance Time (s)	5.0		6.0		4.0	6.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	202		2110		289	2666
v/s Ratio Prot	c0.04		c0.52		c0.09	0.31
v/s Ratio Perm					0.50	
v/c Ratio	0.35		0.87		0.78	0.41
Uniform Delay, d1	36.1		15.5		25.7	3.9
Progression Factor	1.00		0.73		1.41	1.01
Incremental Delay, d2	1.1		2.8		11.8	0.4
Delay (s)	37.2		14.1		48.2	4.4
Level of Service	D		B		D	A
Approach Delay (s)	37.2		14.1			12.0
Approach LOS	D		B			B
Intersection Summary						
HCM 2000 Control Delay			15.5		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.78			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	15.0
Intersection Capacity Utilization			80.3%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

Queues
6: Route 83 & Allan Drive

2023 Build Conditions
Saturday Midday Peak Hour

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø1
Lane Configurations									
Traffic Volume (vph)	81	0	69	2	0	116	1154	1242	
Future Volume (vph)	81	0	69	2	0	116	1154	1242	
Lane Group Flow (vph)	0	140	119	0	4	123	1232	1408	
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	NA	
Protected Phases		4			8	5	2	6	1
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	6	
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	9.0	22.0	22.0	9.0
Total Split (s)	19.0	19.0	19.0	19.0	19.0	20.0	51.0	51.0	20.0
Total Split (%)	21.1%	21.1%	21.1%	21.1%	21.1%	22.2%	56.7%	56.7%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	5.0	6.0	6.0	
Lead/Lag						Lead	Lag	Lag	Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None
v/c Ratio		0.75	0.38		0.01	0.55	0.50	0.74	
Control Delay		62.4	10.7		0.0	45.9	6.0	15.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.1	
Total Delay		62.4	10.7		0.0	45.9	6.0	16.0	
Queue Length 50th (ft)		77	0		0	67	134	420	
Queue Length 95th (ft)		85	8		0	117	174	126	
Internal Link Dist (ft)		184			1042		345	481	
Turn Bay Length (ft)									
Base Capacity (vph)		203	330		294	295	2474	1910	
Starvation Cap Reductn		0	0		0	0	0	54	
Spillback Cap Reductn		0	0		0	0	0	0	
Storage Cap Reductn		0	0		0	0	0	0	
Reduced v/c Ratio		0.69	0.36		0.01	0.42	0.50	0.76	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 9 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Route 83 & Allan Drive






















 Ø1	 Ø2 (R)	 Ø4
20 s	51 s	19 s
 Ø5	 Ø6 (R)	 Ø8
20 s	51 s	19 s

HCM Signalized Intersection Capacity Analysis

6: Route 83 & Allan Drive

2023 Build Conditions

















Saturday Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	0	69	2	0	1	116	1154	4	0	1242	53
Future Volume (vph)	81	0	69	2	0	1	116	1154	4	0	1242	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		5.0	6.0			6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frt		1.00	0.85		0.97		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1770	1583		1770		1770	3372			3452	
Flt Permitted		0.76	1.00		0.80		0.95	1.00			1.00	
Satd. Flow (perm)		1407	1583		1465		1770	3372			3452	
Peak-hour factor, PHF	0.58	0.58	0.58	0.75	0.75	0.75	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	140	0	119	3	0	1	123	1228	4	0	1350	58
RTOR Reduction (vph)	0	0	103	0	3	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	140	16	0	1	0	123	1232	0	0	1405	0
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	7%	7%	4%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		11.3	66.0			49.7	
Effective Green, g (s)		12.0	12.0		12.0		11.3	66.0			49.7	
Actuated g/C Ratio		0.13	0.13		0.13		0.13	0.73			0.55	
Clearance Time (s)		6.0	6.0		6.0		5.0	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		187	211		195		222	2472			1906	
v/s Ratio Prot							0.07	c0.37			c0.41	
v/s Ratio Perm		c0.10	0.01		0.00							
v/c Ratio		0.75	0.08		0.00		0.55	0.50			0.74	
Uniform Delay, d1		37.5	34.1		33.8		37.0	5.0			15.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00			0.84	
Incremental Delay, d2		15.1	0.2		0.0		3.0	0.7			2.1	
Delay (s)		52.6	34.3		33.8		40.0	5.8			14.9	
Level of Service		D	C		C		D	A			B	
Approach Delay (s)		44.2			33.8			8.9			14.9	
Approach LOS		D			C			A			B	
Intersection Summary												
HCM 2000 Control Delay			14.7				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			17.0		
Intersection Capacity Utilization			62.7%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

7: Route 83 & Site Drive/Private Drive









2023 Build Conditions
Saturday Midday Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	50	46	0	38	0	1231	53	41	1244	28
Future Volume (Veh/h)	0	0	50	46	0	38	0	1231	53	41	1244	28
Sign Control	Stop				Stop				Free			
Grade	0%				0%				0%			
Peak Hour Factor	0.78	0.78	0.78	0.63	0.63	0.63	0.82	0.82	0.82	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	64	73	0	60	0	1501	65	49	1499	34
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												425
pX, platoon unblocked	0.69	0.69	0.69	0.69	0.69		0.69					
vC, conflicting volume	2424	3180	766	2381	3164	783	1533			1566		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2162	3262	0	2098	3240	783	863			1566		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	91	0	100	82	100			88		
cM capacity (veh/h)	14	6	749	17	6	341	507			408		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	64	133	1001	565	798	784						
Volume Left	0	73	0	0	49	0						
Volume Right	64	60	0	65	0	34						
cSH	749	30	1700	1700	408	1700						
Volume to Capacity	0.09	4.38	0.59	0.33	0.12	0.46						
Queue Length 95th (ft)	7	Err	0	0	10	0						
Control Delay (s)	10.3	Err	0.0	0.0	3.9	0.0						
Lane LOS	B	F			A							
Approach Delay (s)	10.3	Err	0.0		2.0							
Approach LOS	B	F										
Intersection Summary												
Average Delay			398.7									
Intersection Capacity Utilization			76.6%	ICU Level of Service					D			
Analysis Period (min)			15									

Queues

8: Route 83 & Dobson Road

2023 Build Conditions
Saturday Midday Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	25	1023	180	1105
Future Volume (vph)	25	1023	180	1105
Lane Group Flow (vph)	270	1193	200	1228
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	9.0	15.0	5.0	15.0
Minimum Split (s)	21.0	22.0	9.0	22.0
Total Split (s)	36.0	44.0	20.0	64.0
Total Split (%)	36.0%	44.0%	20.0%	64.0%
Yellow Time (s)	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	6.0
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	Min	C-Max	None	C-Max
v/c Ratio	0.69	0.54	0.48	0.45
Control Delay	17.7	12.5	6.6	4.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.7	12.5	6.6	4.6
Queue Length 50th (ft)	18	187	19	96
Queue Length 95th (ft)	72	330	51	188
Internal Link Dist (ft)	654	822		1482
Turn Bay Length (ft)			240	
Base Capacity (vph)	660	2229	491	2759
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.54	0.41	0.45

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated











Splits and Phases: 8: Route 83 & Dobson Road



HCM Signalized Intersection Capacity Analysis

8: Route 83 & Dobson Road

2023 Build Conditions
Saturday Midday Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	202	1023	15	180	1105
Future Volume (vph)	25	202	1023	15	180	1105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		6.0		4.0	6.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.88		1.00		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1599		3532		1770	3539
Flt Permitted	0.99		1.00		0.17	1.00
Satd. Flow (perm)	1599		3532		324	3539
Peak-hour factor, PHF	0.84	0.84	0.87	0.87	0.90	0.90
Adj. Flow (vph)	30	240	1176	17	200	1228
RTOR Reduction (vph)	214	0	1	0	0	0
Lane Group Flow (vph)	56	0	1192	0	200	1228
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	11.0		63.1		78.0	78.0
Effective Green, g (s)	11.0		63.1		78.0	78.0
Actuated g/C Ratio	0.11		0.63		0.78	0.78
Clearance Time (s)	5.0		6.0		4.0	6.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	175		2228		410	2760
v/s Ratio Prot	c0.04		c0.34		0.05	c0.35
v/s Ratio Perm					0.33	
v/c Ratio	0.32		0.54		0.49	0.44
Uniform Delay, d1	41.1		10.3		5.6	3.7
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	1.1		0.9		0.9	0.5
Delay (s)	42.1		11.2		6.5	4.2
Level of Service	D		B		A	A
Approach Delay (s)	42.1		11.2			4.6
Approach LOS	D		B			A
Intersection Summary						
HCM 2000 Control Delay			10.8		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.50			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	15.0
Intersection Capacity Utilization			65.1%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Prime Wellness of Connecticut, LLC dba Leaf Street

Proposed Convert to Hybrid Retailer

Operating Plan

Proposed Convert to Hybrid Retailer Operating Plan

Prime Wellness of Connecticut, LLC dba Leaf Street (“Leaf Street”) is a proposed Convert to Hybrid Retailer of approximately 8,920 square feet on the ground floor, including 6,556 dispensary space and storage, and 2,364 square feet of office space. When the second floor of the building is completed, it will consist of an additional 4,247 square feet of office space, which will not include any dispensary space or dispensary storage space. The facility is located at 234 Talcottville Road, Vernon, Connecticut 06066. Leaf Street seeks to operate a Convert to Hybrid Cannabis Retailer at this location, owned and supported by Acreage Holdings, one of the nation’s largest and most successful cannabis providers.

The following is a summary of all on-site activities of the proposed Convert to Hybrid Retailer, including number of employees for each area, a floorplan of the proposed facility, maximum occupancy, hours of operation, products that will be sold at the facility, security, access, and state-regulated standards around patient and consumer services.

On-Site Activities

Leaf Street will receive, display, dispense, and sell medical cannabis and adult use cannabis to qualifying and registered patients, caregivers, and consumers with valid DCP- and state-approved identification only. Further details about on-site activities are included in the existing sets of Security and Operational SOPS.

Number of Employees

Leaf Street intends to employ 36 Management, security, and dispensary staff members for its Vernon location. At least 12 employees will be included for medical cannabis management and sales; 12 employees for adult use cannabis, and 7 management and sales; and 3-5 employees for the office portion of the building. If more employees are needed, Leaf Street will retain additional employees to meet Retailer demand and provide a safe and compliant facility for the community, patients, caregivers, vendors, consumers, and employees.

Maximum Occupancy

The maximum occupancy of Leaf Street will be determined by the local fire marshal. At no time will the occupancy of the facility be exceeded in compliance with local and state regulations.

Hours of Operation

Leaf Street’s hours of operation will be as follows:

Monday-Saturday: 9:00 A.M. – 8:00 P.M.

Sunday: 10:00 A.M. – 4:00 P.M.

Prime Wellness of Connecticut, LLC dba Leaf Street

Proposed Convert to Hybrid Retailer

Operating Plan

Proposed Products

Leaf Street plans obtain cannabis from a licensed cultivator, producer, product packager, food and beverage manufacturer, product manufacturer or transporter as necessary, and to sell the following products to qualified and registered patients, caregivers, and consumers:

- Flower;
- Pre-Rolls;
- Vaporizers;
- Concentrates;
- Edibles;
- Tinctures;
- Topicals; and
- Accessories.

At no time will Leaf Street gift or transfer cannabis at no cost to a consumer, qualifying patient, or caregiver as part of a commercial transaction. Any cannabis or medical cannabis products sold to patients/caregivers will be dispensed by a licensed pharmacist and recorded in the electronic prescription drug monitoring program in real-time or immediately after the transaction is completed (not more than one hour after completion). Only a licensed Botanist Pharmacist or Dispensary Technician will upload or access prescription drug monitoring program information.

All products will be in original child-resistant, tamper resistant, and light-resistant containers or packaging as delivered to the establishment, and no cannabis shall be removed from its original packaging inside the establishment, except by a licensed pharmacist at a hybrid retailer under certain lawful conditions.

Secure Location

Leaf Street will maintain a secure location for undeliverable cannabis that must be returned to the facility, on-site. Leaf Street's Pharmacist will remove all returned cannabis within 48 hours after receipt from the prescription drug monitoring program, per state regulations.

The following is a summary of Leaf Street's Traffic Mitigation and Security Operations Plan. This document is subject to continued modifications following feedback from the DCP, law enforcement, local officials, and members of the Vernon community. Leaf Street intends to continue pursuing a collaborative relationship with all local stakeholders through pro-active outreach, meeting attendance, and open lines of communication to ensure its operational protocols are in the best interest of the surrounding community and reflect local feedback. This section of the Operating Plan covers traffic mitigation; employee and consumer/patient/caregiver/visitor facility and product access; security measures and requirements; displays; process for checking out and payment (including verification of age); and measures to ensure that consumption on the premises does not occur.

Prime Wellness of Connecticut, LLC dba Leaf Street

Proposed Convert to Hybrid Retailer

Operating Plan

Traffic Mitigation, Access, and Security Operations Plan

Traffic and Queuing

Leaf Street has taken great care to refine its site plan, floor plan, and operational protocols to prevent street level queuing of vehicles, manage vehicle entrance and circulation flow and reduce the impact of traffic on the surrounding community.

As part of the planning and communication process, Director of Security & Facilities, Dean Marino, and other members of management team will meet with Vernon Police Chief and Town Officials to review the proposed traffic mitigation and security plans.

Similar discussions will be ongoing with Connecticut State Police officials of any state roads in the area that are under the authority of the Barracks Commander. These discussions with law enforcement and other safety officials will continue to take place to reduce negative impact on normal community traffic operations.

Traffic and Queuing Plan Goals

Minimize the impact of traffic flow on adjacent residential neighborhoods and commuters;

- Facilitate efficient parking lot operations to minimize back up on adjacent residential streets;
- Develop facility opening protocols to reduce the impact of traffic and queuing during high volume opening periods;
- Provide advanced notice and information to allow consumers and patients to get to/from the facility efficiently and safely;
- Promote efficient coordination between Leaf Street, the Vernon Police Department, and Vernon city employees; and
- Ensure safe transit for all vehicles near the facility.

Site Plan and Parking

Leaf Street's proposed property offers ample accommodations for a retail use of this scale. The site offers 50 parking spaces and one (1) entry/exit point to the main road.

For at least the first two (2) months of operation and as long as deemed necessary by local officials, Leaf Street will employ two (2) parking lot attendants during all hours of operation to allow for the safe and efficient flow of vehicles in and out of the parking lot area. These attendants will also assist in directing consumers to available parking spaces to eliminate backups if they occur inside or outside the lot.

Leaf Street will request the assistance of Vernon Police Department detail officers during this period. The number of officers and their operational deployment shall be at the discretion of the Vernon Police Chief.

Prime Wellness of Connecticut, LLC dba Leaf Street

Proposed Convert to Hybrid Retailer

Operating Plan

Vehicle Queue Prevention and Management

During the first month of operation, Leaf Street will provide adequate staff to meet the demands of the business operation. Offering these services initially will assist in preventing an overflow of consumers; mitigating traffic impacts; and allowing for efficient operations both inside and outside of Leaf Street.

If deemed necessary, Leaf Street will employ a customer waiting system similar to what is used in restaurants. Consumers will be offered an anticipated wait time and notified via cell phone or buzzer when they may enter the facility.

If desired by the town of Vernon, Leaf Street will explore initially only offering facility access to patients, followed by consumers that have made an online appointment via Leaf Street's website, and finally followed by consumers who do not have appointments.

Dissemination of Traffic and Parking Information

Leaf Street will provide clearly marked information about traffic regulations and parking requirements for its Vernon facility on its website and social media channels. Although Leaf Street does not anticipate conducting any outbound media activities, it will include information about appointment requirements, traffic, and parking directives in responses to inbound media requests should it receive any. Leaf Street will also provide this information to the Town of Vernon to post or share at its discretion.

Facility Layout

Leaf Street's approximately 8,920 square foot ground floor plan has been designed to accommodate high volume patient and consumer counts simultaneously while maximizing all safety and security protocols; protecting consumer and patient privacy; optimizing patient and consumer experience; prioritizing patient orders; and preserving the flow throughout the proposed Convert to Hybrid Cannabis Retailer facility.

Entry Vestibule

Patients and consumers will enter the facility through a secure entry vestibule. The entry vestibule is appropriately sized to prevent exterior queuing. Leaf Street's employees will staff the vestibule area to verify that consumers and patients are 21 years of age or older through review of government issued identification or a Medical Use of Marijuana Patient Identification card issued by the DCP. A shielded counter is available for patients to protect patient privacy and expedite check in time. Fake identification scanners will also be utilized to assist staff with verifying identification presented by the customer. Consumers and patients will be granted access to the facility on a single-person basis following ID verification.

Dispensary Floor Experience

During the initial months of operation, the facility will be overstaffed to ensure that consumers and patients are able to move seamlessly throughout the floorplate. Patients and consumers who wish to have an individualized consultation will be greeted by a customer service representative on the sales floor area. Patients will have the opportunity to utilize a private consultation office to protect patient privacy. Patients and

Prime Wellness of Connecticut, LLC dba Leaf Street

Proposed Convert to Hybrid Retailer

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consumers will be guided to a designated point-of-sale terminal to complete their transactions and receive their products.

Patients and consumers who do not desire an individualized consultation will be taken directly to a designated point-of-sale terminal to complete their transactions and receive their products. Designated point-of-sale terminals will be available only for patients, to ensure they are served first. All patients and consumers will exit through the secure exit vestibule which feeds directly into the parking lot.

Anticipated Transaction Time

Leaf Street's anticipated average transaction time will be approximately 15 minutes.

Plan Evaluation

Leaf Street management respectfully requests the opportunity to meet with representatives from the Town of Vernon to discuss traffic and queue management at the following times:

- Prior to opening the facility;
- One week after opening;
- Two weeks after opening or as needed in the month following opening;
- Two months following opening; and
- Additionally, at the discretion of Leaf Street and the Town of Vernon.

Leaf Street anticipates making thoughtful, continued modifications to this plan at least annually to ensure the facility is operating efficiently, safely, and in harmony with the surrounding community.

SAFETY AND SECURITY PLAN

Leaf Street incorporates a comprehensive, multi-layered approach to all security operations, technologies, and safety procedures to safeguard all patients, caregivers, consumers, and staff involving every aspect of the operation, dispensing, sale, and control of cannabis and related products. A revolving Risk, Threat, and Vulnerability (RTV) analysis will be performed on the facility, followed by a similar evaluation of all operations and procedures. These layers of protection are engaged through the purposeful design and layout of the facility with risk evaluation as a primary concern.

Through the incorporation of sufficient lighting and the absence of visual obstructions, the complete exterior of Leaf Street facility is protected by the strategic placement of a high-resolution video surveillance system. This system allows for real-time observation and retention of external activities, with dual capability to enhance and support law enforcement initiative and response in the area.

Video surveillance recording will be made available for immediate viewing and will be retained for at least 30 days. If Leaf Street is made aware of any pending criminal, civil, or administrative investigation or legal proceeding for which a recording may contain

Prime Wellness of Connecticut, LLC dba Leaf Street

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relevant information, it shall retain an unaltered copy of the recording until the investigation or legal proceedings are closed.

Contact with patients, caregivers, and retail consumers is controlled and recorded through a single-entry doorway which is visually and electronically monitored during all operational periods. Individuals are greeted separately by a security representative / staff member from within the controlled access lobby area, and a verification of identification in the form of either a valid Medical Use of Marijuana Program Patient Registration Card (for registered Medical Marijuana patients) and an additional valid state or government form of identification accepted by the DCP are required. This identification is reconciled with the DCP patient registration system for compliance prior to entrance into the dispensary. Consumers seeking to purchase adult use cannabis products must present a valid state or government ID showing the consumers is 21 years of age or older.

Upon verification of identification, patient/caregiver/consumer is escorted to the Retailer floor, where they are met by a staff member. The requested amount of cannabis product (within DCP regulations for each patient/caregiver/consumer) is then dispensed, packaged, and sold compliantly.

The Retailer floor is monitored and controlled under a video surveillance system, which is in turn monitored from within a limited-access security area. Security in the retail area is further enhanced by motion detection sensors, as well as glass-break sensors on all exterior glass locations. Additionally, several hidden panic-alarm activators are located throughout the retail and Security/check-in areas for enhanced safety of patients, caregivers, consumers, and Retailer employees.

All point-of-sale stations are positioned behind a limited-access controlled counter and are individually monitored via a digitally recorded stationary fixed dome surveillance camera with real-time and search capability. All pre-packaged cannabis products available for sale are secured in suitable, approved cabinets/containers behind the secure counter area. The facility is equipped with a uniquely designed vault room per regulations. Access to the vault storage area is always tightly controlled, and access is limited to identified and approved managerial and supervisory staff.

All purchases are tracked in an approved cannabis point of sale software system, as required by the DCP. If an attempted purchase brings the patient/caregiver/consumer over the state allowed limit, staff is alerted through the software, and only an amount up to the allowed limit will be dispensed. Management reviews all sales at the close of each business day. Leaf Street may refuse to complete any transaction if it believes a patient/caregiver/consumer or the public is at risk.

Leaf Street's Safety and Security Plan ("SSP") utilizes industry best practices, is shaped by Leaf Street's operational experience in other regulated markets, and is the result of a collaboration between Leaf Street's security team, third-party security professionals Integrated Security Group (ISG), and local law enforcement. The integration of these security layers is designed to provide protection, deterrence, detection, diversion control and response in addressing all hazards and potential safety concerns.

Prime Wellness of Connecticut, LLC dba Leaf Street

Proposed Convert to Hybrid Retailer

Operating Plan

The SSP details Leaf Street's significant measures employed to deter and prevent unauthorized access to restricted areas, while ensuring the security and control of marijuana products to prevent theft, diversion, or loss.

Leaf Street has enlisted the services of the Integrated Security Group (ISG) to provide a state-of-the-art Digital Monitoring Program (DMP) security system to include the evaluation and placement of security technologies throughout the facility. As part of its *Response Monitoring System*, ISG monitors all security systems 24/7 and provides timely notification of any potential breach or alarm activation to both the managerial and security staff, as well as local law enforcement.

Leaf Street also contracts with ISG to provide comprehensive fire alarm protection and monitoring services in coordination with local fire safety regulations. Some of the additional components of Leaf Street's overall SSP follow.

- Strategic landscape and structural design with minimal foliage to promote site visibility and crime deterrence.
- All walkways will be handicapped accessible.
- A minimum of two (2) handicapped accessible parking spaces on site.
- No changes of floor elevation within the building and no steps required to enter building.
- Exterior lighting will provide a bright, unobstructed field of view for those entering and exiting the entire property and afford optimal conditions for the security cameras to clearly monitor the parking area.
- Entrances to the building will be supervised by specific Management team members who will coordinate proper opening/closing procedures.
- Surveillance equipment will be stored in the locked, limited access area that only Leaf Street's security director and management will have access to.
- Surveillance systems will be present in all internal areas where cannabis is sold and stored.
- All deliveries of cannabis products will be received in a limited access-controlled area which is under constant video surveillance.
- All transportation manifests shall be reconciled and recorded for accuracy prior to transport and again upon delivery.
- In the event of a power loss, the facility's digital monitoring security system and emergency lighting systems will automatically transition to a back-up power source. All locks and alarm protections on both interior and exterior doors will engage and notifications will be sent to managerial and security staff. If necessary, notification will be made to the local law enforcement agency and all access to the facility will be limited.
- Security system will have the ability to remain operational during a power outage.
- Security system will have a primary & secondary (back-up) system to detect unauthorized entry.

Prime Wellness of Connecticut, LLC dba Leaf Street

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- All security equipment shall be kept in good working order and test such equipment no less than two times a year. Log shall be maintained of all equipment testing and the dates thereof.
- A visitor logbook shall be established for approved visitors only in compliance with DCP regulations. Visitors shall be always escorted/monitored throughout the facility with limited access pertinent to their visit.
- Key employees will be responsible for registering & properly training staff. All training record requirements will be met.
- Key employees will be responsible for physical security of cannabis and the establishment are met.
- All procedures will be implemented to meet or exceed the minimum regulations & industry standards.
- Security Director will coordinate facility familiarization training for law enforcement and fire department personnel. Ongoing training will also be available upon request to emergency personnel.
- Security measures will be in place to prevent diversion, theft, or loss, and all staff will be trained pursuant to DCP cannabis regulations & reportable events.

Emergency Evacuations

In the event of an emergency which requires complete evacuation from the facility, the security staff and manager on-duty will facilitate the safe and orderly exit of all persons. As outlined in its *Emergency Operations and Response Plan*, the manager will direct all persons to the external emergency meeting spot and reconcile both the visitor log and employee sign-in sheets to ensure all persons are accounted for. No re-entry shall be permitted until public safety authorities have determined it is safe to do so.

Prime Wellness of Connecticut, LLC dba Leaf Street
Proposed Convert to Hybrid Retailer
Operating Plan

COMMUNITY OUTREACH PLAN

Community Engagement

Leaf Street will work with organizations throughout Vernon to enhance the well-being of the city. Below are examples of these types of non-profit organizations we've collaborated with across the state. We will also focus on local vendors to support the Buy Local initiative.

Charities

American Legion, American Red Cross, Ann's Place, Habitat for Humanity, Helen & Harry Gray Cancer Center, Homeless Hospitality Centers, Jaycees, Kiwanis Club, Lions Clubs, MACC Food Charities, Meals-on-Wheels, Rotary Club, Veterans of Foreign War, Toys for Tots, United Way.

Organizations

Electricity, Electrical repair, Fire Monitoring, Fire Suppression, Gas/Fuel, HVAC, Security Monitoring, Janitorial Service, Landscaping, Locksmith, Plumbing, Snow Removal, Water.

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ORDER CONFIRMATION (CONTINUED)

Salesperson: ALIDA PELLETIER

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PUBLIC NOTICE
Town of Vernon

The Vernon Planning & Zoning Commission (PZC) will hold the following public hearings at a regular meeting on Thursday, February 16, 2023 at 7:30 p.m. in Vernon Town Hall, Third Floor Council Chambers, 14 Park Place, Vernon:

PZ 2023-02 - 10 Snipsic St. Application of Adam Wing, Connecticut Water Company for Site Plan and special permits (4.18.3.3.2, 4.18.3.3.4) to construct a 5,200 sq. ft. building for new aeration equipment to replace the aging infrastructure and storage building for equipment that is stored onsite for the treatment plant and reservoir. Property is zoned Restricted Watershed [Map #45, Block #123, Lot #3]

PZ 2023-01 - 234 Talcottville Road - An application of Benjamin Tinsley (Prime Wellness of Connecticut) for Site Plan and Special Permits (4.9.4.10 and 4.9.4.15.6) for a hybrid cannabis dispensary and cannabis retailer. The property is zoned Commercial [Map #10, Block #15, Lot #40].

Roland Klee, Chairperson
Planning & Zoning Commission



Journal Inquirer
February 4, 2023
February 11, 2023



TOWN OF VERNON

55 WEST MAIN STREET, VERNON, CT 06066
(860) 870-3640 - astephens@vernon-ct.gov

OFFICE OF THE TOWN PLANNER

January 26, 2023

NOTICE TO ABUTTERS PLANNING AND ZONING COMMISSION MEETING

The Vernon Planning & Zoning Commission (PZC) will hold the following public hearings at a regular meeting on **Thursday, February 16, 2023 at 7:30 p.m. in Vernon Town Hall, First Floor, Probate Court Conference Room, 14 Park Place, Vernon.**

PZ 2023-02 - 10 Snipsic St. Application of Adam Wing, Connecticut Water Company for Site Plan and special permits (4.18.3.3.2, 4.18.3.3.4) to construct a 5,200 sq. ft. building for new aeration equipment to replace the aging infrastructure and storage building for equipment that is stored onsite for the treatment plant and reservoir Property is zoned Restricted Watershed [Map #45, Block #123, Lot #3]

PZ 2023-01 – 234 Talcottville Road – An application of Benjamin Tinsley (Prime Wellness of Connecticut) for Site Plan and Special Permits (4.9.4.10 and 4.9.4.15.6) for a hybrid cannabis dispensary and cannabis retailer. The property is zoned Commercial [Map #10, Block #15, Lot #40].

Roland Klee, Chairperson
Planning & Zoning Commission

The applications are available for review in the Planners Office located at 55 West Main Street. The PZC agenda and application materials will be also be available for review 24 hours before the meeting at <https://www.vernon-ct.gov/government/board-and-commissions>. Interested parties are encouraged to provide written comments in advance by emailing Ashley Stephens, Town Planner, at astephens@vernon-ct.gov



North Central District Health Department

□ Enfield—31 North Main Street, Enfield, CT 06082 * (860) 745-0383 Fax (860) 745-3188

□ Vernon—375 Hartford Turnpike, Room 120, Vernon, CT 06066 * (860) 872-1501 Fax (860) 872 1531

□ Windham—Town Hall, 979 Main Street, Willimantic, CT 06226 * (860) 465-3033 Fax (860) 465-3034

□ Stafford—Town Hall, 1 Main Street, Stafford Springs, CT 06076 * (860) 684-5609 Fax (860) 684-1768

Patrice A. Sulik, MPH, R.S.
Director of Health

February 8, 2023

Ms. Ashley Stephens
Vernon Town Planner
55 West Main Street
Vernon, Connecticut 06066

Re: Planning & Zoning Commission Application – Prime Wellness of Connecticut, LLC
366 Madison Avenue, 14th Fl
New York, New York

Dear Ashley Stephens:

I am writing regarding the Planning & Zoning Commission Application at 234 Talcottville Road, Vernon.

North Central District Health Department (NCDHD) has the following comments regarding the application:

- According to the Vernon Water Pollution Control Authority and the historical records that the NCDHD has on file, the existing building is connected to public sewers.
- The existing building is connected to public water. The NCDHD strongly recommends having the building remain connected to public water.
- If dumpsters are required. The dumpster(s) shall reside on a concrete slab or equivalent.
- Any proposed future expansion of services offered by Prime Wellness of Connecticut, LLC, such as coffee service or some sort of food service, would require a plan review with the NCDHD and a license to operate.

Should anyone have any additional questions regarding this matter, I am reachable via email at bbielawiec@ncdhd.org. You can also call me at the NCDHD office at 860-745-0383, extension 114.

Sincerely,

Brian Bielawiec, M.P.H., R.S.
Registered Sanitarian 3

Site Location

Town of Vernon, CT



January 26, 2023

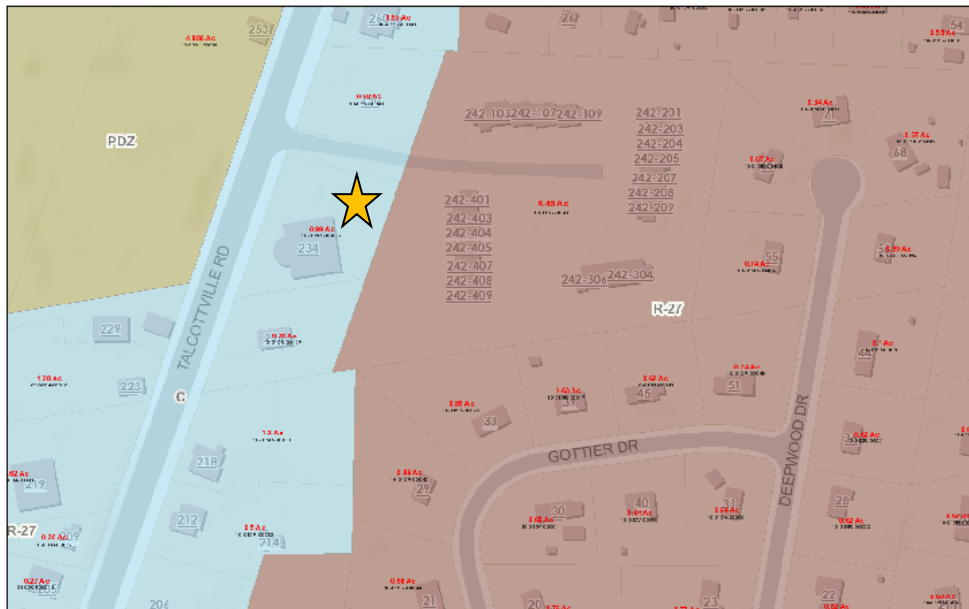
TaxParcelPublishing 2019

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Red: Band_1
Blue: Band_3

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0 0.03 0.06 0.11 km
Bloomfield Township MI, East, Inc.

GIS Dept
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Town of Vernon, CT



January 26, 2023

TaxParcelPublishing
Zoning
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Bloomfield Township MI, East, Inc.

GIS Dept
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SUMMARY

The applicant proposes to renovate the existing building for a cannabis retailer. The applicant submitted an application with a site plan, drainage plan, photometric plan, traffic study, architectural elevations, and an erosion and sedimentation control plan, all included with the agenda packet.



STAFF REVIEWS:

Traffic Authority: The application is going to Traffic Authority on February 9th. I will report Monday the 13th with their findings.

Conservation: N/A

Town Engineer: I have reviewed the site plans and supporting materials for this application and believe that this proposal will not have any adverse impacts on Traffic or Stormwater facilities in this area. The Sediment and Erosion Control plan provides the necessary control measures to prevent off-site impacts.

Building Official:

- All construction must comply with the adopted 2022 Connecticut State Building Code
- All building demolition, alterations and additions must be permitted
- No work shall begin until construction plans have been submitted and all permits have been approved by the Building Department and Fire Marshal's Office

Fire Marshal: No concerns.

Wetlands Commission: N/A

Zoning Review: The property is an existing non-conforming property. The proposed use does not expand the nonconformity. The applicant has taken measures to reduce the non-conformities such as moving the dumpster so it is outside of the setbacks, as well as realign some of the parking spaces to be more in compliance.

The applicant has created an increase in lot coverage, resulting in the need for a special permit (4.9.4.15.6) to address the concerns of traffic from the town.

The plans conform with zoning regulations regarding dumpster requirements; screening; parking; loading zone; photometric and design standards.

Health Department: Please see attached comments.

Town Planner Summary:

The applicant requests approval to renovate an existing building to create a cannabis retailer per section 4.9.4.10. The lot coverage for this parcel is over sixty percent (60%), requiring a special permit per section 4.9.4.15.6.

The applicant submitted confirmation that the cannabis retail establishment is more than 3,000 feet from any public or parochial school.

The applicant's proposed plan of development meets the Town of Vernon's site plan requirements under section 14.

In order to approve a special permit, the Commission must find that the application meets the general special permit criteria of Section 17.3.1, specifically:

- 17.3.1.1 It shall not create a hazardous condition relative to public health and safety
- 17.3.1.2 It shall be compatible with neighboring uses;
- 17.3.1.3 It shall not create a nuisance;
- 17.3.1.4 It shall not hinder the future sound development of the community;
- 17.3.1.5 It shall conform to all applicable sections of this ordinance;
- 17.3.1.6 N/A
- 17.3.1.7 N/A
- 17.3.1.8 The Commission may at its discretion require the submission of a Site Plan for approval as outlined in Section 14 of this ordinance.

In order to approve a special permit, the Commission must also find that the application meets the Architectural & Design Review Regulations, specifically section 21.

This proposal is a permitted use in the commercial corridor by a special permit. It meets the separating distance from a cannabis retailer to a public or parochial school of 3,000 feet. The operational plan is well thought out including that cannabis shall not be consumed, ingested, or smoked on the premises and the hours of operations meet the zoning regulations. There will be proper ventilation so no odors are apparent.

The town's concern is traffic at this location. The town desired to have a traffic signal installed. After meeting with the applicant at pre-development meetings and discussing this concern, the applicant provided a traffic study. The traffic study showed that the location does not meet a signal warrant, meaning there are conditions that an intersection must meet to justify a signal installation. This application is on Route 83, which is in the state's jurisdiction.

The applicant's alternative approach is to use the existing site driveway connecting to the Courtside Condominiums driveway and relocate the main entrance into the property further from Talcottville Road, which will be entrance only. Additionally, a right out only driveway is proposed onto Talcottville Road to eliminate the majority of conflict. The study concludes that the proposed driveways will provide adequate access to and from the site.

After reviewing a new hybrid cannabis retailer's application in Manchester regarding traffic from September 2022, located at 240 Buckland Street, there is a one way out location (former Friendly's, next to Chili's). The minutes stated 'Attorney Penny commented that, in the three years of traffic review, there were three minor accidents with no fatalities. In addition, there will be less traffic from this use than when Friendly's was at its peak.'

The applicant proposes to have ongoing discussions about the traffic safety with Vernon's Chief of Police, as well as Connecticut State Police officials to ensure safe transit near the facility. This will include two parking attendants for all hours of operation for the first two months as well as officers from the Vernon Police Department based on the Chief of Police's recommendations.

The application meets Section 17.3.1. for a special permit, as well as Section 21 for design review. This application also meets the separating distance from public of parochial schools of 3,000 feet (section 17.1.4 & 17.1.5); hours of operation (Section 17.1.6); an operations plan which includes no consumption, ingestion or smoking on the premises (17.1.7 & 17.1.8); and retail cannabis sales are a primary use, per section 17.1.9. The proposal does not create a hazardous condition relating to public health or safety; it is compatible with neighboring commercial uses; and it will not create a nuisance nor will it hinder the future sound development of the community. We have confirmed that all safeguards have been met. Staff recommends the approval of the special permit request.

Proposed motion:

- I move that the Planning & Zoning Commission Approve PZ 2023-01, a special permit to have a cannabis retailer (Section 4.9.4.10) and a special permit to exceed lot coverage of sixty percent (60%) (Section 4.9.4.15.6) because we have confirmed that all safeguards have been taken to ensure the traffic plan is safe, the hours of operations are met, a thought out operational plan has been provided, no odors will be apparent on site, and retail cannabis sales are the primary use. The application shall have the following stipulations:
 - The applicant agrees that the town will charge the applicant for enhanced public safety measures.
 - Hours of operation are limited to 8 am to 10 pm Monday to Saturday and Sunday 10am to 6pm.
 -

Or

- I propose another motion