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August 19, 2021

Hon. Loretta Taylor
Chairperson of the Town of Cortlandt Planning Board
and Members of the Planning Board
Town Hall
1 Heady Street
Cortlandt Manor, NY 10567

Re: Overlook Terrace Site Plan Application and
Referral from Town Board of Proposed Zoning Text Amendments
119 Oregon Road, SBL 23.11-1-12 ("Property")

Dear Chairperson Taylor and Members of the Planning Board:

On behalf of NRP Group (the "Applicant"), contract-vendee of the above-referenced Property we are writing to update you that the Applicant met with Town staff and consultants during the week of August 2 to discuss the technical review for the proposed 135-unit active adult residential rental community. Based on the discussion with Town staff, the Applicant is in the process of updating the full-size site plan drawings and supporting analysis for review.

As the plan revisions are in progress, we enclose 12 copies the following materials for your ongoing consideration:

Tab

1. Responses to traffic and parking comments, prepared by Provident Design Engineers (PDE)
2. Responses to comments from Michael Preziosi, Director of Technical Services (DOTS), prepared by Divney Tung Schwalbe, LLP
3. Responses to comments from Chris Kehoe, Deputy Director DOTS Planning Division, prepared by Divney Tung Schwalbe, LLP
4. Responses to SWPPP comments from HVEA, prepared by Divney Tung Schwalbe, LLP

Additional detailed responses to certain comments will be submitted for review as the site development plan review process continues.

We look forward to continuing our review of the Project with the Planning Board.

Very truly yours,

DIVNEY TUNG SCHWALBE, LLP

Matthew N. Steinberg, AICP
Associate

Enclosures
File: 858

Provident design engineering
7 Skyline Drive, Hawthorne, NY 10532
Tel: (914) 592-4040 www.pderesults.com

Memorandum

To: Chris Kehoe, AICP – Deputy Director, Planning

From: Carlito Holt, P.E., PTOE
Managing Partner

Subject: Traffic Comment Responses – Overlook Terrace
Town of Cortlandt, New York

Date: August 19, 2021

CC: D. Ward – NRP Group
N. Williams – St. Katherine's Group
J. Schwalbe – Divney, Tung, Schwalbe
D. Steinmetz – Zarin & Steinmetz

Project No.: 21-022

Provident Design Engineering, PLLC (PDE) has prepared this response to the comments regarding Overlook Terrace. The following documents contained comments related to traffic and parking:

- Memorandum dated July 23, 2021 prepared by HVEA Engineers
- Memorandum dated July 23, 2021 prepared by Michael Preziosi, Director of Technical Services
- Memorandum dated July 28, 2021 prepared by Chris Kehoe, Director of

Copies of each Memorandum are contained in Attachment A for ease of reference. The following are responses to the relevant outstanding comments pertaining to traffic and parking, in order in which they appeared in each associated Memorandum:

HVEA MEMORANDUM

Previous Comment 5:

The HVEA Memorandum incorrectly stated the Donnelly Place approach would operate at failing Levels of Service. Based upon the updated analysis contained herein this approach will operate at a Level of Service "B" and "D" during the Peak AM and Peak PM Hours, respectively with no more than a 1.2 second increase in delay from No-Build to Build Conditions, during either of the Peak Hours. Based on the foregoing, it is the opinion of PDE that the Donnelly Place access as proposed is acceptable. Providing a new curb cut between the two existing curb cuts cannot be performed by the Applicant, since they do not control the property needed to create this access. The overflow parking area accessed from Oregon Road for the eastern property on Donnelly Place will not be impacted by the proposed Project.

Previous Comment 6:
The Applicant has revised the Eton Downs access to allow right-turn exit-only access with full emergency access still provided at this location. This will allow residents the ability to exit the site via Eton Downs Road in order to make the left-turn exiting movement under the protection of the traffic signal. The updated traffic analysis contained herein demonstrates that acceptable Levels of Service will be maintained with the revised access scheme.

Additional Comments 1 and 2:
The updated traffic analysis has been revised with the following parameters:

- The phasing conflicts at Oregon Road/Eton Downs/Heady/Pumphouse have been resolved
- Calculated Peak Hour Factors (PHF) were utilized for all study locations
- The Oregon Road/Eton Downs/Heady/Pumphouse traffic signal demonstrated semi-actuated operations based upon field investigations and thus has been analyzed with that controller type
- The trip distributions have been revised to reflect a 50/50 split for project-generated traffic along Oregon Road

With the adjusted parameters noted above, the updated traffic analysis indicates essentially the same Level of Service findings contained in the original report. The proposed Project would still not create any significant incremental traffic impacts within the study area.

It is noted that a pedestrian crossing does not exist along this portion of Oregon Road. A crossing would be beneficial for existing pedestrians in the area, as well as pedestrians anticipated from the proposed Project to cross to/from the sidewalk on the north side of Oregon Road, as well as to access the Bee Line Bus Stops. In order to provide pedestrian crossings at the signalized intersection of Oregon Road/Eton Downs/Heady/Pumphouse, a full traffic signal upgrade would be required at this intersection. This improvement would cost upwards of $500,000. The proposed Project, with its limited incremental impacts, would not warrant that significant of an improvement.

Based on the foregoing, PDE has prepared three Conceptual Improvement Plans (see Attachment B), as follows:

Concept Plan CP-1 – Proposed Rapid Rectangular Flashing Beacon (RRFB) pedestrian crossing to be installed at proposed site driveway intersection. This improvement would be implemented by the Applicant and would provide a much safer pedestrian crossing for both existing and project-generated pedestrian traffic in the area. The pedestrian crossing sign would illuminate with a flashing beacon when pedestrians were crossing to alert drivers to stop and allow pedestrians to safely cross. This improvement would cost approximately $20,000 to $30,000.

Concept Plan CP-2 – Proposed pedestrian crossings on the eastern leg of Oregon Road and the Pumphouse Road leg of the signalized intersection. This improvement would include a new traffic signal system to be installed with associated pedestrian traffic signals. This improvement would cost approximately $500,000.

Concept Plan CP-3 – This would be the same improvement as CP-2, with the exception that a dedicated left-turn lane would be provided along the westbound approach of Oregon Road. This improvement would cost approximately $750,000. It is noted that the extent of Right-of-Way availability for this improvement is unknown.

The Level of Service Tables contained in Attachment C outline the results with each improvement alternative (Capacity Analysis Worksheets are contained in Attachment D). As can be seen in the Level of Service Tables, acceptable Levels of Service can be maintained under any improvement alternative. Although the proposed Project does not warrant implementation of CP-2 or CP-3, a Fair-share Financial Contribution analysis was conducted for this location. When considering the total Project-generated traffic at this location compared to the existing background traffic, the Fair-share Percentage would equate to 3% of the total cost of improvements (see Attachment E). When applying this percentage to the improvement costs associate with CP-2 or CP-3, a Fair-share Financial Contribution of $15,000 to $22,500 would be required.

Based on the foregoing, the CP-1 improvement to be implemented by the Applicant would offset the Fair-share impacts of the proposed Project. Although this improvement would fully offset the Applicant's Fair-share responsibility, the Applicant is willing to go above and beyond and provide an additional Financial Contribution by designing the preferred improvement alternative at the intersection of Oregon Road/Eton Downs/Heady/Pumphouse. These design services could cost approximately $50,000 to $60,000. This design would allow the Town to have a shovel-ready Project when capital funding became available to implement the proposed improvement. Additionally, the design could be utilized by the Town in Grant Applications to seek alternative funding. PDE will provide a formal Scope and Fee for the design of the improvements to be reviewed and confirmed by the Town.

Additional Comment 3:

The Jacobs Hill Apartments provide a total of 121 off-street parking spaces. Based upon the observed Average Peak Parking Demand a total of 42 parking spaces were unoccupied (35% of total parking provided). Based upon the Maximum Peak Parking Demand observed at any time during the two-week period, a total of 32 parking spaces were unoccupied (26% of total parking provided). Based on the foregoing, this data continues to support the Parking Ratio to be provided for the proposed Project.

PREZIOSI MEMORANDUM

Comments 5a and 5b:
See response to HVEA Additional Comments 1 and 2 above.

Comment 5c:
See response to HVEA Previous Comment 6 above.

KEHOE MEMORANDUM

Comment 6:
The Project Team has reviewed the operating and parking conditions for the Springvale Apartment Complex. It is noted that this site is not a very comparable use to the proposed Project based upon the size (total of 401 units), as well as the style which is a Garden-style Cluster Apartment development. Although the use is not a directly comparable, PDE conducted a survey of the site. Based upon the survey it was determined that the site provides a total of 478 off-street parking spaces. The parking demand observed during the survey conducted by PDE (10:00 PM on a weeknight) was 374 parked vehicles. The observed parking demand equates to a parking ratio of 0.93 parked vehicles per unit. The 104 unoccupied parking spaces represents 22% of the total parking provided. This data further supports the parking ratio to be provided by the proposed Project.

ATTACHMENT A

REVIEW MEMORANDA

HVEA ENGINEERS

Copies 8 Planning Board
Town Board
Zoning Board
1 Legal Dept.
1 DOTS Director
C.A.C.
A.R.C.
1 Applicant
1 Carlin Holt
1 Zarin + Steinmetz, Esq.
Sent 7/28/21

July 23, 2021

Mr. Chris Kehoe AICP, Deputy Director
Town of Cortlandt, Planning Division
1 Heady Street
Cortlandt Manor, NY 10567

Re: Traffic Impact Study dated 6/23/2021
Overlook Terrace
Town of Cortlandt, New York

Dear Mr. Kehoe:

HVEA has received the following documents associated with the referenced project:

- Traffic Impact Study Proposed Senior Living Facility 119 Oregon Road dated June 23, 2021 - prepared by Provident Design Engineering, PLC.

Comments are provided on previous design issues as well as the current report information. Responses to previous comments are first discussed, followed by additional comments:

Previous Comment:

1. *The existing traffic volumes were gathered via historical data extrapolated from smartphone technology because of COVID-19 pandemic impacts on traffic patterns. It is recommended that manual traffic counts be obtained for more accurate volumes and turning counts.*

Response:

- The applicant obtained field counts as requested.

Previous Comment:

2. *The traffic analysis should encompass intersections from Pump House Road to the intersection of Locust Ave. The intersections of Oregon Road/Pump House/Heady/Eton, Oregon/Site Drive, Oregon/Gallows/Donnelly, and Oregon/Locust should have an existing vs. proposed ETC LOS analysis comparison performed.*

Response:

- The applicant expanded the traffic study as requested.

Previous Comment:

3. *The analysis presented in the April 27 memo applies traffic generated volumes based on NJDOT trip generation rates for a banquet hall based on the number of seats at the*

facility to the existing condition. Trip generation from the existing facility may not have a strong correlation to the AM and PM peak hours under consideration and it is not recommended that the NJDOT values be applied to the AM/PM peak traffic counts. This facility has been closed for sufficient time period that manual traffic counts should be used without consideration of the previous development.

Response:

- The applicant did not include estimated counts generated from a banquet hall in the existing condition. This is consistent with what was requested.

Previous Comment:

4. *It is recommended that proposed volumes be calculated for Land Use Category 221 – Multifamily Housing (0.44 trips per dwelling unit PM peak hour) in addition to Land Use Category 252 (0.26 trips per dwelling unit PM peak hour) to best understand the range of potential traffic impacts.*

Response:

- The applicant increased the generation rates as requested, showing a comparison between the two land use categories. The traffic analysis used an average between the two rates. We had expected that the high and low values be carried through the capacity analysis, but the average condition may be adequate to assess impacts.

Previous Comment:

5. *The 4/27 memo states that Donnelly Place will be terminated on the East end to provide a more controlled intersection with Oregon Road. This is contrary to our understanding that Donnelly Place would be terminated at the West end. Donnelly Place at the western end has a skewed entrance at Oregon Road and there is a wide asphalt apron on Oregon Road that accommodates the combined entrance of Donnely Place and the Site driveway. This existing situation has the potential for uncontrolled access type movements/conflicts and unexpected driver behavior situations.*

Response:

- The Applicant clarified the closure point in the report submission to be on the west side on Donnelly Place. It should be noted that the LOS of the intersection that the properties on Donnelly Place will have access is shown to operate at LOS F. This may be a concern to property owners on Donnelly Place. The merits of creating a driveway to Oregon Road across the grass in the middle of the Donnelly Place segment and closing both ends of Donnelly Place should be discussed with the Town. An additional item to note is that there could be a historically sensitive resource in the subject grass area. Further, the property at the eastern end of Donnelly Place appears to have overflow parking accessed directly from Oregon Road.

Previous Comment:

6. *It is recommended that the residents of the proposed facility be provided access to Oregon Road westbound with a protected left turn movement at the signalized intersection with Eton Downs Road. The proposed emergency service access driveway to Eton Downs Road could be upgraded to full access. The proposed Site Drive could be used for right turns only from/to Oregon Road eastbound and possibly left turns in from Oregon Road westbound. Consideration for a westbound left turn auxiliary lane on Oregon Road should be evaluated.*

Response:

The applicant evaluated this option on page 21 of the traffic study, which is described as the 'Alternative Access Scheme'. The applicant states that the site generated traffic could be accommodated at Eton Downs Road, but it is not recommended because this access could invite cut through traffic from Oregon Road to Eton Downs Road. The applicant analyzed the level of service of the Eton Downs signal to be LOS A, but field observations have shown westbound traffic queues extending back from the signal, which could create the temptation for a cut through.

Thus, we are comparing the potential safety benefit of a protected left turn against the potential safety problems created by a path to avoid a traffic signal.

We are still in favor of providing access to the protected left turn on the Eton Downs Road approach to the signal. We feel that the potential safety benefits associated with providing the protected left outweigh the cut through concern. This is a preference is partially driven by a sensitivity to senior drivers, but also by a philosophy of providing access to protected left turns where possible. The applicant could consider roadway surface treatment measures to discourage cut throughs. Left turns to the site in from Oregon Road westbound could be restricted by a directional channelized island at the entrance that dictated right turns in and out.

Previous Comment:

7. *Based on consultation with the Town Planning Office, a 1% traffic growth rate should be utilized.*

Response:

- The applicant utilized the specified growth rate.

Additional Comments:

1. Traffic Analysis:

- The program analysis printouts indicate phase conflict errors at the Oregon Road & Pump House Road intersection existing condition that appear to invalidate the analysis. Specifically, the conflicts with phases 6 with 8. The operation of phase 6 as modeled should be verified with field conditions. The use of split phasing with phase 6 should also be discussed.
- The applicant used the default value for PHF – whereas collected counts could be used to determine the actual peak hour factor.
- The consultant treated the existing signal as at Oregon Road & Pump House Road as semi-actuated, which is consistent with our observations of the signal controller but no detection equipment on the sideroads was observed. The Town does not have any records or documents that indicate the signal is semi-actuated. It must be determined if the signal is equipped with functional actuation and the analysis must correspond to the current operation.
- There is a need to address pedestrian access to and through the Oregon Road & Pump House Road intersection. After addressing signal analysis comments stated above, it would be beneficial to ascertain the impacts of adding pedestrian movement phases to the Pump House/Eton Downs signal. It recommended that pedestrians cross Oregon Road before Eton Downs at the signal and then cross Pump House Road to continue on the sidewalk system. A second crosswalk is recommended across Oregon Road on the west side of Pump House Road to access Heady Street.

2. Additional Traffic Condition comments:

- It should be noted that the Arrival/Departure distribution is significantly weighted to the west (80% to Peekskill City direction) based on forecasted destination. The existing Oregon Road traffic volume split is approximately 50-50. Additional justification for this distribution split is required.

3. Parking

- The parking ratio proposed is 1.08 parking spaces per unit. We confirmed that this rate exceeds the ITE recommendations for land use codes 221 and 252 (0.75 and 0.61 respectively). The applicant reported that based on observing two weeks of activity at Jacobs Hill Apartments that the Parking Demand Ratio was found to be 0.77 on average and 0.86 at the highest. It would be beneficial to know what the actual parking to unit ratio was at Jacobs Hill Apartments.

If you have any questions or require additional information, feel free to contact our office.

Sincerely,

Brendan Fitzgerald, P.E.
HVEA Engineers

cc: Michael Preziosi, P.E.
Michelle Robbins, AICP

TOWN OF CORTLANDT
DEPARTMENT OF TECHNICAL SERVICES

Michael Preziosi, P.E.
Director – D.O.T.S

Chris Kehoe, AICP
Deputy Director – Planning

Town Hall, 1 Heady Street
Cortlandt Manor, NY 10567
Main #: 914-734-1060

REVIEW MEMORANDUM

To: Town of Cortlandt Town Board
Town of Cortlandt Planning Board

Cc: Chris Kehoe, AICP – Deputy Director – Planning, Department of Technical Services
Tom Wood, ESQ. – Town Attorney
Michael Cunningham, ESQ. – Asst. Town Attorney

From: Michael Preziosi, P.E. – Director, Department of Technical Services

Date: July 23, 2021

RE: **PLANNING BOARD CASE 2021-01**
"Overlook Terrace – 119 Oregon Road"

The documents listed below were reviewed as part of the Planning Board Application 2021-01 "Overlook Terrace – 119 Oregon Road"

- Expanded Environmental Assessment form prepared by DTS dated June 2021
- "Overlook Terrace" Site Plan Application Drawings prepared by DTS dated revised June 23, 2021
- Storm Water Pollution Prevention Plan, prepared by DTS dated June 2021
- Traffic Impact Study prepared by Provident Design Engineering, dated last revised June 23, 2021

The following comments shall be addressed satisfactorily by the Applicant prior to the Chairperson endorsing the development plan. Please note that many of these items are technical in nature but once addressed shall limit the need for further review during the building permit application by Engineering.

1. Demographic notes are missing from the drawings.

2. A table of all third party required permits (Army Corp / DEC / DOT / Town / etc….) shall be provided on the revised drawings.

3. Consideration should be given to create a landscape buffer between the proposed curb line and sidewalks to soften the hardscape and provide for improved pedestrian accommodations around the building. There is ample space onsite.

4. Pedestrian accommodation should be considered along Oregon Road to connect to the existing sidewalk infrastructure. Currently only a walking trail to a proposed bus shelter is shown. Pedestrians may elect to cross Oregon Road to walk to the convenience store / gas station and towards Peekskill. Details for crosswalk, pedestrian accommodations, drop curbs and details of the same should be provided. All work within Oregon Road, shall follow NYSDOT Standards and Specifications.

5. The Traffic Impact Study prepared by Provident Design Engineering, dated last revised June 23, 2021 will be reviewed more thoroughly by the Town's traffic consultant HVEA. I offer the following comments:

    a. While the report concludes no significant adverse traffic impacts are expected for the intersection, the traffic light at the intersection of Eton Down's / Pumphouse / Heady Street and Oregon Road is antiquated and appears to be pre-timed. A general observation of the intersection during the peak hour will demonstrate that due to current geometry of this intersection and lack of turning lanes along Oregon Road, vehicles will backup and queue as far back as Locust Avenue.

    b. It is recommended that as part of this Application, intersection improvements including but not limited to an updated traffic signal and phasing plan with consideration provided for geometric improvements be considered as a condition of the zoning petition. At minimum recommendations, plans and specifications should be provided which can then be developed into construction documents for a future capital project.

    c. The report analyzes an alternative access scheme that restricts left turns from the project driveway and re-directs these vehicles to Eton Downs Road. The conclusion of the Applicant's Consultant is this alternative is not recommended. One of the reasons provided is that this connection could promote "cut through" traffic. This could be easily rectified by making this connection "exit" only. Further consideration shall be provided to address the Planning Board's comment.

6. The proposed grading plan will require the complete clearing of the entire site in order to accommodate the construction of the proposed facility. The south of the site will be retained by a 10-ft high retaining wall. The rear (southern slope) will be graded 2H:1V. The Applicant is increasing the severity of the slope. A Steep Slope Analysis and Findings Statement was included in the EAF. It shall be revised as follows:

    a. 1.4 acres of steep slope exist onsite. The following steep slope thresholds shall be used; 15-25%, 25-35%, >35%. A revised written narrative addressing 259-6 shall be prepared in addition to revised drawings. The Applicant must clearly summarize impacted steep slopes vs site wide steep slopes.

    b. EAF Figure No. I-1 and I-2 identify existing and proposed steep slopes. Based on the proposed grading plan, the applicant is proposing to create approximately .8 acres of steep slopes in excess of 15%.

c. All slopes greater than 4H:1V shall be stabilized with erosion control matting / blanketing and planted. Plans must delineate areas requiring such stabilization.

d. Earthwork quantities are missing. Applicant shall evaluate and balance cuts and fills to the maximum extent practical. The geotechnical report indicates the majority of existing fill that was brought onsite is not suitable for structural use.

e. A 10-ft high retaining wall is proposed. A cross section through the site shall be provided. Additional comments to follow.

f. Section 259-6 (H) is mostly advisory. Bullet points 11-15 shall be added on the site plan as notes.

7. Notes on the site demolition plan shall be revised to reflect the following:

a. Applicant shall file a demolition permit with the Department of Technical Services – Code Enforcement Division prior to the removal of any structure.

b. Prior to any demolition occurring in Town right-of-way (Donnelly Place and the Oval) a road opening permit shall be filed and obtained through the Department of Environmental Services.

c. All structures shall be tested for lead, asbestos and other hazardous materials in accordance with the NYS Uniform Fire Prevention and Building Code and NYCRRR by a licensed and certified tester. All hazardous materials shall be properly abated and lawfully disposed of offsite.

d. All onsite existing wastewater septic systems shall be abandoned in accordance with the Westchester County Department of Health Guidelines and generally accepted engineering best practice. All material shall be lawfully disposed of off-site.

e. All asphalt pavement removed from the site and Donnelly Place right-of-way shall be lawfully disposed of off-site and not mixed with other construction debris.

f. All imported fill material shall be unrestricted residential use in accordance with NYSDEC soil objective clean-up requirements. No recycled material shall be used as fill within areas that will be planted, grassed and otherwise stabilized.

g. All existing utilities (water services, sanitary, telecommunications, power, etc…) shall be excavated and removed from the site. All existing water services shall be cut and capped as close to the curb stop as reasonably practical. The Town of Cortlandt DES – Water Division shall be contacted to inspect said work.

h. Applicant shall clarify if blasting is proposed as part of this project. If so, preliminary geotechnical investigations shall be submitted as part of this application and a listing of all properties within 1000-ft of the proposed limits of blasting shall be established. It is recommended that all blasting requirements be included in the approval (including pre and post blast survey), noticing requirements, seismic monitoring and processing of rock. Otherwise general notes related to

blasting shall be removed from the plan set and a note indicating "No blasting, no rock crushing or processing of material is proposed onsite. All debris will be lawfully disposed of off-site.

8. The 75-ft wide roadway dedicated to the Town of Cortlandt will revert to the Applicant. This shall be noted in any findings statement and resolutions of approval.

9. Applicant shall demonstrate to the satisfaction of the Town Board with consultation by Town Counsel that the all deed restrictions (noted on Filed Map 5001 and as referenced on the Alta Survey) have been released.

10. Applicant shall also clarify why portions of the property are restricted from development and noted as "park area".

11. Applicant is referred to Chapter 33 of the NYS Building Code, Safeguards During Construction. Requirements shall be incorporated into the submitted plan set.

12. The Applicant is referred to 2020 Fire Code of NYS, Chapter 5 – Fire Services Features. A swept path analysis for all emergency apparatus shall be provded. The design vehicles are as follows.

    a. HQ—L- 35 length is 42'2" (506") with a turning radius of 22.9 Degrees. To deploy stabilizer jacks a minimum 16- 18 feet for full deployment and 12' for short-jack deployment;

    b. E-252 from HQ- Length is 31' 11" (383") with a turning radius of 23.8 degrees; E-256 out of Hollowbrook Station: Length is 32' (384") with a turning radius of 23.5 degrees.

    c. Plans must adequately demonstrate that an aerial apparatus can setup and meet the required hose pulls.

    d. Plans shall be revised to include fire lanes and striping details of the same.

13. A site wide photometric analysis shall be prepared and submitted for review.

<u>Utility Comments</u>

14. As part of this application a water main extension is proposed, looping Oregon Road to Eton Downs through the project site. The existing water main through the site is proposed to be abandoned in place. A water main extension fees shall be provided prior to the approval and endorsement of the plans by the Town of Cortlandt in accordance with the Town's Master Fee schedule. The existing water main shall be removed from the site once the new main is placed into service.

    a. Since the main will be dedicated to the Town of Cortlandt shop submittals shall be provided to the Town of Cortlandt for review and approval prior to installation for all water mains and appurtenances.

b. This water main as proposed will be dedicated as public. The Town of Cortlandt will be required to make application to the Westchester County Department of Health. All permitting fees and submittal costs shall be borne by the NRP Group.

c. Applicant shall coordinate with DES – Water in regards to proposed water main tie-in locations. Multiple water mains (existing) are shown in Oregon Road and Eton Downs. It is recommended that mains be connected with a tee, 3-8" MJxMJ resilient wedge gate valves. Plans shall be revised to differentiate existing water main (size and type) versus proposed and existing water main to be demolished.

d. All water main pipe shall be "Tyton Joint" with push on (rubber gasket) and 2 bronze wedges per joint, class 54 double cement lined ductile iron pipe, class 350 as manufactured by United States Pipe and Foundry Company, made in the U.S.A., or approved equal.

e. All fittings shall be mechanical joint with retainer glands, cement lined, ductile iron pipe as manufactured by United States Pipe and Foundry Company, made in the U.S.A. or approved equal.

f. The pipe and fittings shall be cement mortar lined to twice the standard thickness in accordance with ANSI A21.4 (AWWA C104) except as noted. All changes in pipe directions, requiring fittings both vertical and horizontal, shall be secured with retainer glands and thrust blocked with concrete against undisturbed earth.

g. The mechanical joint restraint system shall incorporate a restraining mechanism in the follower gland, which shall impart a multiple welding action against the pipe. Glands shall be manufactured of ductile iron conforming to ASTM A536-80. Retainer glands shall be "Megalug" as manufactured by Ebaa Iron, Inc., or approved equal.

h. Gate valves shall be Mueller, iron body, non-rising stem conventional packing, resilient seated, mechanical joint with retainer glands, pressure class 350, opening left (CCW) and operation shall be by 2" square wrench nut.

i. All drawings shall be revised to indicate size and type of all water main, hydrants and appurtenances.

j. The water main layout plan shall call out all horizontal bends. Stationing shall be provided in 100-ft increments.

k. A water main profile is required. All vertical bends separation to wastewater sources, etc… shall be shown.

l. Since this is a new water main, all horizontal and vertical separation distances shall be met unless otherwise justified by the design engineer to be infeasible.

m. Fire service shall be sized to meet the hydraulic demand of the required fire suppression system. The EAF indicates a flow test was performed on March 9, 2020. Sprinkler design may be deferred until a building permit application is filed.

n. Corporation Stop shall be Mueller B-2500N (pressure rating 300 psi). Ground key models are preferable.

o. Curb Valve shall be Mueller Mark II Oirseal (min pressure rating 175 psi) H-15209N, or B-25209N with no drain ports depending on operating pressure of main.

p. Curb boxes shall be Mueller Model No. H-10314, 4 ½' full extension, or approved equal and Made in the U.S.A. If needed, Stainless Steel extension rods within the curb boxes shall be furnished and installed.

q. A reduced backflow preventer shall be provided for the potable water supply in accordance with applicable State, County and Local laws.

r. A reduced backflow preventer shall be provided for proposed irrigation in accordance with applicable State, County and Local laws. It is recommended that irrigation be disconnecting from the public supply and an onsite well be utilized for said purposes.

s. A double check detector assembly shall be provided for the fire service. Device shall be tamper proof. If a bypass is proposed it shall be metered.

t. All water services and fire services shall be metered.

u. Fire hydrants shall be "Mueller" Super Centurion 350, (or approved equal), with safety breakaway flange, 3-way, opening left (CCW). The pumper nozzle shall be 5 1/4"; the two hose nozzles shall be 2 ½". Bodies shall be painted yellow, caps red. Detail shall be revised accordingly.

v. All utility easements shall be 20-ft minimum. Utilities shall run as close to the centerline as possible. Easement shall be submitted for review and approval prior to the submittal of any plans to the WCDOH. All easements shall be filed with the Westchester County Clerk - Division of Land Records.

w. Westchester County DOH requirements for testing and disinfection shall be provided on final drawings.

15. As part of this application, the subject premises is proposing to connected to the Town's sanitary infrastructure at the intersection of Eton Downs and Oregon Road. The Applicant is advised that the proposed sewer connections from facilities within that are design to carry in excess of 2,500 gallons per day flow requires Departmental of Health approval for its private sewer connection and must be designed in accordance with 10-States Standards.

16. Applicant shall provide a detail to connect to the Town's sanitary manhole near Oregon Road. Applicant shall clarify if a drop invert is proposed.

17. Sanitary profiles shall be provided. A sanitary main shall be sloped at 2% unless determined to be determined to be infeasible by the design engineer. At minimum the slope of the main shall meet the required minimum scouring velocity published in the 10 States Standard.

18. Figure No. G2 shall be revised to provide RIM elevations. Manholes 1-12 shall be opened and visually inspected by the design professional and witnessed by the Town.

19. Maximum sanitary flow shall be set at 75% of the pipe diameter. Between manholes 8 and 12 as identified in EAF Figure No. G2 average daily flow and peaking periods will exceed this. In addition due to the shallow slope of the existing main, it is recommended that inflow and infiltration requirements be set at three to one (3:1) offset ratio for non-affordable units and one to one (1:1) for non-affordable units.

20. The Engineer shall field verify the actual rims and inverts in which the existing pipe slopes are less than 1%. Information was noted as taken from a partial as-built. There may be discrepancies with actual field conditions.

Landscape Comments

21. Demolition and landscape plans do not seem to match the June 4, 2021 report prepared by the Town's Consultant Bartlett Tree Expert. Plans shall be revised to call out all specimen, protected and trees of significance (e.g. White Pine #1240, Silver Maple #1230, American Smoke #1306, Catapla (#1314). Applicant shall comment and provide response related to preserving these trees.

22. The total number of trees proposed for removal is still outstanding. The Bartlett Study indicates 598 trees onsite. The plans do not indicate the total number of trees >4-inches proposed for removal.

23. Applicant shall comment and provide response on quality of trees and restorative efforts required to be undertaken for all pines along Eton Downs.

24. The storm water basins shall be planted in accordance with the NYSDEC Storm Water Design Manual. Trees, shrubs and wetland plants shall be provided for the bio-retention basins, in addition to the proposed grass mixes.

25. Slope plantings are noted as typical, but not shown. A minimum number of trees and shrubs shall be provided. The construction sequence plan shall incorporate landscaping in order to ensure installation in a timely and effective manner.

26. When determining the actual number of trees required to be replanted, the Planning Board shall consider the following factors:

    a. Approximately 8 acres are proposed for disturbance. At minimum the total number of trees required to be mitigated is 349 trees. Each protected tree that is to be removed shall be replaced by at least 1 1/2 times the number (rounded up) of the same trees as removed. On slopes of 25% or greater, two trees shall be planted for each tree proposed to be removed.

    b. Pollinator species, grasses and meadow mixes shall be specified to be seeded, annually for a period of no less than 3-years and be incorporated into an annual monitoring plan. The variety of pollinator species shall meet or exceed those as recommended by the NYSDEC.

c. All deciduous plantings shall be 3-inch caliper at DBH and all evergreens 6-8 ft in height from finished grade.

d. The following equivalent ratios may be used in lieu of planting a tree:

   i. 3:1 Understory trees (minimum 1" caliper)

   ii. 10:1 Small maturing trees (<4-ft in height) and shrubs (2 gallon minimum)

e. Every effort shall be made to re-plant the required number of trees onsite. In the event that this quantity cannot be re-planted, off-site mitigation or payment in-lieu may be provided.

f. The revised reforestation plan will be submitted to the Town's Conservation Advisory Council for final comment.

g. It is recommended that trees along the perimeter of the property outside along the periphery of the limits of disturbance be preserved if these trees after a risk assessment are determined to be healthy.

Storm Water Comments

Please note, the Town's Consultant (HVEA) will provide additional comments under separate cover.

27. A revised Notice of Intent is required in order to obtain coverage under the SPDES General Permit for Construction Activity based upon the response to comment letter(s).

28. Applicant is advised that controls will need to be modified to accommodate corrections made to the site plan in response to this comment letter.

29. The SWPPP shall be revised to meet all requirements of the NYS Storm Water Design Manual. The project shall be classified as redevelopment (NYSDEC SWDM Ch. 9). Approximately 8 acres is proposed for disturbance with 2.5 acres proposed as impervious. This is an increase from pre-existing conditions by approximately 0.2 acres.

30. New impervious surfaces shall be sized in accordance with Chapter 4 of the SWDM. Redevelopment shall meet the sizing criteria outline in Chapter 9.3 of the SWDM.

31. The SWPPP must clearly demonstrate the post development peak flow rate(s) and velocities have not increased from the pre-developed condition. There is extensive re-grading shown which will alter the surface hydrology, including importation of fill material.

32. Underdrains, curtain drains and similar subsurface conveyance shall drain to daylight and not to any water quality structures or storm water best management practices. The amount of flow is unknown and may lead to these devices not functioning as intended hampering detention and water quality treatment. The plans indicate multiple overland channels and graded swales that will re-direct runoff from the rear of the property to the Town's infrastructure in Oregon Road and Donnelly Place.

33. The SWPPP proposes to meet water quality controls with a bio-retention basin and extended detention pond. Discharge from the site is being routed towards existing Town infrastructure at Donnelly Place. The SWPPP does not evaluate the existing Town infrastructure (downstream) nor comments on its suitability to effectively convey storm water runoff from this site. Typically, storm catch basins and infrastructure located within a right-of-way is constructed to capture and convey runoff from the roadway and shoulders to a storm water outfall.

34. The SWPPP should consider practices that infiltrate runoff reduction volumes and water quality volumes in order to recharge the aquifer. Consideration for off-site discharge may be provided if there is no other feasible alternative. It is unclear if subsurface investigations were performed in the area of the proposed best management practices. The geo-technical report does indicate that the site is influenced by ground water at an average depth of 10-ft. Infiltration practices may be possible.

35. The bio-retention and extended detention basin, details shall be revised to include proposed plant material.

36. The applicant shall request a 5-acre waiver as they are proposing to disturb a total of 8 acres. Typically it is recommended that soil disturbance be kept at less than 5 acres at any one time.

37. A construction sequencing plan shall include various stages of construction (e.g., clearing, erosion controls, access road construction, staging, installation, restoration, plantings, and pollinator soil stabilization). All employee parking and material storage shall be revised to limit unnecessary tree removal and disturbance to steep slopes.

38. Site maintenance and good housekeeping protocol shall include fugitive dust control and watering requirements.

39. The SWPPP shall include copies of maintenance easements during and after construction in accordance with Town Code Chapter 262-9.

40. Recycled material is not recommended for onsite use. Only earthen material or natural stone is permitted to be used as fill. If recycled material is proposed, it must be noted on the plans and its intended use confirmed to be consistent with NYSDEC's beneficial use determinations.

41. Applicant shall clarify how much fill is proposed to be brought to the site. All fill shall be tested in accordance with NYSDEC rules and regulations and shall be certified as unrestricted for residential use, certified by a professional engineer prior to importation on site.

<u>Detail Comments</u>

42. A significant number of details are missing. These include but are not limited to a dumpster enclosure, emergency access gate with knox box, site amenities, foundations (e.g. light poles), bollards, site signage, wayfinding, pedestal or free standing signs for the facility name etc….

43. Station the proposed roadway and provide a centerline profile in intervals not to exceed 50-ft.

44. Sidewalk details shall be revised to demonstrate a maximum cross slope of 1.5%. It is recommended curb ramp details have a maximum slope of 1:13.

45. Storm frames and grates shall be pedestrian safe along curbs, parking lots and walkways. Any public infrastructure shall be manufactured domestically.

46. All trench details shall be revised to provide magnetic tracer tape, specific to the pipe type. If bury depth is greater than 6-ft multiple layers shall be provided no greater than 2-ft from finished grade and no closer than 2-ft to the pipe.

47. Sanitary sewer manhole shall be revised to include boot seal (e.g. Kor N-Seal), bitumastic coating. Manhole diameter shall be 36" minimum. There are conflicting details presented on the site detail sheets SP 6.1 and SP 6.4.

48. The Redi Rock retaining wall details shall be noted as a deferred design. Based on the geotechnical assessment existing fill is not sufficient and structural fill is proposed. Excess material will be lawfully disposed of off-site or used onsite based on the soil properties.

    a. A final detail and cross section at maximum retained height shall be provided.

    b. Computations demonstrating that all factors of safety for sliding, overturning and settlement shall be submitted along with an engineer's certification stating such prior to final approval.

    c. Engineer shall comment if a global stability analysis is warranted due to the proposed wall height and 2H:1V soil backfill and its imposed surcharges.

    d. A cross section (N/S) of the site from Eaton Downs though the building shall be submitted with the analysis.

Revised plans will be forwarded to the Town's Department of Environmental Services, Fire Advisory Board and Conservation Advisory Council for review and comment. Be advised that additional comments may arise during the review of the construction documents for the building permit.

Signed this 23rd Day of July 2021 by

Michael Preziosi, P.E.

Michael Preziosi, P.E.
Director - Dept. of Technical Services

CC: Myles Monaghan, NRP Group
Jerry Schwalbe, P.E., DTS
DOTS – Director of Code Enforcement
DES Director

TOWN OF CORTLANDT
DEPARTMENT OF TECHNICAL SERVICES
PLANNING DIVISION

Michael Preziosi, P.E.
Director – D.O.T.S

Chris Kehoe, AICP
Deputy Director – Planning

Planning Staff
Michelle Robbins, AICP
Rosemary Boyle-Lasher

Town Hall, 1 Heady Street
Cortlandt Manor, NY 10567
Main #: 914-734-1080

MEMORANDUM

TO: Planning Board Members

FROM: Chris Kehoe, AICP, Deputy Director CK
Department of Technical Services, Planning Division

SUBJECT: PB 2021-1 Application of NRP Properties, LLC for Site Development Plan approval, a Special Permit and for Tree Removal and Steep Slope Permits for a proposed 135-unit active adult residential community to be located on an approximately 8.7-acre parcel of property at 119 Oregon Road. Drawings latest revised dated June 23, 2021.

DATE: July 28, 2021

1. The Planning Division conducted a review of the subject application consisting of the following:

   A 16-page set of drawings entitled "Site Plan Application Drawings, Overlook Terrace" prepared by Divney, Tung & Schwalbe, LLP latest revision dated June 23, 2021.

   Expanded Environmental Assessment Form dated June 2021.

2. Based on a review of the above-mentioned drawing and expanded EAF application, the following information as required by Chapter 307-71 of the Town of Cortlandt (Zoning) and other regulations should be submitted for the subject application unless waived by the Planning Board at the applicant's request.

   a. The subject drawing (SP-1) shows the proposed location and height of the proposed parking lot light fixtures and proposed wall mounted fixtures. Drawing SP 6.5 shows the proposed lighting details. It is suggested that the applicant analyze the use of a more traditional/historic looking light fixture. A photometric plan is also required.

(continued on page 2)

b. The subject drawing should be revised to show a garbage enclosure with sufficient space for garbage and recycling. The applicant is advised the Town will not provide garbage/recycling pick-up to the site and a note confirming the same shall be added to the subject site plan.

c. The subject drawing shall show the existing and proposed location, height and design of all fences. Drawing SP 6.2 shows a detail of the proposed retaining wall at the rear of the proposed building which varies from 8' to 10' in height. The applicant shall submit additional details/renderings showing proposed colors and treatment of the wall.

d. The subject drawing shall show the location, height and design of all existing and proposed signs.

e. A complete set of elevation drawings, with the proposed color and materials, shall be submitted for referral to the Town's Architectural Advisory Council (AAC) for their review and comment. The submitted information has already been provided to the AAC for their preliminary review.

3. The applicant is proposing a 135-unit active adult residential community at the site of the Colonial Terrace catering facility. The facility is proposed to have 96 one-bedroom and 39 two-bedroom units. The building is proposed to be approximately 125,000 sq. ft. All units are proposed to be affordable. The subject property is approximately 8.7 acres in size and is zoned CC, community commercial. The proposed facility is not permitted by the existing CC zoning and the applicant has proposed a zoning amendment to permit an active adult residential community in a CC zone pursuant to a Special Permit issued by the Town Board. The language of the proposed special permit requires that for a parcel to be eligible for the proposed Active Adult Residential Community Special Permit the parcel must be at least 8 acres in size, front on and has a primary access on a state road or on Oregon Rd., which will connect to public water and sewer systems and have a maximum building footprint of 135,000 sq. ft. The maximum density is proposed to be 17 units per acre.

   The Town Board is Lead Agent for the project and has held a public hearing on the proposed zoning text amendment at their July 21st meeting at which time they closed the public hearing with the intent of adopting a Negative Declaration for the proposed zoning text amendment and adopting the amendment at their August 10th meeting. The Planning Board is responsible for the review of the proposed site plan and all environmental permits. The Planning Board has already reviewed the proposed zoning text amendments and provided comments back to the Town Board in a memo dated April 7, 2021.

4. The applicant shall clarify for the Planning Board if they intend to work with Westchester County to ensure the proposed affordable units meet the Westchester County Planning Department's definition of affordable.

(continued on page 3)

5. The proposed site plan calls for the demolition of the existing building on site and the construction of a 3-story, 125,000 sq. ft. building. The main access to the facility will still be from Oregon Road. A second egress, gated and for emergency use only, is proposed to Eton Downs Rd. The building will have two courtyards located at the rear of the building. The site will have 146 proposed parking spaces located in the front of the proposed facility and on both sides. A service road will continue around the entire facility.

6. The applicant has completed a traffic study done by Provident Engineering dated June 23, 2021. The study is included in the Expanded EAF. The study has been sent to the Town's traffic consultant, HVEA for their review and comment. The subject site plan shows parking for 146 spaces, a ratio of 1.08 spaces per unit. The applicant analyzed parking at Jacobs Hill for a two-week period and found an average parking demand of .77 and a peak parking demand of .86. It is recommended the applicant provide to the Planning Board an analysis of the parking at the Springvale Apartment Complex for further comparison.

   The applicant is proposing to enhance the existing Westchester County Bee-Line bus stop(s) located on Oregon Rd. The applicant shall provide correspondence from the Westchester County Department of Transportation regarding the proposed enhancements.

7. Trees on the subject property were inventoried and a report dated June 4, 2021 was submitted by Town consulting arborist, Bartlett Tree Experts. The report was previously transmitted to the Planning Board on June 21, 2021. The report did find three (3) protected trees and several specimen trees as per Chapter 283 (Trees) of the Town Code. The report specifically mentions tree #1306 (American Smoke Tree) #1314 (Catalpa) as significant trees. Both are slated for removal. In addition, the site, in its current condition, is home to several large trees, both deciduous and evergreen which help define the "historic" character of the site, specifically the very large trees that line the main entrance way into the property from Oregon Rd. According to the tree report there are 598 regulated trees on the subject site. A proposed landscape plan SP-4 has been submitted showing 53 Shade Trees, 20 Evergreen Trees and 35 Ornamental Trees to be planted. In addition, plantings are proposed for the building foundation, stormwater basins and areas of slopes. Trees to be preserved and trees to be removed shall be noted on the landscape plan and calculated. The subject drawing shows shade trees of 2-1/2" caliper to be planted along the entrance drive from Oregon Rd. It is recommended that larger caliper trees be planted along this entranceway given the existing allee of trees that exist on the site now and are slated for removal.

   A re-planting plan that meets Chapter 283 (Trees) is required to be submitted. The revised landscape plan shall be referred to the Town's Conservation Advisory Council (CAC) for their review and comment.

8. As per section 307-22 of the Zoning Code parking areas with parking for 30 or more cars require landscaped areas comprised of a minimum of 5% of the total area within the perimeter of the parking area. The subject drawing shall be revised to show the required landscaping.

(continued on page 4)

9. The Expanded EAF contains a Fiscal Analysis of the existing facility (Colonial Terrace) and the proposed facility showing existing and estimated tax generation. This analysis has been referred to the Town Assessor for review and comment.

10. Section 265-11 (Subdivision) of the Town Code requires the reservation of land suitable for playgrounds or other recreational facilities or the deposit of moneys, currently $6,000/unit, shall be deposited into a recreation fund in-lieu of such reservation of land. The applicant shall provide information to the Planning Board on how they intend to meet these requirements.

11. Appendix 1 of the Expanded Environmental Assessment Form provides a sustainability narrative for the proposed project. The applicant is proposing to seek LEED Homes v4 certification for the project. Green initiatives include solar PV systems on the roof to offset electricity purchase from the grid, electric heat pump technology for domestic hot water, low flow fixtures and the use of environmentally preferred products with field verification and testing as per LEED protocols. The applicant shall confirm whether any of the solar power produced by the proposed panels will be put back into the grid or will only be used by the facility.

12. The subject proposal will impact approximately 1.4 acres of regulated steep slope. The applicant submitted the required Steep Slope analysis as per Chapter 259-6 of the Town Code. The applicant shall submit the required colored steep slope drawing showing areas of steep slope 15% to 25%, 25% to 30% and greater than 30%.

13. The applicant has referred the proposed project to the NYS Office of Parks, Recreation and Historic Preservation Office (OPRHP) for review and comment. OPRHP responded by a letter dated April 14, 2021 (included in the Expanded EAF) that stated "It is the opinion of the OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Register of Historic Places will be impacted by this project". The Town's Historic Resources Advisory Council (HRAC) has indicated an interest in working with the applicant to create a "history wall" in the new facility to commemorate the history of the Colonial Terrace, similar to what was done at the Hollowbrook Golf Club. The applicant shall provide additional information to the Planning Board on their progress at preserving items from Colonial Terrace and their plans for a display.

14. The applicant has submitted a Stormwater Pollution Prevention Plan (SWPPP) for review by the Town Engineering Division and the Town's Environmental Consultant, HVEA Engineering.

(continued on page 5)

15. Enclosed is an aerial view(s) of the subject site. The subject drawing set was previously given to the Planning Board.

16. Referrals of this application include, the Town Engineering Division, the Fire Advisory Board, the Conservation Advisory Council, the Town Department of Environmental Services, the Town Assessor, the Code Enforcement Division, and Westchester County as well as all interested and involved agencies.

CRK/crk
Attachments

cc: Linda D. Puglisi, Town Supervisor
Members of the Town Board
Michael Preziosi, P.E., Director of Technical Services
Thomas Wood, Esq., Town Attorney
Michael Cunningham, Esq., Deputy Town Attorney
Gerhard Schwalbe, P.E., Divney, Tung & Schwalbe
David Steinmetz, Esq.
NRP Group, LLC

375.0 0 187.50 375.0 Feet

Map produced by: user

Disclaimer: "The information contained in this data is NOT to be construed as a "legal description"/ The Town and its consultants do NOT provide any guarantee of accuracy or completeness and will NOT be held liable for any damages or losses due to its use."

Town of Cortlandt

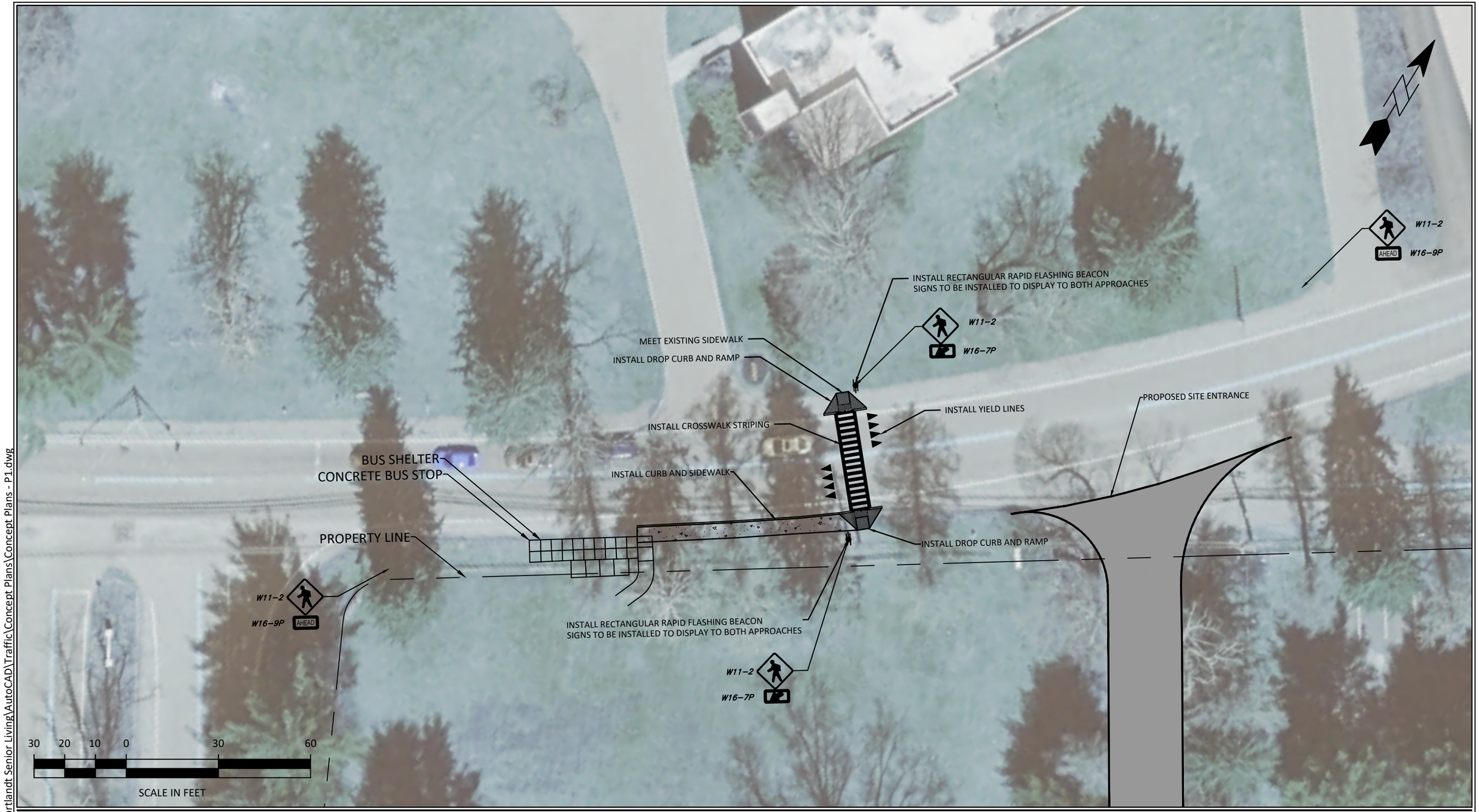
Legend

- Parcels
- Road Labels

Notes

ATTACHMENT B

CONCEPT PLANS



Q:\PROJECTS-21\21-022 Cortlandt Senior Living\AutoCAD\Traffic\Concept Plans\Concept Plans - P1.dwg

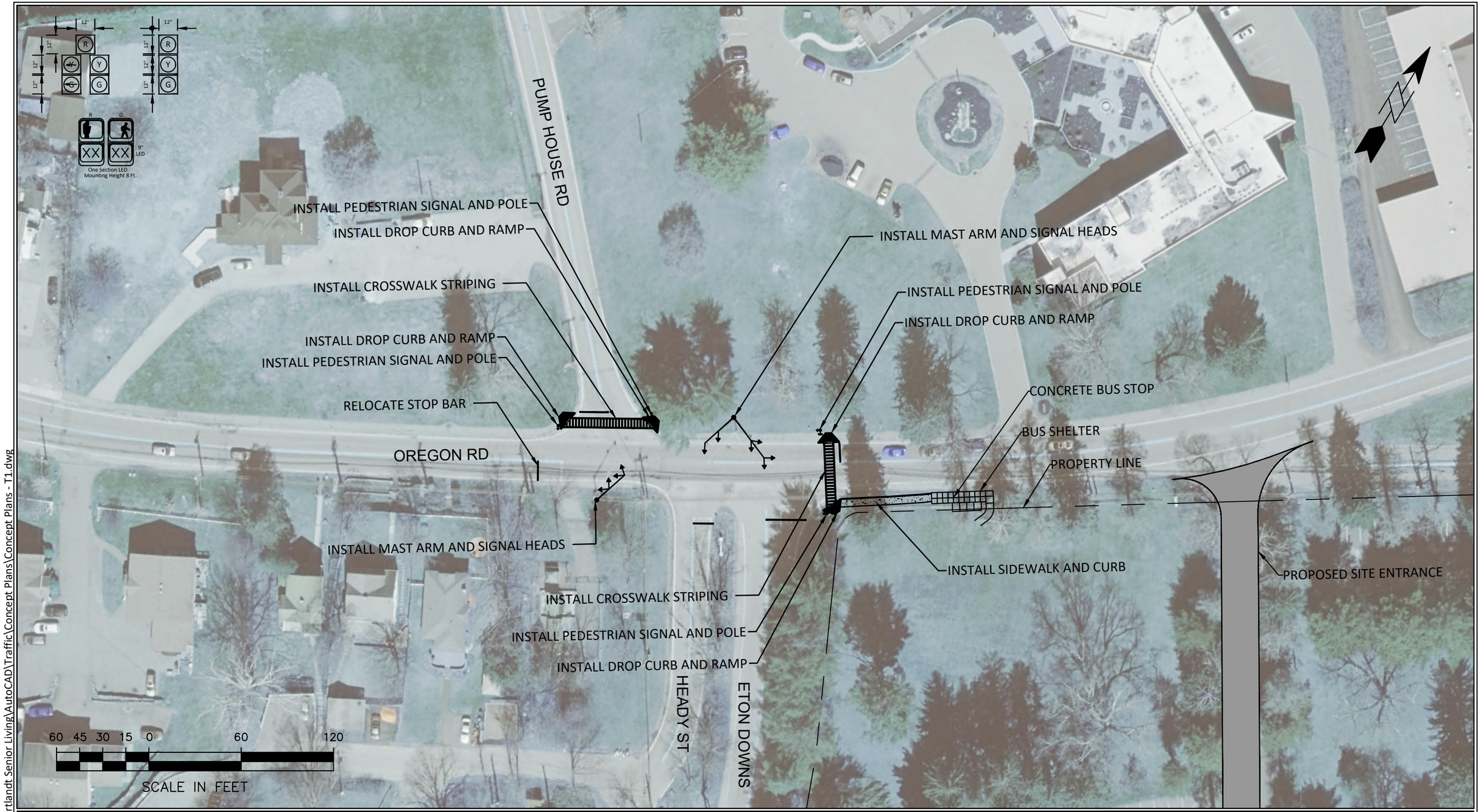
Provident design engineering
7 SKYLINE DRIVE, HAWTHORNE, NEW YORK 10532
TEL: (914) 592-4040 WWW.PDERESULTS.COM

Pedestrian Crosswalk

Cortlandt, Westchester County, NY

Project No. 21-022
August 2021
Scale As Shown

Figure No. CP-1



Q:\PROJECTS-21\21-022 Cortlandt Senior Living\AutoCAD\Traffic\Concept Plans\Concept Plans - T1.dwg

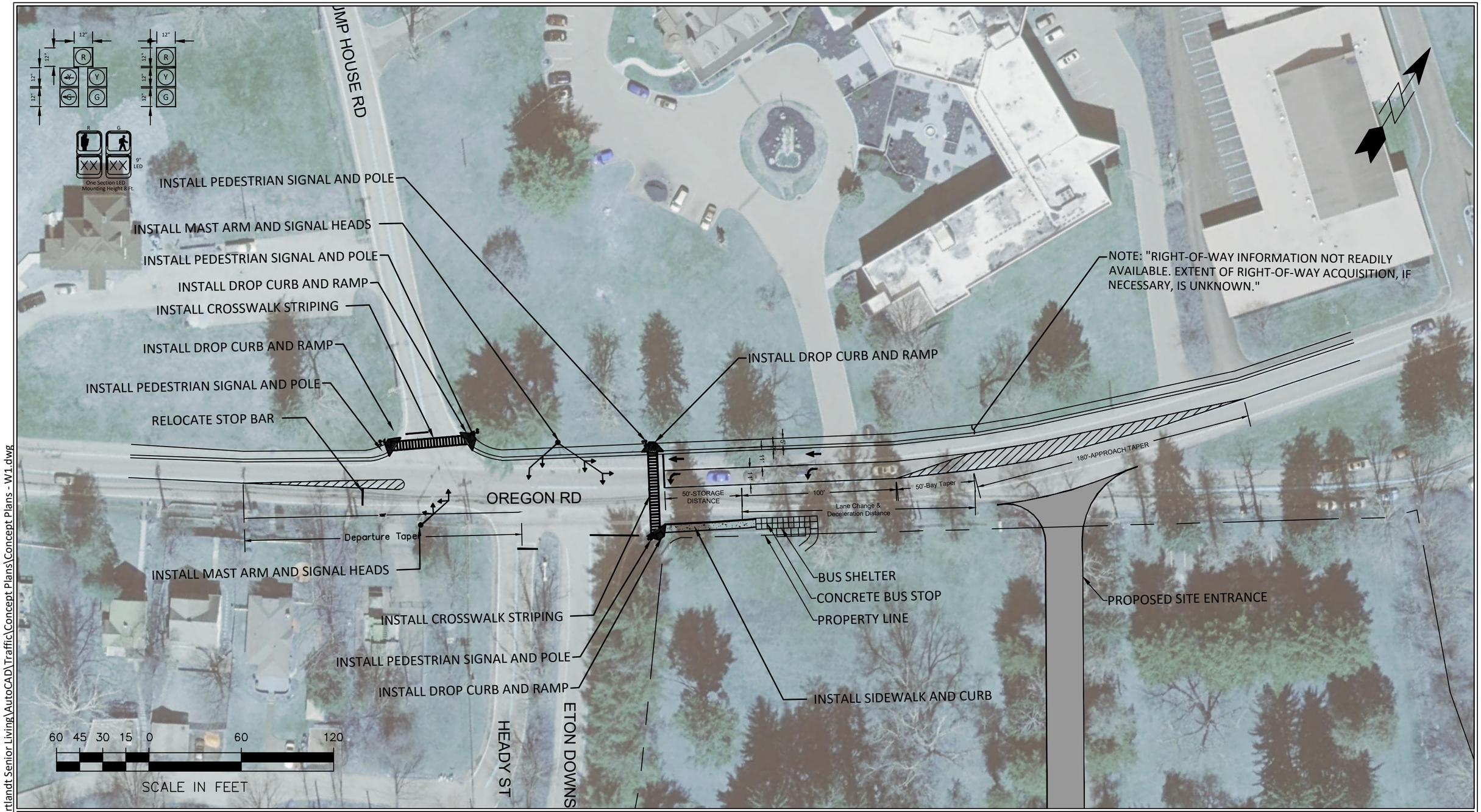
Provident design engineering
7 SKYLINE DRIVE, HAWTHORNE, NEW YORK 10532
TEL: (914) 592-4040 WWW.PDERESULTS.COM

New Traffic Signal

Cortlandt, Westchester County, NY

Project No. 21-022
August 2021
Scale As Shown

Figure No. CP-2
T1



Q:\PROJECTS-21\21-022 Cortlandt Senior Living\AutoCAD\Traffic\Concept Plans\Concept Plans - W1.dwg

Provident design engineering

7 SKYLINE DRIVE, HAWTHORNE, NEW YORK 10532
TEL: (914) 592-4040 WWW.PDERESULTS.COM

Left Turn Lane Concept

Cortlandt, Westchester County, NY

Project No. 21-022
August 2021
Scale As Shown

Figure No. CP-3

ATTACHMENT C

LEVEL OF SERVICE TABLES

TABLE C-1
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
Oregon Road & Clara Rd/Smith Rd

APPROACH		PEAK AM HOUR			PEAK PM HOUR		
		2021 EXISTING	**2024 NO-BUILD**	**2024 BUILD**	**2021 EXISTING**	**2024 NO-BUILD**	**2024 BUILD**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Clara Ct							
NB	LTR	c 16.5	c 16.9	c 17.3	c 19.1	c 19.8	c 20.8
Smith Rd							
SB	LTR	b 14.4	b 14.9	c 15.4	c 16.4	c 16.8	c 17.8
Oregon Road							
EB	LTR	a 8.2	a 8.2	a 8.3	a 8.4	a 8.4	a 8.6
WB	LTR	a 8.1	a 8.1	a 8.1	a 8.5	a 8.6	a 8.6

TABLE C-2

PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE

Oregon Rd & Pump House Rd / Heady St / Eton Downs

APPROACH		PEAK AM HOUR						PEAK PM HOUR					
		2021 EXISTING	2024 NO-BUILD	2024 BUILD	2021 BUILD WITH IMPROVEMENTS 1 (Pedestrian Crossing)	2024 BUILD WITH IMPROVEMENTS 2 (New Traffic Signal)	2024 BUILD WITH IMPROVEMENTS 3 (New Traffic Signal + Left-Turn Lane)	2021 EXISTING	2024 NO-BUILD	2024 BUILD	2021 BUILD WITH IMPROVEMENTS 1 (Pedestrian Crossing)	2024 BUILD WITH IMPROVEMENTS 2 (New Traffic Signal)	2024 BUILD WITH IMPROVEMENTS 3 (New Traffic Signal + Left-Turn Lane)
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Heady Street													
NB	LTR	D 38.3	D 38.7	D 39.4	D 39.4	D 42.7	D 47.2	D 40.0	D 40.1	D 41.5	D 41.5	D 43.6	D 48.7
Eton Downs													
NWB	LTR	A 0.3	A 0.4	A 0.6	A 0.6	A 0.8	A 0.6	A 1.5	A 1.5	A 3.1	A 3.1	A 3.4	A 0.9
Pump House Road													
SB	LTR	D 41.0	D 41.1	D 44.2	D 44.2	D 44.8	D 51.4	D 43.2	D 43.4	D 47.4	D 47.4	D 50.4	E 58.5
Oregon Road													
EB	LTR	B 16.9	B 17.1	B 17.9	B 17.9	B 17.8	B 18.2	C 21.4	C 21.9	C 23.7	C 23.7	C 22.5	C 24.6
WB	L	N/A	N/A	N/A	N/A	N/A	B 13.6	N/A	N/A	N/A	N/A	N/A	B 14.4
	(L)TR	B 18.2	B 18.6	B 19.7	B 19.7	B 19.4	B 17.0	C 23.8	C 24.6	C 26.9	C 26.9	C 25.2	C 20.8
	OVERALL	B 18.2	B 18.6	B 19.7	B 19.7	B 19.4	B 16.9	C 23.8	C 24.6	C 26.9	C 26.9	C 25.2	C 20.6
INTERSECTION		**B 18.6**	**B 18.9**	**B 19.6**	**B 19.6**	**B 19.6**	**B 18.9**	**C 23.6**	**C 24.3**	**C 26.2**	**C 26.3**	**C 25.3**	**C 24.7**

TABLE C-3
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
Oregon Road & Healthcare Driveway

APPROACH		PEAK AM HOUR			PEAK PM HOUR		
		2021 EXISTING	**2024 NO-BUILD**	**2024 BUILD**	**2021 EXISTING**	**2024 NO-BUILD**	**2024 BUILD**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Healthcare Driveway							
SB	LR	b 13.6	b 13.8	b 13.9	c 19.4	c 20.1	c 20.7
Oregon Road							
EB	LT	a 8.3	a 8.3	a 8.3	a 8.5	a 8.6	a 8.6
WB	TR	a 0.0	a 0.0	a 0.0	a 0.0	a 0.0	a 0.0

TABLE C-4
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
Oregon Road & Gallows Hill Rd/Donnelly Pl

APPROACH		PEAK AM HOUR			PEAK PM HOUR		
		2021 EXISTING	**2024 NO-BUILD**	**2024 BUILD**	**2021 EXISTING**	**2024 NO-BUILD**	**2024 BUILD**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Donnelly Pl							
NB	LTR	b 14.2	b 14.6	b 14.9	d 28.3	d 29.7	d 30.9
Gallows Hill Rd							
SB	LTR	f 53.7	f 64.8	f 72.3	f 198.1	f 241.7	f 265.0
Oregon Road							
EB	LTR	a 8.4	a 8.4	a 8.4	a 9.5	a 9.6	a 9.7
WB	LTR	a 8.0	a 8.0	a 8.0	a 8.5	a 8.6	a 8.6

TABLE C-5
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
Oregon Rd & Locust Ave

APPROACH		PEAK AM HOUR			PEAK PM HOUR		
		2021 EXISTING	**2024 NO-BUILD**	**2024 BUILD**	**2021 EXISTING**	**2024 NO-BUILD**	**2024 BUILD**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Locust Ave							
NB	LTR	C 27.8	C 28.0	C 27.9	C 34.3	D 35.1	D 35.5
Oregon Road							
EB	LTR	B 13.0	B 13.4	B 13.4	B 19.9	C 21.3	C 22.0
WB	L	A 6.9	A 7.1	A 7.1	A 9.9	B 10.5	B 10.8
	TR	A 6.1	A 6.2	A 6.2	A 7.4	A 7.6	A 7.7
	OVERALL	A 6.2	A 6.3	A 6.3	A 7.7	A 7.9	A 8.0
INTERSECTION		**B 12.4**	**B 12.6**	**B 12.6**	**B 17.2**	**B 18.1**	**B 18.4**

TABLE C-6
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
Oregon Road & Site Driveway

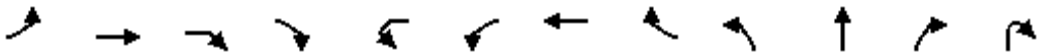
APPROACH		PEAK AM HOUR			PEAK PM HOUR		
		2021 EXISTING	**2024 NO-BUILD**	**2024 BUILD**	**2021 EXISTING**	**2024 NO-BUILD**	**2024 BUILD**
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
Site Driveway							
NB	LR	- -	- -	b 10.9	- -	- -	b 13.2
Oregon Road							
EB	TR	- -	- -	a 0.0	- -	- -	a 0.0
WB	LT	- -	- -	a 8.2	- -	- -	a 9.1

ATTACHMENT D

CAPACITY ANALYSIS WORKSHEETS

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	2	332	17	19	7	6	365	55	4	1	4	1
Future Volume (vph)	2	332	17	19	7	6	365	55	4	1	4	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987					0.983			0.932		
Flt Protected							0.999			0.980		
Satd. Flow (prot)	0	1839	0	0	0	0	1829	0	0	1701	0	0
Flt Permitted		0.999					0.986					
Satd. Flow (perm)	0	1837	0	0	0	0	1805	0	0	1736	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2	346	18	20	7	6	380	57	4	1	4	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	386	0	0	0	0	450	0	0	10	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	50	1	3	2	1	23	3	10
Future Volume (vph)	50	1	3	2	1	23	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			0.954		
Flt Protected			0.956			0.968		
Satd. Flow (prot)	0	0	1772	0	0	1720	0	0
Flt Permitted			0.737			0.968		
Satd. Flow (perm)	0	0	1366	0	0	1720	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			1			108		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	52	1	3	2	1	24	3	10
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	58	0	0	38	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		

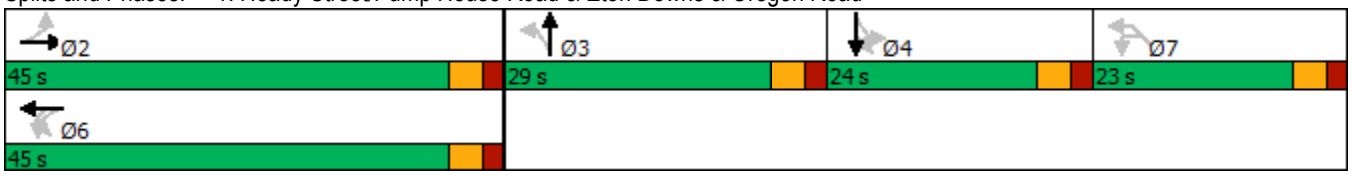


Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (%)	37.2%	37.2%			37.2%	37.2%	37.2%		24.0%	24.0%		
Maximum Green (s)	40.0	40.0			40.0	40.0	40.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Walk Time (s)	7.0	7.0			7.0	7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0			0	0	0		0	0		
Act Effct Green (s)		40.6					40.6			6.1		
Actuated g/C Ratio		0.49					0.49			0.07		
v/c Ratio		0.43					0.51			0.08		
Control Delay		17.4					18.8			39.0		
Queue Delay		0.0					0.0			0.0		
Total Delay		17.4					18.8			39.0		
LOS		B					B			D		
Approach Delay		17.4					18.8			39.0		
Approach LOS		B					B			D		
90th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		7.2	7.2		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		234					288			12		
Fuel Used(gal)		4					4			0		
CO Emissions (g/hr)		287					292			11		
NOx Emissions (g/hr)		56					57			2		
VOC Emissions (g/hr)		67					68			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		121					149			4		
Queue Length 95th (ft)		266					323			22		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		905					889			513		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.43					0.51			0.02		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.8%	19.8%	19.8%		19.0%	19.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0	0		0	0		
Act Effct Green (s)			8.8			18.3		
Actuated g/C Ratio			0.11			0.22		
v/c Ratio			0.40			0.08		
Control Delay			43.9			0.3		
Queue Delay			0.0			0.0		
Total Delay			43.9			0.3		
LOS			D			A		
Approach Delay			43.9			0.3		
Approach LOS			D			A		
90th %ile Green (s)	13.1	13.1	13.1		18.0	18.0		
90th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
70th %ile Green (s)	10.0	10.0	10.0		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	8.7	8.7	8.7		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	7.4	7.4	7.4		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	0.0	0.0	0.0		18.0	18.0		
10th %ile Term Code	Skip	Skip	Skip		MaxR	MaxR		
Stops (vph)			49			0		
Fuel Used(gal)			1			0		
CO Emissions (g/hr)			63			5		
NOx Emissions (g/hr)			12			1		
VOC Emissions (g/hr)			15			1		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			28			0		
Queue Length 95th (ft)			72			0		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			320			465		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.18			0.08		

Intersection Summary		
Area Type:	Other	
Cycle Length: 121		
Actuated Cycle Length: 82.3		
Natural Cycle: 125		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.51		
Intersection Signal Delay: 19.3		Intersection LOS: B
Intersection Capacity Utilization 55.4%		ICU Level of Service B
Analysis Period (min) 15		
90th %ile Actuated Cycle: 98.3		
70th %ile Actuated Cycle: 83		
50th %ile Actuated Cycle: 81.7		
30th %ile Actuated Cycle: 80.4		
10th %ile Actuated Cycle: 68		

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	384	141	32	360	116	20
Future Volume (veh/h)	384	141	32	360	116	20
Number	4	14	3	8	5	12
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	409	150	34	383	123	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence			No		No	
Cap, veh/h	717	263	502	1221	309	53
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.55	0.55	0.06	0.65	0.21	0.21
Unsig. Movement Delay						
Ln Grp Delay, s/veh	0.0	13.0	6.9	6.1	27.8	0.0
Ln Grp LOS	A	B	A	A	C	A
Approach Vol, veh/h	559			417	145	
Approach Delay, s/veh	13.0			6.2	27.8	
Approach LOS	B			A	C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Case No		12.0	1.2	8.0				4.0
Phs Duration (G+Y+Rc), s		20.0	7.4	44.6				52.0
Change Period (Y+Rc), s		5.0	3.0	5.0				5.0
Max Green (Gmax), s		15.0	9.0	35.0				47.0
Max Allow Headway (MAH), s		3.8	3.8	5.3				5.2
Max Q Clear (g_c+I1), s		7.1	2.5	16.8				8.4
Green Ext Time (g_e), s		0.2	0.0	3.6				2.6
Prob of Phs Call (p_c)		1.00	0.49	1.00				1.00
Prob of Max Out (p_x)		0.00	0.02	0.00				0.00

Left-Turn Movement Data								
Assigned Mvmt		5	3	7				
Mvmt Sat Flow, veh/h		1485	1781	0				

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		12		1305				1870

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		254		479				0

Left Lane Group Data								
Assigned Mvmt	0	5	3	7	0	0	0	0
Lane Assignment		L+T+R	L (Pr/Pm)					

Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	145	34	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1750	1781	0	0	0	0	0
Q Serve Time (g_s), s	0.0	5.1	0.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.1	0.5	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	850	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	41.6	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	24.8	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	39.6	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.85	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	365	502	0	0	0	0	0
V/C Ratio (X)	0.00	0.40	0.07	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	365	615	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	24.6	6.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.8	6.9	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.1	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.2	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.08	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment								T
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	383
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	1221
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1221
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment				T+R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	559	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1784	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.14	0.00	0.27	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	980	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	980	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	13.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	8	331	1	1	356	2	7	1	2	14	1	18
Future Vol, veh/h	8	331	1	1	356	2	7	1	2	14	1	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	376	1	1	405	2	8	1	2	16	1	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	407	0	0	377	0	0	814	804	377	804	803	406
Stage 1	-	-	-	-	-	-	395	395	-	408	408	-
Stage 2	-	-	-	-	-	-	419	409	-	396	395	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1152	-	-	1181	-	-	297	316	670	301	317	645
Stage 1	-	-	-	-	-	-	630	605	-	620	597	-
Stage 2	-	-	-	-	-	-	612	596	-	629	605	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1152	-	-	1181	-	-	285	313	670	297	314	645
Mov Cap-2 Maneuver	-	-	-	-	-	-	285	313	-	297	314	-
Stage 1	-	-	-	-	-	-	624	599	-	614	596	-
Stage 2	-	-	-	-	-	-	591	595	-	619	599	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	16.5	14.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	325	1152	-	-	1181	-	-	422
HCM Lane V/C Ratio	0.035	0.008	-	-	0.001	-	-	0.089
HCM Control Delay (s)	16.5	8.2	0	-	8.1	0	-	14.4
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	12.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	320	1	1	378	65	3	2	6	195	1	41
Future Vol, veh/h	23	320	1	1	378	65	3	2	6	195	1	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	340	1	1	402	69	3	2	6	207	1	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	471	0	0	341	0	0	850	862	341	832	828	437
Stage 1	-	-	-	-	-	-	389	389	-	439	439	-
Stage 2	-	-	-	-	-	-	461	473	-	393	389	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1091	-	-	1218	-	-	280	293	701	288	306	620
Stage 1	-	-	-	-	-	-	635	608	-	597	578	-
Stage 2	-	-	-	-	-	-	581	558	-	632	608	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1091	-	-	1218	-	-	254	285	701	278	297	620
Mov Cap-2 Maneuver	-	-	-	-	-	-	254	285	-	278	297	-
Stage 1	-	-	-	-	-	-	618	592	-	581	577	-
Stage 2	-	-	-	-	-	-	539	557	-	607	592	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	14.2	53.7
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1091	-	-	1218	-	-	307
HCM Lane V/C Ratio	0.029	0.022	-	-	0.001	-	-	0.821
HCM Control Delay (s)	14.2	8.4	0	-	8	0	-	53.7
HCM Lane LOS	B	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	6.9

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	384	427	3	1	1
Future Vol, veh/h	1	384	427	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	409	454	3	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	457	0	-	0	867	456
Stage 1	-	-	-	-	456	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1104	-	-	-	323	604
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	669	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1104	-	-	-	323	604
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	669	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1104	-	-	-	421
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	8.3	0	-	-	13.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	384	0	0	422	0	0
Future Vol, veh/h	384	0	0	422	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	417	0	0	459	0	0

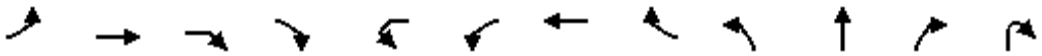
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	417	0	876	417
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	459	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1142	-	319	636
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	636	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1142	-	319	636
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1142	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	2	342	17	19	7	6	376	57	5	1	5	1
Future Volume (vph)	2	342	17	19	7	6	376	57	5	1	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987					0.983			0.932		
Flt Protected							0.999			0.980		
Satd. Flow (prot)	0	1839	0	0	0	0	1829	0	0	1701	0	0
Flt Permitted		0.999					0.986					
Satd. Flow (perm)	0	1837	0	0	0	0	1805	0	0	1736	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2	356	18	20	7	6	392	59	5	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	396	0	0	0	0	464	0	0	12	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	51	1	3	2	1	24	3	10
Future Volume (vph)	51	1	3	2	1	24	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			0.955		
Flt Protected			0.956			0.968		
Satd. Flow (prot)	0	0	1772	0	0	1722	0	0
Flt Permitted			0.736			0.968		
Satd. Flow (perm)	0	0	1364	0	0	1722	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			1			108		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	1	3	2	1	25	3	10
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	59	0	0	39	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		

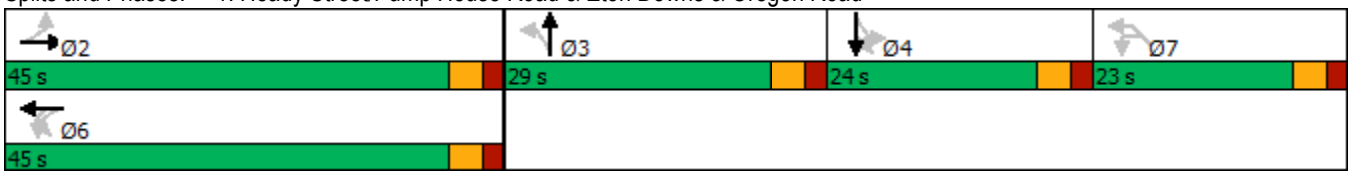


Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (%)	37.2%	37.2%			37.2%	37.2%	37.2%		24.0%	24.0%		
Maximum Green (s)	40.0	40.0			40.0	40.0	40.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Walk Time (s)	7.0	7.0			7.0	7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0			0	0	0		0	0		
Act Effct Green (s)		40.6					40.6			6.2		
Actuated g/C Ratio		0.49					0.49			0.08		
v/c Ratio		0.44					0.52			0.09		
Control Delay		17.7					19.3			39.4		
Queue Delay		0.0					0.0			0.0		
Total Delay		17.7					19.3			39.4		
LOS		B					B			D		
Approach Delay		17.7					19.3			39.4		
Approach LOS		B					B			D		
90th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		7.4	7.4		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		242					300			13		
Fuel Used(gal)		4					4			0		
CO Emissions (g/hr)		296					305			13		
NOx Emissions (g/hr)		58					59			2		
VOC Emissions (g/hr)		69					71			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		126					156			5		
Queue Length 95th (ft)		277					337			24		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		904					888			513		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.44					0.52			0.02		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.8%	19.8%	19.8%		19.0%	19.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0	0		0	0		
Act Effct Green (s)			8.9			18.2		
Actuated g/C Ratio			0.11			0.22		
v/c Ratio			0.40			0.08		
Control Delay			44.0			0.4		
Queue Delay			0.0			0.0		
Total Delay			44.0			0.4		
LOS			D			A		
Approach Delay			44.0			0.4		
Approach LOS			D			A		
90th %ile Green (s)	13.3	13.3	13.3		18.0	18.0		
90th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
70th %ile Green (s)	10.1	10.1	10.1		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	8.8	8.8	8.8		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	7.5	7.5	7.5		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	0.0	0.0	0.0		18.0	18.0		
10th %ile Term Code	Skip	Skip	Skip		MaxR	MaxR		
Stops (vph)			50			0		
Fuel Used(gal)			1			0		
CO Emissions (g/hr)			65			5		
NOx Emissions (g/hr)			13			1		
VOC Emissions (g/hr)			15			1		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			28			0		
Queue Length 95th (ft)			73			0		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			319			465		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.18			0.08		

Intersection Summary		
Area Type:	Other	
Cycle Length: 121		
Actuated Cycle Length: 82.4		
Natural Cycle: 125		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.52		
Intersection Signal Delay: 19.6		Intersection LOS: B
Intersection Capacity Utilization 55.3%		ICU Level of Service B
Analysis Period (min) 15		
90th %ile Actuated Cycle: 98.7		
70th %ile Actuated Cycle: 83.1		
50th %ile Actuated Cycle: 81.8		
30th %ile Actuated Cycle: 80.5		
10th %ile Actuated Cycle: 68		

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	396	145	33	371	119	20
Future Volume (veh/h)	396	145	33	371	119	20
Number	4	14	3	8	5	12
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	421	154	35	395	127	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence			No		No	
Cap, veh/h	716	262	491	1221	311	51
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.55	0.55	0.06	0.65	0.21	0.21
Unsig. Movement Delay						
Ln Grp Delay, s/veh	0.0	13.4	7.1	6.2	28.0	0.0
Ln Grp LOS	A	B	A	A	C	A
Approach Vol, veh/h	575			430	149	
Approach Delay, s/veh	13.4			6.3	28.0	
Approach LOS	B			A	C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Case No		12.0	1.2	8.0				4.0
Phs Duration (G+Y+Rc), s		20.0	7.5	44.5				52.0
Change Period (Y+Rc), s		5.0	3.0	5.0				5.0
Max Green (Gmax), s		15.0	9.0	35.0				47.0
Max Allow Headway (MAH), s		3.8	3.8	5.3				5.2
Max Q Clear (g_c+I1), s		7.3	2.5	17.5				8.7
Green Ext Time (g_e), s		0.2	0.0	3.7				2.7
Prob of Phs Call (p_c)		1.00	0.50	1.00				1.00
Prob of Max Out (p_x)		0.00	0.02	0.00				0.00

Left-Turn Movement Data								
Assigned Mvmt		5	3	7				
Mvmt Sat Flow, veh/h		1493	1781	0				

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		12		1306				1870

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		247		478				0

Left Lane Group Data								
Assigned Mvmt	0	5	3	7	0	0	0	0
Lane Assignment		L+T+R	L (Pr/Pm)					

Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	149	35	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1751	1781	0	0	0	0	0
Q Serve Time (g_s), s	0.0	5.3	0.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.3	0.5	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	838	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	41.5	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	39.5	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.85	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	365	491	0	0	0	0	0
V/C Ratio (X)	0.00	0.41	0.07	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	365	602	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	24.7	7.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.4	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	28.0	7.1	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.2	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.08	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment								T
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	395
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	1221
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1221
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment				T+R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	575	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1784	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	15.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	15.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.14	0.00	0.27	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	978	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	978	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	341	1	1	367	2	7	1	2	15	1	18
Future Vol, veh/h	8	341	1	1	367	2	7	1	2	15	1	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	388	1	1	417	2	8	1	2	17	1	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	419	0	0	389	0	0	838	828	389	828	827	418
Stage 1	-	-	-	-	-	-	407	407	-	420	420	-
Stage 2	-	-	-	-	-	-	431	421	-	408	407	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1140	-	-	1170	-	-	286	306	659	290	307	635
Stage 1	-	-	-	-	-	-	621	597	-	611	589	-
Stage 2	-	-	-	-	-	-	603	589	-	620	597	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1140	-	-	1170	-	-	274	303	659	286	304	635
Mov Cap-2 Maneuver	-	-	-	-	-	-	274	303	-	286	304	-
Stage 1	-	-	-	-	-	-	615	591	-	605	588	-
Stage 2	-	-	-	-	-	-	582	588	-	611	591	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	16.9	14.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	314	1140	-	-	1170	-	-	404
HCM Lane V/C Ratio	0.036	0.008	-	-	0.001	-	-	0.096
HCM Control Delay (s)	16.9	8.2	0	-	8.1	0	-	14.9
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	15.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	24	330	1	1	390	67	3	2	6	201	1	42
Future Vol, veh/h	24	330	1	1	390	67	3	2	6	201	1	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	351	1	1	415	71	3	2	6	214	1	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	486	0	0	352	0	0	880	892	352	861	857	451
Stage 1	-	-	-	-	-	-	404	404	-	453	453	-
Stage 2	-	-	-	-	-	-	476	488	-	408	404	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1077	-	-	1207	-	-	268	281	692	276	295	608
Stage 1	-	-	-	-	-	-	623	599	-	586	570	-
Stage 2	-	-	-	-	-	-	570	550	-	620	599	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1077	-	-	1207	-	-	242	272	692	266	286	608
Mov Cap-2 Maneuver	-	-	-	-	-	-	242	272	-	266	286	-
Stage 1	-	-	-	-	-	-	604	581	-	568	569	-
Stage 2	-	-	-	-	-	-	527	549	-	594	581	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	14.6	64.8
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	387	1077	-	-	1207	-	-	295
HCM Lane V/C Ratio	0.03	0.024	-	-	0.001	-	-	0.88
HCM Control Delay (s)	14.6	8.4	0	-	8	0	-	64.8
HCM Lane LOS	B	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	7.9

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	396	440	3	1	1
Future Vol, veh/h	1	396	440	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	421	468	3	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	471	0	-	0	893	470
Stage 1	-	-	-	-	470	-
Stage 2	-	-	-	-	423	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1091	-	-	-	312	594
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	661	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1091	-	-	-	312	594
Mov Cap-2 Maneuver	-	-	-	-	312	-
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	661	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1091	-	-	-	409
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	8.3	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	396	0	0	435	0	0
Future Vol, veh/h	396	0	0	435	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	430	0	0	473	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	430	0	903	430
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	473	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1129	-	308	625
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1129	-	308	625
Mov Cap-2 Maneuver	-	-	-	-	308	-
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	627	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1129	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	2	348	17	19	7	6	389	57	5	1	5	1
Future Volume (vph)	2	348	17	19	7	6	389	57	5	1	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00					1.00			0.99		
Frt		0.987					0.983			0.932		
Flt Protected							0.999			0.980		
Satd. Flow (prot)	0	1835	0	0	0	0	1821	0	0	1676	0	0
Flt Permitted		0.998					0.987					
Satd. Flow (perm)	0	1831	0	0	0	0	1799	0	0	1710	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Confl. Peds. (#/hr)	10			2		2		10			4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2	363	18	20	7	6	405	59	5	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	403	0	0	0	0	477	0	0	12	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		

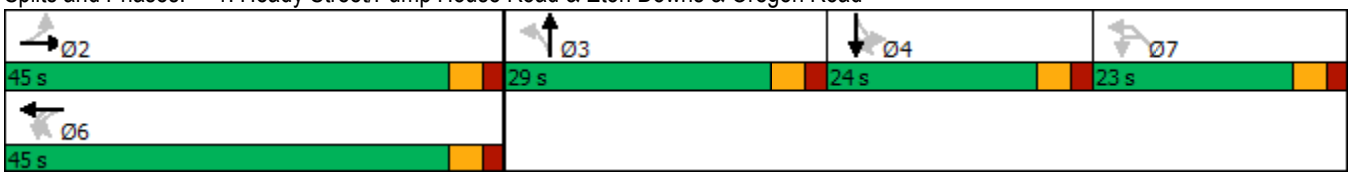
Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	51	1	3	2	1	37	3	10
Future Volume (vph)	51	1	3	2	1	37	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99			0.98		
Frt			0.995			0.967		
Flt Protected			0.956			0.964		
Satd. Flow (prot)	0	0	1772	0	0	1708	0	0
Flt Permitted			0.736			0.964		
Satd. Flow (perm)	0	0	1348	0	0	1700	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			1			108		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Confl. Peds. (#/hr)	4				2		10	4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	1	3	2	1	39	3	10
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	59	0	0	53	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (%)	37.2%	37.2%			37.2%	37.2%	37.2%		24.0%	24.0%		
Maximum Green (s)	40.0	40.0			40.0	40.0	40.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Act Effct Green (s)		40.6					40.6			6.2		
Actuated g/C Ratio		0.49					0.49			0.08		
v/c Ratio		0.45					0.54			0.09		
Control Delay		17.9					19.7			39.4		
Queue Delay		0.0					0.0			0.0		
Total Delay		17.9					19.7			39.4		
LOS		B					B			D		
Approach Delay		17.9					19.7			39.4		
Approach LOS		B					B			D		
90th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		7.5	7.5		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		248					313			13		
Fuel Used(gal)		4					5			0		
CO Emissions (g/hr)		304					318			13		
NOx Emissions (g/hr)		59					62			2		
VOC Emissions (g/hr)		70					74			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		128					162			5		
Queue Length 95th (ft)		283					352			24		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		900					884			505		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.45					0.54			0.02		

Intersection Summary

Area Type:	Other		
Cycle Length: 121			
Actuated Cycle Length: 82.5			
Natural Cycle: 125			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 98.9			
70th %ile Actuated Cycle: 83.2			
50th %ile Actuated Cycle: 81.8			
30th %ile Actuated Cycle: 80.5			
10th %ile Actuated Cycle: 68			

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.8%	19.8%	19.8%		19.0%	19.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Act Effct Green (s)			8.9			18.3		
Actuated g/C Ratio			0.11			0.22		
v/c Ratio			0.40			0.12		
Control Delay			44.2			0.6		
Queue Delay			0.0			0.0		
Total Delay			44.2			0.6		
LOS			D			A		
Approach Delay			44.2			0.6		
Approach LOS			D			A		
90th %ile Green (s)	13.4	13.4	13.4		18.0	18.0		
90th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
70th %ile Green (s)	10.2	10.2	10.2		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	8.8	8.8	8.8		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	7.5	7.5	7.5		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	0.0	0.0	0.0		18.0	18.0		
10th %ile Term Code	Skip	Skip	Skip		MaxR	MaxR		
Stops (vph)			50			0		
Fuel Used(gal)			1			0		
CO Emissions (g/hr)			65			7		
NOx Emissions (g/hr)			13			1		
VOC Emissions (g/hr)			15			2		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			28			0		
Queue Length 95th (ft)			73			3		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			315			460		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.19			0.12		

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	406	148	33	376	120	20
Future Volume (veh/h)	406	148	33	376	120	20
Number	4	14	3	8	5	12
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	423	154	34	392	125	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence			No		No	
Cap, veh/h	719	262	489	1221	310	52
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.55	0.55	0.06	0.65	0.21	0.21
Unsig. Movement Delay						
Ln Grp Delay, s/veh	0.0	13.4	7.1	6.2	27.9	0.0
Ln Grp LOS	A	B	A	A	C	A
Approach Vol, veh/h	577			426	147	
Approach Delay, s/veh	13.4			6.3	27.9	
Approach LOS	B			A	C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Case No		12.0	1.2	8.0				4.0
Phs Duration (G+Y+Rc), s		20.0	7.4	44.6				52.0
Change Period (Y+Rc), s		5.0	3.0	5.0				5.0
Max Green (Gmax), s		15.0	9.0	35.0				47.0
Max Allow Headway (MAH), s		3.8	3.8	5.3				5.2
Max Q Clear (g_c+I1), s		7.2	2.5	17.5				8.6
Green Ext Time (g_e), s		0.2	0.0	3.7				2.7
Prob of Phs Call (p_c)		1.00	0.49	1.00				1.00
Prob of Max Out (p_x)		0.00	0.02	0.00				0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3	7				
Mvmt Sat Flow, veh/h		1489	1781	0				
Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		12		1308				1870
Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		250		476				0
Left Lane Group Data								
Assigned Mvmt	0	5	3	7	0	0	0	0
Lane Assignment		L+T+R	L (Pr/Pm)					

Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	147	34	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1751	1781	0	0	0	0	0
Q Serve Time (g_s), s	0.0	5.2	0.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.2	0.5	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	836	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	41.6	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	24.1	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	39.6	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.85	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	365	489	0	0	0	0	0
V/C Ratio (X)	0.00	0.40	0.07	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	365	602	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	24.6	7.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.3	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.9	7.1	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.1	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.2	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.08	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment								T
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	392
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	1221
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1221
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment				T+R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	577	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1785	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	15.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	15.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.14	0.00	0.27	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	981	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	981	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	8	347	1	1	380	2	7	1	2	15	1	18
Future Vol, veh/h	8	347	1	1	380	2	7	1	2	15	1	18
Conflicting Peds, #/hr	10	0	0	0	0	10	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	394	1	1	432	2	8	1	2	17	1	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	444	0	0	395	0	0	859	859	395	859	858	443
Stage 1	-	-	-	-	-	-	413	413	-	445	445	-
Stage 2	-	-	-	-	-	-	446	446	-	414	413	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1116	-	-	1164	-	-	277	294	654	277	294	615
Stage 1	-	-	-	-	-	-	616	594	-	592	575	-
Stage 2	-	-	-	-	-	-	591	574	-	616	594	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1105	-	-	1164	-	-	265	288	654	270	288	609
Mov Cap-2 Maneuver	-	-	-	-	-	-	265	288	-	270	288	-
Stage 1	-	-	-	-	-	-	610	588	-	581	569	-
Stage 2	-	-	-	-	-	-	569	568	-	607	588	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	17.3	15.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	304	1105	-	-	1164	-	-	384
HCM Lane V/C Ratio	0.037	0.008	-	-	0.001	-	-	0.101
HCM Control Delay (s)	17.3	8.3	0	-	8.1	0	-	15.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	16.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	343	1	1	396	67	3	2	6	201	1	42
Future Vol, veh/h	24	343	1	1	396	67	3	2	6	201	1	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	365	1	1	421	71	3	2	6	214	1	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	492	0	0	366	0	0	900	912	366	881	877	457
Stage 1	-	-	-	-	-	-	418	418	-	459	459	-
Stage 2	-	-	-	-	-	-	482	494	-	422	418	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1071	-	-	1193	-	-	259	274	679	267	287	604
Stage 1	-	-	-	-	-	-	612	591	-	582	566	-
Stage 2	-	-	-	-	-	-	565	546	-	609	591	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	1193	-	-	234	266	679	257	278	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	234	266	-	257	278	-
Stage 1	-	-	-	-	-	-	594	573	-	565	565	-
Stage 2	-	-	-	-	-	-	522	545	-	583	573	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	14.9	72.3
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	377	1071	-	-	1193	-	-	285
HCM Lane V/C Ratio	0.031	0.024	-	-	0.001	-	-	0.911
HCM Control Delay (s)	14.9	8.4	0	-	8	0	-	72.3
HCM Lane LOS	B	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	8.4

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	402	453	3	1	1
Future Vol, veh/h	1	402	453	3	1	1
Conflicting Peds, #/hr	6	0	0	6	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	414	467	3	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	476	0	-	0	891	475
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1086	-	-	-	313	590
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1080	-	-	-	309	587
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	622	-
Stage 2	-	-	-	-	662	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1080	-	-	-	405
HCM Lane V/C Ratio	0.001	-	-	-	0.005
HCM Control Delay (s)	8.3	0	-	-	13.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	396	6	6	435	0	13
Future Vol, veh/h	396	6	6	435	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	430	7	7	473	0	14

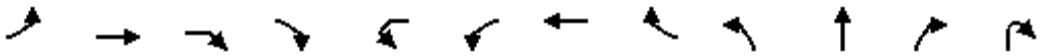
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	437	0	921	434
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	487	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1123	-	300	622
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1123	-	298	622
Mov Cap-2 Maneuver	-	-	-	-	298	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	613	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	622	-	-	1123	-
HCM Lane V/C Ratio	0.023	-	-	0.006	-
HCM Control Delay (s)	10.9	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	2	348	17	19	7	6	389	57	5	1	5	1
Future Volume (vph)	2	348	17	19	7	6	389	57	5	1	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00					0.99			0.99		
Frt		0.987					0.983			0.932		
Flt Protected							0.999			0.980		
Satd. Flow (prot)	0	1835	0	0	0	0	1817	0	0	1676	0	0
Flt Permitted		0.998					0.987					
Satd. Flow (perm)	0	1831	0	0	0	0	1795	0	0	1710	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Confl. Peds. (#/hr)	10			2		2		10			4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2	363	18	20	7	6	405	59	5	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	403	0	0	0	0	477	0	0	12	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	51	1	3	2	1	37	3	10
Future Volume (vph)	51	1	3	2	1	37	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99			0.98		
Frt			0.995			0.967		
Flt Protected			0.956			0.964		
Satd. Flow (prot)	0	0	1772	0	0	1708	0	0
Flt Permitted			0.736			0.964		
Satd. Flow (perm)	0	0	1348	0	0	1700	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			1			108		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Confl. Peds. (#/hr)	4				2		10	4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	1	3	2	1	39	3	10
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	59	0	0	53	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		



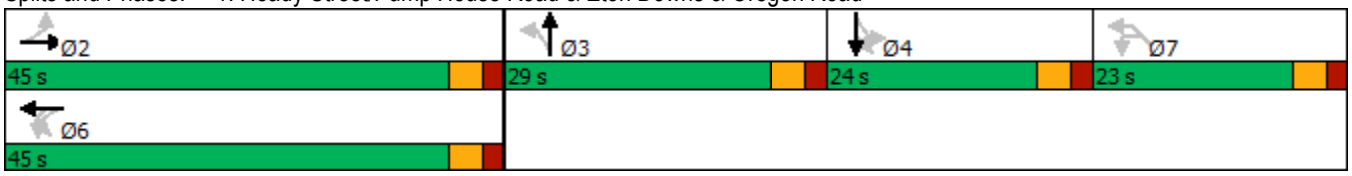
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (%)	37.2%	37.2%			37.2%	37.2%	37.2%		24.0%	24.0%		
Maximum Green (s)	40.0	40.0			40.0	40.0	40.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Walk Time (s)					7.0	7.0	7.0					
Flash Dont Walk (s)					11.0	11.0	11.0					
Pedestrian Calls (#/hr)					6	6	6					
Act Effct Green (s)		40.6					40.6			6.2		
Actuated g/C Ratio		0.49					0.49			0.08		
v/c Ratio		0.45					0.54			0.09		
Control Delay		17.9					19.7			39.4		
Queue Delay		0.0					0.0			0.0		
Total Delay		17.9					19.7			39.4		
LOS		B					B			D		
Approach Delay		17.9					19.7			39.4		
Approach LOS		B					B			D		
90th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		7.5	7.5		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		248					313			13		
Fuel Used(gal)		4					5			0		
CO Emissions (g/hr)		304					318			13		
NOx Emissions (g/hr)		59					62			2		
VOC Emissions (g/hr)		70					74			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		128					162			5		
Queue Length 95th (ft)		283					352			24		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		900					882			505		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.8%	19.8%	19.8%		19.0%	19.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
Act Effct Green (s)			8.9			18.3		
Actuated g/C Ratio			0.11			0.22		
v/c Ratio			0.40			0.12		
Control Delay			44.2			0.6		
Queue Delay			0.0			0.0		
Total Delay			44.2			0.6		
LOS			D			A		
Approach Delay			44.2			0.6		
Approach LOS			D			A		
90th %ile Green (s)	13.4	13.4	13.4		18.0	18.0		
90th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
70th %ile Green (s)	10.2	10.2	10.2		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	8.8	8.8	8.8		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	7.5	7.5	7.5		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	0.0	0.0	0.0		18.0	18.0		
10th %ile Term Code	Skip	Skip	Skip		MaxR	MaxR		
Stops (vph)			50			0		
Fuel Used(gal)			1			0		
CO Emissions (g/hr)			65			7		
NOx Emissions (g/hr)			13			1		
VOC Emissions (g/hr)			15			2		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			28			0		
Queue Length 95th (ft)			73			3		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			315			460		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.45					0.54			0.02		

Intersection Summary			
Area Type:	Other		
Cycle Length: 121			
Actuated Cycle Length: 82.5			
Natural Cycle: 125			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 98.9			
70th %ile Actuated Cycle: 83.2			
50th %ile Actuated Cycle: 81.8			
30th %ile Actuated Cycle: 80.5			
10th %ile Actuated Cycle: 68			

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.19			0.12		

Intersection Summary

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	2	348	17	19	7	6	389	57	5	1	5	1
Future Volume (vph)	2	348	17	19	7	6	389	57	5	1	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00					0.99			0.98		
Frt		0.987					0.983			0.932		
Flt Protected							0.999			0.980		
Satd. Flow (prot)	0	1835	0	0	0	0	1817	0	0	1676	0	0
Flt Permitted		0.999					0.987					
Satd. Flow (perm)	0	1833	0	0	0	0	1795	0	0	1710	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Confl. Peds. (#/hr)	10			2		2		10			4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2	363	18	20	7	6	405	59	5	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	403	0	0	0	0	477	0	0	12	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	51	1	3	2	1	37	3	10
Future Volume (vph)	51	1	3	2	1	37	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99			0.98		
Frt			0.995			0.967		
Flt Protected			0.956			0.964		
Satd. Flow (prot)	0	0	1772	0	0	1708	0	0
Flt Permitted			0.736			0.964		
Satd. Flow (perm)	0	0	1347	0	0	1699	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			1			105		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Confl. Peds. (#/hr)	4				2		10	4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	1	3	2	1	39	3	10
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	59	0	0	53	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		

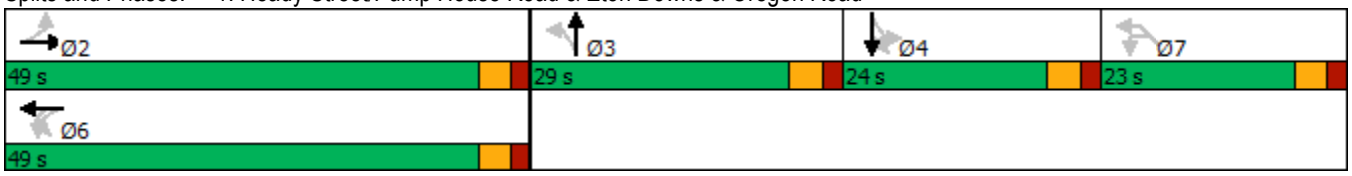
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	49.0	49.0			49.0	49.0	49.0		29.0	29.0		
Total Split (%)	39.2%	39.2%			39.2%	39.2%	39.2%		23.2%	23.2%		
Maximum Green (s)	44.0	44.0			44.0	44.0	44.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Walk Time (s)					7.0	7.0	7.0					
Flash Dont Walk (s)					11.0	11.0	11.0					
Pedestrian Calls (#/hr)					6	6	6					
Act Effct Green (s)		44.7					44.7			6.2		
Actuated g/C Ratio		0.51					0.51			0.07		
v/c Ratio		0.43					0.52			0.10		
Control Delay		17.8					19.4			42.7		
Queue Delay		0.0					0.0			0.0		
Total Delay		17.8					19.4			42.7		
LOS		B					B			D		
Approach Delay		17.8					19.4			42.7		
Approach LOS		B					B			D		
90th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		7.6	7.6		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		239					302			13		
Fuel Used(gal)		4					4			0		
CO Emissions (g/hr)		299					312			13		
NOx Emissions (g/hr)		58					61			3		
VOC Emissions (g/hr)		69					72			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		129					163			6		
Queue Length 95th (ft)		302					376			27		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		936					917			477		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.2%	19.2%	19.2%		18.4%	18.4%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)	7.0	7.0	7.0					
Flash Dont Walk (s)	11.0	11.0	11.0					
Pedestrian Calls (#/hr)	2	2	2					
Act Effct Green (s)			9.8			18.3		
Actuated g/C Ratio			0.11			0.21		
v/c Ratio			0.39			0.12		
Control Delay			44.8			0.8		
Queue Delay			0.0			0.0		
Total Delay			44.8			0.8		
LOS			D			A		
Approach Delay			44.8			0.8		
Approach LOS			D			A		
90th %ile Green (s)	18.0	18.0	18.0		18.0	18.0		
90th %ile Term Code	Ped	Ped	Ped		MaxR	MaxR		
70th %ile Green (s)	10.4	10.4	10.4		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	9.0	9.0	9.0		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	7.6	7.6	7.6		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	0.0	0.0	0.0		18.0	18.0		
10th %ile Term Code	Skip	Skip	Skip		MaxR	MaxR		
Stops (vph)			49			0		
Fuel Used(gal)			1			0		
CO Emissions (g/hr)			65			7		
NOx Emissions (g/hr)			13			1		
VOC Emissions (g/hr)			15			2		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			30			0		
Queue Length 95th (ft)			75			3		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			298			438		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.43					0.52			0.03		

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 87.5			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 107.6			
70th %ile Actuated Cycle: 87.4			
50th %ile Actuated Cycle: 86			
30th %ile Actuated Cycle: 84.6			
10th %ile Actuated Cycle: 72			

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.20			0.12		

Intersection Summary

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	2	348	17	19	7	6	389	57	5	1	5	1
Future Volume (vph)	2	348	17	19	7	6	389	57	5	1	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00					0.99			0.98		
Frt		0.987					0.981			0.932		
Flt Protected						0.950				0.980		
Satd. Flow (prot)	0	1835	0	0	0	1770	1814	0	0	1675	0	0
Flt Permitted		0.999				0.421						
Satd. Flow (perm)	0	1833	0	0	0	784	1814	0	0	1709	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Confl. Peds. (#/hr)	10			2		2		10			4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2	363	18	20	7	6	405	59	5	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	403	0	0	0	13	464	0	0	12	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		12					12			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			pm+pt	pm+pt	NA		Perm	NA		
Protected Phases		2			1	1	6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			1	1	6		3	3		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	51	1	3	2	1	37	3	10
Future Volume (vph)	51	1	3	2	1	37	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99			0.98		
Frt			0.995			0.967		
Flt Protected			0.956			0.964		
Satd. Flow (prot)	0	0	1772	0	0	1706	0	0
Flt Permitted			0.736			0.964		
Satd. Flow (perm)	0	0	1346	0	0	1696	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			1			133		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Confl. Peds. (#/hr)	4				2		10	4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	1	3	2	1	39	3	10
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	59	0	0	53	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		

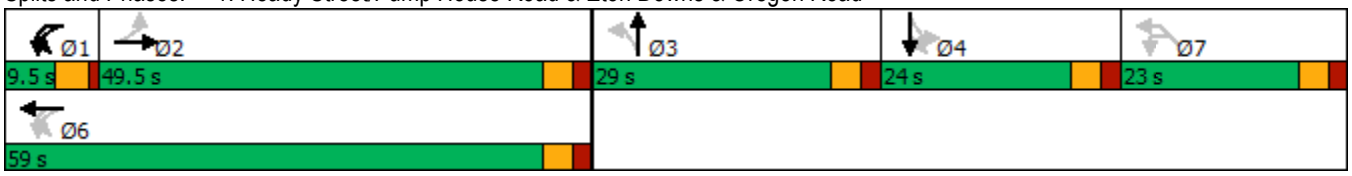
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Switch Phase												
Minimum Initial (s)	40.0	40.0			5.0	5.0	40.0		5.0	5.0		
Minimum Split (s)	45.0	45.0			9.5	9.5	45.0		29.0	29.0		
Total Split (s)	49.5	49.5			9.5	9.5	59.0		29.0	29.0		
Total Split (%)	36.7%	36.7%			7.0%	7.0%	43.7%		21.5%	21.5%		
Maximum Green (s)	44.5	44.5			5.0	5.0	54.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.5	3.5	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			1.0	1.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0				0.0	0.0			0.0		
Total Lost Time (s)		5.0				4.5	5.0			5.0		
Lead/Lag	Lag	Lag			Lead	Lead			Lead	Lead		
Lead-Lag Optimize?	Yes	Yes			Yes	Yes			Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			None	None	Max		None	None		
Walk Time (s)							7.0					
Flash Dont Walk (s)							11.0					
Pedestrian Calls (#/hr)							6					
Act Effct Green (s)		53.2				55.3	54.7			6.3		
Actuated g/C Ratio		0.54				0.56	0.56			0.06		
v/c Ratio		0.41				0.03	0.46			0.11		
Control Delay		18.2				13.6	17.0			47.2		
Queue Delay		0.0				0.0	0.0			0.0		
Total Delay		18.2				13.6	17.0			47.2		
LOS		B				B	B			D		
Approach Delay		18.2					16.9			47.3		
Approach LOS		B					B			D		
90th %ile Green (s)	44.5	44.5			5.0	5.0	54.0		7.8	7.8		
90th %ile Term Code	MaxR	MaxR			Max	Max	MaxR		Gap	Gap		
70th %ile Green (s)	54.0	54.0			0.0	0.0	54.0		0.0	0.0		
70th %ile Term Code	Hold	Hold			Skip	Skip	MaxR		Skip	Skip		
50th %ile Green (s)	54.0	54.0			0.0	0.0	54.0		0.0	0.0		
50th %ile Term Code	Hold	Hold			Skip	Skip	MaxR		Skip	Skip		
30th %ile Green (s)	54.0	54.0			0.0	0.0	54.0		0.0	0.0		
30th %ile Term Code	Hold	Hold			Skip	Skip	MaxR		Skip	Skip		
10th %ile Green (s)	54.0	54.0			0.0	0.0	54.0		0.0	0.0		
10th %ile Term Code	Hold	Hold			Skip	Skip	MaxR		Skip	Skip		
Stops (vph)		228				6	260			13		
Fuel Used(gal)		4				0	4			0		
CO Emissions (g/hr)		297				6	275			14		
NOx Emissions (g/hr)		58				1	53			3		
VOC Emissions (g/hr)		69				1	64			3		
Dilemma Vehicles (#)		0				0	0			0		
Queue Length 50th (ft)		131				3	158			7		
Queue Length 95th (ft)		346				17	355			29		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		995				493	1014			425		
Starvation Cap Reductn		0				0	0			0		
Spillback Cap Reductn		0				0	0			0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	17.8%	17.8%	17.8%		17.0%	17.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)	7.0	7.0	7.0					
Flash Dont Walk (s)	11.0	11.0	11.0					
Pedestrian Calls (#/hr)	2	2	2					
Act Effct Green (s)			10.2			18.2		
Actuated g/C Ratio			0.10			0.19		
v/c Ratio			0.42			0.12		
Control Delay			51.4			0.6		
Queue Delay			0.0			0.0		
Total Delay			51.4			0.6		
LOS			D			A		
Approach Delay			51.4			0.6		
Approach LOS			D			A		
90th %ile Green (s)	18.0	18.0	18.0		18.0	18.0		
90th %ile Term Code	Ped	Ped	Ped		MaxR	MaxR		
70th %ile Green (s)	11.0	11.0	11.0		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	9.5	9.5	9.5		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	8.0	8.0	8.0		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	0.0	0.0	0.0		18.0	18.0		
10th %ile Term Code	Skip	Skip	Skip		MaxR	MaxR		
Stops (vph)			50			0		
Fuel Used(gal)			1			0		
CO Emissions (g/hr)			71			7		
NOx Emissions (g/hr)			14			1		
VOC Emissions (g/hr)			16			2		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			34			0		
Queue Length 95th (ft)			82			0		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			265			424		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Storage Cap Reductn		0				0	0			0		
Reduced v/c Ratio		0.41				0.03	0.46			0.03		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 97.9			
Natural Cycle: 135			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 18.9		Intersection LOS: B	
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 117.8			
70th %ile Actuated Cycle: 98			
50th %ile Actuated Cycle: 96.5			
30th %ile Actuated Cycle: 95			
10th %ile Actuated Cycle: 82			

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.22			0.13		

Intersection Summary

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	3	447	24	3	19	4	444	56	6	3	1	1
Future Volume (vph)	3	447	24	3	19	4	444	56	6	3	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992					0.986			0.975		
Flt Protected							0.998			0.973		
Satd. Flow (prot)	0	1848	0	0	0	0	1833	0	0	1767	0	0
Flt Permitted		0.998					0.968					
Satd. Flow (perm)	0	1844	0	0	0	0	1778	0	0	1816	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	466	25	3	20	4	463	58	6	3	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	497	0	0	0	0	545	0	0	11	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		

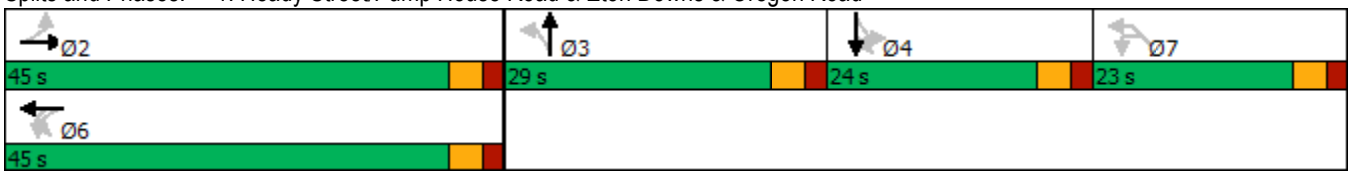
Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	90	3	2	8	1	19	6	29
Future Volume (vph)	90	3	2	8	1	19	6	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990			0.915		
Flt Protected			0.957			0.982		
Satd. Flow (prot)	0	0	1765	0	0	1674	0	0
Flt Permitted			0.738			0.982		
Satd. Flow (perm)	0	0	1361	0	0	1674	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			3			108		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	94	3	2	8	1	20	6	30
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	107	0	0	57	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (%)	37.2%	37.2%			37.2%	37.2%	37.2%		24.0%	24.0%		
Maximum Green (s)	40.0	40.0			40.0	40.0	40.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Walk Time (s)	7.0	7.0			7.0	7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0			0	0	0		0	0		
Act Effct Green (s)		40.3					40.3			6.1		
Actuated g/C Ratio		0.46					0.46			0.07		
v/c Ratio		0.59					0.67			0.09		
Control Delay		22.7					25.3			41.3		
Queue Delay		0.0					0.0			0.0		
Total Delay		22.7					25.3			41.3		
LOS		C					C			D		
Approach Delay		22.7					25.3			41.3		
Approach LOS		C					C			D		
90th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		7.3	7.3		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		346					392			12		
Fuel Used(gal)		6					6			0		
CO Emissions (g/hr)		422					418			12		
NOx Emissions (g/hr)		82					81			2		
VOC Emissions (g/hr)		98					97			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		183					211			5		
Queue Length 95th (ft)		395					#467			24		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		848					817			502		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.59					0.67			0.02		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.8%	19.8%	19.8%		19.0%	19.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0	0		0	0		
Act Effct Green (s)			12.0			18.2		
Actuated g/C Ratio			0.14			0.21		
v/c Ratio			0.57			0.13		
Control Delay			47.2			1.4		
Queue Delay			0.0			0.0		
Total Delay			47.2			1.4		
LOS			D			A		
Approach Delay			47.2			1.4		
Approach LOS			D			A		
90th %ile Green (s)	18.5	18.5	18.5		18.0	18.0		
90th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
70th %ile Green (s)	13.7	13.7	13.7		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	11.7	11.7	11.7		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	9.8	9.8	9.8		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	7.3	7.3	7.3		18.0	18.0		
10th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
Stops (vph)			90			1		
Fuel Used(gal)			2			0		
CO Emissions (g/hr)			121			8		
NOx Emissions (g/hr)			24			2		
VOC Emissions (g/hr)			28			2		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			52			0		
Queue Length 95th (ft)			117			5		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			299			432		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.36			0.13		

Intersection Summary		
Area Type:	Other	
Cycle Length: 121		
Actuated Cycle Length: 87.7		
Natural Cycle: 125		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.67		
Intersection Signal Delay: 25.2		Intersection LOS: C
Intersection Capacity Utilization 67.6%		ICU Level of Service C
Analysis Period (min) 15		
90th %ile Actuated Cycle: 103.8		
70th %ile Actuated Cycle: 86.7		
50th %ile Actuated Cycle: 84.7		
30th %ile Actuated Cycle: 82.8		
10th %ile Actuated Cycle: 80.3		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	558	147	57	538	164	55
Future Volume (veh/h)	558	147	57	538	164	55
Number	4	14	3	8	5	12
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	581	153	59	560	171	57
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence			No		No	
Cap, veh/h	748	197	397	1221	269	90
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.52	0.52	0.09	0.65	0.21	0.21
Unsig. Movement Delay						
Ln Grp Delay, s/veh	0.0	19.9	9.9	7.4	34.3	0.0
Ln Grp LOS	A	B	A	A	C	A
Approach Vol, veh/h	734			619	229	
Approach Delay, s/veh	19.9			7.7	34.3	
Approach LOS	B			A	C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Case No		12.0	1.2	8.0				4.0
Phs Duration (G+Y+Rc), s		20.0	9.2	42.8				52.0
Change Period (Y+Rc), s		5.0	3.0	5.0				5.0
Max Green (Gmax), s		15.0	9.0	35.0				47.0
Max Allow Headway (MAH), s		3.9	3.8	5.3				5.2
Max Q Clear (g_c+I1), s		10.7	2.9	25.5				12.7
Green Ext Time (g_e), s		0.3	0.0	3.6				4.2
Prob of Phs Call (p_c)		1.00	0.69	1.00				1.00
Prob of Max Out (p_x)		0.00	0.05	0.00				0.00

Left-Turn Movement Data								
Assigned Mvmt		5	3	7				
Mvmt Sat Flow, veh/h		1291	1781	0				

Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		8		1427				1870

Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		430		376				0

Left Lane Group Data								
Assigned Mvmt	0	5	3	7	0	0	0	0
Lane Assignment		L+T+R	L (Pr/Pm)					

Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	229	59	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1728	1781	0	0	0	0	0
Q Serve Time (g_s), s	0.0	8.7	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.7	0.9	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	723	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	39.8	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	37.8	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.75	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	360	397	0	0	0	0	0
V/C Ratio (X)	0.00	0.64	0.15	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	360	466	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.0	9.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.3	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.3	9.9	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.4	0.3	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.2	0.3	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.26	0.15	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment								T
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	560
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	1221
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1221
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment				T+R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	734	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1803	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	23.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	23.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.25	0.00	0.21	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	946	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	946	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	19.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	15	487	6	8	440	4	2	1	2	10	1	22
Future Vol, veh/h	15	487	6	8	440	4	2	1	2	10	1	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	529	7	9	478	4	2	1	2	11	1	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	482	0	0	536	0	0	1076	1065	533	1064	1066	480
Stage 1	-	-	-	-	-	-	565	565	-	498	498	-
Stage 2	-	-	-	-	-	-	511	500	-	566	568	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1081	-	-	1032	-	-	197	223	547	201	222	586
Stage 1	-	-	-	-	-	-	510	508	-	554	544	-
Stage 2	-	-	-	-	-	-	545	543	-	509	506	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1081	-	-	1032	-	-	184	216	547	194	215	586
Mov Cap-2 Maneuver	-	-	-	-	-	-	184	216	-	194	215	-
Stage 1	-	-	-	-	-	-	499	497	-	542	537	-
Stage 2	-	-	-	-	-	-	515	536	-	495	495	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	19.1	16.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	261	1081	-	-	1032	-	-	352
HCM Lane V/C Ratio	0.021	0.015	-	-	0.008	-	-	0.102
HCM Control Delay (s)	19.1	8.4	0	-	8.5	0	-	16.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	21

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	53	527	1	1	517	218	2	2	2	132	1	20
Future Vol, veh/h	53	527	1	1	517	218	2	2	2	132	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	549	1	1	539	227	2	2	2	138	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	766	0	0	550	0	0	1326	1428	550	1317	1315	653
Stage 1	-	-	-	-	-	-	660	660	-	655	655	-
Stage 2	-	-	-	-	-	-	666	768	-	662	660	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	847	-	-	1020	-	-	133	135	535	~ 134	158	467
Stage 1	-	-	-	-	-	-	452	460	-	455	463	-
Stage 2	-	-	-	-	-	-	449	411	-	451	460	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	847	-	-	1020	-	-	117	122	535	~ 122	143	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	117	122	-	~ 122	143	-
Stage 1	-	-	-	-	-	-	410	417	-	412	462	-
Stage 2	-	-	-	-	-	-	427	410	-	405	417	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	28.3	198.1
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	161	847	-	-	1020	-	-	135
HCM Lane V/C Ratio	0.039	0.065	-	-	0.001	-	-	1.181
HCM Control Delay (s)	28.3	9.5	0	-	8.5	0	-	198.1
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	9.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	598	527	4	7	3
Future Vol, veh/h	2	598	527	4	7	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	616	543	4	7	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	547	0	-	0	1165	545
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	620	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1022	-	-	-	215	538
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1022	-	-	-	214	538
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	536	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1022	-	-	-	261
HCM Lane V/C Ratio	0.002	-	-	-	0.039
HCM Control Delay (s)	8.5	0	-	-	19.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	605	0	0	539	0	0
Future Vol, veh/h	605	0	0	539	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	658	0	0	586	0	0

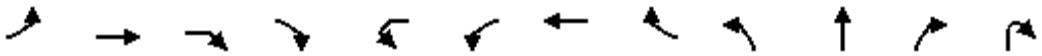
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	658	0	1244	658
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	586	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	930	-	192	464
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	556	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	930	-	192	464
Mov Cap-2 Maneuver	-	-	-	-	192	-
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	556	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	930	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	3	460	25	3	19	5	458	58	6	3	1	1
Future Volume (vph)	3	460	25	3	19	5	458	58	6	3	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992					0.986			0.975		
Flt Protected							0.998			0.973		
Satd. Flow (prot)	0	1848	0	0	0	0	1833	0	0	1767	0	0
Flt Permitted		0.998					0.967					
Satd. Flow (perm)	0	1844	0	0	0	0	1776	0	0	1816	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	479	26	3	20	5	477	60	6	3	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	511	0	0	0	0	562	0	0	11	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	93	3	2	8	1	19	6	29
Future Volume (vph)	93	3	2	8	1	19	6	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990			0.915		
Flt Protected			0.957			0.982		
Satd. Flow (prot)	0	0	1765	0	0	1674	0	0
Flt Permitted			0.738			0.982		
Satd. Flow (perm)	0	0	1361	0	0	1674	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			3			108		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	97	3	2	8	1	20	6	30
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	110	0	0	57	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		

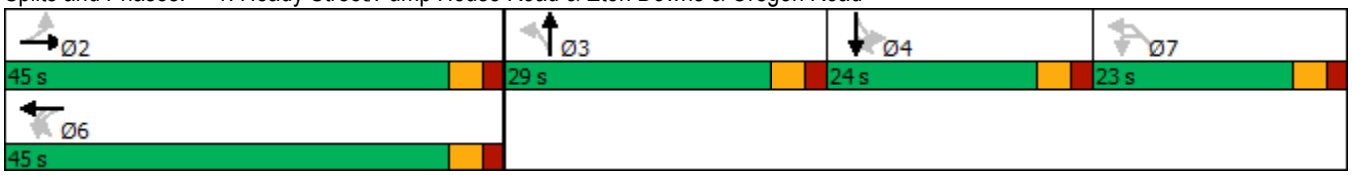


Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (%)	37.2%	37.2%			37.2%	37.2%	37.2%		24.0%	24.0%		
Maximum Green (s)	40.0	40.0			40.0	40.0	40.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Walk Time (s)	7.0	7.0			7.0	7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0			0	0	0		0	0		
Act Effct Green (s)		40.3					40.3			6.1		
Actuated g/C Ratio		0.46					0.46			0.07		
v/c Ratio		0.60					0.69			0.09		
Control Delay		23.3					26.2			41.5		
Queue Delay		0.0					0.0			0.0		
Total Delay		23.3					26.2			41.5		
LOS		C					C			D		
Approach Delay		23.3					26.2			41.5		
Approach LOS		C					C			D		
90th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		7.3	7.3		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		361					404			12		
Fuel Used(gal)		6					6			0		
CO Emissions (g/hr)		441					439			12		
NOx Emissions (g/hr)		86					85			2		
VOC Emissions (g/hr)		102					102			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		191					222			5		
Queue Length 95th (ft)		413					#517			25		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		846					814			500		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.60					0.69			0.02		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.8%	19.8%	19.8%		19.0%	19.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0	0		0	0		
Act Effct Green (s)			12.2			18.2		
Actuated g/C Ratio			0.14			0.21		
v/c Ratio			0.58			0.13		
Control Delay			47.4			1.4		
Queue Delay			0.0			0.0		
Total Delay			47.4			1.4		
LOS			D			A		
Approach Delay			47.4			1.4		
Approach LOS			D			A		
90th %ile Green (s)	18.9	18.9	18.9		18.0	18.0		
90th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
70th %ile Green (s)	13.9	13.9	13.9		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	11.9	11.9	11.9		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	10.0	10.0	10.0		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	7.4	7.4	7.4		18.0	18.0		
10th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
Stops (vph)			93			1		
Fuel Used(gal)			2			0		
CO Emissions (g/hr)			125			8		
NOx Emissions (g/hr)			24			2		
VOC Emissions (g/hr)			29			2		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			54			0		
Queue Length 95th (ft)			120			5		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			298			431		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.37			0.13		

Intersection Summary		
Area Type:	Other	
Cycle Length: 121		
Actuated Cycle Length: 87.9		
Natural Cycle: 125		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.69		
Intersection Signal Delay: 25.9		Intersection LOS: C
Intersection Capacity Utilization 69.5%		ICU Level of Service C
Analysis Period (min) 15		
90th %ile Actuated Cycle: 104.2		
70th %ile Actuated Cycle: 86.9		
50th %ile Actuated Cycle: 84.9		
30th %ile Actuated Cycle: 83		
10th %ile Actuated Cycle: 80.4		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	575	152	59	554	169	57
Future Volume (veh/h)	575	152	59	554	169	57
Number	4	14	3	8	5	12
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	599	158	61	577	176	59
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence			No		No	
Cap, veh/h	746	197	383	1221	268	90
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.52	0.52	0.09	0.65	0.21	0.21
Unsig. Movement Delay						
Ln Grp Delay, s/veh	0.0	21.3	10.5	7.6	35.1	0.0
Ln Grp LOS	A	C	B	A	D	A
Approach Vol, veh/h	757			638	236	
Approach Delay, s/veh	21.3			7.9	35.1	
Approach LOS	C			A	D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Case No		12.0	1.2	8.0				4.0
Phs Duration (G+Y+Rc), s		20.0	9.3	42.7				52.0
Change Period (Y+Rc), s		5.0	3.0	5.0				5.0
Max Green (Gmax), s		15.0	9.0	35.0				47.0
Max Allow Headway (MAH), s		3.9	3.8	5.3				5.2
Max Q Clear (g_c+I1), s		11.0	2.9	26.9				13.2
Green Ext Time (g_e), s		0.3	0.0	3.4				4.3
Prob of Phs Call (p_c)		1.00	0.70	1.00				1.00
Prob of Max Out (p_x)		0.00	0.06	0.00				0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3	7				
Mvmt Sat Flow, veh/h		1289	1781	0				
Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		7		1426				1870
Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		432		376				0
Left Lane Group Data								
Assigned Mvmt	0	5	3	7	0	0	0	0
Lane Assignment		L+T+R	L (Pr/Pm)					

Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	236	61	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1728	1781	0	0	0	0	0
Q Serve Time (g_s), s	0.0	9.0	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.0	0.9	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	708	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	39.7	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	12.8	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	37.7	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.75	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	360	383	0	0	0	0	0
V/C Ratio (X)	0.00	0.66	0.16	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	360	448	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.1	10.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.1	10.5	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.5	0.3	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.4	0.3	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.27	0.17	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment								T
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	577
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	1221
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1221
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment				T+R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	757	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1803	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	24.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	24.9	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.25	0.00	0.21	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	943	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	943	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	10.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	16	502	6	8	453	5	2	1	2	10	1	23
Future Vol, veh/h	16	502	6	8	453	5	2	1	2	10	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	546	7	9	492	5	2	1	2	11	1	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	497	0	0	553	0	0	1110	1099	550	1098	1100	495
Stage 1	-	-	-	-	-	-	584	584	-	513	513	-
Stage 2	-	-	-	-	-	-	526	515	-	585	587	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1067	-	-	1017	-	-	187	212	535	190	212	575
Stage 1	-	-	-	-	-	-	498	498	-	544	536	-
Stage 2	-	-	-	-	-	-	535	535	-	497	497	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1067	-	-	1017	-	-	173	205	535	184	205	575
Mov Cap-2 Maneuver	-	-	-	-	-	-	173	205	-	184	205	-
Stage 1	-	-	-	-	-	-	487	487	-	531	530	-
Stage 2	-	-	-	-	-	-	505	529	-	483	486	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	19.8	16.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	248	1067	-	-	1017	-	-	343
HCM Lane V/C Ratio	0.022	0.016	-	-	0.009	-	-	0.108
HCM Control Delay (s)	19.8	8.4	0	-	8.6	0	-	16.8
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	25.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	54	543	1	1	533	224	2	2	2	136	1	20
Future Vol, veh/h	54	543	1	1	533	224	2	2	2	136	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	566	1	1	555	233	2	2	2	142	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	788	0	0	567	0	0	1364	1469	567	1355	1353	672
Stage 1	-	-	-	-	-	-	679	679	-	674	674	-
Stage 2	-	-	-	-	-	-	685	790	-	681	679	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	831	-	-	1005	-	-	125	127	523	~ 127	150	456
Stage 1	-	-	-	-	-	-	441	451	-	444	454	-
Stage 2	-	-	-	-	-	-	438	402	-	440	451	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	831	-	-	1005	-	-	110	114	523	~ 115	135	456
Mov Cap-2 Maneuver	-	-	-	-	-	-	110	114	-	~ 115	135	-
Stage 1	-	-	-	-	-	-	398	407	-	400	453	-
Stage 2	-	-	-	-	-	-	416	401	-	393	407	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	29.7	241.7
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	152	831	-	-	1005	-	-	127
HCM Lane V/C Ratio	0.041	0.068	-	-	0.001	-	-	1.288
HCM Control Delay (s)	29.7	9.6	0	-	8.6	0	-	241.7
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	10.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	617	543	5	7	3
Future Vol, veh/h	2	617	543	5	7	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	636	560	5	7	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	565	0	-	0	1203	563
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	640	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1007	-	-	-	204	526
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	525	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1007	-	-	-	203	526
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	568	-
Stage 2	-	-	-	-	525	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1007	-	-	-	249
HCM Lane V/C Ratio	0.002	-	-	-	0.041
HCM Control Delay (s)	8.6	0	-	-	20.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	623	0	0	555	0	0
Future Vol, veh/h	623	0	0	555	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	677	0	0	603	0	0

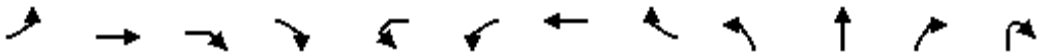
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	677	0	1280	677
Stage 1	-	-	-	-	677	-
Stage 2	-	-	-	-	603	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	915	-	183	453
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	546	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	915	-	183	453
Mov Cap-2 Maneuver	-	-	-	-	183	-
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	546	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	915	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	3	474	25	3	19	5	468	58	6	3	1	1
Future Volume (vph)	3	474	25	3	19	5	468	58	6	3	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00					1.00					
Frt		0.993					0.986			0.975		
Flt Protected							0.998			0.973		
Satd. Flow (prot)	0	1850	0	0	0	0	1827	0	0	1767	0	0
Flt Permitted		0.998					0.966					
Satd. Flow (perm)	0	1846	0	0	0	0	1768	0	0	1816	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Confl. Peds. (#/hr)	8							8				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	494	26	3	20	5	488	60	6	3	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	526	0	0	0	0	573	0	0	11	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	93	3	2	8	1	29	6	29
Future Volume (vph)	93	3	2	8	1	29	6	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98		
Frt			0.990			0.927		
Flt Protected			0.957			0.977		
Satd. Flow (prot)	0	0	1765	0	0	1645	0	0
Flt Permitted			0.738			0.977		
Satd. Flow (perm)	0	0	1361	0	0	1645	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			3			108		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Confl. Peds. (#/hr)								8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	97	3	2	8	1	30	6	30
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	110	0	0	67	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		

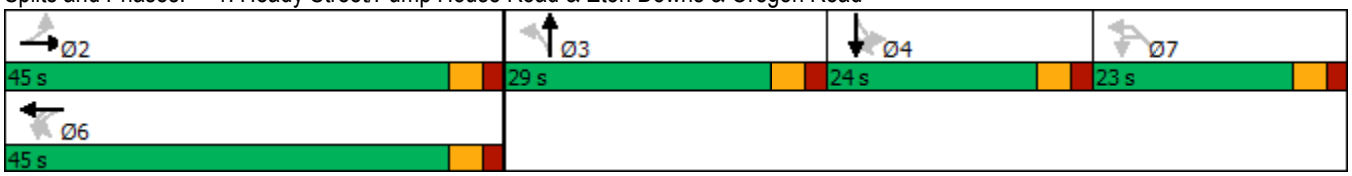


Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (%)	37.2%	37.2%			37.2%	37.2%	37.2%		24.0%	24.0%		
Maximum Green (s)	40.0	40.0			40.0	40.0	40.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Act Effct Green (s)		40.3					40.3			6.1		
Actuated g/C Ratio		0.46					0.46			0.07		
v/c Ratio		0.62					0.71			0.09		
Control Delay		23.7					26.9			41.5		
Queue Delay		0.0					0.0			0.0		
Total Delay		23.7					26.9			41.5		
LOS		C					C			D		
Approach Delay		23.7					26.9			41.5		
Approach LOS		C					C			D		
90th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		7.3	7.3		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		375					412			12		
Fuel Used(gal)		7					6			0		
CO Emissions (g/hr)		458					452			12		
NOx Emissions (g/hr)		89					88			2		
VOC Emissions (g/hr)		106					105			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		199					229			5		
Queue Length 95th (ft)		428					#536			25		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		847					811			500		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.62					0.71			0.02		

Intersection Summary

Area Type:	Other		
Cycle Length: 121			
Actuated Cycle Length: 87.9			
Natural Cycle: 125			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 26.2		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 104.2			
70th %ile Actuated Cycle: 86.9			
50th %ile Actuated Cycle: 84.9			
30th %ile Actuated Cycle: 83			
10th %ile Actuated Cycle: 80.4			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.8%	19.8%	19.8%		19.0%	19.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Act Effct Green (s)			12.2			18.2		
Actuated g/C Ratio			0.14			0.21		
v/c Ratio			0.58			0.16		
Control Delay			47.4			3.1		
Queue Delay			0.0			0.0		
Total Delay			47.4			3.1		
LOS			D			A		
Approach Delay			47.4			3.1		
Approach LOS			D			A		
90th %ile Green (s)	18.9	18.9	18.9		18.0	18.0		
90th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
70th %ile Green (s)	13.9	13.9	13.9		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	11.9	11.9	11.9		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	10.0	10.0	10.0		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	7.4	7.4	7.4		18.0	18.0		
10th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
Stops (vph)			93			3		
Fuel Used(gal)			2			0		
CO Emissions (g/hr)			125			12		
NOx Emissions (g/hr)			24			2		
VOC Emissions (g/hr)			29			3		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			54			0		
Queue Length 95th (ft)			120			13		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			298			425		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.37			0.16		

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	583	154	59	565	172	57
Future Volume (veh/h)	583	154	59	565	172	57
Number	4	14	3	8	5	12
Initial Q, veh	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)		0.99	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	160	61	589	179	59
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence			Yes		Yes	
Cap, veh/h	745	196	375	1221	270	89
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.52	0.52	0.09	0.65	0.21	0.21
Unsig. Movement Delay						
Ln Grp Delay, s/veh	0.0	22.0	10.8	7.7	35.5	0.0
Ln Grp LOS	A	C	B	A	D	A
Approach Vol, veh/h	767			650	239	
Approach Delay, s/veh	22.0			8.0	35.5	
Approach LOS	C			A	D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Case No		12.0	1.2	8.0				4.0
Phs Duration (G+Y+Rc), s		20.0	9.3	42.7				52.0
Change Period (Y+Rc), s		5.0	3.0	5.0				5.0
Max Green (Gmax), s		15.0	9.0	35.0				47.0
Max Allow Headway (MAH), s		3.9	3.8	5.3				5.2
Max Q Clear (g_c+I1), s		11.1	2.9	27.5				13.5
Green Ext Time (g_e), s		0.3	0.0	3.2				4.4
Prob of Phs Call (p_c)		1.00	0.70	1.00				1.00
Prob of Max Out (p_x)		0.00	0.06	0.00				0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3	7				
Mvmt Sat Flow, veh/h		1295	1781	0				
Through Movement Data								
Assigned Mvmt		2		4				8
Mvmt Sat Flow, veh/h		7		1425				1870
Right-Turn Movement Data								
Assigned Mvmt		12		14				18
Mvmt Sat Flow, veh/h		427		376				0
Left Lane Group Data								
Assigned Mvmt	0	5	3	7	0	0	0	0
Lane Assignment		L+T+R	L (Pr/Pm)					

Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	239	61	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1729	1781	0	0	0	0	0
Q Serve Time (g_s), s	0.0	9.1	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.1	0.9	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	700	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	39.7	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	37.7	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.75	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	360	375	0	0	0	0	0
V/C Ratio (X)	0.00	0.66	0.16	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	360	441	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.2	10.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.3	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.5	10.8	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.6	0.3	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.3	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.28	0.17	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	0	0	8
Lane Assignment								T
Lanes in Grp	0	0	0	0	0	0	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	589
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	1221
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	1221
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	0	0	18
Lane Assignment				T+R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	767	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1800	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	25.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	25.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.25	0.00	0.21	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	942	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	942	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	10.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	16	516	6	8	463	5	2	1	2	10	1	23
Future Vol, veh/h	16	516	6	8	463	5	2	1	2	10	1	23
Conflicting Peds, #/hr	16	0	4	4	0	16	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	561	7	9	503	5	2	1	2	11	1	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	572	0	0	1140	1145	569	1140	1146	522
Stage 1	-	-	-	-	-	-	603	603	-	540	540	-
Stage 2	-	-	-	-	-	-	537	542	-	600	606	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1043	-	-	1001	-	-	178	200	522	178	199	555
Stage 1	-	-	-	-	-	-	486	488	-	526	521	-
Stage 2	-	-	-	-	-	-	528	520	-	488	487	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1027	-	-	997	-	-	164	189	520	169	188	547
Mov Cap-2 Maneuver	-	-	-	-	-	-	164	189	-	169	188	-
Stage 1	-	-	-	-	-	-	472	474	-	505	506	-
Stage 2	-	-	-	-	-	-	496	505	-	473	473	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	20.8	17.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	234	1027	-	-	997	-	-	319
HCM Lane V/C Ratio	0.023	0.017	-	-	0.009	-	-	0.116
HCM Control Delay (s)	20.8	8.6	0	-	8.6	0	-	17.8
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	27.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	54	553	1	1	547	224	2	2	2	136	1	20
Future Vol, veh/h	54	553	1	1	547	224	2	2	2	136	1	20
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	576	1	1	570	233	2	2	2	142	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	803	0	0	579	0	0	1393	1496	579	1380	1380	689
Stage 1	-	-	-	-	-	-	691	691	-	689	689	-
Stage 2	-	-	-	-	-	-	702	805	-	691	691	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	821	-	-	995	-	-	119	123	515	~ 122	144	446
Stage 1	-	-	-	-	-	-	435	446	-	436	446	-
Stage 2	-	-	-	-	-	-	429	395	-	435	446	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	821	-	-	993	-	-	104	110	514	~ 110	129	445
Mov Cap-2 Maneuver	-	-	-	-	-	-	104	110	-	~ 110	129	-
Stage 1	-	-	-	-	-	-	391	401	-	392	445	-
Stage 2	-	-	-	-	-	-	406	394	-	388	401	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	30.9	265
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	145	821	-	-	993	-	-	122
HCM Lane V/C Ratio	0.043	0.069	-	-	0.001	-	-	1.341
HCM Control Delay (s)	30.9	9.7	0	-	8.6	0	-	265
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	10.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	631	553	5	7	3
Future Vol, veh/h	2	631	553	5	7	3
Conflicting Peds, #/hr	2	0	0	2	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	651	570	5	7	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	577	0	-	0	1230	581
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	655	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	996	-	-	-	196	514
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	517	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	994	-	-	-	195	510
Mov Cap-2 Maneuver	-	-	-	-	195	-
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	994	-	-	-	239
HCM Lane V/C Ratio	0.002	-	-	-	0.043
HCM Control Delay (s)	8.6	0	-	-	20.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	623	14	14	555	0	10
Future Vol, veh/h	623	14	14	555	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	677	15	15	603	0	11

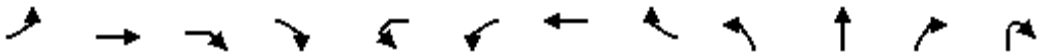
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	692	0	1318	685
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	633	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	903	-	173	448
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	903	-	169	448
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	448	-	-	903	-
HCM Lane V/C Ratio	0.024	-	-	0.017	-
HCM Control Delay (s)	13.2	-	-	9.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	3	474	25	3	19	5	468	58	6	3	1	1
Future Volume (vph)	3	474	25	3	19	5	468	58	6	3	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							1.00					
Frt		0.993					0.986			0.975		
Flt Protected							0.998			0.973		
Satd. Flow (prot)	0	1850	0	0	0	0	1824	0	0	1767	0	0
Flt Permitted		0.998					0.966					
Satd. Flow (perm)	0	1846	0	0	0	0	1766	0	0	1816	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Confl. Peds. (#/hr)	8							8				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	494	26	3	20	5	488	60	6	3	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	526	0	0	0	0	573	0	0	11	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	93	3	2	8	1	29	6	29
Future Volume (vph)	93	3	2	8	1	29	6	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98		
Frt			0.990			0.927		
Flt Protected			0.957			0.977		
Satd. Flow (prot)	0	0	1765	0	0	1645	0	0
Flt Permitted			0.738			0.977		
Satd. Flow (perm)	0	0	1361	0	0	1645	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			3			108		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Confl. Peds. (#/hr)								8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	97	3	2	8	1	30	6	30
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	110	0	0	67	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		



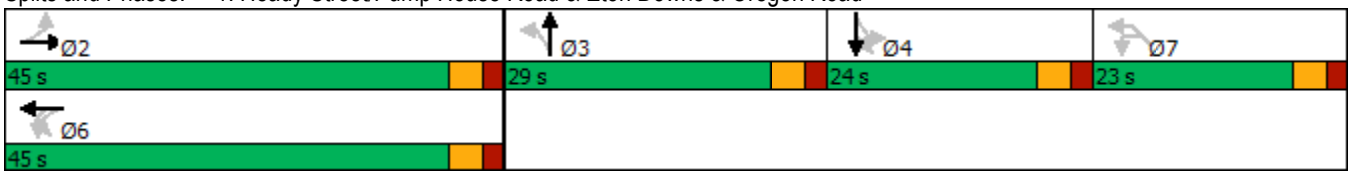
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (%)	37.2%	37.2%			37.2%	37.2%	37.2%		24.0%	24.0%		
Maximum Green (s)	40.0	40.0			40.0	40.0	40.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Walk Time (s)					7.0	7.0	7.0					
Flash Dont Walk (s)					11.0	11.0	11.0					
Pedestrian Calls (#/hr)					6	6	6					
Act Effct Green (s)		40.3					40.3			6.1		
Actuated g/C Ratio		0.46					0.46			0.07		
v/c Ratio		0.62					0.71			0.09		
Control Delay		23.7					26.9			41.5		
Queue Delay		0.0					0.0			0.0		
Total Delay		23.7					26.9			41.5		
LOS		C					C			D		
Approach Delay		23.7					26.9			41.5		
Approach LOS		C					C			D		
90th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		7.3	7.3		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	40.0	40.0			40.0	40.0	40.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		375					412			12		
Fuel Used(gal)		7					6			0		
CO Emissions (g/hr)		458					453			12		
NOx Emissions (g/hr)		89					88			2		
VOC Emissions (g/hr)		106					105			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		199					229			5		
Queue Length 95th (ft)		428					#536			25		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		847					810			500		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.8%	19.8%	19.8%		19.0%	19.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
Act Effct Green (s)			12.2			18.2		
Actuated g/C Ratio			0.14			0.21		
v/c Ratio			0.58			0.16		
Control Delay			47.4			3.1		
Queue Delay			0.0			0.0		
Total Delay			47.4			3.1		
LOS			D			A		
Approach Delay			47.4			3.1		
Approach LOS			D			A		
90th %ile Green (s)	18.9	18.9	18.9		18.0	18.0		
90th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
70th %ile Green (s)	13.9	13.9	13.9		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	11.9	11.9	11.9		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	10.0	10.0	10.0		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	7.4	7.4	7.4		18.0	18.0		
10th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
Stops (vph)			93			3		
Fuel Used(gal)			2			0		
CO Emissions (g/hr)			125			12		
NOx Emissions (g/hr)			24			2		
VOC Emissions (g/hr)			29			3		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			54			0		
Queue Length 95th (ft)			120			13		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			298			425		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.62					0.71			0.02		

Intersection Summary			
Area Type:	Other		
Cycle Length: 121			
Actuated Cycle Length: 87.9			
Natural Cycle: 125			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 104.2			
70th %ile Actuated Cycle: 86.9			
50th %ile Actuated Cycle: 84.9			
30th %ile Actuated Cycle: 83			
10th %ile Actuated Cycle: 80.4			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road

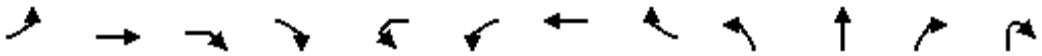


Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.37			0.16		

Intersection Summary

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	3	474	25	3	19	5	468	58	6	3	1	1
Future Volume (vph)	3	474	25	3	19	5	468	58	6	3	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							1.00					
Frt		0.993					0.986			0.975		
Flt Protected							0.998			0.973		
Satd. Flow (prot)	0	1850	0	0	0	0	1824	0	0	1767	0	0
Flt Permitted		0.998					0.966					
Satd. Flow (perm)	0	1846	0	0	0	0	1765	0	0	1816	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Confl. Peds. (#/hr)	8							8				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	494	26	3	20	5	488	60	6	3	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	526	0	0	0	0	573	0	0	11	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		0					0			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			Perm	Perm	NA		Perm	NA		
Protected Phases		2					6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			6	6	6		3	3		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	93	3	2	8	1	29	6	29
Future Volume (vph)	93	3	2	8	1	29	6	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.97		
Frt			0.990			0.927		
Flt Protected			0.957			0.977		
Satd. Flow (prot)	0	0	1765	0	0	1644	0	0
Flt Permitted			0.738			0.977		
Satd. Flow (perm)	0	0	1361	0	0	1644	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			3			105		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Confl. Peds. (#/hr)								8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	97	3	2	8	1	30	6	30
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	110	0	0	67	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		



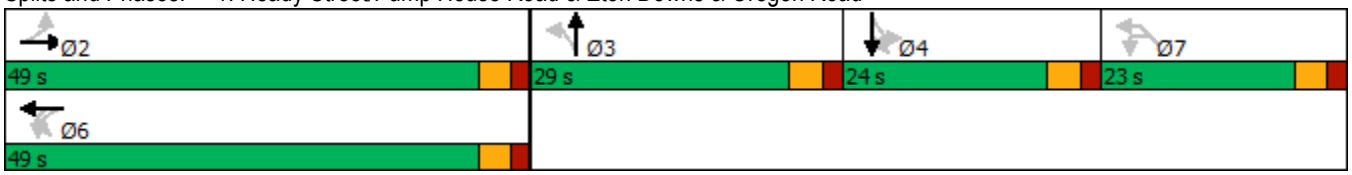
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Switch Phase												
Minimum Initial (s)	40.0	40.0			40.0	40.0	40.0		5.0	5.0		
Minimum Split (s)	45.0	45.0			45.0	45.0	45.0		29.0	29.0		
Total Split (s)	49.0	49.0			49.0	49.0	49.0		29.0	29.0		
Total Split (%)	39.2%	39.2%			39.2%	39.2%	39.2%		23.2%	23.2%		
Maximum Green (s)	44.0	44.0			44.0	44.0	44.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0					0.0			0.0		
Total Lost Time (s)		5.0					5.0			5.0		
Lead/Lag									Lead	Lead		
Lead-Lag Optimize?									Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			Max	Max	Max		None	None		
Walk Time (s)					7.0	7.0	7.0					
Flash Dont Walk (s)					11.0	11.0	11.0					
Pedestrian Calls (#/hr)					6	6	6					
Act Effct Green (s)		44.4					44.4			6.2		
Actuated g/C Ratio		0.48					0.48			0.07		
v/c Ratio		0.59					0.68			0.09		
Control Delay		22.5					25.2			43.6		
Queue Delay		0.0					0.0			0.0		
Total Delay		22.5					25.2			43.6		
LOS		C					C			D		
Approach Delay		22.5					25.2			43.6		
Approach LOS		C					C			D		
90th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		7.4	7.4		
90th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Gap	Gap		
70th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
50th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		0.0	0.0		
50th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
30th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		0.0	0.0		
30th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
10th %ile Green (s)	44.0	44.0			44.0	44.0	44.0		0.0	0.0		
10th %ile Term Code	MaxR	MaxR			MaxR	MaxR	MaxR		Skip	Skip		
Stops (vph)		360					407			12		
Fuel Used(gal)		6					6			0		
CO Emissions (g/hr)		443					437			12		
NOx Emissions (g/hr)		86					85			2		
VOC Emissions (g/hr)		103					101			3		
Dilemma Vehicles (#)		0					0			0		
Queue Length 50th (ft)		200					231			5		
Queue Length 95th (ft)		426					#498			25		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		888					848			477		
Starvation Cap Reductn		0					0			0		
Spillback Cap Reductn		0					0			0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	19.2%	19.2%	19.2%		18.4%	18.4%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)	7.0	7.0	7.0					
Flash Dont Walk (s)	11.0	11.0	11.0					
Pedestrian Calls (#/hr)	2	2	2					
Act Effct Green (s)			12.5			18.1		
Actuated g/C Ratio			0.14			0.20		
v/c Ratio			0.59			0.16		
Control Delay			50.4			3.4		
Queue Delay			0.0			0.0		
Total Delay			50.4			3.4		
LOS			D			A		
Approach Delay			50.4			3.4		
Approach LOS			D			A		
90th %ile Green (s)	19.0	19.0	19.0		18.0	18.0		
90th %ile Term Code	Max	Max	Max		MaxR	MaxR		
70th %ile Green (s)	14.4	14.4	14.4		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	12.2	12.2	12.2		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	10.2	10.2	10.2		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	7.6	7.6	7.6		18.0	18.0		
10th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
Stops (vph)			93			4		
Fuel Used(gal)			2			0		
CO Emissions (g/hr)			130			13		
NOx Emissions (g/hr)			25			2		
VOC Emissions (g/hr)			30			3		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			57			0		
Queue Length 95th (ft)			124			16		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			285			407		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Storage Cap Reductn		0					0			0		
Reduced v/c Ratio		0.59					0.68			0.02		

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 92.2			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 25.3		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 108.4			
70th %ile Actuated Cycle: 91.4			
50th %ile Actuated Cycle: 89.2			
30th %ile Actuated Cycle: 87.2			
10th %ile Actuated Cycle: 84.6			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.39			0.16		

Intersection Summary

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	3	474	25	3	19	5	468	58	6	3	1	1
Future Volume (vph)	3	474	25	3	19	5	468	58	6	3	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					
Frt		0.993					0.984			0.975		
Flt Protected						0.950				0.973		
Satd. Flow (prot)	0	1850	0	0	0	1770	1823	0	0	1767	0	0
Flt Permitted		0.998				0.330						
Satd. Flow (perm)	0	1846	0	0	0	615	1823	0	0	1816	0	0
Right Turn on Red				No				No				Yes
Satd. Flow (RTOR)										1		
Link Speed (mph)		30					30			30		
Link Distance (ft)		518					276			165		
Travel Time (s)		11.8					6.3			3.8		
Confl. Peds. (#/hr)	8							8				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	494	26	3	20	5	488	60	6	3	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	526	0	0	0	25	548	0	0	11	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)		12					12			0		
Link Offset(ft)		0					0			50		
Crosswalk Width(ft)		16					16			16		
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		60	9	60	15		9	15		9	60
Number of Detectors	1	2			1	1	2		1	2		
Detector Template	Left	Thru			Left	Left	Thru		Left	Thru		
Leading Detector (ft)	20	100			20	20	100		20	100		
Trailing Detector (ft)	0	0			0	0	0		0	0		
Detector 1 Position(ft)	0	0			0	0	0		0	0		
Detector 1 Size(ft)	20	6			20	20	6		20	6		
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		94					94			94		
Detector 2 Size(ft)		6					6			6		
Detector 2 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA			pm+pt	pm+pt	NA		Perm	NA		
Protected Phases		2			1	1	6			3		
Permitted Phases	2				6	6	6		3			
Detector Phase	2	2			1	1	6		3	3		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	93	3	2	8	1	29	6	29
Future Volume (vph)	93	3	2	8	1	29	6	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.97		
Frt			0.990			0.927		
Flt Protected			0.957			0.977		
Satd. Flow (prot)	0	0	1765	0	0	1642	0	0
Flt Permitted			0.738			0.977		
Satd. Flow (perm)	0	0	1361	0	0	1642	0	0
Right Turn on Red				Yes				Yes
Satd. Flow (RTOR)			2			133		
Link Speed (mph)			30			30		
Link Distance (ft)			307			230		
Travel Time (s)			7.0			5.2		
Confl. Peds. (#/hr)								8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	97	3	2	8	1	30	6	30
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	110	0	0	67	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right
Median Width(ft)			0			12		
Link Offset(ft)			0			75		
Crosswalk Width(ft)			16			16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	60		9	60	60	60	60
Number of Detectors	1	1	2		1	1		
Detector Template	Left	Left	Thru		Left	Left		
Leading Detector (ft)	20	20	100		20	20		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	20	20	6		20	20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Perm	Perm	NA		Perm	Perm		
Protected Phases			4					
Permitted Phases	4	4			7	7		
Detector Phase	4	4	4		7	7		

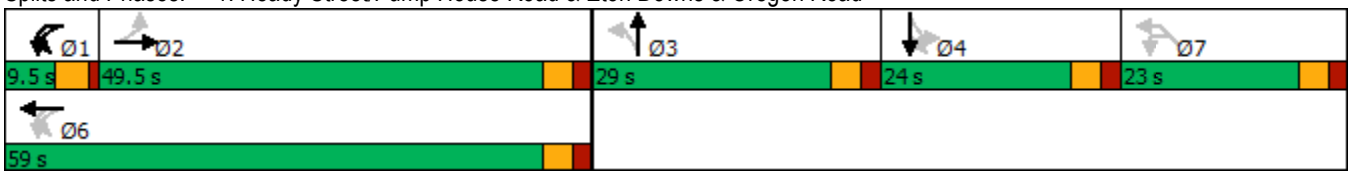
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Switch Phase												
Minimum Initial (s)	40.0	40.0			5.0	5.0	40.0		5.0	5.0		
Minimum Split (s)	45.0	45.0			9.5	9.5	45.0		29.0	29.0		
Total Split (s)	49.5	49.5			9.5	9.5	59.0		29.0	29.0		
Total Split (%)	36.7%	36.7%			7.0%	7.0%	43.7%		21.5%	21.5%		
Maximum Green (s)	44.5	44.5			5.0	5.0	54.0		24.0	24.0		
Yellow Time (s)	3.0	3.0			3.5	3.5	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0			1.0	1.0	2.0		2.0	2.0		
Lost Time Adjust (s)		0.0				0.0	0.0			0.0		
Total Lost Time (s)		5.0				4.5	5.0			5.0		
Lead/Lag	Lag	Lag			Lead	Lead			Lead	Lead		
Lead-Lag Optimize?	Yes	Yes			Yes	Yes			Yes	Yes		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max			None	None	Max		None	None		
Walk Time (s)							7.0					
Flash Dont Walk (s)							11.0					
Pedestrian Calls (#/hr)							6					
Act Effct Green (s)		50.7				54.8	54.3			6.2		
Actuated g/C Ratio		0.49				0.53	0.53			0.06		
v/c Ratio		0.58				0.07	0.57			0.10		
Control Delay		24.6				14.4	20.8			48.7		
Queue Delay		0.0				0.0	0.0			0.0		
Total Delay		24.6				14.4	20.8			48.7		
LOS		C				B	C			D		
Approach Delay		24.6					20.6			48.7		
Approach LOS		C					C			D		
90th %ile Green (s)	44.5	44.5			5.0	5.0	54.0		7.5	7.5		
90th %ile Term Code	MaxR	MaxR			Max	Max	MaxR		Gap	Gap		
70th %ile Green (s)	44.5	44.5			5.0	5.0	54.0		0.0	0.0		
70th %ile Term Code	MaxR	MaxR			Max	Max	MaxR		Skip	Skip		
50th %ile Green (s)	54.0	54.0			0.0	0.0	54.0		0.0	0.0		
50th %ile Term Code	Hold	Hold			Skip	Skip	MaxR		Skip	Skip		
30th %ile Green (s)	54.0	54.0			0.0	0.0	54.0		0.0	0.0		
30th %ile Term Code	Hold	Hold			Skip	Skip	MaxR		Skip	Skip		
10th %ile Green (s)	54.0	54.0			0.0	0.0	54.0		0.0	0.0		
10th %ile Term Code	Hold	Hold			Skip	Skip	MaxR		Skip	Skip		
Stops (vph)		361				12	350			12		
Fuel Used(gal)		7				0	5			0		
CO Emissions (g/hr)		459				13	370			13		
NOx Emissions (g/hr)		89				3	72			3		
VOC Emissions (g/hr)		106				3	86			3		
Dilemma Vehicles (#)		0				0	0			0		
Queue Length 50th (ft)		205				7	219			6		
Queue Length 95th (ft)		486				26	445			27		
Internal Link Dist (ft)		438					196			85		
Turn Bay Length (ft)												
Base Capacity (vph)		911				384	962			427		
Starvation Cap Reductn		0				0	0			0		
Spillback Cap Reductn		0				0	0			0		

Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0		3.0	3.0		
Minimum Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (s)	24.0	24.0	24.0		23.0	23.0		
Total Split (%)	17.8%	17.8%	17.8%		17.0%	17.0%		
Maximum Green (s)	19.0	19.0	19.0		18.0	18.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)			0.0			0.0		
Total Lost Time (s)			5.0			5.0		
Lead/Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		
Recall Mode	None	None	None		Max	Max		
Walk Time (s)	7.0	7.0	7.0					
Flash Dont Walk (s)	11.0	11.0	11.0					
Pedestrian Calls (#/hr)	2	2	2					
Act Effct Green (s)			13.2			18.1		
Actuated g/C Ratio			0.13			0.18		
v/c Ratio			0.63			0.17		
Control Delay			58.5			0.9		
Queue Delay			0.0			0.0		
Total Delay			58.5			0.9		
LOS			E			A		
Approach Delay			58.5			0.9		
Approach LOS			E			A		
90th %ile Green (s)	19.0	19.0	19.0		18.0	18.0		
90th %ile Term Code	Max	Max	Max		MaxR	MaxR		
70th %ile Green (s)	15.4	15.4	15.4		18.0	18.0		
70th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
50th %ile Green (s)	13.2	13.2	13.2		18.0	18.0		
50th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
30th %ile Green (s)	11.0	11.0	11.0		18.0	18.0		
30th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
10th %ile Green (s)	8.1	8.1	8.1		18.0	18.0		
10th %ile Term Code	Gap	Gap	Gap		MaxR	MaxR		
Stops (vph)			96			0		
Fuel Used(gal)			2			0		
CO Emissions (g/hr)			143			9		
NOx Emissions (g/hr)			28			2		
VOC Emissions (g/hr)			33			2		
Dilemma Vehicles (#)			0			0		
Queue Length 50th (ft)			66			0		
Queue Length 95th (ft)			137			0		
Internal Link Dist (ft)			227			150		
Turn Bay Length (ft)								
Base Capacity (vph)			254			398		
Starvation Cap Reductn			0			0		
Spillback Cap Reductn			0			0		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Storage Cap Reductn		0				0	0			0		
Reduced v/c Ratio		0.58				0.07	0.57			0.03		

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 102.8			
Natural Cycle: 135			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 24.7		Intersection LOS: C	
Intersection Capacity Utilization 59.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 118.5			
70th %ile Actuated Cycle: 102.4			
50th %ile Actuated Cycle: 100.2			
30th %ile Actuated Cycle: 98			
10th %ile Actuated Cycle: 95.1			

Splits and Phases: 1: Heady Street/Pump House Road & Eton Downs & Oregon Road



Lane Group	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Storage Cap Reductn			0			0		
Reduced v/c Ratio			0.43			0.17		

Intersection Summary

ATTACHMENT E

FAIR SHARE PERCENT CALCULATIONS

Provident design engineering
7 SKYLINE DRIVE, HAWTHORNE, NEW YORK 10532
TEL: (914) 592-4040 WWW.PDERESULTS.COM

SHEET NO. 1 OF 1
PROJECT NO. 21-022
DATE 08/13/21
BY BH
CHK'D CH

SUBJECT Fair Share Calculation

Intersection of Oregon Road & Pump House Rd/Eton Downs/ Heady St

AM Build Scenario Total Traffic = 962
AM Build Scenario Project Additional Traffic = 32

PM Build Scenario Total Traffic = 1,235
PM Build Scenario Project Additional Traffic = 34

32/962 = 0.03326 = 3.33%

34/1,235 = 0.02753 = 2.75 %

The average of these 2 percentages is equal to 3.04% or rounded 3%

The fair share contribution is 3%

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ATTACHMENT F

UPDATED TRAFFIC VOLUME FIGURES

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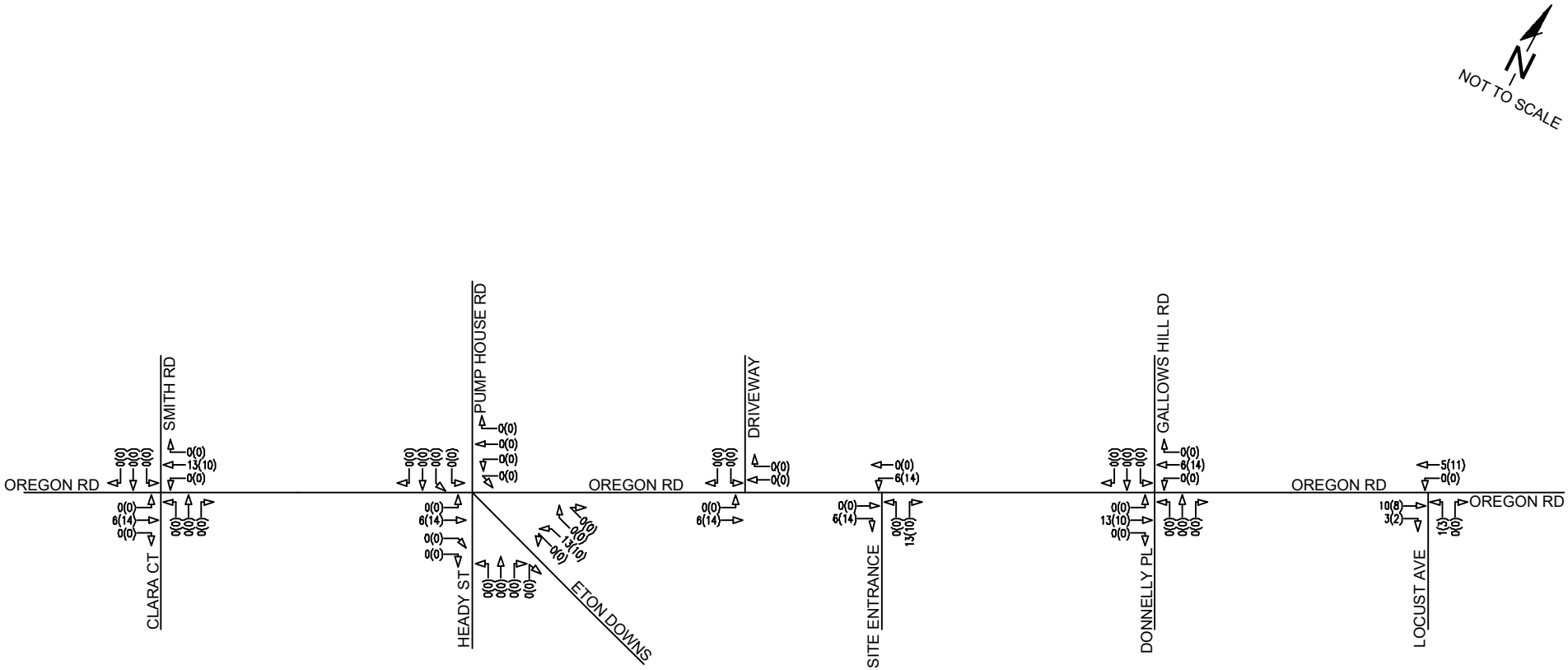


LEGEND

00 - VPH-PEAK AM HOUR (7:30-8:30)

(00) - VPH-PEAK PM HOUR (4:30-5:30)

Provident design engineering

7 SKYLINE DRIVE, HAWTHORNE, NEW YORK 10532

TEL: (914) 592-4040 WWW.PDERESULTS.COM

Site Generated Traffic Volumes

Cortlandt Senior Living

Cortlandt, Westchester County, NY

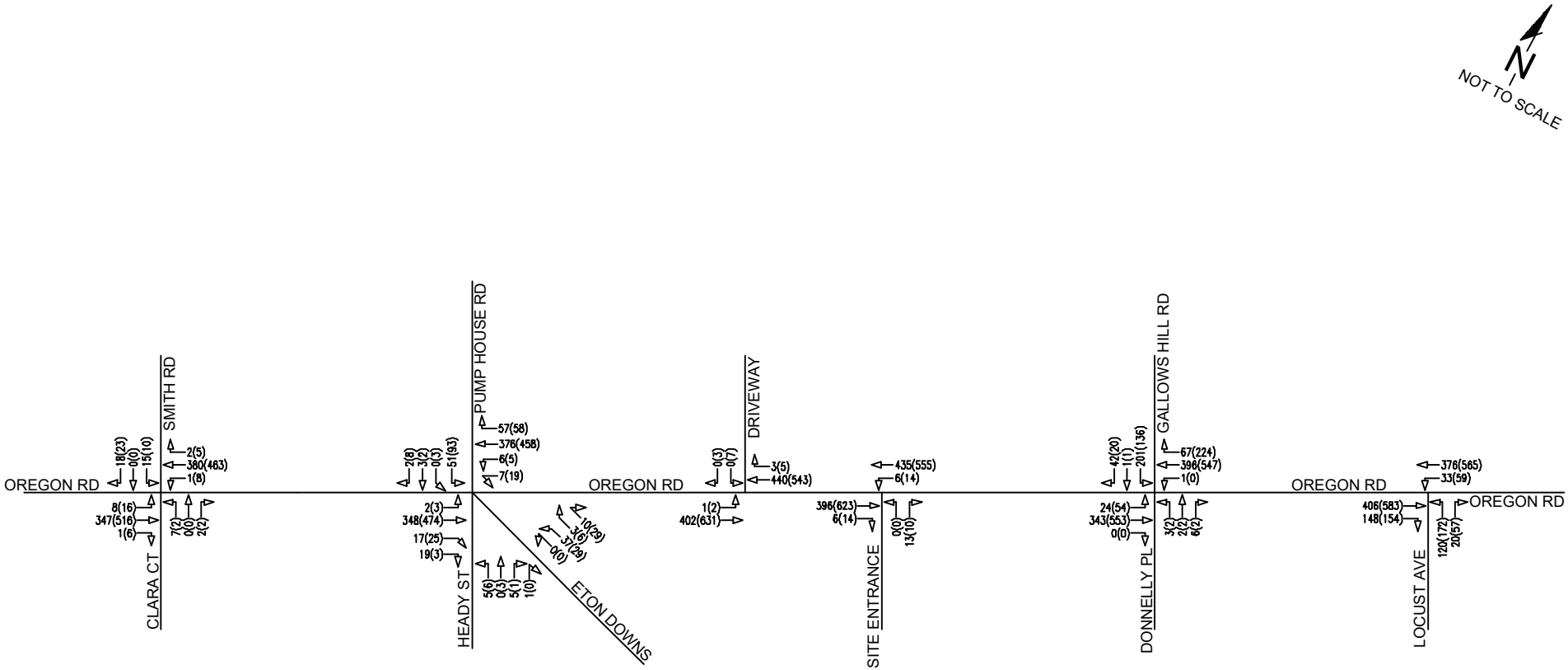
Project No. 21-022

N.T.S.

June 2021

Figure No. 07

Q:\PROJECTS-21\21-022 Cortlandt Senior Living\AutoCAD\Traffic\Analysis - Traffic Data Bank\TrafficFigures_Rev 08-16-21.dwg



LEGEND

00 - VPH-PEAK AM HOUR (7:30-8:30)

(00) - VPH-PEAK PM HOUR (4:30-5:30)

Provident design engineering

7 SKYLINE DRIVE, HAWTHORNE, NEW YORK 10532

TEL: (914) 592-4040 WWW.PDERESULTS.COM

Build Traffic Volumes

Cortlandt Senior Living

Cortlandt, Westchester County, NY

Project No. 21-022

N.T.S.

June 2021

Figure No. 08

DIVNEY • TUNG • SCHWALBE
Intelligent Land Use

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Matthew N. Steinberg, AICP

August 19, 2021

Hon. Loretta Taylor
Chairperson of the Town of Cortlandt Planning Board
and Members of the Planning Board
Town Hall
1 Heady Street
Cortlandt Manor, NY 10567

Re: Overlook Terrace
119 Oregon Road

Dear Chairperson Taylor and Members of the Planning Board:

On behalf of NRP Group (the Applicant) we offer the following responses to a comment memo prepared by Michael Preziosi, P.E., DOTS Director, dated July 23, 2021, for your consideration.

1. **Comment:** ***Demographic notes are missing from the drawings.***
Response: The following demographic notes will be added to the site plan drawing set:

School District	Lakeland Central School District
Police Protection	Westchester County Police, Cortlandt Town Hall, 1 Heady Street, Cortlandt Manor New York State Police, Cortlandt Station, 1 Memorial Drive, Croton on Hudson
Fire Protection	Mohegan Fire District, Hollowbrook Fire Station, 1130 Oregon Road, Cortlandt Manor
Emergency Medical Services	Mohegan VFA VAC, 1975 East Main Street (Rt 6) Mohegan Lake, NY Cortlandt Regional Paramedics, 1980 Crompond Road, Cortlandt Manor
Hospital	NewYork-Presbyterian Hudson Valley Hospital, 1980 Crompond Road, Cortlandt Manor
Library	John C. Hart Memorial Library, 1130 East Main Street, Shrub Oak

2. **Comment:** ***A table of all third party required permits (Army Corp / DEC / DOT / Town / etc….) shall be provided on the revised drawings.***
Response: The following table of required permits will be included on the site plan drawing set cover sheet.

Agency	Status	Approval Date	Proposed/Approved Activities
Town of Cortlandt			
Town Board	Pending	Pending	Zoning Ordinance Amendment
Planning Board	Pending	Pending	Site Development Plan; Special Permit; Steep Slope Permit, Tree Removal Permit
DOTS Code Enforcement Division	Pending	Pending	Demolition and Building Permits
DOTS Engineering Division	Pending	Pending	Sanitary Sewer Connection; MS4 SWPPP Approval
DES Water Division	Pending	Pending	Water Main Relocation (onsite); Water Backflow (fire and domestic)
Weschester County Department of Health (DOH)	Pending	Pending	Sanitary Sewer and Water Connection Permits
NYS Department of Environmental Conservation (DEC)	Pending	Pending	SPDES Permit for Stormwater Discharge During Construction
NYS Housing and Community Renewal (HCR)	Pending	Pending	Funding
NYS Historic Preservation Office (SHPO)	Complete	4/14/2021	Letter of No Effect Issued

3. **Comment:** ***Consideration should be given to create a landscape buffer between the proposed curb line and sidewalks to soften the hardscape and provide for improved pedestrian accommodations around the building. There is ample space onsite.***

Response: The walk placed at the curb line will allow senior residents to access the walk from their parking space. A landscape strip between the curb and the walk will be a concern in the winter months and possible snow accumulation. It will be easier to maintain the walk if it is located adjacent to the curb line.

4. **Comment:** ***Pedestrian accommodation should be considered along Oregon Road to connect to the existing sidewalk infrastructure. Currently only a walking trail to a proposed bus shelter is shown. Pedestrians may elect to cross Oregon Road to walk to the convenience store / gas station and towards Peekskill. Details for crosswalk, pedestrian accommodations, drop curbs and details of the same should be provided. All work within Oregon Road, shall follow NYSDOT Standards and Specifications.***

Response: The applicant is studying options to provide a crosswalk to the existing sidewalk on the westbound side of Oregon Road.

5a. **Comment:** ***The Traffic Impact Study prepared by Provident Design Engineering, dated last revised June 23, 2021 will be reviewed more thoroughly by the Town's traffic consultant HVEA. I offer the following comments:***

While the report concludes no significant adverse traffic impacts are expected for the intersection, the traffic light at the intersection of Eton Down's / Pumphouse / Heady Street and Oregon Road is antiquated and appears to be pre-timed. A general observation of the intersection during the peak hour will demonstrate that due to current geometry of this intersection and lack of turning lanes along Oregon Road, vehicles will backup and queue as far back as Locust Avenue.

Response: See Provident Design Engineering (PDE) response under separate cover.

5b. **Comment:** ***It is recommended that as part of this Application, intersection improvements including but not limited to an updated traffic signal and phasing plan with consideration provided for geometric improvements be considered as a condition of the zoning petition. At minimum recommendations, plans and specifications should be provided which can then be developed into construction documents for a future capital project.***

Response: See Provident Design Engineering (PDE) response under separate cover.

5c. **Comment:** ***The report analyzes an alternative access scheme that restricts left turns from the project driveway and re-directs these vehicles to Eton Downs Road. The conclusion of the Applicant's Consultant is this alternative is not recommended. One of the reasons provided is that this connection could promote "cut through" traffic. This could be easily rectified by making this connection "exit" only. Further consideration shall be provided to address the Planning Board's comment.***

Response: See Provident Design Engineering (PDE) response under separate cover.

6a. **Comment:** ***The proposed grading plan will require the complete clearing of the entire site in order to accommodate the construction of the proposed facility. The south of the site will be retained by a 10-ft high retaining wall. The rear (southern slope) will be graded 2H:1V. The Applicant is increasing the severity of the slope. A Steep Slope Analysis and Findings Statement was included in the EAF. It shall be revised as follows:***

1.4 acres of steep slope exist onsite. The following steep slope thresholds shall be used; 15-25%, 25-35%, >35%. A revised written narrative addressing 259-6 shall be prepared in addition to revised drawings. The Applicant must clearly summarize impacted steep slopes vs site wide steep slopes.

Response: Based on Town Code Chapter 259-6, the slope analysis will be updated to reflect 15-25%, 25-30% and over 30%.

Where steep slopes are being created, they will be stabilized with sustainable ground cover planting, shrubs and seed mixes with a stabilization fabric over any slope 3:1 or greater.

6b. **Comment:** ***EAF Figure No. I-1 and I-2 identify existing and proposed steep slopes. Based on the proposed grading plan, the applicant is proposing to create approximately .8 acres of steep slopes in excess of 15%.***

Response: The slope analysis will be updated and the amount of slopes in excess of 15% will be confirmed.

6c. **Comment:** ***All slopes greater than 4H:1V shall be stabilized with erosion control matting / blanketing and planted. Plans must delineate areas requiring such stabilization.***

Response: Plans and details will note that planted or seeded slopes greater than or equal to 3:1 will include an erosion control fabric in

accordance with the NYSDEC 2016 Standards and Specifications for Sediment and Erosion Control, Page 4.5. The erosion and sediment control plan will note these slope areas.

6d. **Comment:** ***Earthwork quantities are missing. Applicant shall evaluate and balance cuts and fills to the maximum extent practical. The geotechnical report indicates the majority of existing fill that was brought onsite is not suitable for structural use.***

Response: The site design will balance cut and fills as much as possible. Updated earthwork calculations will be submitted to the Town with the revised site plan package. Excess fill material, including unsuitable fill, will be removed from the site during construction and disposed of in accordance with all local and state regulations.

6e. **Comment:** ***A 10-ft high retaining wall is proposed. A cross section through the site shall be provided. Additional comments to follow.***

Response: A cross section through the site will be provided in the plan set.

6f. **Comment:** ***Section 259-6 (H) is mostly advisory. Bullet points 11-15 shall be added on the site plan as notes.***

Response: These notes will be provided on the site plan drawings.

7a. **Comment:** ***Notes on the site demolition plan shall be revised to reflect the following:***

Applicant shall file a demolition permit with the Department of Technical Services – Code Enforcement Division prior to the removal of any structure.

Response: Comment noted

7b. **Comment:** ***Prior to any demolition occurring in Town right-of-way (Donnelly Place and the Oval) a road opening permit shall be filed and obtained through the Department of Environmental Services.***

Response: Comment noted

7c. **Comment:** ***All structures shall be tested for lead, asbestos and other hazardous materials in accordance with the NYS Uniform Fire Prevention and Building Code and NYCRRR by a licensed and certified tester. All hazardous materials shall be properly abated and lawfully disposed of offsite.***

Response: Comment noted

7d. **Comment:** ***All onsite existing wastewater septic systems shall be abandoned in accordance with the Westchester County Department of Health Guidelines and generally accepted engineering best practice. All material shall be lawfully disposed of off-site.***

Response: Comment noted

7e. **Comment:** ***All asphalt pavement removed from the site and Donnelly Place right-of-way shall be lawfully disposed of off-site and not mixed with other construction debris.***

Response: Comment noted

7f. **Comment:** ***All imported fill material shall be unrestricted residential use in accordance with NYSDEC soil objective clean-up requirements. No recycled material shall be used as fill within areas that will be planted, grassed and otherwise stabilized.***

Response: Comment noted

7g. **Comment:** ***All existing utilities (water services, sanitary, telecommunications, power, etc…) shall be excavated and removed from the site. All existing water services shall be cut and capped as close to the curb stop as reasonably practical. The Town of Cortlandt DES – Water Division shall be contacted to inspect said work.***

Response: Comment noted

7h. **Comment:** ***Applicant shall clarify if blasting is proposed as part of this project. If so, preliminary geotechnical investigations shall be submitted as part of this application and a listing of all properties within 1000-ft of the proposed limits of blasting shall be established. It is***

recommended that all blasting requirements be included in the approval (including pre and post blast survey), noticing requirements, seismic monitoring and processing of rock. Otherwise general notes related to blasting shall be removed from the plan set and a note indicating "No blasting, no rock crushing or processing of material is proposed onsite. All debris will be lawfully disposed of off-site.

Response: Comment noted. Blasting is not anticipated based on the soil boring information.

8. **Comment:** ***The 75-ft wide roadway dedicated to the Town of Cortlandt will revert to the Applicant. This shall be noted in any findings statement and resolutions of approval.***

Response: Comment noted

9. **Comment:** ***Applicant shall demonstrate to the satisfaction of the Town Board with consultation by Town Counsel that the all deed restrictions (noted on Filed Map 5001 and as referenced on the Alta Survey) have been released.***

Response: Comment noted

10. **Comment:** ***Applicant shall also clarify why portions of the property are restricted from development and noted as "park area".***

Response: Comment noted

11. **Comment:** ***Applicant is referred to Chapter 33 of the NYS Building Code, Safeguards During Construction. Requirements shall be incorporated into the submitted plan set.***

Response: Safeguards to be implemented during construction will be included in the site plan set.

12a. **Comment:** ***The Applicant is referred to 2020 Fire Code of NYS, Chapter 5 – Fire Services Features. A swept path analysis for all emergency apparatus shall be provided. The design vehicles are as follows.***

HQ—L- 35 length is 42'2" (506") with a turning radius of 22.9 Degrees. To deploy stabilizer jacks a minimum 16- 18 feet for full deployment and 12' for short-jack deployment;

E-252 from HQ- Length is 31' 11" (383") with a turning radius of 23.8 degrees; E-256 out of Hollowbrook Station: Length is 32' (384") with a turning radius of 23.5 degrees.

Plans must adequately demonstrate that an aerial apparatus can setup and meet the required hose pulls.

Response: A swept path analysis for the requested emergency vehicle access (L35 and E-252 fire apparatus vehicles as confirmed) will be prepared and submitted. The site has been designed to accommodate the turn movements of these vehicles.

12d. **Comment:** ***Plans shall be revised to include fire lanes and striping details of the same.***

Response: The required fire lane designations and signage will be reviewed with the Town's fire inspector and incorporated into the site plan drawings.

13. **Comment:** ***A site wide photometric analysis shall be prepared and submitted for review.***

Response: The photometric analysis will be prepared and submitted in the revised site plan drawing set.

Utility Comments

14a. **Comment:** ***As part of this application a water main extension is proposed, looping Oregon Road to Eton Downs through the project site. The existing water main through the site is proposed to be abandoned in place. A water main extension fees shall be provided prior to the approval and endorsement of the plans by the Town of Cortlandt in accordance with the Town's Master Fee schedule. The existing water main shall be removed from the site once the new main is placed into service.***

Since the main will be dedicated to the Town of Cortlandt shop submittals shall be provided to the Town of Cortlandt for review and approval prior to installation for all water mains and appurtenances.

Response: Comment Noted. Once the design is accepted by the Town, the final design plans and reports will be submitted to the Westchester County Department of Health for approval of a public water main extension.

14b. **Comment:** ***This water main as proposed will be dedicated as public. The Town of Cortlandt will be required to make application to the Westchester County Department of Health. All permitting fees and submittal costs shall be borne by the NRP Group.***

Response: Comment noted.

14c. **Comment:** ***Applicant shall coordinate with DES – Water in regards to proposed water main tie-in locations. Multiple water mains (existing) are shown in Oregon Road and Eton Downs. It is recommended that mains be connected with a tee, 3-8" MJxMJ resilient wedge gate valves. Plans shall be revised to differentiate existing water main (size and type) versus proposed and existing water main to be demolished.***

Response: Connection details will be coordinated with the Town of Cortlandt DES.

14d. **Comment:** ***All water main pipe shall be "Tyton Joint" with push on (rubber gasket) and 2 bronze wedges per joint, class 54 double cement lined ductile iron pipe, class 350 as manufactured by United States Pipe and Foundry Company, made in the U.S.A., or approved equal.***

Response: Comment Noted

14e. **Comment:** ***All fittings shall be mechanical joint with retainer glands, cement lined, ductile iron pipe as manufactured by United States Pipe and Foundry Company, made in the U.S.A. or approved equal.***

Response: Comment Noted

14f. **Comment:** ***The pipe and fittings shall be cement mortar lined to twice the standard thickness in accordance with ANSI A21.4 (AWWA C104) except as noted. All changes in pipe directions, requiring fittings both vertical and horizontal, shall be secured with retainer glands and thrust blocked with concrete against undisturbed earth.***

Response: Commented noted.

14g. **Comment:** ***The mechanical joint restraint system shall incorporate a restraining mechanism in the follower gland, which shall impart a multiple welding action against the pipe. Glands shall be manufactured of ductile iron conforming to ASTM A536-80. Retainer glands shall be "Megalug" as manufactured by Ebaa Iron, Inc., or approved equal.***

Response: Comment noted.

14h. **Comment:** ***Gate valves shall be Mueller, iron body, non-rising stem conventional packing, resilient seated, mechanical joint with retainer glands, pressure class 350, opening left (CCW) and operation shall be by 2" square wrench nut.***

Response: Comment noted.

14i. **Comment:** ***All drawings shall be revised to indicate size and type of all water main, hydrants and appurtenances.***

Response: Comment noted.

14j. **Comment:** ***The water main layout plan shall call out all horizontal bends. Stationing shall be provided in 100- ft increments.***

Response: Comment noted.

14k. **Comment:** ***A water main profile is required. All vertical bends separation to wastewater sources, etc… shall be shown.***

Response: Comment noted.

14l. **Comment:** ***Since this is a new water main, all horizontal and vertical separation distances shall be met unless otherwise justified by the design engineer to be infeasible.***

Response: Comment noted.

14m. **Comment:** ***Fire service shall be sized to meet the hydraulic demand of the required fire suppression system. The EAF indicates a flow test was performed on March 9, 2020. Sprinkler design may be deferred until a building permit application is filed.***

Response: Comment noted. Adequate pressure and flow were found based on the 2020 flow test. Fire service and sprinkler design will be coordinated with the Town.

14n. **Comment:** ***Corporation Stop shall be Mueller B-2500N (pressure rating 300 psi). Ground key models are preferable.***

Response: Comment noted.

14o. **Comment:** ***Curb Valve shall be Mueller Mark II Oirseal (min pressure rating 175 psi) H-15209N, or B-25209N with no drain ports depending on operating pressure of main.***

Response: Comment noted.

14p. **Comment:** ***Curb boxes shall be Mueller Model No. H-10314, 4 ½' full extension, or approved equal and Made in the U.S.A. If needed, Stainless Steel extension rods within the curb boxes shall be furnished and installed.***

Response: Comment noted.

14q. **Comment:** ***A reduced backflow preventer shall be provided for the potable water supply in accordance with applicable State, County and Local laws.***

Response: Comment noted.

14r. **Comment:** ***A reduced backflow preventer shall be provided for proposed irrigation in accordance with applicable State, County and Local***

laws. It is recommended that irrigation be disconnecting from the public supply and an onsite well be utilized for said purposes.

Response: Comment noted.

14s. **Comment:** ***A double check detector assembly shall be provided for the fire service. Device shall be tamper proof. If a bypass is proposed it shall be metered.***

Response: Comment noted.

14t. **Comment:** ***All water services and fire services shall be metered.***

Response: Comment noted.

14u. **Comment:** ***Fire hydrants shall be "Mueller" Super Centurion 350, (or approved equal), with safety breakaway flange, 3-way, opening left (CCW). The pumper nozzle shall be 5 1/4"; the two hose nozzles shall be 2 ½". Bodies shall be painted yellow, caps red. Detail shall be revised accordingly.***

Response: Comment noted. The detail will be revised and submitted.

14v. **Comment:** ***All utility easements shall be 20-ft minimum. Utilities shall run as close to the centerline as possible. Easement shall be submitted for review and approval prior to the submittal of any plans to the WCDOH. All easements shall be filed with the Westchester County Clerk - Division of Land Records.***

Response: Comment noted.

14w. **Comment:** ***Westchester County DOH requirements for testing and disinfection shall be provided on final drawings.***

Response: Comment noted.

15. **Comment:** ***As part of this application, the subject premises is proposing to connected to the Town's sanitary infrastructure at the intersection of Eton Downs and Oregon Road. The Applicant is advised that the proposed sewer connections from facilities within that are design to carry in excess of 2,500 gallons per day flow requires Departmental***

of Health approval for its private sewer connection and must be designed in accordance with 10-States Standards.

Response: Comment noted. It is anticipated that the sanitary sewer service will require approval from the Westchester County Department of Health.

16. **Comment:** ***Applicant shall provide a detail to connect to the Town's sanitary manhole near Oregon Road. Applicant shall clarify if a drop invert is proposed.***

Response: A drop connection, if required, will be verified.

17. **Comment:** ***Sanitary profiles shall be provided. A sanitary main shall be sloped at 2% unless determined to be determined to be infeasible by the design engineer. At minimum the slope of the main shall meet the required minimum scouring velocity published in the 10 States Standard.***

Response: Due to the low cover conditions and possible other utilities located at the Town sewer, the sewer connection may be less than 2% slope. Scouring velocities will be reviewed to meet 10 State Standards.

18. **Comment:** ***Figure No. G2 shall be revised to provide RIM elevations. Manholes 1-12 shall be opened and visually inspected by the design professional and witnessed by the Town.***

Response: Additional information on the existing sanitary manholes will be provided. Each manhole was inspected with representatives of the Town Department of Public Works and additional review with DES will be undertaken to verify the connection requirements will be adequate.

19. **Comment:** ***Maximum sanitary flow shall be set at 75% of the pipe diameter. Between manholes 8 and 12 as identified in EAF Figure No. G2 average daily flow and peaking periods will exceed this. In addition due to the shallow slope of the existing main, it is recommended that inflow and infiltration requirements be set at three to one***

(3:1) offset ratio for non-affordable units and one to one (1:1) for non-affordable units.

Response: Additional review with DES will be undertaken to verify the connection requirements will be adequate and to determine the required Inflow and Infiltration mitigation requirements have been provided.

20. **Comment:** ***The Engineer shall field verify the actual rims and inverts in which the existing pipe slopes are less than 1%. Information was noted as taken from a partial as-built. There may be discrepancies with actual field conditions.***

Response: The survey information will be reviewed with DES.

Landscape Comments

21. **Comment:** ***Demolition and landscape plans do not seem to match the June 4, 2021 report prepared by the Town's Consultant Bartlett Tree Expert. Plans shall be revised to call out all specimen, protected and trees of significance (e.g. White Pine #1240, Silver Maple #1230, American Smoke #1306, Catapla (#1314). Applicant shall comment and provide response related to preserving these trees.***

Response: The specimen, protected and significant trees noted by Bartlett will be flagged on a new plan sheet for Tree Protection and Preservation. Due to the proposed locations of the building and parking, and due to the grading required to accommodate these improvements, it is not feasible to preserve trees 1240, 1306 and 1314. However, grading adjustments are being reviewed to try to preserve tree 1230, the 70" Silver Maple in the front yard which will remain a landscaped area for the proposed project.

22. **Comment:** ***The total number of trees proposed for removal is still outstanding. The Bartlett Study indicates 598 trees onsite. The plans do not indicate the total number of trees >4-inches proposed for removal.***

Response: The 598 trees included in the Bartlett study included over 200 trees offsite – particularly on the property east of the project site. There are 393 trees onsite per the 12/23/20 Gallas surveyed tree

locations. Per the Gallas survey and most recent site plan, approximately 280 trees will be removed from the site and approximately 7 trees will be removed in the Eton Downs right of way. These numbers will be confirmed with the issuance of a revised plan set along with a tree removal and preservation plan.

23. **Comment:** ***Applicant shall comment and provide response on quality of trees and restorative efforts required to be undertaken for all pines along Eton Downs.***

Response: To improve the growing condition for the trees along Eton Downs, the Applicant proposes to cut invasive vines, cut and stump dead and pioneer plants, and remove invasive understory plants.

24. **Comment:** ***The storm water basins shall be planted in accordance with the NYSDEC Storm Water Design Manual. Trees, shrubs and wetland plants shall be provided for the bio-retention basins, in addition to the proposed grass mixes.***

Response: In accordance with the NYSDEC Storm Water Design Manual, flood tolerant, native trees, shrubs and grasses will be added to the northwest bioretention basin. Flood tolerant, native grasses and shrubs, as well as a stormwater basin seed mix, will be added to the northeast stormwater pond.

25. **Comment:** ***Slope plantings are noted as typical, but not shown. A minimum number of trees and shrubs shall be provided. The construction sequence plan shall incorporate landscaping in order to ensure installation in a timely and effective manner.***

Response: Erosion control shrubs are proposed on the rear south slope at a spacing of 4' on center to stabilize and colonize the slope. Due to the nature of the 3:1 slope, trees are not proposed on the slope. However, the revised landscape plan will include trees within the proposed disturbed areas south of the slope where the grades are less steep. The construction sequence plan will incorporate landscape installation.

26a. **Comment:** ***When determining the actual number of trees required to be replanted, the Planning Board shall consider the following factors:***

Approximately 8 acres are proposed for disturbance. At minimum the total number of trees required to be mitigated is 349 trees. Each protected tree that is to be removed shall be replaced by at least 1 1/2 times the number (rounded up) of the same trees as removed. On slopes of 25% or greater, two trees shall be planted for each tree proposed to be removed.

Response: Per the proposed plan, a total of 8.73 acres are proposed to be disturbed (7.91 on site and 0.46 offsite on Eton Downs). Per the Town Code, this will require the planting of 365 trees. The disturbance area will be confirmed with the revised plan set.

2 protected Cornus florida trees will be removed and 3 Cornus florida species will be planted. Approximately 40 trees will be removed from slopes of 25% or greater requiring the planting of 80 trees. The final number of trees to be removed on 25% or greater slopes and required planting mitigation will be confirmed with the revised plan set.

26b. **Comment:** ***Pollinator species, grasses and meadow mixes shall be specified to be seeded, annually for a period of no less than 3-years and be incorporated into an annual monitoring plan. The variety of pollinator species shall meet or exceed those as recommended by the NYSDEC.***

Response: Notes on the revised plans will indicate that seed mixes shall be seeded annually for a period of three years.

26c. **Comment:** ***All deciduous plantings shall be 3-inch caliper at DBH and all evergreens 6-8 ft in height from finished grade.***

Response: The proposed landscape plan will include a mixture of shade tree sizes with 4 1/2”-5” caliper trees along the entry drive, 3”-3 ½” caliper trees in the landscaped and east/west buffer areas, and 2 ½”

– 3" caliper trees to fill in the south wooded area. The plant list will include ornamental, understory and evergreen trees in the 6' to 8' height range.

26d. **Comment:** ***The following equivalent ratios may be used in lieu of planting a tree:***

i. 3:1 Understory trees (minimum 1" caliper)

ii. 10:1 Small maturing trees (<4-ft in height) and shrubs (2 gallon minimum)

Response: Comment noted. These ratios will be applied.

26e. **Comment:** ***Every effort shall be made to re-plant the required number of trees onsite. In the event that this quantity cannot be re-planted, off-site mitigation or payment in-lieu may be provided.***

Response: Using a combination of primarily native shade, ornamental, understory, and evergreen trees, and deciduous and evergreen shrub planting, we anticipate meeting the Town's planting requirement. If the requirement cannot be achieved with onsite planting, a combination of planting and fee in lieu of planting will be used to meet the Town requirements. A tree removal and preservation plan as well as an updated landscape plan will be included with the revised plan set.

26f. **Comment:** ***The revised reforestation plan will be submitted to the Town's Conservation Advisory Council for final comment.***

Response: Comment noted.

26g. **Comment:** ***It is recommended that trees along the perimeter of the property outside along the periphery of the limits of disturbance be preserved if these trees after a risk assessment are determined to be healthy.***

Response: Unless impacted by the development or noted as a hazard, trees along the periphery will be preserved.

Storm Water Comments

Please note, the Town's Consultant (HVEA) will provide additional comments under separate cover.

27. **Comment:** ***A revised Notice of Intent is required in order to obtain coverage under the SPDES General Permit for Construction Activity based upon the response to comment letter(s).***

Response: Comment noted.

28. **Comment:** ***Applicant is advised that controls will need to be modified to accommodate corrections made to the site plan in response to this comment letter.***

Response: Comment noted.

29. **Comment:** ***The SWPPP shall be revised to meet all requirements of the NYS Storm Water Design Manual. The project shall be classified as redevelopment (NYSDEC SWDM Ch. 9). Approximately 8 acres is proposed for disturbance with 2.5 acres proposed as impervious. This is an increase from pre-existing conditions by approximately 0.2 acres.***

Response: Comment noted.

30. **Comment:** ***New impervious surfaces shall be sized in accordance with Chapter 4 of the SWDM. Redevelopment shall meet the sizing criteria outline in Chapter 9.3 of the SWDM.***

Response: Design has included these requirements.

31. **Comment:** ***The SWPPP must clearly demonstrate the post development peak flow rate(s) and velocities have not increased from the pre-developed condition. There is extensive re-grading shown which will alter the surface hydrology, including importation of fill material.***

Response: Stormwater Hydraulic conditions have been provided. Based on further discussion with DES, the design will include additional stormwater storage to reduce the peak flow rates as it exits the property. Additional review will be coordinated with DES.

32. **Comment:** ***Underdrains, curtain drains and similar subsurface conveyance***

shall drain to daylight and not to any water quality structures or storm water best management practices. The amount of flow is unknown and may lead to these devices not functioning as intended hampering detention and water quality treatment. The plans indicate multiple overland channels and graded swales that will re-direct runoff from the rear of the property to the Town's infrastructure in Oregon Road and Donnelly Place.

Response: Subsurface underdrains and offsite runoff will be designed to bypass the stormwater managements systems. Additional review of the site details will be coordinated with DES.

33. **Comment:** ***The SWPPP proposes to meet water quality controls with a bio-retention basin and extended detention pond. Discharge from the site is being routed towards existing Town infrastructure at Donnelly Place. The SWPPP does not evaluate the existing Town infrastructure (downstream) nor comments on its suitability to effectively convey storm water runoff from this site. Typically, storm catch basins and infrastructure located within a right-of-way is constructed to capture and convey runoff from the roadway and shoulders to a storm water outfall.***

Response: The stormwater design has been designed such that the peak rate of runoff will be at or lower than currently exists. Based on further discussion with DES, the design will also include additional onsite stormwater storage to further reduce the peak flow rates as it exits the property. Additional review will be coordinated with DES.

34. **Comment:** ***The SWPPP should consider practices that infiltrate runoff reduction volumes and water quality volumes in order to recharge the aquifer. Consideration for off-site discharge may be provided if there is no other feasible alternative. It is unclear if subsurface investigations were performed in the area of the proposed best management practices. The geo-technical report does indicate that the site is influenced by ground water at an average depth of 10-ft. Infiltration practices may be possible.***

Response: Additional test pits and perc tests will be undertaken to determine if infiltration practices can be provided.

35. **Comment:** ***The bio-retention and extended detention basin, details shall be revised to include proposed plant material.***

Response: The basin details will be revised to include the proposed plant material.

36. **Comment:** ***The applicant shall request a 5-acre waiver as they are proposing to disturb a total of 8 acres. Typically it is recommended that soil disturbance be kept at less than 5 acres at any one time.***

Response: A 5-acre waiver will be requested for at least part of the construction period due to the amount of earthwork required.

37. **Comment:** ***A construction sequencing plan shall include various stages of construction (e.g., clearing, erosion controls, access road construction, staging, installation, restoration, plantings, and pollinator soil stabilization). All employee parking and material storage shall be revised to limit unnecessary tree removal and disturbance to steep slopes.***

Response: A sequencing plan will be provided.

38. **Comment:** ***Site maintenance and good housekeeping protocol shall include fugitive dust control and watering requirements.***

Response: Comment noted.

39. **Comment:** ***The SWPPP shall include copies of maintenance easements during and after construction in accordance with Town Code Chapter 262-9.***

Response: Comment noted.

40. **Comment:** ***Recycled material is not recommended for onsite use. Only earthen material or natural stone is permitted to be used as fill. If recycled material is proposed, it must be noted on the plans and its intended use confirmed to be consistent with NYSDEC's beneficial use***

determinations.

Response: Comment noted. Any recycled material, if used, will be certified meeting DEC beneficial reuse requirements or that is meets clean fill requirements.

41. **Comment:** ***Applicant shall clarify how much fill is proposed to be brought to the site. All fill shall be tested in accordance with NYSDEC rules and regulations and shall be certified as unrestricted for residential use, certified by a professional engineer prior to importation on site.***

Response: Comment noted.

Detail Comments

42. **Comment:** ***A significant number of details are missing. These include but are not limited to a dumpster enclosure, emergency access gate with knox box, site amenities, foundations (e.g. light poles), bollards, site signage, wayfinding, pedestal or free standing signs for the facility name etc….***

Response: Additional details will be provided where needed.

43. **Comment:** ***Station the proposed roadway and provide a centerline profile in intervals not to exceed 50-ft.***

Response: This will be included for the driveways and parking area drive aisles.

44. **Comment:** ***Sidewalk details shall be revised to demonstrate a maximum cross slope of 1.5%. It is recommended curb ramp details have a maximum slope of 1:13.***

Response: Comment noted.

45. **Comment:** ***Storm frames and grates shall be pedestrian safe along curbs, parking lots and walkways. Any public infrastructure shall be manufactured domestically.***

Response: Comment noted.

46. **Comment:** ***All trench details shall be revised to provide magnetic tracer tape, specific to the pipe type. If bury depth is greater than 6-ft multiple layers shall be provided no greater than 2-ft from finished grade and no closer than 2-ft to the pipe.***

Response: The details will be revised to include tape requirements.

47. **Comment:** ***Sanitary sewer manhole shall be revised to include boot seal (e.g. Kor N-Seal), bitumastic coating. Manhole diameter shall be 36" minimum. There are conflicting details presented on the site detail sheets SP 6.1 and SP 6.4.***

Response: The details will be revised as requested.

48a. **Comment:** ***The Redi Rock retaining wall details shall be noted as a deferred design. Based on the geotechnical assessment existing fill is not sufficient and structural fill is proposed. Excess material will be lawfully disposed of off-site or used onsite based on the soil properties.***

A final detail and cross section at maximum retained height shall be provided.

Response: The retaining wall design plans prepared and stamped by a Professional Engineer will be provided at the time of Building Permit Application. All soil export will be disposed of off-site in accordance with local and state regulations.

48b. **Comment:** ***Computations demonstrating that all factors of safety for sliding, overturning and settlement shall be submitted along with an engineer's certification stating such prior to final approval.***

Response: The retaining wall design plans prepared and stamped by a Professional Engineer will be provided at the time of Building Permit Application.

48c. **Comment:** ***Engineer shall comment if a global stability analysis is warranted due to the proposed wall height and 2H:1V soil backfill and its imposed surcharges.***

Response: The retaining wall design plans prepared and stamped by a Professional Engineer will be provided at the time of Building Permit Application.

48d. **Comment:** ***A cross section (N/S) of the site from Eaton Downs though the building shall be submitted with the analysis.***

Response: This cross section will be provided.

We look forward to continuing our review of the Project with the Planning Board.

Very truly yours,

DIVNEY TUNG SCHWALBE, LLP

Gerhard M. Schwalbe, P.E.
Partner

File 858

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August 19, 2021

Hon. Loretta Taylor
Chairperson of the Town of Cortlandt Planning Board
and Members of the Planning Board
Town Hall
1 Heady Street
Cortlandt Manor, NY 10567

Re: Overlook Terrace
119 Oregon Road

Dear Chairperson Taylor and Members of the Planning Board:

On behalf of NRP Group (the Applicant) we offer the following responses to a comment memo prepared by Chris Kehoe, AICP, Deputy Directory, DOTS Planning Division, dated July 28, 2021, for your consideration.

1. **Comment:** ***The Planning Division conducted a review of the subject application consisting of the following:***

A 16-page set of drawings entitled "Site Plan Application Drawings, Overlook Terrace" prepared by Divney, Tung & Schwalbe, LLP latest revision dated June 23, 2021.

Expanded Environmental Assessment Form dated June 2021.

Response: Comment noted.

2a. **Comment:** ***Based on a review of the above-mentioned drawing and expanded EAF application, the following information as required by Chapter 307-71 of the Town of Cortlandt (Zoning) and other regulations should be submitted for the subject application unless waived by the Planning***

Board at the applicant's request.

a. ***The subject drawing (SP-1) shows the proposed location and height of the proposed parking lot light fixtures and proposed wall mounted fixtures. Drawing SP 6.5 shows the proposed lighting details. It is suggested that the applicant analyze the use of a more traditional/historic looking light fixture. A photometric plan is also required.***

Response: A photometric plan will be prepared and submitted for review. The Applicant is reviewing options for the requested traditional light fixtures and will submit representative samples.

2b. **Comment:** ***The subject drawing should be revised to show a garbage enclosure with sufficient space for garbage and recycling. The applicant is advised the Town will not provide garbage/recycling pick-up to the site and a note confirming the same shall be added to the subject site plan.***

Response: An exterior garbage enclosure is not proposed, as all trash and recycling will be collected internally and will be wheeled outside in large bins to be picked up by a private contractor. The Applicant acknowledges that the Town will not provide garbage/recycling pickup and will contract a private refuse and recycling carter. A note will be added to drawing SP-1.

2c. **Comment:** ***The subject drawing shall show the existing and proposed location, height and design of all fences. Drawing SP 6.2 shows a detail of the proposed retaining wall at the rear of the proposed building which varies from 8' to 10' in height. The applicant shall submit additional details/renderings showing proposed colors and treatment of the wall.***

Response: Fence details will be provided in the plan set. The proposed rear retaining wall will be a precast concrete modular wall system with a natural stone appearance. Representative images of the proposed wall will be submitted.

2d. **Comment:** ***The subject drawing shall show the location, height and design of all existing and proposed signs.***

Response: The existing and proposed sign locations, height and design will be submitted to the Town with the revised site plan package.

2e. **Comment:** ***A complete set of elevation drawings, with the proposed color and materials, shall be submitted for referral to the Town's Architectural Advisory Council (AAC) for their review and comment. The submitted information has already been provided to the AAC for their preliminary review.***

Response: Architectural plans and elevations with color and material selections will be submitted to the Town with the revised site plan package.

3. **Comment:** ***The applicant is proposing a 135-unit active adult residential community at the site of the Colonial Terrace catering facility. The facility is proposed to have 96 one-bedroom and 39 two-bedroom units. The building is proposed to be approximately 125,000 sq. ft. All units are proposed to be affordable. The subject property is approximately 8. 7 acres in size and is zoned CC, community commercial. The proposed facility is not permitted by the existing CC zoning and the applicant has proposed a zoning amendment to permit an active adult residential community in a CC zone pursuant to a Special Permit issued by the Town Board. The language of the proposed special permit requires that for a parcel to be eligible for the proposed Active Adult Residential Community Special Permit the parcel must be at least 8 acres in size, front on and has a primary access on a state road or on Oregon Rd., which will connect to public water and sewer systems and have a maximum building footprint of 135,000 sq. ft. The maximum density is proposed to be 17 units per acre.***

The Town Board is Lead Agent for the project and has held a public hearing on the proposed zoning text amendment at their July 21st meeting at which time they closed the public hearing with the intent of adopting a Negative Declaration for the proposed zoning text amendment and adopting the amendment at their August 1Oth meeting. The Planning Board is responsible for the review of the

proposed site plan and all environmental permits. The Planning Board has already reviewed the proposed zoning text amendments and provided comments back to the Town Board in a memo dated April 7, 2021.

Response: Comment noted.

4. **Comment:** ***The applicant shall clarify for the Planning Board if they intend to work with Westchester County to ensure the proposed affordable units meet the Westchester County Planning Department's definition of affordable.***

Response: The Applicant intends to work with Westchester County to ensure the affordable units meet their program requirements. It is the Applicant's understanding that the County definition of affordable housing is a unit with a rent that is affordable to households that earn 60% AMI and below, which is approximately $60,000 per year for a two-person household. Of the total 135 units at Overlook Terrace, 127 units (94%) will be affordable to households earning 60% AMI and below.

5. **Comment:** ***The proposed site plan calls for the demolition of the existing building on site and the construction of a 3-story, 125,000 sq. ft. building. The main access to the facility will still be from Oregon Road. A second egress, gated and for emergency use only, is proposed to Eton Downs Rd. The building will have two courtyards located at the rear of the building. The site will have 146 proposed parking spaces located in the front of the proposed facility and on both sides. A service road will continue around the entire facility.***

Response: Comment noted. To clarify, the road at the rear of the building is a fire access drive (for emergency use only), not a service road. One way egress to Eton Downs with a right turn only restriction is being considered. The site plan will reflect any driveway changes when submitted.

6. **Comment:** ***The applicant has completed a traffic study done by Provident Engineering dated June 23, 2021. The study is included in the***

Expanded EAF. The study has been sent to the Town's traffic consultant, HVEA for their review and comment. The subject site plan shows parking for 146 spaces, a ratio ofl.08 spaces per unit. The applicant analyzed parking at Jacobs Hill for a two-week period and found an average parking demand of . 77 and a peak parking demand of .86. It is recommended the applicant provide to the Planning Board an analysis of the parking at the Springvale Apartment Complex for further comparison.

The applicant is proposing to enhance the existing Westchester County Bee-Line bus stop(s) located on Oregon Rd. The applicant shall provide correspondence from the Westchester County Department of Transportation regarding the proposed enhancements.

Response: The Applicant is initiating discussions with WCDOT and when comments on the proposed application are received from the Westchester County Department of Transportation, they will be shared with the Town.

7. **Comment:** ***Trees on the subject property were inventoried and a report dated June 4, 2021 was submitted by Town consulting arborist, Bartlett Tree Experts. The report was previously transmitted to the Planning Board on June 21, 2021. The report did find three (3) protected trees and several specimen trees as per Chapter 283 (Trees) of the Town Code. The report specifically mentions tree #1306 (American Smoke Tree) #1314 (Catalpa) as significant trees. Both are slated for removal. In addition, the site, in its current condition~ is home to several large trees, both deciduous and evergreen which help define the "historic" character of the site, specifically the very large trees that line the main entrance way into the property from Oregon Rd. According to the tree report there are 598 regulated trees on the subject site. A proposed landscape plan SP-4 has been submitted showing 53 Shade Trees, 20 Evergreen Trees and 35 Ornamental trees to be planted. In addition, plantings are proposed for the building foundation, storm water basins and areas of slopes. Trees to be preserved and trees to be removed shall be noted on the landscape plan***

and calculated. The subject drawing shows shade trees of 2-1/2" caliper to be planted along the entrance drive from Oregon Rd. It is recommended that larger caliper trees be planted along this entranceway given the existing allee of trees that exist on the site now and are slated for removal.

A re-planting plan that meets Chapter 283 (Trees) is required to be submitted. The revised landscape plan shall be referred to the Town's Conservation Advisory Council (CAC) for their review and comment.

Response: The 598 trees included in the Bartlett study included over 200 trees offsite – particularly on the property east of the project site. There are 393 trees onsite per the 12/23/20 Gallas surveyed tree locations. Per the Gallas survey and most recent site plan, approximately 280 trees will be removed from the site and approximately 7 trees will be removed in the Eton Downs right of way. These numbers will be confirmed with the issuance of a revised plan set.

Per the proposed plan, a total of 8.73 acres are proposed to be disturbed (7.91 on site and 0.46 offsite on Eton Downs). Per the Town Code, this will require the planting of 365 trees. The disturbance area will be confirmed with the revised plan set.

There are 2 protected Cornus florida trees as well as an American Smoketree and a Catalpa tree that will be removed with the proposed development as they are located within the proposed parking lots or building area. The proposed landscape plan will include the planting of 3 Cornus florida trees. As the Smoketree and Catalpa tree are not native to this area, they are not included in the proposed plant list however several native species are including oak, maple, linden, sweet gum and black gum.

The proposed landscape plan will include a mixture of shade tree sizes with 4 1/2”-5” caliper trees along the entry drive, 3”-3 ½” caliper trees in the landscaped and east/west buffer areas, and 2 ½” – 3” caliper trees

to fill in the south wooded area. The plant list will include ornamental, understory and evergreen trees in the 6' to 8' height range.

Using a combination of primarily native shade, ornamental, understory, and evergreen trees, and deciduous and evergreen shrub planting, we anticipate meeting the Town's planting requirement. If the requirement cannot be achieved with onsite planting, a combination of planting and fee in lieu of planting will be used to meet the Town requirements. A tree removal and preservation plan as well as an updated landscape plan will be included with the revised plan set.

8. **Comment:** ***As per section 307-22 of the Zoning Code parking areas with parking for 30 or more cars require landscaped areas comprised of a minimum of 5% of the total area within the perimeter of the parking area. The subject drawing shall be revised to show the required landscaping.***

Response: Tree, shrub and perennial plantings in the planted islands within the parking area meet the minimum 5% requirement of the total parking area.

9. **Comment:** ***The Expanded EAF contains a Fiscal Analysis of the existing facility (Colonial Terrace) and the proposed facility showing existing and estimated tax generation. This analysis has been referred to the Town Assessor for review and comment.***

Response: Comment noted.

10. **Comment:** ***Section 265-11 (Subdivision) of the Town Code requires the reservation of land suitable for playgrounds or other recreational facilities or the deposit of moneys, currently $6,000/unit, shall be deposited into a recreation fund in-lieu of such reservation of land. The applicant shall provide information to the Planning Board on how they intend to meet these requirements.***

Response: The Applicant's counsel and the Town Attorney's office are discussing the appropriate fee in lieu structure, particularly given the fact that this is an age restricted AND affordable rental apartment complex. The

Applicant will comply with the final determination made with regard to this fee.

11. **Comment:** ***Appendix 1 of the Expanded Environmental Assessment Form provides a sustainability narrative for the proposed project. The applicant is proposing to seek LEED Homes v4 certification for the project. Green initiatives include solar PV systems on the roof to offset electricity purchase from the grid, electric heat pump technology for domestic hot water, low flow fixtures and the use of environmentally preferred products with field verification and testing as per LEED protocols. The applicant shall confirm whether any of the solar power produced by the proposed panels will be put back into the grid or will only be used by the facility.***

Response: The Applicant is studying the design of the solar panel system and will confirm whether the power produced by the proposed panels will be put back into the grid or will be used onsite by the proposed facility.

12. **Comment:** ***The subject proposal will impact approximately 1.4 acres of regulated steep slope. The applicant submitted the required Steep Slope analysis as per Chapter 259-6 of the Town Code. The applicant shall submit the required colored steep slope drawing showing areas of steep slope 15% to 25%, 25% to 30% and greater than 30%.***

Response: The steep slope analysis maps will be prepared and submitted to show 15-25%, 25%-30% and greater than 30% as requested.

13. **Comment:** ***The applicant has referred the proposed project to the NYS Office of Parks, Recreation and Historic Preservation Office (OPRHP) for review and comment. OPRHP responded by a letter dated April 14, 2021 (included in the Expanded EAF) that stated "It is the opinion of the OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Register of Historic Places will be impacted by this project". The Town's Historic Resources Advisory Council (HRAC) has indicated an interest in working with the applicant to create a "history wall" in***

the new facility to commemorate the history of the Colonial Terrace, similar to what was done at the Hollowbrook Golf Club. The applicant shall provide additional information to the Planning Board on their progress at preserving items from Colonial Terrace and their plans for a display.

Response: The applicant welcomes the opportunity to collaborate with the Town's Historic Resources Advisory Council (HRAC) in the development of the "Colonial Terrace Commemorative Display", which will be featured prominently in the residential lobby of the new building. The display will feature archival photographs and memorabilia, much of which is currently on display throughout the Colonial Terrace property and has been documented in the applicant's site assessments. The applicant has also spoken with the Van Cortlandtville Historical Society about collaborating with them to conduct a review of potential archival materials at the property and would welcome their feedback on incorporating them into the lobby display.

14. **Comment:** ***The applicant has submitted a Storm water Pollution Prevention Plan (SWPPP) for review by the Town Engineering Division and the Town's Environmental Consultant, HVEA Engineering.***

Response: Comment noted.

15. **Comment:** ***Enclosed is an aerial view(s) of the subject site. The subject drawing set was previously given to the Planning Board.***

Response: Comment noted.

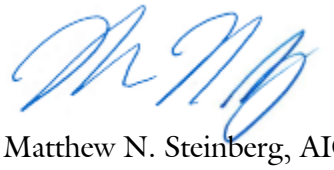
16. **Comment:** ***Referrals of this application include, the Town Engineering Division, the Fire Advisory Board, the Conservation Advisory Council, the Town Department of Environmental Services, the Town Assessor, the Code Enforcement Division, and Westchester County as well as all interested and involved agencies.***

Response: Comment noted.

We look forward to continuing our review of the Project with the Planning Board.

Very truly yours,

DIVNEY TUNG SCHWALBE, LLP



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Enclosures
File: 858

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August 19, 2021

Hon. Loretta Taylor
Chairperson of the Town of Cortlandt Planning Board
and Members of the Planning Board
Town Hall
1 Heady Street
Cortlandt Manor, NY 10567

Re: Overlook Terrace
119 Oregon Road

Dear Chairperson Taylor and Members of the Planning Board:

On behalf of NRP Group (the Applicant) we offer the following responses to a comment memo by HVEA Engineers, dated July 26, 2021, regarding the Overlook Terrace SWPPP for your consideration.

1. **Comment:** ***A Notice of Intent is critical to the review process in understanding how the project's stormwater requirements are being met, how reductions are being credited, etc. A Notice of Intent should be included in the submission for review to verify hydrologic calculations and practice credits.***

   Response: A Notice of Intent will be provided.

2. **Comment:** ***Table 3 giving the on-site summary for stormwater quality measures shows different values for existing impervious area and total site areas. The water quality volume (WQV) value in the table reflects a total site area of 9.33 acres, with 2.41 acres existing impervious as opposed to the 2.26 acres existing impervious that Table 3 shows. It is my understanding that the WQV was calculated based on the total site area instead of the disturbed area. Therefore, Table 3 should be revised***

to show the correct values being utilized. Calculating WQV based on the limits of disturbance results in a higher required WQV.

Response: The water quality volume proposed exceeds the minimum requirements for both the total disturbance area and the total site area. Table 3 will be updated to clarify.

3. **Comment:** ***The project proposes a direct connection to the existing drainage system on Donnelly Place. The existing drainage system on Donnelly is comprised of 15" diameter pipes in the area of connection. The Donnelly drainage system should be analyzed to determine if there is adequate capacity for the proposed flows.***

Response: The berm on the proposed stormwater basin will be raised slightly to provide additional stormwater storage onsite. This increased storage volume will further reduce the peak rate of flow leaving the site for the 1-, 10-, 25-, and 100-year storm events. Stormwater currently drains from the site overland to a storm basin located on Donnelly Place. Currently stormwater flows that exceed the capacity of the drain pipes flow along the roadway gutter on Donnelly Place and Oregon Road to an unnamed stream just north of Gallows Hill Road. With a reduction in the rate of flow leaving the site, the frequency of these flows along the roadway will be reduced. The final details of the connections will be further reviewed with the Town Engineer.

4. **Comment:** ***Silt fence should be parallel to the contours. Some of the silt fence runs appear to be perpendicular to the contours, which would result in concentrated flows.***

Response: Silt fence layout will be revised to parallel slopes.

5. **Comment:** ***The erosion and sediment control plan shows temporary sediment traps in the future bioretention basin area. If there is any chance of infiltrative soil, it will likely be plugged by fines if the basin is used as a trap during construction. The detail should outline the sequence of construction to show how the area will be utilized in the temporary condition before being brought to its final condition as a bioretention basin.***

Response: At the end of the construction the sediment trap at the bioretention site will be excavated approximately three (3) feet deep to install the stone base course and filter material. The accumulated sediment will be removed at that time. These requirements will be included on the construction details.

6. **Comment:** ***There is no planting plan shown for the bioretention basin. Bioretention basins should include a mix of tree species, shrub species, and herbaceous plants spaced in accordance with the NYSDEC Stormwater Management Design Manual.***

Response: The landscape plan will show trees, shrubs and basin grasses planted in the bioretention basin in accordance with the design manual.

7. **Comment:** ***Page 11 of the SWPPP states that the contractor will prepare a detailed construction phasing plan. The SWPPP should revise the anticipated general sequence to include temporary stormwater controls and drainage, as well as approximate areas of disturbance during each phase to ensure no more than 5 acres are disturbed at one time.***

Response: The construction sequence will be expanded in the SWPPP. A 5-acre waiver will be requested for at least part of the construction period due to the amount of earthwork required. The details of the phasing and disturbance limits will be provided and included in the SWPPP for review and approval by the Town Engineer.

8. **Comment:** ***The table summary values for the Pond Pack Models for Existing and Proposed Conditions in the Appendix vary from the design flow summary values for peak flows in Table 4. The summary table should be revised to show the updated values.***

Response: The PondPack modeling and Table 4 will be revised.

9. **Comment:** ***Detention Basin Outlet Control Structure detail does not show an emergency spillway from the practice. Will the constructed basin have an emergency spillway area?***

Response: The stormwater basins will have emergency overflows lined with stone rip-rap. The plans and details will be updated.

10. **Comment:** ***Side slopes of bioretention basin are 3:1 and should therefore receive rolled erosion control product. Rolled erosion to be used on all slopes 3:1 or steeper in accordance with the NYSDEC Blue Book.***

Response: The plans and planting details will note that erosion control fabric is required on planted and seeded slopes greater than or equal to 3:1.

We look forward to continuing our review of the Project with the Planning Board.

Very truly yours,

DIVNEY TUNG SCHWALBE, LLP

Gerhard M. Schwalbe, P.E.
Partner

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