Ross Engineering
Civil/Structural Engineering & Surveying

909 Islington Street **603-433-7560**
Portsmouth, NH 03801 **alexross@comcast.net**

August 8, 2022

Beverly Mesa-Zendt - Planning Director
City of Portsmouth, Planning Department
1 Junkins Ave Portsmouth, NH 03801

RE: Site Plan Approval for property located at 140 West Rd, Tax Map 252, Lot 2-13 (LU-22-99)

Dear Ms. Beverly,

I am writing in response to your letter dated August 3rd, 2022. Your concerns are italicized with our comments below in bold.

1. *Plans will be updated to include treatment swale details and calculations. DPW to review and approve prior to Planning Board consideration.*
   The treatment swale has been removed. A curb inlet jellyfish filter has been designed in its place to provide treatment. This is shown on the plan view of sheet 6 "Grading & Drainage" and a detail on sheet 9 "Stormwater Management Details".

2. *Catch Basin A will be changed to a manhole.*
   Catch basin A has been changed to a drain manhole. It has been relabeled as DMH A. DMH A has been relabeled as DMH B, and DMH B has been relabeled as DMH C. This is shown on sheet 6 "Grading & Drainage".

3. *Sewer manhole detail, in accordance with State standard, will be added to the plans.*

   A sewer manhole detail has been added to sheet 11 "Details".

4. *Landscape plans will be updated to include additional plantings and loam planting beds within the three landscape islands.*

   The landscape islands have been revised to include additional plantings. This is shown on sheet 3 "Landscape Plan". The number of landscape islands has increased due to the relocation of several light poles.

5. *Cistern operation and maintenance details will be added to the plans. DPW to review and approve prior to Planning Board consideration.*

   Cistern operation and maintenance details have been added to sheet 12 "Notes". The Stormwater Management Operation & Maintenance Manual has been updated also.

6. *All State and Federal permits as required for this project will be listed on the plans.*
   A Construction General Permit is required for this project. See note 6 on sheet 2 "Site Plan".

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7. *Plans will be updated to show granite curbing around the entire parking lot in the vicinity of Catch Basin B for drainage.*

   Granite curbing has been shown around the entire parking lot in the vicinity of the old Catch Basin B (relabeled as Catch Basin A). This is shown on sheet 2 "Site Plan".

8. *Grading Plan will be adjusted to correct reduction in grade behind building. DPW to review and approve prior to Planning Board consideration.*

   Grading has been adjusted at the rear of the building, so that proposed contour 97 more closely matches the existing contour. This is shown on sheet 6 "Grading & Drainage".

9. *Light poles will be shown on plans at least 10 feet from the overhead power lines with details that will show light temperature, cutoff shields, and mounting height. DPW to review and approve prior to Planning Board consideration.*

   Light poles along West Road have been moved into the parking lot islands to ensure a 10 foot separation from overhead power lines. Islands have been adjusted as per item 4. The light poles have a mounting height is 20 feet, and a fixture color temperature of 4000k. These are a full cutoff type and do not emit light above the horizontal plan (10.114.10). As indicated on the lighting plan, the design has minimal light reaspass (10.1141) as required by zoning with minimal light levels over the property line. Cutoff shields have not been provided as we believe the design meets the intent of the zoning and the only area no light trespass is required is within residential zones (10.1144.20).

10. *Outfall structure will be added to the plans.*

    The 12" beehive cover and 12" outlet pipe from the detention pond have been added to the plan. This is shown on sheet 6 "Grading & Drainage".

11. *Catch Basin B will be moved to the curb and a note will be added regarding jellyfish filter.*

    Catch Basin B (relabeled as Catch Basin A) has been moved to the granite curb and a note has been added on the plan noting the catch basin is a jellyfish filter. This is shown on sheet 2 "Site Plan"

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12. *A letter will be provided to the Planning Department with the updated submission stating where resolved conditions can be found on within the submission and how outstanding conditions will be resolved subsequent to Planning Board approval.*

    This letter is provided with the updated submission stating the resolved conditions and where they can be found within the submission.

Conditions precedent to Building Permit

13. *Drainage easements will be dedicated and accepted by the City.*

    A Drainage easement will be dedicated and accepted by the City and recorded in the Rockingham Registry of Deeds. See note 5 on drawing 2.

14. *Plantings in the public Right of Way receive approval from the Trees and Greenery Committee.*

    Plantings in the public Right of Way must receive approval from the Trees and Greenery Committee prior to applying for a building permit. See note 7 on drawing 2.

15. *A full set of documents including all plans, studies, and the aforementioned letter will be submitted for staff review and Planning Board consideration.*

A full set of documents including plans, studies, and letter will be submitted as part of the updated Planning Board submission.

Sincerely,

Alex Ross, P.E.

BLACK ROCK SOCIAL CLUB

140 WEST RD

Portsmouth, NH 03801

LIST OF PROJECT PLANS AND DOCUMENTS:

CIVIL

PREPARED BY:

ROSS ENGINEERING, LLC

Civil/Structural Engineering
& Surveying

909 Islington St.
Portsmouth, NH 03801
(603) 433-7560

PREPARED FOR:

Road to the West, LLC
Alexander B. Choquette
14 Lafayette Rd. Unit 9
North Hampon, NH 03862

August 8, 2022

REFERENCE PLANS

1) "SUBDIVISION PLAN" BY KIMBALL CHASE COMPANY, INC. DATED MAY 15, 1983. RCRD D-11744.

2) "CONDOMINIUM SITE PLAN 300 WEST CONDOMINIUM FOR FREDERICK & THOMAS DAIGNEAULT" BY RICHARD P. MILLETTE AND ASSOCIATES. DATED MAY 1987. RCRD D-17576

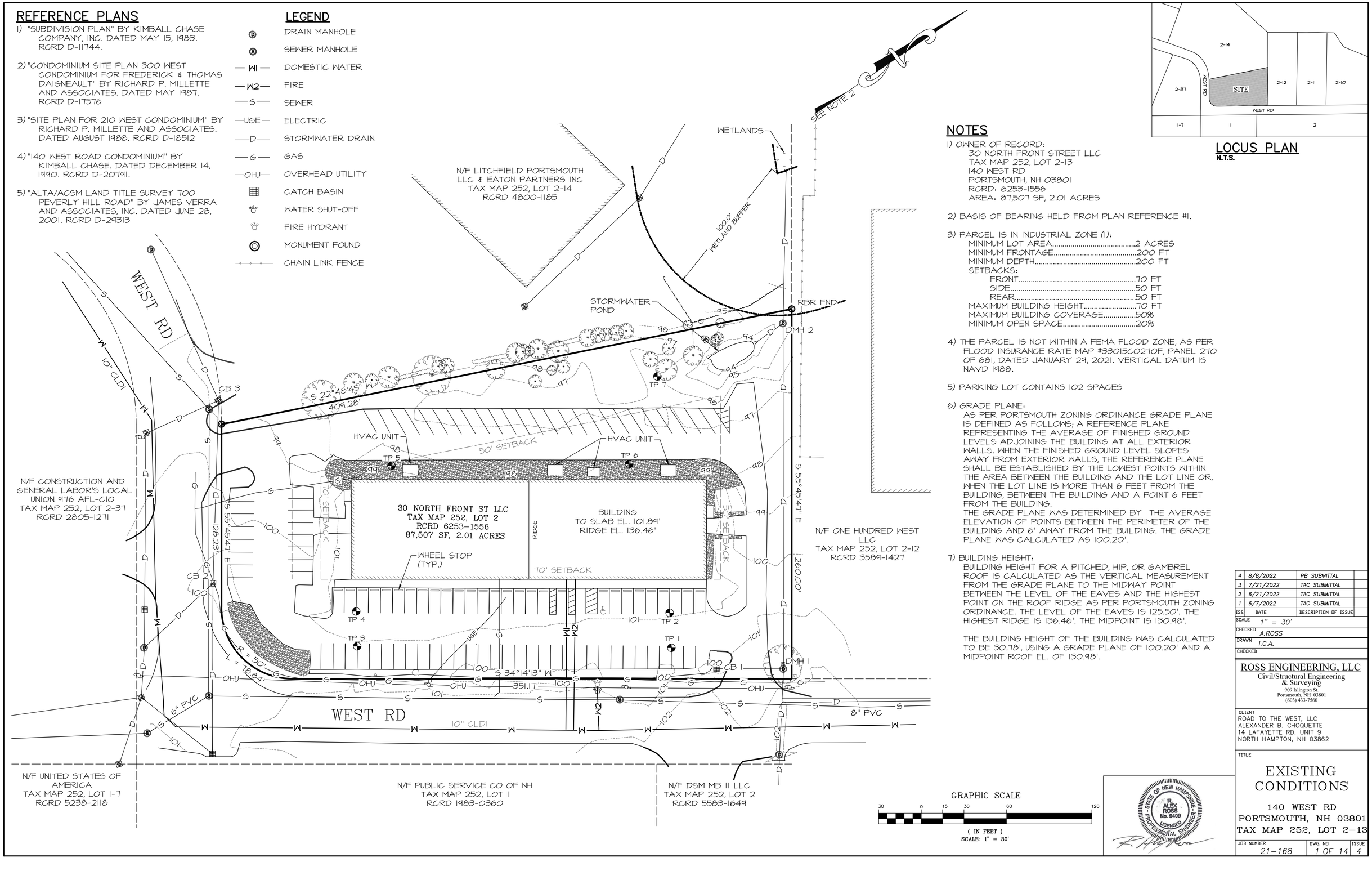
3) "SITE PLAN FOR 210 WEST CONDOMINIUM" BY RICHARD P. MILLETTE AND ASSOCIATES. DATED AUGUST 1988. RCRD D-18512

4) "140 WEST ROAD CONDOMINIUM" BY KIMBALL CHASE. DATED DECEMBER 14, 1990. RCRD D-20791.

5) "ALTA/ACSM LAND TITLE SURVEY 700 PEVERLY HILL ROAD" BY JAMES VERRA AND ASSOCIATES, INC. DATED JUNE 28, 2001. RCRD D-29313

LEGEND

- DRAIN MANHOLE
- SEWER MANHOLE
- W1 — DOMESTIC WATER
- W2 — FIRE
- S — SEWER
- UGE — ELECTRIC
- D — STORMWATER DRAIN
- G — GAS
- OHU — OVERHEAD UTILITY
- CATCH BASIN
- WATER SHUT-OFF
- FIRE HYDRANT
- MONUMENT FOUND
- CHAIN LINK FENCE



LOCUS PLAN
N.T.S.

NOTES

1) OWNER OF RECORD:
30 NORTH FRONT STREET LLC
TAX MAP 252, LOT 2-13
140 WEST RD
PORTSMOUTH, NH 03801
RCRD: 6253-1556
AREA: 87,507 SF, 2.01 ACRES

2) BASIS OF BEARING HELD FROM PLAN REFERENCE #1.

3) PARCEL IS IN INDUSTRIAL ZONE (I):

MINIMUM LOT AREA	2 ACRES
MINIMUM FRONTAGE	200 FT
MINIMUM DEPTH	200 FT
SETBACKS:	
FRONT	70 FT
SIDE	50 FT
REAR	50 FT
MAXIMUM BUILDING HEIGHT	70 FT
MAXIMUM BUILDING COVERAGE	50%
MINIMUM OPEN SPACE	20%

4) THE PARCEL IS NOT WITHIN A FEMA FLOOD ZONE, AS PER FLOOD INSURANCE RATE MAP #33015C0270F, PANEL 270 OF 681, DATED JANUARY 29, 2021. VERTICAL DATUM IS NAVD 1988.

5) PARKING LOT CONTAINS 102 SPACES

6) GRADE PLANE:
AS PER PORTSMOUTH ZONING ORDINANCE GRADE PLANE IS DEFINED AS FOLLOWS; A REFERENCE PLANE REPRESENTING THE AVERAGE OF FINISHED GROUND LEVELS ADJOINING THE BUILDING AT ALL EXTERIOR WALLS. WHEN THE FINISHED GROUND LEVEL SLOPES AWAY FROM EXTERIOR WALLS, THE REFERENCE PLANE SHALL BE ESTABLISHED BY THE LOWEST POINTS WITHIN THE AREA BETWEEN THE BUILDING AND THE LOT LINE OR, WHEN THE LOT LINE IS MORE THAN 6 FEET FROM THE BUILDING, BETWEEN THE BUILDING AND A POINT 6 FEET FROM THE BUILDING.
THE GRADE PLANE WAS DETERMINED BY THE AVERAGE ELEVATION OF POINTS BETWEEN THE PERIMETER OF THE BUILDING AND 6' AWAY FROM THE BUILDING. THE GRADE PLANE WAS CALCULATED AS 100.20'.

7) BUILDING HEIGHT:
BUILDING HEIGHT FOR A PITCHED, HIP, OR GAMBREL ROOF IS CALCULATED AS THE VERTICAL MEASUREMENT FROM THE GRADE PLANE TO THE MIDWAY POINT BETWEEN THE LEVEL OF THE EAVES AND THE HIGHEST POINT ON THE ROOF RIDGE AS PER PORTSMOUTH ZONING ORDINANCE. THE LEVEL OF THE EAVES IS 125.50'. THE HIGHEST RIDGE IS 136.46'. THE MIDPOINT IS 130.98'.

THE BUILDING HEIGHT OF THE BUILDING WAS CALCULATED TO BE 30.78', USING A GRADE PLANE OF 100.20' AND A MIDPOINT ROOF EL. OF 130.98'.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
SCALE: 1" = 30'

R. ALEX ROSS No. 9409 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

ISS.	DATE	DESCRIPTION OF ISSUE
4	8/8/2022	PB SUBMITTAL
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SCALE 1" = 30'
CHECKED A.ROSS
DRAWN I.C.A.
CHECKED

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Portsmouth, NH 03801
(603) 433-7560

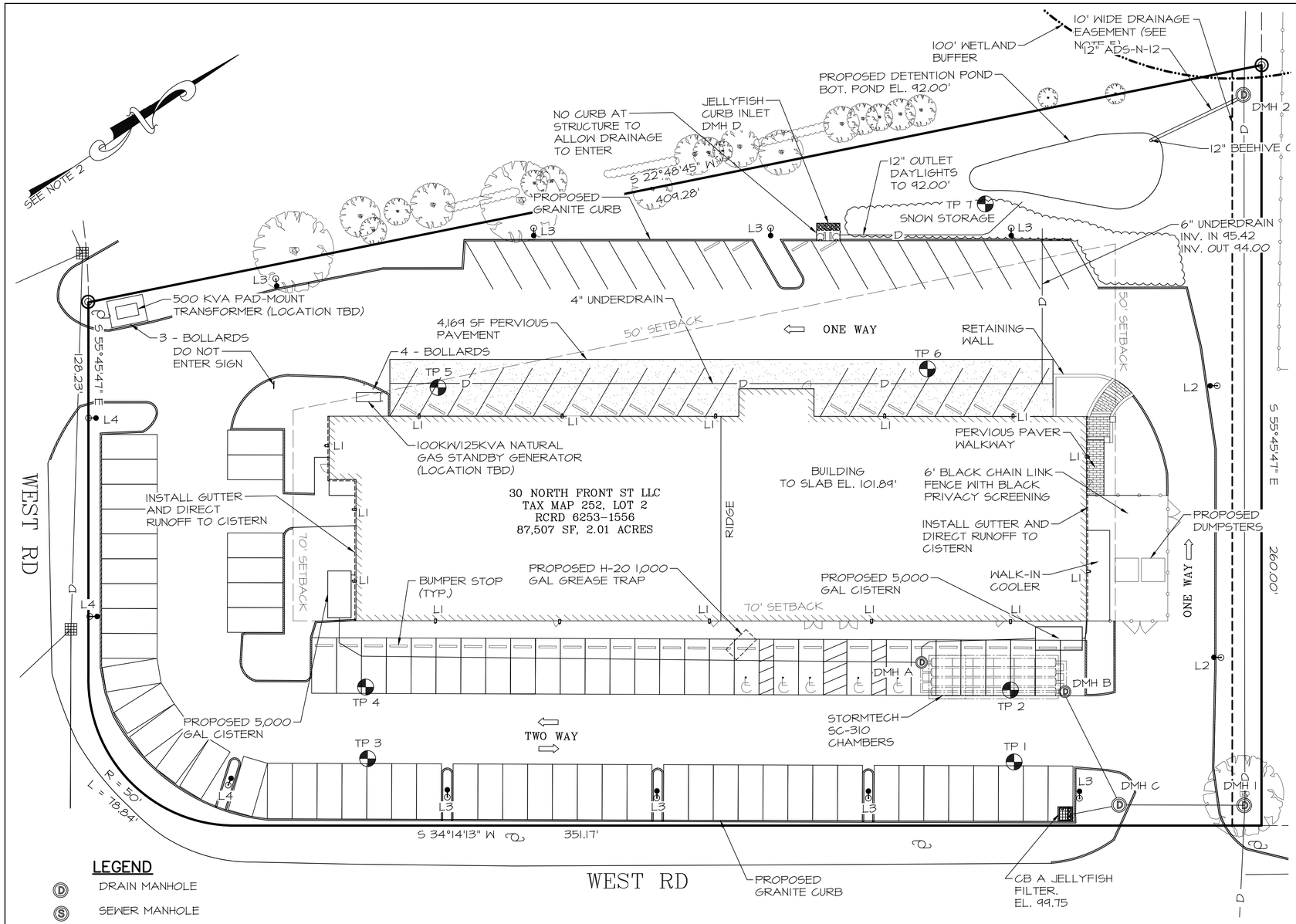
CLIENT
ROAD TO THE WEST, LLC
ALEXANDER B. CHOQUETTE
14 LAFAYETTE RD. UNIT 9
NORTH HAMPTON, NH 03862

TITLE

EXISTING CONDITIONS

140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

JOB NUMBER	DWG. NO.	ISSUE
21-168	1 OF 14	4



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30 NORTH FRONT STREET LLC
TAX MAP 252, LOT 2-13
140 WEST RD
PORTSMOUTH, NH 03801
RCRD: 6253-1556
AREA: 87,507 SF, 2.01 ACRES

2) COVERAGES

EXISTING BUILDING COVERAGE

BUILDING	17,500 SF
TOTAL	17,500 SF

BUILDING COVERAGE = 20.0%

PROPOSED BUILDING COVERAGE

BUILDING	17,922 SF
WALK-IN COOLER	248 SF
TOTAL	18,170 SF

BUILDING COVERAGE = 20.8% < 50%

EXISTING OPEN SPACE

BUILDING COVERAGE	17,500 SF
ASPHALT	42,529 SF
TOTAL LOT COVERAGE	60,029 SF

OPEN SPACE = 87507 - 60029 = 27478 SF
OPEN SPACE = 31.4%

PROPOSED OPEN SPACE

BUILDING COVERAGE	18,170 SF
ASPHALT	45,901 SF
CONCRETE PAD	140 SF
RETAINING WALL	76 SF
STAIRS	32 SF
TOTAL	64,319 SF

OPEN SPACE = 87507 - 64319 = 23,188 SF
OPEN SPACE = 26.5% > 20%

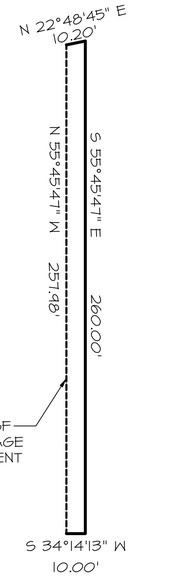
3) THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.

4) ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.

5) A 10' WIDE DRAINAGE EASEMENT IS SHOWN TO ALLOW CONTINUED DRAINAGE USAGE AND MAINTENANCE. A DRAINAGE EASEMENT WILL BE DEDICATED AND ACCEPTED BY THE CITY AND RECORDED AT THE REGISTRY.

6) A CONSTRUCTION GENERAL PERMIT (CGP) FROM THE EPA IS REQUIRED FOR THIS PROJECT.

7) PLANTINGS IN THE PUBLIC RIGHT OF WAY MUST RECEIVE APPROVAL FROM THE TREES & GREENERY COMMITTEE PRIOR TO APPLYING FOR A BUILDING PERMIT.



EASEMENT AREA

1" = 40'

LEGEND

- DRAIN MANHOLE
- SEWER MANHOLE
- WATER
- SEWER
- STORMWATER DRAIN
- GAS
- CATCH BASIN
- WATER SHUT-OFF
- FIRE HYDRANT
- MONUMENT FOUND
- CHAIN LINK FENCE
- VERTICAL GRANITE CURB

ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
SCALE: 1" = 20'

ZBA APPROVALS

1) THE PORTSMOUTH ZONING BOARD OF ADJUSTMENT GRANTED THE FOLLOWING VARIANCES ON 5-24-22.

A) SECTION 10.440 USE #4.30 TO ALLOW INDOOR RECREATION USE WHERE THE USE IS NOT PERMITTED.

B) 10.1113.41 TO ALLOW PARKING TO BE LOCATED 2 FEET FROM THE FRONT LOT LINE WHERE 50 FEET IS REQUIRED.

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DRAWN D.D.D.
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140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

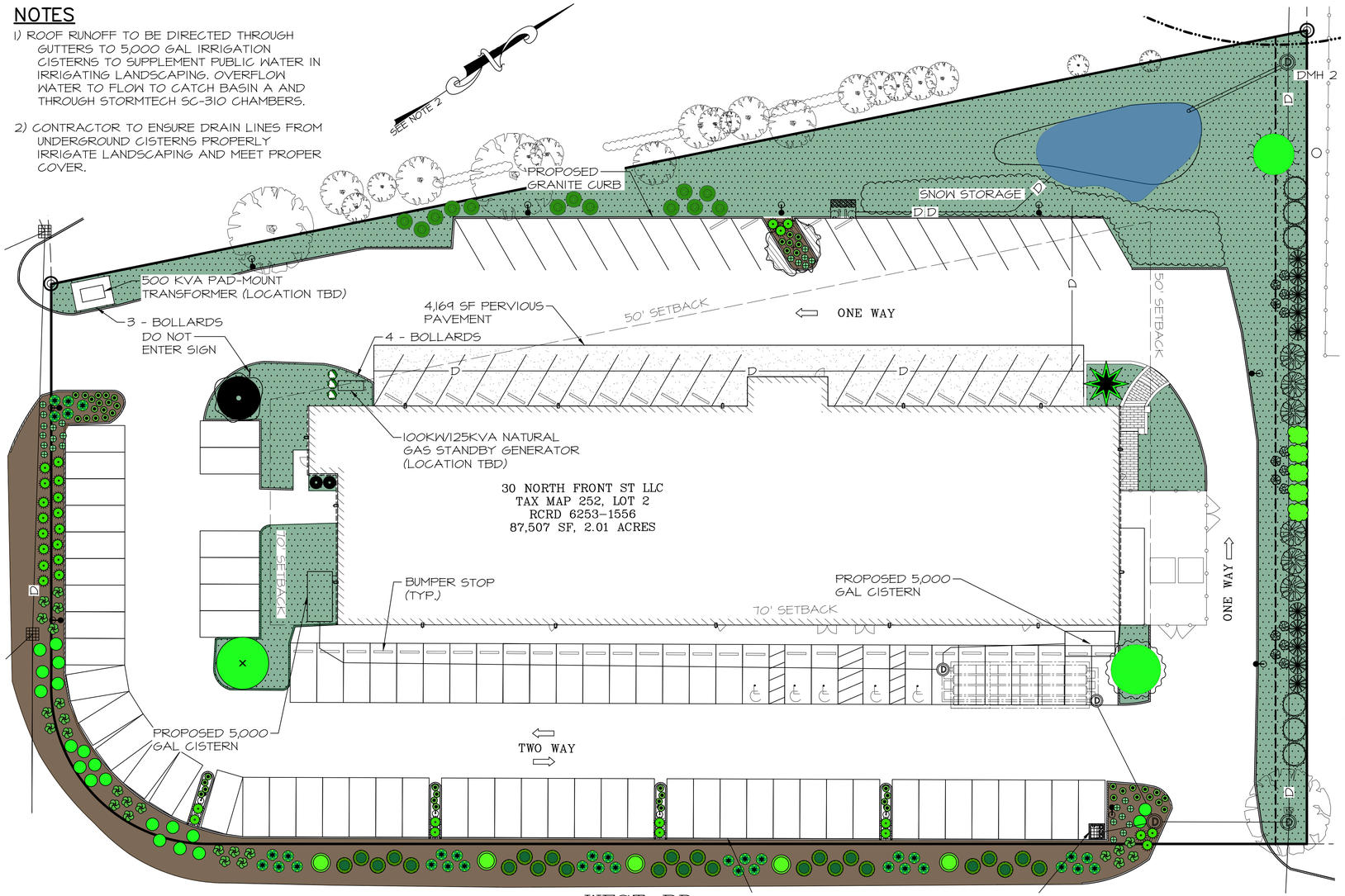
STATE OF NEW HAMPSHIRE · R. ALEX ROSS No. 9409 LICENSED PROFESSIONAL ENGINEER

JOB NUMBER	DWG. NO.	ISSUE
21-168	2 OF 14	4

NOTES

1) ROOF RUNOFF TO BE DIRECTED THROUGH GUTTERS TO 5,000 GAL IRRIGATION CISTERNS TO SUPPLEMENT PUBLIC WATER IN IRRIGATING LANDSCAPING. OVERFLOW WATER TO FLOW TO CATCH BASIN A AND THROUGH STORMTECH SC-310 CHAMBERS.

2) CONTRACTOR TO ENSURE DRAIN LINES FROM UNDERGROUND CISTERNS PROPERLY IRRIGATE LANDSCAPING AND MEET PROPER COVER.



LEGEND

- LIGHT POST
- ROSA 'KNOCKOUT'
- THUJA OCCIDENTALIS 'HOLMSTRUP'
- SEDUM 'AUTUMN JOY'
- HEMEROCALLIS 'RUBY RETURNS'
- BUXUS 'GREEN VELVET'
- NIPPONANTHEMUM NIPPONICUM
- CALAMAGROSTIS ACUTIFLORA
- SYRINGA X 'BABY KIM'
- PINUS MUGO 'MOPS'
- VACCINIUM CORYMBOSUM
- ROSA RUGOSA
- MALUS 'ADIRONDACK'
- JUNIPERUS CHINENSIS 'MOUNTBATTEN'
- THUJA OCCIDENTALIS 'SMARAGD'
- THUJA OCCIDENTALIS 'SUNKIST'
- VIBURNUM TRILOBUM 'WENTWORTH'
- VIBURNUM PLICATUM TOMENTOSUM 'SHASTA'
- ACER GINNALA 'FLAME'
- ACER X FREEMANII 'ARMSTRONG'
- MAGNOLIA LOEBNERI 'LEONARD MESSEL'
- CORNUS KOUSA 'MILKY WAY'
- TAXUS CUSPIDATA 'CAPITATA'
- LAWN

NOTES

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2) ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.

INSTALLATION REQUIREMENTS

1. WHEN REPLACING EXISTING PAVED AREAS WITH AREAS OF LANDSCAPING, PAVEMENT MUST BE REMOVED ALONG WITH 18" OF SUBGRADE. APPROPRIATE LANDSCAPING LOAM MAY THEN BE ADDED WITHIN CURBING.
2. THE INSTALLATION OF A DRIP IRRIGATION SYSTEM IS STRONGLY RECOMMENDED TO ASSURE HEALTHY PLANTS LONG TERM.
3. IN CASE OF DROUGHT (DEFINED AS TWO WEEK PERIOD WITHOUT RAIN) ALL NEW PLANTS SHALL BE WATERED THROUGH NOVEMBER 30TH DURING THE FIRST SEASON IN WHICH THEY ARE INSTALLED. THEY SHALL BE WATERED ONE TIME PER DAY FOR THE FIRST WEEK AFTER INSTALLATION AND THREE TIMES PER WEEK FOR THE REMAINDER OF THE SEASON. AFTER THE FIRST SEASON WHEN THE ROOTS OF THE PLANTS ARE ESTABLISHED THEY WILL REQUIRE DEEP WATERING ONCE A WEEK.
4. SOAKER HOSES WOUND THROUGH THE BED NEAR THE BASE OF EACH PLANT ARE THE RECOMMENDED METHOD OF WATERING DURING THE FIRST SEASON. THESE CAN BE REMOVED AFTER NOVEMBER 30TH WHEN THE PLANTS ARE ESTABLISHED.
5. LAWN SEEDING INFORMATION:

LAWN SEED MIXTURE:

	LB/ACRE	LB/1000SF
TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED CLOVER (ALSIKE)	20	0.45
TOTAL	48	1.35

LIME: AT 2 TONS PER ACRE OR 100 LBS PER 1,000 S.F.
FERTILIZER: 10 20 20 (NITROGEN, PHOSPHATE, POTASH AT 500# PER ACRE.
MULCH: HAY OR CLEAN STRAW; 2 TONS/ACRE OR 2 BALES/1000 S.F.

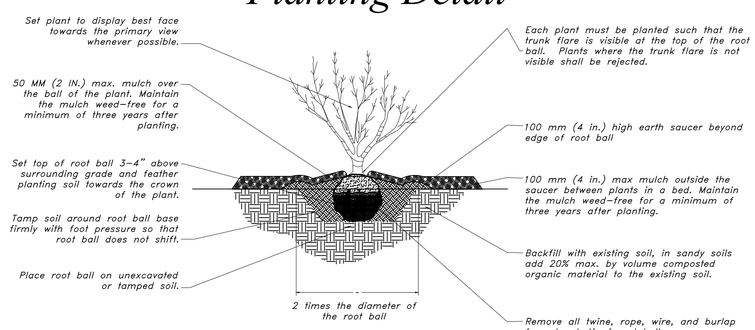
GRADING AND SHAPING:
SLOPES SHALL NOT BE STEEPER THAN 2 TO 1. 3 TO 1 OR FLATTER SLOPES ARE PREFERRED.

SEEDBED PREPARATION:
SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
STONES LARGER THAN FOUR INCHES AND TRASH SHOULD BE REMOVED.
SOD SHOULD BE TILLED TO A DEPTH OF FOUR INCHES TO PREPARE SEEDBED. FERTILIZER & LIME SHOULD BE MIXED INTO THE SOIL.
THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

6. LAWN PREPARATION AND SEEDING SHALL TAKE PLACE AFTER ALL PLANTS ARE INSTALLED.

BOTANICAL NAME	COMMON NAME	SIZE	QTY.
ACER GINNALA 'FLAME'	FLAME AMUR MAPLE	3" C	1
ACER X FREEMANII 'ARMSTRONG'	ARMSTRONG MAPLE	3-3.5" C	1
BUXUS 'GREEN VELVET'	GREEN VELVET BOXWOOD	#5	2
CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL	30
CORNUS KOUSA 'MILKY WAY'	MILKY WAY KOUSA DOGWOOD	3" C	1
HEMEROCALLIS 'RUBY RETURNS'	RE-BLOOMING DAYLILY	1 QT	50
JUNIPERUS CHINENSIS 'MOUNTBATTEN'	MOUNTBATTEN JUNIPER	6-7' BB	10
MAGNOLIA LOEBNERI 'LEONARD MESSEL'	LEONARD MESSEL MAGNOLIA	3" C	1
MALUS 'ADIRONDACK'	ADIRONDACK CRABAPPLE	2.5" C	5
NIPPONANTHEMUM NIPPONICUM	MONTAUK DAISY	1 QT	20
PINUS MUGO 'MOPS'	MOPS MUGO PINE	2 GAL	35
ROSA 'KNOCKOUT'	KNOCKOUT ROSE	#10	15
ROSA RUGOSA	SALT SPRAY ROSE	2 GAL	25
SEDUM 'AUTUMN JOY'	AUTUMN JOY STONECROP	1 QT	26
SYRINGA X 'BABY KIM'	DWARF KOREAN LILAC	2 GAL	25
TAXUS CUSPIDATA 'CAPITATA'	PYRAMIDIAL JAPANESE YEW	4' BB	1
THUJA OCCIDENTALIS 'HOLMSTRUP'	HOLMSTRUP ARBORVITAE	4-5' BB	3
THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	5-6' BB	5
THUJA OCCIDENTALIS 'SUNKIST'	SUNKIST ARBORVITAE	4-5' BB	6
VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	2 GAL	13
VIBURNUM PLICATUM TOMENTOSUM 'SHASTA'	SHASTA DOUBLEFILE VIBURNUM	5-6' BB	1
VIRBURNUM TRILOBUM 'WENTWORTH'	WENTWORTH CRANBERRY VIBURNUM	3-4' BB	6

Planting Detail



PLANTING NOTES

1. ALL PLANT MATERIALS SHALL BE FIRST QUALITY NURSERY GROWN STOCK.
2. ALL PLANTS SHALL BE PLANTED IN ACCORDANCE WITH NEW HAMPSHIRE LANDSCAPE ASSOCIATION STANDARDS AND GUARANTEED FOR ONE YEAR BY THE LANDSCAPE CONTRACTOR.
3. AFTER PLANTING, ALL PLANTS SHALL BE FLOODED AT THE BASE WITH WATER FROM A SLOW-RUNNING HOSE FOR 5 MINUTES EACH.
4. ALL PLANTS SHALL BE INSTALLED BEFORE ANY GRASS IS SEEDED.
5. ALL SHRUBS AND PLANTING BEDS SHALL BE MULCHED WITH 3" OF DARK BROWN AGED BARK MULCH AS A FINAL STEP. MULCH MUST BE KEPT 2" AWAY FROM BASE OF EACH PLANT.
6. THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS SHALL BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR, AND REPLACEMENT OF ALL REQUIRED SCREENING AND LANDSCAPE MATERIALS.
7. ALL REQUIRED PLANT MATERIALS SHALL BE TENDED AND MAINTAINED IN A HEALTHY GROWING CONDITION, REPLACED WHEN NECESSARY, AND KEPT FREE OF REFUSE AND DEBRIS. ALL REQUIRED FENCES AND WALLS SHALL BE MAINTAINED IN GOOD REPAIR.
8. THE PROPERTY OWNER SHALL BE RESPONSIBLE TO REMOVE AND REPLACE DEAD OR DISEASED PLANT MATERIALS IMMEDIATELY WITH THE SAME TYPE, SIZE, AND QUANTITY OF PLANT MATERIALS AS ORIGINALLY INSTALLED, UNLESS ALTERNATIVE PLANTINGS ARE REQUESTED, JUSTIFIED, AND APPROVED BY THE PLANNING BOARD OR PLANNING DIRECTOR.
9. MULCH USED WILL BE NON-COMBUSTIBLE OR APPROVED BY THE PORTSMOUTH FIRE DEPARTMENT

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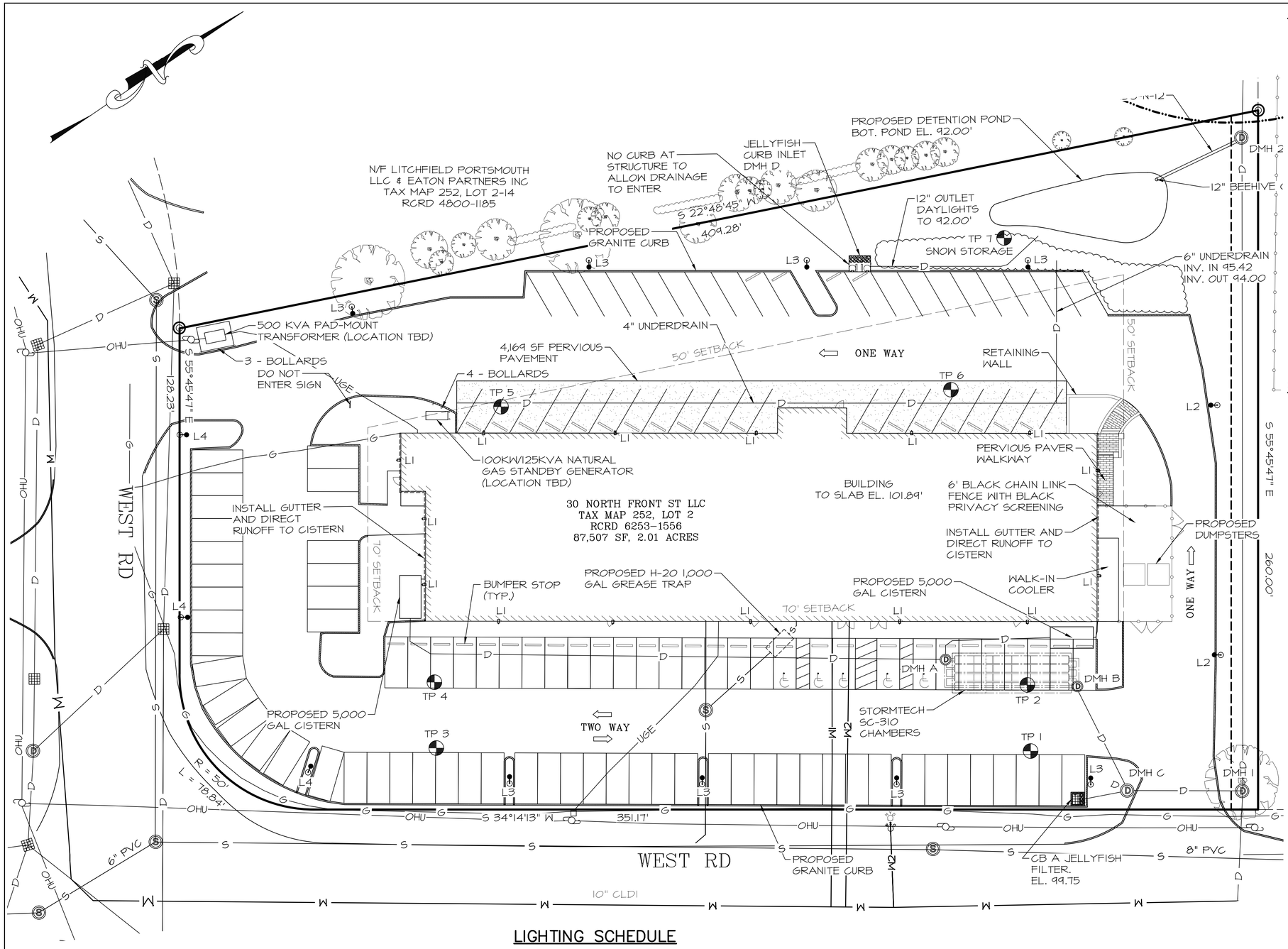
TITLE
LANDSCAPE PLAN
140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

STATE OF NEW HAMPSHIRE - R. ALEX ROSS No. 9409 - LICENSED PROFESSIONAL ENGINEER

JOB NUMBER	DWG. NO.	ISSUE
21-168	3 OF 14	4



LIGHTING SCHEDULE

LABEL	SPECIFICATION
L1	WALL PACK - LUMARK XTOR CROSSTOUR MAXX LED
L2	LIGHT POLE - SL630 SOLANA SERIES LED DISTRIBUTION TYPE T2
L3	LIGHT POLE - SL630 SOLANA SERIES LED DISTRIBUTION TYPE T3
L4	LIGHT POLE - SL630 SOLANA SERIES LED DISTRIBUTION TYPE T4

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
SCALE: 1" = 20'

UTILITIES:

CONTACT LIST:

GAS: UNITIL: SUSAN L. DUPLISEA.....603-294-5147
WATER: PORTSMOUTH DPW: 603-427-1530
SEWER: PORTSMOUTH DPW: 603-427-1530
STORMWATER: PORTSMOUTH DPW: 603-427-1530
ELECTRIC: EVERSOURCE: CASEY MCDONALD.....603-436-7708 EXT 5641

PROPOSED UTILITIES:

GAS:
EXISTING 1-¼" GAS LINE SERVES BUILDING

WATER:
EXISTING 2" DOMESTIC WATER - W1
EXISTING 6" FIRE - W2

SEWER:
EXISTING 6" SEWER SERVES BUILDING. THE LINE IS DAMAGE 33' OUT FROM THE BUILDING. DAMAGED SECTION WILL BE REPLACED.

STORMWATER:
INSTALL CB A, CB B, CB C, DMH A, DMH B
INSTALL 45 STORMTECH SC-310 CHAMBERS (ST A)
INSTALL 40 STORMTECH SC-310 CHAMBERS (ST B)
REPLACE CB 1 WITH CB D
INSTALL GUTTERS ON THE SOUTHERN ROOF TO DIRECT ROOF RUNOFF TO STORMTECH A
INSTALL GUTTERS ON THE NORTHERN ROOF TO DIRECT ROOF RUNOFF TO CATCH BASIN B

ELECTRIC:
THE EXISTING SERVICE IS 800A, 208Y/120V 3-PHASE, 4-WIRE
THE PROPOSED SERVICE IS 1600A, 208Y/120V 3-PHASE
INSTALL 500 KVA PAD-MOUNT TRANSFORMER
INSTALL A 100KW/125KVA NATURAL GAS STANDBY GENERATOR
INSTALL SOLAR PANELS ON THE EXISTING ROOF

GENERAL NOTES

1) CONTRACTOR TO REVIEW ALL SURFACING TYPES, AND MATERIAL SPECIFICATIONS WITH COMMISSIONER OF PUBLIC WORKS.
2) ALL NECESSARY NHDOT, NHDES & TOWN PERMITS MUST BE OBTAINED.
3) ALL CONSTRUCTION SHALL BE PER NH-DOT, STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION. LATEST REVISION.
4) CONTRACTOR SHALL MEET STATE AND TOWN REQUIREMENTS. TO ASSURE TYPE, SEPARATION, COVER, ETC. ALWAYS CALL DIGSAFE PRIOR TO DIGGING. UTILITIES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED.

LEGEND

- DRAIN MANHOLE
- SEWER MANHOLE
- WATER
- SEWER
- STORMWATER DRAIN
- GAS
- CATCH BASIN
- WATER SHUT-OFF
- FIRE HYDRANT
- MONUMENT FOUND
- CHAIN LINK FENCE
- VERTICAL GRANITE CURB
- UTILITY POLE
- OVERHEAD UTILITY
- DRAINAGE FLOW PATH
- EXISTING CONTOUR

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SCALE 1" = 20'
CHECKED A.ROSS
DRAWN D.D.D.
CHECKED

ROSS ENGINEERING, LLC
Civil/Structural Engineering & Surveying
909 Islington St.
Portsmouth, NH 03801
(603) 433-7560

CLIENT
ROAD TO THE WEST, LLC
ALEXANDER B. CHOQUETTE
14 LAFAYETTE RD. UNIT 9
NORTH HAMPTON, NH 03862

R. ALEX ROSS No. 9409 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE -

TITLE

UTILITY PLAN

140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

JOB NUMBER	DWG. NO.	ISSUE
21-168	4 OF 14	4

NOTES

1) PARKING SPACES PROVIDED = 119 SPACES

N/F LITCHFIELD PORTSMOUTH LLC & EATON PARTNERS INC
TAX MAP 252, LOT 2-14
RCRD 4800-1185

PROPOSED GRANITE CURB

S 22°48'45" W
409.28'

SNOW STORAGE

19.0'

8.5'

4,169 SF PERVIOUS PAVEMENT

50' SETBACK

24.0'

ONE WAY

AASHTO WB-50 TRUCK TURNING RADIUS

50' SETBACK

S 55°45'47" E
128.23'

10.42'

DO NOT ENTER SIGN

S 55°45'47" E

260.00'

30 NORTH FRONT ST LLC
TAX MAP 252, LOT 2
RCRD 6253-1556
87,507 SF, 2.01 ACRES

WEST RD

24.0'

70' SETBACK

BUMPER STOP (TYP.)

PROPOSED 5,000 GAL CISTERN

70' SETBACK

ONE WAY

N/F ONE HUNDRED WEST LLC
TAX MAP 252, LOT 2-12
RCRD 3589-1427

16.0'

19.0'

25.5'

PROPOSED 5,000 GAL CISTERN

8.5'

24.0'

TWO WAY

5.0'

8.0'

R = 50.'
L = 78.84'

S 34°14'13" W
351.17'

WEST RD

PROPOSED GRANITE CURB

CB A JELLYFISH FILTER, EL. 99.75

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
SCALE: 1" = 20'

R. ALEX ROSS No. 9409 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE -

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SCALE 1" = 20'
CHECKED A.ROSS
DRAWN D.D.D.
CHECKED

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TITLE

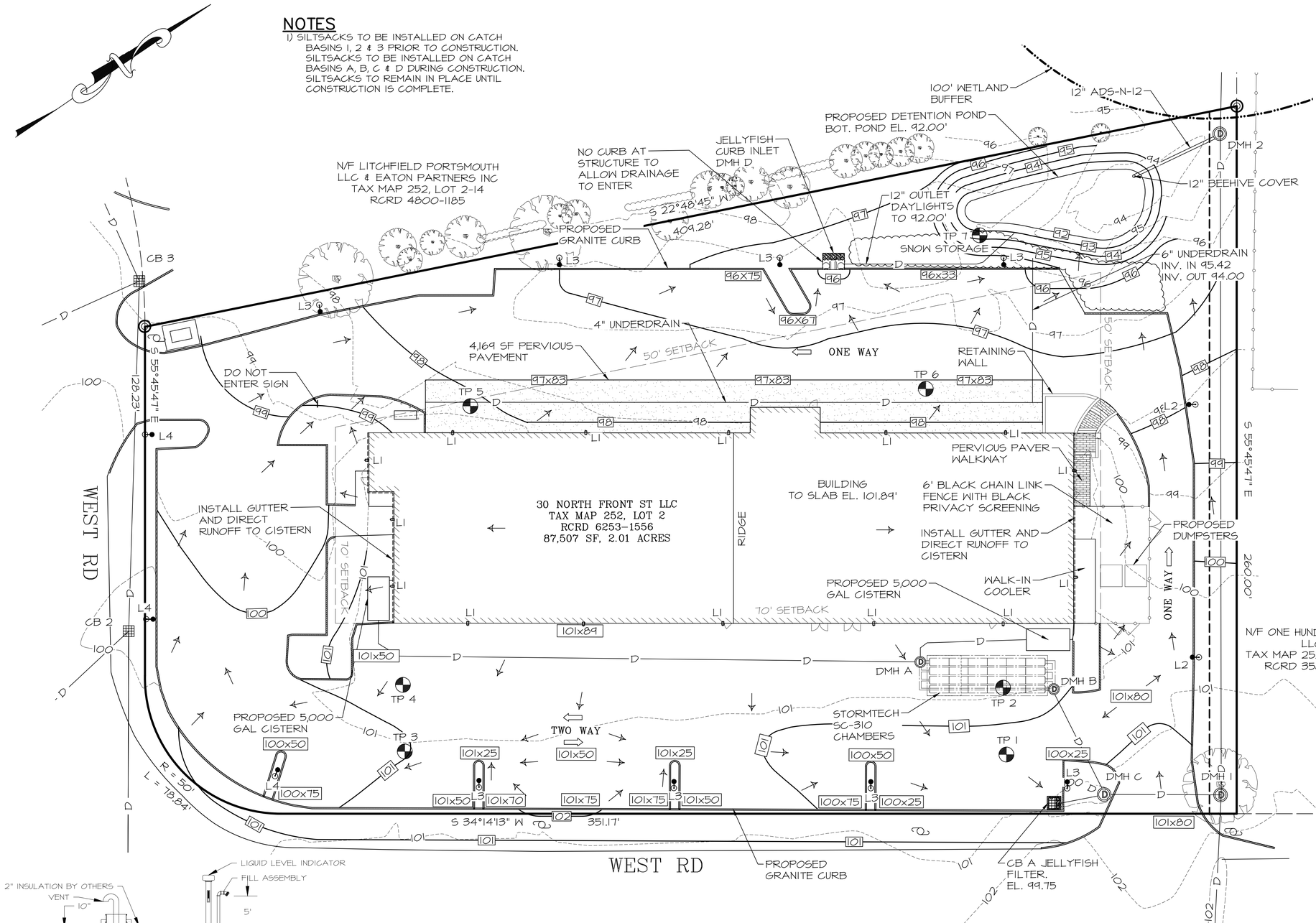
PARKING PLAN

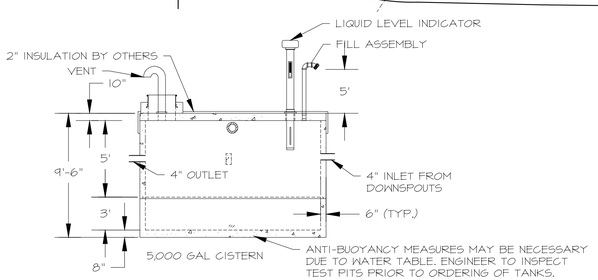
140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

JOB NUMBER	DWG. NO.	ISSUE
21-168	5 OF 14	4

NOTES

1) SILTSACKS TO BE INSTALLED ON CATCH BASINS 1, 2 & 3 PRIOR TO CONSTRUCTION. SILTSACKS TO BE INSTALLED ON CATCH BASINS A, B, C & D DURING CONSTRUCTION. SILTSACKS TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.





IRRIGATION CISTERN (TYP.)

NTS

EXISTING STRUCTURES

CATCH BASINS

CB #1
RIM EL. 99.28
INV. OUT 95.28 (12" RCP)

CB #2
RIM EL. 99.66
INV. OUT 95.26

CB #3
RIM EL. 98.36
INV. OUT 94.06

DRAIN MANHOLES

DMH #1
RIM EL. 101.37
INV. IN 93.37 (24" RCP) PROPOSED
INV. IN 93.12 (24" RCP)
INV. OUT 92.79 (24" RCP)

DMH #2
RIM EL. 95.64
INV. IN 92.24 (4" ADS-N-12) REMOVED
INV. IN 90.75 (12" ADS-N-12) PROPOSED
INV. IN 90.50 (24" RCP)
INV. OUT 90.47 (24" RCP)

PROPOSED STRUCTURES

CATCH BASINS

CB A
RIM EL. 99.75
INV. OUT 95.40 (12" ADS-N-12)
STRUCTURE: 4'Ø JELLYFISH FILTER

DRAIN MANHOLES

DMH A
RIM EL. 101.50
INV. IN 98.25 (4" ADS-N-12)
INV. IN 98.25 (4" ADS-N-12)
INV. OUT 98.17 (8" ADS-N-12)
INV. OUT 98.17 (12" ADS-N-12)
STRUCTURE: 4' Ø CONC. BASIN

DMH B
RIM EL. 101.00
INV. IN 98.17 (12" ADS-N-12)
INV. OUT 98.00 (12" ADS-N-12)
STRUCTURE: 4' Ø CONC. BASIN

DMH C
RIM EL. 102.25
INV. IN 95.40 (12" ADS-N-12)
INV. IN 95.35 (12" ADS-N-12)
INV. OUT 95.28 (24" ADS-N-12)
STRUCTURE: 4' Ø CONC. BASIN

DMH D
RIM EL. 96.25
CURB INLET EL. 96.00
INV. OUT 92.75 (12" ADS-N-12)
STRUCTURE: 6'x8' JELLYFISH FILTER

LEGEND

CHAIN LINK FENCE		DRAIN MANHOLE	D
VERTICAL GRANITE CURB		SEWER MANHOLE	S
UTILITY POLE		WATER	W
OVERHEAD UTILITY	OHU	SEWER	S
DRAINAGE FLOW PATH		STORMWATER DRAIN	D
EXISTING CONTOUR	97	GAS	G
PROPOSED CONTOUR	97	CATCH BASIN	
EXISTING SPOT GRADE	101x50	WATER SHUT-OFF	
PROPOSED SPOT GRADE	101x50	FIRE HYDRANT	
: SL630 SOLANA SERIES. MOUNTING HEIGHT: 20FT		MONUMENT FOUND	

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
SCALE: 1" = 20'

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TITLE

GRADING & DRAINAGE

140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

STATE OF NEW HAMPSHIRE · R. ALEX ROSS No. 9409 · LICENSED PROFESSIONAL ENGINEER

JOB NUMBER	DWG. NO.	ISSUE
21-168	6 OF 14	4

TEST PIT 1 (of 7)

DEPTH (INCHES)	COLOR	TEXTURE	STRUCTURE	CONSISTENCE
+3	ASPHALT			
0	10 YR 5/3 BROWN	GRAVELLY LOAMY SAND (FILL)	MASSIVE	MOIST FRIABLE
5	10 YR 5/3 BROWN	GRAVELLY SANDY LOAM (FILL)	MASSIVE	MOIST FRIABLE
36	10 YR 3/4 YELLOWISH BROWN, 10% 7.5 YR 5/8 STRONG BROWN REDOXIMORPHIC CONCENTRATIONS	GRAVELLY FINE SANDY LOAM	MASSIVE	MOIST FRIABLE

ESHWT	36 INCHES	ROOTS	NONE	RESTRICTIVE LAYERS	N/A
OBSERVED H_2O	NONE	REFUSAL (INCHES):	POSSIBLE @ 54"		
NOTES	OLD GRAVEL PIT, LONG SINCE DEVELOPED, FILL (EXCEPT FOR LAYER IMMEDIATELY BENEATH ASPHALT) MAY ALSO BE UNCONSOLIDATED SPOIL REMAINING AFTER MINING ACTIVITIES				

TEST PIT 2 (of 7)

DEPTH (INCHES)	COLOR	TEXTURE	STRUCTURE	CONSISTENCE
0	10 YR 5/3 BROWN	GRAVELLY LOAMY SAND (FILL)	MASSIVE	MOIST FRIABLE
14	10 YR 5/3 BROWN	GRAVELLY FINE SANDY LOAM (FILL)	MASSIVE	MOIST FRIABLE
42	10 YR 5/3 BROWN, 10% 7.5 YR 5/8 STRONG BROWN REDOXIMORPHIC CONCENTRATIONS	VERY STONY FINE SANDY LOAM (FILL/SPOIL?)	MASSIVE	MOIST FRIABLE

ESHWT	42 INCHES	ROOTS	NONE	RESTRICTIVE LAYERS	N/A
OBSERVED H_2O	NONE	REFUSAL (INCHES):	NONE TO 64"		
NOTES	FILL (EXCEPT FOR LAYER IMMEDIATELY BENEATH ASPHALT) MAY ALSO BE UNCONSOLIDATED SPOIL LEFTOVER FROM MINING ACTIVITIES				

TEST PIT 3 (of 7)

DEPTH (INCHES)	COLOR	TEXTURE	STRUCTURE	CONSISTENCE
+3	ASPHALT			
0	10 YR 5/3 BROWN	GRAVELLY LOAMY SAND (FILL)	MASSIVE	MOIST FRIABLE
5	10 YR 5/3 BROWN	FINE SAND	MASSIVE	MOIST FRIABLE
23	10 YR 5/3 BROWN, 15% FINE 7.5 YR 5/8 STRONG BROWN REDOXIMORPHIC CONCENTRATIONS	FINE SAND, DISCONTINUOUS LENSES OF SILT LOAM FROM 18"-24" IN SOME LOCATIONS	WEAK MEDIUM PLATY	MOIST FRIABLE
35	10 YR 5/3 BROWN (NO REDOXIMORPHIC FEATURES)	VERY FINE SAND	MASSIVE	MOIST FIRM

ESHWT	23 INCHES (PERCHED)	ROOTS	NONE	RESTRICTIVE LAYERS	35"
OBSERVED H_2O	NONE	REFUSAL (INCHES):	NONE TO 66"		
NOTES					

TEST PIT 4 (of 7)

DEPTH (INCHES)	COLOR	TEXTURE	STRUCTURE	CONSISTENCE
+3	ASPHALT			
0	10 YR 5/3 BROWN	GRAVELLY LOAMY SAND (FILL)	MASSIVE	MOIST FRIABLE
10	10 YR 4/4 DARK YELLOWISH BROWN	GRAVELLY LOAMY SAND (FILL)	MASSIVE	MOIST FRIABLE
18	10 YR 4/2 DARK GRAYISH BROWN, ≤3% 10 YR 5/2 GRAYISH BROWN REDOXIMORPHIC DEPLETIONS	GRAVELLY SANDY LOAM (FILL)	WEAK FINE SUBANGULAR BLOCKY	MOIST FRIABLE
24	10 YR 5/3 BROWN, 5% FINE 10 YR 5/6 YELLOWISH BROWN REDOXIMORPHIC CONCENTRATIONS	FINE SAND, DISCONTINUOUS LENSES OF SILT LOAM FROM 18"-24" IN SOME PIT LOCATIONS	WEAK MEDIUM PLATY	MOIST FRIABLE
36	10 YR 5/3 BROWN (NO REDOXIMORPHIC FEATURES)	VERY FINE SAND (W/ DISCONTINUOUS LENSES OF SILT LOAM)	MASSIVE (WEAK FINE PLATY)	MOIST FIRM

ESHWT	23 INCHES (PERCHED-SHORT TERM)	ROOTS	NONE	RESTRICTIVE LAYERS	36"
OBSERVED H_2O	NONE	REFUSAL (INCHES):	NONE TO 66"		
NOTES	LOW CONFIDENCE LEVEL IN REDOXIMORPHIC FEATURES AT 24" - MORPHOLOGY POSSIBLY INFLUENCED BY ROOF RUNOFF, CONVERSELYM OTHER FEATURES RELICT - POSSIBLY REFLECTIVE OF FORMER CONDITIONS				

TEST PIT 5 (of 7)

DEPTH (INCHES)	COLOR	TEXTURE	STRUCTURE	CONSISTENCE
+3	CRUSHED STONE (1.5")			
0	10 YR 6/3 PALE BROWN	SAND (FILL)	SINGLE GRAIN	MOIST FRIABLE
8	10 YR 5/4 BROWN	FINE SAND (POSSIBLE FILL)	MASSIVE	MOIST FRIABLE
26	10 YR 5/3 BROWN, 10% 7.5 YR 5/8 STRONG BROWN REDOXIMORPHIC CONCENTRATIONS AND 10% 10 YR 6/2 LIGHT BROWNISH GRAY REDOXIMORPHIC DEPLETIONS	VERY FINE SAND WITH DISCONTINUOUS LENSES OF SILT	MASSIVE	MOIST FRIABLE
35	10 YR 5/3 BROWN (NO REDOXIMORPHIC FEAUTRES)	VERY FINE SAND	MASSIVE	MOIST FIRM

ESHWT	26 INCHES	ROOTS	NONE	RESTRICTIVE LAYERS	N/A
OBSERVED H_2O	NONE	REFUSAL (INCHES):	POSSIBLE @ 60"		
NOTES	OLD GRAVEL PIT, LONG SINCE DEVELOPED, POSSIBLE PARALITHIC BEDROCK CONTACT, PITS LOCATED BEHIND STRUCTURE.				

TEST PIT 6 (of 7)

DEPTH (INCHES)	COLOR	TEXTURE	STRUCTURE	CONSISTENCE
+3	CRUSHED STONE (1.5")			
0	10 YR 6/3 PALE BROWN	SAND (FILL)	SINGLE GRAIN	MOIST FRIABLE
5	10 YR 4/3 BROWN	FINE SANDY LOAM (FILL)	MASSIVE	MOIST FRIABLE
10	2.5Y 5/4 OLIVE BROWN	FINE SAND	MASSIVE	MOIST FRIABLE
26	2.5 YR 4/2 DARK GRAYISH BROWN, 5% 2.5Y 5/6 LIGHT OLIVE BROWN AND 5% 2.5Y 6/2 LIGHT BROWNISH GRAY REDOXIMORPHIC DEPLETIONS	FINE SANDY LOAM	MASSIVE	MOIST FIRM
36	2.5Y 5/3 OLIVE BROWN	FINE SANDY LOAM	MASSIVE	MOIST FRIABLE

ESHWT	26 INCHES (PERCHED)	ROOTS	NONE	MINERAL RESTRICTIVE LAYER	26"
OBSERVED H_2O	NONE	REFUSAL (INCHES):	NONE TO 78"		

TEST PIT 7 (of 7)

DEPTH (INCHES)	COLOR	TEXTURE	STRUCTURE	CONSISTENCE
0	10 YR 3/3 DARK BROWN	FINE SANDY LOAM (FILL)	WEAK FINE GRANULAR	MOIST FRIABLE
12	2.5 YR 4/3 OLIVE BROWN	STONY SANDY LOAM (FILL)	MASSIVE	MOIST FRIABLE
21	2.5 Y 5/3 LIGHT OLIVE BROWN, 15% 7.5 YR 5/6 STRONG BROWN REDOXIMORPHIC CONCENTRATIONS AND 15% 2.5 Y 6/2 LIGHT BROWNISH GRAY REDOXIMORPHIC DEPLETIONS	FINE SANDY LOAM (FILL)	MASSIVE	MOIST TO WET FRIABLE
36	2.5 Y 4/2 DARK GRAYISH BROWN (NO REDOXIMORPHIC FEATURES)	FINE SANDY LOAM (FILL)	MASSIVE	MOIST FIRM
54	2.5 Y 4/1 DARK GRAY	FINE SANDY LOAM (FILL)	MASSIVE	MOIST TO WET FRIABLE

ESHWT	21 INCHES (PERCHED)	ROOTS	NONE	MINERAL RESTRICTIVE LAYERS	36 INCHES
OBSERVED H_2O	SLOW SEEP AT 21"	REFUSAL (INCHES):	NONE TO 84"		
NOTES	RAIN OCCURRED NIGHT BEFORE				

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TITLE
TEST PIT DATA

140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

JOB NUMBER 21-168 | DWG. NO. 7 OF 14 | ISSUE 4

STATE OF NEW HAMPSHIRE - R. ALEX ROSS No. 9409 LICENSED PROFESSIONAL ENGINEER

STORMTECH GENERAL NOTES

1. STORMTECH REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.

2. OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL **1-888-892-2694** TO SPEAK TO A TECHNICAL SERVICES REPRESENTATIVE OR VISIT **WWW. STORMTECH.COM** TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.

3. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.):MINIMUM COVER IS 18" (457 mm) NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96" (2438 mm) INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24" (610 mm), MAXIMUM COVER IS 96" (2438 mm).

4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.

5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.

6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.

7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.

8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: **WWW.STORMTECH.COM**. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.

9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT **1-888-892-2694** OR VISIT **WWW.STORMTECH.COM**

SC-310 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-310.

2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.

3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418-16a (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".

4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.

5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.

7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.

9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

1. STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.

2. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".

3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.

4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.

5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.

6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.

7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).

8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.

9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".

2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".

3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".

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CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

INSPECTION & MAINTENANCE

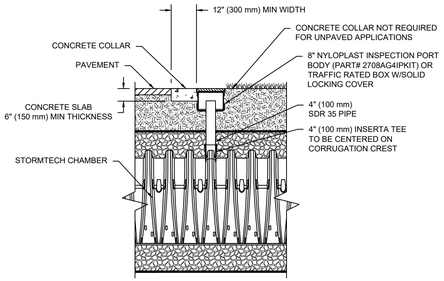
STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80MM) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B.
- C. ALL ISOLATOR ROWS
  - C.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - C.2. USING A FLASH LIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE. MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - C.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80MM) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1M) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

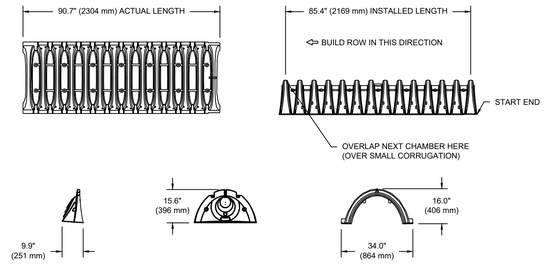
NOTES
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS. ADJUSTMENT TO THE INSPECTION INTERVAL TIMEFRAME SHALL NOT BE GREATER THAN 12 MONTHS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

4" INSPECTION PORT DETAIL

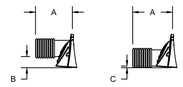
N.T.S.



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	31.0 CUBIC FEET	(0.88 m³)
WEIGHT	35.0 lbs.	(16.8 kg)

*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS



PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	---
SC310EPE06B / SC310EPE06BPC			---	0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.9" (302 mm)	3.5" (89 mm)	---
SC310EPE08B / SC310EPE08BPC			---	0.6" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	---
SC310EPE10B / SC310EPE10BPC			---	0.7" (18 mm)
SC310EPE12B	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)
SC310EPE12BR	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)

ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC310EPE12B THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

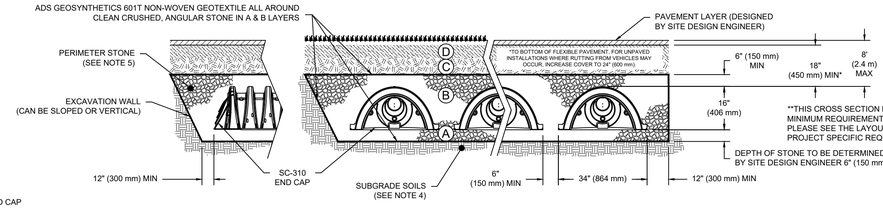
NOTE: ALL DIMENSIONS ARE NOMINAL

SC-310 TECHNICAL SPECIFICATIONS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

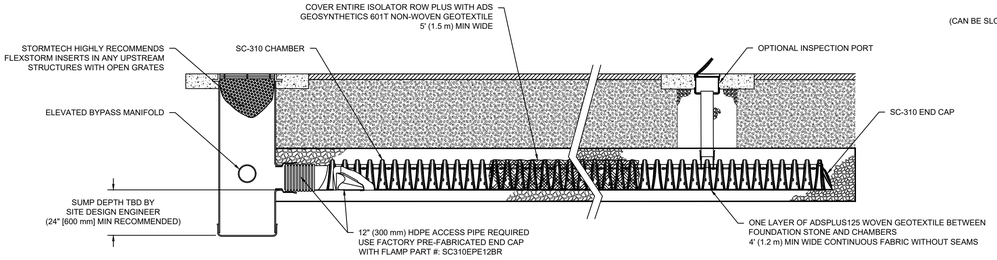
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DESIGN REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE; "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



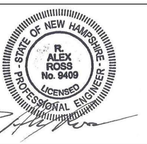
NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418-16a (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



ISOLATOR ROW PROFILE

N.T.S.



ISS.	DATE	DESCRIPTION OF ISSUE
4	8/8/2022	PB SUBMITTAL
3	7/21/2022	TAC SUBMITTAL
2	6/21/2022	TAC SUBMITTAL
1	6/7/2022	TAC SUBMITTAL

SCALE: 1" = 20'
CHECKED: A.ROSS
DRAWN: D.D.D.
CHECKED:

ROSS ENGINEERING, LLC
Civil/Structural Engineering & Surveying
909 Islington St
Portsmouth, NH 03801
(603) 433-7560

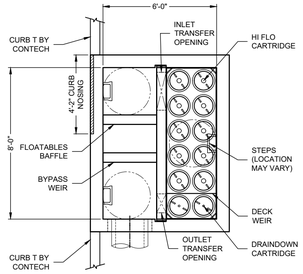
CLIENT
ROAD TO THE WEST, LLC
ALEXANDER B. CHOQUETTE
14 LAFAYETTE RD. UNIT 9
NORTH HAMPTON, NH 03862

TITLE

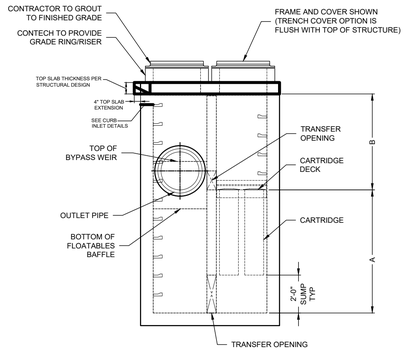
STORMTECH DETAILS

140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

JOB NUMBER	DWG. NO.	ISSUE
21-168	8 OF 14	4



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)

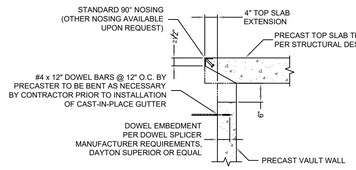


ELEVATION VIEW

JELLYFISH FILTER JFPD0806-3-1 (DMH D) DETAIL

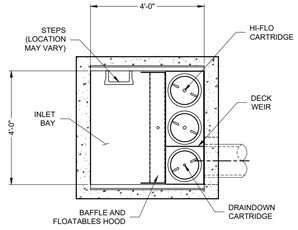
N.T.S.

JELLYFISH (JFPD0806-3-1) DESIGN NOTES				
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD				
CARTRIDGE SELECTION				
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	1.96	1.47	0.98	0.54
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00

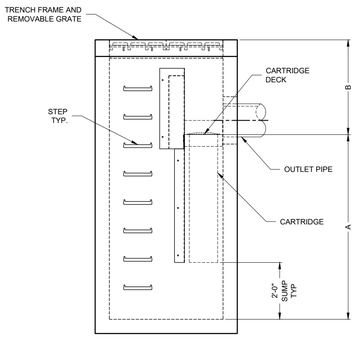


SECTION VIEW

EXTENDED TOP SLAB CURB INLET DETAIL
(VAULT IS SET BEHIND CURB)
NOT TO SCALE



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



ELEVATION VIEW

JELLYFISH FILTER JFSI0404 (CBA) DETAIL

N.T.S.

JELLYFISH (JFSI0404) DESIGN NOTES				
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD SURFACE INLET STYLE WITH TRENCH GRATE AND COVER IS SHOWN. ALTERNATE CURB INLET OR PIPE INLET OPTIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.				
CARTRIDGE SELECTION				
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	0.45	0.33	0.22	0.12
OUTLET INVERT TO RIM (MIN) (B)	3'-4"	3'-4"	3'-4"	3'-4"

TECHO-BLOC & PERVIOUS PAVER INSTALLATION GENERAL NOTES

DATA COLLECTION

1. DETERMINE THE SIZE, SHAPE AND INTENDED USE OF FINISHED AREAS.
2. CLASSIFY SUB-GRADE SOILS.
3. DOCUMENT ALL EXISTING CONDITIONS. (FIXED POINTS, EXISTING GRADES, SITE CONTOURS, ETC)
4. DOCUMENT SOIL TYPE, LOCATION, AND ELEVATION OF BELOW GRADE AND OVERHEAD UTILITIES BOTH PUBLIC AND PRIVATE.
5. ENSURE PUBLIC UTILITIES ARE MARKED THROUGH THE USE OF LOCATING SERVICE.
6. DETERMINE THE CROSS SECTION DESIGN OF THE SYSTEM BASED ON SOIL TYPE AND APPLICATION, SHOWING PROPOSED SUB-GRADE AND FINISHED GRADE ELEVATIONS AND ALL GEOTEXTILES AND DRAINAGE DRAINAGE PIPES NEEDED FOR CONSTRUCTION.
7. ESTABLISH THE TYPE, LOCATION, AND ELEVATION OF RELIEF STRUCTURES IF REQUIRED (OVERFLOW PIPE DISCHARGING TO RAIN GARDEN, ETC).
8. DETERMINE CURB OR EDGE RESTRAINT TYPE, ELEVATION, AND LOCATION.
9. CHOOSE PATTERN APPROPRIATE TO THE APPLICATION (TRAFFIC TYPE AND LOAD).

EXCAVATION

1. BEFORE EXCAVATING, CALL ALL LOCAL UTILITY COMPANIES (E.G., PHONE, GAS, ELECTRICAL) TO ENSURE THAT THE AREA IN WHICH YOU PLAN TO DIG IS CLEAR OF UNDERGROUND CABLES OR WIRES. IF ANY ARE FOUND, PLEASE NOTIFY THE APPROPRIATE COMPANIES BEFORE YOU BEGIN.
2. EXCAVATION DEPTH IS DETERMINE FROM THE FOUNDATION THICKNESS ACCORDING TO THE PROJECT SPECIFICATIONS (FOUNDATION THICKNESS IS DETERMINED BY QUALIFIED ENGINEER BASED ON STRUCTURAL AND HYDROLOGIC ANALYSIS)
3. THE SLOPE OF THE SUB-GRADE WILL DEPEND ON DRAINAGE DESIGN AND INFILTRATION TYPE, A MINIMUM SLOPE OF 5% (⅝" PER FOOT) IS REQUIRED.
4. THE DISTANCE THAT THE EXCAVATED AREA SHOULD EXTEND BEYOND THE AREA TO BE PAVED SHALL BE ONE TO 1.5 TIMES THE THICKNESS OF THE FOUNDATION. EXTRA SPACE ENSURE STABILITY OF PAVERS NEAR EDGE AND EDGE RESTRAINTS.
5. LEVEL THE BOTTOM OF THE EXCAVATED AREA WITH A RAKE.
6. COMPACTION WILL REDUCE THE PERMEABILITY OF THE SUB-GRADE. CARE SHOULD BE TAKEN TO MAINTAIN UNDISTURBED SOIL INFILTRATION DURING EXCAVATION AND CONSTRUCTION. STABILIZATION OF SUB-GRADE MAY BE REQUIRED WITH WEAK, OR CONTINUOUSLY SATURATED SOILS. REDUCED INFILTRATION MAY REQUIRE DRAINAGE PIPES WITHIN THE SUB-BASE TO CONFORM TO STORMWATER DRAINAGE REQUIREMENTS.

GEOTEXTILES, IMPERMEABLE LINERS, AND DRAIN PIPES.

1. USE A WOVEN GEOTEXTILE WITH HIGH BI-AXEL STRENGTH.
2. PLACE THE GEOTEXTILE ON THE BOTTOM AND SIDES OF THE SOIL SUB-GRADE. ELIMINATE WRINKLES IN THE GEOTEXTILE AND ENSURE IT IS NOT DAMAGED DURING CONSTRUCTION.
3. OVERLAP OF GEOTEXTILE SHALL BE A MINIMUM 2'-0" IN THE DIRECTION OF DRAINAGE. OVERLAPPING SHOULD BE "SHINGLE" STYLE WITH RESPECT TO ANY SLOPE DIRECTION AND BASE STONE DISTRIBUTION DIRECTION. KEEP PROPERLY TENSIONED, ELIMINATE WRINKLES, AND AVOID DAMAGING FABRIC (NO SPIKES).

SUB-BASE

1. USE SUB-BASE ASTM NO. 2 OR NO. 3 MEETING THE FOLLOWING REQUIREMENTS:
   - A. 90% FRACTURED SYMMETRICAL PARTICALS
   - B. LESS THAN 5% PASSING 200 SIEVE
   - C. INDUSTRY HARDNESS TESTED
2. MOISTEN SPREAD AND COMPACT ASTM NO. 2 AGGREGATE SUB-BASE IN MINIMUM 6" LIFTS (WITHOUT DAMAGING OR DISTORTING THE GEOTEXTILE).
3. MAKE AT LEAST TWO PASSES IN VIBRATORY MODE FOLLOWED BY AT LEAST TWO PASSES IN STATIC MODE WITH A MINIMUM 10 TON VIBRATORY ROLLER, UNTIL THERE IS NOT VISIBLE MOVEMENT OF THE AGGREGATE.
4. DO NOT ALLOW COMPACTOR TO CRUSH AGGREGATE.
5. SURFACE TOLERANCE OF THE ASTM NO. 2 SUB-BASE SHOULD BE ±2½" OVER 10'.

EDGE RESTRAINT

1. INSTALL AVIGNON, BELGIK, PIETRA, TUNDRA, OR UNIVERSAL EDGE CUT UNITS. CAST-IN-PLACE CONCRETE OR PRECAST CONCRETE CURBS SHALL BE UTILIZED IN VEHICULAR APPLICATIONS.
2. EDGE RESTRAINT MAY REST ON AN OPEN-GRADED OR DENSE-GRADED AGGREGATE BASE.

BASE

1. MOISTEN, SPREAD AND COMPACT THE ASTM NO. 57 AGGREGATE BASE LAYER IN ONE 4" THICK LIFT.
2. MAKE A MINIMUM OF TWO PASSES IN VIBRATORY MODE FOLLOWED BY AT LEAST TWO STATIC MODE WITH A MINIMUM 10 TON ROLLER, UNTIL NO VISIBLE MOVEMENT OF THE AGGREGATE. ALTERNATIVELY, A 13,500 LB PLATE COMPACTOR CAN BE USED TO COMPACTER ASTM NO. 57 AGGREGATE BASE.
3. DO NOT ALLOW COMPACTOR TO CRUSH AGGREGATE.
4. SURFACE TOLERANCE OF THE ASTM NO. 57 BASE SHOULD BE ±1" OVER 10'.

BEDDING COURSE

1. MOISTEN, SPREAD AND SCREED ASTM NO 8. AGGREGATE BEDDING LAYER IN ONE 2" THICK LIFT
2. SURFACE TOLERANCE OF THE ASTM NO 8. BEDDING COURSE ±⅜" OVER 10'
3. CONSTRUCTION EQUIPMENT AND PEDESTRIAN TRAVEL ON SCREEDED BEDDING COARSE IS PROHIBITED.

PAVER

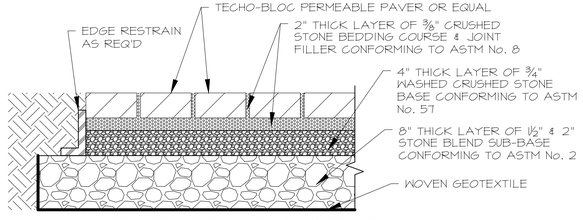
1. PAVERS SHOULD BE PLACED IN PATTERN SHOWN ON DRAWINGS. LAY UNITS TIGHT TO DESIGNATED LAYING PATTERNS. UNITS HAVE LUGS TO MAINTAIN CONSISTENT JOINT WIDTH.
2. IN SLOPED CONDITIONS START LAYING FROM THE BOTTOM IN AN UPHILL DIRECTION.
3. THE MINIMUM SLOPE FOR PERMEABLE PAVEMENT SURFACE IS 1%.
4. INFLO PAVERS CAN BE INSTALLED WITH TBI0051 (TECHO-BLOC MECHANICAL TOOL) TO EXPEDITE INSTALLATION.
5. WHEN SUBJECT IT VEHICULAR TRAFFIC, CUT UNITS SHOULD NOT BE SMALLER THEN ⅓ THE WHOLE PAVER. WHEN USING CUT PAVERS MAINTAIN JOINT.
6. IN VEHICULAR APPLICATION LAY PATTERN PERPENDICULAR TO TRAFFIC FLOW.

JOINT FILL

1. FILL PAVER JOINT OPENINGS WITH ASTM NO. 8 AGGREGATE. SWEEP STONE TO FILL JOINTS. SURFACE MUST BE SWEPT CLEAN PRIOR TO COMPACTION
2. COMPACT WITH 5,000 LB PLATE COMPACTOR (TWO PASSES MINIMUM). INSTALL OF NEOPRENE PAD TO PROTECT THE TEXTURE OF THE PAVING UNITS.
3. DO NOT COMPACT WITHIN 6' OF UNRESTRAINED EDGES OF PAVERS.
4. APPLY ADDITIONAL AGGREGATE TO FILL THE JOINT OPENINGS IF NEEDED AND COMPACT.
5. SURFACE TOLERANCE OF COMPACTED PAVERS SHOULD BE ±⅜" OVER 10'.

POST INSTALLATION PROTECTION

1. MAINTAIN EROSION AND SEDIMENT MEASURES AT PERIMETER TO PREVENT CONTAMINATION OF POROUS PAVEMENT SYSTEM.



PERVIOUS PAVERS DETAIL

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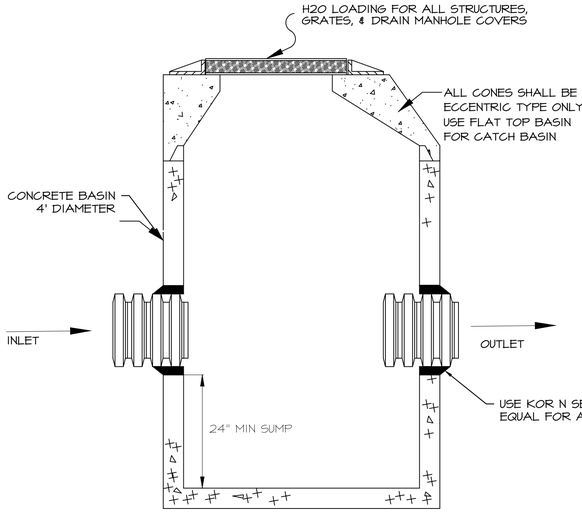

PROPOSED DRAIN MANHOLE (TYP.)

N.T.S.

GENERAL NOTES:

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContecheS.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE (WHERE APPLICABLE) AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

ISS.	DATE	DESCRIPTION OF ISSUE
4	8/8/2022	PB SUBMITTAL
3	7/21/2022	TAC SUBMITTAL
2	6/21/2022	TAC SUBMITTAL
1	6/7/2022	TAC SUBMITTAL

SCALE 1" = 20'
CHECKED A.ROSS
DRAWN D.D.D.
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TITLE
STORMWATER MANAGEMENT DETAILS
140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

STATE OF NEW HAMPSHIRE · R. ALEX ROSS No. 9409 · LICENSED PROFESSIONAL ENGINEER

JOB NUMBER	DWG. NO.	ISSUE
21-168	9 OF 14	4

CONSTRUCTION SPECIFICATIONS FOR POROUS ASPHALT

REFERENCE DOCUMENT: UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS, UNH STORMWATER CENTER, FEBRUARY, 2014.

INSTALLATION RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS WILL HELP ASSURE THAT THE POROUS ASPHALT PAVEMENT IS PROPERLY INSTALLED.

1. THE FULL PAVEMENT SPECIFICATION MUST BE FOLLOWED CONSCIENTIOUSLY DURING CONSTRUCTION. IT IS BASED ON UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS. THE UNH SPECIFICATION INCLUDE NUMEROUS VITAL PROVISIONS FOR AGGREGATE AND BITUMINOUS MATERIALS, THEIR PLACEMENT, AND QUALITY CONTROL, AMONG ITS NOTABLE PROVISIONS ARE THE FOLLOWING EXAMPLES:
   - OPEN-GRADED AGGREGATE TO MAKE ALL PAVEMENT LAYERS POROUS AND PERMEABLE.
   - STIFF ASPHALT BINDER TO ADHERE TO THE AGGREGATE PARTICLES AND RESIST "DRAINDOWN" THROUGH THE PAVEMENT'S PORES, ENHANCING THE MATERIAL'S PERFORMANCE AND DURABILITY;
   - A SPECIFIC LIMIT ON ALLOWABLE DRAINDOWN, AND ADDITION OF A STYRENE-BUTADIENE-STYRENE (SBS) POLYMER ADDITIVE TO HELP MEET THAT REQUIREMENT;
   - THE POROUS PAVEMENT IS TO BE INSTALLED ONLY AFTER MAJOR CONSTRUCTION IS COMPLETED, SO THAT CONSTRUCTION TRAFFIC WILL NOT TRACK POTENTIALLY CLOGGING SEDIMENT ONTO THE PAVEMENT SURFACE. FOR CONSTRUCTION ACCESS, A TEMPORARY SURFACE WILL BE INSTALLED, SIMILAR IN CONSTRUCTION TO A STANDARD STABILIZED CONSTRUCTION ENTRANCE. THIS TYPE OF SURFACE CAN BEAR CONSTRUCTION TRAFFIC WITHOUT ERODING.
   - PROMINENT AND REPEATED STATEMENTS OF THE SPECIAL NATURE AND PURPOSE OF POROUS PAVEMENT, AND THE NECESSITY OF COMPLYING STRICTLY WITH THESE DISTINCTIVE SPECIFICATIONS.
   - PROTECTION OF THE FINISHED POROUS ASPHALT SURFACE FROM TRACKING OF CONSTRUCTION SEDIMENT.

2. THOROUGH COMMUNICATION WITH THE POROUS ASPHALT SUPPLIER AND PAVEMENT INSTALLER IS ESSENTIAL. THEY MUST UNDERSTAND THE POROUS PAVEMENT'S SPECIAL OBJECTIVES, THE SPECIAL MATERIALS AND PROCEDURES NECESSARY TO MAKE IT EFFECTIVE, AND WHY COMPLIANCE WITH SPECIFICATIONS IS ESSENTIAL. TO THIS END, THE SPECIFICATIONS STATE PROMINENTLY AND REPEATEDLY THE SPECIAL NATURE AND PURPOSE OF THE POROUS MATERIALS. IN ADDITION, THE PROJECT ENGINEER SHOULD MEET WITH THE CONTRACTORS IN PERSON TO REVIEW THE SPECIFICATIONS AND MAKE SURE THE CONTRACTORS UNDERSTAND THE OBJECTIVES. HE SHOULD OBSERVE THE CONTRACTORS ON-SITE FREQUENTLY, TO MAKE SURE THE OBJECTIVES ARE CARRIED OUT. HE SHOULD MAINTAIN A WRITTEN RECORD DOCUMENTING REVIEW AND APPROVAL AT CRITICAL PROJECT STAGES SUCH AS EXCAVATION OF THE SUB GRADE AND QUALITY CHECKS OF BASE AND SURFACE MATERIALS. HE SHOULD INSPECT THE SITE TO MAKE SURE CONSTRUCTION VEHICLES ARE NOT ALLOWED TO TRAVERSE EXCAVATED SUB GRADE OR THE PAVEMENT STRUCTURE AT ANY INAPPROPRIATE STAGE. HE SHOULD FORBID CONSTRUCTION TRAFFIC FROM TRACKING SOIL ONTO THE FINISHED PAVEMENT SURFACE.

INSTALLATION

A. PERCOLATION BEDS
   1. OWNER SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO ALL PERCOLATION BED AND POROUS PAVING WORK.
   2. SUB GRADE PREPARATION
      a. EXISTING SUB GRADE UNDER BED AREAS SHALL NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO STONE BED PLACEMENT.
      b. WHERE EROSION OF SUB GRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE OR EQUIVALENT AND LIGHT TRACTOR.
      c. BRING SUB GRADE OF STONE PERCOLATION BED TO LINE, GRADE, AND ELEVATIONS INDICATED. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSIONS, PONDING, OR TRAFFIC COMPACTION BEFORE THE PLACING OF STONE. ALL BED BOTTOMS ARE LEVEL GRADE.
   3. RECHARGE BED INSTALLATION
      a. UPON COMPLETION OF SUB GRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT HIS DISCRETION BEFORE PROCEEDING WITH PERCOLATION BED INSTALLATION.
      b. PERCOLATION BED AGGREGATE SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUB GRADE PREPARATION. ANY ACCUMULATION OF DEBRIS OR SEDIMENT WHICH HAS TAKEN PLACE AFTER APPROVAL OF SUB GRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF AGGREGATE AT NO EXTRA COST TO THE OWNER.
      c. INSTALL COARSE AGGREGATE (CRUSHED STONE) IN 8-INCH MAXIMUM LIFTS, TO A MAXIMUM OF 95% STANDARD PROCTOR COMPACTION, KEEPING EQUIPMENT MOVEMENT OVER STORAGE BED SUBGRADES TO A MINIMUM. INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
      d. INSTALL FILTER COARSE (BANK RUN GRAVEL) IN 8-INCH MAXIMUM LIFTS, TO A MAXIMUM OF 95% STANDARD PROCTOR COMPACTION, KEEPING EQUIPMENT MOVEMENT OVER STORAGE BED SUBGRADES TO A MINIMUM. INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
      e. INSTALL CHOKER BASE COURSE (SEE MATERIALS SECTION) AGGREGATE EVENLY OVER SURFACE OF STONE BED, SUFFICIENT TO ALLOW PLACEMENT OF PAVEMENT, AND NOTIFY ENGINEER FOR APPROVAL. CHOKER BASE COURSE SHALL BE SUFFICIENT TO ALLOW FOR EVEN PLACEMENT OF ASPHALT BUT NO LESS THAN 4-INCH IN DEPTH.

4. SURROUNDING AREAS
   a. BEFORE THE POROUS PAVEMENT IS INSTALLED, ADJACENT SOIL AREAS SHOULD BE SLOPED AWAY FROM ALL PAVEMENT EDGES, TO PREVENT POTENTIAL SEDIMENT FROM WASHING ON THE PAVEMENT SURFACE.
   b. TO ACCOMPLISH THIS, A SEQUENCE OF TEMPORARY SWALES SHOULD BE EXCAVATED INTO ALL EARTHEN (UNPAVED) AREAS AT LEAST ON THE UPHILL SIDES OF THE PAVEMENT, AND WHERE NECESSARY, TO BELOW THE CURB OR PAVEMENT ELEVATION. ITS SHAPE AND PLANTINGS CAN BE INTEGRATED WITH THE PROJECT'S ARCHITECTURE AND LANDSCAPE, AND DESIGNED TO MAXIMIZE INFILTRATION. SWALE OVERFLOW, WHEN IT OCCURS, CAN BE DISCHARGED FROM ONE SWALE TO ANOTHER BY CONNECTING PIPES UNDER DRIVEWAYS.
   c. BUILDING BASEMENTS AND FOUNDATIONS SHOULD BE WATERPROOFED AS NECESSARY, WHERE THE POROUS PAVEMENT ABUTS BUILDINGS.

INSTALLATION (CONT...)

B. POROUS ASPHALT
   1. TRANSPORTING MATERIAL
      a. TRANSPORTING OF MIX TO THE SITE SHALL BE IN VEHICLES WITH SMOOTH, CLEAN DUMP BEDS THAT HAVE BEEN SPRAYED WITH A NON-PETROLEUM RELEASE AGENT.
      b. THE MIX SHALL BE COVERED DURING TRANSPORT TO CONTROL COOLING.
   2. POROUS BITUMINOUS ASPHALT SHALL NOT BE STORED IN EXCESS OF 90 MINUTES BEFORE PLACEMENT.
   3. ASPHALT PLACEMENT
      a. THE POROUS BITUMINOUS SURFACE COURSE SHALL BE LAID IN ONE OR TWO LIFTS DIRECTLY OVER THE CHOKER COARSE, FILTER COARSE, AND CRUSHED STONE BASE COURSE TO DEPTH INDICATED. IF LAID IN TWO LIFTS THE PAVEMENT SHALL BE CLEANED AND INSPECTED BY THE ENGINEER BEFORE PLACEMENT OF THE SECOND LIFT.
      b. THE LAYING TEMPERATURE OF THE BITUMINOUS MIX SHALL BE BETWEEN 275 DEGREES FAHRENHEIT AND 325 DEGREES FAHRENHEIT (BASED ON RECOMMENDATIONS OF THE ASPHALT SUPPLIER).
      c. INSTALLATION SHALL TAKE PLACE WHEN AMBIENT TEMPERATURES ARE 55 DEGREES FAHRENHEIT OR ABOVE, WHEN MEASURED IN THE SHADE AWAY FROM ARTIFICIAL HEAT:
      d. THE USE OF A REMIXING MATERIAL TRANSFER DEVICE BETWEEN THE TRUCKS AND THE PAVER IS HIGHLY RECOMMENDED TO ELIMINATE COLD LUMPS IN THE MIX.
      e. THE POLYMER-MODIFIED ASPHALT IS VERY DIFFICULT TO RAKE, A WELL-HEATED SCREED SHOULD BE USED TO MINIMIZE THE NEED FOR RAKING.
      f. COMPACTION OF THE SURFACE COURSE SHALL TAKE PLACE WHEN THE SURFACE IS COOL ENOUGH TO RESIST AN 8-12-TON ROLLER. BREAKDOWN ROLLING SHALL OCCUR WHEN THE MIX TEMPERATURE IS BETWEEN 275 DEGREES FAHRENHEIT AND 325 DEGREES FAHRENHEIT. INTERMEDIATE ROLLING SHALL OCCUR WHEN THE MIX TEMPERATURE IS BETWEEN 150 DEGREES FAHRENHEIT AND 200 DEGREES FAHRENHEIT. THE CESSATION TEMPERATURE OCCURS AT APPROXIMATELY 175 DEGREES FAHRENHEIT, AT WHICH POINT THE MIX BECOMES RESISTANT TO COMPACTION. IF COMPACTION HAS NOT BEEN DONE AT TEMPERATURE GREATER THAN THE CESSATION TEMPERATURE, THE PAVEMENT WILL NOT ACHIEVE ADEQUATE DURABILITY.
   4. IN THE EVENT CONSTRUCTION SEDIMENT IS INADVERTENTLY DEPOSITED ON THE FINISHED POROUS SURFACE, IT MUST BE IMMEDIATELY REMOVED BY VACUMING.
   5. AFTER FINAL ROLLING, NO VEHICULAR TRAFFIC OF ANY KIND SHALL BE PERMITTED ON THE SURFACE UNTIL COOLING AND HARDENING HAS TAKEN PLACE, AND IN NO CASE WITHIN THE FIRST 48 HOURS. PROVIDE BARRIERS AS NECESSARY AT NO EXTRA COST TO THE OWNER TO PREVENT VEHICULAR USE; REMOVE AT THE DISCRETION OF THE ENGINEER.
   6. STRIPING PAINT FOR TRAFFIC LANES AND PARKING BAYS SHALL BE CHLORINATED RUBBER BASE, FACTORY MIXED, NON-BLEEDING, FAST DRYING, BEST QUALITY, WHITE TRAFFIC PAINT WITH A LIFE EXPECTANCY OF TWO YEARS UNDER NORMAL TRAFFIC USE.
      a. PAVEMENT-MARKING PAINT; LATEX, WATER-BASE EMULSION, READY-MIXED, COMPLYING WITH FS TT-P-1952.
      b. SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST.
      c. PAINT 4 INCH WIDE PARKING STRIPING AND TRAFFIC LANE STRIPING IN ACCORDANCE WITH LAYOUTS OF PLAN. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. APPLY IN TWO COATS AT MANUFACTURER'S RECOMMENDED RATES. PROVIDE CLEAR, SHARP LINES USING WHITE TRAFFIC PAINT, INSTALLED IN ACCORDANCE WITH NHDOT SPECIFICATIONS.
   7. WORK SHALL BE DONE EXPERTLY THROUGHOUT, WITHOUT STAINING OR INJURY TO OTHER WORK. TRANSITION TO ADJACENT IMPERVIOUS BITUMINOUS PAVING SHALL BE MERGED NEATLY WITH FLUSH, CLEAN LINE. FINISHED PAVING SHALL BE EVEN, WITHOUT POCKETS, AND GRADED TO ELEVATIONS SHOWN ON DRAWING.
   8. POROUS PAVEMENT BEDS SHALL NOT BE USED FOR EQUIPMENT OR MATERIALS STORAGE DURING CONSTRUCTION, AND UNDER NO CIRCUMSTANCES SHALL VEHICLES BE ALLOWED TO DEPOSIT SOIL ON PAVED POROUS SURFACES.
   9. REPAIR OF DAMAGED PAVING
      a. ANY EXISTING PAVING ON OR ADJACENT TO THE SITE THAT HAS BEEN DAMAGED AS A RESULT OF CONSTRUCTION WORK SHALL BE REPAIRED TO SATISFACTION OF THE OWNER WITHOUT ADDITIONAL COST TO THE OWNER.
   10. FULL QUALITY CONTROL
      a. THE FULL PERMEABILITY OF THE PAVEMENT SURFACE SHALL BE TESTED BY APPLICATION OF CLEAN WATER AT THE RATE OF AT LEAST 5 GPM OVER THE SURFACE, USING A HOSE OR OTHER DISTRIBUTION DEVISE, WATER USED FOR THE TEST SHALL BE CLEAN, FREE OF SUSPENDED SOLIDS AND DELETERIOUS LIQUIDS AND WILL BE PROVIDED AT NO EXTRA COST TO THE OWNER. ALL APPLIED WATER SHALL INFILTRATE DIRECTLY WITHOUT PUDDLE FORMATION OR SURFACE RUNOFF, AND SHALL BE OBSERVED BY THE ENGINEER AND OWNER.
      b. TEST IN-PLACE BASE AND SURFACE COURSE FOR COMPLIANCE WITH REQUIREMENTS FOR THICKNESS AND SURFACE SMOOTHNESS, REPAIR OR REMOVE AND REPLACE UNACCEPTABLE WORK AS DIRECTED BY THE OWNER.
      c. SURFACE SMOOTHNESS: TEST FINISHED SURFACE FOR SMOOTHNESS AND EVEN DRAINAGE, USING A TEN-FOOT TO CENTERLINE OF PAVED AREA. SURFACE WILL NOT BE ACCEPTED IF GAPS OR RIDGES EXCEED 3/16 OF AN INCH.

MAINTENANCE SPECIFICATIONS FOR POROUS ASPHALT

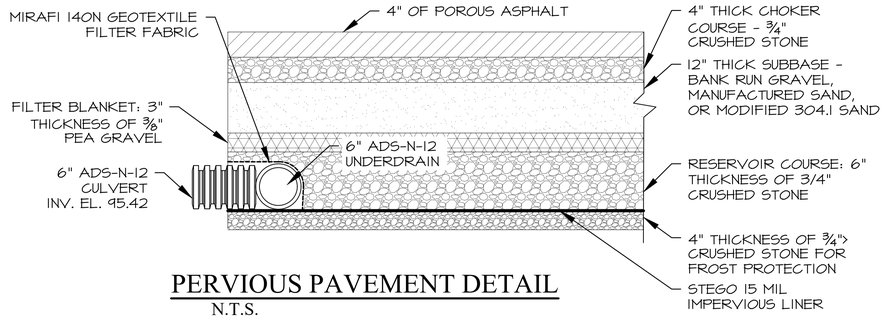
THE FOLLOWING RECOMMENDATIONS WILL HELP ASSURE THAT THE PAVEMENT IS MAINTAINED TO PRESERVE ITS HYDROLOGIC EFFECTIVENESS.

WINTER MAINTENANCE:

1. SANDING FOR WINTER TRACTION IS PROHIBITED. DEICING IS PERMITTED (NaCl, MgCl2, OR EQUIVALENT). REDUCED SALT APPLICATION OF 50% OVER TRADITIONAL PAVEMENT APPLICATION RATES, NONTOXIC, ORGANIC DEICERS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE-BASED LIQUID PRODUCTS OR AS PRETREATED SALT, ARE PREFERABLE.
2. PLOWING IS ALLOWED, BLADE SHOULD BE SLIGHTLY RAISED (ALTHOUGH NOT NECESSARY, THIS WILL PREVENT PAVEMENT SCARING). ICE AND LIGHT SNOW ACCUMULATION ARE GENERALLY NOT AS PROBLEMATIC AS FOR STANDARD ASPHALT. SNOW WILL ACCUMULATE DURING HEAVIER STORMS AND SHOULD BE PLOWED AFTER 2 TO 4 INCHES OF SNOW ACCUMULATION.

ROUTINE MAINTENANCE:

1. ASPHALT SEAL COATING MUST BE ABSOLUTELY FORBIDDEN. SURFACE SEAL COATING IS NOT REVERSIBLE.
2. THE PAVEMENT SURFACE SHOULD BE VACUMED 2 TO 4 TIMES PER YEAR, ESPECIALLY AFTER WINTER AND FALL SEASONS, AND AT ANY ADDITIONAL TIMES SEDIMENT IS SPILLED, ERODED, OR TRACKED ONTO THE SURFACE.
3. PLANTED AREAS ADJACENT TO PERVIOUS PAVEMENT SHOULD BE WELL MAINTAINED TO PREVENT SOIL WASHOUT ONTO THE PAVEMENT. IF ANY BARE SPOTS OR ERODED AREAS ARE OBSERVED WITHIN THE PLANTED AREAS, THEY SHOULD BE REPLANTED AND/OR STABILIZED AT ONCE.
4. IMMEDIATELY CLEAN ANY SOIL DEPOSITED ON PAVEMENT. SUPERFICIAL DIRT DOES NOT NECESSARILY CLOG THE PAVEMENT VOIDS. HOWEVER, DIRT THAT IS GROUND IN REPEATEDLY BY TIRES CAN LEAD TO CLOGGING. THEREFORE, TRUCKS OR OTHER HEAVY VEHICLES SHOULD BE PREVENTED FROM TRACKING OR SPILLING DIRT ONTO THE PAVEMENT.
5. DO NOT ALLOW CONSTRUCTION STAGING, SOIL/MULCH STORAGE, ETC. ON UNPROTECTED PAVEMENT SURFACE.
6. REPAIRS: FOR THE POROUS ASPHALT PARKING LOT, POTHOLES OF LESS THAN 50 SQUARE FEET CAN BE PATCHED BY ANY MEANS SUITABLE WITH STANDARD PAVEMENT OR A PERVIOUS MIX IS PREFERRED. FOR AREAS GREATER THAN 50 SQ. FT. IS IN NEED OF REPAIR, APPROVAL OF PATCH TYPE SHOULD BE SOUGHT FROM A QUALIFIED ENGINEER. ANY REQUIRED REPAIR OF DRAINAGE STRUCTURES SHOULD BE DONE PROMPTLY TO ENSURE CONTINUED PROPER FUNCTIONING OF THE SYSTEM. REPAIRS TO THE POROUS ASPHALT SIDEWALK SHALL BE MADE WITH A PERVIOUS MIX.
7. WRITTEN AND VERBAL COMMUNICATION TO THE POROUS PAVEMENT'S FUTURE OWNER SHOULD MAKE CLEAR THE PAVEMENT'S SPECIAL PURPOSE AND SPECIAL MAINTENANCE REQUIREMENTS SUCH AS THOSE LISTED HERE.



PERVIOUS PAVEMENT DETAIL

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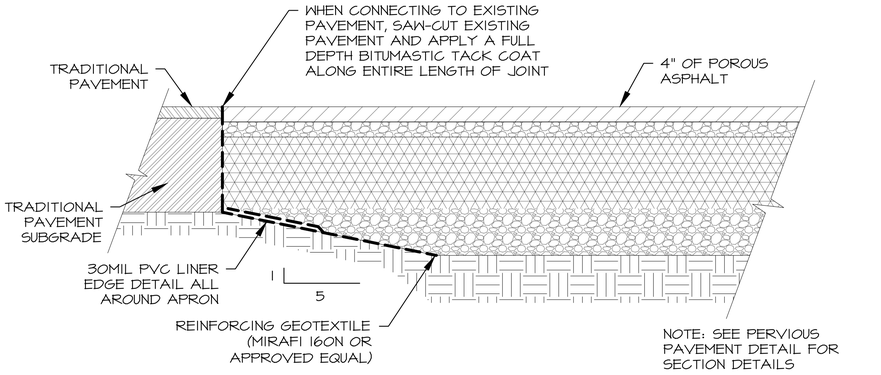

PERVIOUS PAVEMENT TRANSITION DETAIL

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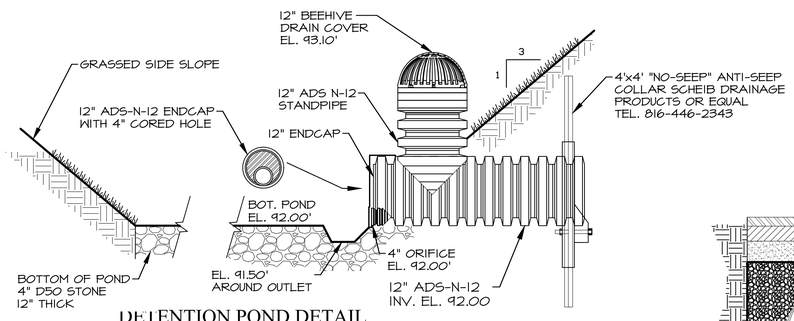
MIX SUMMARY

1. POROUS ASPHALT PAVEMENT MIX PER THE CURRENT UNH STORM WATER CENTER DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS MANUAL.

2. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR HAS SUBMITTED AND THE ENGINEER HAS APPROVED A MIX DESIGN INCLUDING THE PERCENTAGE OF EACH INGREDIENT INCLUDING BINDER, POLYMER, AND THE JOB-MIX FORMULA FROM SUCH A COMBINATION. THE JOB-MIX FORMULA SHALL ESTABLISH A SINGLE PERCENTAGE OF AGGREGATE PASSING SIEVE AND A SINGLE PERCENTAGE OF BITUMINOUS MATERIAL TO BE ADDED TO THE AGGREGATE. NO CHANGE IN THE JOB-MIX FORMULA MAY BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER. THE JOB-MIX FORMULA MUST FALL WITH THE MASTER RANGE SPECIFIED IN COMPOSITION OF MIXTURE TABLE.

TRANSPORTING MATERIAL: SEE CONSTRUCTION AND INSTALL SPECIFICATIONS



DETENTION POND DETAIL

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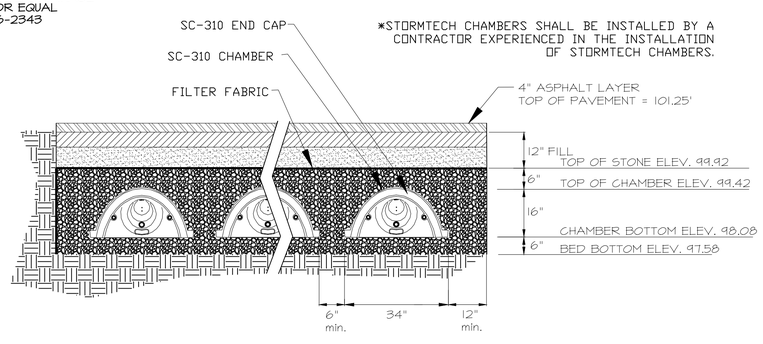
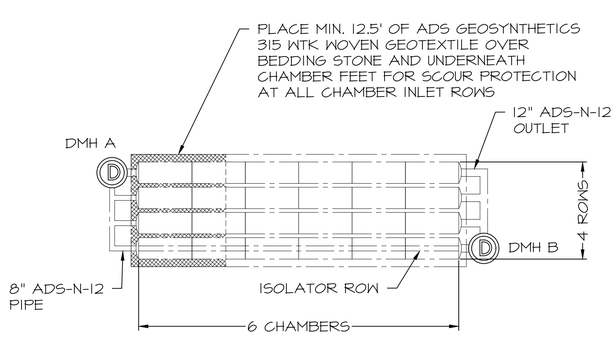


STORMTECH SC-310 CHAMBER SYSTEM CROSS SECTION

N.T.S.



SUBSURFACE CHAMBER LAYOUT

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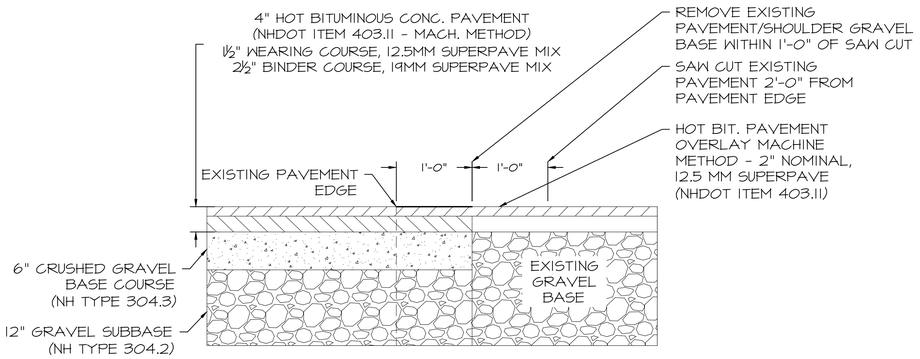
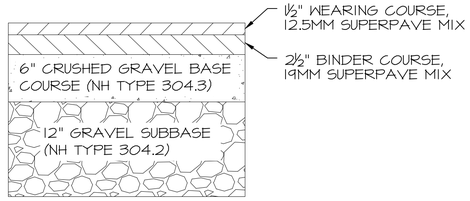


PAVEMENT JOINT DETAIL
N.T.S.



PROPOSED PAVEMENT DETAIL
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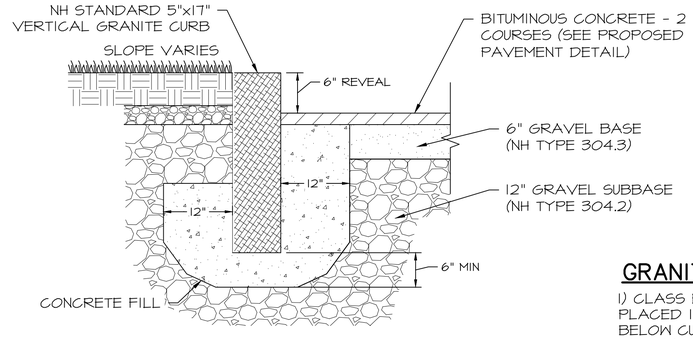


VERTICAL GRANITE CURB DETAIL
N.T.S.

GRANITE CURB NOTES:

1) CLASS B CONCRETE FILL SHALL BE PLACED IN VOIDS IN FRONT, BEHIND, AND BELOW CURBING PRIOR TO INSTALLATION OF GRAVEL BACKING AND FINISH GRADE WEARING COURSE PAVEMENT.

TRENCH NOTES - STORM DRAIN:

1) BEDDING: BEDDING FOR PIPES SHALL CONSIST OF PREPARING THE BOTTOM OF THE TRENCH TO SUPPORT THE ENTIRE LENGTH OF THE PIPE AT A UNIFORM SLOPE AND ALIGNMENT. CRUSHED STONE SHALL BE USED TO BED THE PIPE TO THE ELEVATION SHOWN ON THE DRAWINGS. NORMAL PIPE BEDDING IS CRUSHED STONE TO THE HAUNCH OF THE PIPE AND SAND BEDDING 6" ABOVE THE CROWN. IF THE TOP OF THE PIPE IS LESS THAN 30" FROM FINISH GRADE, BED PIPE COMPLETELY IN STONE UP TO 6" ABOVE PIPE CROWN. UNDERDRAIN TO HAVE 4" MIN" OF STONE OVER PIPE OR AS NECESSARY TO BE IN CONTACT WITH GRAVEL LAYER OF SELECTS ABOVE. FILTER FABRIC TO BE PLACED IN BETWEEN ALL STONE BEDDING MATERIAL AND SUBSEQUENT LAYERS OF FILL MATERIAL.

2) COMPACTION: ALL BACKFILL SHALL BE COMPACTED AT OR NEAR OPTIMUM MOISTURE CONTENT BY PNEUMATIC TAMPERS, VIBRATORY COMPACTORS OR OTHER APPROVED MEANS. BACKFILL BENEATH PAVED SURFACES SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF AASHTO T99, METHOD C.

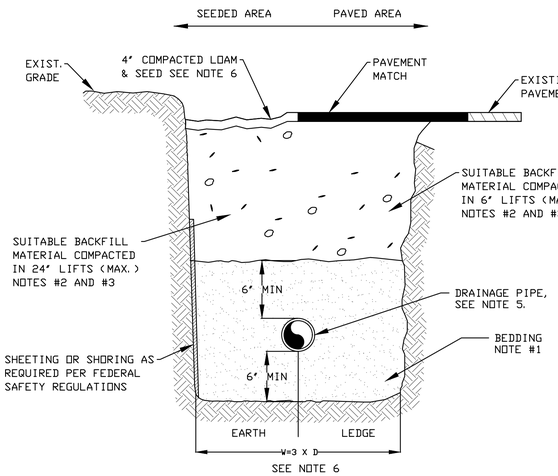
3) SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ROCKS OVER 6 INCHES IN LARGEST DIMENSION; FROZEN EARTH AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.

   IN SEEDED AREAS, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAD, ROCKS UNDER 12", FROZEN EARTH OR CLAY, IF HE/SHE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EAST ACCESS TO THE PIPE WILL BE PRESERVED.

4) BASE COURSE AND PAVEMENT: SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES - DIVISIONS 300 AND 400 RESPECTIVELY.

5) DRAINAGE PIPE: PIPE MATERIALS SHALL BE POLYETHYLENE (SEE SPECIFICATIONS).

6) W=MAXIMUM ALLOWABLE TRENCH WIDTH: W SHALL BE THE MAXIMUM PAYMENT WIDTH FOR ROCK EXCAVATION (TRENCH) AND FOR ORDERED EXCAVATION BELOW GRADE.



TRENCH DETAIL - STORM DRAIN
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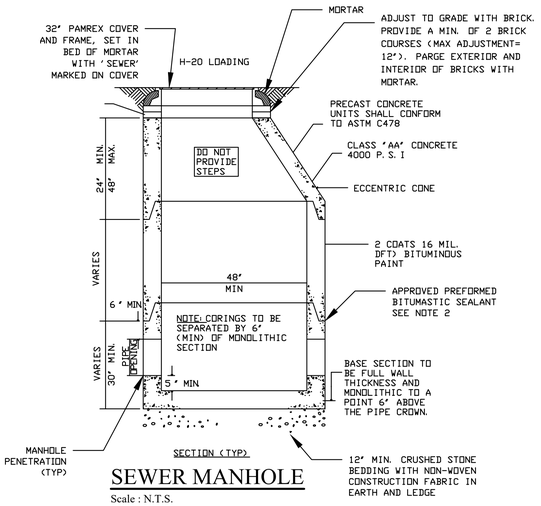
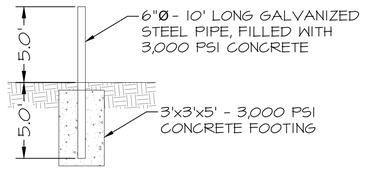


SEWER MANHOLE
Scale : N.T.S.



BOLLARD DETAIL
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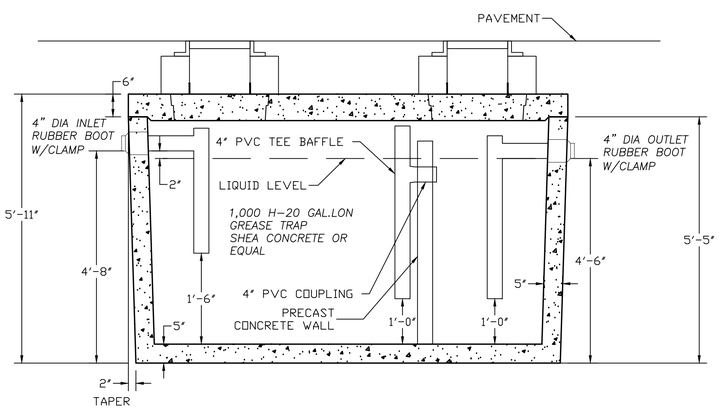

GREASE TRAP DETAIL
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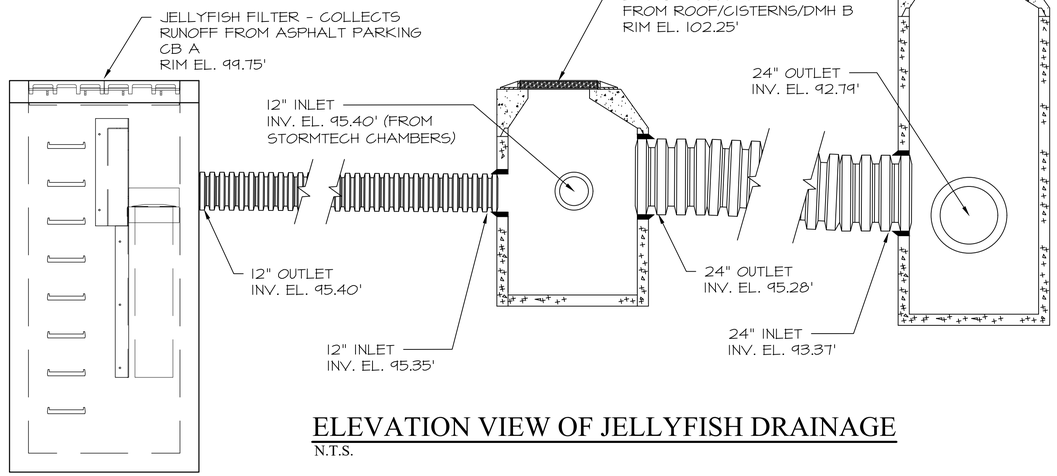

ELEVATION VIEW OF JELLYFISH DRAINAGE
N.T.S.

ISS.	DATE	DESCRIPTION OF ISSUE
4	8/8/2022	PB SUBMITTAL
3	7/21/2022	TAC SUBMITTAL
2	6/21/2022	TAC SUBMITTAL
1	6/7/2022	TAC SUBMITTAL

SCALE	1" = 20'
CHECKED	A.ROSS
DRAWN	D.D.D.
CHECKED	

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TAX MAP 252, LOT 2-13

STATE OF NEW HAMPSHIRE · R. ALEX ROSS No. 9409 · LICENSED PROFESSIONAL ENGINEER

JOB NUMBER	DWG. NO.	ISSUE
21-168	11 OF 14	4

MAINTENANCE NOTES

A. MAINTENANCE OF COMMON FACILITIES OR PROPERTY

B. MAINTENANCE OF COMMON FACILITIES OR PROPERTY

1. FUTURE OWNERS OR ASSIGNS ARE RESPONSIBLE FOR MAINTENANCE OF ALL STORMWATER INFRASTRUCTURE ASSOCIATED WITH THE FACILITY AND THE PROPERTY. THIS INCLUDES THE ROOF DRAINAGE SYSTEM, CISTERN, STORMWATER POND, PERVIOUS PAVERS, STORM TECH CHAMBERS, LANDSCAPED AREAS, PERVIOUS ASPHALT AND CONTECH TREATMENT STRUCTURE.

C. GENERAL INSPECTION AND MAINTENANCE REQUIREMENTS

1. PERMANENT STORMWATER AND SEDIMENT AND EROSION CONTROL FACILITIES TO BE MAINTAINED ON THE SITE INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

   a. PARKING AREAS
   b. PERVIOUS ASPHALT
   c. DETENTION POND
   d. LANDSCAPED AREAS
   e. PERMEABLE PAVERS
   f. CULVERTS & DRAIN LINES
   g. CONTECH JELLYFISH
   h. ROOF DRAINAGE
   i. STORM TECH CHAMBERS
   j. CISTERN

2. MAINTENANCE OF PERMANENT MEASURES SHALL FOLLOW THE FOLLOWING SCHEDULE:

a. PARKING AREAS, DRIVEWAY:

INSPECTION AT THE END OF EVERY WINTER, PRIOR TO THE START OF THE SPRING RAIN SEASON. SWEEPING SHALL BE DONE ONCE IN EARLY FALL AND THEN AFTER SPRING SNOWMELT. SAND/DEBRIS THAT HAS COLLECTED OFF THE DRIVEWAY AND PARKING LOT SHOULD BE REMOVED OFF-SITE AND DISPOSED OF PROPERLY.

b. PERVIOUS ASPHALT:

VISUALLY INSPECT PAVEMENT MONTHLY TO ENSURE IT IS CLEAN OF DEBRIS, DE-WATERS BETWEEN STORMS AND IS CLEAN OF SEDIMENTS. MAINTAIN ALL ADJACENT AND UPLAND AREAS. KEEP SURFACE FREE OF SEDIMENT BY BLOWING, AND VACUUMING AT LEAST AS OFTEN AS ITEM A. ABOVE AND AS NEEDED. AVOID ANY SEALING OR REPAVING WITH IMPERVIOUS MATERIALS.

c. DETENTION POND:

INSPECT INLET AND OUTLET PIPES AND STONED BASIN ANNUALLY. INSPECT FOR ACCUMULATION OF SEDIMENT AND OF PROPER FUNCTION OF PIPES. REMOVED TRASH AND DEBRIS FROM BASIN AND ANY INLET OR OUTLET PIPE OFFSITE. GRASSED SIDE SLOPES SHALL BE MAINTAINED AND MOWED REGULARLY.

d. LANDSCAPED AREAS:

ANNUAL INSPECTION OF SITE'S VEGETATION AND LANDSCAPING. ANY AREAS THAT ARE BARE SHALL BE RESEEDED AND MULCHED WITH HAY OR, IF THE CASE IS EXTREME, LOAMED AND SEEDED OR SODDED TO ENSURE ADEQUATE VEGETATIVE COVER. LANDSCAPE SPECIMENS SHALL BE REPLACED IN-KIND, IF THEY ARE FOUND TO BE DEAD OR DYING.

e. PERMEABLE PAVERS:

REVIEW PERIODICALLY DURING STORM EVENTS FOR PROPER INFILTRATION. INSPECT ONCE PER YEAR BY RUNNING WATER OVER THE SURFACE WHILE WATCHING FOR PROPER INFILTRATION. CLEAN/REMOVE ANY SEDMENT/DEBRIS FROM THE JOINTS TO ENSURE LARGEST SURFACE AREA FOR WATER TO INFILTRATE, PERFORM LIGHT VACUUMING TWICE A YEAR.

f. CULVERTS AND DRAIN LINES:

INSPECT TWICE A YEAR, MORE OFTEN IF NEEDED. INSPECT FOR ACCUMULATION OF DEBRIS. REMOVE MATERIAL FROM INLET/OUTLET AS NECESSARY, DISPOSE OF OFFSITE.

g. CONTECH JELLYFISH TREATMENT STRUCTURE:

SEE ATTACHED JELLYFISH MAINTENANCE GUIDE.

h. **ROOF DRAINAGE:**

THE FOLLOWING RECOMMENDATIONS WILL HELP ASSURE THAT THE ROOF DRAINAGE SYSTEM IS MAINTAINED TO PRESERVE ITS EFFECTIVENESS:

1. INITIALLY, IT SHOULD BE TESTED BY INSERTING A GARDEN HOSE INTO THE INLET AND ALLOWING THE WATER TO RUN AT FULL STRENGTH FOR A MINIMUM OF ONE HOUR. THE WATER SHOULD STAY UNDERGROUND WITHIN THE GRAVEL. IF WATER COMES OUT OF THE OVERFLOW, THE SYSTEM SHOULD BE FURTHER INSPECTED AND POSSIBLY REPLACED. THIS PROCEDURE SHOULD BE PERFORMED EVERY YEAR DURING THE ANNUAL INSPECTION.

2. IN THE SPRING AND FALL, VISUALLY INSPECT THE AREA AROUND THE SYSTEM AND REPAIR ANY EROSION. USE SMALL STONES TO STABILIZE EROSION ALONG DRAINAGE PATHS. RE-MULCH ANY VOID AREAS BY HAND AS NEEDED. ALSO, INSPECT THE ROOF COLLECTION AND PIPING AND CLEAN AND REPAIR AS NECESSARY.

3. DO NOT PLANT DEEP ROOTED TREES AND SHRUBS WITHIN 5' OF THE SYSTEM.

i. STORM TECH CHAMBERS:

THE FOLLOWING REQUIREMENTS WILL HELP ASSURE THAT THE STORM TECH CHAMBERS SYSTEM IS MAINTAINED TO PRESERVE ITS EFFECTIVENESS:

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT

A. INSPECTION PORTS (IF PRESENT)

A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN

A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED

A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG

A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80MM) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

B. ALL ISOLATOR ROWS

B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW

B.2. USING A FLASH LIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE. MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE

B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80MM) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS

A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1M) OR MORE IS PREFERRED

B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN

C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORM TECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS. ADJUSTMENT TO THE INSPECTION INTERVAL TIMEFRAME SHALL NOT BE GREATER THAN 12 MONTHS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

j. INSPECTION OF SITE SHALL OCCUR MONTHLY FOR THE FIRST FEW MONTHS AFTER CONSTRUCTION. THEN INSPECTIONS CAN OCCUR ON AN ANNUAL BASIS, PREFERABLY AFTER RAIN EVENTS WHEN CLOGGING CAN OCCUR AND BE OBVIOUS. PERMEABLE PAVERS REQUIRE MINIMAL MAINTENANCE; HOWEVER MAINTENANCE IS ABSOLUTELY NECESSARY TO ENSURE A PROPER WORKING SYSTEM.

ii. ASPHALT SEAL COATING IS ABSOLUTELY FORBIDDEN. SURFACE SEAL COATING IS NOT REVERSIBLE.

iii. STREET SWEEPERS WITH VACUUMS, WATER, AND BRUSHES CAN BE USED TO RESTORE PERMEABILITY. FOLLOW SWEEPING WITH HIGH-PRESSURE HOSING OF THE SURFACE PORES. SURFACE SHOULD BE VACUUMED 4 TIMES PER YEAR, AND AT ANY ADDITIONAL TIMES SEDIMENT IS SPILLED, ERODED, OR TRACKED ONTO THE SURFACE.

iv. PLANTED AREAS ADJACENT TO PERVIOUS PAVERS SHOULD BE WELL MAINTAINED TO PREVENT SOIL WASHOUT ONTO THE PAVEMENT. IF ANY BARE SPOTS OR ERODED AREAS ARE OBSERVED WITHIN THE PLANTED AREAS, THEY SHOULD BE REPLANTED AND/OR STABILIZED AT ONCE.

v. IMMEDIATELY CLEAN ANY SOIL DEPOSITED ON PAVERS. SUPERFICIAL DIRT DOES NOT NECESSARILY CLOG THE VOIDS. HOWEVER, DIRT THAT IS GROUND IN REPEATEDLY BY TIRES CAN LEAD TO CLOGGING. THEREFORE, TRUCKS OR OTHER HEAVY VEHICLES SHOULD BE PREVENTED FROM TRACKING OR SPILLING DIRT ONTO THE PAVEMENT. REPLACE ANY DAMAGED PAVING BLOCKS.

vi. DO NOT ALLOW CONSTRUCTION STAGING, SOIL/MULCH STORAGE, ETC. ON UNPROTECTED PAVERS SURFACE.

vii. NO WINTER SANDING. MECHANICAL SNOW AND ICE REMOVAL PREFERRED.

viii. WRITTEN AND VERBAL COMMUNICATION TO THE POROUS PAVER'S FUTURE OWNER SHOULD MAKE CLEAR THE SPECIAL PURPOSE AND SPECIAL MAINTENANCE REQUIREMENTS SUCH AS THOSE LISTED HERE.

viv. OWNERS SHALL PROVIDE A REPORT ON ACTIVITIES PERFORMED THROUGHOUT THE YEAR. REPORT SHALL INCLUDE DOCUMENTATION THAT PAVEMENT CLEANING IS ACCOMPLISHED PER THIS DOCUMENT AND A CERTIFICATION THAT THE SYSTEM CONTINUES TO FUNCTION AS DESIGNED.

j. LOW IMPACT DEVELOPMENT - CISTERN

CISTERNS ARE ABOVE OR UNDERGROUND STORAGE TANKS USED TO COLLECT ROOF RUNOFF. THEY MAY INCLUDE PUMPS AND FILTRATION DEVICES TO REUSE WATER. THEY PROVIDE THE BENEFIT OF REDUCED STORMWATER RUNOFF AND CONSERVATION OF WATER SUPPLIES WHEN THE WATER IS REUSED. STORMWATER COLLECTED IN CISTERNS CAN TYPICALLY BE REUSED FOR PURPOSES OF IRRIGATION AND, WASH WATER, AND OTHER NON-POTABLE USES.

WITH AN ACTIVELY MANAGED OPERATING SYSTEM, REGULAR MAINTENANCE IS ALSO IMPORTANT TO PRESERVE THE END USE WATER QUALITY, MAINTAIN SYSTEM SAFETY AND EFFICIENCY, AND MINIMIZE COST ASSOCIATED WITH REPAIRS AND DOWNTIME.

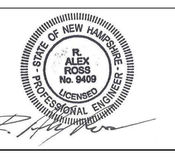
MAINTENANCE

- INSPECT OVERFLOW PIPE AND OVERFLOW AREA TO ENSURE THAT OVERFLOW IS DRAINING IN A NONEROSIVE MANNER.
- INSPECT CISTERNS AT LEAST ANNUALLY FOR ACCUMULATION OF SEDIMENT AND DEBRIS, AND CLEAN CISTERN AS WARRANTED BY INSPECTION. CISTERNS MAY REQUIRE SERVICING UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL, INCLUDING PERIODIC DISINFECTION TO CONTROL BACTERIA GROWTH, OR APPLICATION OF LARVICIDE TO CONTROL MOSQUITOES.
- VERIFY THAT THE RAINWATER HARVESTING WAS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN AND STANDARDS AND SPECIFICATIONS.
- INSPECT AND CLEAN ALL CONVEYANCE AND STORAGE ELEMENTS IMMEDIATELY PRIOR TO SYSTEM TESTING. VERIFY THAT THE DISTRIBUTION INTAKE WITHIN STORAGE DEVICE(S) IS CLEAT OF SEDIMENT AND WILL NOT ENTRAIN ANY SEDIMENT ONCE THE FLOW IS INITIATED.
- VERIFY THAT THE PRACTICE ACTUALLY CAPTURES RUNOFF. CONDUCT A FULL INUNDATION TEST TO INSPECT THE INFLOWS, PIPING, STORAGE TANK, AND OUTFLOWS.
- CONFIRM THAT THERE ARE NO LEAKAGES IN THE ROUTING TO THE STORAGE DEVICE OR OUT OF THE STORAGE DEVICE.
- USE A DETAILED INSPECTION CHECKLIST THAT INCLUDES SIGN-OFFS BY QUALIFIED INDIVIDUALS AT THE COMPLETION OF CONSTRUCTION, TO ENSURE THAT THE CONTRACTOR'S INTERPRETATION OF THE PLAN IS ACCEPTABLE TO THE PROFESSIONAL DESIGNER.

l. REVIEW AND DISCUSS ALL PART WARRANTIES.

Annual Operations and Maintenance Report

	Activity	Date of Inspection	Who Inspected	Satisfactory: Yes, No, N/A	Maintenance Needed	Implemented date of corrective action	Findings of Inspector
	Parking Areas						
	Pervious Asphalt						
	Detention Pond						
	Landscaped Areas						
	Permeable Pavers						
	Culverts & Drain lines						
	Contech Jellyfish						
	Roof Drainage						
	Storm tech Chambers						
	Cistern						



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140 WEST RD
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TAX MAP 252, LOT 2-13

JOB NUMBER	DWG. NO.	ISSUE
21-168	12 OF 14	4

EROSION AND SEDIMENTATION CONTROL CONSTRICTION PHASING AND SEQUENCING

1. SEE "EROSION AND SEDIMENTATION CONTROL GENERAL NOTES" WHICH ARE TO BE AN INTEGRAL PART OF THIS PROCESS.
2. INSTALL SILTSOXX FENCING AS PER DETAILS AND AT SEDIMENT MIGRATION.
3. CONSTRUCT TREATMENT SWALES , LEVEL SPREADERS AND DETENTION STRUCTURES AS DEPICTED ON DRAWINGS.
4. STRIP AND STOCKPILE TOPSOIL. STABILIZE PILES OF SOIL CONSTRUCTION MATERIAL & COVER WHERE PRACTICABLE.
5. MINIMIZE DUST THROUGH APPROPRIATE APPLICATION OF WATER OR OTHER DUST SUPPRESSION TECHNIQUES ON SITE.
6. ROUGH GRADE SITE. INSTALL CULVERTS AND ROAD DITCHES.
7. FINISH GRADE AND COMPACT SITE.
8. RE-SPREAD AND ADD TOPSOIL TO ALL ROADSIDE SLOPES. TOTAL TOPSOIL THICKNESS TO BE A MINIMUM OF FOUR TO SIX INCHES.
9. STABILIZE ALL AREAS OF BARE SOIL WITH MULCH AND SEEDING.
10. RE-SEED PER EROSION AND SEDIMENTATION CONTROL GENERAL NOTES.
11. SILT SOXX FENCING TO REMAIN AND BE MAINTAINED FOR TWENTY FOUR MONTHS AFTER CONSTRUCTION TO ENSURE ESTABLISHMENT OF ADEQUATE SOIL STABILIZATION AND VEGETATIVE COVER. ALL SILT SOXX FENCING ARE THEN TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
12. PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
13. ALL TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC. MUST BE USED AS NECESSARY UNTIL AREAS ARE STABILIZED.
14. PONDS AND SWALES SHALL BE INSTALLED EARLY ON IN THE CONSTRUCTION SEQUENCE - BEFORE ROUGH GRADING THE SITE.
15. ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM
16. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
17. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
18. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
19. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
20. LOT DISTURBANCE, OTHER THAN THAT SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.

PLANTING NOTES:

1. ALL PLANT MATERIALS SHALL BE FIRST QUALITY NURSERY GROWN STOCK.
2. ALL PLANTS SHALL BE PLANTED IN ACCORDANCE WITH NEW HAMPSHIRE LANDSCAPE ASSOCIATION STANDARDS AND GUARANTEED FOR ONE YEAR BY THE LANDSCAPE CONTRACTOR.
3. ALL TREES AND SHRUBS SHALL HAVE WATER SAUCERS BUILT AROUND THEIR BASES AND THESE SHALL BE MULCHED WITH 4" OF DARK BROWN AGED BARK MULCH. MULCH MUST BE KEPT 2" AWAY FROM THEIR TRUNKS.
4. ALL TREES AND SHRUBS SHALL BE PLANTED AND MULCHED BEFORE LAWN IS SEEDED.

MAINTENANCE REQUIREMENTS:

1. ALL TREES, SHRUBS, AND PERENNIALS WILL NEED TO BE WATERED THROUGH THANKSGIVING DURING THE FIRST SEASON IN WHICH THEY ARE INSTALLED.
2. AN UNDERGROUND DRIP IRRIGATION SYSTEM IS RECOMMENDED. IF AN UNDERGROUND DRIP IRRIGATION SYSTEM IS NOT INSTALLED, SOAKER HOSES WOUND THROUGHOUT PLANTING BEDS ARE ACCEPTABLE. ALTHOUGH OVERHEAD SPRINKLERS ARE RECOMMENDED FOR LAWN AREAS, THEY ARE NOT ACCEPTABLE FOR IRRIGATING TREES AND SHRUBS.

SEEDING AND STABILIZATION FOR LOAMED SITE:

FOR TEMPORARY & LONG TERM SEEDINGS USE AGWAY'S SOIL CONSERVATION GRASS SEED OR EQUAL
COMPONENTS: ANNUAL RYE GRASS, PERENNIAL RYE GRASS, WHITE CLOVER, 2 FESCUES, SEED AT A RATE OF 100 POUNDS PER ACRE,
FERTILIZER & LIME:
NITROGEN (N) 50 LBS/ACRE, PHOSPHATE (P205) 100 LBS/ACRE, POTASH (K20) 100 LBS/ACRE, LIME 2000 LBS/ACRE
MULCH:
HAY OR STRAW 1.5-2 TONS/ACRE

A) GRADING AND SHAPING
1) SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED, WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.

B) SEED BED PREPARATION
1) SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
2) STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

1. CONDUCT ALL CONSTRUCTION IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE PHYSICAL ENVIRONMENT, BUT IN NO CASE SHALL EXCEED 2 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
2. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
3. ALL DITCHES, SWALES AND PONDS MUST BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
4. ALL GROUND AREAS OPENED UP FOR CONSTRUCTION WILL BE STABILIZED WITHIN 24 HOURS OF EARTH-DISTURBING ACTIVITIES BEING CEASED, AND WILL BE FULLY STABILIZED NO LONGER THAN 14 DAYS AFTER INITIATION, (SEE NOTE 11 FOR DEFINITION OF STABLE). ALL SOILS FINISH GRADED MUST BE STABILIZED WITHIN SEVENTY TWO HOURS OF DISTURBANCE. ALL TEMPORARY OR LONG TERM SEEDING MUST BE APPLIED TO COMPLY WITH "WINTER CONSTRUCTION NOTES" (SEE WINTER CONSTRUCTION NOTES). EMPLOY TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AS DETAILED ON THIS PLAN AS NECESSARY UNTIL ADEQUATE STABILIZATION HAS BEEN ASSURED (SEE NOTE 11 FOR DEFINITION OF STABLE).
5. TEMPORARY & LONG TERM SEEDING: USE SEED MIXTURES, FERTILIZER, LIME AND MULCHING AS RECOMMENDED (SEE SEEDING AND STABILIZATION NOTES).
6. SILTSOXX FENCING TO BE SECURELY EMBEDDED AND STAKED AS DETAILED. WHEREVER POSSIBLE A VEGETATED STRIP OF AT LEAST TWENTY FIVE FEET IS TO BE KEPT BETWEEN SILTSOXX AND ANY EDGE OF WET AREA.
7. SEEDED AREAS WILL BE FERTILIZED AND RE-SEEDED AS NECESSARY TO ENSURE VEGETATIVE ESTABLISHMENT.
8. SEDIMENT BASIN(S), IF REQUIRED, TO BE CHECKED AFTER EACH SIGNIFICANT RAINFALL AND CLEANED AS NEEDED TO RETAIN DESIGN CAPACITY.
9. SILTSOXX FENCING WILL BE CHECKED REGULARLY AND AFTER EACH SIGNIFICANT RAINFALL. NECESSARY REPAIRS WILL BE MADE TO CORRECT UNDERMINING OR DETERIORATION OF THE BARRIER AS WELL AS CLEANING, REMOVAL AND PROPER DISPOSAL OF TRAPPED SEDIMENT.
10. TREATMENT SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATIVE COVER HAS BEEN ESTABLISHED.
11. AN AREA SHALL BE CONSIDERED FULLY STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED
- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
- A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED.
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

11. ALL EROSION AND SEDIMENTATION CONTROL MEASURES IN THE PLAN SHALL MEET THE DESIGN BASED ON STANDARDS AND SPECIFICATIONS SET FORTH IN THE STORM WATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE (DECEMBER 2008 OR LATEST) PREPARED BY ROCKINGHAM COUNTY CONSERVATION DISTRICT, N.H. DES AND NRCS.

WINTER CONSTRUCTION NOTES

1. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPETED IN ADVANCE OF THAW OR SPRING MELT EVENT.;
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
3. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

LONG TERM SEEDING

*WELL TO MODERATELY WELL DRAINED SOILS

FOR CUT AND FILL AREA AND FOR WATERWAYS AND CHANNELS

SEEDING MIXTURE C

	lb/ACRE	lb/1000SF
TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED CLOVER (ALSIKE)	20	0.45
TOTAL	48	1.35

LIME: AT 2 TONS PER ACRE OR 100 LBS PER 1,000 S.F.
FERTILIZER: 10 20 20 (NITROGEN, PHOSPHATE, POTASH AT 500# PER ACRE.
MULCH: HAY OR CLEAN STRAW; 2 TONS/ACRE OR 2 BALES/1000 S.F.

GRADING AND SHAPING:
SLOPES SHALL NOT BE STEEPER THAN 2 TO 1. 3 TO 1 OR FLATTER SLOPES ARE PREFERRED.
SEEDBED PREPARATION:
SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
STONES LARGER THAN FOUR INCHES AND TRASH SHOULD BE REMOVED.
SOD SHOULD BE TILLED TO A DEPTH OF FOUR INCHES TO PREPARE SEEDBED. FERTILIZER & LIME SHOULD BE MIXED INTO THE SOIL.
THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

* FROM: STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE, DECEMBER 2008.

SHORT TERM SEEDING

*WELL TO MODERATELY WELL DRAINED SOILS

FOR CUT AND FILL AREA AND FOR WATERWAYS AND CHANNELS

SEEDING MIXTURE C

	#/ACRE	#/1000SF
FOR APRIL 1 - AUGUST 15		
ANNUAL RYE GRASS	40	1
FOR FALL SEEDING		
WINTER RYE	112	2.5

LIME: AT 1 TON PER ACRE OR 100 LBS PER 1,000 S.F.
FERTILIZER: 10 10 10 (NITROGEN, PHOSPHATE, POTASH AT 500# PER ACRE.
MULCH: HAY OR CLEAN STRAW; 2 TONS/ACRE OR 2 BALES/1000 S.F.

GRADING AND SHAPING:
SLOPES SHALL NOT BE STEEPER THAN 2 TO 1. 3 TO 1 OR FLATTER SLOPES ARE PREFERRED.
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* FROM: STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE, DECEMBER 2008.

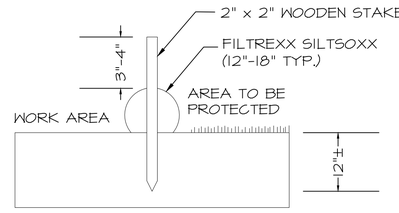
WHEN PROPOSED FOR ALTERATION DURING CONSTRUCTION AS BEING INFESTED WITH INVASIVE SPECIES SHALL BE MANAGED APPROPRIATELY USING THE DISPOSAL PRACTICES IDENTIFIED IN "NHDOT - BEST MANAGEMENT PRACTICES FOR ROADSIDE INVASIVE PLANTS -2008" AND "METHODS FOR DISPOSING NON-NATIVE INVASIVE PLANTS - UNH COOPERATIVE EXTENSION - 2010"

SEED MIXES SHALL NOT CONTAIN ANY SPECIES IDENTIFIED BY THE NEW HAMPSHIRE PROHIBITED INVASIVE PLANT SPECIES LIST.

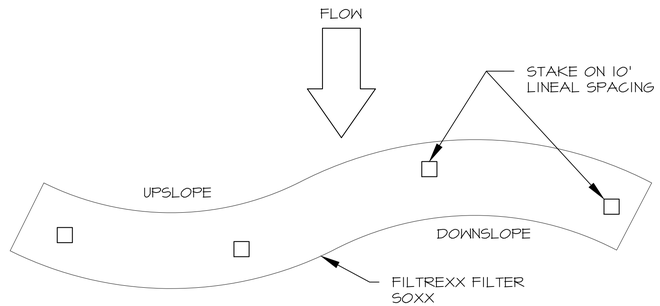
FILTREXX SILTSOXX NOTES

1) ALL MAERTIAL TO MEET FILTREXX SPECIFICATIONS

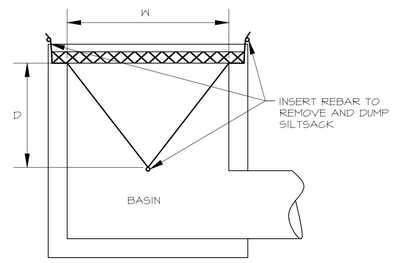
2) SILTSOXX COMPOST, SOIL, ROCK, SEED FILL TO MEET APPLICATION REQUIREMENTS



Filtrexx SiltSoxx Section
N.T.S.



Filtrexx SiltSoxx Plan View
N.T.S.



SILTSACK IS TO BE SECURED BY WEIGHT OF BASIN GRATE TO PREVENT SEDIMENT FROM ENTERING THE DRAIN LINE

INSTALL SILTSACK TO CATCH BASINS 1, 2, & 3 PRIOR TO CONSTRUCTION & TO CATCH BASINS A, B, C & D DURING CONSTRUCTION. DO NOT REMOVE SILTSACK UNTIL CONSTRUCTION IS COMPLETE.

Siltsack
N.T.S.

ISS.	DATE	DESCRIPTION OF ISSUE	
4	8/8/2022	PB SUBMITTAL	
3	7/21/2022	TAC SUBMITTAL	
2	6/21/2022	TAC SUBMITTAL	
1	6/7/2022	TAC SUBMITTAL	

SCALE 1" = 20'
CHECKED A.ROSS
DRAWN D.D.D.
CHECKED

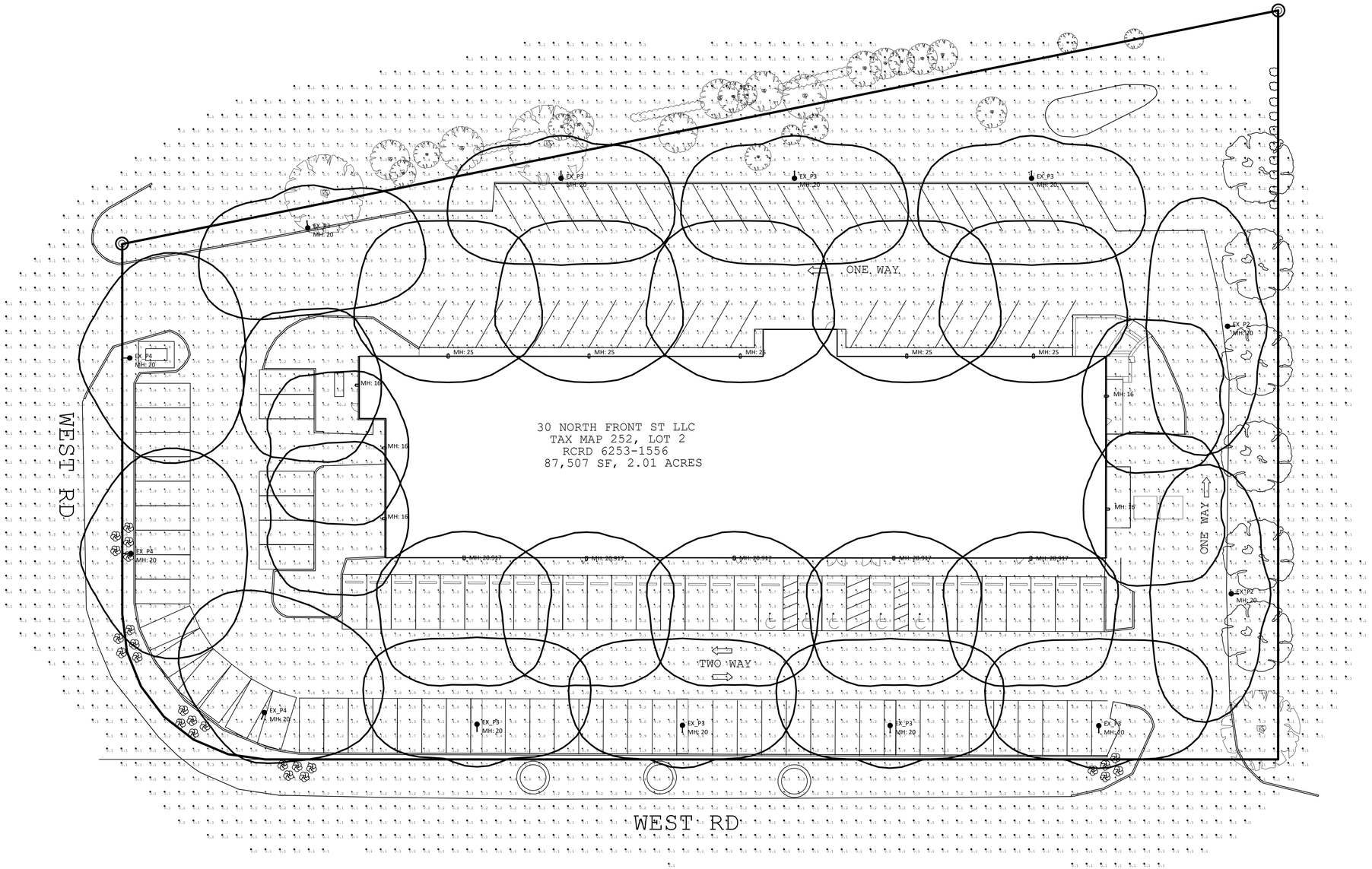
ROSS ENGINEERING, LLC
Civil/Structural Engineering & Surveying
909 Islington St.
Portsmouth, NH 03801
(603) 433-7560

CLIENT
ROAD TO THE WEST, LLC
ALEXANDER B. CHOQUETTE
14 LAFAYETTE RD. UNIT 9
NORTH HAMPTON, NH 03862

TITLE
EROSION CONTROL PLAN
140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

R. ALEX ROSS No. 9409 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE -

JOB NUMBER	DWG. NO.	ISSUE
21-168	13 OF 14	4



LIGHTING SCHEDULE

LABEL	SPECIFICATION
L1	WALL PACK - LUMARK XTOR CROSSTOUR MAXX LED
L2	LIGHT POLE - SL630 SOLANA SERIES LED DISTRIBUTION TYPE T2
L3	LIGHT POLE - SL630 SOLANA SERIES LED DISTRIBUTION TYPE T3
L4	LIGHT POLE - SL630 SOLANA SERIES LED DISTRIBUTION TYPE T4

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
SCALE: 1" = 20'

LIGHTING PLAN DESIGNED BY:

SEAN REESE, OMNILITE ILLUMINATE
263 WINN STREET
BURLINGTON, MA 01803
P: (978) 992-6484
E: SREESE@ILLUMINATENE.COM
ILLUMINATENE.COM

ISS.	DATE	DESCRIPTION OF ISSUE
4	8/8/2022	PB SUBMITTAL
3	7/21/2022	TAC SUBMITTAL
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SCALE 1" = 20'
CHECKED A.ROSS
DRAWN D.D.D.
CHECKED

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ROAD TO THE WEST, LLC
ALEXANDER B. CHOQUETTE
14 LAFAYETTE RD. UNIT 9
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TITLE

LIGHTING PLAN

140 WEST RD
PORTSMOUTH, NH 03801
TAX MAP 252, LOT 2-13

JOB NUMBER	DWG. NO.	ISSUE
21-168	13 OF 14	4

GENERAL CODE COMPLIANCE REVIEW

140 WEST ROAD
PORTSMOUTH, NH 03801

PROJECT DATA:

DESCRIPTION: INTERIOR RENOVATIONS AND EXTERIOR STAIR TOWER ADDITIONS TO AN EXISTING 2B BUILDING, THE USE IS INDOOR RECREATION - ASSEMBLY AND OFFICE.

STATE BUILDING CODE:

2015 INTERNATIONAL BUILDING CODE (2015 IBC)

LIFE SAFETY CODE:

2015 NATIONAL FIRE PROTECTION AGENCY 101 (NFPA 101)

FIRE CODE:

2015 INTERNATIONAL FIRE CODE (2015 IFC)

STATE ENERGY CODE:

2015 INTERNATIONAL ENERGY CONSERVATION CODE (2015 IECC)

STATE MECHANICAL CODE:

2015 INTERNATIONAL MECHANICAL CODE (2015 IMC)

ELECTRICAL CODE:

2017 NATIONAL ELECTRICAL CODE (NFPA 70)

STATE PLUMBING CODE:

2015 INTERNATIONAL PLUMBING CODE (2015 IPC)

EXISTING BUILDING CODE:

2015 INTERNATIONAL EXISTING BUILDING CODE

STATE ACCESSIBILITY CODE:

2009 ANSI A117.1 ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

CODE REVIEW

GENERAL BUILDING INFO	COMMENTS	CODE SECTION REFERENCE
OCCUPANCY USE GROUP	(A-2) ASSEMBLY, (B) BUSINESS, (S-2) STORAGE ASSEMBLY, BUSINESS, STORAGE	IBC, CH 3 NFPA101, CH 6 & CH 26
CONSTRUCTION TYPE	TYPE 2-B	IBC 602.2
FIRE SPRINKLER SYSTEM	YES	IBC 903; NFPA 101: 7.1.11
FIRE ALARM	YES	IBC 907; NFPA 101: 4.5.4
MIXED USE	NONSEPARATED OCCUPANCIES - A-2 MOST RESTRICTIVE	IBC 508.3.3; NFPA 101: 6.1.14.3
BUILDING HEIGHT	ALLOWABLE: 75'-0" ACTUAL: 38' - 0" +/-	IBC 504, TABLE 504.3
STORIES(S)	ALLOWABLE: 3 ACTUAL: 2	IBC 504, TABLE 504.4
AREA	ALLOWABLE: 28,500 SF ACTUAL: 18,111 SF	IBC 506, TABLE 506.2
AREA CALCULATIONS	N/A	IBC 506
OCCUPANT LOAD PER SUITE 100	502 (SEE LIFE SAFETY PLAN)	IBC TABLE 1004.5: NFPA 101: 7.3.1
NUMBER OF EXITS	REQUIRED: 3 ACTUAL: 5 (1ST), 3 (2ND)	IBC TABLE 1006.3.1
FIRE RATINGS	**TYPE 2B CONSTRUCTION**	**IBC TABLE 601**
EXTERIOR BEARING WALLS	0 HOUR	
INTERIOR BEARING WALLS	0 HOUR	
NON-BEARING INTERIOR WALLS	0 HOUR	
FLOOR CONSTRUCTION	0 HOUR	
ROOF CONSTRUCTION	0 HOUR	
STRUCTURAL FRAME	0 HOUR	
MEANS OF EGRESS REQUIREMENTS	--	--
MIN EGRESS WIDTH AT DOORS	REQUIRED: 32 INCHES ACTUAL: 32 INCHES	IBC 1005.3.2, IBC 1010.1.1
MIN EGRESS WIDTH AT STAIR	REQUIRED: 44 INCHES ACTUAL: 44 INCHES	IBC 1005.3.1, IBC 1011.2: NFPA101 12.2.3.8
MAXIMUM DEAD END CORRIDOR	(A-2) IBC: 20'-0" (A) NFPA: 20'-0"	IBC 1020.4: NFPA 101 TABLE A.7.6
MAXIMUM TRAVEL DISTANCE	(A-2) IBC: 250'-0" (A) NFPA: 250'-0"	IBC TABLE 1017.2: NFPA 101 TABLE A.7.6
COMMON PATH OF TRAVEL	(A-2) IBC: 75'-0" (A) NFPA: 20' - 75'(ALLOWED WITH <50PPL)	IBC TABLE 1006.2.1: NFPA 101 TABLE A.7.6
MINIMUM CORRIDOR WIDTH	REQUIRED: 44" ACTUAL: 60"	IBC 1005.3.2, IBC 1020.2
MINIMUM RAMP WIDTH	REQUIRED: 36" BETWEEN HANDRAILS ACTUAL: 56"	IBC 1005.3.2, IBC 1012.5.1
REMOTENESS	268'-3" (DIAGONAL) / 3 = 89'-5" MINIMUM EXIT SEPARATION DISTANCE	IBC 1007.1.2 NFPA101 7.5.1.3.3
ASSEMBLY EGRESS REQUIREMENTS	--	**IBC SECTION 1018, 1029**
TRAVEL DISTANCE	250' - 0" MAX.	IBC 1029.7
COMMON PATH OF TRAVEL	30' FROM ANY SEAT TO A CHOICE OF TWO PATHS TO EXITS	IBC 1029.8
AISLE WIDTH (.15" PER OCCUPANT)	MINIMUM AT LEVEL AISLE WITH SEATING ON BOTH SIDES: 42" MINIMUM AT LEVEL AISLE WITH SEATING ON ONE SIDE: 36"	IBC 1029.9.1.4: NFPA101 12.2.5.6.3(4) IBC 1029.9.1.5: NFPA101 12.2.5.6.3(2)
CONVERGING AISLES	AT CONVERGING AISLES: AISLE WIDTH SHALL NOT BE LESS THAN TOTAL REQUIRED CAPACITY OF ALL CONVERGING AISLES	IBC 1029.9.3
UNIFORM WIDTH AND CAPACITY	AISLES SHALL BE UNIFORM IN MINIMUM OR REQUIRED WIDTH	IBC 1029.9.4
DEAD END AISLES	20' - 0"	IBC 1029.9.6: NFPA101 12.2.5.6.2
AISLE MEASURMENT	CLEAR WIDTH OF AISLES SHALL BE MEASURED FROM WALLS TO EDGE OF SEATING EXCEPT FOR PERMITED PROJECTIONS 19" FROM FACE OF COUNTER/TABLE TO FACE OF COUNTER/TABLE	IBC 1029.9.6
AISLE ACCESSWAYS		IBC 1029.12.1
CAPACITY AND WIDTH	12" MIN, .15" PER PERSON ACCESSING AISLE ACCESSWAY	IBC 1029.12.1.1
AISLE ACCESSWAY LENGTH	30' - 0" MAX.	IBC 1029.12.1.2
ACCESSIBILITY REQUIREMENTS	--	--
TOE AND KNEE CLEARANCES	SEE SHEET T4	ANSI A117.1, ADA 2010 SECTION 306
REACH RANGES	SEE SHEET T4	ANSI A117.1, ADA 2010 SECTION 308
SERVICE COUNTERS	SEE SHEET T4	ANSI A117.1, ADA 2010 SECTION 904
CLEAR FLOOR SPACE	CLEAR FLOOR SPACE POSITIONED FOR FORWARD APPROACH SHALL BE PROVIDED	ANSI A117.1, ADA 2012 SECTION 902.2 (305/306)
TABLE HEIGHT	THE TOPS OF TABLES SHALL BE BETWEEN 28" MIN. AND 34" MAX. ABOVE THE FINISH FLOOR	ANSI A117.1, ADA 2012 SECTION 902.3
DINING AND DRINKING AREAS	ALL DINING AND DRINKING AREAS SHALL BE ACCESSIBE AND BE ON AN ACCESSIBLE ROUTE (SEE AISLES ABOVE)	IBC SECTION 1108.2.9
DINING SURFACES	5% OF TOTAL DINING SURFACES FOR THE SEATING AND STANDING SPACES SHALL BE ACCESSIBLE AND BE DISTRIBUTED THROUGHOUT THE FACILITY AND CONNECTED TO AN ACCESSBLE ROUTE, SEE TABLE CLEAR FLOOR SPACE BELOW (2/T2).	IBC SECTION 1108.2.9.1
PLUMBING FIXTURES	--	**A-3 - IBC TABLE 2902.1**
WATER CLOSET:		
MALE: 1 PER / 125 OC	PROVIDED: 8 PER GENDER, 2 UNISEX FAMILY	
FEMALE: 1 PER / 65 OC	REQUIRED: 3	
	REQUIRED: 3	
LAVATORY:	PROVIDED: 4 PER GENDER, 2 UNISEX FAMILY	
MALE: 1 PER / 200 OC	REQUIRED: 2	
FEMALE: 1 PER / 200 OC	REQUIRED: 2	
FAMILY/ASSISTED-USE TOILET ROOM	REQUIRED: 1 ACTUAL: 1 UNISEX FAMILY	IBC 1109.2.1
SERVICE SINK:	REQUIRED: 1 ACTUAL: 1	
DRINKING FOUNTAINS: 1 PER / 500 OC	KITCHEN WILL PROVIDE WATER IN A CONTAINER FREE OF CHARGE, 2 EXISTING DRINKING FOUNTAINS PROVIDED	IPC 410.4

INTERNATIONAL ENERGY CONSERVATION CODE

PORTSMOUTH ORDINANCE - CLIMATE ZONE 6	
ROOF: INSULATION ENTIRELY ABOVE ROOF DECK[1]	R-30 CONTINUOUS INSULATION
WALLS ABOVE GRADE: METAL FRAMED[1]	R-21
SLAB ON GRADE: UNHEATED[1]	R-10 FOR 24" BELOW
FIXED FENESTRATION[2]	U-0.36
OPERABLE FENESTRATION[2]	U-0.43
ENTRY DOORS[2]	U-0.77

1. SEE TABLE C402.1.3 IN IECC 2015
2. SEE TABLE C402.4 IN IECC 2015

FIRE SPRINKLER NOTES

1. CONTRACTOR TO DESIGN AND PROVIDE NFPA 13 COMPLIANT FIRE SPRINKLER SYSTEM. THE DESIGN SHALL INCLUDE DRAWINGS AND ENGINEERING CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN NEW HAMPSHIRE.
2. SYSTEM SHALL MEET ALL STATE AND LOCAL CODES. COORDINATE SYSTEM WITH DESIGN DOCUMENTS.

LIFE SAFETY LEGEND

: FIRE - EGRESS
: MAIN EGRESS AISLES / CORRIDORS
: FIRE - 1Hr Sep.

EGRESS DOOR TAG

EXIT DOOR 001	WIDTH	CAPACITY
DOOR	72"	360
USE		62

DOOR NUMBER
ALLOWED USE
ACTUAL USE
CLEAR WIDTH

EGRESS STAIR TAG

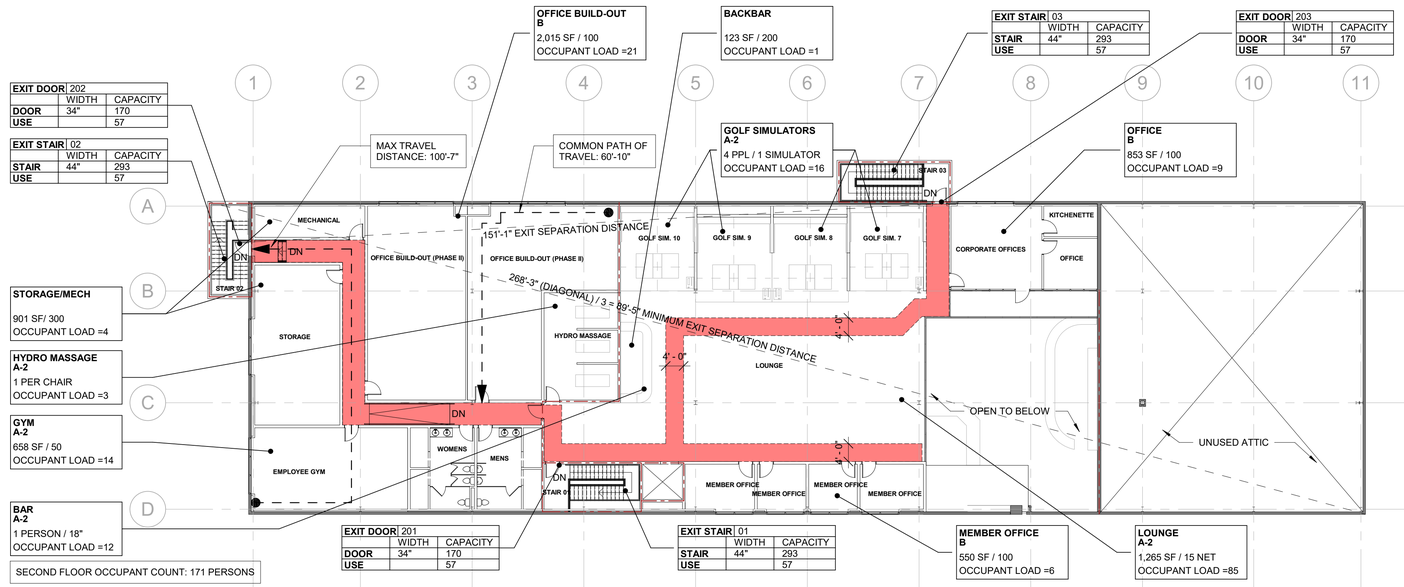
EXIT STAIR 01	WIDTH	CAPACITY
STAIR	72"	360
USE		62

ALLOWED USE
ACTUAL USE
CLEAR WIDTH

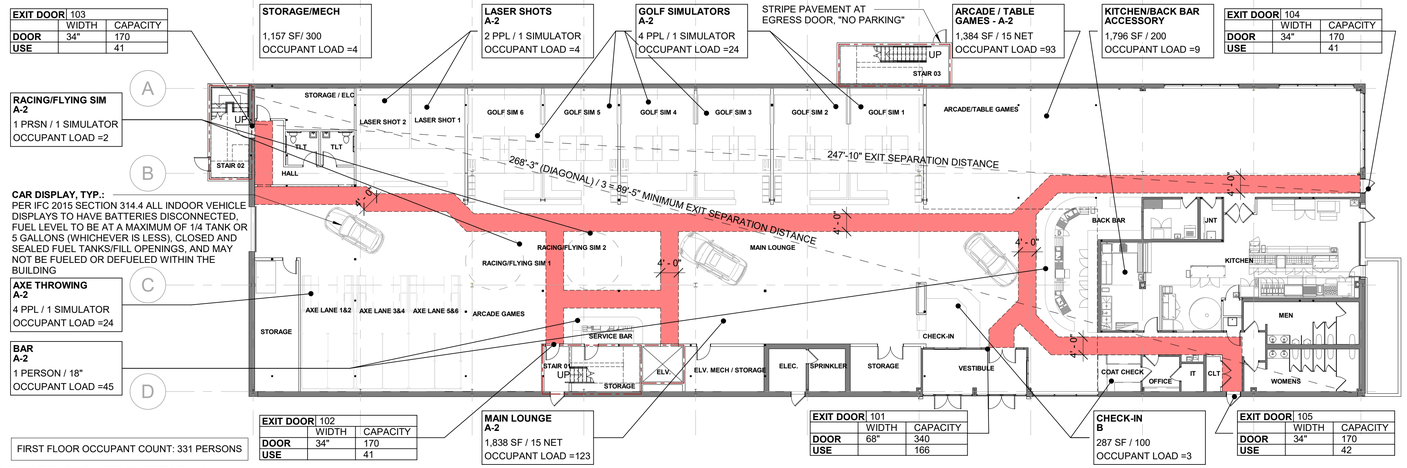
BUILDING USE TAG

ASSEMBLY
A-3
600 SF / 15
OCCUPANT LOAD =40

USE
AREA / LOAD FACTOR
OCCUPANT LOAD



2 SECOND FLOOR LIFE SAFETY PLAN
1/16" = 1'-0"



1 FIRST FLOOR LIFE SAFETY PLAN
1/16" = 1'-0"

4' 16'
0' 8' 32'
Scale: 1/16" = 1'-0"

BLACK ROCK SOCIAL CLUB
ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

McHENRY ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name:
BLACK ROCK SOCIAL CLUB

Drawing Name:
GENERAL CODE REVIEW

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

T2

Scale: AS INDICATED

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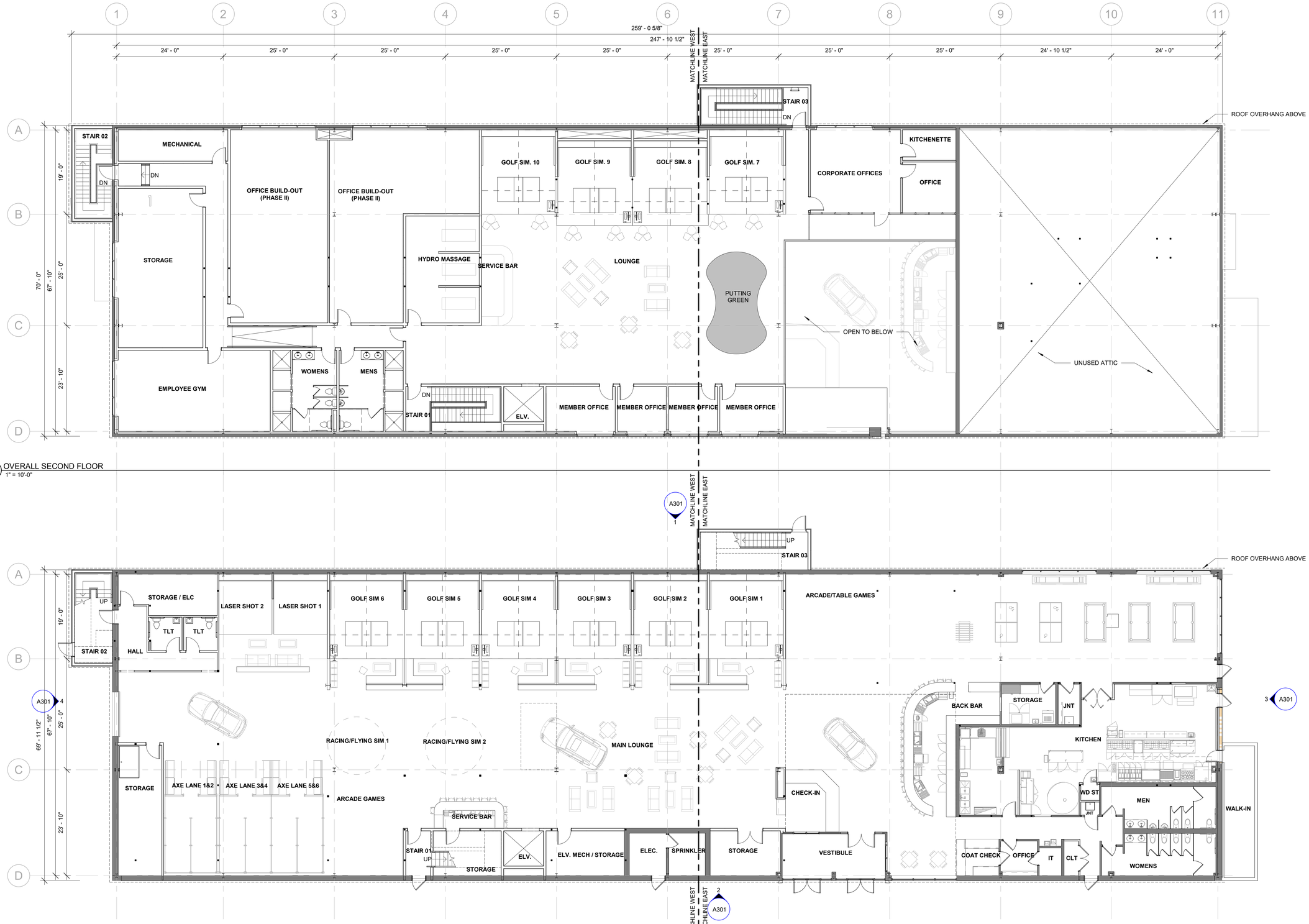

BUILDING FOOTPRINT:	18,111 SF
FIRST FLOOR:	18,111 SF - ASSEMBLY
SECOND FLOOR:	12,053 SF - ASSEMBLY / BUSINESS
GROSS AREA	30,164 SF

0' 10' 20' 40'
Scale: 1:10

BLACK ROCK SOCIAL CLUB

ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

McHENRY ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name:
BLACK ROCK SOCIAL CLUB

Drawing Name:
OVERALL FLOOR PLANS

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

A101

Scale: 1" = 10'-0"

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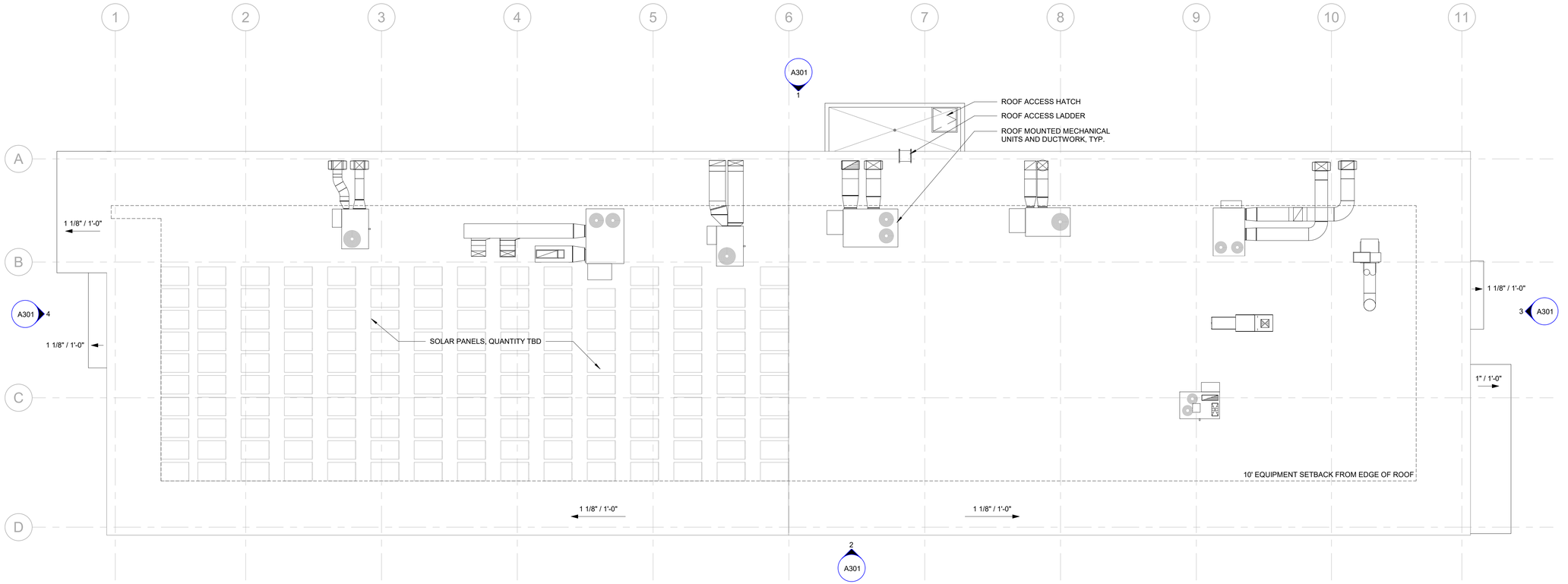

1 OVERALL ROOF PLAN
1" = 10'-0"

0' 10' 20' 40'
Scale: 1:10

BLACK ROCK SOCIAL CLUB

ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION
PERMIT SET ONLY

No.	Description	Date

Project Name:
BLACK ROCK SOCIAL CLUB

Drawing Name:
ROOF PLAN

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

A102

Scale: 1" = 10'-0"

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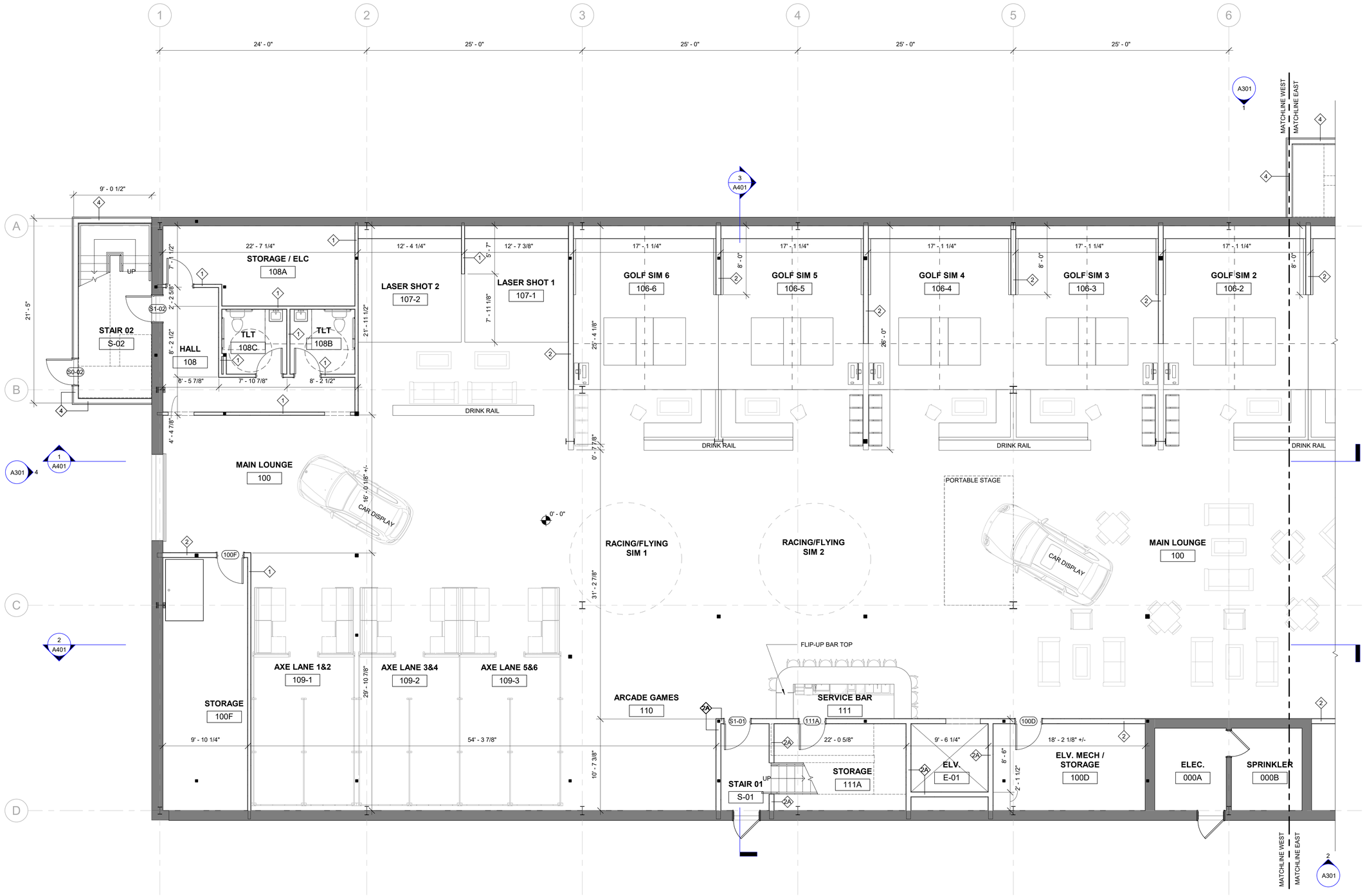

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Scale: 3/16" = 1'-0"

BLACK ROCK SOCIAL CLUB

ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

STAIR 03

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION
PERMIT SET ONLY

No.	Description	Date

Project Name:
BLACK ROCK SOCIAL CLUB

Drawing Name:
FIRST FLOOR PLAN - WEST

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

A103

Scale: 3/16" = 1'-0"

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6 7 8 9 10 11

A B C D

A301 1 — MATCHLINE WEST — MATCHLINE EAST — 4 A401 — 4 — SD-03 — 4' - 0" — 25' - 4 1/4" — STAIR 03 S-03 — 9' - 0 1/2" — 17' - 10"

2 — 17' - 1 1/4"

GOLF SIM 2 106-2 422 SF

GOLF SIM 1 106-1 422 SF

ARCADE/TABLE GAMES 105 1968 SF

26' - 0"

1 A401 — 2 A401

SERVICE BAR

BACK BAR 101 419 SF

STORAGE 105B — JNT 105A

CAR DISPLAY — 17' - 5 3/4" — 0' - 0"

2' - 1" — 8' - 2 1/2" — 3' - 10 1/2" — 0' - 6 5/8" — 1' - 6 3/8" — 0' - 6 5/8" — 3' - 10 1/2"

MAIN LOUNGE 100 1315 SF

7' - 1 1/4"

CHECK-IN 100B — 3' - 7 1/4" — 10' - 1 5/8"

16' - 11 1/8"

KITCHEN 102 1176 SF

FLIP-UP BAR TOP

GOLF SIM 5 103

3' - 6 3/8" — 4' - 6"

CLT 103D

MEN 103A

WOMENS 103B

WALK-IN 102E

3 A301

SPRINKLER 000B — STORAGE 100C — VESTIBULE 100A

COAT CHECK 104B — OFFICE 104 — IT 104A

MATCHLINE WEST — MATCHLINE EAST — 2 A301

0' 4' 8' 12'
Scale: 3/16" = 1'-0"

BLACK ROCK SOCIAL CLUB

ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
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Portsmouth, New Hampshire
603.430.0274

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No.	Description	Date

Project Name: BLACK ROCK SOCIAL CLUB

Drawing Name: FIRST FLOOR PLAN - EAST

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

A104

Scale: 3/16" = 1'-0"

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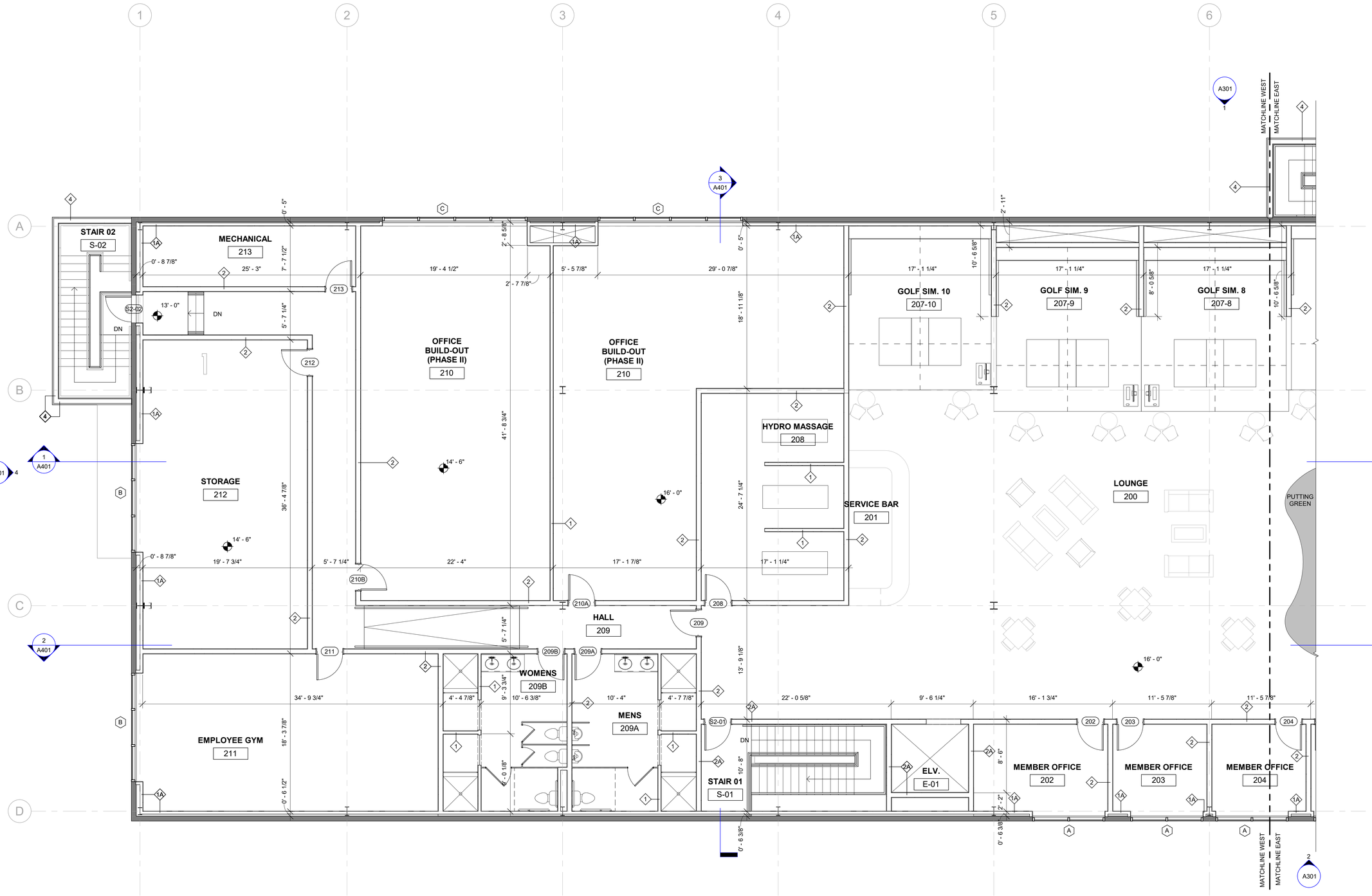

0' 4' 8' 12'
Scale: 3/16" = 1'-0"

BLACK ROCK SOCIAL CLUB

ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

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Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name:
BLACK ROCK SOCIAL CLUB

Drawing Name:
SECOND FLOOR PLAN - WEST

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

A105

Scale: 3/16" = 1'-0"

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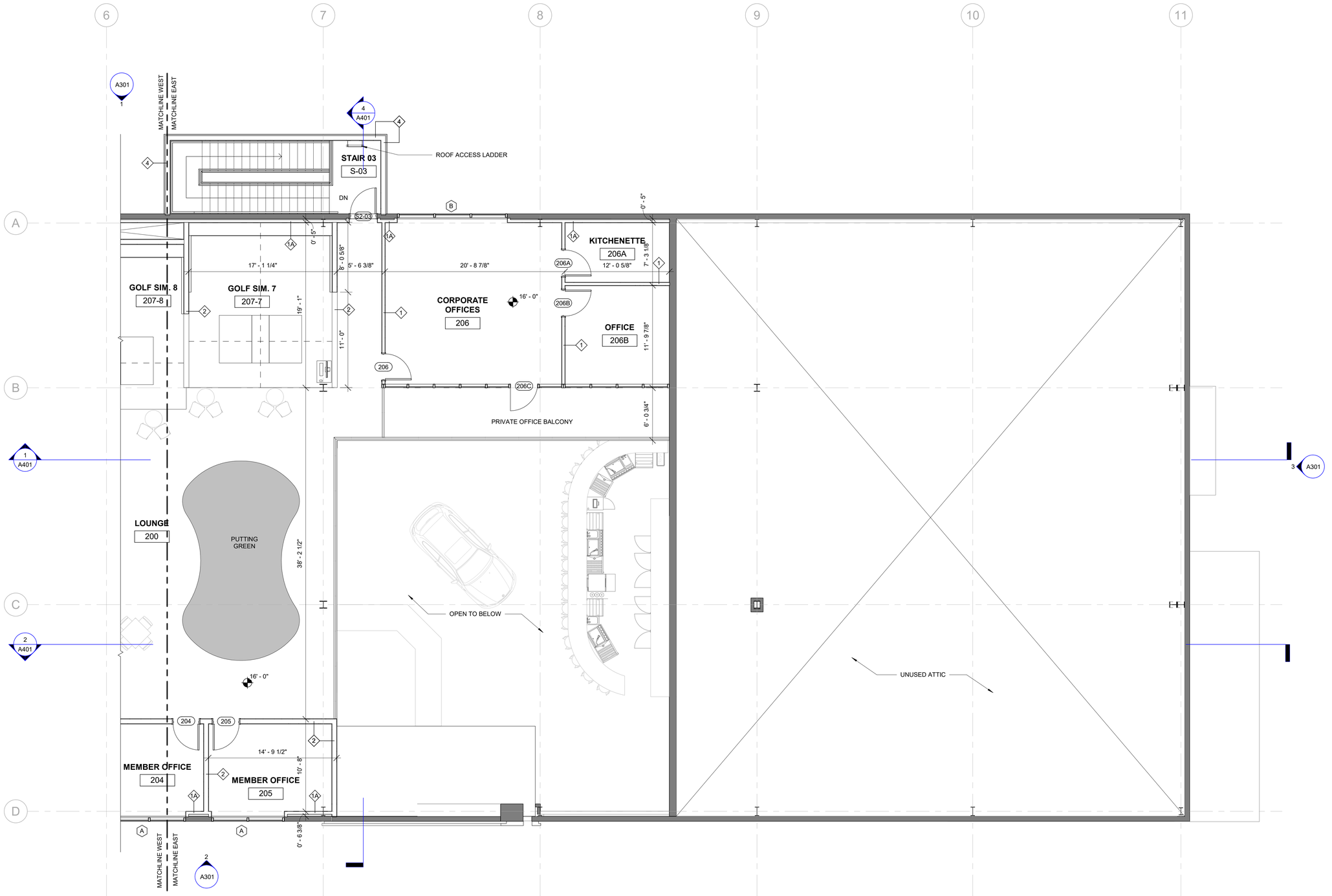

0' 4' 8' 12'
Scale: 3/16" = 1'-0"

BLACK ROCK SOCIAL CLUB

ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

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ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name:
BLACK ROCK SOCIAL CLUB

Drawing Name:
SECOND FLOOR PLAN - EAST

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

A106

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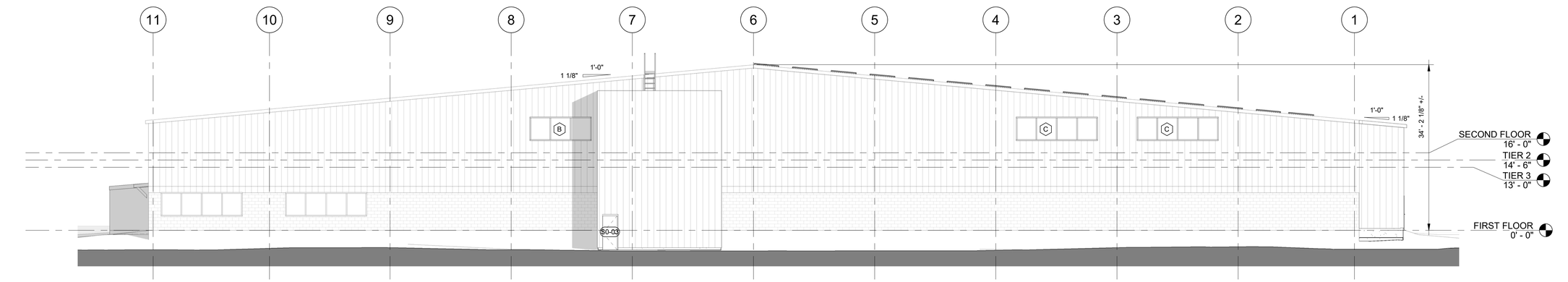
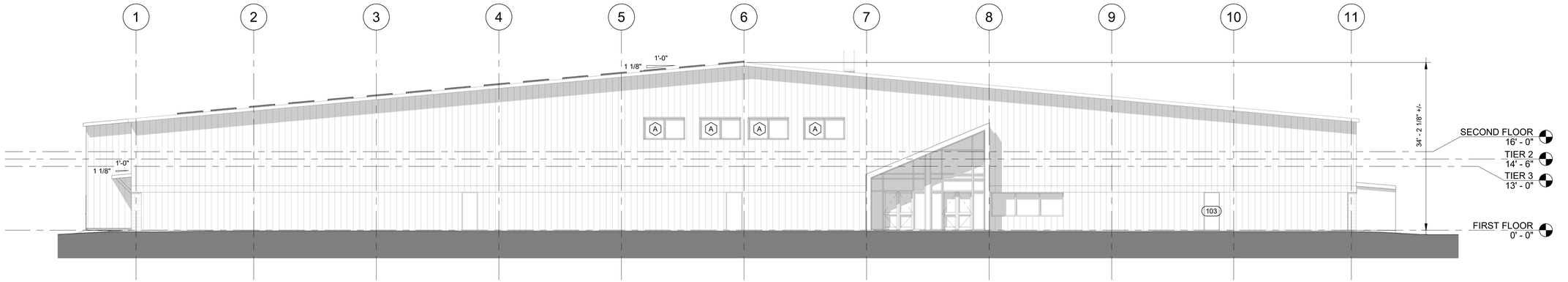
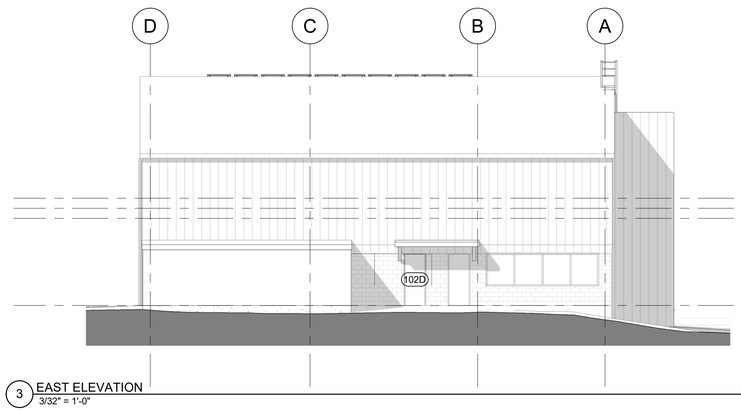


1 NORTH ELEVATION
3/32" = 1'-0"



2 SOUTH ELEVATION
3/32" = 1'-0"



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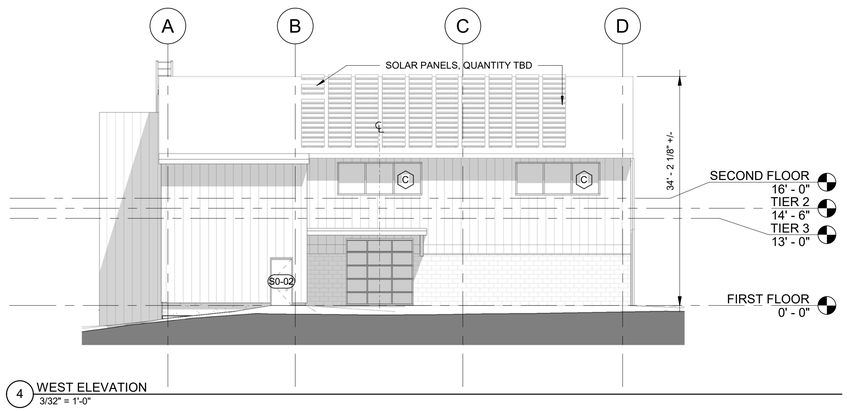

4 WEST ELEVATION
3/32" = 1'-0"

0' 8' 16' 24'
Scale: 3/32" = 1'-0"

BLACK ROCK SOCIAL CLUB

ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

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No.	Description	Date

Project Name:
BLACK ROCK SOCIAL CLUB

Drawing Name:
OVERALL EXTERIOR ELEVATIONS

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

A301

Scale: 3/32" = 1'-0"

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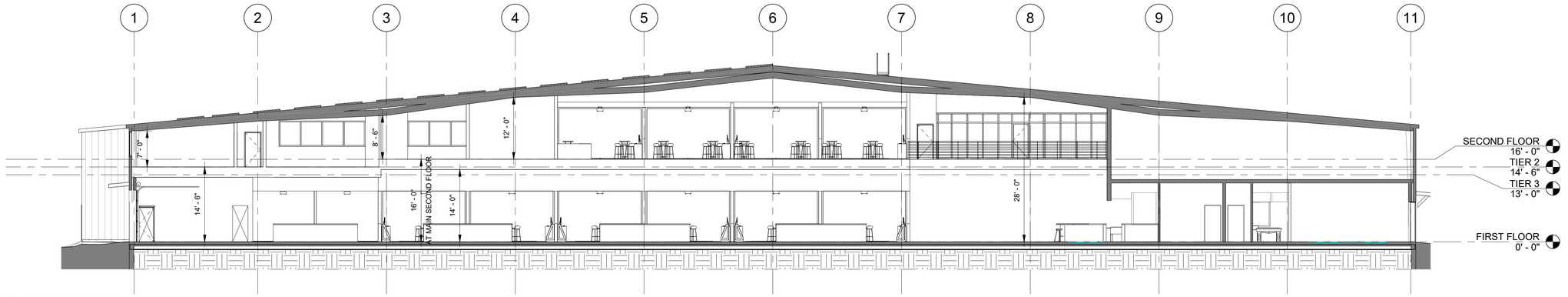
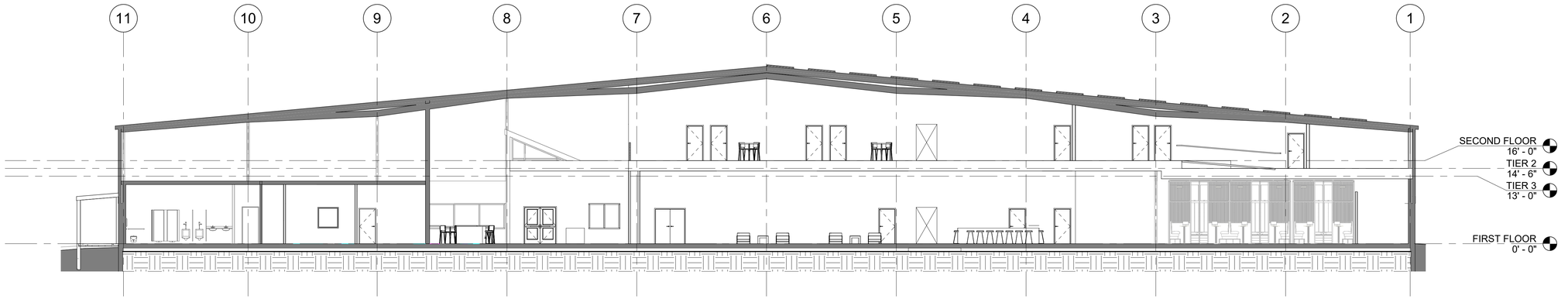
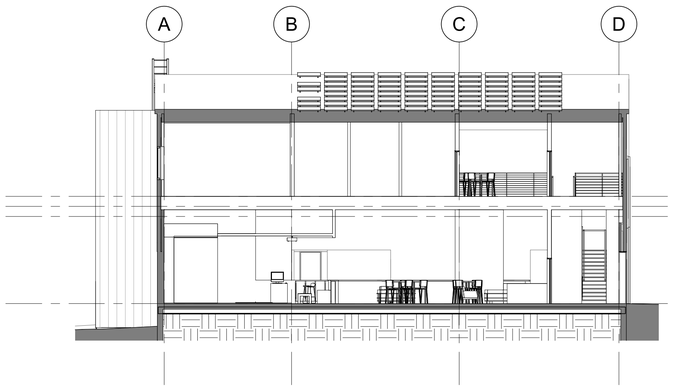


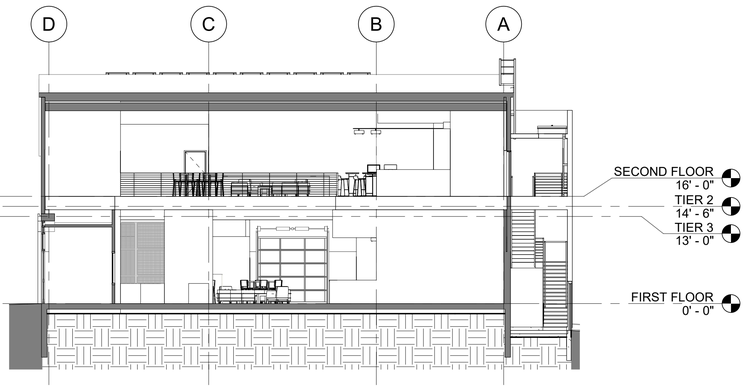
1 CROSS SECTION LOOKING NORTH
3/32" = 1'-0"



2 CROSS SECTION LOOKING SOUTH
3/32" = 1'-0"



3 CROSS SECTION LOOKING EAST
3/32" = 1'-0"



4 CROSS SECTION LOOKING WEST
3/32" = 1'-0"

0' 8' 16' 24'
Scale: 3/32" = 1'-0"

BLACK ROCK SOCIAL CLUB

ROAD TO THE WEST, LLC.
140 WEST ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

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No.	Description	Date

Project Name:
BLACK ROCK SOCIAL CLUB

Drawing Name:
OVERALL SECTIONS

Project Number:	21121
Date:	07/14/2022
Drawn By:	RD
Checked By:	MG

A401

Scale: 3/32" = 1'-0"

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Ross Engineering, LLC
Civil / Structural Engineering
909 Islington Street **603-433-7560**
Portsmouth, NH 03801 **alexross@comcast.net**

140 West Rd--Project Description

August 8th, 2022

This site review application is for renovations and site improvements to an existing fully developed site. The existing lot includes a commercial building and asphalt parking lot, with a stormwater pond in the rear. Two stairwells, adequate code conforming parking, a walk-in cooler, a pervious paver walkway, and a new screen-in dumpster area are proposed improvements to the site.

To mitigate the additional impervious coverage from the above improvements, Stormtech SC-310 chambers are proposed underneath the parking at the front of the building. Two large cisterns are proposed to collect runoff from the roof and supply water to irrigate the proposed landscaping. Overflow from these cisterns is directed into the aforementioned stormtech chambers. Pervious pavement will be installed as part of the rear parking, as well as a pervious paver walkway from the building, to mitigate stormwater runoff. The stormwater pond in the rear of the property will be expanded to handle the stormwater. A jellyfish filter by Contech will be installed to treat runoff from the east parking lot.

The plan set has been updated to include the TAC comments. Additional test pits have been dug on the rear of the property and data has been added to the plans. The grease trap has been relocated closer to the building. A traffic study has been completed and included in this submittal.

Improvements include:

- Renovations to interior of building
- Two stairwells off of the existing building
- Walk-in cooler
- Pervious paver walkway & retaining wall
- Dumpsters relocated in a privacy screened area
- Install 1,000 gallon grease interceptor
- Install Stormtech Chambers with catch basins and drain manholes
- Install 2 - cisterns
- Install gutters on the south and north roofs to direct runoff to the cisterns
- Expand rear stormwater pond
- Install jellyfish filter by Contech to treat runoff
- Install landscaping

These improvements will vastly improve the overall look of the site as well as add a significant amount of landscaping and install a stormwater system that detain, infiltrate, and treat runoff where currently that does not occur.

Sincerely,

Alex Ross, P.E.

Ross Engineering
Civil / Structural Engineering
909 Islington Street **603-433-7560**
Portsmouth, NH 03801 **alexross@comcast.net**

Dated 6-7-2022
To: City of Portsmouth Planning Department

Applicant & Land Owner's Name:
30 North Front Street LLC
14 Lafayette Rd, Unit 9
North Hampton, NH 03862

Location of Land:
140 West Rd
Portsmouth, NH 03801
Tax Map 252, Lot 2-13

List of Abutters

United States of America
US Army Corps of Engineers
New England District
Real Est Division
696 Virginia Rd
Concord, MA 01742-2751
Tax Map 252, Lot 1-7

Public Service Company of NH
PO Box 270
Hartford, CT 06141
Tax Map 252, Lot 1

DSM MB II LLC
875 East St
Tewksbury, MA 08176
Tax Map 252, Lot 2

One Hundred West LLC
100 West Rd
Portsmouth, NH 03801
Tax Map 252, Lot 2-12

Litchfield Portsmouth LLC
& Eaton Partners Inc
175 Canal St Ste 401
Manchester, NH 03101
Tax Map 252, Lot 2-14

Construction and General Labor's Local Union
976 AFL-CIO
PO Box 4119
Portsmouth, NH 03802
Tax Map 252, Lot 2-37

List of Professionals

1. Civil Engineer & Surveyor
   Alex Ross
   Ross Engineering
   Certified Professional Engineer
   Licensed Land Surveyor
   909 Islington Street
   Portsmouth, NH 03801

2. Architect
   McHenry Architecture
   4 Market Street
   Portsmouth, NH 03801

3. MEP Engineer
   CSI Engineering
   125 Aviation Ave #4
   Portsmouth, NH 03801

Ross Engineering
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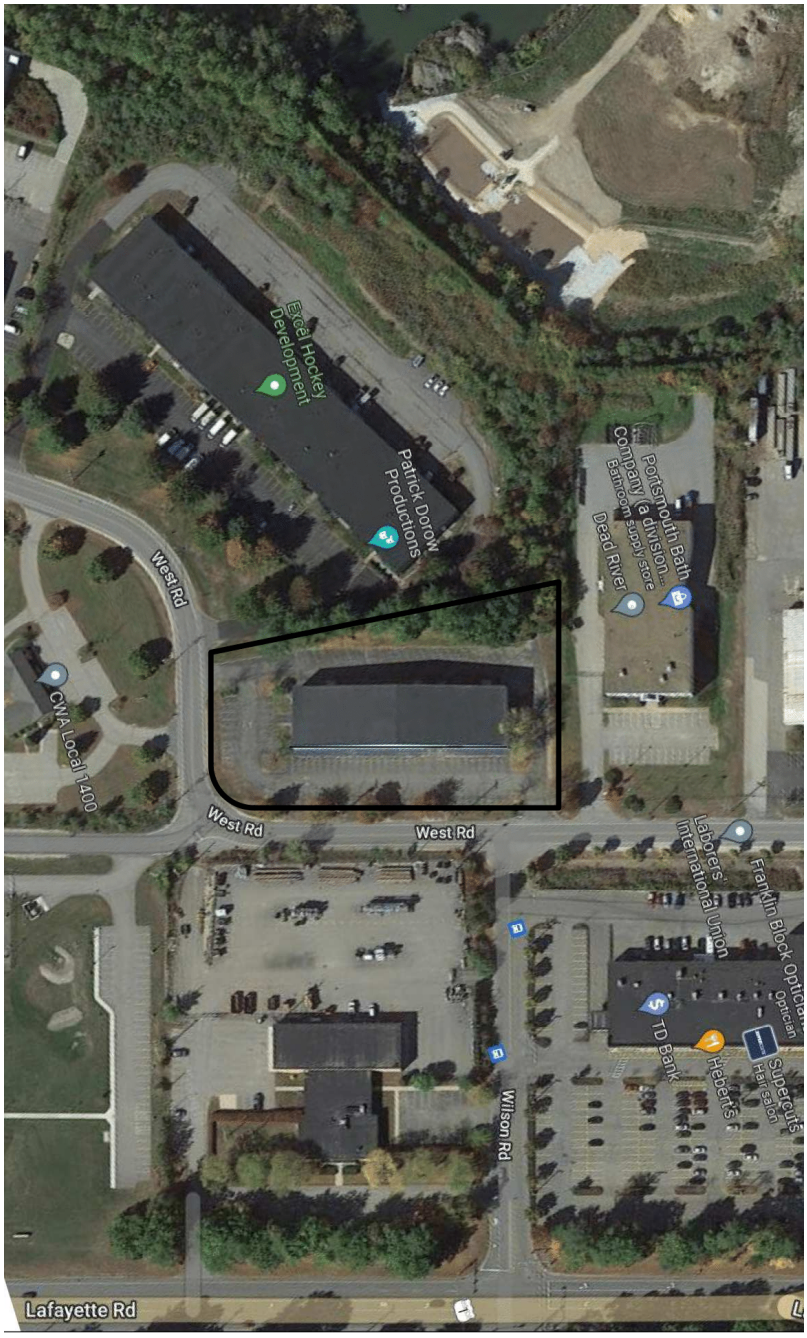
alexross@comcast.net



Aerial view of site

Ross Engineering
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View of building looking to the west

View of building looking to the east

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View of building & parking lot looking to the south

View of building looking to the east

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View of building looking to the south

View of dumpsters and stormwater pond looking to the west

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603-433-7560
alexross@comcast.net

View of existing stormwater pond

View of front parking lot & swale looking to the south

MEMORANDUM

Date:	June 20, 2022
Project:	West Road Sport Club 140 West Rd.
Subject:	Green building components

The scope of the project uses the existing building located on the site of 140 West Road while incorporating green building materials and systems into the renovation and interior expansion. As part of the site plan review application, section 2.5.3.1b, the project has incorporated green components into the project as listed below.

- Pervious asphalt in a portion of the parking stalls.
- Reconstruction and upgrades to the site stormwater system, including a detention pond and jelly fish filtration system.
- Rainwater recovery to be used for irrigation with two 5,000-gallon cisterns located at each end of the building.
- Landscaping around the whole parcel that will include native plantings.
- LED energy efficient lighting for the site and building interior.
- Dark sky compliant site lighting.
- PV solar panel array located on the existing roof.
- Reuse of existing structure and cladding.
- Replacement and upgrade of HVAC units with energy recovery (ERV) that meet or exceed ASHRAE requirements.
- Low flow plumbing fixtures.
- Recycled content for many building components including structural steel for the 2nd floor structure and interior finishes.
- Energy efficient glazing and frames for new windows added. The additional windows also allow for natural light in occupied office space.

MEMORANDUM

Date:	June 20, 2022
Project:	West Road Sport Club 140 West Rd.
Subject:	Parking Calculations

Off street parking requirements, per the city of Portsmouth zoning section 10.1110, calculates office parking based on gross area and assembly spaces based on the calculated occupant load. The first table below outlines the maximum occupant count from Code Review sheet T2, followed by the parking tabulations.

Maximum Occupant Load Table	
Occupant Total (see sheet T2)	502
Office	36
Assembly	466

10.1112.32 Parking Requirements for Nonresidential Uses

Parking Calculations Table				
Use	Use No.	Requirement	Load	Stalls
Office	5.20	1 per 350 sf GFA	3418 sf	10
Assembly	3.10/4.60	1 per 4 persons maximum occupancy	466 persons	117
Total Parking				127

*4.60 Indoor Recreation has the same parking requirements as Assembly.

10.1112.60 Shared Parking
10.1112.61 Methodology

Developments that contain a mix of uses on the same parcel shall reduce the number of off-street parking spaces in accordance with the following methodology:

(1) Determine the minimum number of off-street parking spaces for each land use within the development in accordance with Sections 10.1112.10 through 10.1112.50.
(2) Multiply the minimum parking requirement for each land use by the corresponding parking occupancy rates for each of the five time periods set forth in Columns (B) through (F) of the Parking Occupancy Rates table below.
(3) Add the resulting shared parking requirements for each time period to determine the minimum parking requirement for that period.

The required minimum number of parking spaces for the development shall be the highest of the five time-period totals.

Shared Parking Methodology

Use	Weekday				Weekend					
	Daytime (b)		Evening (c)		Daytime(d)		Evening(e)		Nighttime(f)	
Office	100%	10	20%	2	10%	1	5%	1	5%	1
Entertainment	40%	47	100%	117	80%	94	100%	117	10%	12
Total		57		119		95		118		13

Based on the zoning requirements for off street parking and the shared parking methodology 140 West road will require 119 parking spaces.

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STORMWATER MANAGEMENT OPERATION & MAINTENANCE

140 West Road, Portsmouth, NH

The proposed stormwater structures and improvements will result in a massive upgrade for stormwater runoff control and treatment. For all of these elements to work correctly in the future it is imperative to keep up with proper operation and maintenance.

Inspection and Maintenance of Facilities and Property

A. Maintenance of Common Facilities or Property

1. Future owners or assigns are responsible for maintenance of all stormwater infrastructure associated with the facility and the property. This includes the roof drainage system, cistern, stormwater pond, pervious pavers, Storm Tech Chambers, landscaped areas, pervious asphalt and Contech treatment structure.

B. General Inspection and Maintenance Requirements

1. Permanent stormwater and sediment and erosion control facilities to be maintained on the site include but are not limited to the following:

    a. Parking areas
    b. Pervious Asphalt
    c. Detention Pond
    d. Landscaped areas
    e. Permeable Pavers
    f. Culverts & Drain lines
    g. Contech jellyfish
    h. Roof drainage
    i. Storm Tech Chambers
    j. Cistern

2. Maintenance of permanent measures shall follow the following schedule:

    a. **<u>Parking areas, Driveway:</u>**
    Inspection at the end of every winter, prior to the start of the spring rain season. Sweeping shall be done once in early fall and then after spring snowmelt. Sand/debris that has collected off the driveway and parking lot should be removed off-site and disposed of properly.

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b. **Pervious Asphalt:**
Visually inspect pavement monthly to ensure it is clean of debris, de-waters between storms and is clean of sediments. Maintain all adjacent and upland areas. Keep surface free of sediment by blowing, and vacuuming at least as often as item a. above and as needed. Avoid any sealing or repaving with impervious materials.

c. **Detention Pond:**
Inspect inlet and outlet pipes and stoned basin annually. Inspect for accumulation of sediment and of proper function of pipes. Removed trash and debris from basin and any inlet or outlet pipe offsite. Grassed side slopes shall be maintained and mowed regularly.

d. **Landscaped Areas:**
Annual inspection of site's vegetation and landscaping. Any areas that are bare shall be reseeded and mulched with hay or, if the case is extreme, loamed and seeded or sodded to ensure adequate vegetative cover. Landscape specimens shall be replaced in-kind, if they are found to be dead or dying.

e. **Permeable Pavers:**
Review periodically during storm events for proper infiltration. Inspect once per year by running water over the surface while watching for proper infiltration. Clean/remove any sedment/debris from the joints to ensure largest surface area for water to infiltrate, perform light vacuuming twice a year.

f. **Culverts and drain lines:**
Inspect twice a year, more often if needed. Inspect for accumulation of debris. Remove material from inlet/outlet as necessary, dispose of offsite.

g. **Contech jellyfish treatment structure:**
See attached Jellyfish Maintenance Guide.

h. **Roof drainage:**
The following recommendations will help assure that the roof drainage system is maintained to preserve its effectiveness:

1. Initially, it should be tested by inserting a garden hose into the inlet and allowing the water to run at full strength for a minimum of one hour. The water should stay underground within the gravel. If water comes out of the overflow, the system should be further inspected and possibly replaced. This procedure should be performed every year during the annual inspection.

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2. In the spring and fall, visually inspect the area around the system and repair any erosion. Use small stones to stabilize erosion along drainage paths. Re-mulch any void areas by hand as needed. Also, inspect the roof collection and piping and clean and repair as necessary.

3. Do not plant deep rooted trees and shrubs within 5' of the system.

i. **Storm Tech Chambers:**
The following requirements will help assure that the storm tech chambers system is maintained to preserve its effectiveness:

STEP 1) inspect isolator row for sediment

A. Inspection ports (if present)
A.1. remove/open lid on nyloplast inline drain
A.2. remove and clean flexstorm filter if installed
A.3. using a flashlight and stadia rod, measure depth of sediment and record on maintenance log
A.4. lower a camera into isolator row for visual inspection of sediment levels (optional)
A.5. if sediment is at, or above, 3" (80mm) proceed to step 2. If not, proceed to step 3.

B. All isolator rows
B.1. remove cover from structure at upstream end of isolator row
B.2. using a flash light, inspect down the isolator row through outlet pipe. mirrors on poles or cameras may be used to avoid a confined space entry. follow osha regulations for confined space entry if entering manhole
B.3. if sediment is at, or above, 3" (80mm) proceed to step 2. If not, proceed to step 3.

STEP 2) Clean out isolator row using the jetvac process
A. a fixed culvert cleaning nozzle with rear facing spread of 45" (1.1m) or more is preferred
B. apply multiple passes of jetvac until backflush water is clean
C. vacuum structure sump as required

STEP 3) replace all covers, grates, filters, and lids; record observations and actions.

STEP 4) inspect and clean basins and manholes upstream of the storm tech system.

NOTES

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1. Inspect every 6 months during the first year of operation. Adjust the inspection interval based on previous observations of sediment accumulation and high water elevations. Adjustment to the inspection interval timeframe shall not be greater than 12 months.
2. Conduct jetting and vactoring annually or when inspection shows that maintenance is necessary.

i. Inspection of site shall occur monthly for the first few months after construction. Then inspections can occur on an annual basis, preferably after rain events when clogging can occur and be obvious. Permeable pavers require minimal maintenance; however maintenance is absolutely necessary to ensure a proper working system.

ii. Asphalt seal coating is absolutely forbidden. Surface seal coating is not reversible.

iii. Street sweepers with vacuums, water, and brushes can be used to restore permeability. Follow sweeping with high-pressure hosing of the surface pores. Surface should be vacuumed 4 times per year, and at any additional times sediment is spilled, eroded, or tracked onto the surface.

iv. Planted areas adjacent to pervious pavers should be well maintained to prevent soil washout onto the pavement. If any bare spots or eroded areas are observed within the planted areas, they should be replanted and/or stabilized at once.

v. Immediately clean any soil deposited on pavers. Superficial dirt does not necessarily clog the voids. However, dirt that is ground in repeatedly by tires can lead to clogging. Therefore, trucks or other heavy vehicles should be prevented from tracking or spilling dirt onto the pavement. Replace any damaged paving blocks.

vi. Do not allow construction staging, soil/mulch storage, etc. on unprotected pavers surface.

vii. No winter sanding. Mechanical snow and ice removal preferred.

viii. Written and verbal communication to the porous paver's future owner should make clear the special purpose and special maintenance requirements such as those listed here.

viv. Owners shall provide a report on activities performed throughout the year. Report shall include documentation that pavement cleaning is accomplished per this document and a certification that the system continues to function as designed.

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j. Low Impact Development – Cistern

Cisterns are above or underground storage tanks used to collect roof runoff. They may include pumps and filtration devices to reuse water. They provide the benefit of reduced stormwater runoff and conservation of water supplies when the water is reused. Stormwater collected in cisterns can typically be reused for purposes of irrigation and, wash water, and other non-potable uses.

With an actively managed operating system, regular maintenance is also important to preserve the end use water quality, maintain system safety and efficiency, and minimize cost associated with repairs and downtime.

Maintenance

- Inspect overflow pipe and overflow area to ensure that overflow is draining in a nonerosive manner.
- Inspect cisterns at least annually for accumulation of sediment and debris, and clean cistern as warranted by inspection. Cisterns may require servicing under the supervision of a qualified professional, including periodic disinfection to control bacteria growth, or application of larvicide to control mosquitoes.
- Verify that the rainwater harvesting was built in accordance with the approved design and standards and specifications.
- Inspect and clean all conveyance and storage elements immediately prior to system testing. Verify that the distribution intake within storage device(s) is cleat of sediment and will not entrain any sediment once the flow is initiated.
- Verify that the practice actually captures runoff. Conduct a full inundation test to inspect the inflows, piping, storage tank, and outflows.
- Confirm that there are no leakages in the routing to the storage device or out of the storage device.
- Use a detailed inspection checklist that includes sign-offs by qualified individuals at the completion of construction, to ensure that the contractor’s interpretation of the plan is acceptable to the professional designer.
- Review and discuss all part warranties.

Ross Engineering

909 Islington Street
Portsmouth, NH 03801

603-433-7560
alexross@comcast.net

Annual Operations and Maintenance Report

	Activity	Date of Inspection	Who Inspected	Satisfactory: Yes, No, N/A	Maintenance Needed	Implemented date of corrective action	Findings of Inspector
	Parking Areas						
	Pervious Asphalt						
	Detention Pond						
	Landscaped Areas						
	Permeable Pavers						
	Culverts & Drain lines						
	Contech Jellyfish						
	Roof Drainage						
	Storm tech Chambers						
	Cistern						

City of Portsmouth, New Hampshire

Site Plan Application Checklist

This site plan application checklist is a tool designed to assist the applicant in the planning process and for preparing the application for Planning Board review. A pre-application conference with a member of the planning department is strongly encouraged as additional project information may be required depending on the size and scope. The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan review regulations for full details.

Applicant Responsibilities (Section 2.5.2): Applicable fees are due upon application submittal along with required attachments. The application shall be complete as submitted and provide adequate information for evaluation of the proposed site development. Waiver requests must be submitted in writing with appropriate justification.

Name of Owner/Applicant: Alex Ross Date Submitted: 6/21/2022

Phone Number: 603-433-7560 E-mail: alexross@comcast.net

Site Address: 140 West Rd Map: 252 Lot: 2-13

Zoning District: Industrial Lot area: 87,507 sq. ft.

Application Requirements			
☑	**Required Items for Submittal**	**Item Location (e.g. Page or Plan Sheet/Note #)**	**Waiver Requested**
☑	Fully executed and signed Application form. **(2.5.2.3)**	Online Land Use Application	N/A
☑	All application documents, plans, supporting documentation and other materials provided in digital Portable Document Format (PDF) on compact disc, DVD or flash drive. **(2.5.2.8)**	See attached CD	N/A

Site Plan Review Application Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	Statement that lists and describes "green" building components and systems. **(2.5.3.1A)**	See Attached Statement	☐
☑	Gross floor area and dimensions of all buildings and statement of uses and floor area for each floor. **(2.5.3.1B)**	Sheets A101-A105	N/A
☑	Tax map and lot number, and current zoning of all parcels under Site Plan Review. **(2.5.3.1C)**	Sheet 1 "Existing Conditions"	N/A
☑	Owner's name, address, telephone number, and signature. Name, address, and telephone number of applicant if different from owner. **(2.5.3.1D)**	30 North Front St LLC 14 Lafayette Rd, Unit 9 North Hampton, NH 03862 alexbrian1568@gmail.com	N/A

Site Plan Review Application Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
✓	Names and addresses (including Tax Map and Lot number and zoning districts) of all direct abutting property owners (including properties located across abutting streets) and holders of existing conservation, preservation or agricultural preservation restrictions affecting the subject property. **(2.5.3.1E)**	See Attached Abutter's List	N/A
✓	Names, addresses and telephone numbers of all professionals involved in the site plan design. **(2.5.3.1F)**	See Attached Abutter's List	N/A
✓	List of reference plans. **(2.5.3.1G)**	Sheet 1 "Existing Conditions"	N/A
✓	List of names and contact information of all public or private utilities servicing the site. **(2.5.3.1H)**	Sheet 4 "Utility Plan"	N/A

Site Plan Specifications			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
✓	Full size plans shall not be larger than 22 inches by 34 inches with match lines as required, unless approved by the Planning Director. Submittals shall be a minimum of 11 inches by 17 inches as specified by Planning Dept. staff. **(2.5.4.1A)**	Required on all plan sheets	N/A
✓	Scale: Not less than 1 inch = 60 feet and a graphic bar scale shall be included on all plans. **(2.5.4.1B)**	Required on all plan sheets	N/A
✓	GIS data should be referenced to the coordinate system New Hampshire State Plane, NAD83 (1996), with units in feet. **(2.5.4.1C)**	Required on all plan sheets Will be added	N/A
✓	Plans shall be drawn to scale. **(2.5.4.1D)**	Required on all plan sheets	N/A
✓	Plans shall be prepared and stamped by a NH licensed civil engineer. **(2.5.4.1D)**	Required on all plan sheets	N/A
✓	Wetlands shall be delineated by a NH certified wetlands scientist. **(2.5.4.1E)**	No wetlands on site	N/A
✓	Title (name of development project), north point, scale, legend. **(2.5.4.2A)**	Required on all plan sheets	N/A
✓	Date plans first submitted, date and explanation of revisions. **(2.5.4.2B)**	Required on all plan sheets	N/A
✓	Individual plan sheet title that clearly describes the information that is displayed. **(2.5.4.2C)**	Required on all plan sheets	N/A

Site Plan Specifications			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
✓	Source and date of data displayed on the plan. **(2.5.4.2D)**	Required on all plan sheets	N/A
✓	A note shall be provided on the Site Plan stating: "All conditions on this Plan shall remain in effect in perpetuity pursuant to the requirements of the Site Plan Review Regulations." **(2.5.4.2E)**	Required on all plan sheets	N/A
✓	Plan sheets submitted for recording shall include the following notes: a. "This Site Plan shall be recorded in the Rockingham County Registry of Deeds." b. "All improvements shown on this Site Plan shall be constructed and maintained in accordance with the Plan by the property owner and all future property owners. No changes shall be made to this Site Plan without the express approval of the Portsmouth Planning Director." **(2.13.3)**	Sheets 2 & 3	N/A
✓	Plan sheets showing landscaping and screening shall also include the following additional notes: a. "The property owner and all future property owners shall be responsible for the maintenance, repair and replacement of all required screening and landscape materials." b. "All required plant materials shall be tended and maintained in a healthy growing condition, replaced when necessary, and kept free of refuse and debris. All required fences and walls shall be maintained in good repair." c. "The property owner shall be responsible to remove and replace dead or diseased plant materials immediately with the same type, size and quantity of plant materials as originally installed, unless alternative plantings are requested, justified and approved by the Planning Board or Planning Director." **(2.13.4)**	Sheet 3 "Landscape Plan" - Planting Notes 6-8	N/A

Site Plan Specifications – Required Exhibits and Data			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
	1. Existing Conditions: (2.5.4.3A)		
✓	a. Surveyed plan of site showing existing natural and built features;	Sheet 1 "Existing Conditions"	☐
✓	b. Zoning boundaries;	Sheet 1 "Existing Conditions"	☐
✓	c. Dimensional Regulations;	Sheet 1 - Note 3	☐
✓	d. Wetland delineation, wetland function and value assessment;	Sheet 1 "Existing Conditions"	☐
✓	e. SFHA, 100-year flood elevation line and BFE data.	Sheet 1 - Note 4	☐
	2. Buildings and Structures: (2.5.4.3B)		
✓	a. Plan view: Use, size, dimensions, footings, overhangs, 1st fl. elevation;	Sheets A101-A105	☐
✓	b. Elevations: Height, massing, placement, materials, lighting, façade treatments;	Sheet A301	☐
✓	c. Total Floor Area;	Sheet A101	☐
✓	d. Number of Usable Floors;	Sheet A101	☐
✓	e. Gross floor area by floor and use.	Sheet A101	☐
	3. Access and Circulation: (2.5.4.3C)		
✓	a. Location/width of access ways within site;	Sheet 2 "Site Plan"	☐
✓	b. Location of curbing, right of ways, edge of pavement and sidewalks;	Sheet 2 "Site Plan"	☐
✓	c. Location, type, size and design of traffic signing (pavement markings);	Sheet 2 "Site Plan"	☐
✓	d. Names/layout of existing abutting streets;	N/A	☐
✓	e. Driveway curb cuts for abutting prop. and public roads;	Sheet 1 "Existing Conditions"	☐
✓	f. If subdivision; Names of all roads, right of way lines and easements noted;	Not a Subdivision	☐
✓	g. AASHTO truck turning templates, description of minimum vehicle allowed being a WB-50 (unless otherwise approved by TAC).	Sheet 5 "Parking Plan"	☐
	4. Parking and Loading: (2.5.4.3D)		
✓	a. Location of off street parking/loading areas, landscaped areas/buffers;	Sheet 3 "Landscape Plan"	☐
✓	b. Parking Calculations (# required and the # provided).	Sheet 5 "Parking Plan"	☐
	5. Water Infrastructure: (2.5.4.3E)		
✓	a. Size, type and location of water mains, shut-offs, hydrants & Engineering data;	Sheet 4 "Utility Plan"	☐
✓	b. Location of wells and monitoring wells (include protective radii).	N/A	☐
	6. Sewer Infrastructure: (2.5.4.3F)		
✓	a. Size, type and location of sanitary sewage facilities & Engineering data.	Sheet 4 "Utility Plan"	☐
	7. Utilities: (2.5.4.3G)		
✓	a. The size, type and location of all above & below ground utilities;	Sheet 4 "Utility Plan"	☐
✓	b. Size type and location of generator pads, transformers and other fixtures.	Sheet 4 "Utility Plan"	☐

Site Plan Specifications – Required Exhibits and Data			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
✓	**8. Solid Waste Facilities: (2.5.4.3H)**		
✓	a. The size, type and location of solid waste facilities.	Sheet 2 "Site Plan"	☐
	9. Storm water Management: (2.5.4.3I)		
✓	a. The location, elevation and layout of all storm-water drainage.	Sheet 4 "Utility Plan"	☐
	10. Outdoor Lighting: (2.5.4.3J)		
✓	a. Type and placement of all lighting (exterior of building, parking lot and any other areas of the site) and; b. photometric plan.	"Lighting Plan"	☐
✓	**11.** Indicate where dark sky friendly lighting measures have been implemented. **(10.1)**	"Lighting Plan"	☐
	12. Landscaping: (2.5.4.3K)		
✓	a. Identify all undisturbed area, existing vegetation and that which is to be retained;	Sheet 3 "Landscape Plan"	☐
✓	**b.** Location of any irrigation system and water source.	N/A	☐
	13. Contours and Elevation: (2.5.4.3L)		
✓	a. Existing/Proposed contours (2 foot minimum) and finished grade elevations.	Sheet 4 "Grading & Drainage Plan"	☐
	14. Open Space: (2.5.4.3M)		
✓	a. Type, extent and location of all existing/proposed open space.	Sheet 2 "Site Plan"	☐
✓	**15. All easements, deed restrictions and non-public rights of ways. (2.5.4.3N)**	N/A	☐
✓	**16. Location of snow storage areas and/or off-site snow removal. (2.5.4.3O)**	Sheet 2 "Site Plan"	☐
✓	**17. Character/Civic District (All following information shall be included): (2.5.4.3Q)**	N/A	☐
	a. Applicable Building Height (10.5A21.20 & 10.5A43.30);		
	b. Applicable Special Requirements (10.5A21.30);		
	c. Proposed building form/type (10.5A43);		
	d. Proposed community space (10.5A46).		

Other Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
✓	Traffic Impact Study or Trip Generation Report, as required. (*Four (4) hardcopies of the full study/report and Six (6) summaries to be submitted with the Site Plan Application*) **(3.2.1-2)**	Will Be Submitted	☐
✓	Indicate where Low Impact Development Design practices have been incorporated. **(7.1)**	Sheet 2 "Site Plan" Rain Garden & Stormtech SC-310 Units	☐
✓	Indicate whether the proposed development is located in a wellhead protection or aquifer protection area. Such determination shall be approved by the Director of the Dept. of Public Works. **(7.3.1)**	Development not within wellhead protection area	☐
✓	Indicate where measures to minimize impervious surfaces have been implemented. **(7.4.3)**	Sheets 9 & 10	☐
✓	Calculation of the maximum effective impervious surface as a percentage of the site. **(7.4.3.2)**	Sheet 2 "Site Plan"	☐
✓	Stormwater Management and Erosion Control Plan. (*Four (4) hardcopies of the full plan/report and Six (6) summaries to be submitted with the Site Plan Application*) **(7.4.4.1)**	Sheet 10 "Erosion Control Plan"	✓

Final Site Plan Approval Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
✓	All local approvals, permits, easements and licenses required, including but not limited to: a. Waivers; b. Driveway permits; c. Special exceptions; d. Variances granted; e. Easements; f. Licenses. **(2.5.3.2A)**		☐
✓	Exhibits, data, reports or studies that may have been required as part of the approval process, including but not limited to: a. Calculations relating to stormwater runoff; b. Information on composition and quantity of water demand and wastewater generated; c. Information on air, water or land pollutants to be discharged, including standards, quantity, treatment and/or controls; d. Estimates of traffic generation and counts pre- and post-construction; e. Estimates of noise generation; f. A Stormwater Management and Erosion Control Plan; g. Endangered species and archaeological / historical studies; h. Wetland and water body (coastal and inland) delineations; i. Environmental impact studies. **(2.5.3.2B)**	See attached Drainage Study & Sheet 13 "Erosion Control Plan"	☐

Final Site Plan Approval Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
✓	A document from each of the required private utility service providers indicating approval of the proposed site plan and indicating an ability to provide all required private utilities to the site. **(2.5.3.2D)**	Has Been Requested and will be submitted	☐
✓	A list of any required state and federal permit applications required for the project and the status of same. **(2.5.3.2E)**	N/A	☐

Applicant's Signature: _____ **Date:** 6/21/22

PLAN FOR
STORMWATER MANAGEMENT

For Property Located At:
140 West Rd
Tax Map 252, Lot 2-13
Portsmouth, NH 03801

Prepared by:
Alex Ross, P.E.
Ross Engineering
August 8, 2022

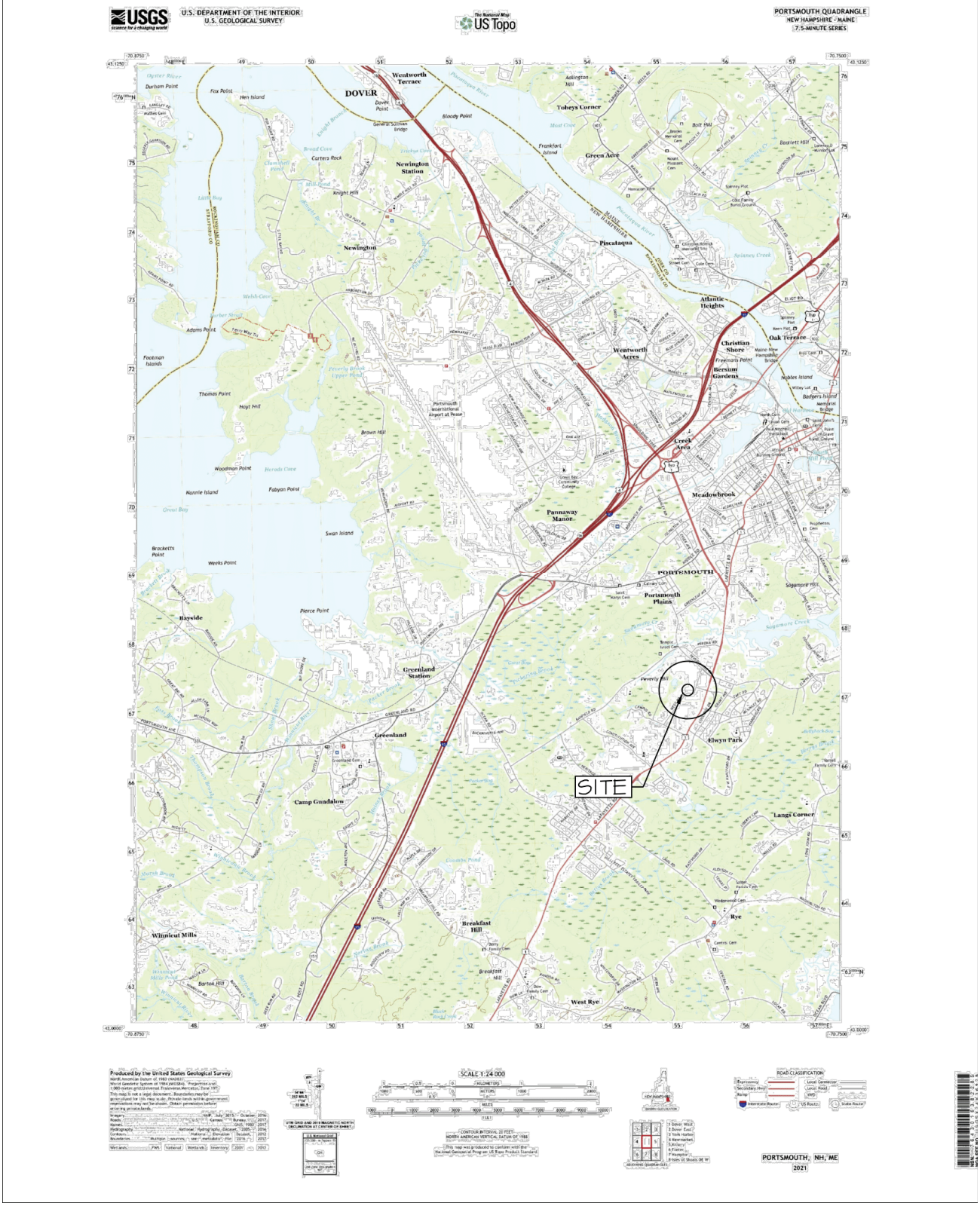
Table of Contents

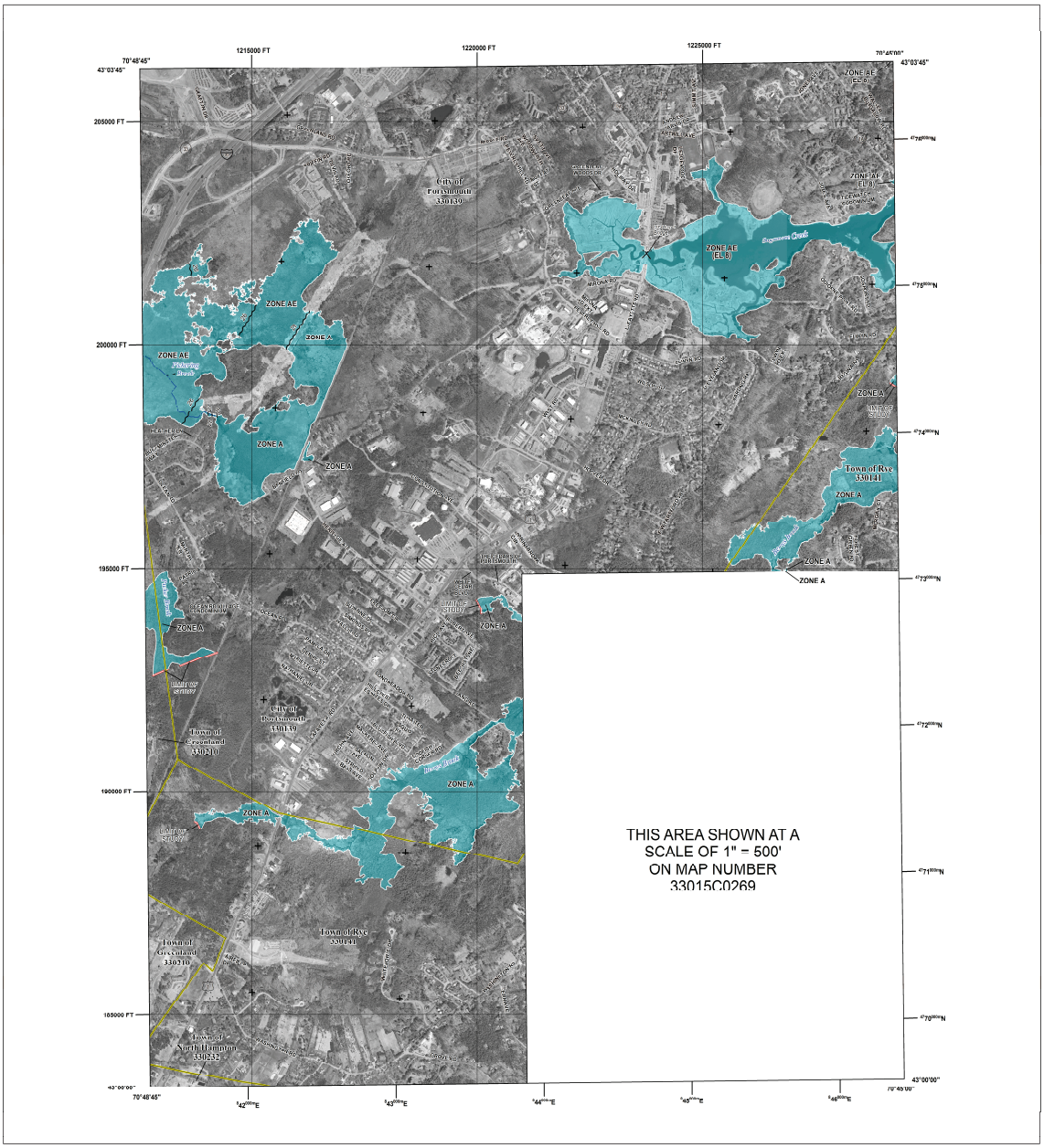
Site Description

The parcel being analyzed is located at 140 West Road in Portsmouth, NH. This is a fully developed 2.01 Acre site that was built in the late 1980's and most recently had a recreational building use. There are wetlands to the north of the site. The site lacks any effective stormwater management. The proposed improvements offer an opportunity to control stormwater and provide protection to the surrounding wetlands, while providing infiltration and aquifer recharge.

The existing building is in the center of the lot, surrounding by an asphalt parking lot. Runoff from the majority of the roof as well as northern, western and a portion of the south side of the lot flows to a stormwater pond located in the north side of the site that is improperly sized. This stormwater pond outlets to a drain manhole. Runoff from the eastern side of the lot also flows to this drain manhole through a series of drainage structures. This drain manhole outlets to the wetlands in the west. A portion of the roof and a small portion of the southern side of the lot flows to a catch basin that is part of a network of drainage structures along West Rd. This network drains to the south away from the site.

The County Soil Survey Map describes the soil in the area as 299 "Udorthents, smoothed". This soil is in the hydrologic soil group C which was used in modeling stormwater events. Seven test pits have been dug on site, and the data has been included in the site plan set.


USGS
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
The National Map
US Topo
PORTSMOUTH QUADRANGLE
NEW HAMPSHIRE - MAINE
7.5-MINUTE SERIES
SITE
DOVER
Wentworth Terrace
Dover Point
Garrison Schirmer Bridge
Durham Point
Fox Point
Hen Island
Oyster River
Tobeys Corner
Bloody Point
Frankfort Island
Green Acre
Newington Station
Carters Rock
Knight Hill
Newington
Piscataqua
Atlantic Heights
Oak Terrace
Christian Shore
Wentworth Acres
Gerrish Island
Footman Islands
Adams Point
Thomas Point
Hoyt Hill
Brown Hill
Portsmouth International Airport at Pease
Creek Area
Meadowbrook
Woodman Point
Herods Cove
Fabyan Point
Nannie Island
Great Bay
Pannaway Manor
Swan Island
Brackett's Point
Weeks Point
PORTSMOUTH
Portsmouth Plains
Sagamore Hill
Bayside
Pierce Point
Greenland Station
Greenland
Elwyn Park
Camp Gundalow
Langs Corner
Breakfast Hill
Rye
Whidden Mills
Barton Hill
West Rye
Produced by the United States Geological Survey
SCALE 1:24 000
CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
ROAD CLASSIFICATION
PORTSMOUTH, NH, ME
2021



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTPS://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AH*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall
- 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)

OTHER FEATURES
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Mapping and Insurance eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Mapping and Insurance eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM notes. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

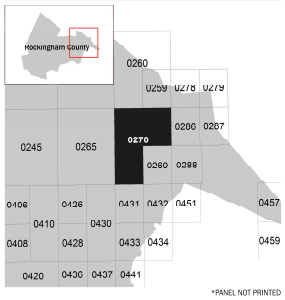
Base map information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). This information was derived from digital orthophotography at a 1 foot resolution from photography dated 2010.

SCALE

Map Projection:
NAD 1983 StatePlane New Hampshire FIPS 2800 Feet;
Western Hemisphere Vertical Datum: NAVD 88

1 inch = 1,000 feet 1:12,000
0 1,000 2,000 4,000 Feet
0 260 520 1,040 Meters

PANEL LOCATOR



*PANEL NOT PRINTED

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

ROCKINGHAM COUNTY, NEW HAMPSHIRE
(All Jurisdictions)

PANEL 270 OF 681

FEMA

Panel Contains:

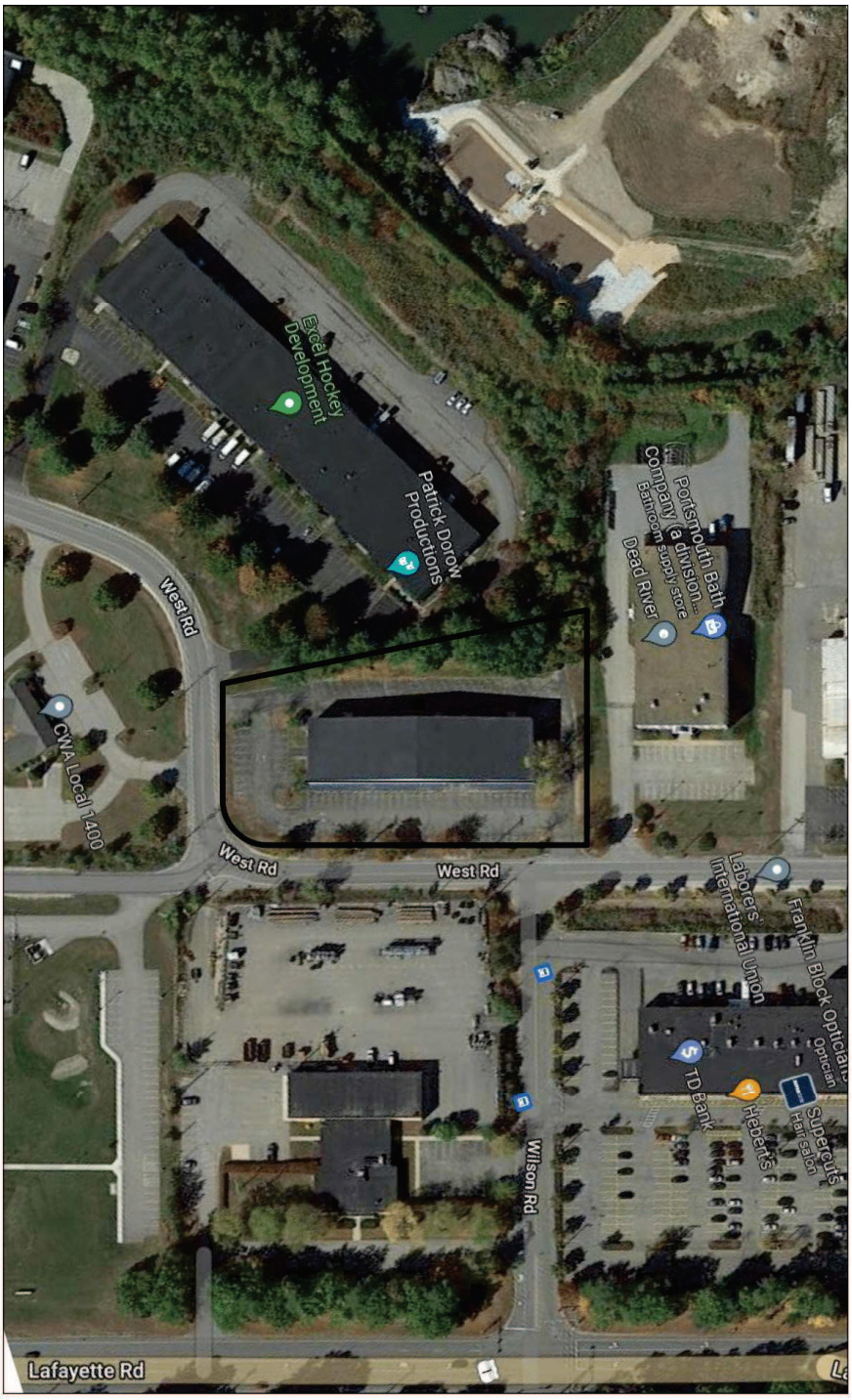
COMMUNITY	NUMBER	PANEL	SUFFIX
GREENLAND, TOWN OF	330210	0270	F
NORTH HAMPTON, TOWN OF	330232	0270	F
PORTSMOUTH, CITY OF	330139	0270	F
RYE, TOWN OF	330141	0270	F

VERSION NUMBER
2.3.2.1

MAP NUMBER
33015C0270F

MAP REVISED
January 29, 2021

Aerial View


Excel Hockey Development
Patrick Dorow Productions
Portsmouth Bath Company (a division... Bathroom supply store
Dead River
West Rd
CWA Local 1400
West Rd
West Rd
Laborers' International Union
Franklin Block Opticians
Optician
TD Bank
Supercuts
Hair salon
Wilson Rd
Lafayette Rd

Drainage Design

Pre-development stormwater runoff flows must be analyzed to establish a comparable baseline for post-development flows. A stormwater management system should be installed that will adequately handle any increased post-development runoff.

The stormwater runoff analysis of the site was based on the **two, ten, twenty-five,** and **fifty** year storm event as per the City Site Plan Review Regulations, Section 7.6.1. The research method applied was the TR-55 method, which was developed from the U.S. Soil Conservation Service's TR-20 runoff procedure. The TR-55 Manual describes the method as a "...procedure to calculate storm runoff, peak rate of discharge, hydrographs, and storage volumes required for floodwater reservoirs." The model begins with a rainfall amount uniformly imposed on the watershed over a specified time distribution. Mass rainfall is converted to mass runoff by using a runoff curve number (CN). The curve number is based on soils, plant cover, amount of impervious area, interception, and surface storage to determine a coefficient representing the capability of a surface to infiltrate stormwater. Runoff is then transformed into a hydrograph by using the unit hydrograph theory and routing procedures through segments of the watershed. A hydrograph models the volume of runoff with respect to time, reflecting the unit hydrograph theory, which is that a one-day rainfall event produces a one inch depth of runoff over a given area. The routing of runoff is segmented into areas of the watershed dependent on topography and travel time. These segmented areas are known as subcatchments. Modeling calculations were performed using the HydrodCAD stormwater modeling system version 10.

Proposed Development

The existing building will be renovated, with stairwell additions on the south and west side, and a walk-in cooler expansion on the north side. Additional parking will be installed, with the new parking being partially pervious pavement and partially asphalt pavement. A patio walkway will be installed on the north exit of the building. Gutters will be added to the existing roof directing runoff into two cisterns (one on the north and one on the south side), with overflow being directed to the stormtech SC-310 units, which will connect to a drain manhole (DMH C). A jellyfish filter (CB A) that treats runoff from the eastern parking will connect to DMH C as well. DMH C will then flow to an existing drain manhole (DMH 1) on site. Pervious pavement will be located along the west side of the building. Runoff on the pervious pavement will be directed to a detention pond in the northwest of the property. Runoff from the detention pond will be slowly released to an existing drain manhole (DMH 2) on site. The runoff from DMH 1 also flows to DMH 2. The combined runoff then flows to the wetlands off site in the west. Seven test pits were dug at the site. A conservative value of 7.5 inches/hour was used for exfiltration in this analysis at the stormtech units. Exfiltration has been included in the model only for the stormtech units located at the eastern portion of the property.

Results of Drainage Analysis

Pre-Development Runoff

The existing conditions have been modeled as 3 separate subcatchments and are outlined below.

- Subcatchment area 1 will collect runoff from the north side of the building, the majority of the south side of the building, a portion of West Road, a portion of the southern parking lot, a portion of the northern parking lot, and the west side of the parking lot. Runoff will travel northwest into a stormwater pond, then through a 4" culvert into DMH 2, then through a 24" culvert to the wetlands in the northwest off site.
- Subcatchment area 2 will collect runoff from a small portion of the south side of the building, a portion of the southern parking lot, and a portion of West Road. Runoff will flow to CB 2, then to CB 3, then continue southwest into the Portsmouth drainage network.
- Subcatchment area 3 will collect runoff from the eastern parking lot, as well as a portion of West Road. Runoff will flow into CB 1 then to DMH 1, then to DMH 2, then through a 24" culvert to the wetlands in the northwest off site.

Post-Development Runoff

The proposed conditions have been modeled as 5 separate subcatchments and are outlined below.

- Subcatchment area 1 will collect runoff from the grassed area west of the parking lot and the grassed area northing of the parking lot. Runoff will flow to the northwest to a detention pond, then through a 12" culvert to DMH 2, then through a 24" culvert to the wetlands in the northwest off site.
- Subcatchment area 2 will collect runoff from the landscaped area south of the parking lot and a portion of West Road. Runoff will flow to CB 2, then to CB 3, then continue southwest into the Portsmouth drainage network.
- Subcatchment area 3 will collect runoff from the roof. Runoff will flow through gutters to two irrigation cisterns, then to DMH A, then through stormtech SC-310 chambers, then to DMH B, then to DMH C, then to DMH 1, then to DMH 2, then through a 24" culvert to the wetlands in the northwest off site.
- Subcatchment 4 will collect runoff from a portion of the eastern parking lot and a portion of West Road. Runoff will flow to a catch basin using a jellyfish filter (CB A), then to DMH C, then to DMH 1, then to DMH 2, then through a 24" culvert to the wetlands in the northwest off site.
- Subcatchment area 5 will collect runoff from a portion of the southern parking lot, a portion of the northern parking lot, the western parking lot, and a portion of West Road. Runoff will run along the vertical granite curb, flowing to curb inlet basin with a jellyfish filter (DMH D), then to a detention

pond in the northwest, then through a 12” culvert to DMH 2, then through a 24” culvert to the wetlands in the northwest off site.

- Subcatchment area 6 will collect runoff from area on the parking lot west of the existing building and a small portion of the roof. Runoff will be collected by the pervious pavement, where it will be detained and slowly released through a 6” underdrain to the detention pond in the northwest, then through a 12” culvert to DMH 2, then through a 24” culvert to the wetlands in the northwest off site.

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Drainage Summary

As required by the City of Portsmouth's Site Plan Review Regulations for Stormwater Management Best Practices (Section 7.6.1.6), the **two, ten, twenty-five,** and **fifty** year storm events were analyzed. The post-development flow meets or exceeds the requirements set forth by the city, resulting in no net increase in stormwater runoff rates. As shown on the plan, the stormwater system will adequately handle the post-development peak rate of runoff.

The proposed site improvements will have a positive drainage impact on the neighborhood and the city. Currently the flow from the majority of the site travels to either a stormwater pond that is undersized, or to the wetlands without treatment. The stormwater control measures provided by the detention pond, pervious pavement, stormtech SC-310 units, and jellyfish catch basins will both reduce the peak flow to the wetlands, and treat more stormwater than the existing site currently does.

Rate of Runoff Comparison

Pre-Development (CFS)				
Analysis Points	**2yr**	**10yr**	**25yr**	**50yr**
Analysis Point 1	4.95	8.16	10.63	12.94
Analysis Point 2	2.38	3.76	4.83	5.83
Post-Development (CFS)				
Analysis Point 1	4.63	8.13	10.63	12.35
Analysis Point 2	0.37	0.64	0.85	1.04
Decrease in Flow (CFS)				
Analysis Point 1	0.32	0.03	0.00	0.59
Analysis Point 2	2.01	3.12	3.98	4.79

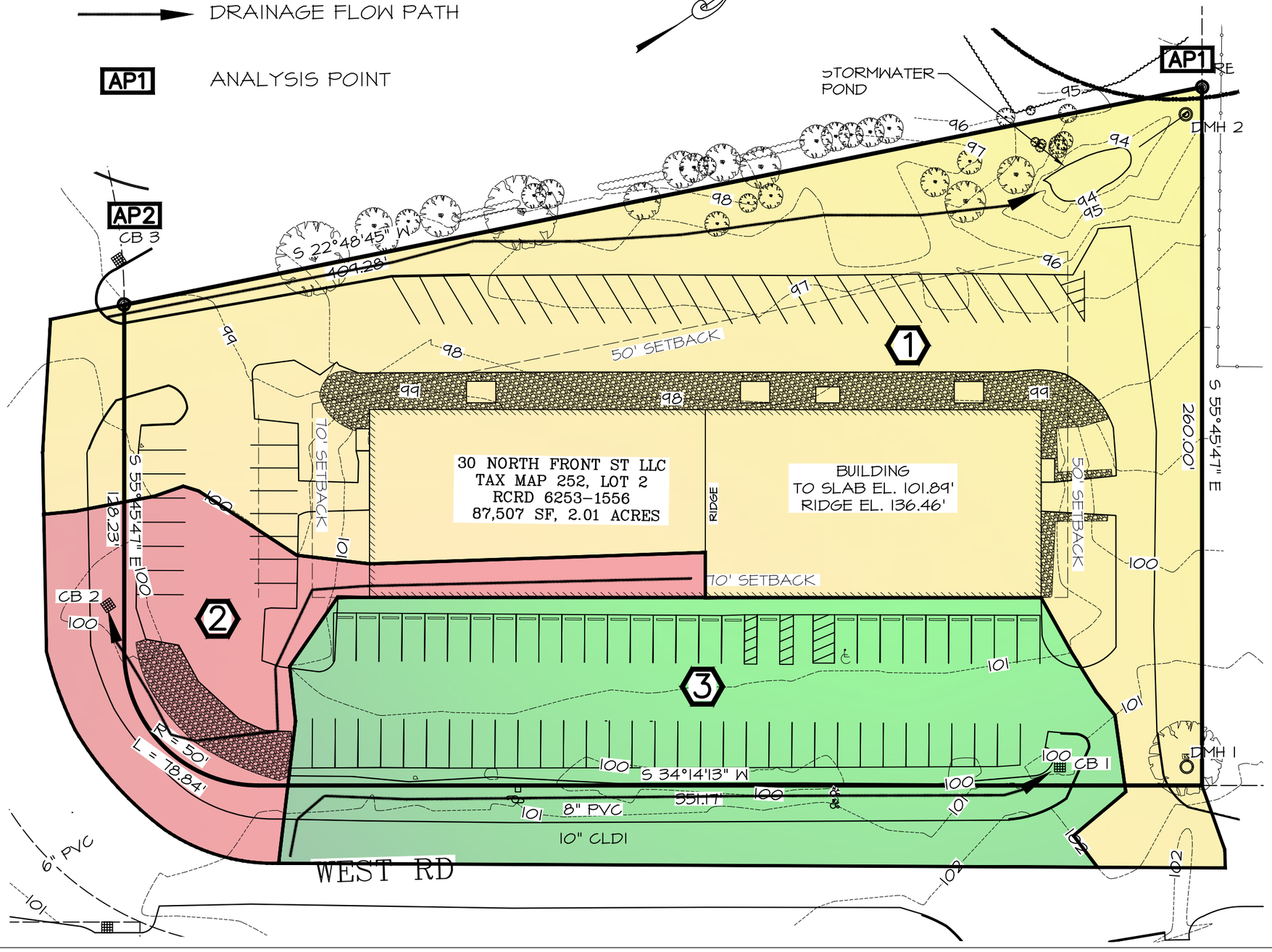
PRE-DEVELOPMENT CALCULATIONS

LEGEND

1 SUBCATCHMENT

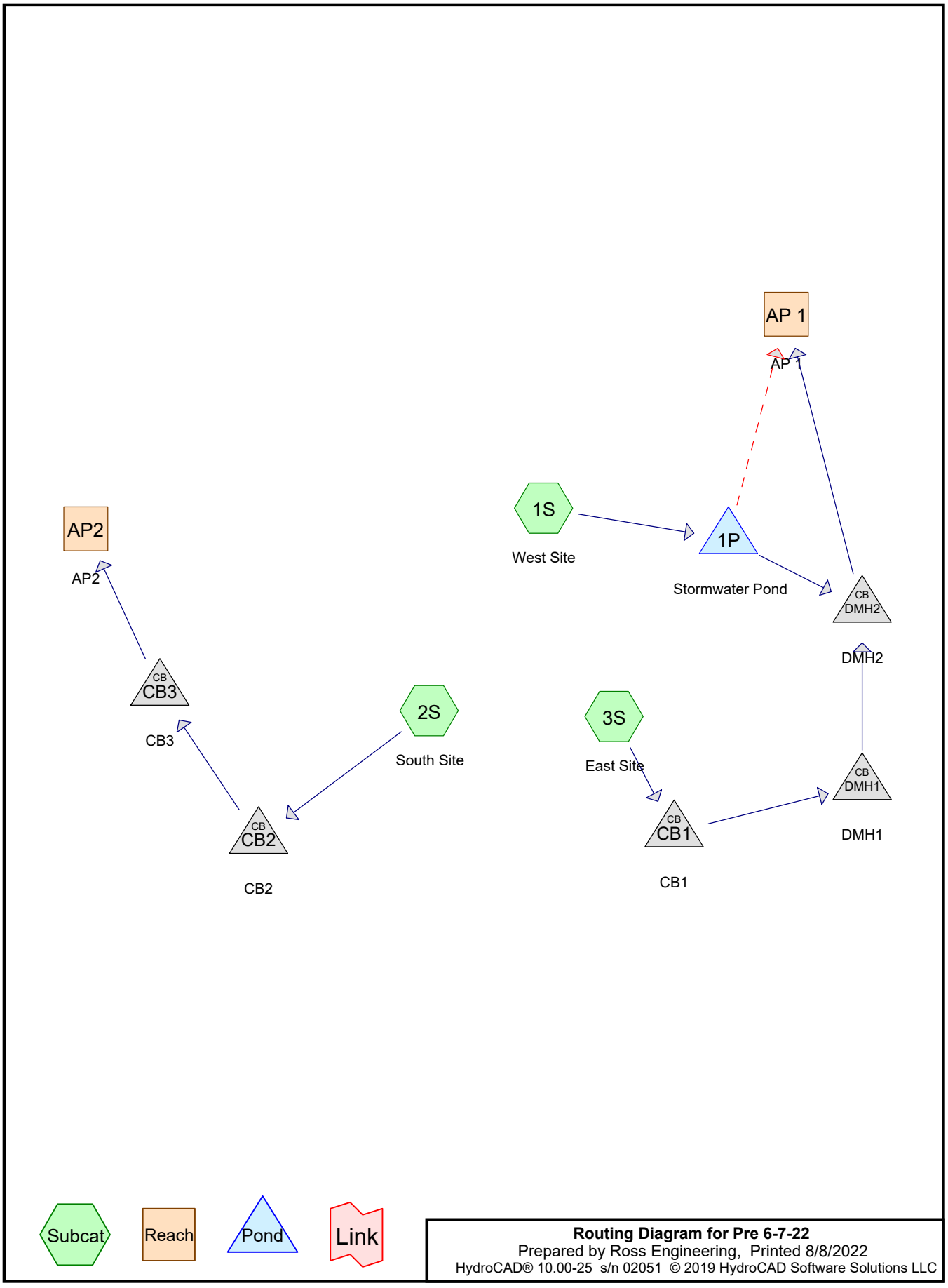
DRAINAGE FLOW PATH

AP1 ANALYSIS POINT



PRE-DEVELOPMENT

SCALE: 1" = 40'



Routing Diagram for Pre 6-7-22
Prepared by Ross Engineering, Printed 8/8/2022

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.627	74	>75% Grass cover, Good, HSG C (1S, 2S, 3S)
0.007	98	Concrete, HSG C (1S)
0.002	98	Granite Curb, HSG C (1S)
0.124	96	Gravel surface, HSG C (1S, 2S, 3S)
1.232	98	Paved roads w/curbs & sewers, HSG C (1S, 2S, 3S)
0.402	98	Roofs, HSG C (1S, 3S)
2.395	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.395	HSG C	1S, 2S, 3S
0.000	HSG D	
0.000	Other	
2.395		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.627	0.000	0.000	0.627	>75% Grass cover, Good	1S, 2S, 3S
0.000	0.000	0.007	0.000	0.000	0.007	Concrete	1S
0.000	0.000	0.002	0.000	0.000	0.002	Granite Curb	1S
0.000	0.000	0.124	0.000	0.000	0.124	Gravel surface	1S, 2S, 3S
0.000	0.000	1.232	0.000	0.000	1.232	Paved roads w/curbs & sewers	1S, 2S, 3S
0.000	0.000	0.402	0.000	0.000	0.402	Roofs	1S, 3S
0.000	**0.000**	**2.395**	**0.000**	**0.000**	**2.395**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	93.60	92.24	21.2	0.0642	0.010	4.0	0.0	0.0
2	CB1	95.28	93.37	47.2	0.0405	0.012	12.0	0.0	0.0
3	CB2	95.26	94.06	129.0	0.0093	0.012	12.0	0.0	0.0
4	CB3	94.06	94.06	1.0	0.0000	0.012	12.0	0.0	0.0
5	DMH1	92.79	90.50	47.2	0.0485	0.012	24.0	0.0	0.0
6	DMH2	90.47	90.06	105.9	0.0039	0.012	24.0	0.0	0.0

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: West Site Runoff Area=62,055 sf 61.01% Impervious Runoff Depth>2.64"
Flow Length=350' Tc=7.6 min CN=90 Runoff=4.11 cfs 0.314 af

Subcatchment2S: South Site Runoff Area=29,613 sf 83.41% Impervious Runoff Depth>3.04"
Tc=5.0 min CN=94 Runoff=2.38 cfs 0.172 af

Subcatchment3S: East Site Runoff Area=12,646 sf 71.50% Impervious Runoff Depth>2.93"
Flow Length=288' Tc=8.5 min CN=93 Runoff=0.88 cfs 0.071 af

Reach AP 1: AP 1 Inflow=4.95 cfs 0.383 af
Outflow=4.95 cfs 0.383 af

Reach AP2: AP2 Inflow=2.38 cfs 0.172 af
Outflow=2.38 cfs 0.172 af

Pond 1P: Stormwater Pond Peak Elev=94.17' Storage=365 cf Inflow=4.11 cfs 0.314 af
Primary=0.27 cfs 0.148 af Secondary=3.80 cfs 0.164 af Outflow=4.07 cfs 0.312 af

Pond CB1: CB1 Peak Elev=95.76' Inflow=0.88 cfs 0.071 af
12.0" Round Culvert n=0.012 L=47.2' S=0.0405 '/' Outflow=0.88 cfs 0.071 af

Pond CB2: CB2 Peak Elev=96.21' Inflow=2.38 cfs 0.172 af
12.0" Round Culvert n=0.012 L=129.0' S=0.0093 '/' Outflow=2.38 cfs 0.172 af

Pond CB3: CB3 Peak Elev=95.17' Inflow=2.38 cfs 0.172 af
12.0" Round Culvert n=0.012 L=1.0' S=0.0000 '/' Outflow=2.38 cfs 0.172 af

Pond DMH1: DMH1 Peak Elev=93.17' Inflow=0.88 cfs 0.071 af
24.0" Round Culvert n=0.012 L=47.2' S=0.0485 '/' Outflow=0.88 cfs 0.071 af

Pond DMH2: DMH2 Peak Elev=90.98' Inflow=1.15 cfs 0.219 af
24.0" Round Culvert n=0.012 L=105.9' S=0.0039 '/' Outflow=1.15 cfs 0.219 af

Total Runoff Area = 2.395 ac Runoff Volume = 0.557 af Average Runoff Depth = 2.79"
31.36% Pervious = 0.751 ac 68.64% Impervious = 1.644 ac

Summary for Subcatchment 1S: West Site

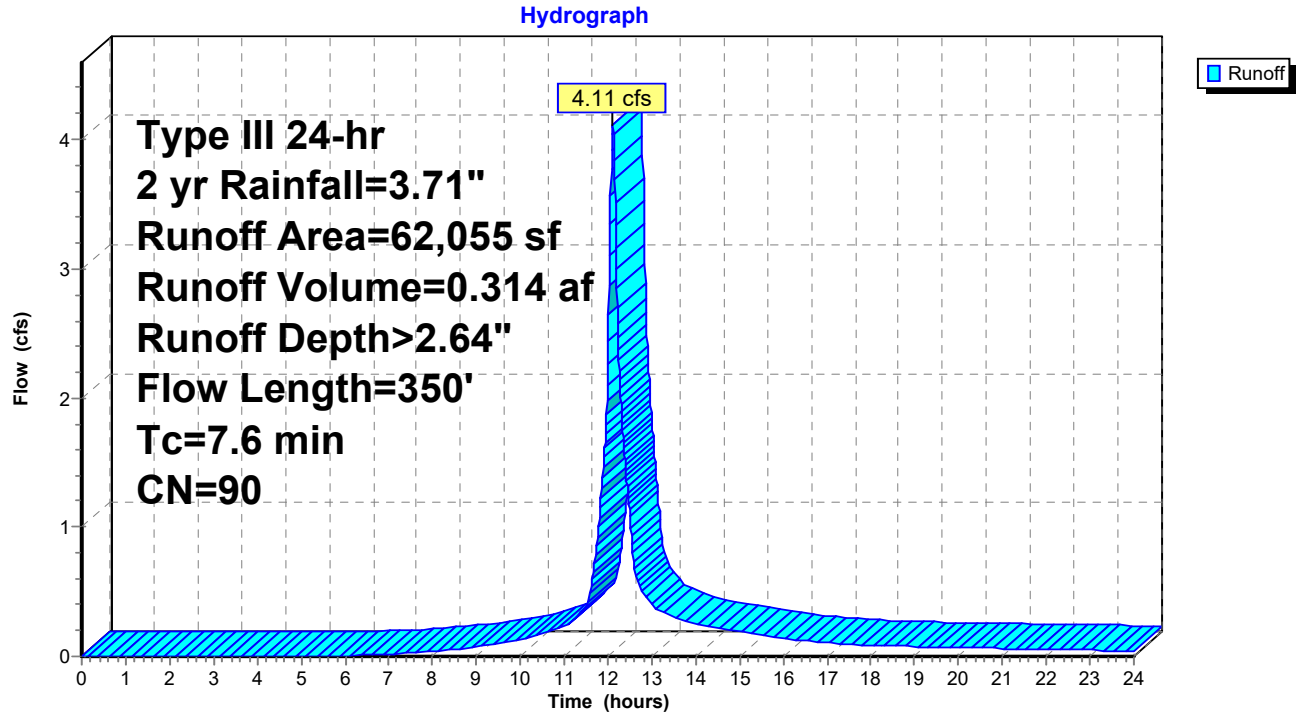
Runoff = 4.11 cfs @ 12.11 hrs, Volume= 0.314 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

	Area (sf)	CN	Description
	19,963	74	>75% Grass cover, Good, HSG C
	15,667	98	Roofs, HSG C
	4,231	96	Gravel surface, HSG C
	21,772	98	Paved roads w/curbs & sewers, HSG C
*	315	98	Concrete, HSG C
*	107	98	Granite Curb, HSG C
	62,055	90	Weighted Average
	24,194		38.99% Pervious Area
	37,861		61.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0232	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
2.7	300	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.6	350	Total			

Subcatchment 1S: West Site



Summary for Subcatchment 2S: South Site

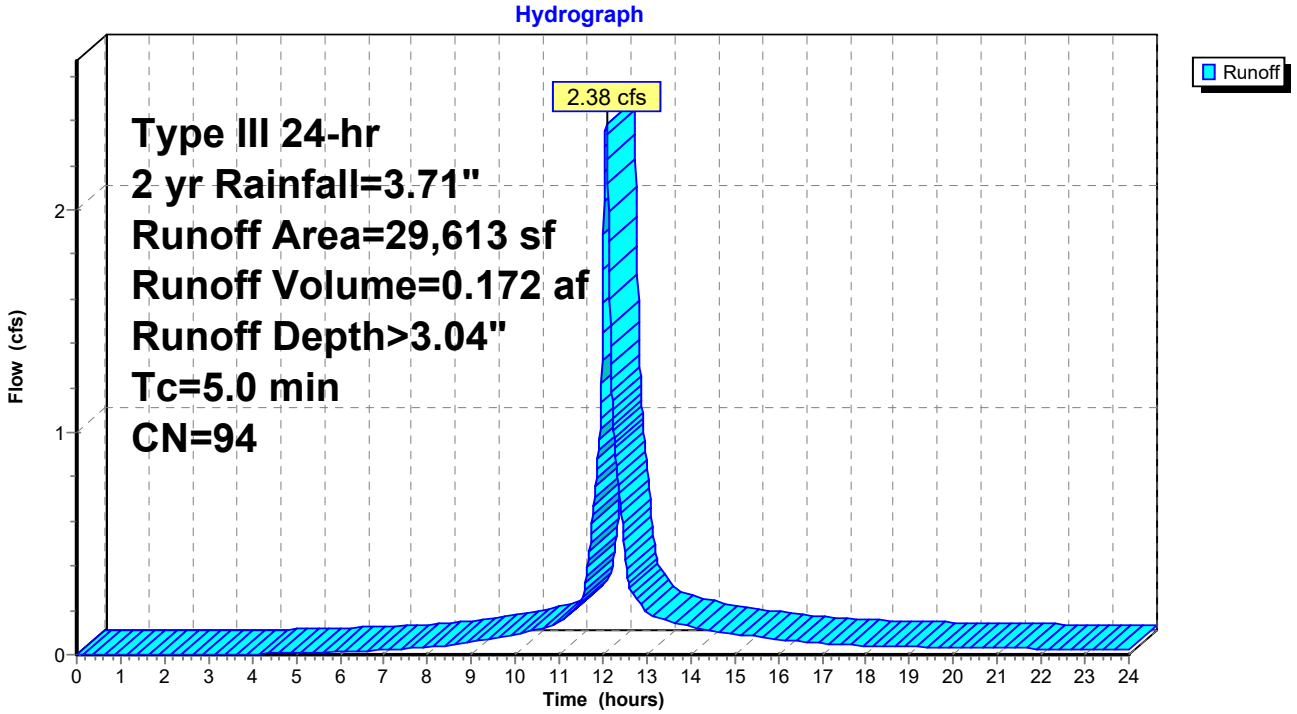
Runoff = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

Area (sf)	CN	Description
4,910	74	>75% Grass cover, Good, HSG C
3	96	Gravel surface, HSG C
24,700	98	Paved roads w/curbs & sewers, HSG C
29,613	94	Weighted Average
4,913		16.59% Pervious Area
24,700		83.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: South Site



Summary for Subcatchment 3S: East Site

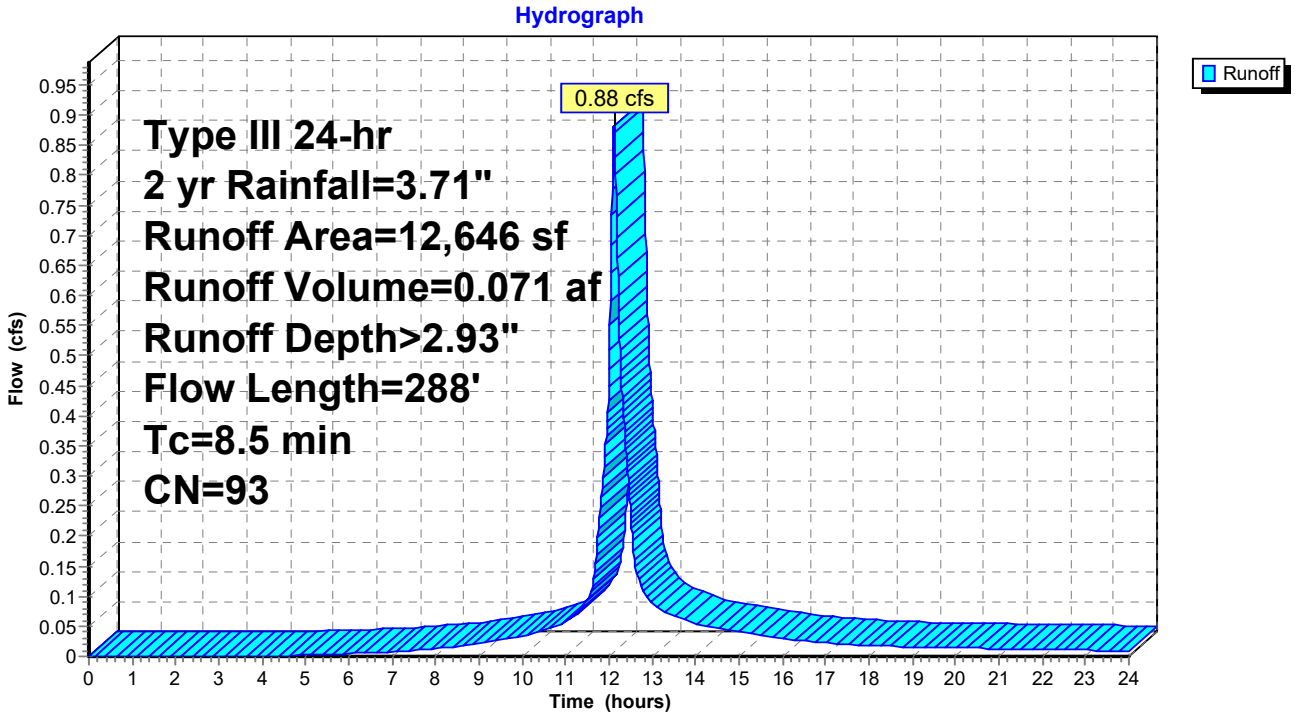
Runoff = 0.88 cfs @ 12.12 hrs, Volume= 0.071 af, Depth> 2.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

Area (sf)	CN	Description
2,426	74	>75% Grass cover, Good, HSG C
1,845	98	Roofs, HSG C
1,178	96	Gravel surface, HSG C
7,197	98	Paved roads w/curbs & sewers, HSG C
12,646	93	Weighted Average
3,604		28.50% Pervious Area
9,042		71.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0208	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.70"
4.6	37	0.0154	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
3.7	237	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.5	288	Total			

Subcatchment 3S: East Site



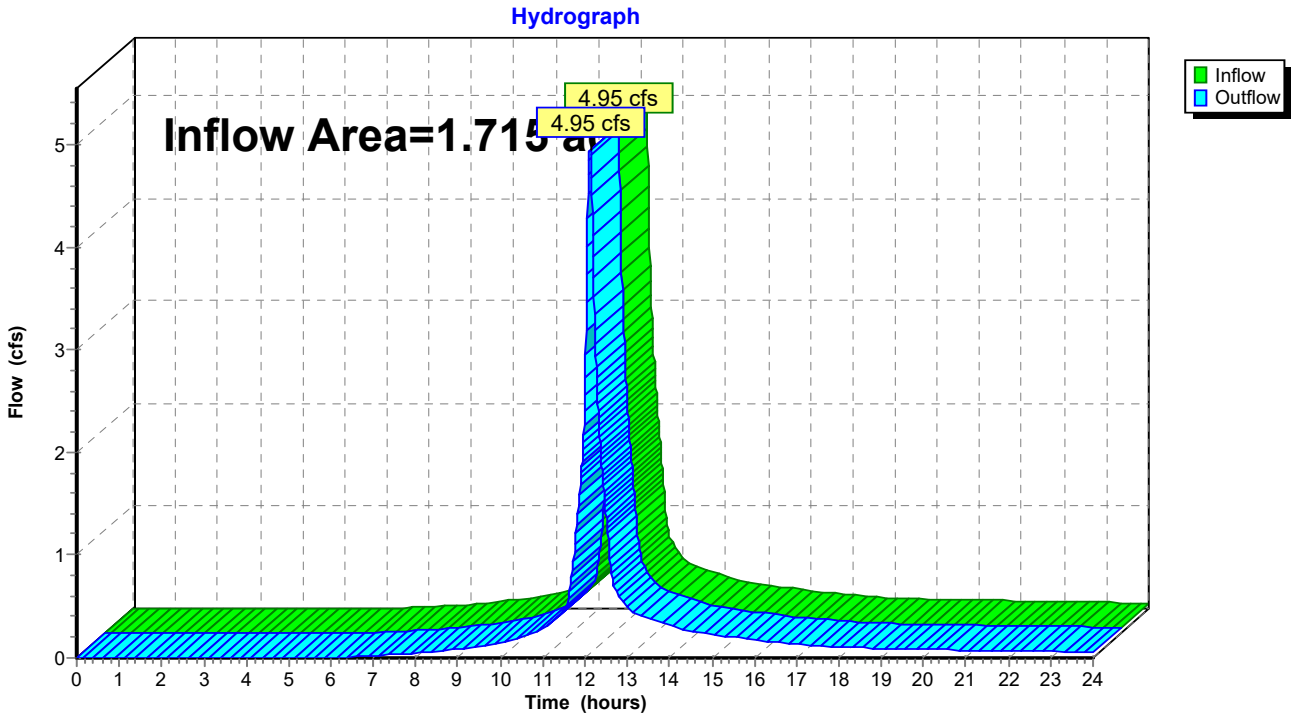
Summary for Reach AP 1: AP 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.715 ac, 62.79% Impervious, Inflow Depth > 2.68" for 2 yr event
Inflow = 4.95 cfs @ 12.12 hrs, Volume= 0.383 af
Outflow = 4.95 cfs @ 12.12 hrs, Volume= 0.383 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Reach AP 1: AP 1



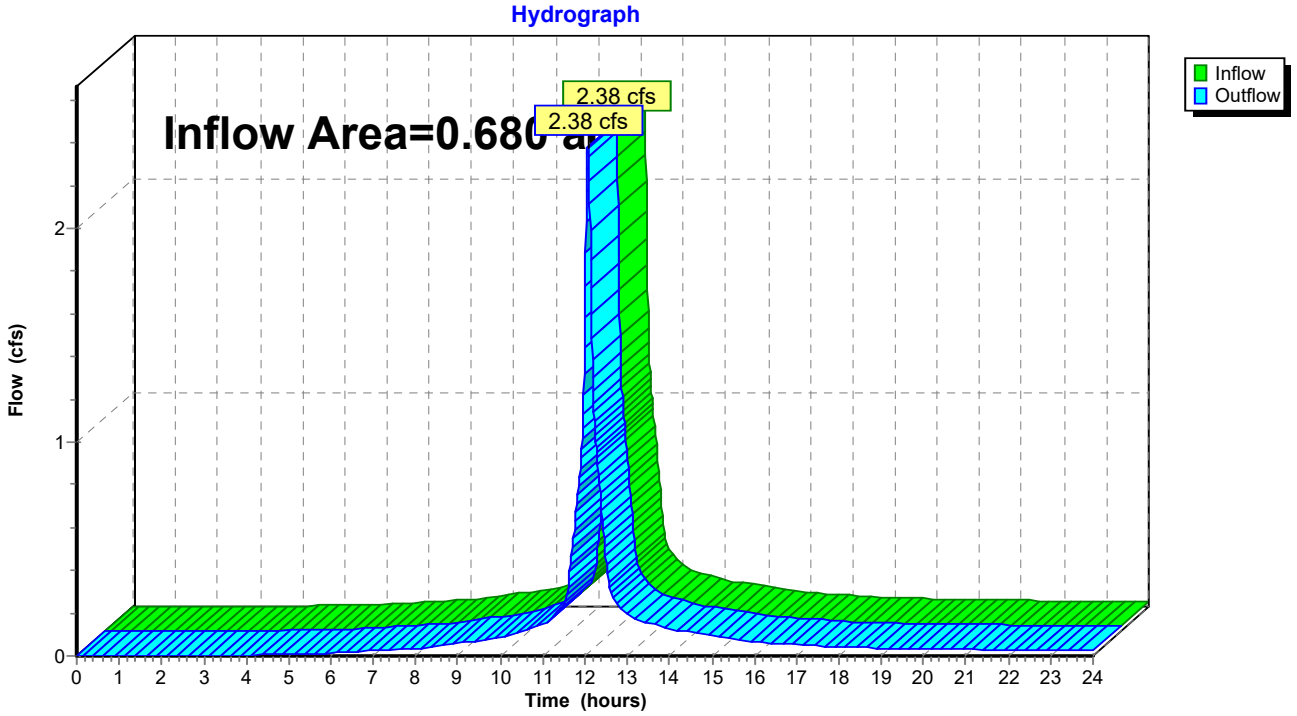
Summary for Reach AP2: AP2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 3.04" for 2 yr event
Inflow = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af
Outflow = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Reach AP2: AP2



Summary for Pond 1P: Stormwater Pond

Inflow Area = 1.425 ac, 61.01% Impervious, Inflow Depth > 2.64" for 2 yr event
Inflow = 4.11 cfs @ 12.11 hrs, Volume= 0.314 af
Outflow = 4.07 cfs @ 12.12 hrs, Volume= 0.312 af, Atten= 1%, Lag= 0.8 min
Primary = 0.27 cfs @ 12.12 hrs, Volume= 0.148 af
Secondary = 3.80 cfs @ 12.12 hrs, Volume= 0.164 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 94.17' @ 12.12 hrs Surf.Area= 935 sf Storage= 365 cf

Plug-Flow detention time=8.7 min calculated for 0.312 af (100% of inflow)
Center-of-Mass det. time=5.9 min (807.8 - 802.0)

Volume	Invert	Avail.Storage	Storage Description
#1	93.60'	1,541 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

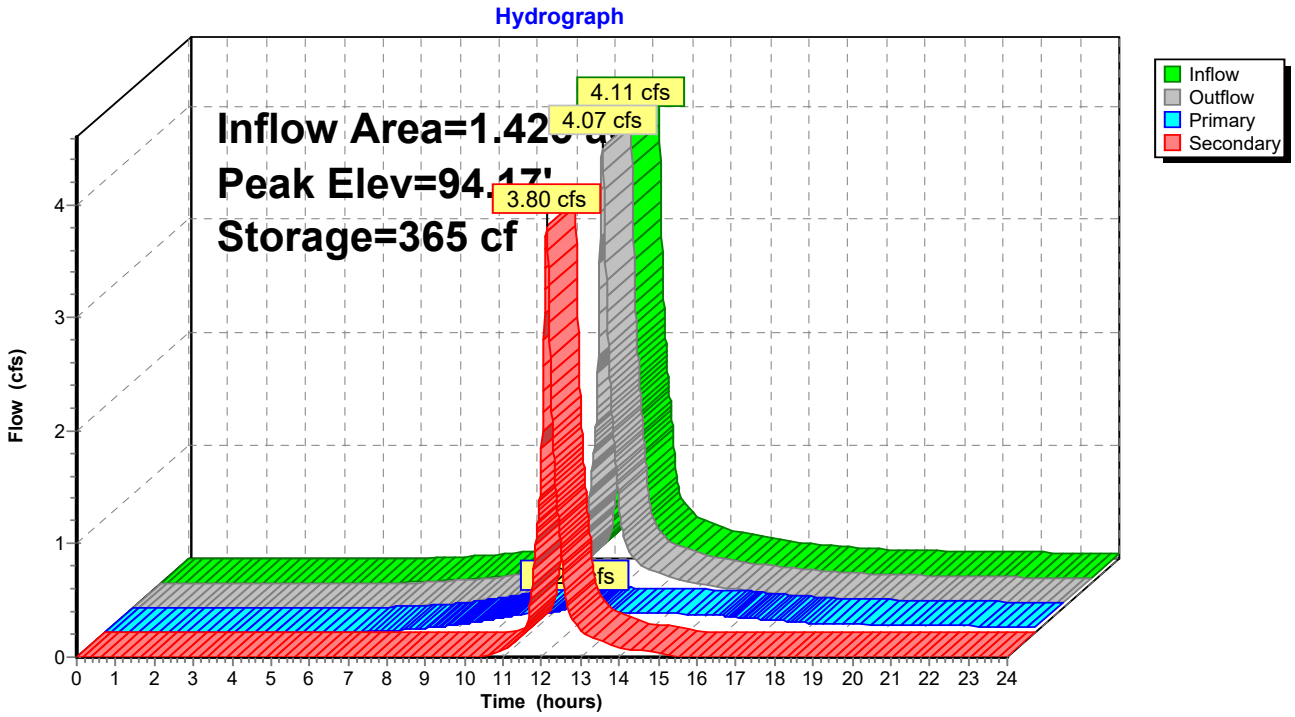
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
93.60	374	0	0
94.00	737	222	222
95.00	1,900	1,319	1,541

Device	Routing	Invert	Outlet Devices
#1	Primary	93.60'	**4.0" Round Culvert** L= 21.2' Ke= 0.500 Inlet / Outlet Invert= 93.60' / 92.24' S= 0.0642 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	93.90'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.27 cfs @ 12.12 hrs HW=94.17' TW=90.98' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.27 cfs @ 3.06 fps)

Secondary OutFlow Max=3.80 cfs @ 12.12 hrs HW=94.17' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 3.80 cfs @ 1.40 fps)

Pond 1P: Stormwater Pond



Summary for Pond CB1: CB1

[57] Hint: Peaked at 95.76' (Flood elevation advised)

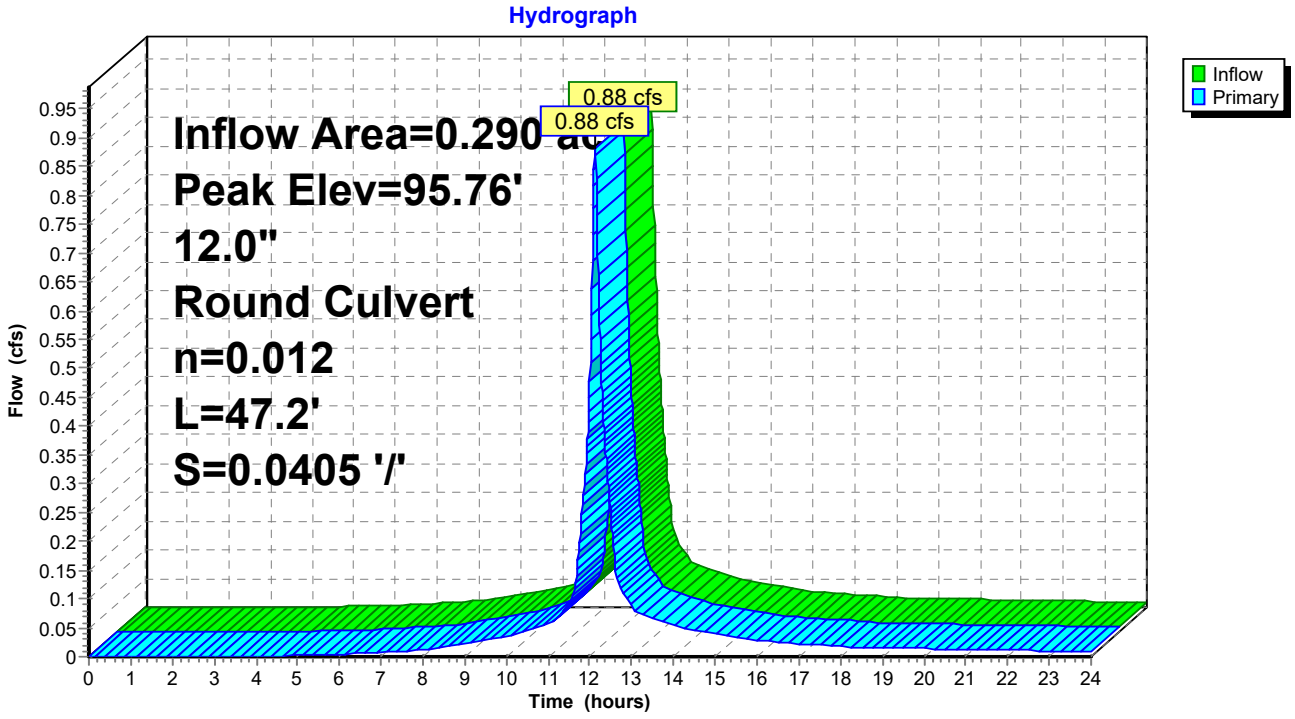
Inflow Area = 0.290 ac, 71.50% Impervious, Inflow Depth > 2.93" for 2 yr event
Inflow = 0.88 cfs @ 12.12 hrs, Volume= 0.071 af
Outflow = 0.88 cfs @ 12.12 hrs, Volume= 0.071 af, Atten= 0%, Lag= 0.0 min
Primary = 0.88 cfs @ 12.12 hrs, Volume= 0.071 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 95.76' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.28'	**12.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 95.28' / 93.37' S= 0.0405 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.88 cfs @ 12.12 hrs HW=95.76' TW=93.17' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 0.88 cfs @ 2.36 fps)

Pond CB1: CB1



Summary for Pond CB2: CB2

[57] Hint: Peaked at 96.21' (Flood elevation advised)

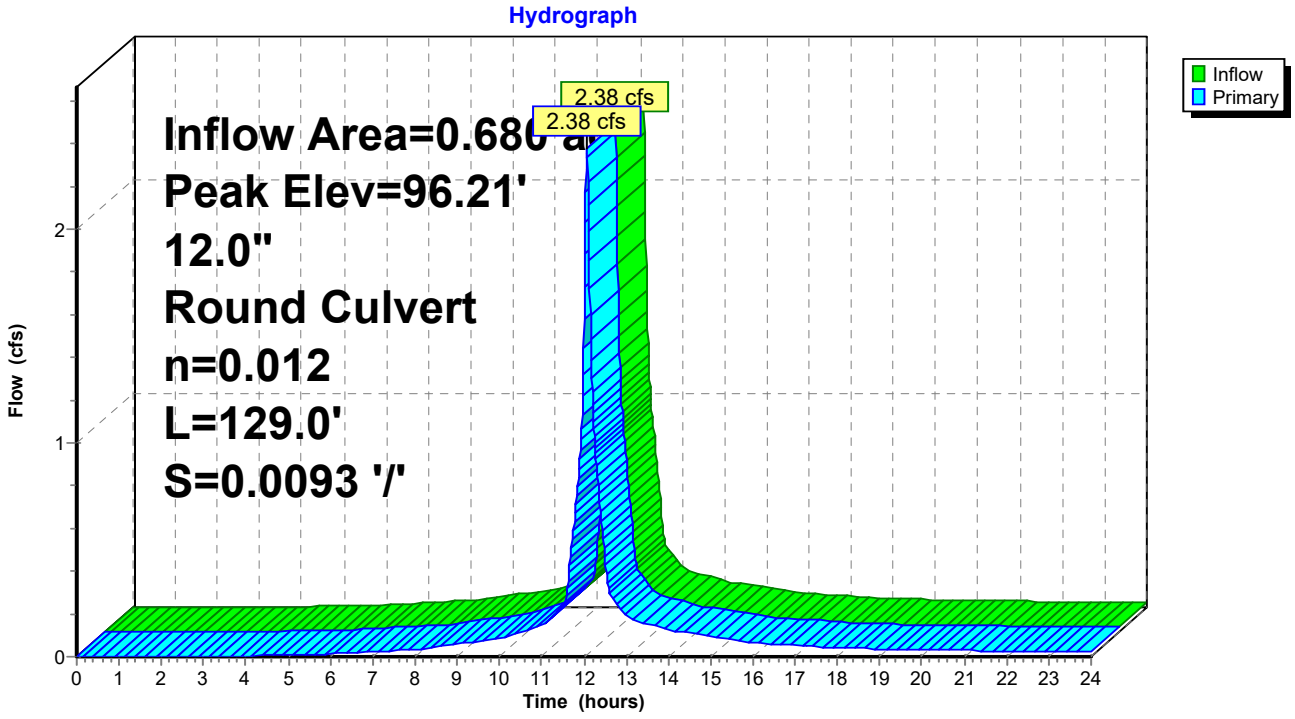
Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 3.04" for 2 yr event
Inflow = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af
Outflow = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af, Atten= 0%, Lag= 0.0 min
Primary = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 96.21'@ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.26'	**12.0" Round Culvert** L= 129.0' Ke= 0.500 Inlet / Outlet Invert= 95.26' / 94.06' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.38 cfs @ 12.07 hrs HW=96.21' TW=95.16' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.38 cfs @ 3.98 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

[57] Hint: Peaked at 95.17' (Flood elevation advised)

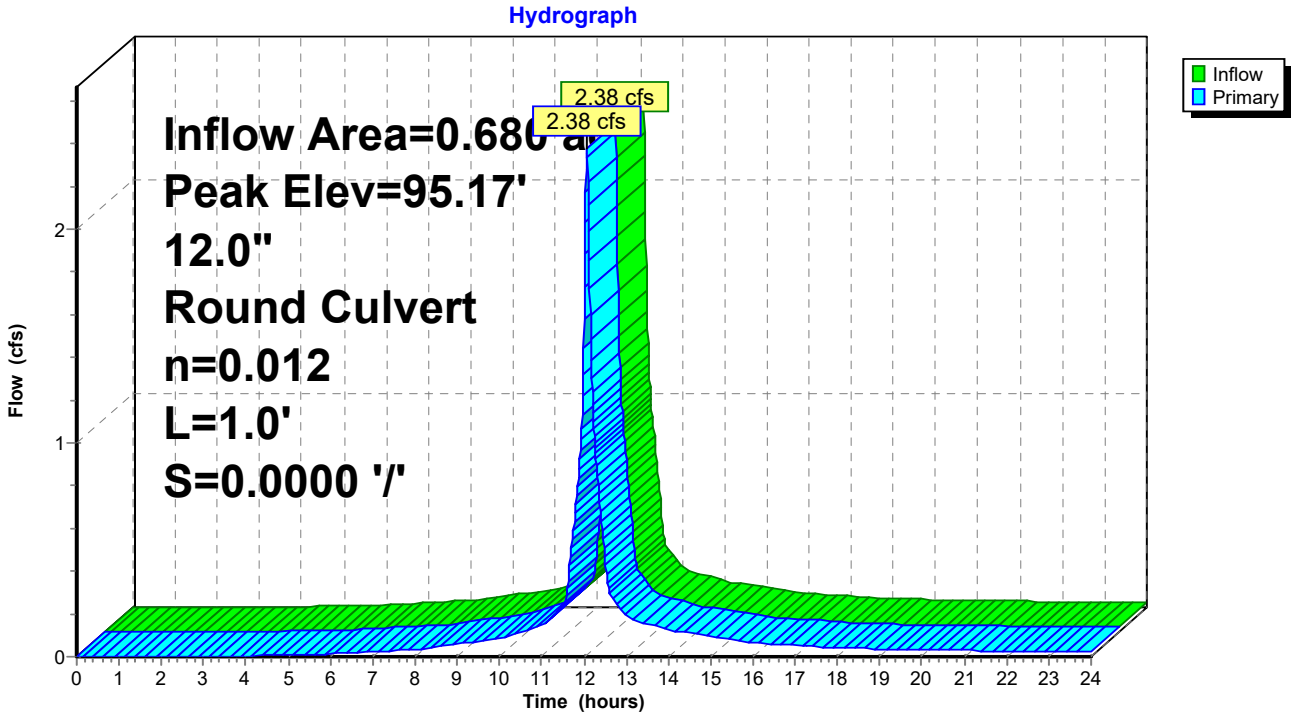
Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 3.04" for 2 yr event
Inflow = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af
Outflow = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af, Atten= 0%, Lag= 0.0 min
Primary = 2.38 cfs @ 12.07 hrs, Volume= 0.172 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 95.17' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.06'	**12.0" Round Culvert** L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 94.06' / 94.06' S= 0.0000 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.38 cfs @ 12.07 hrs HW=95.16' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 2.38 cfs @ 3.42 fps)

Pond CB3: CB3



Summary for Pond DMH1: DMH1

[57] Hint: Peaked at 93.17' (Flood elevation advised)

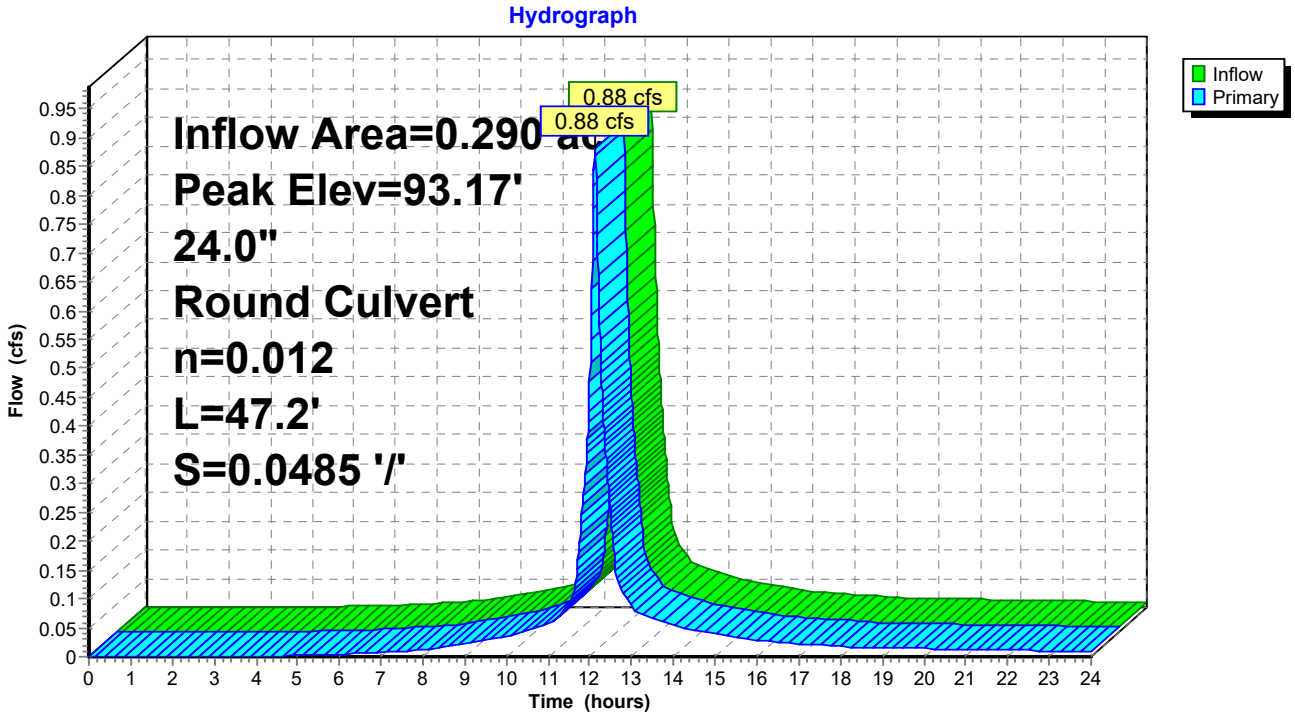
Inflow Area = 0.290 ac, 71.50% Impervious, Inflow Depth > 2.93" for 2 yr event
Inflow = 0.88 cfs @ 12.12 hrs, Volume= 0.071 af
Outflow = 0.88 cfs @ 12.12 hrs, Volume= 0.071 af, Atten= 0%, Lag= 0.0 min
Primary = 0.88 cfs @ 12.12 hrs, Volume= 0.071 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 93.17'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.79'	**24.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 92.79' / 90.50' S= 0.0485 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=0.88 cfs @ 12.12 hrs HW=93.17' TW=90.98' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.88 cfs @ 2.10 fps)

Pond DMH1: DMH1



Summary for Pond DMH2: DMH2

[57] Hint: Peaked at 90.98' (Flood elevation advised)

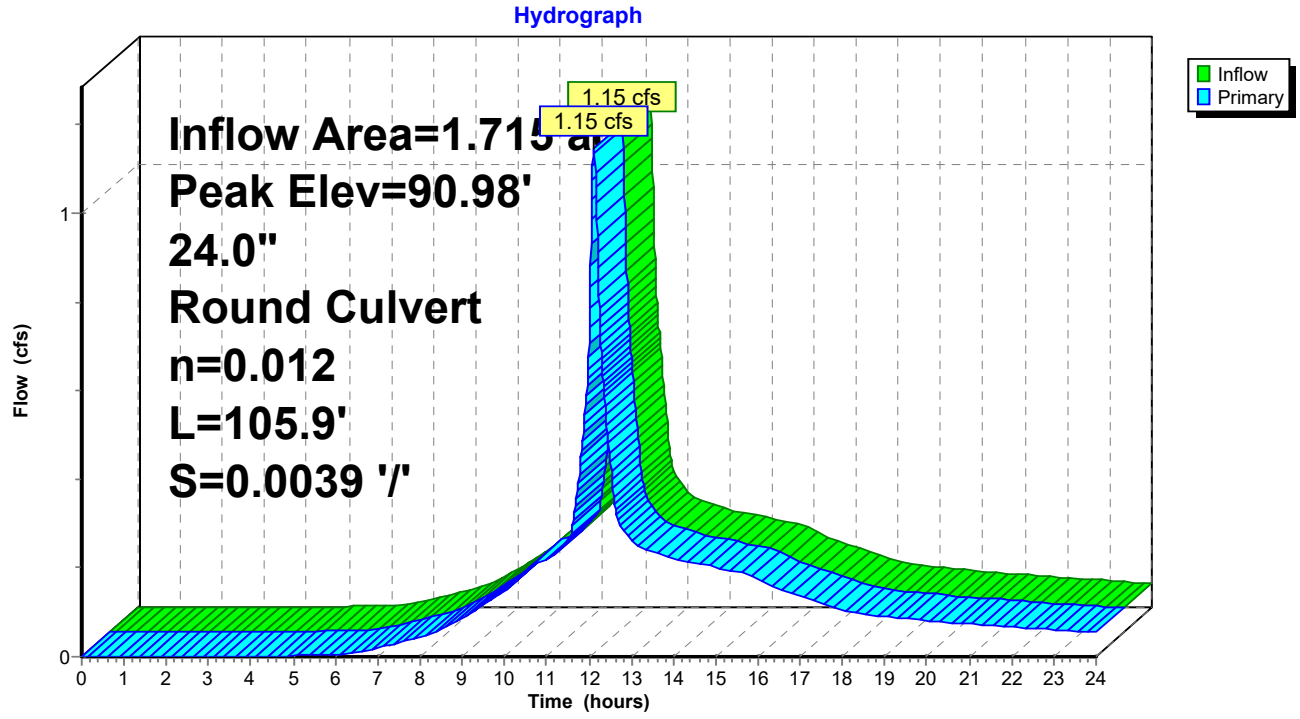
Inflow Area = 1.715 ac, 62.79% Impervious, Inflow Depth > 1.53" for 2 yr event
Inflow = 1.15 cfs @ 12.12 hrs, Volume= 0.219 af
Outflow = 1.15 cfs @ 12.12 hrs, Volume= 0.219 af, Atten= 0%, Lag= 0.0 min
Primary = 1.15 cfs @ 12.12 hrs, Volume= 0.219 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 90.98' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	90.47'	**24.0" Round Culvert** L= 105.9' Ke= 0.500 Inlet / Outlet Invert= 90.47' / 90.06' S= 0.0039 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=1.15 cfs @ 12.12 hrs HW=90.98' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.15 cfs @ 2.73 fps)

Pond DMH2: DMH2



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: West Site Runoff Area=62,055 sf 61.01% Impervious Runoff Depth>4.49"
Flow Length=350' Tc=7.6 min CN=90 Runoff=6.81 cfs 0.533 af

Subcatchment2S: South Site Runoff Area=29,613 sf 83.41% Impervious Runoff Depth>4.94"
Tc=5.0 min CN=94 Runoff=3.76 cfs 0.280 af

Subcatchment3S: East Site Runoff Area=12,646 sf 71.50% Impervious Runoff Depth>4.82"
Flow Length=288' Tc=8.5 min CN=93 Runoff=1.41 cfs 0.117 af

Reach AP 1: AP 1 Inflow=8.16 cfs 0.648 af
Outflow=8.16 cfs 0.648 af

Reach AP2: AP2 Inflow=3.76 cfs 0.280 af
Outflow=3.76 cfs 0.280 af

Pond 1P: Stormwater Pond Peak Elev=94.28' Storage=478 cf Inflow=6.81 cfs 0.533 af
Primary=0.30 cfs 0.201 af Secondary=6.45 cfs 0.331 af Outflow=6.75 cfs 0.531 af

Pond CB1: CB1 Peak Elev=95.91' Inflow=1.41 cfs 0.117 af
12.0" Round Culvert n=0.012 L=47.2' S=0.0405 '/' Outflow=1.41 cfs 0.117 af

Pond CB2: CB2 Peak Elev=97.37' Inflow=3.76 cfs 0.280 af
12.0" Round Culvert n=0.012 L=129.0' S=0.0093 '/' Outflow=3.76 cfs 0.280 af

Pond CB3: CB3 Peak Elev=95.60' Inflow=3.76 cfs 0.280 af
12.0" Round Culvert n=0.012 L=1.0' S=0.0000 '/' Outflow=3.76 cfs 0.280 af

Pond DMH1: DMH1 Peak Elev=93.28' Inflow=1.41 cfs 0.117 af
24.0" Round Culvert n=0.012 L=47.2' S=0.0485 '/' Outflow=1.41 cfs 0.117 af

Pond DMH2: DMH2 Peak Elev=91.10' Inflow=1.71 cfs 0.317 af
24.0" Round Culvert n=0.012 L=105.9' S=0.0039 '/' Outflow=1.71 cfs 0.317 af

Total Runoff Area = 2.395 ac Runoff Volume = 0.929 af Average Runoff Depth = 4.66"
31.36% Pervious = 0.751 ac 68.64% Impervious = 1.644 ac

Summary for Subcatchment 1S: West Site

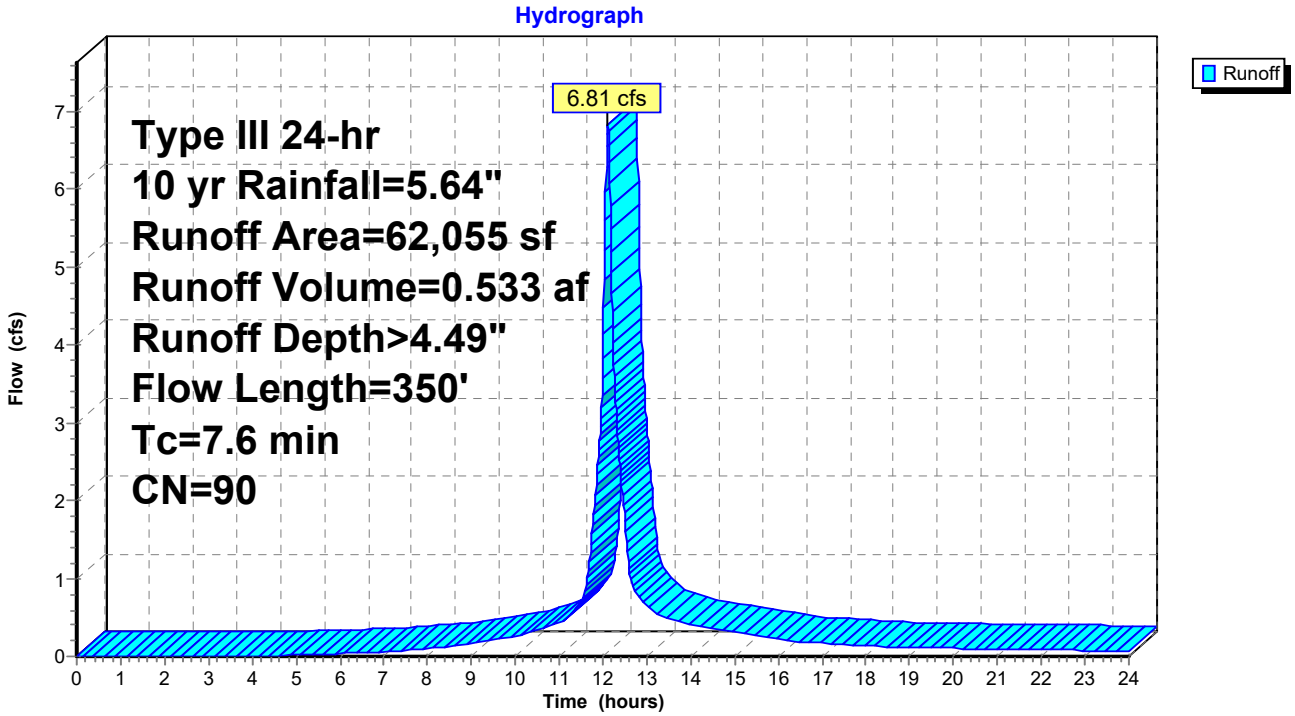
Runoff = 6.81 cfs @ 12.10 hrs, Volume= 0.533 af, Depth> 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

	Area (sf)	CN	Description
	19,963	74	>75% Grass cover, Good, HSG C
	15,667	98	Roofs, HSG C
	4,231	96	Gravel surface, HSG C
	21,772	98	Paved roads w/curbs & sewers, HSG C
*	315	98	Concrete, HSG C
*	107	98	Granite Curb, HSG C
	62,055	90	Weighted Average
	24,194		38.99% Pervious Area
	37,861		61.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0232	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
2.7	300	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.6	350	Total			

Subcatchment 1S: West Site



Summary for Subcatchment 2S: South Site

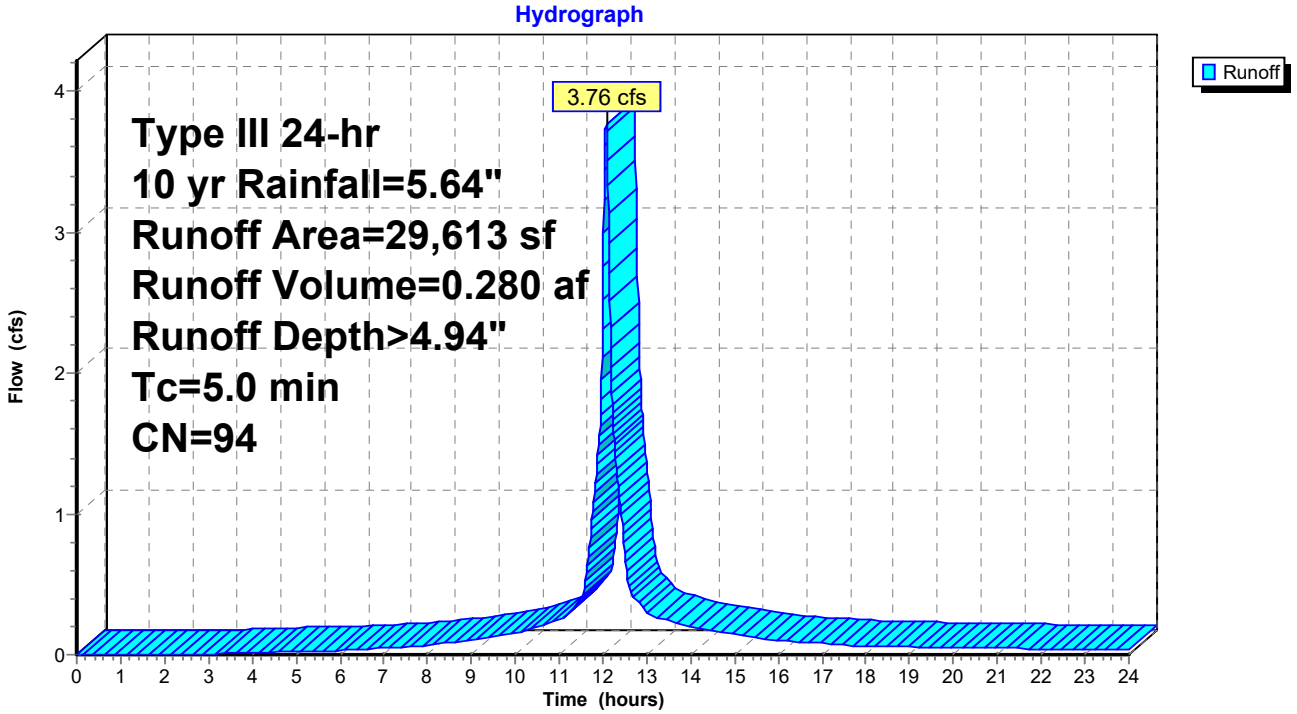
Runoff = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af, Depth> 4.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

Area (sf)	CN	Description
4,910	74	>75% Grass cover, Good, HSG C
3	96	Gravel surface, HSG C
24,700	98	Paved roads w/curbs & sewers, HSG C
29,613	94	Weighted Average
4,913		16.59% Pervious Area
24,700		83.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: South Site



Summary for Subcatchment 3S: East Site

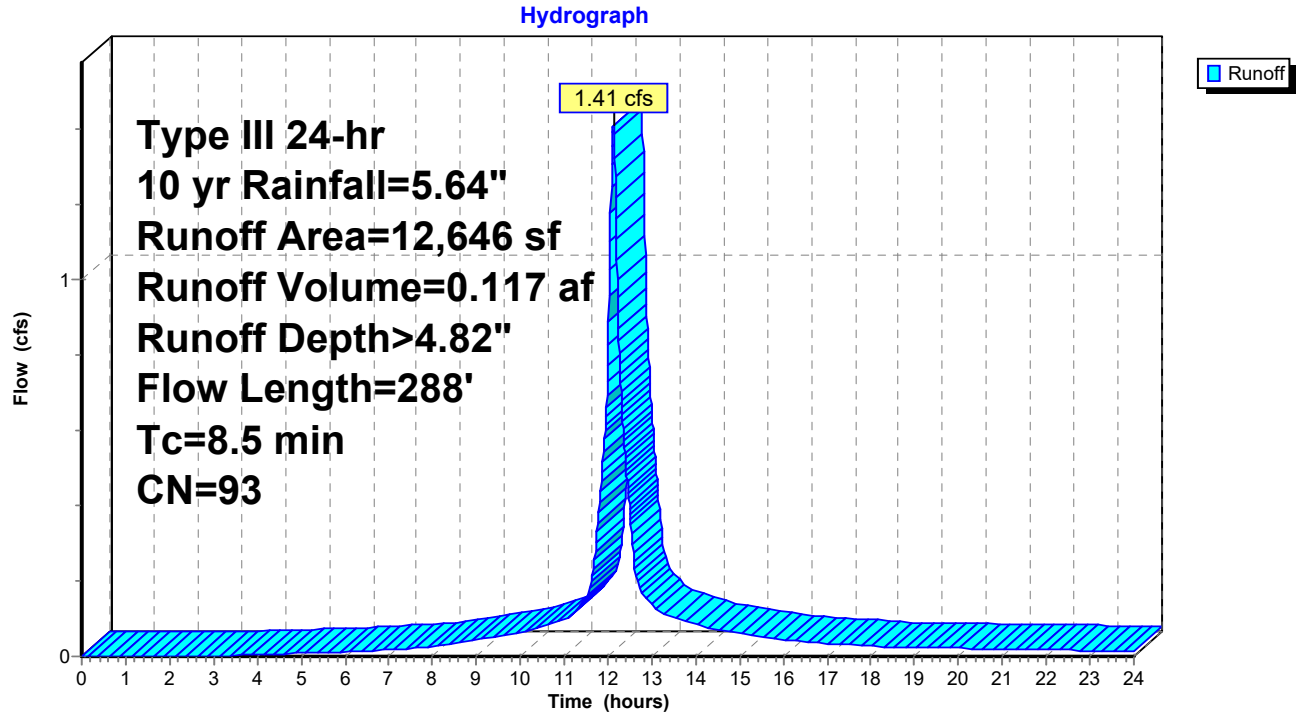
Runoff = 1.41 cfs @ 12.12 hrs, Volume= 0.117 af, Depth> 4.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

Area (sf)	CN	Description
2,426	74	>75% Grass cover, Good, HSG C
1,845	98	Roofs, HSG C
1,178	96	Gravel surface, HSG C
7,197	98	Paved roads w/curbs & sewers, HSG C
12,646	93	Weighted Average
3,604		28.50% Pervious Area
9,042		71.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0208	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.70"
4.6	37	0.0154	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
3.7	237	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.5	288	Total			

Subcatchment 3S: East Site



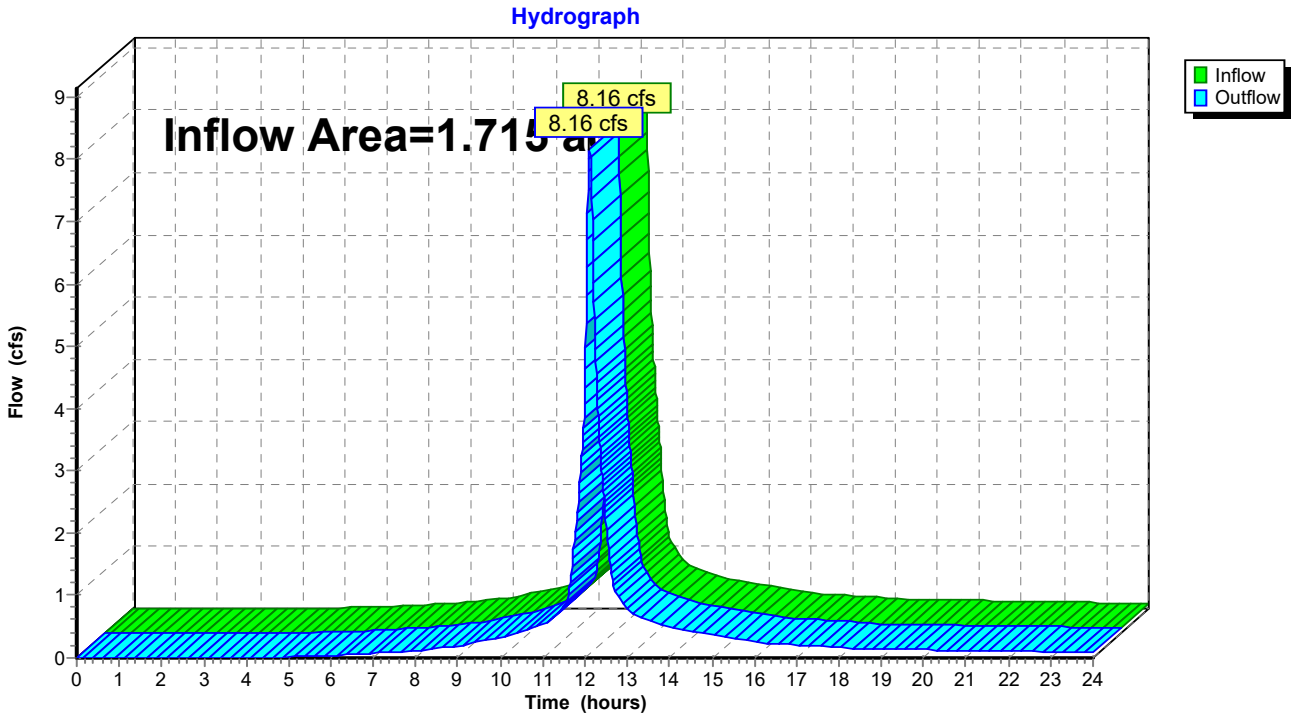
Summary for Reach AP 1: AP 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.715 ac, 62.79% Impervious, Inflow Depth > 4.53" for 10 yr event
Inflow = 8.16 cfs @ 12.12 hrs, Volume= 0.648 af
Outflow = 8.16 cfs @ 12.12 hrs, Volume= 0.648 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Reach AP 1: AP 1



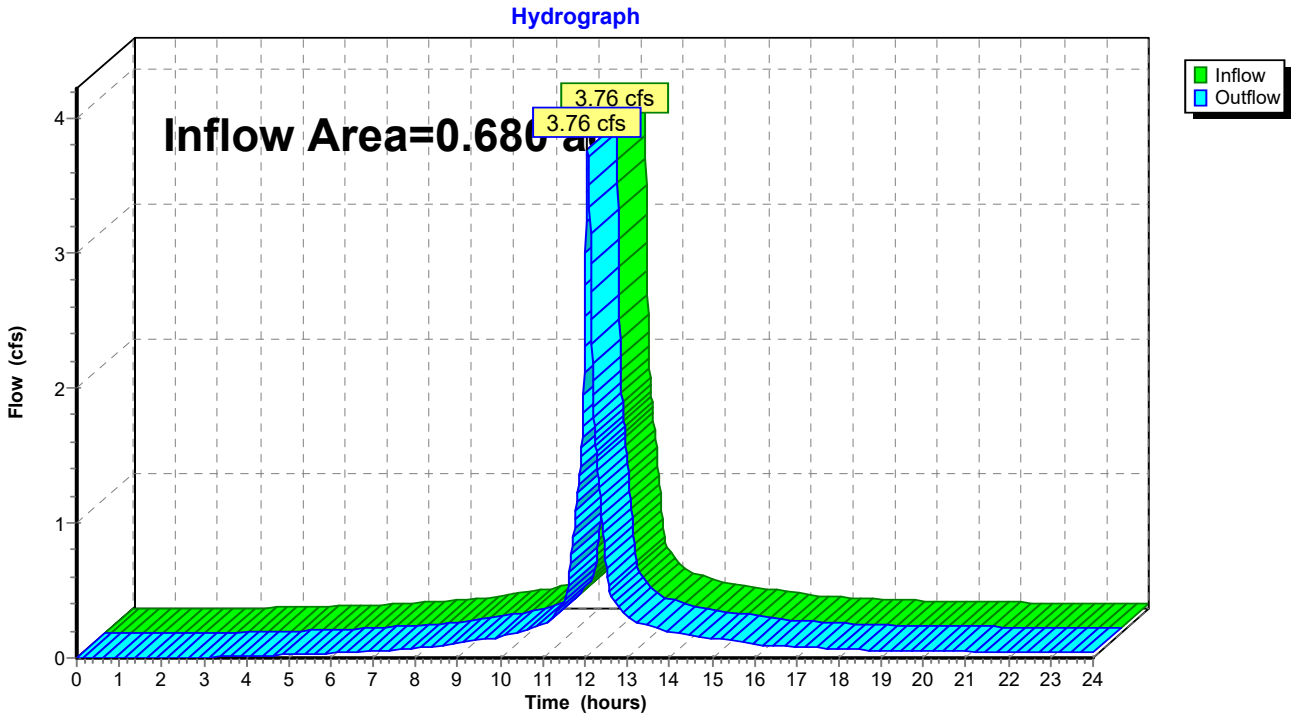
Summary for Reach AP2: AP2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 4.94" for 10 yr event
Inflow = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af
Outflow = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Reach AP2: AP2



Summary for Pond 1P: Stormwater Pond

Inflow Area = 1.425 ac, 61.01% Impervious, Inflow Depth > 4.49" for 10 yr event
Inflow = 6.81 cfs @ 12.10 hrs, Volume= 0.533 af
Outflow = 6.75 cfs @ 12.12 hrs, Volume= 0.531 af, Atten= 1%, Lag= 0.7 min
Primary = 0.30 cfs @ 12.12 hrs, Volume= 0.201 af
Secondary = 6.45 cfs @ 12.12 hrs, Volume= 0.331 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 94.28' @ 12.12 hrs Surf.Area= 1,066 sf Storage= 478 cf

Plug-Flow detention time=6.7 min calculated for 0.531 af (100% of inflow)
Center-of-Mass det. time=4.5 min (791.9 - 787.4)

Volume	Invert	Avail.Storage	Storage Description
#1	93.60'	1,541 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

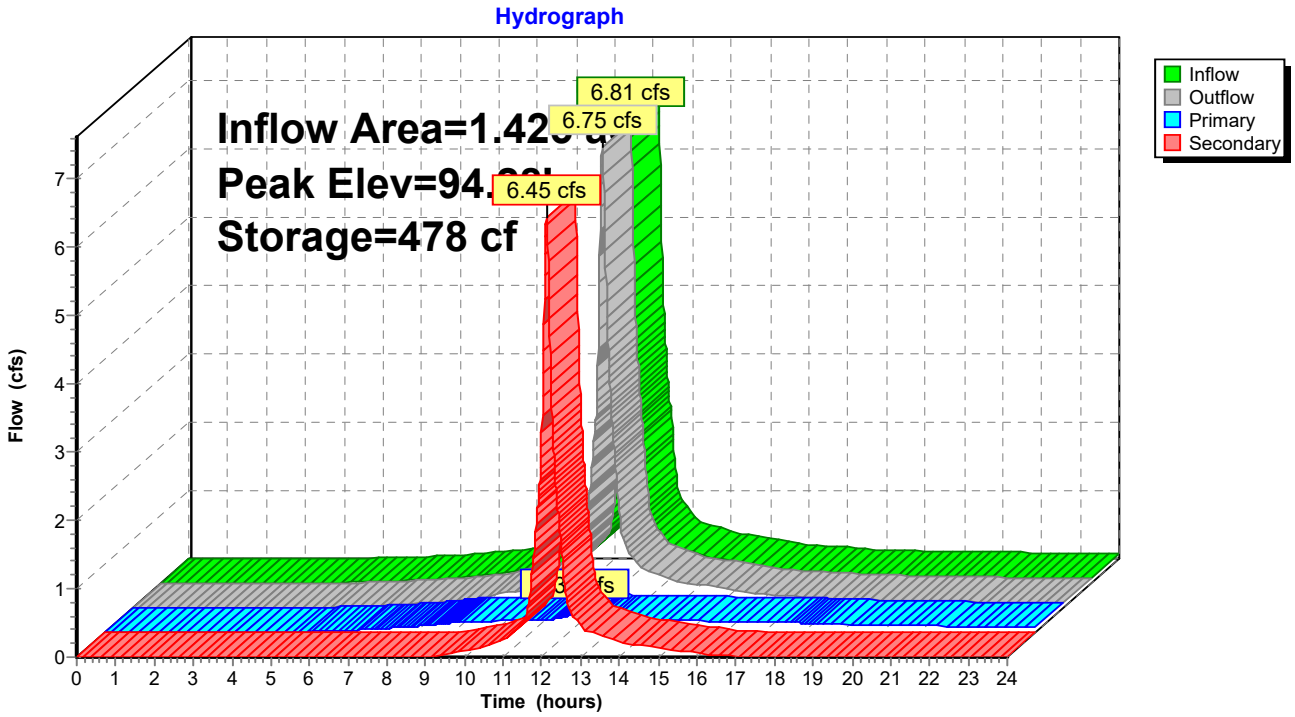
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
93.60	374	0	0
94.00	737	222	222
95.00	1,900	1,319	1,541

Device	Routing	Invert	Outlet Devices
#1	Primary	93.60'	**4.0" Round Culvert** L= 21.2' Ke= 0.500 Inlet / Outlet Invert= 93.60' / 92.24' S= 0.0642 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	93.90'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.30 cfs @ 12.12 hrs HW=94.28' TW=91.10' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.30 cfs @ 3.46 fps)

Secondary OutFlow Max=6.44 cfs @ 12.12 hrs HW=94.28' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 6.44 cfs @ 1.68 fps)

Pond 1P: Stormwater Pond



Summary for Pond CB1: CB1

[57] Hint: Peaked at 95.91' (Flood elevation advised)

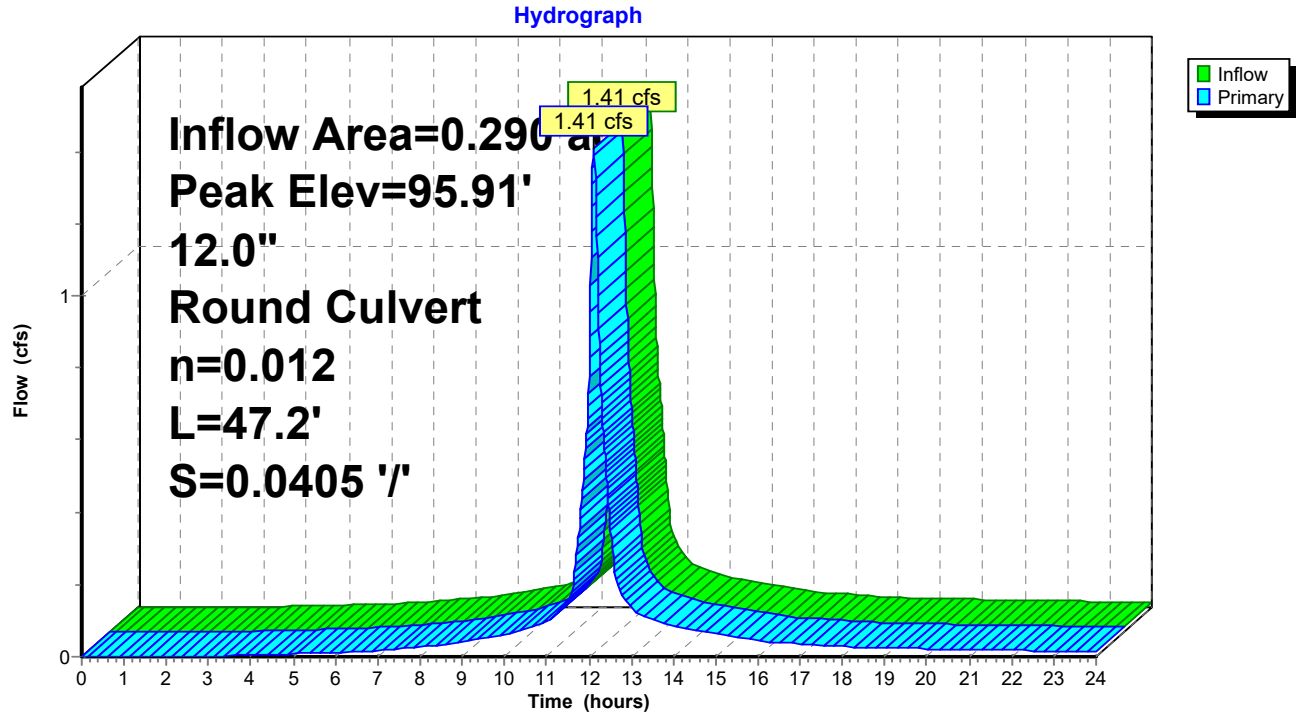
Inflow Area = 0.290 ac, 71.50% Impervious, Inflow Depth > 4.82" for 10 yr event
Inflow = 1.41 cfs @ 12.12 hrs, Volume= 0.117 af
Outflow = 1.41 cfs @ 12.12 hrs, Volume= 0.117 af, Atten= 0%, Lag= 0.0 min
Primary = 1.41 cfs @ 12.12 hrs, Volume= 0.117 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 95.91'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.28'	**12.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 95.28' / 93.37' S= 0.0405 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.41 cfs @ 12.12 hrs HW=95.91' TW=93.28' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.41 cfs @ 2.70 fps)

Pond CB1: CB1



Summary for Pond CB2: CB2

[57] Hint: Peaked at 97.37' (Flood elevation advised)

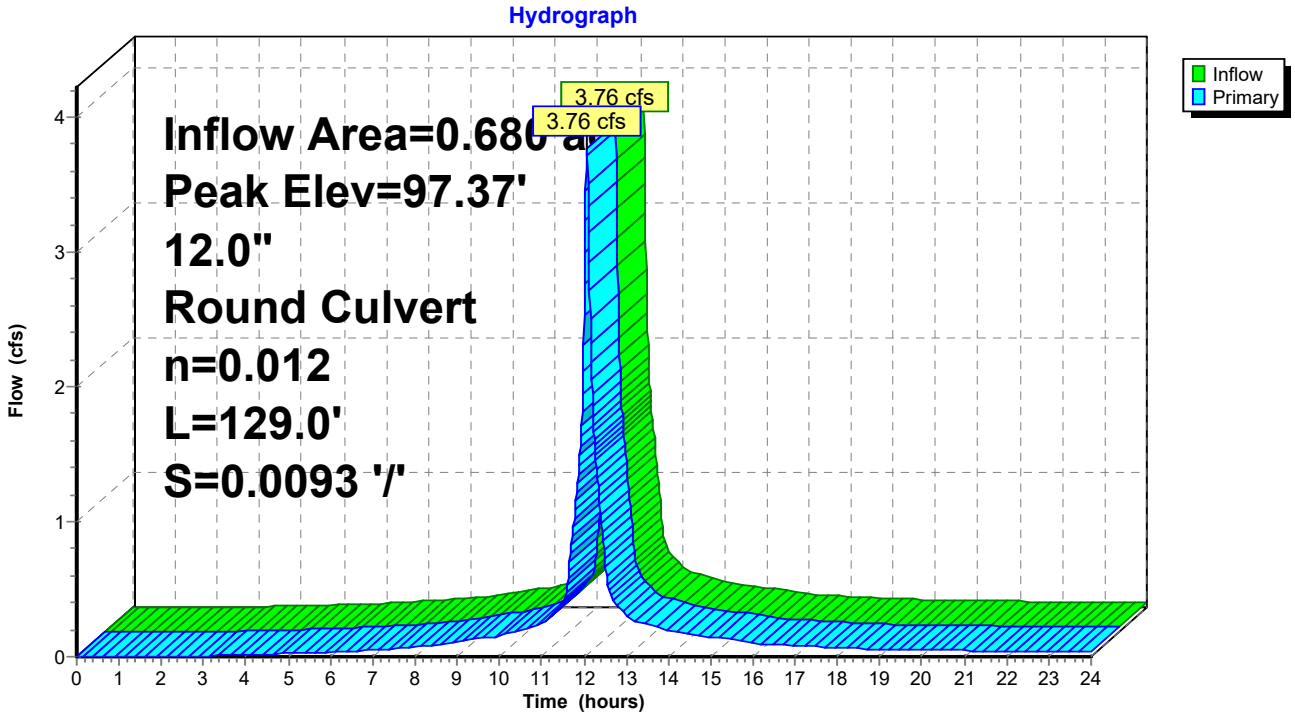
Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 4.94" for 10 yr event
Inflow = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af
Outflow = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af, Atten= 0%, Lag= 0.0 min
Primary = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 97.37' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.26'	**12.0" Round Culvert** L= 129.0' Ke= 0.500 Inlet / Outlet Invert= 95.26' / 94.06' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=3.76 cfs @ 12.07 hrs HW=97.37' TW=95.60' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 3.76 cfs @ 4.79 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

[57] Hint: Peaked at 95.60' (Flood elevation advised)

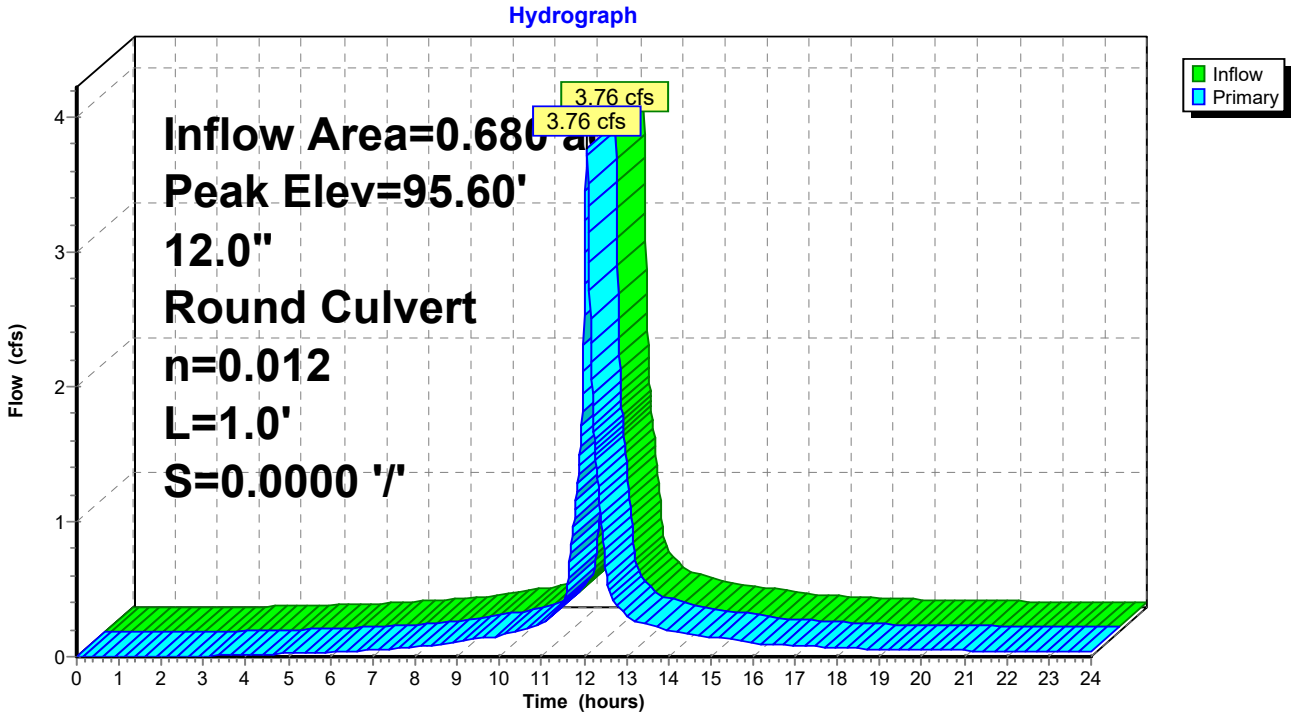
Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 4.94" for 10 yr event
Inflow = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af
Outflow = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af, Atten= 0%, Lag= 0.0 min
Primary = 3.76 cfs @ 12.07 hrs, Volume= 0.280 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 95.60'@ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.06'	**12.0" Round Culvert** L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 94.06' / 94.06' S= 0.0000 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=3.76 cfs @ 12.07 hrs HW=95.60' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 3.76 cfs @ 4.79 fps)

Pond CB3: CB3



Summary for Pond DMH1: DMH1

[57] Hint: Peaked at 93.28' (Flood elevation advised)

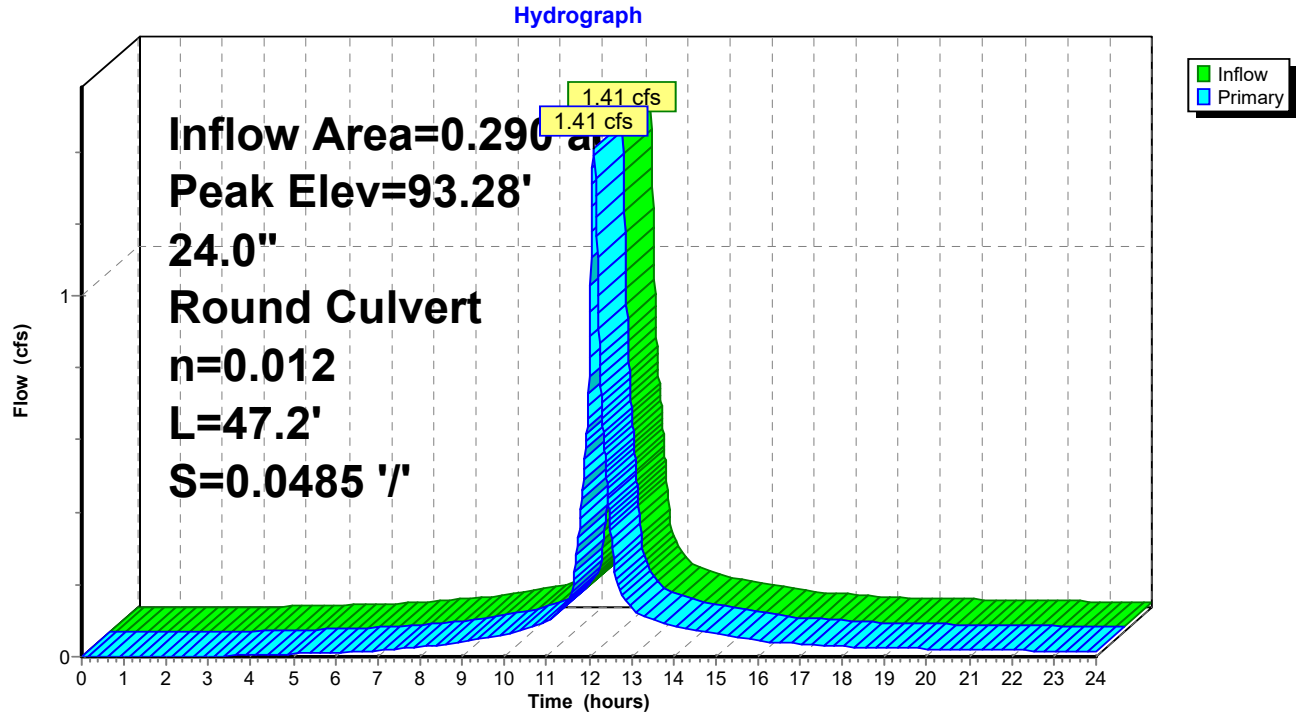
Inflow Area = 0.290 ac, 71.50% Impervious, Inflow Depth > 4.82" for 10 yr event
Inflow = 1.41 cfs @ 12.12 hrs, Volume= 0.117 af
Outflow = 1.41 cfs @ 12.12 hrs, Volume= 0.117 af, Atten= 0%, Lag= 0.0 min
Primary = 1.41 cfs @ 12.12 hrs, Volume= 0.117 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 93.28' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.79'	**24.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 92.79' / 90.50' S= 0.0485 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=1.41 cfs @ 12.12 hrs HW=93.28' TW=91.10' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.41 cfs @ 2.38 fps)

Pond DMH1: DMH1



Summary for Pond DMH2: DMH2

[57] Hint: Peaked at 91.10' (Flood elevation advised)

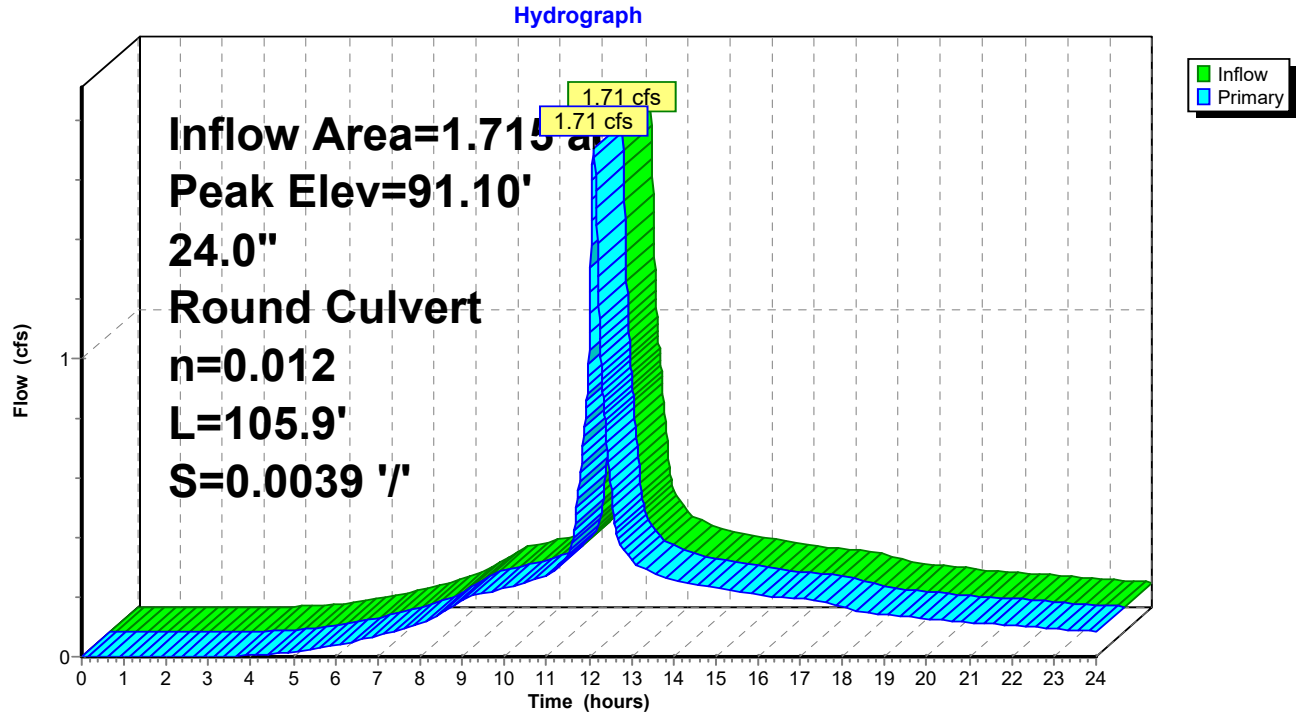
Inflow Area = 1.715 ac, 62.79% Impervious, Inflow Depth > 2.22" for 10 yr event
Inflow = 1.71 cfs @ 12.12 hrs, Volume= 0.317 af
Outflow = 1.71 cfs @ 12.12 hrs, Volume= 0.317 af, Atten= 0%, Lag= 0.0 min
Primary = 1.71 cfs @ 12.12 hrs, Volume= 0.317 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 91.10' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	90.47'	**24.0" Round Culvert** L= 105.9' Ke= 0.500 Inlet / Outlet Invert= 90.47' / 90.06' S= 0.0039 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=1.71 cfs @ 12.12 hrs HW=91.10' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 1.71 cfs @ 3.04 fps)

Pond DMH2: DMH2



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: West Site Runoff Area=62,055 sf 61.01% Impervious Runoff Depth>5.95"
Flow Length=350' Tc=7.6 min CN=90 Runoff=8.88 cfs 0.707 af

Subcatchment2S: South Site Runoff Area=29,613 sf 83.41% Impervious Runoff Depth>6.42"
Tc=5.0 min CN=94 Runoff=4.83 cfs 0.364 af

Subcatchment3S: East Site Runoff Area=12,646 sf 71.50% Impervious Runoff Depth>6.30"
Flow Length=288' Tc=8.5 min CN=93 Runoff=1.81 cfs 0.152 af

Reach AP 1: AP 1 Inflow=10.63 cfs 0.857 af
Outflow=10.63 cfs 0.857 af

Reach AP2: AP2 Inflow=4.83 cfs 0.364 af
Outflow=4.83 cfs 0.364 af

Pond 1P: Stormwater Pond Peak Elev=94.36' Storage=562 cf Inflow=8.88 cfs 0.707 af
Primary=0.32 cfs 0.232 af Secondary=8.49 cfs 0.472 af Outflow=8.81 cfs 0.705 af

Pond CB1: CB1 Peak Elev=96.02' Inflow=1.81 cfs 0.152 af
12.0" Round Culvert n=0.012 L=47.2' S=0.0405 '/' Outflow=1.81 cfs 0.152 af

Pond CB2: CB2 Peak Elev=99.09' Inflow=4.83 cfs 0.364 af
12.0" Round Culvert n=0.012 L=129.0' S=0.0093 '/' Outflow=4.83 cfs 0.364 af

Pond CB3: CB3 Peak Elev=96.19' Inflow=4.83 cfs 0.364 af
12.0" Round Culvert n=0.012 L=1.0' S=0.0000 '/' Outflow=4.83 cfs 0.364 af

Pond DMH1: DMH1 Peak Elev=93.35' Inflow=1.81 cfs 0.152 af
24.0" Round Culvert n=0.012 L=47.2' S=0.0485 '/' Outflow=1.81 cfs 0.152 af

Pond DMH2: DMH2 Peak Elev=91.18' Inflow=2.14 cfs 0.385 af
24.0" Round Culvert n=0.012 L=105.9' S=0.0039 '/' Outflow=2.14 cfs 0.385 af

Total Runoff Area = 2.395 ac Runoff Volume = 1.223 af Average Runoff Depth = 6.13"
31.36% Pervious = 0.751 ac 68.64% Impervious = 1.644 ac

Summary for Subcatchment 1S: West Site

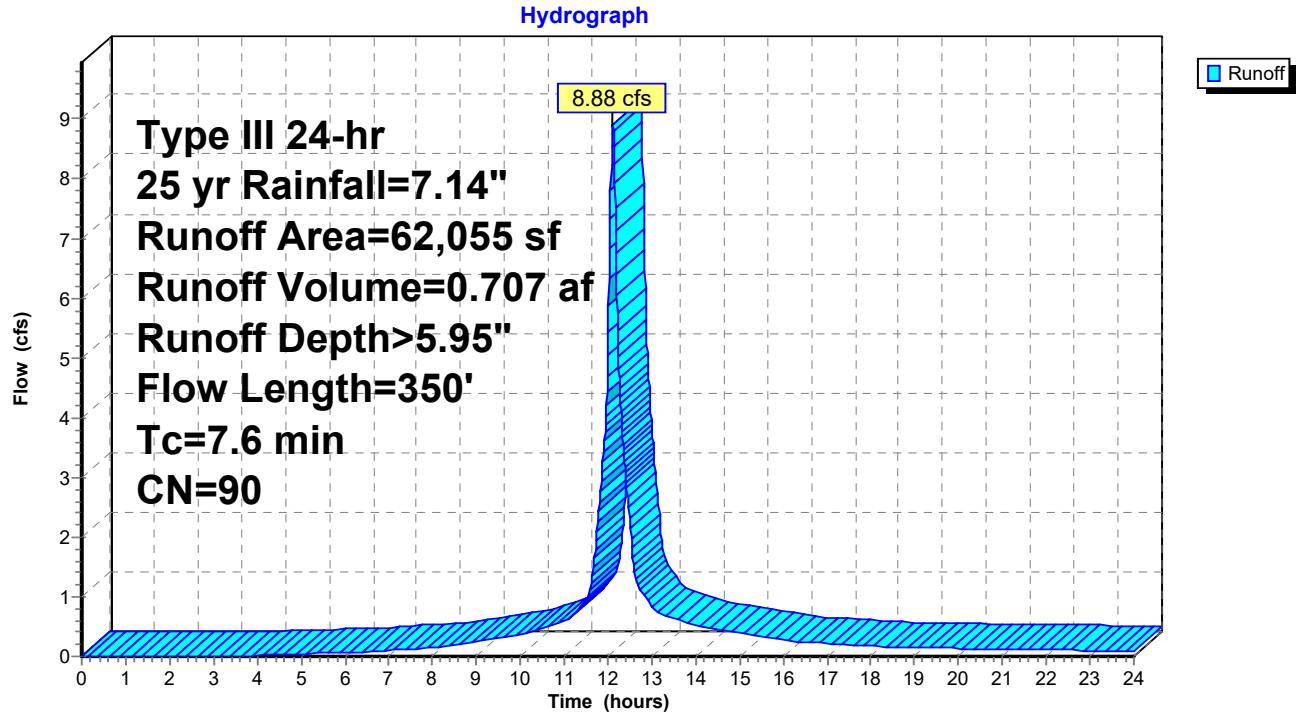
Runoff = 8.88 cfs @ 12.10 hrs, Volume= 0.707 af, Depth> 5.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

	Area (sf)	CN	Description
	19,963	74	>75% Grass cover, Good, HSG C
	15,667	98	Roofs, HSG C
	4,231	96	Gravel surface, HSG C
	21,772	98	Paved roads w/curbs & sewers, HSG C
*	315	98	Concrete, HSG C
*	107	98	Granite Curb, HSG C
	62,055	90	Weighted Average
	24,194		38.99% Pervious Area
	37,861		61.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0232	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
2.7	300	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.6	350	Total			

Subcatchment 1S: West Site



Summary for Subcatchment 2S: South Site

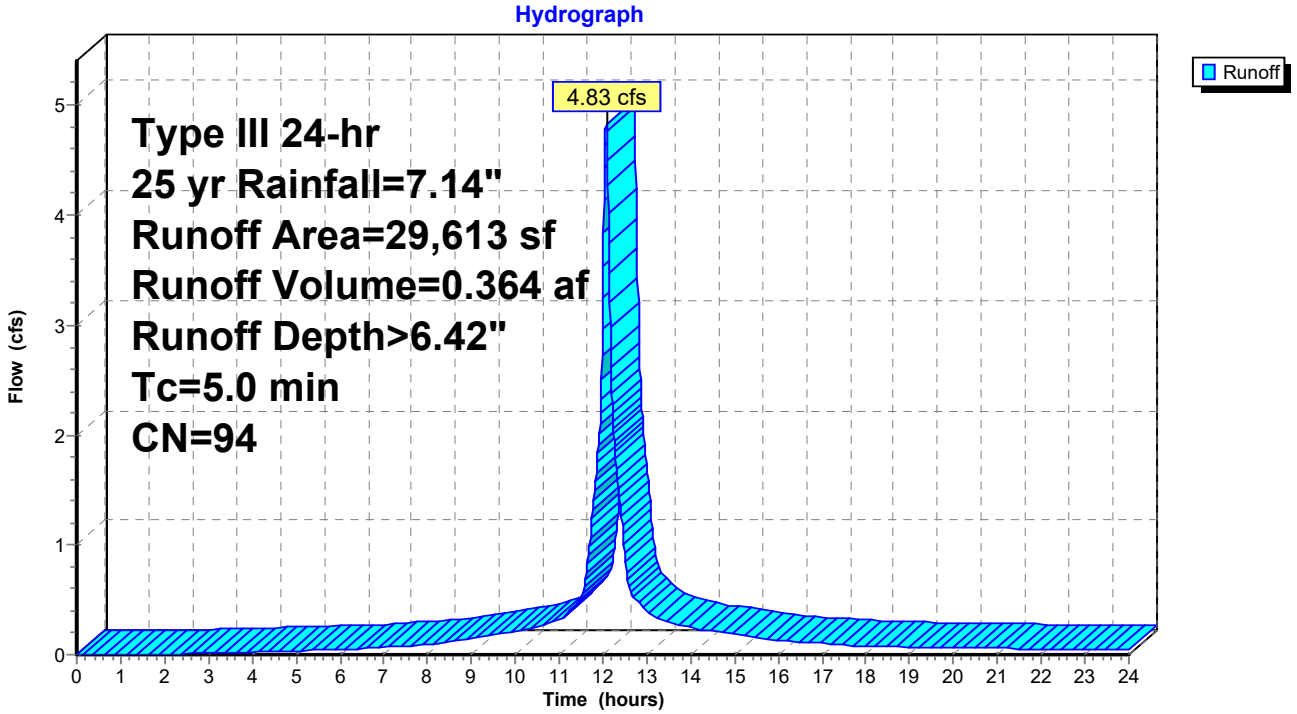
Runoff = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af, Depth> 6.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

Area (sf)	CN	Description
4,910	74	>75% Grass cover, Good, HSG C
3	96	Gravel surface, HSG C
24,700	98	Paved roads w/curbs & sewers, HSG C
29,613	94	Weighted Average
4,913		16.59% Pervious Area
24,700		83.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: South Site



Summary for Subcatchment 3S: East Site

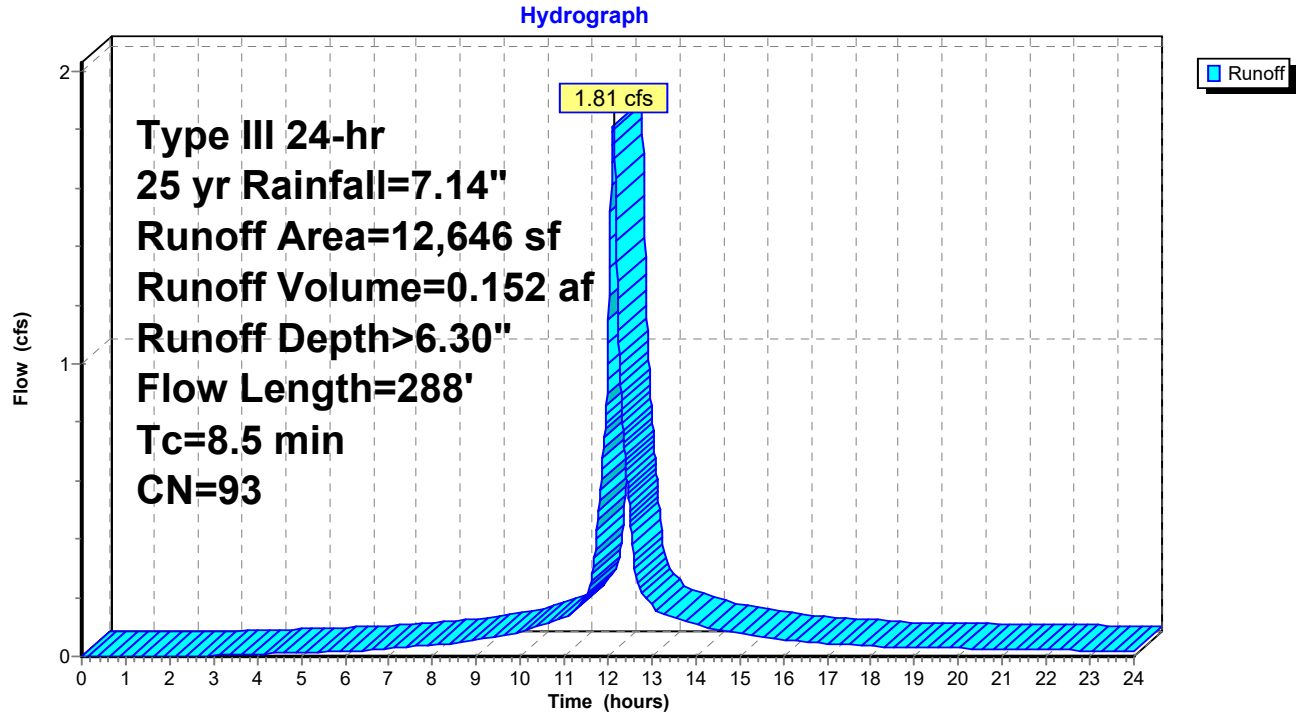
Runoff = 1.81 cfs @ 12.12 hrs, Volume= 0.152 af, Depth> 6.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

Area (sf)	CN	Description
2,426	74	>75% Grass cover, Good, HSG C
1,845	98	Roofs, HSG C
1,178	96	Gravel surface, HSG C
7,197	98	Paved roads w/curbs & sewers, HSG C
12,646	93	Weighted Average
3,604		28.50% Pervious Area
9,042		71.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0208	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.70"
4.6	37	0.0154	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
3.7	237	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.5	288	Total			

Subcatchment 3S: East Site



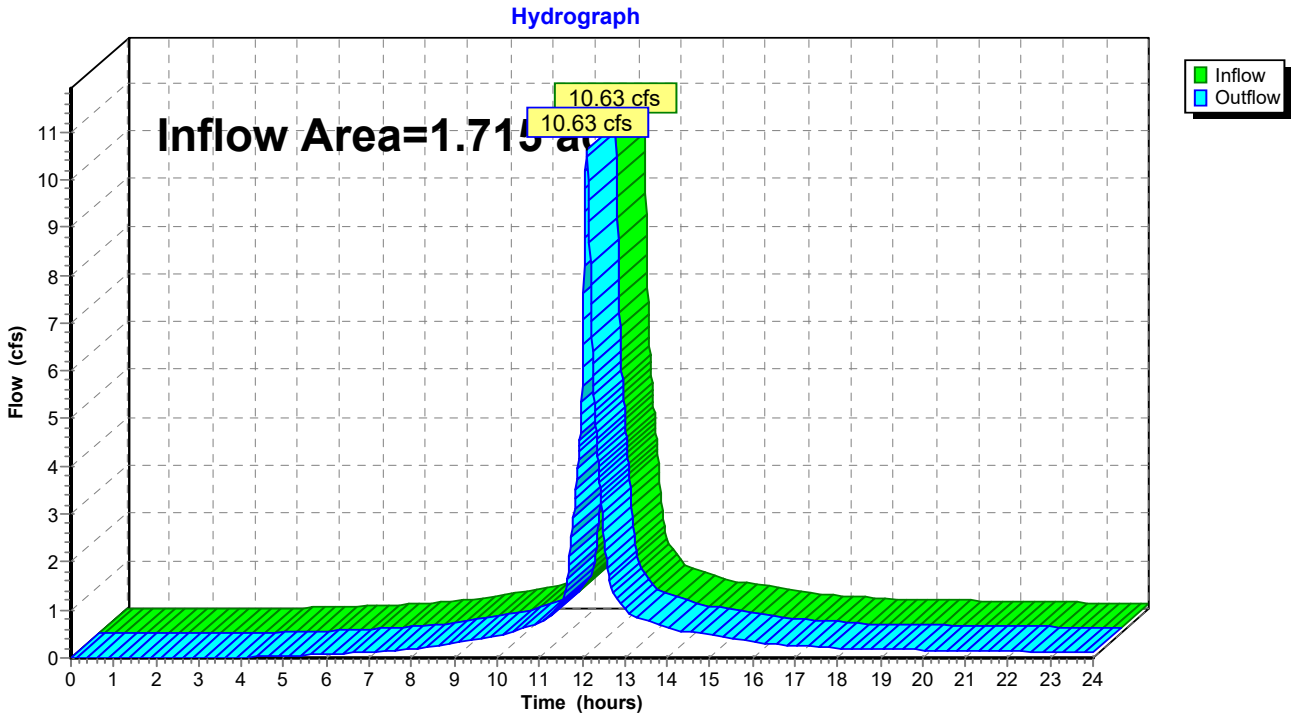
Summary for Reach AP 1: AP 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.715 ac, 62.79% Impervious, Inflow Depth > 6.00" for 25 yr event
Inflow = 10.63 cfs @ 12.12 hrs, Volume= 0.857 af
Outflow = 10.63 cfs @ 12.12 hrs, Volume= 0.857 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Reach AP 1: AP 1



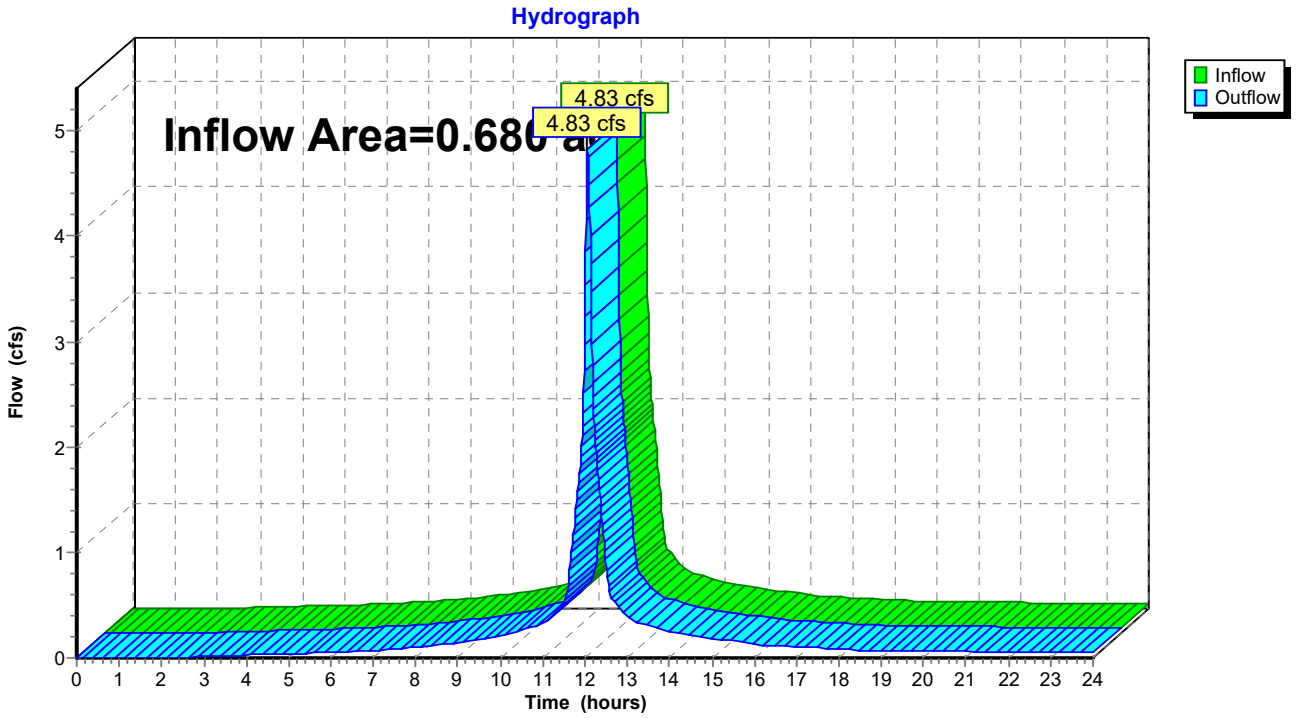
Summary for Reach AP2: AP2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 6.42" for 25 yr event
Inflow = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af
Outflow = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Reach AP2: AP2



Summary for Pond 1P: Stormwater Pond

Inflow Area = 1.425 ac, 61.01% Impervious, Inflow Depth > 5.95" for 25 yr event
Inflow = 8.88 cfs @ 12.10 hrs, Volume= 0.707 af
Outflow = 8.81 cfs @ 12.12 hrs, Volume= 0.705 af, Atten= 1%, Lag= 0.7 min
Primary = 0.32 cfs @ 12.12 hrs, Volume= 0.232 af
Secondary = 8.49 cfs @ 12.12 hrs, Volume= 0.472 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 94.36' @ 12.12 hrs Surf.Area= 1,155 sf Storage= 562 cf

Plug-Flow detention time=5.9 min calculated for 0.705 af (100% of inflow)
Center-of-Mass det. time=3.8 min (783.8 - 780.0)

Volume	Invert	Avail.Storage	Storage Description
#1	93.60'	1,541 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

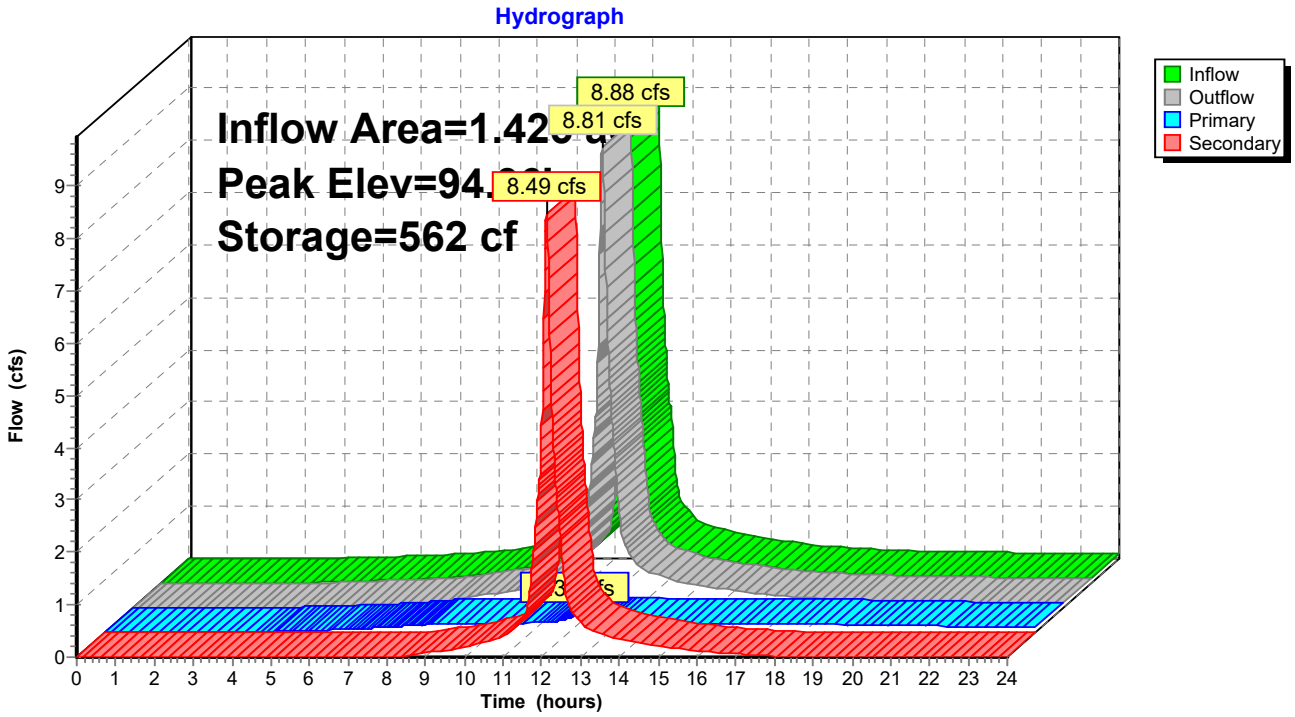
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
93.60	374	0	0
94.00	737	222	222
95.00	1,900	1,319	1,541

Device	Routing	Invert	Outlet Devices
#1	Primary	93.60'	**4.0" Round Culvert** L= 21.2' Ke= 0.500 Inlet / Outlet Invert= 93.60' / 92.24' S= 0.0642 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	93.90'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.32 cfs @ 12.12 hrs HW=94.36' TW=91.17' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.32 cfs @ 3.70 fps)

Secondary OutFlow Max=8.48 cfs @ 12.12 hrs HW=94.36' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 8.48 cfs @ 1.85 fps)

Pond 1P: Stormwater Pond



Summary for Pond CB1: CB1

[57] Hint: Peaked at 96.02' (Flood elevation advised)

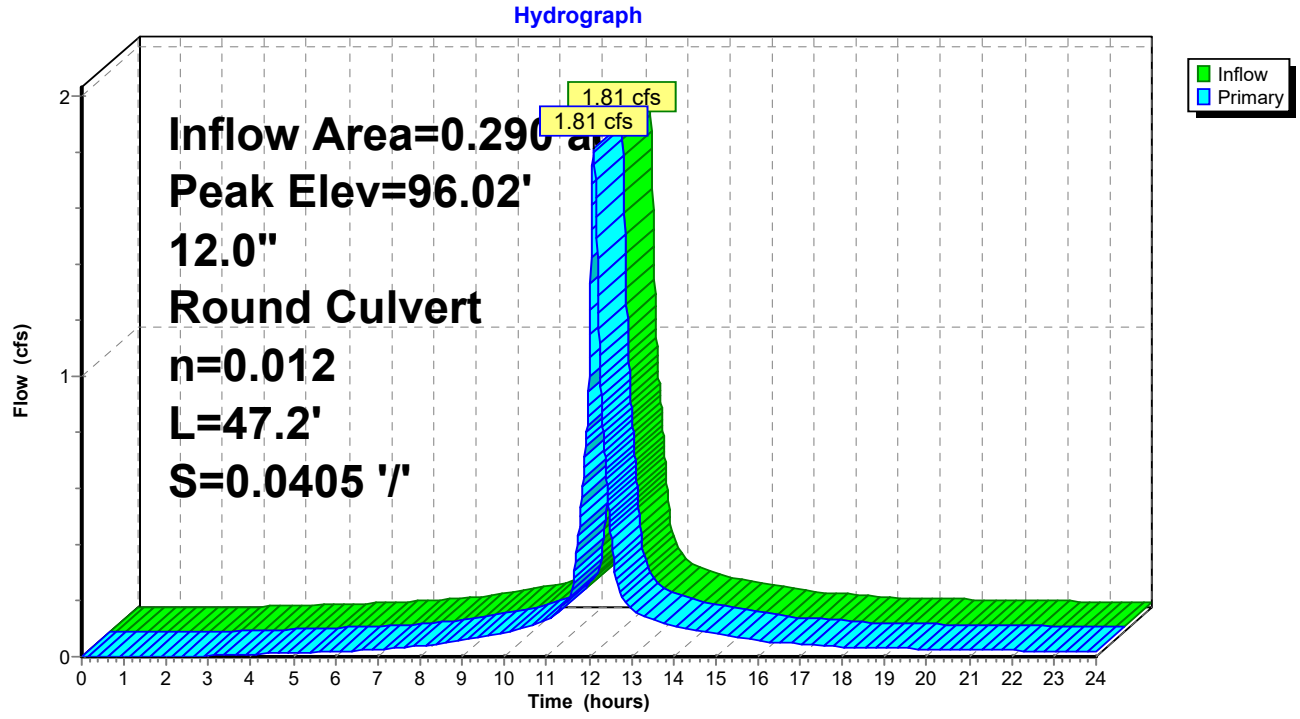
Inflow Area = 0.290 ac, 71.50% Impervious, Inflow Depth > 6.30" for 25 yr event
Inflow = 1.81 cfs @ 12.12 hrs, Volume= 0.152 af
Outflow = 1.81 cfs @ 12.12 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min
Primary = 1.81 cfs @ 12.12 hrs, Volume= 0.152 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 96.02' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.28'	**12.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 95.28' / 93.37' S= 0.0405 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.81 cfs @ 12.12 hrs HW=96.02' TW=93.35' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.81 cfs @ 2.92 fps)

Pond CB1: CB1



Summary for Pond CB2: CB2

[57] Hint: Peaked at 99.09' (Flood elevation advised)

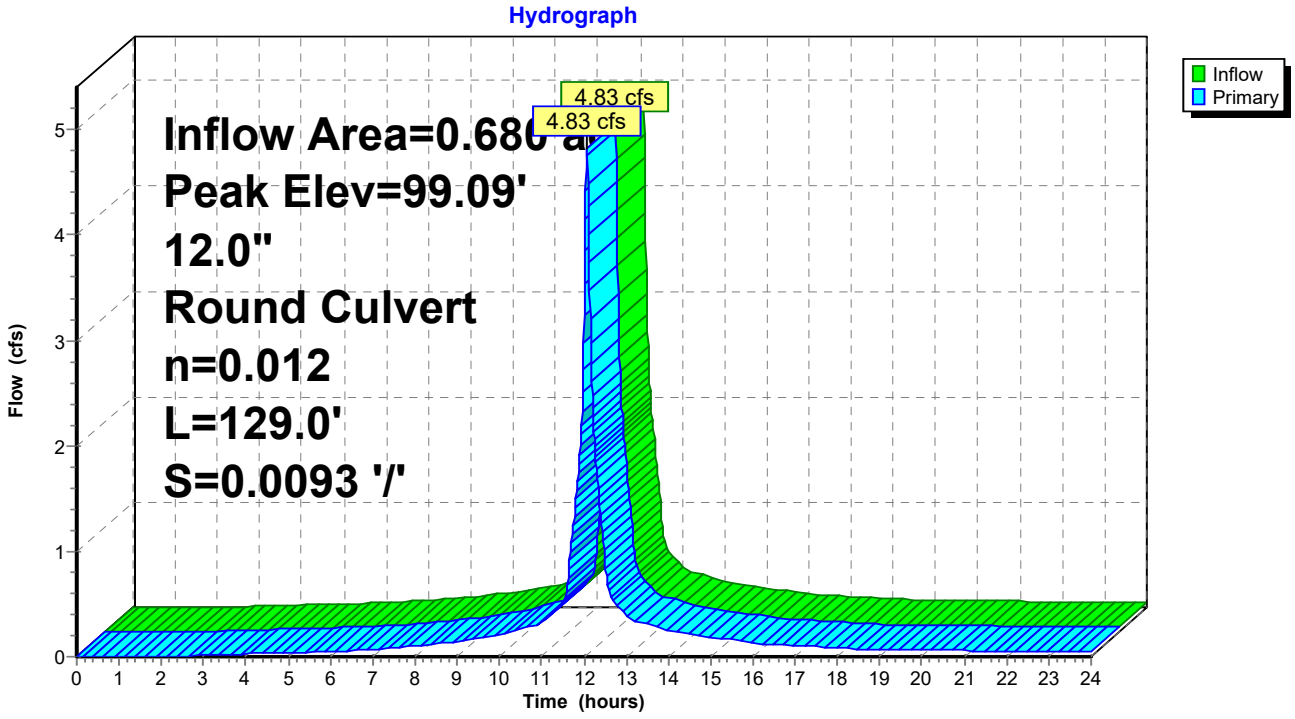
Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 6.42" for 25 yr event
Inflow = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af
Outflow = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af, Atten= 0%, Lag= 0.0 min
Primary = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 99.09' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.26'	**12.0" Round Culvert** L= 129.0' Ke= 0.500 Inlet / Outlet Invert= 95.26' / 94.06' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=4.82 cfs @ 12.07 hrs HW=99.09' TW=96.19' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 4.82 cfs @ 6.14 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

[57] Hint: Peaked at 96.19' (Flood elevation advised)

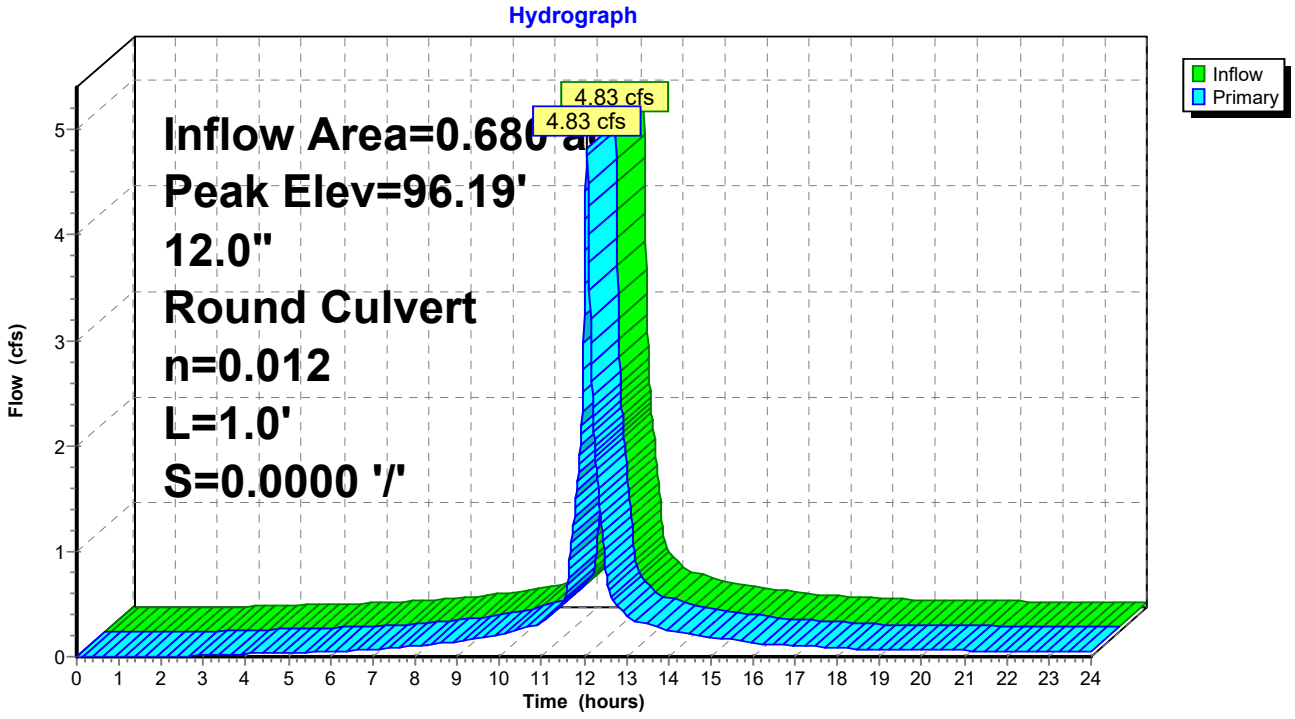
Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 6.42" for 25 yr event
Inflow = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af
Outflow = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af, Atten= 0%, Lag= 0.0 min
Primary = 4.83 cfs @ 12.07 hrs, Volume= 0.364 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 96.19' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.06'	**12.0" Round Culvert** L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 94.06' / 94.06' S= 0.0000 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=4.82 cfs @ 12.07 hrs HW=96.19' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 4.82 cfs @ 6.14 fps)

Pond CB3: CB3



Summary for Pond DMH1: DMH1

[57] Hint: Peaked at 93.35' (Flood elevation advised)

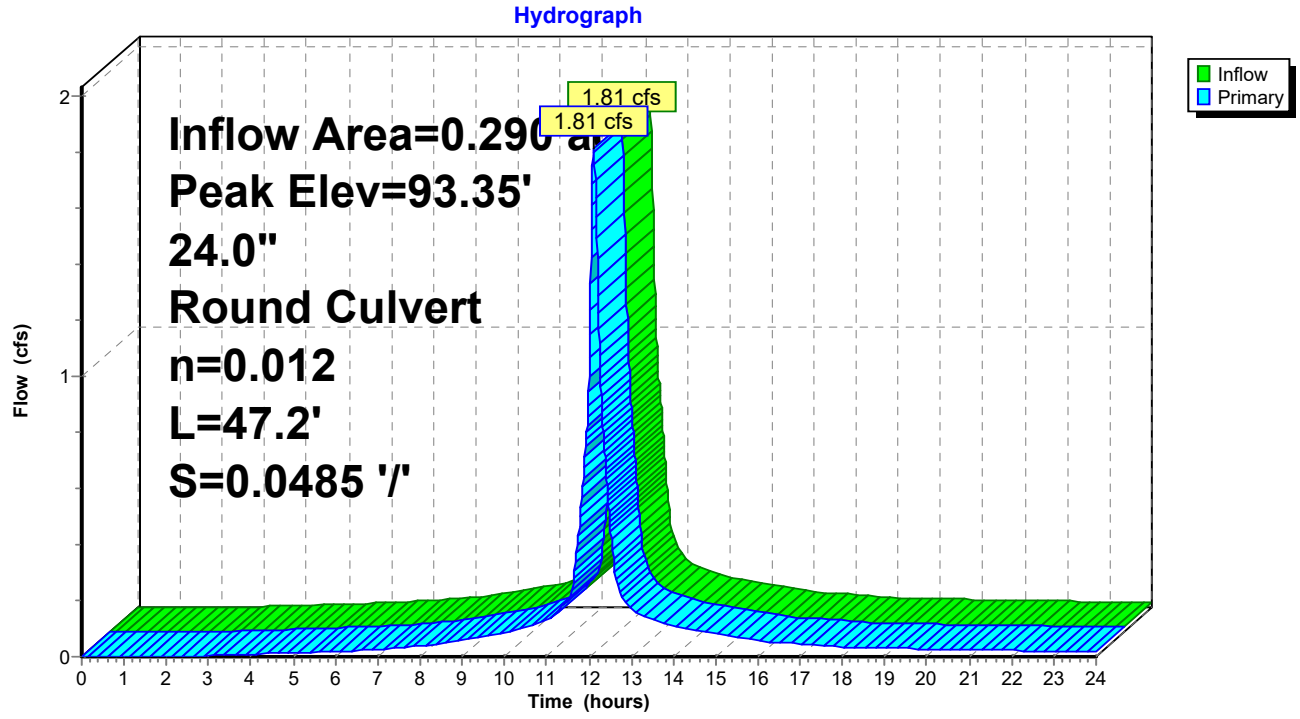
Inflow Area = 0.290 ac, 71.50% Impervious, Inflow Depth > 6.30" for 25 yr event
Inflow = 1.81 cfs @ 12.12 hrs, Volume= 0.152 af
Outflow = 1.81 cfs @ 12.12 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min
Primary = 1.81 cfs @ 12.12 hrs, Volume= 0.152 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 93.35'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.79'	**24.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 92.79' / 90.50' S= 0.0485 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=1.81 cfs @ 12.12 hrs HW=93.35' TW=91.17' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.81 cfs @ 2.54 fps)

Pond DMH1: DMH1



Summary for Pond DMH2: DMH2

[57] Hint: Peaked at 91.18' (Flood elevation advised)

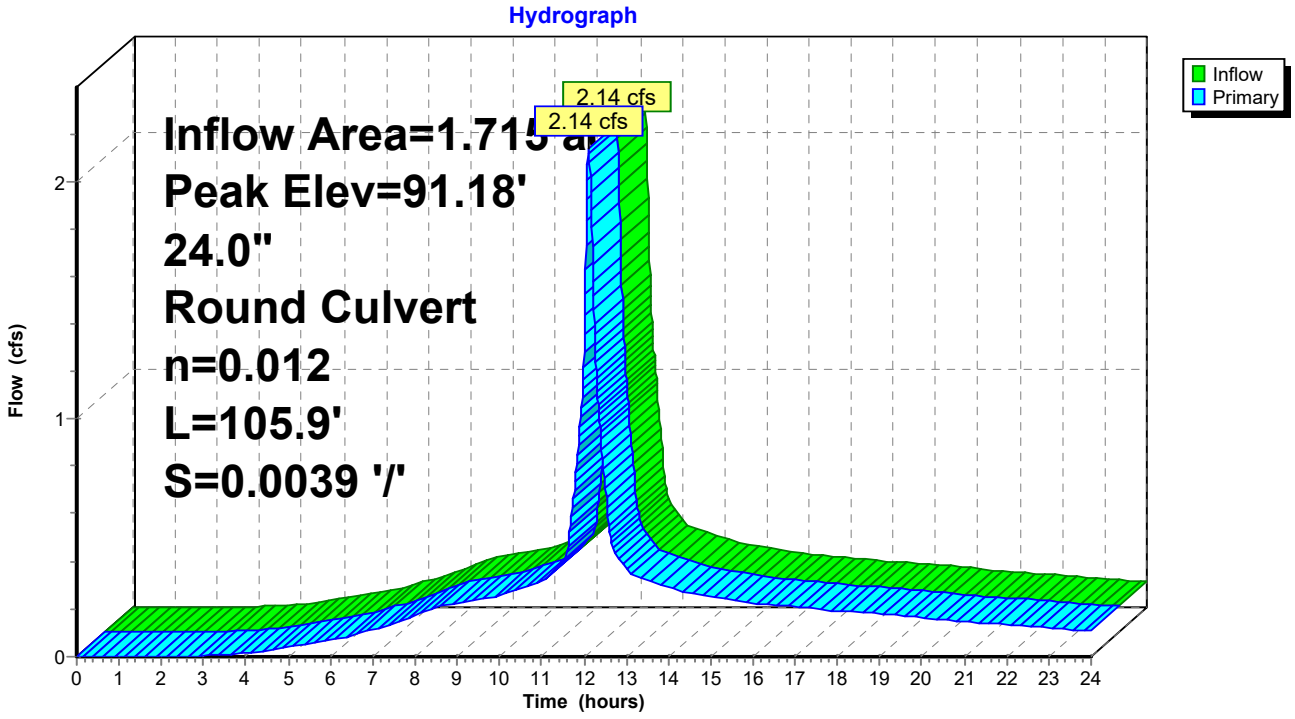
Inflow Area = 1.715 ac, 62.79% Impervious, Inflow Depth > 2.69" for 25 yr event
Inflow = 2.14 cfs @ 12.12 hrs, Volume= 0.385 af
Outflow = 2.14 cfs @ 12.12 hrs, Volume= 0.385 af, Atten= 0%, Lag= 0.0 min
Primary = 2.14 cfs @ 12.12 hrs, Volume= 0.385 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 91.18' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	90.47'	**24.0" Round Culvert** L= 105.9' Ke= 0.500 Inlet / Outlet Invert= 90.47' / 90.06' S= 0.0039 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=2.14 cfs @ 12.12 hrs HW=91.17' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 2.14 cfs @ 3.22 fps)

Pond DMH2: DMH2



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: West Site Runoff Area=62,055 sf 61.01% Impervious Runoff Depth>7.35"
Flow Length=350' Tc=7.6 min CN=90 Runoff=10.84 cfs 0.872 af

Subcatchment2S: South Site Runoff Area=29,613 sf 83.41% Impervious Runoff Depth>7.83"
Tc=5.0 min CN=94 Runoff=5.83 cfs 0.444 af

Subcatchment3S: East Site Runoff Area=12,646 sf 71.50% Impervious Runoff Depth>7.71"
Flow Length=288' Tc=8.5 min CN=93 Runoff=2.20 cfs 0.187 af

Reach AP 1: AP 1 Inflow=12.94 cfs 1.056 af
Outflow=12.94 cfs 1.056 af

Reach AP2: AP2 Inflow=5.83 cfs 0.444 af
Outflow=5.83 cfs 0.444 af

Pond 1P: Stormwater Pond Peak Elev=94.42' Storage=640 cf Inflow=10.84 cfs 0.872 af
Primary=0.34 cfs 0.257 af Secondary=10.41 cfs 0.613 af Outflow=10.75 cfs 0.870 af

Pond CB1: CB1 Peak Elev=96.12' Inflow=2.20 cfs 0.187 af
12.0" Round Culvert n=0.012 L=47.2' S=0.0405 '/' Outflow=2.20 cfs 0.187 af

Pond CB2: CB2 Peak Elev=101.16' Inflow=5.83 cfs 0.444 af
12.0" Round Culvert n=0.012 L=129.0' S=0.0093 '/' Outflow=5.83 cfs 0.444 af

Pond CB3: CB3 Peak Elev=96.93' Inflow=5.83 cfs 0.444 af
12.0" Round Culvert n=0.012 L=1.0' S=0.0000 '/' Outflow=5.83 cfs 0.444 af

Pond DMH1: DMH1 Peak Elev=93.41' Inflow=2.20 cfs 0.187 af
24.0" Round Culvert n=0.012 L=47.2' S=0.0485 '/' Outflow=2.20 cfs 0.187 af

Pond DMH2: DMH2 Peak Elev=91.24' Inflow=2.54 cfs 0.443 af
24.0" Round Culvert n=0.012 L=105.9' S=0.0039 '/' Outflow=2.54 cfs 0.443 af

Total Runoff Area = 2.395 ac Runoff Volume = 1.503 af Average Runoff Depth = 7.53"
31.36% Pervious = 0.751 ac 68.64% Impervious = 1.644 ac

Summary for Subcatchment 1S: West Site

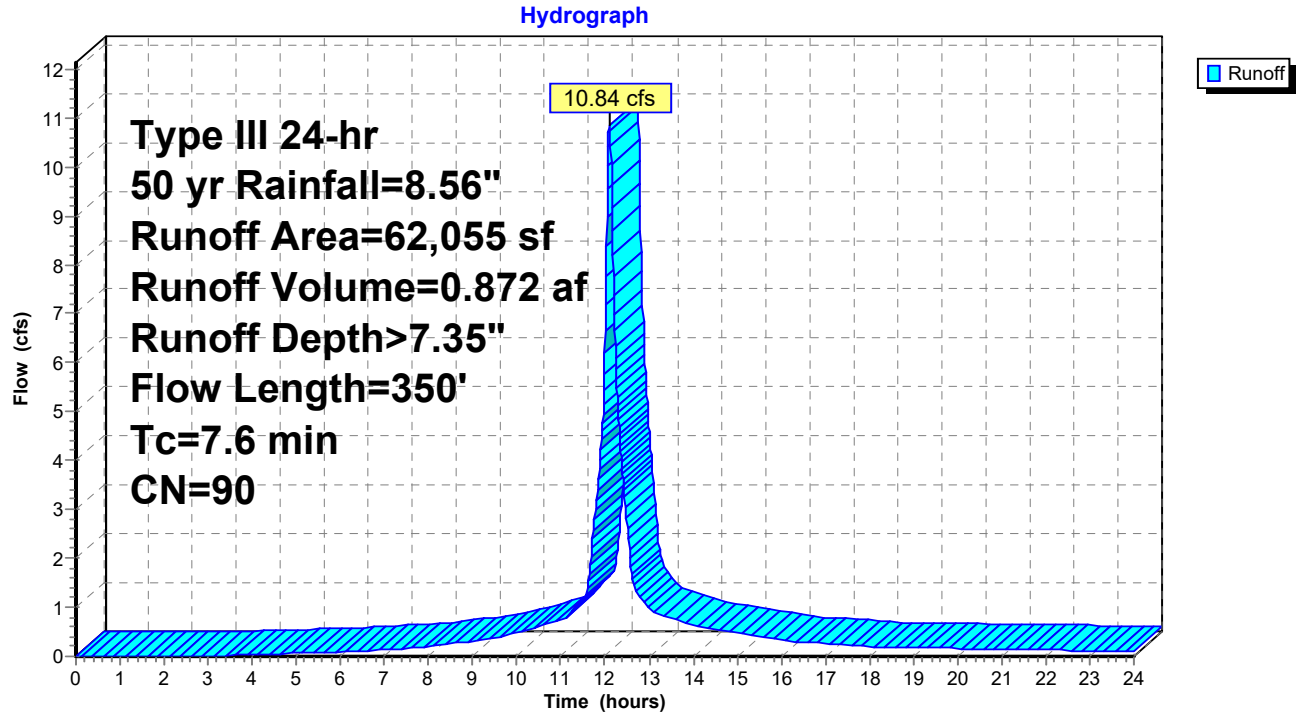
Runoff = 10.84 cfs @ 12.10 hrs, Volume= 0.872 af, Depth> 7.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

	Area (sf)	CN	Description
	19,963	74	>75% Grass cover, Good, HSG C
	15,667	98	Roofs, HSG C
	4,231	96	Gravel surface, HSG C
	21,772	98	Paved roads w/curbs & sewers, HSG C
*	315	98	Concrete, HSG C
*	107	98	Granite Curb, HSG C
	62,055	90	Weighted Average
	24,194		38.99% Pervious Area
	37,861		61.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0232	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
2.7	300	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.6	350	Total			

Subcatchment 1S: West Site



Summary for Subcatchment 2S: South Site

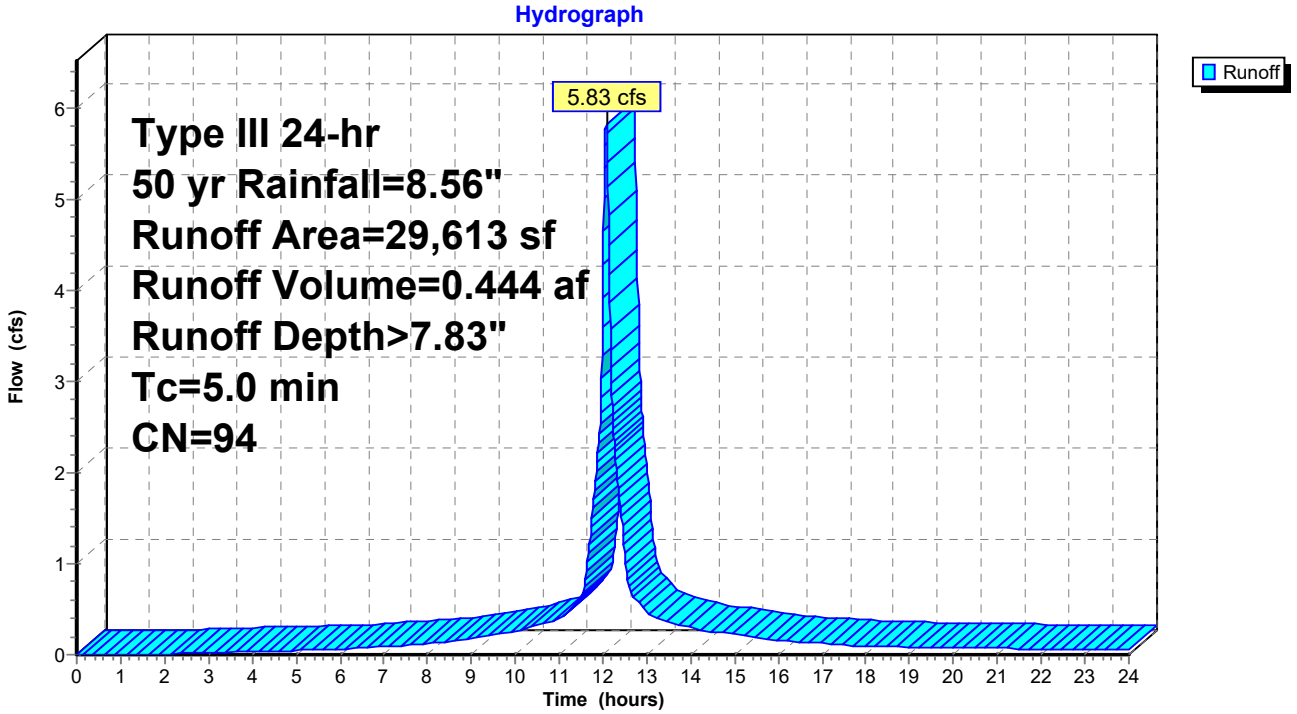
Runoff = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af, Depth> 7.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

Area (sf)	CN	Description
4,910	74	>75% Grass cover, Good, HSG C
3	96	Gravel surface, HSG C
24,700	98	Paved roads w/curbs & sewers, HSG C
29,613	94	Weighted Average
4,913		16.59% Pervious Area
24,700		83.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: South Site



Summary for Subcatchment 3S: East Site

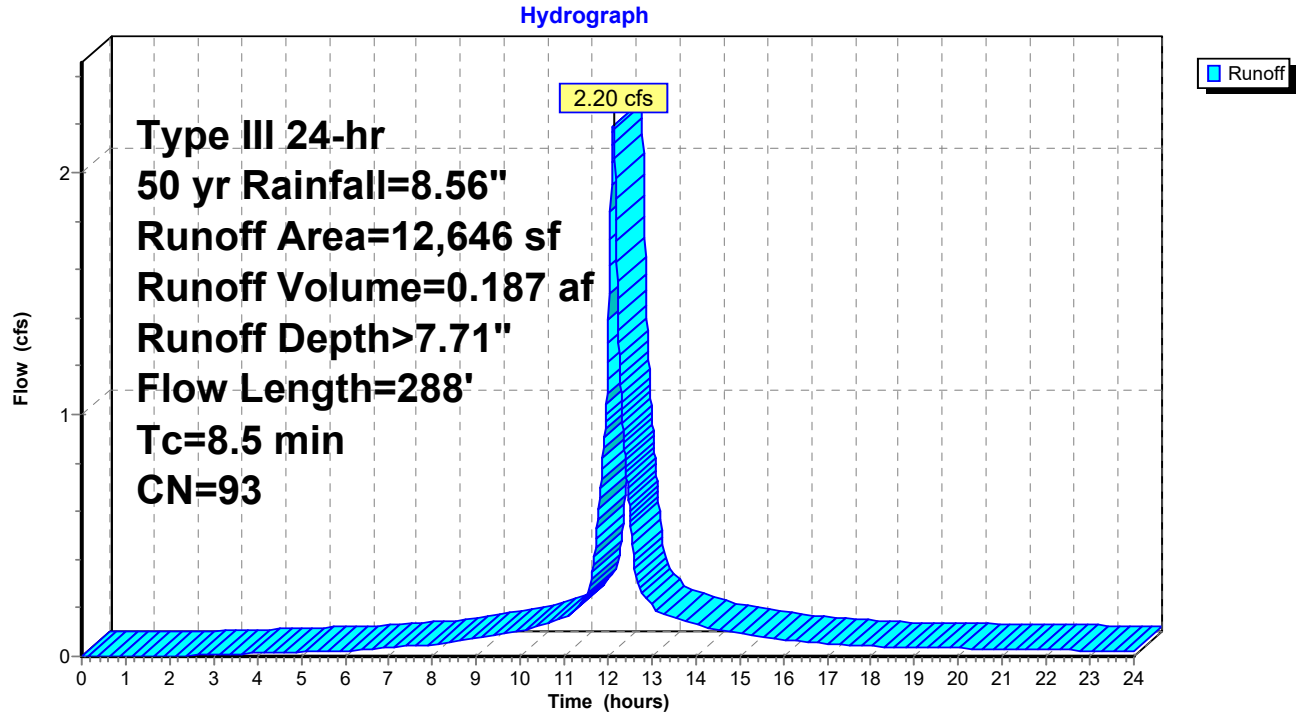
Runoff = 2.20 cfs @ 12.12 hrs, Volume= 0.187 af, Depth> 7.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

Area (sf)	CN	Description
2,426	74	>75% Grass cover, Good, HSG C
1,845	98	Roofs, HSG C
1,178	96	Gravel surface, HSG C
7,197	98	Paved roads w/curbs & sewers, HSG C
12,646	93	Weighted Average
3,604		28.50% Pervious Area
9,042		71.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0208	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.70"
4.6	37	0.0154	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
3.7	237	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.5	288	Total			

Subcatchment 3S: East Site



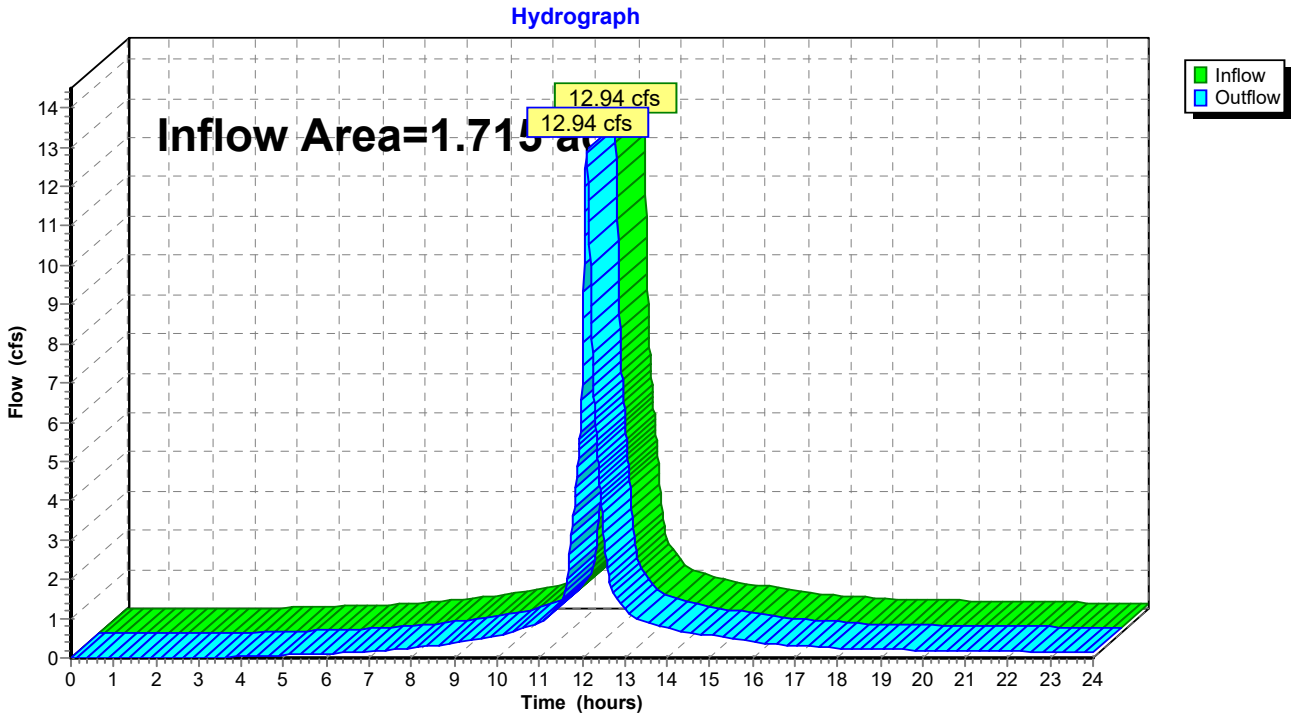
Summary for Reach AP 1: AP 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.715 ac, 62.79% Impervious, Inflow Depth > 7.39" for 50 yr event
Inflow = 12.94 cfs @ 12.12 hrs, Volume= 1.056 af
Outflow = 12.94 cfs @ 12.12 hrs, Volume= 1.056 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Reach AP 1: AP 1



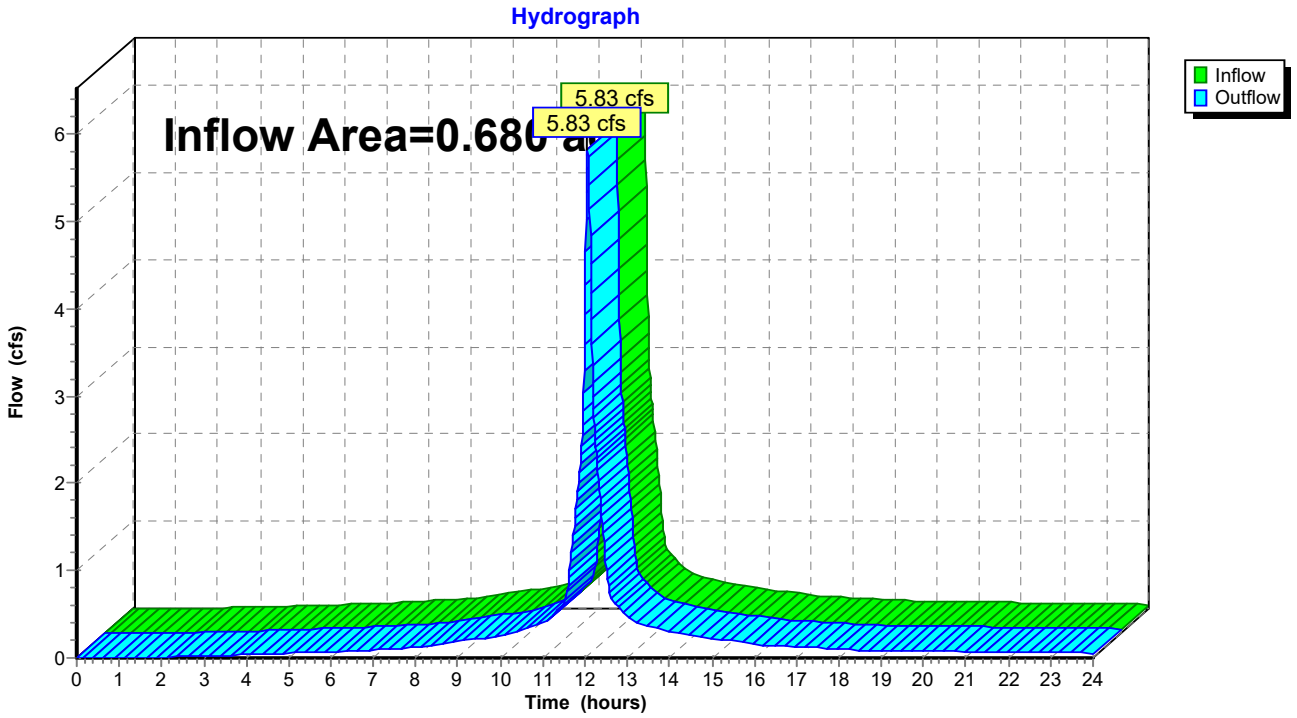
Summary for Reach AP2: AP2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 7.83" for 50 yr event
Inflow = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af
Outflow = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Reach AP2: AP2



Summary for Pond 1P: Stormwater Pond

Inflow Area = 1.425 ac, 61.01% Impervious, Inflow Depth > 7.35" for 50 yr event
Inflow = 10.84 cfs @ 12.10 hrs, Volume= 0.872 af
Outflow = 10.75 cfs @ 12.12 hrs, Volume= 0.870 af, Atten= 1%, Lag= 0.7 min
Primary = 0.34 cfs @ 12.12 hrs, Volume= 0.257 af
Secondary = 10.41 cfs @ 12.12 hrs, Volume= 0.613 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 94.42' @ 12.12 hrs Surf.Area= 1,231 sf Storage= 640 cf

Plug-Flow detention time=5.2 min calculated for 0.870 af (100% of inflow)
Center-of-Mass det. time=3.3 min (778.0 - 774.7)

Volume	Invert	Avail.Storage	Storage Description
#1	93.60'	1,541 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

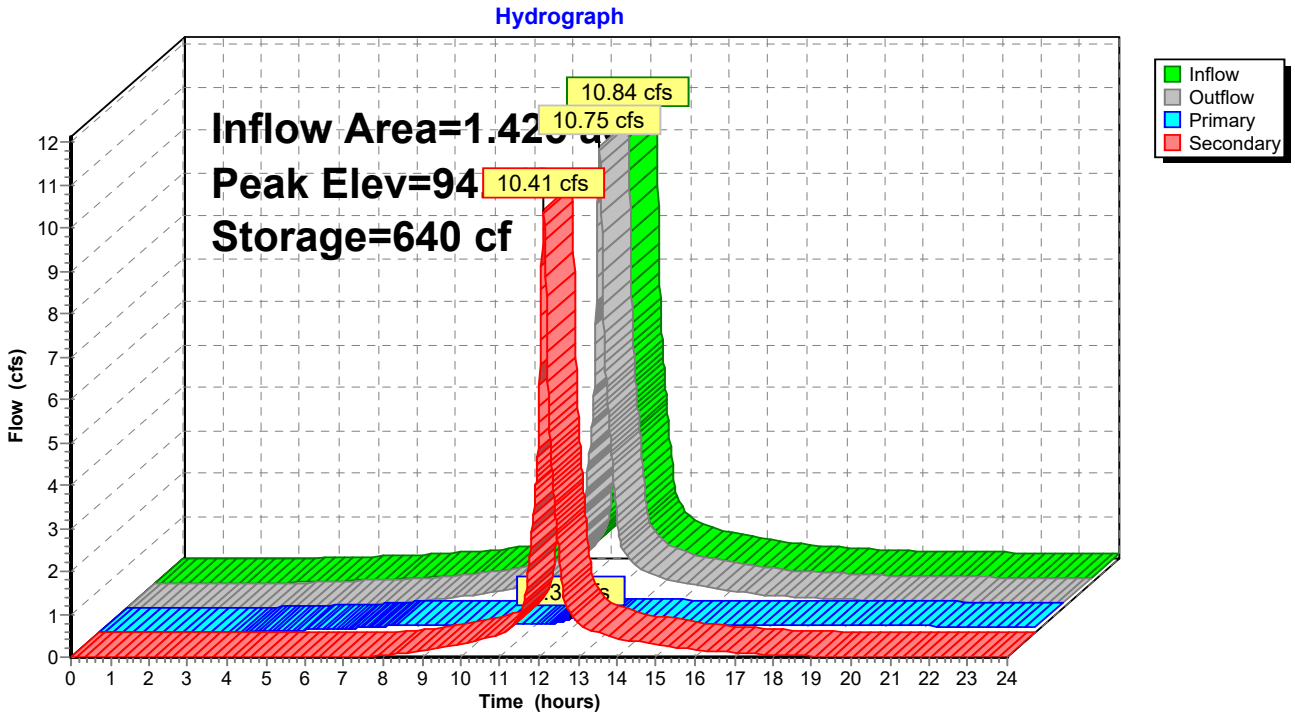
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
93.60	374	0	0
94.00	737	222	222
95.00	1,900	1,319	1,541

Device	Routing	Invert	Outlet Devices
#1	Primary	93.60'	**4.0" Round Culvert** L= 21.2' Ke= 0.500 Inlet / Outlet Invert= 93.60' / 92.24' S= 0.0642 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Secondary	93.90'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.34 cfs @ 12.12 hrs HW=94.42' TW=91.24' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.34 cfs @ 3.90 fps)

Secondary OutFlow Max=10.39 cfs @ 12.12 hrs HW=94.42' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 10.39 cfs @ 1.98 fps)

Pond 1P: Stormwater Pond



Summary for Pond CB1: CB1

[57] Hint: Peaked at 96.12' (Flood elevation advised)

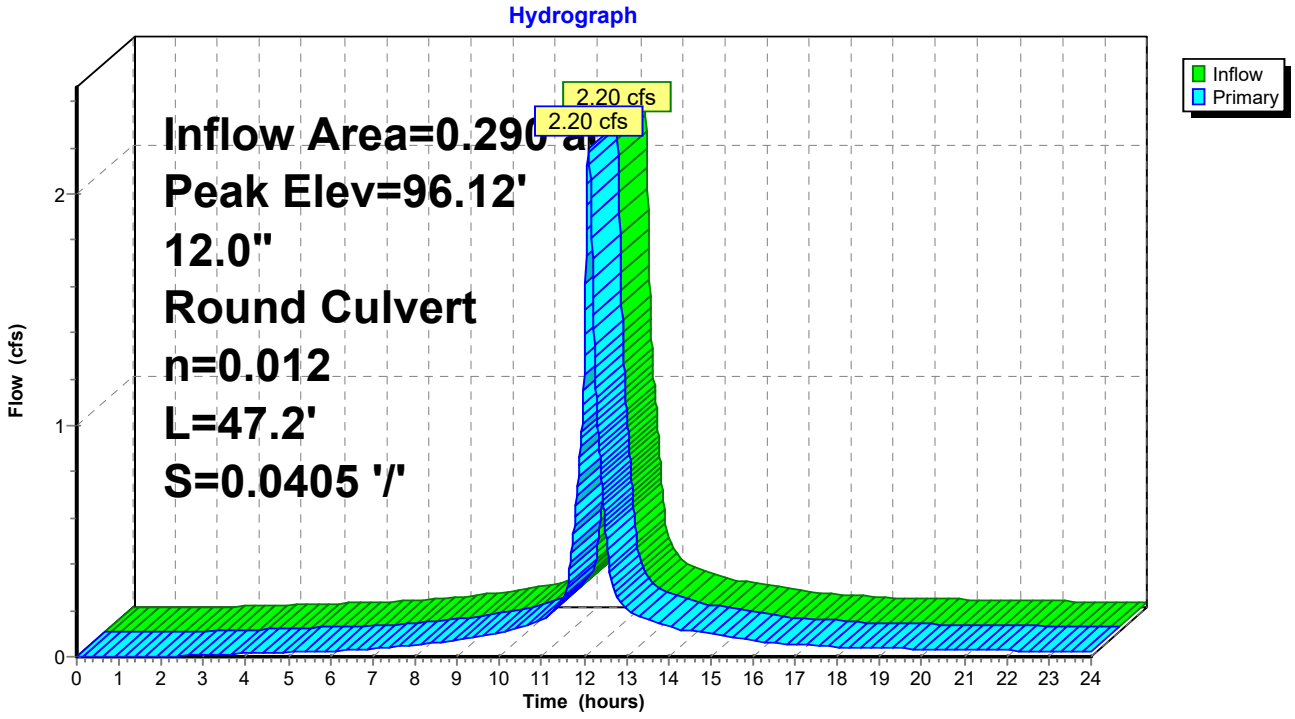
Inflow Area = 0.290 ac, 71.50% Impervious, Inflow Depth > 7.71" for 50 yr event
Inflow = 2.20 cfs @ 12.12 hrs, Volume= 0.187 af
Outflow = 2.20 cfs @ 12.12 hrs, Volume= 0.187 af, Atten= 0%, Lag= 0.0 min
Primary = 2.20 cfs @ 12.12 hrs, Volume= 0.187 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 96.12' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.28'	**12.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 95.28' / 93.37' S= 0.0405 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.19 cfs @ 12.12 hrs HW=96.12' TW=93.41' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.19 cfs @ 3.12 fps)

Pond CB1: CB1



Summary for Pond CB2: CB2

[57] Hint: Peaked at 101.16' (Flood elevation advised)

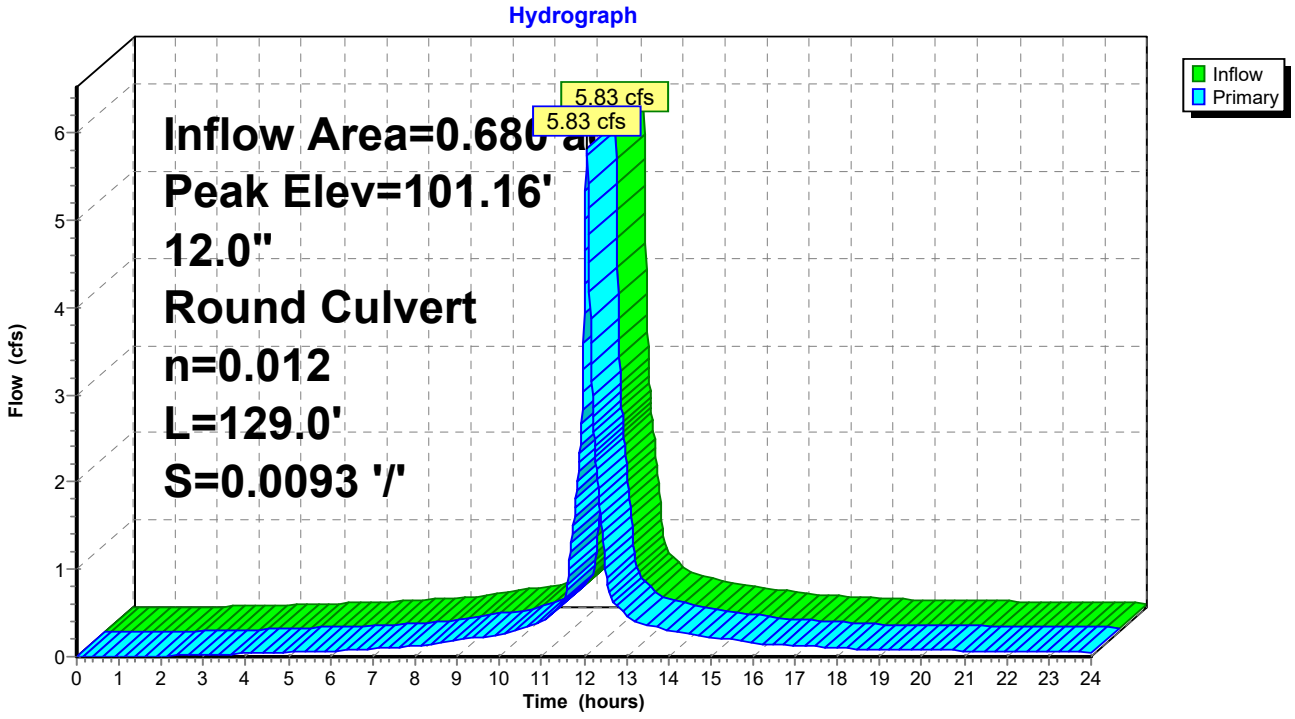
Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 7.83" for 50 yr event
Inflow = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af
Outflow = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af, Atten= 0%, Lag= 0.0 min
Primary = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 101.16'@ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.26'	**12.0" Round Culvert** L= 129.0' Ke= 0.500 Inlet / Outlet Invert= 95.26' / 94.06' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=5.82 cfs @ 12.07 hrs HW=101.16' TW=96.93' (Dynamic Tailwater)
1=Culvert (Outlet Controls 5.82 cfs @ 7.42 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

[57] Hint: Peaked at 96.93' (Flood elevation advised)

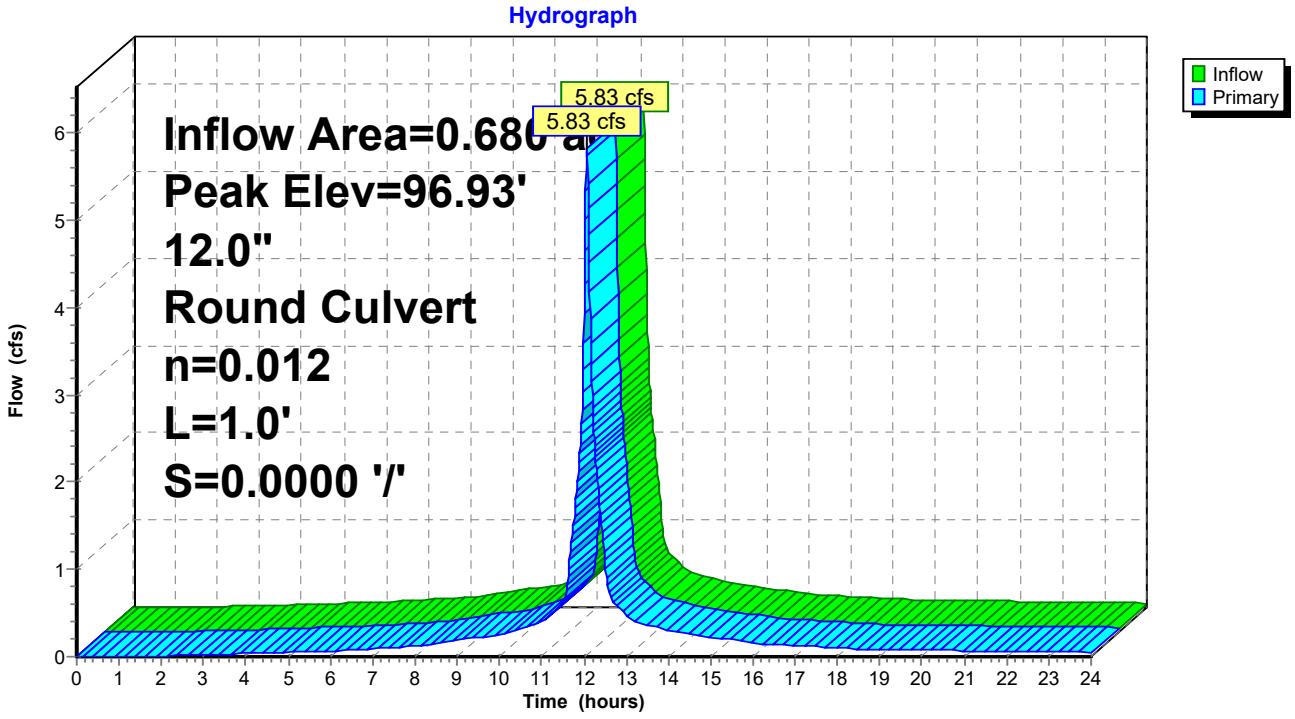
Inflow Area = 0.680 ac, 83.41% Impervious, Inflow Depth > 7.83" for 50 yr event
Inflow = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af
Outflow = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af, Atten= 0%, Lag= 0.0 min
Primary = 5.83 cfs @ 12.07 hrs, Volume= 0.444 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 96.93' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.06'	**12.0" Round Culvert** L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 94.06' / 94.06' S= 0.0000 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=5.82 cfs @ 12.07 hrs HW=96.93' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 5.82 cfs @ 7.42 fps)

Pond CB3: CB3



Summary for Pond DMH1: DMH1

[57] Hint: Peaked at 93.41' (Flood elevation advised)

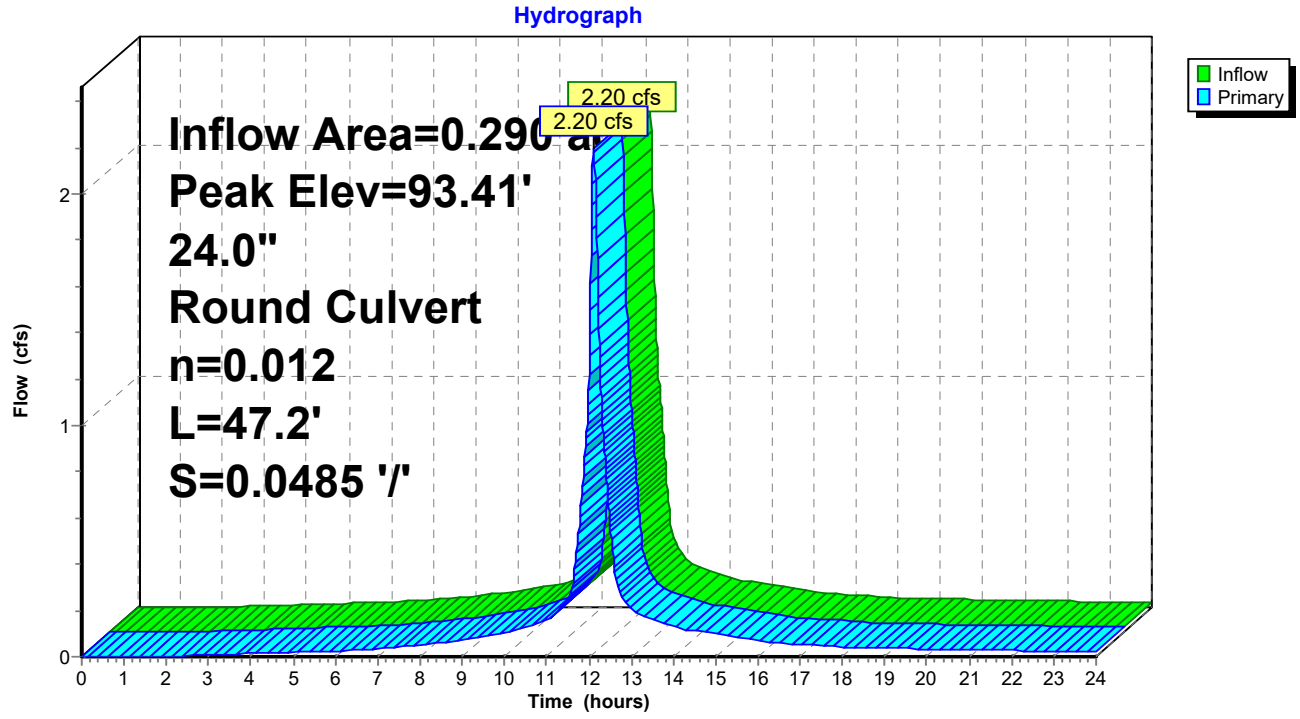
Inflow Area = 0.290 ac, 71.50% Impervious, Inflow Depth > 7.71" for 50 yr event
Inflow = 2.20 cfs @ 12.12 hrs, Volume= 0.187 af
Outflow = 2.20 cfs @ 12.12 hrs, Volume= 0.187 af, Atten= 0%, Lag= 0.0 min
Primary = 2.20 cfs @ 12.12 hrs, Volume= 0.187 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 93.41'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.79'	**24.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 92.79' / 90.50' S= 0.0485 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=2.19 cfs @ 12.12 hrs HW=93.41' TW=91.24' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.19 cfs @ 2.67 fps)

Pond DMH1: DMH1



Summary for Pond DMH2: DMH2

[57] Hint: Peaked at 91.24' (Flood elevation advised)

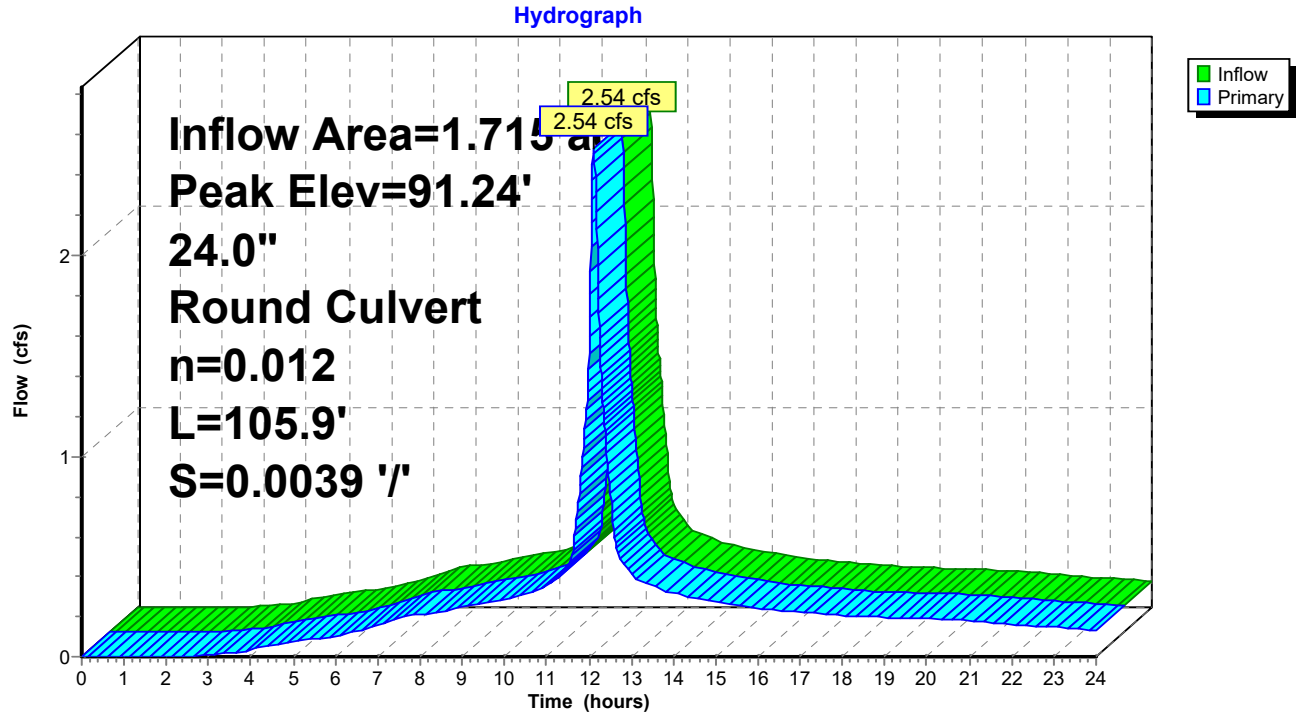
Inflow Area = 1.715 ac, 62.79% Impervious, Inflow Depth > 3.10" for 50 yr event
Inflow = 2.54 cfs @ 12.12 hrs, Volume= 0.443 af
Outflow = 2.54 cfs @ 12.12 hrs, Volume= 0.443 af, Atten= 0%, Lag= 0.0 min
Primary = 2.54 cfs @ 12.12 hrs, Volume= 0.443 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 91.24' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	90.47'	**24.0" Round Culvert** L= 105.9' Ke= 0.500 Inlet / Outlet Invert= 90.47' / 90.06' S= 0.0039 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=2.53 cfs @ 12.12 hrs HW=91.24' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 2.53 cfs @ 3.36 fps)

Pond DMH2: DMH2



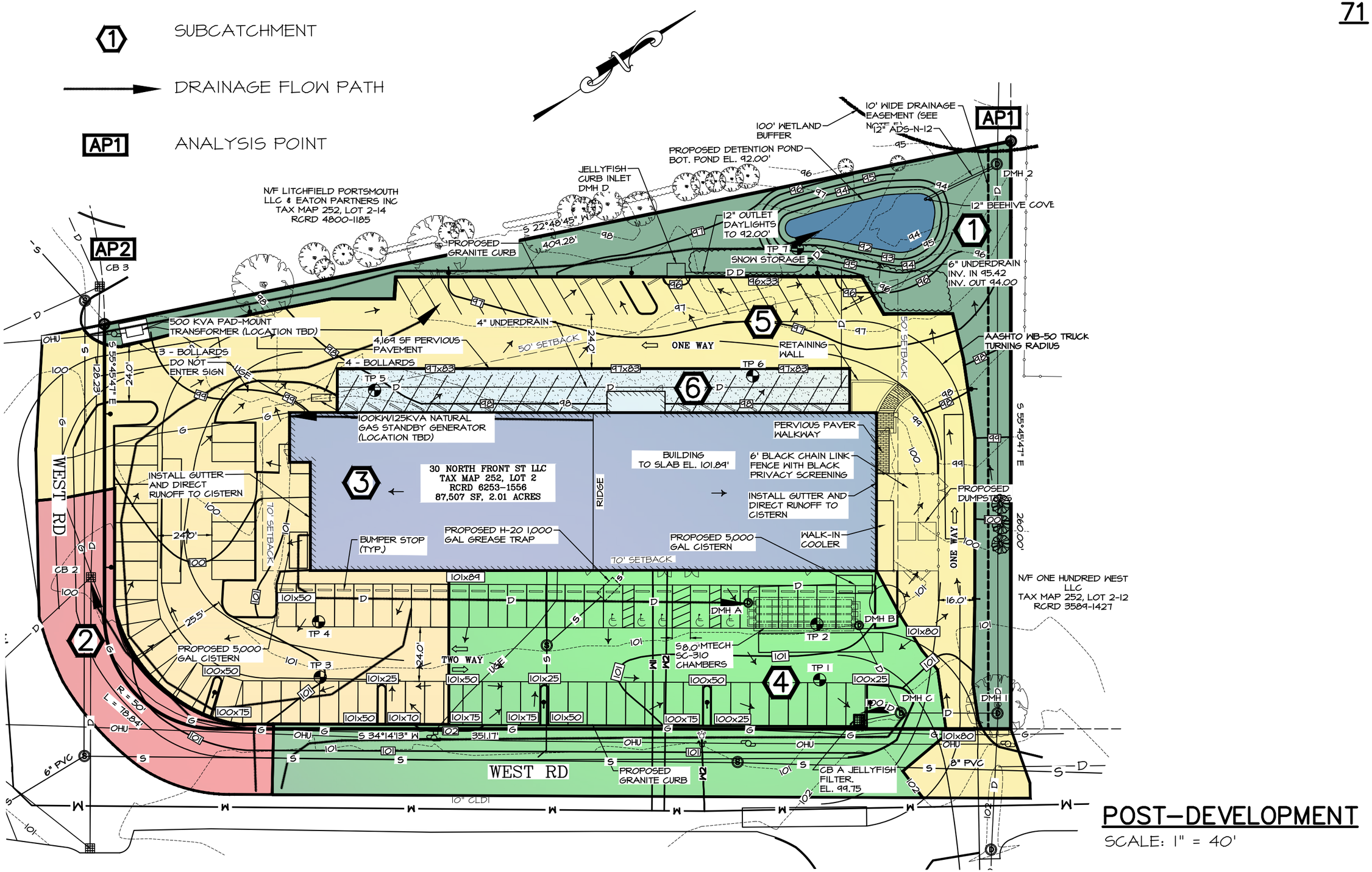
POST-DEVELOPMENT CALCULATIONS

LEGEND

1 — SUBCATCHMENT

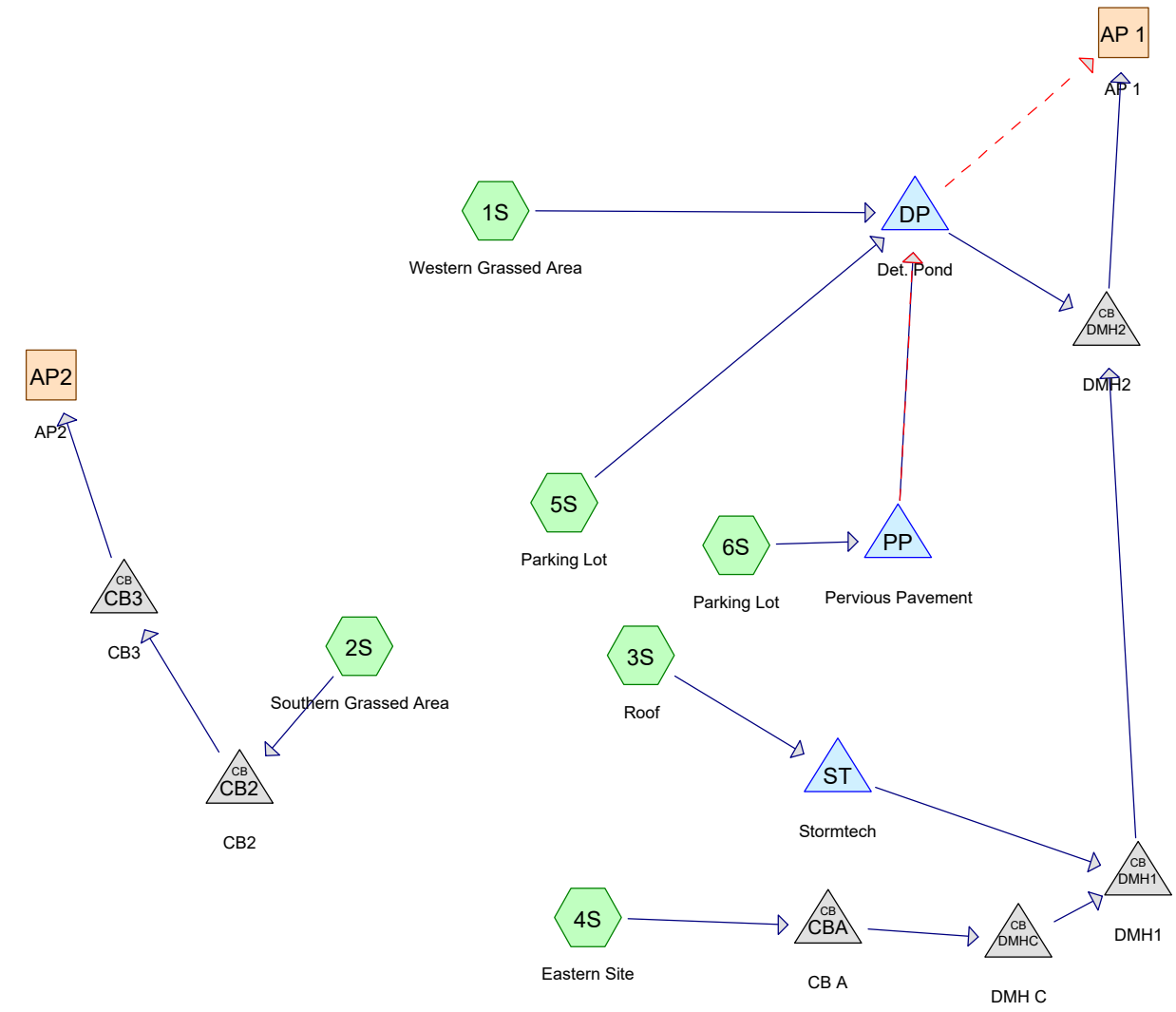
DRAINAGE FLOW PATH

AP1 — ANALYSIS POINT



POST-DEVELOPMENT

SCALE: 1" = 40'



Subcat Reach Pond Link

Routing Diagram for Post 7-21-22
Prepared by Ross Engineering, Printed 8/8/2022

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.584	74	>75% Grass cover, Good, HSG C (1S, 2S, 4S, 5S)
0.003	98	Concrete (1S, 5S)
1.286	98	Paved roads w/curbs & sewers, HSG C (1S, 2S, 4S, 5S)
0.096	61	Pervious Pavement, HSG C (6S)
0.005	42	Pervious Pavers, HSG C (5S)
0.002	98	Retaining Wall & Stairs, HSG C (5S)
0.418	98	Roofs, HSG C (3S, 5S, 6S)
2.395	**91**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.392	HSG C	1S, 2S, 3S, 4S, 5S, 6S
0.000	HSG D	
0.003	Other	1S, 5S
2.395		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.584	0.000	0.000	0.584	>75% Grass cover, Good	1S, 2S, 4S, 5S
0.000	0.000	0.000	0.000	0.003	0.003	Concrete	1S, 5S
0.000	0.000	1.286	0.000	0.000	1.286	Paved roads w/curbs & sewers	1S, 2S, 4S, 5S
0.000	0.000	0.096	0.000	0.000	0.096	Pervious Pavement	6S
0.000	0.000	0.005	0.000	0.000	0.005	Pervious Pavers	5S
0.000	0.000	0.002	0.000	0.000	0.002	Retaining Wall & Stairs	5S
0.000	0.000	0.418	0.000	0.000	0.418	Roofs	3S, 5S, 6S
0.000	**0.000**	**2.392**	**0.000**	**0.003**	**2.395**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	CB2	95.26	94.06	129.0	0.0093	0.012	12.0	0.0	0.0
2	CB3	94.06	94.06	1.0	0.0000	0.012	12.0	0.0	0.0
3	CBA	95.40	95.35	10.0	0.0050	0.012	12.0	0.0	0.0
4	DMH1	92.79	90.50	47.2	0.0485	0.012	24.0	0.0	0.0
5	DMH2	90.47	90.06	105.9	0.0039	0.012	24.0	0.0	0.0
6	DMHC	95.28	93.37	45.0	0.0424	0.012	24.0	0.0	0.0
7	DP	92.00	90.75	32.7	0.0382	0.010	12.0	0.0	0.0
8	PP	95.42	94.00	53.0	0.0268	0.012	6.0	0.0	0.0
9	ST	98.00	95.40	38.5	0.0675	0.010	12.0	0.0	0.0

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 4
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: WesternGrassedArea Runoff Area=14,469 sf 3.15% Impervious Runoff Depth>1.45"
Flow Length=316' Tc=7.5 min CN=75 Runoff=0.52 cfs 0.040 af

Subcatchment2S: SouthernGrassedArea Runoff Area=5,631 sf 54.43% Impervious Runoff Depth>2.37"
Tc=5.0 min CN=87 Runoff=0.37 cfs 0.026 af

Subcatchment3S: Roof Runoff Area=17,704 sf 100.00% Impervious Runoff Depth>3.47"
Tc=5.0 min CN=98 Runoff=1.52 cfs 0.118 af

Subcatchment4S: EasternSite Runoff Area=23,278 sf 80.70% Impervious Runoff Depth>2.93"
Flow Length=303' Tc=8.8 min CN=93 Runoff=1.61 cfs 0.131 af

Subcatchment5S: ParkingLot Runoff Area=38,818 sf 88.18% Impervious Runoff Depth>3.14"
Tc=5.0 min CN=95 Runoff=3.19 cfs 0.233 af

Subcatchment6S: ParkingLot Runoff Area=4,414 sf 5.55% Impervious Runoff Depth>0.76"
Tc=5.0 min CN=63 Runoff=0.08 cfs 0.006 af

ReachAP 1: AP 1 Inflow=4.63 cfs 0.448 af
Outflow=4.63 cfs 0.448 af

ReachAP2: AP2 Inflow=0.37 cfs 0.026 af
Outflow=0.37 cfs 0.026 af

Pond CB2: CB2 Peak Elev=95.56' Inflow=0.37 cfs 0.026 af
12.0" Round Culvert n=0.012 L=129.0' S=0.0093 '/' Outflow=0.37 cfs 0.026 af

Pond CB3: CB3 Peak Elev=94.44' Inflow=0.37 cfs 0.026 af
12.0" Round Culvert n=0.012 L=1.0' S=0.0000 '/' Outflow=0.37 cfs 0.026 af

Pond CBA: CB A Peak Elev=96.23' Inflow=1.61 cfs 0.131 af
12.0" Round Culvert n=0.012 L=10.0' S=0.0050 '/' Outflow=1.61 cfs 0.131 af

Pond DMH1: DMH1 Peak Elev=93.50' Inflow=2.88 cfs 0.171 af
24.0" Round Culvert n=0.012 L=47.2' S=0.0485 '/' Outflow=2.88 cfs 0.171 af

Pond DMH2: DMH2 Peak Elev=91.55' Inflow=4.63 cfs 0.448 af
24.0" Round Culvert n=0.012 L=105.9' S=0.0039 '/' Outflow=4.63 cfs 0.448 af

Pond DMHC: DMH C Peak Elev=95.80' Inflow=1.61 cfs 0.131 af
24.0" Round Culvert n=0.012 L=45.0' S=0.0424 '/' Outflow=1.61 cfs 0.131 af

Pond DP: Det. Pond Peak Elev=93.21' Storage=1,783 cf Inflow=3.66 cfs 0.279 af
Primary=1.91 cfs 0.276 af Secondary=0.00 cfs 0.000 af Outflow=1.91 cfs 0.276 af

Pond PP: PerviousPavement Peak Elev=95.48' Storage=98 cf Inflow=0.08 cfs 0.006 af
Primary=0.01 cfs 0.005 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.005 af

Pond ST: Stormtech Peak Elev=98.60' Storage=386 cf Inflow=1.52 cfs 0.118 af
Discarded=0.11 cfs 0.077 af Primary=1.28 cfs 0.040 af Outflow=1.40 cfs 0.118 af

Total Runoff Area = 2.395 ac Runoff Volume = 0.554 af Average Runoff Depth = 2.78"
28.60% Pervious = 0.685 ac 71.40% Impervious = 1.710 ac

Summary for Subcatchment 1S: Western Grassed Area

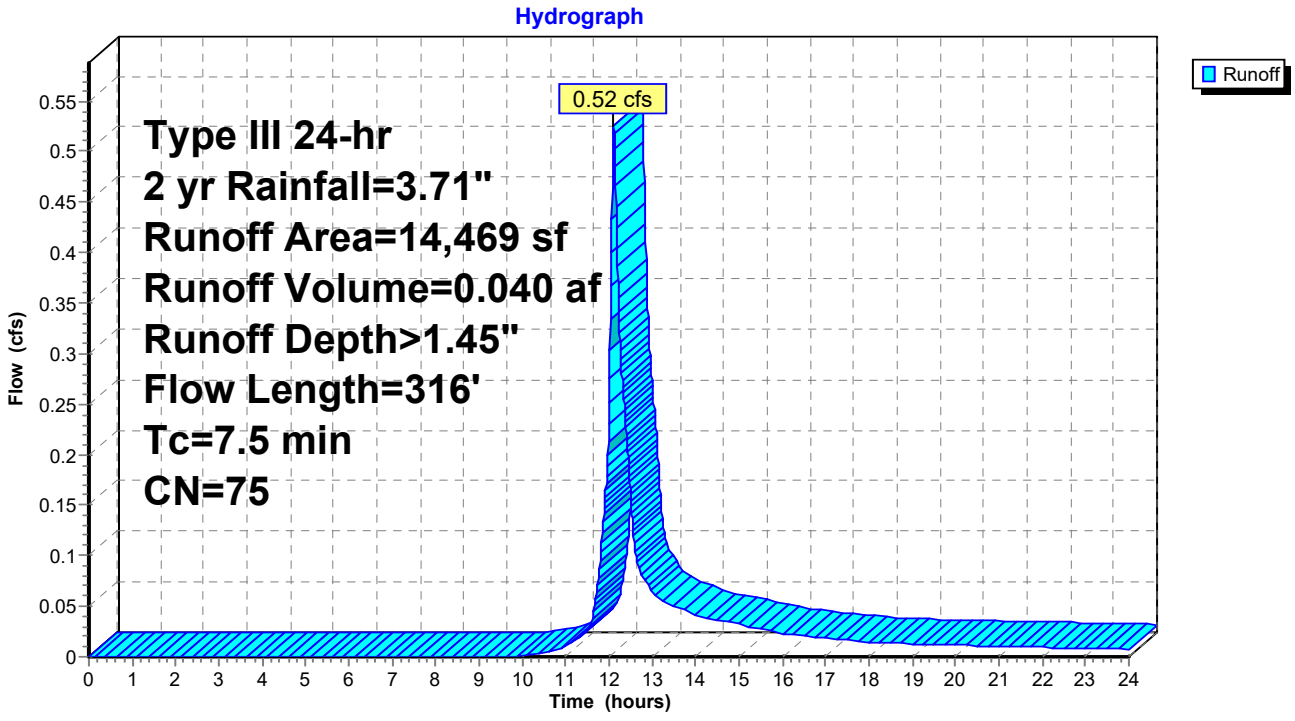
Runoff = 0.52 cfs @ 12.11 hrs, Volume= 0.040 af, Depth> 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

	Area (sf)	CN	Description
	14,013	74	>75% Grass cover, Good, HSG C
	342	98	Paved roads w/curbs & sewers, HSG C
*	114	98	Concrete
	14,469	75	Weighted Average
	14,013		96.85% Pervious Area
	456		3.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0232	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
2.6	266	0.0132	1.72		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.5	316	Total			

Subcatchment 1S: Western Grassed Area



Summary for Subcatchment 2S: Southern Grassed Area

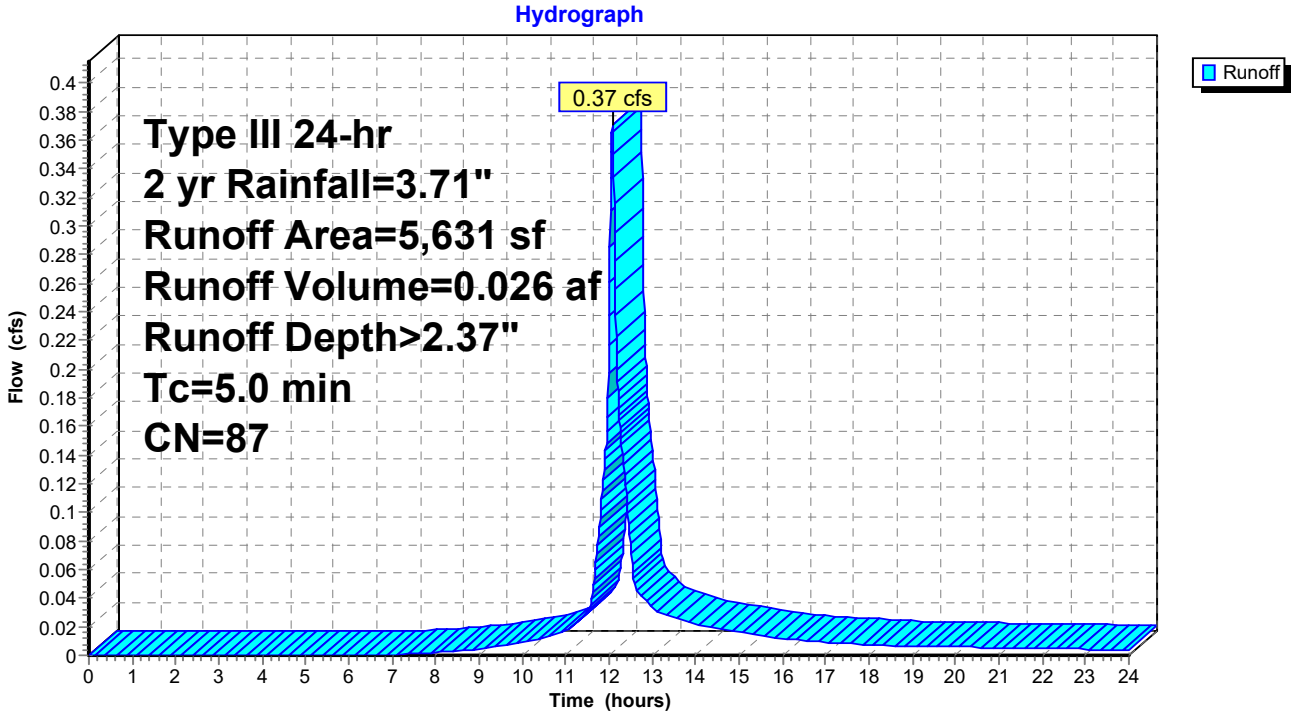
Runoff = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af, Depth> 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

Area (sf)	CN	Description
2,566	74	>75% Grass cover, Good, HSG C
3,065	98	Paved roads w/curbs & sewers, HSG C
5,631	87	Weighted Average
2,566		45.57% Pervious Area
3,065		54.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: Southern Grassed Area



Summary for Subcatchment 3S: Roof

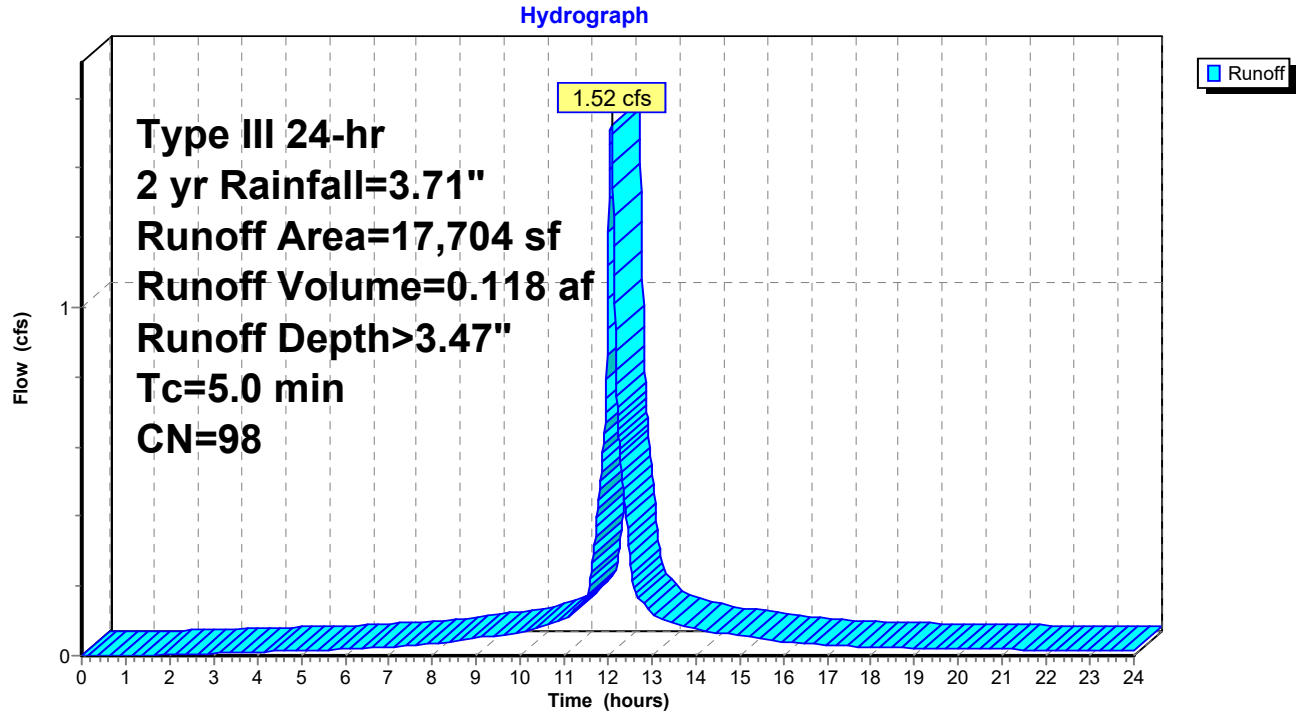
Runoff = 1.52 cfs @ 12.07 hrs, Volume= 0.118 af, Depth> 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

Area (sf)	CN	Description
17,704	98	Roofs, HSG C
17,704		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 3S: Roof



Summary for Subcatchment 4S: Eastern Site

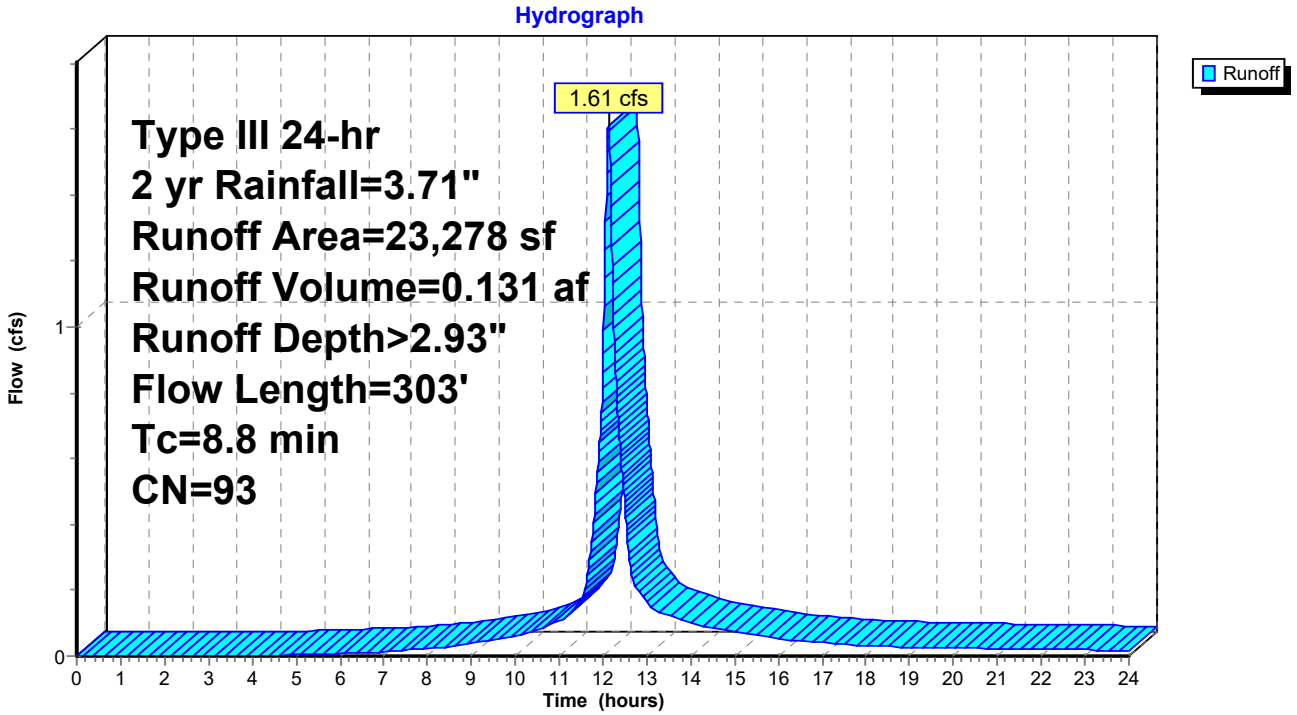
Runoff = 1.61 cfs @ 12.12 hrs, Volume= 0.131 af, Depth> 2.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

Area (sf)	CN	Description
4,492	74	>75% Grass cover, Good, HSG C
18,786	98	Paved roads w/curbs & sewers, HSG C
23,278	93	Weighted Average
4,492		19.30% Pervious Area
18,786		80.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0208	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.70"
4.6	37	0.0154	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
4.0	252	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	303	Total			

Subcatchment 4S: Eastern Site



Summary for Subcatchment 5S: Parking Lot

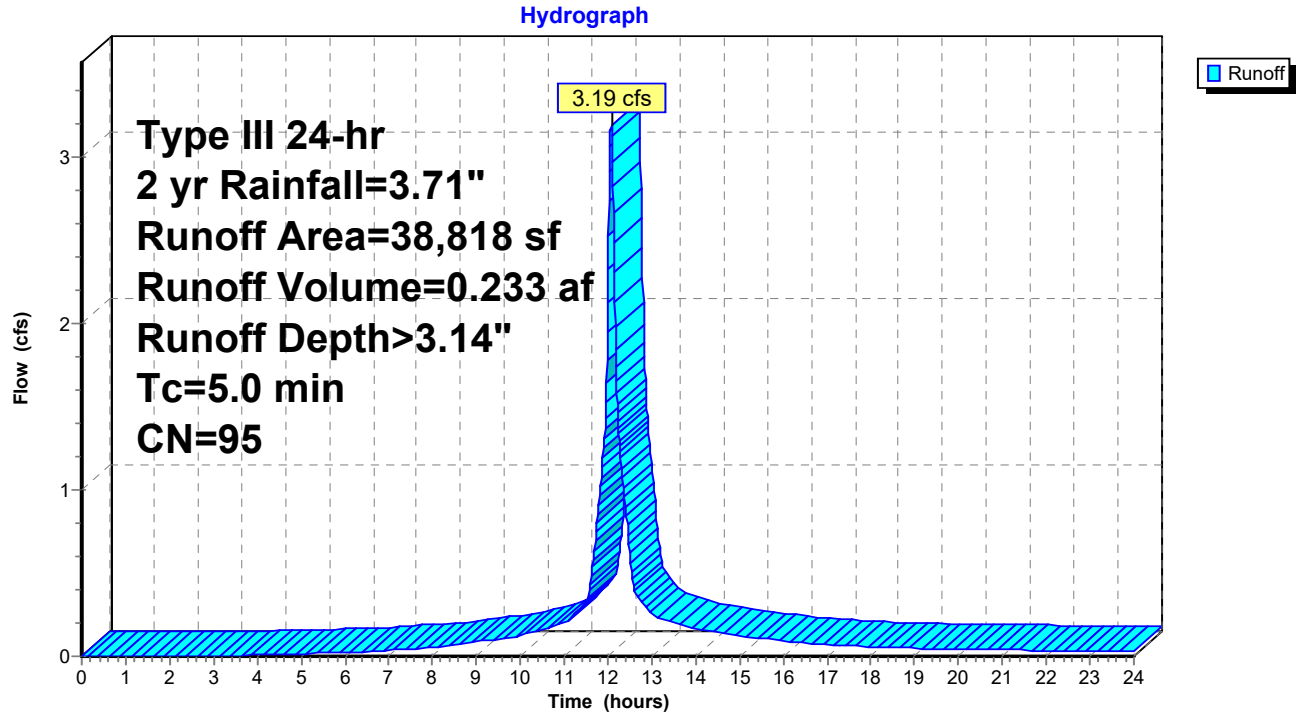
Runoff = 3.19 cfs @ 12.07 hrs, Volume= 0.233 af, Depth> 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

	Area (sf)	CN	Description
	4,359	74	>75% Grass cover, Good, HSG C
	33,846	98	Paved roads w/curbs & sewers, HSG C
*	26	98	Concrete
*	231	42	Pervious Pavers, HSG C
	248	98	Roofs, HSG C
*	108	98	Retaining Wall & Stairs, HSG C
	38,818	95	Weighted Average
	4,590		11.82% Pervious Area
	34,228		88.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 5S: Parking Lot



Summary for Subcatchment 6S: Parking Lot

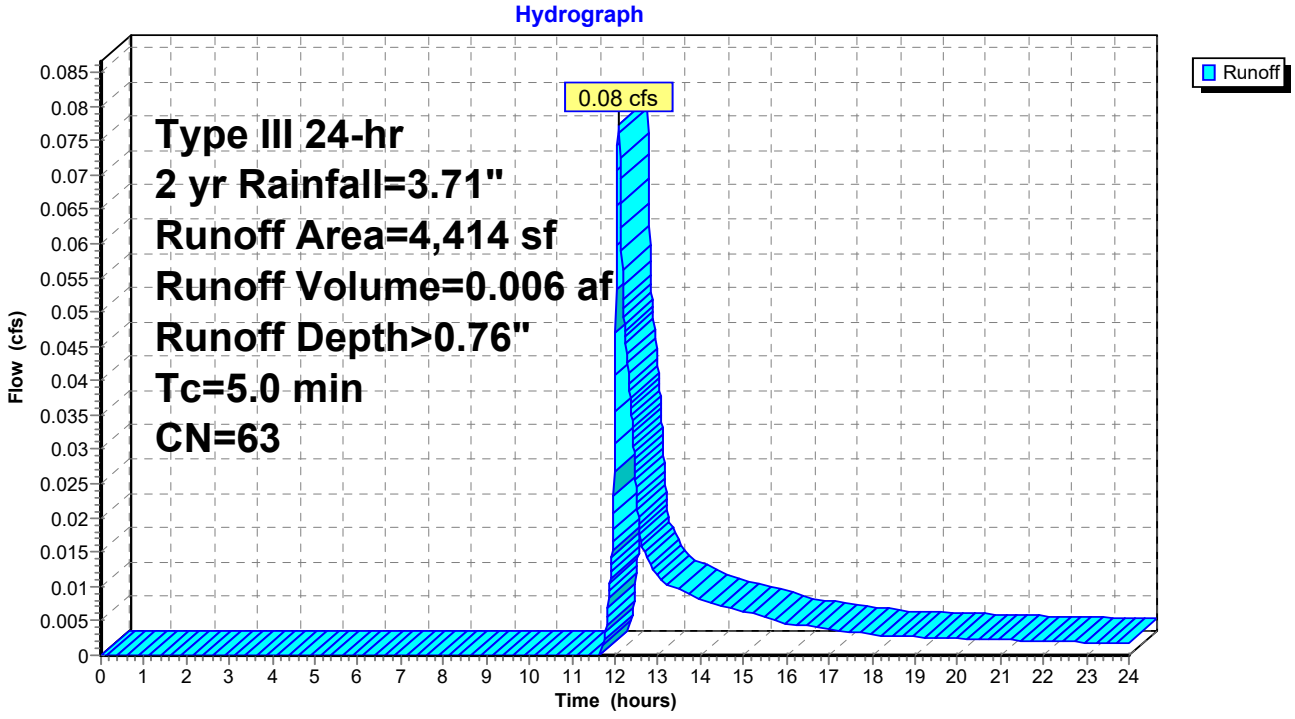
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.71"

	Area (sf)	CN	Description
*	4,169	61	Pervious Pavement, HSG C
	245	98	Roofs, HSG C
	4,414	63	Weighted Average
	4,169		94.45% Pervious Area
	245		5.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 6S: Parking Lot



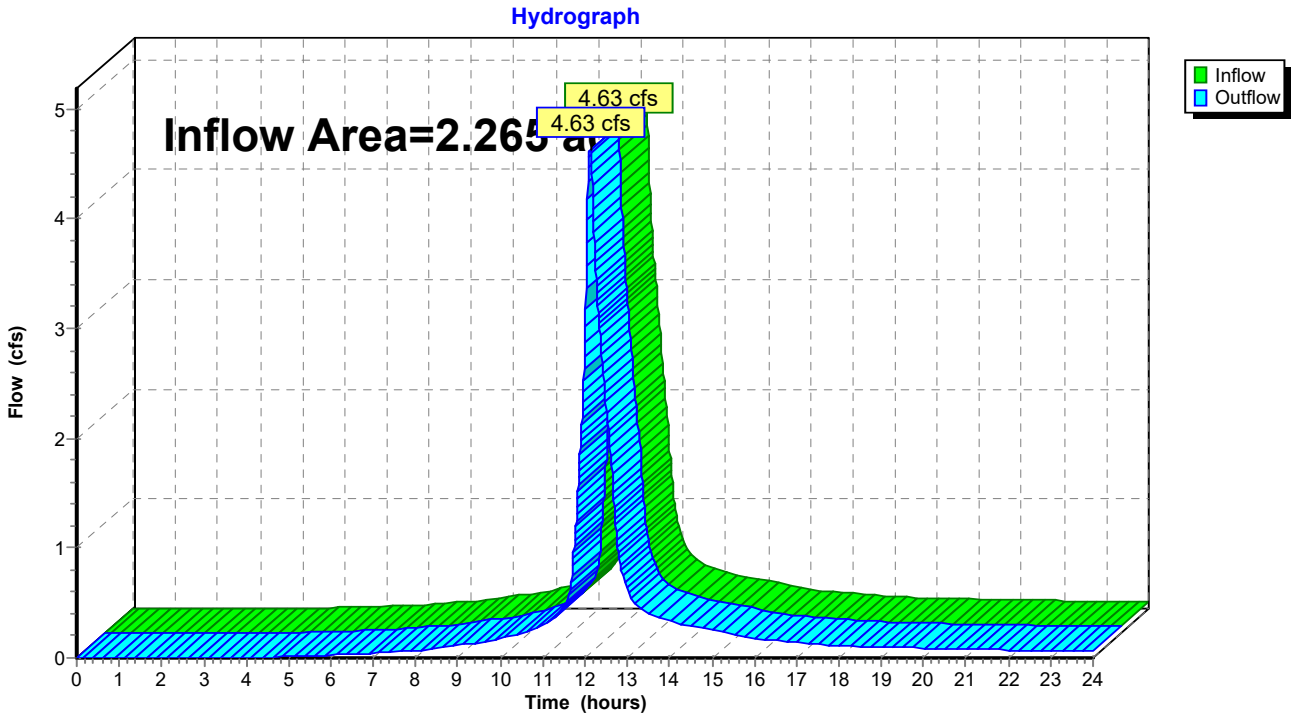
Summary for Reach AP 1: AP 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.265 ac, 72.37% Impervious, Inflow Depth > 2.37" for 2 yr event
Inflow = 4.63 cfs @ 12.12 hrs, Volume= 0.448 af
Outflow = 4.63 cfs @ 12.12 hrs, Volume= 0.448 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4

Reach AP 1: AP 1



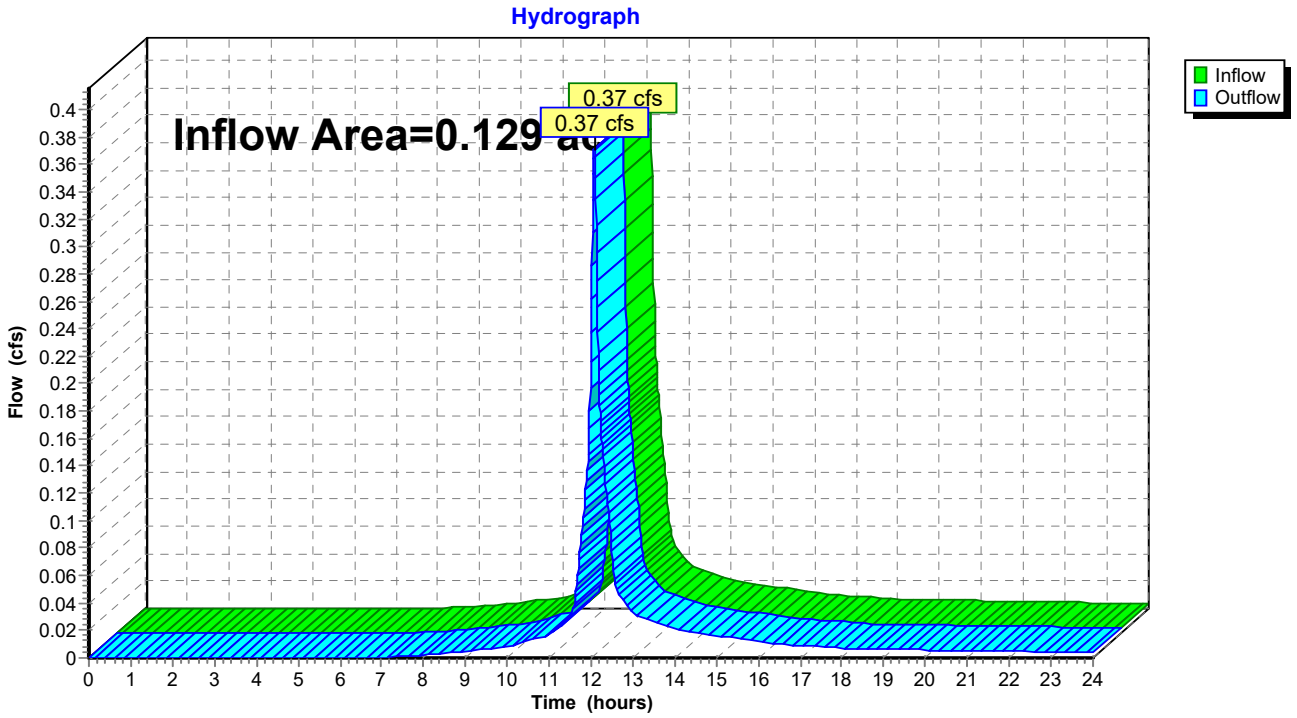
Summary for Reach AP2: AP2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 2.37" for 2 yr event
Inflow = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af
Outflow = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4

Reach AP2: AP2



Summary for Pond CB2: CB2

[57] Hint: Peaked at 95.56' (Flood elevation advised)

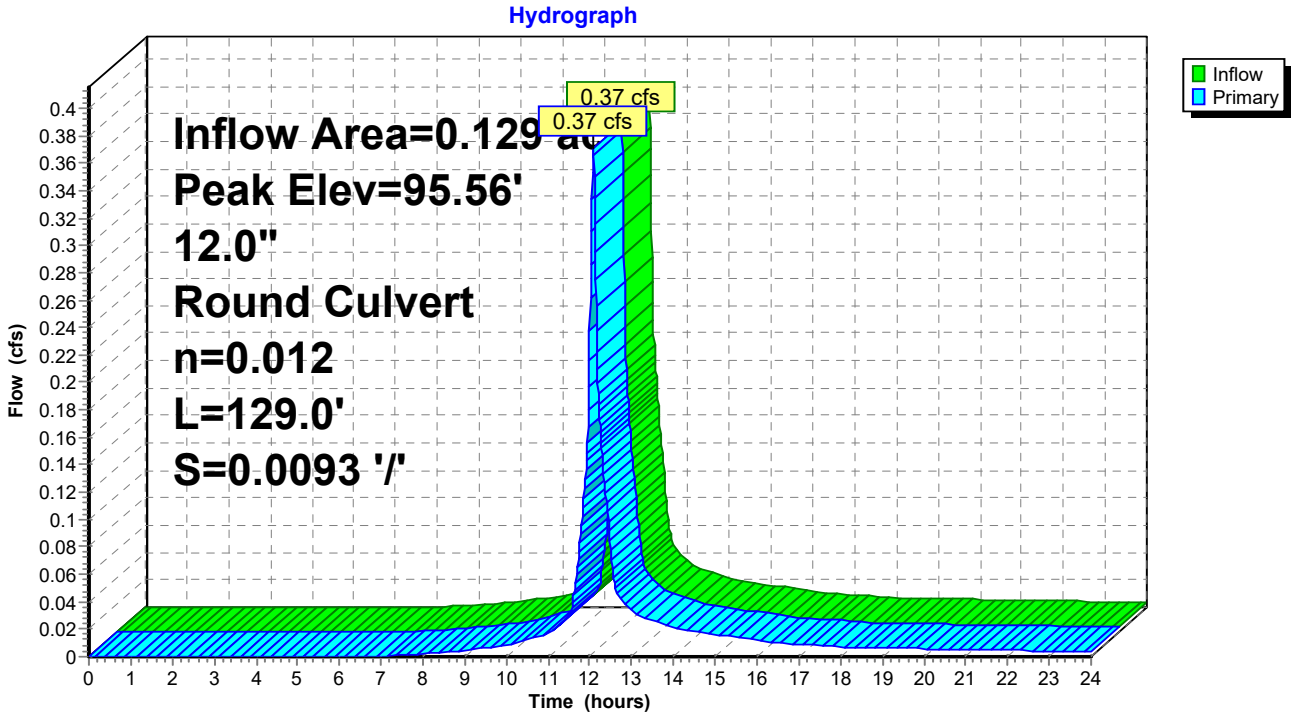
Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 2.37" for 2 yr event
Inflow = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af
Outflow = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min
Primary = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.56'@ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.26'	**12.0" Round Culvert** L= 129.0' Ke= 0.500 Inlet / Outlet Invert= 95.26' / 94.06' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.37 cfs @ 12.07 hrs HW=95.56' TW=94.44' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.37 cfs @ 2.77 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

[57] Hint: Peaked at 94.44' (Flood elevation advised)

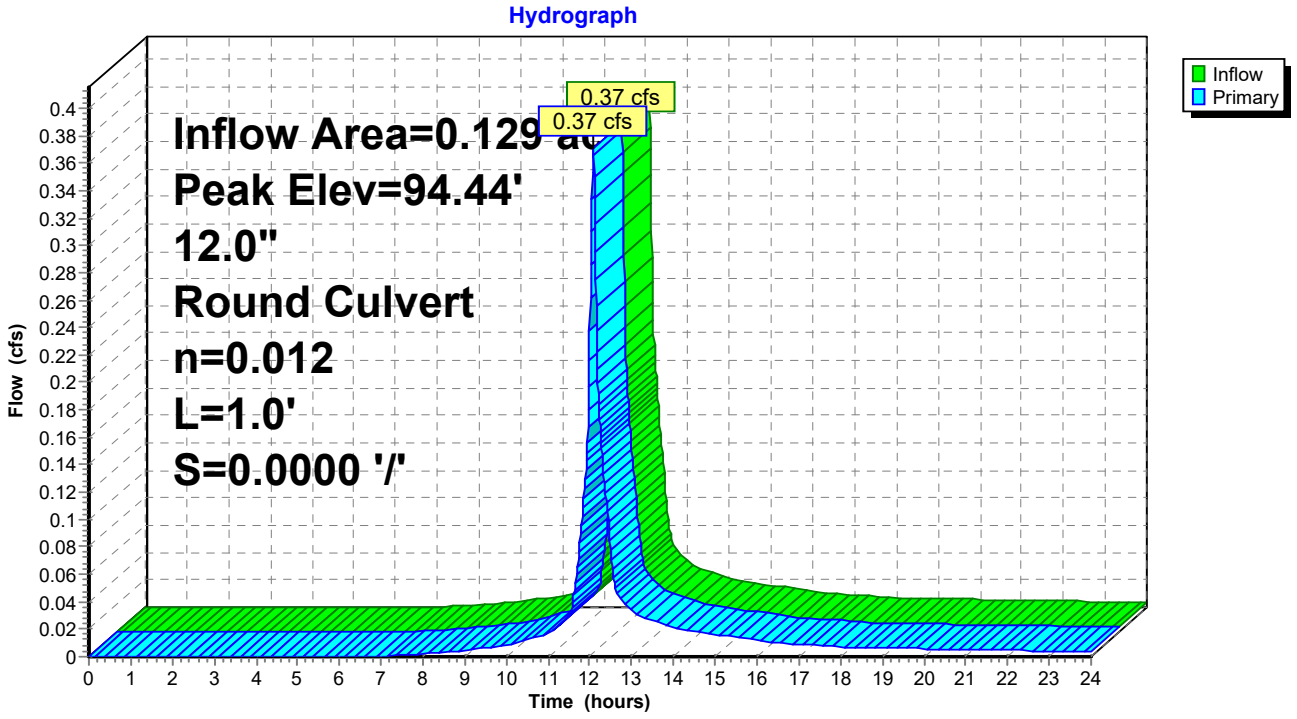
Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 2.37" for 2 yr event
Inflow = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af
Outflow = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min
Primary = 0.37 cfs @ 12.07 hrs, Volume= 0.026 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 94.44' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.06'	**12.0" Round Culvert** L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 94.06' / 94.06' S= 0.0000 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.37 cfs @ 12.07 hrs HW=94.44' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 0.37 cfs @ 1.99 fps)

Pond CB3: CB3



Summary for Pond CBA: CB A

[57] Hint: Peaked at 96.23' (Flood elevation advised)

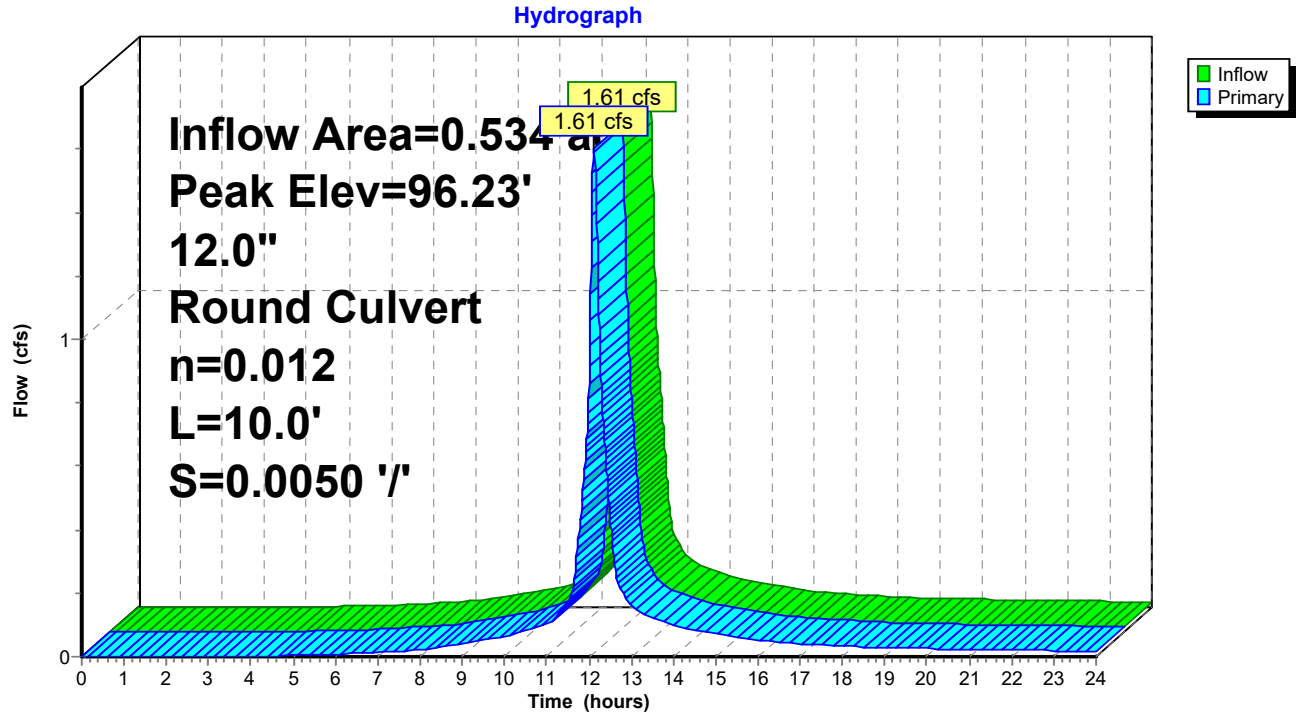
Inflow Area = 0.534 ac, 80.70% Impervious, Inflow Depth > 2.93" for 2 yr event
Inflow = 1.61 cfs @ 12.12 hrs, Volume= 0.131 af
Outflow = 1.61 cfs @ 12.12 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min
Primary = 1.61 cfs @ 12.12 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 96.23'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.40'	**12.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 95.40' / 95.35' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.61 cfs @ 12.12 hrs HW=96.23' TW=95.80' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 1.61 cfs @ 3.11 fps)

Pond CBA: CB A



Summary for Pond DMH1: DMH1

[57] Hint: Peaked at 93.50' (Flood elevation advised)

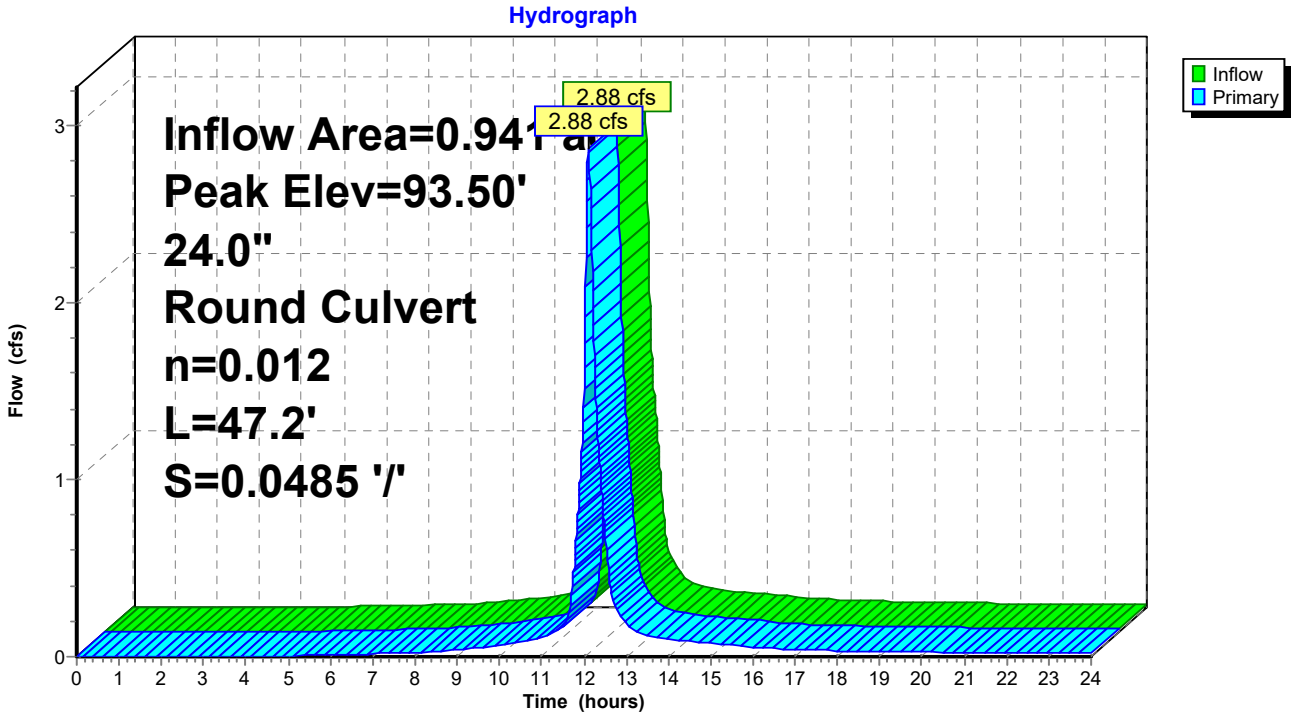
Inflow Area = 0.941 ac, 89.04% Impervious, Inflow Depth > 2.18" for 2 yr event
Inflow = 2.88 cfs @ 12.11 hrs, Volume= 0.171 af
Outflow = 2.88 cfs @ 12.11 hrs, Volume= 0.171 af, Atten= 0%, Lag= 0.0 min
Primary = 2.88 cfs @ 12.11 hrs, Volume= 0.171 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 93.50' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.79'	**24.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 92.79' / 90.50' S= 0.0485 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=2.87 cfs @ 12.11 hrs HW=93.50' TW=91.54' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.87 cfs @ 2.87 fps)

Pond DMH1: DMH1



Summary for Pond DMH2: DMH2

[57] Hint: Peaked at 91.55' (Flood elevation advised)

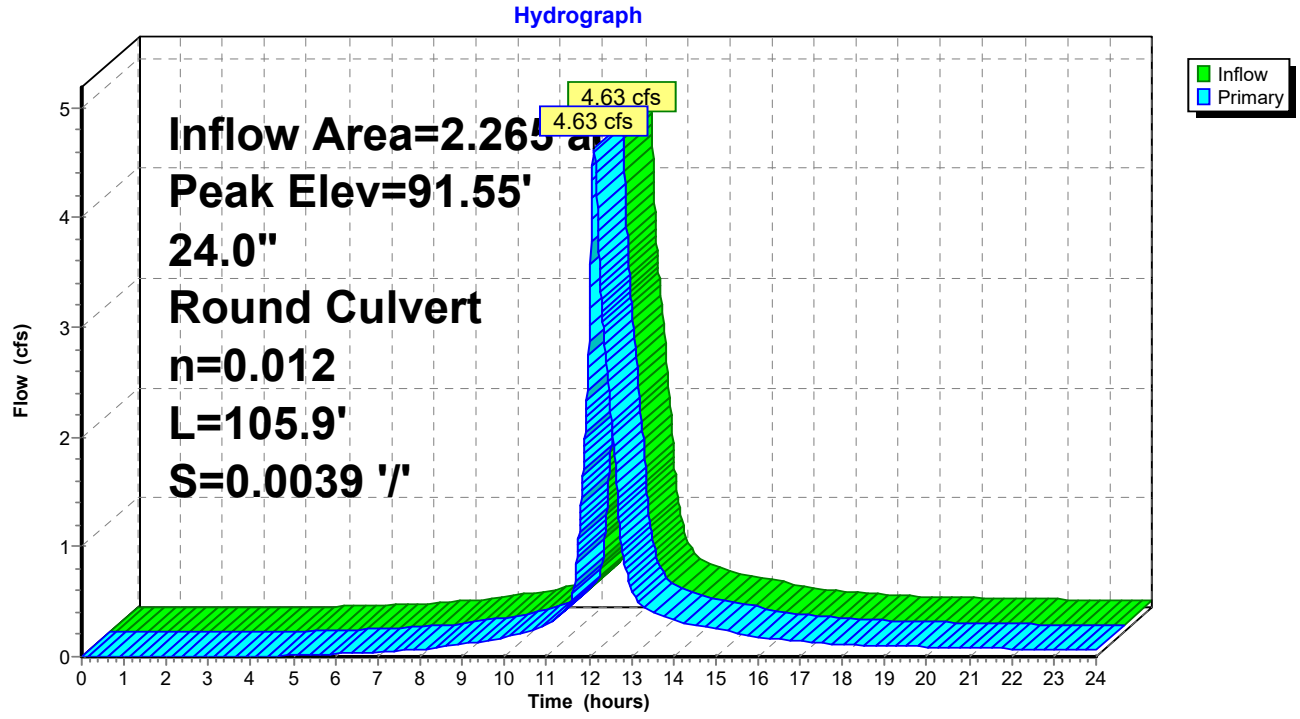
Inflow Area = 2.265 ac, 72.37% Impervious, Inflow Depth > 2.37" for 2 yr event
Inflow = 4.63 cfs @ 12.12 hrs, Volume= 0.448 af
Outflow = 4.63 cfs @ 12.12 hrs, Volume= 0.448 af, Atten= 0%, Lag= 0.0 min
Primary = 4.63 cfs @ 12.12 hrs, Volume= 0.448 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 91.55'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	90.47'	**24.0" Round Culvert** L= 105.9' Ke= 0.500 Inlet / Outlet Invert= 90.47' / 90.06' S= 0.0039 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=4.63 cfs @ 12.12 hrs HW=91.55' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 4.63 cfs @ 3.90 fps)

Pond DMH2: DMH2



Summary for Pond DMHC: DMH C

[57] Hint: Peaked at 95.80' (Flood elevation advised)

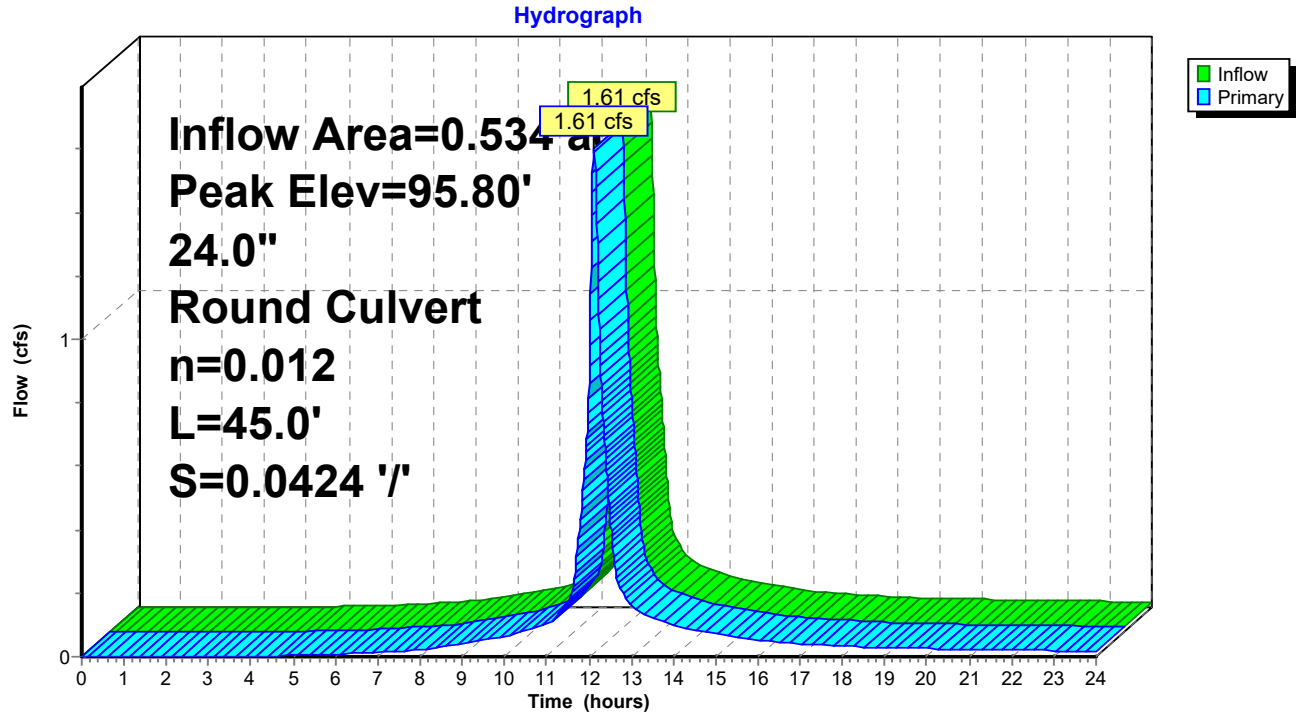
Inflow Area = 0.534 ac, 80.70% Impervious, Inflow Depth > 2.93" for 2 yr event
Inflow = 1.61 cfs @ 12.12 hrs, Volume= 0.131 af
Outflow = 1.61 cfs @ 12.12 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min
Primary = 1.61 cfs @ 12.12 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.80' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.28'	**24.0" Round Culvert** L= 45.0' Ke= 0.500 Inlet / Outlet Invert= 95.28' / 93.37' S= 0.0424 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=1.61 cfs @ 12.12 hrs HW=95.80' TW=93.50' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.61 cfs @ 2.46 fps)

Pond DMHC: DMH C



Summary for Pond DP: Det. Pond

Inflow Area = 1.325 ac, 60.53% Impervious, Inflow Depth > 2.53" for 2 yr event
Inflow = 3.66 cfs @ 12.08 hrs, Volume= 0.279 af
Outflow = 1.91 cfs @ 12.21 hrs, Volume= 0.276 af, Atten= 48%, Lag= 8.0 min
Primary = 1.91 cfs @ 12.21 hrs, Volume= 0.276 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 93.21' @ 12.21 hrs Surf.Area= 1,788 sf Storage= 1,783 cf

Plug-Flow detention time=20.8 min calculated for 0.276 af (99% of inflow)
Center-of-Mass det. time=15.2 min (805.3 - 790.1)

Volume	Invert	Avail.Storage	Storage Description
#1	92.00'	5,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

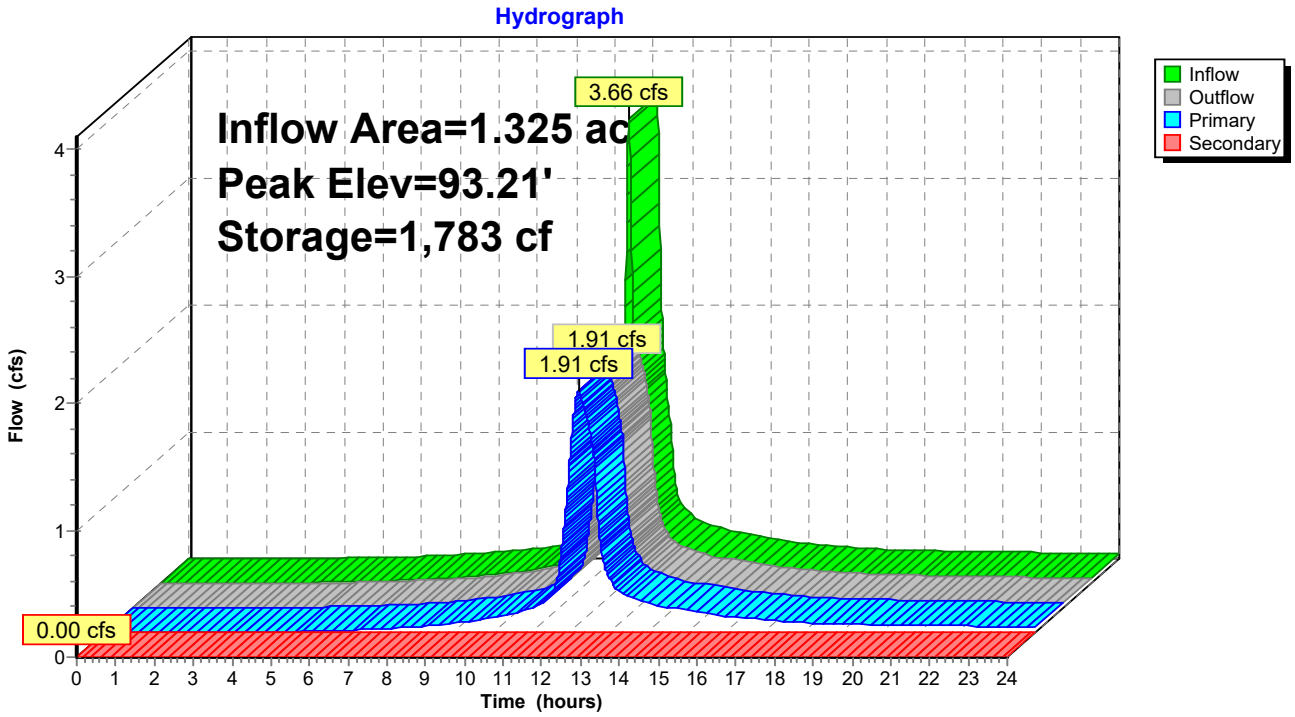
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
92.00	1	0.0	0	0
92.01	1,176	100.0	6	6
93.00	1,671	100.0	1,409	1,415
94.00	2,222	100.0	1,947	3,362
95.00	2,830	100.0	2,526	5,888

Device	Routing	Invert	Outlet Devices
#1	Primary	92.00'	**12.0" Round Culvert** L= 32.7' Ke= 0.500 Inlet / Outlet Invert= 92.00' / 90.75' S= 0.0382 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	94.90'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Device 1	92.00'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	93.10'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.91 cfs @ 12.21 hrs HW=93.21' TW=91.45' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 1.91 cfs of 3.19 cfs potential flow)
↑├**3=Orifice/Grate** (Orifice Controls 1.85 cfs @ 5.30 fps)
└**4=Orifice/Grate** (Orifice Controls 0.06 cfs @ 1.14 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=92.00' TW=0.00' (Dynamic Tailwater)
↑└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond DP: Det. Pond



Summary for Pond PP: Pervious Pavement

Inflow Area = 0.101 ac, 5.55% Impervious, Inflow Depth > 0.76" for 2 yr event
Inflow = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af
Outflow = 0.01 cfs @ 13.09 hrs, Volume= 0.005 af, Atten= 86%, Lag= 59.8 min
Primary = 0.01 cfs @ 13.09 hrs, Volume= 0.005 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.48' @ 13.09 hrs Surf.Area= 4,169 sf Storage= 98 cf

Plug-Flow detention time= 171.4 min calculated for 0.005 af (84% of inflow)
Center-of-Mass det. time= 101.2 min (988.9 - 887.8)

Volume	Invert	Avail.Storage	Storage Description
#1	95.42'	1,803 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

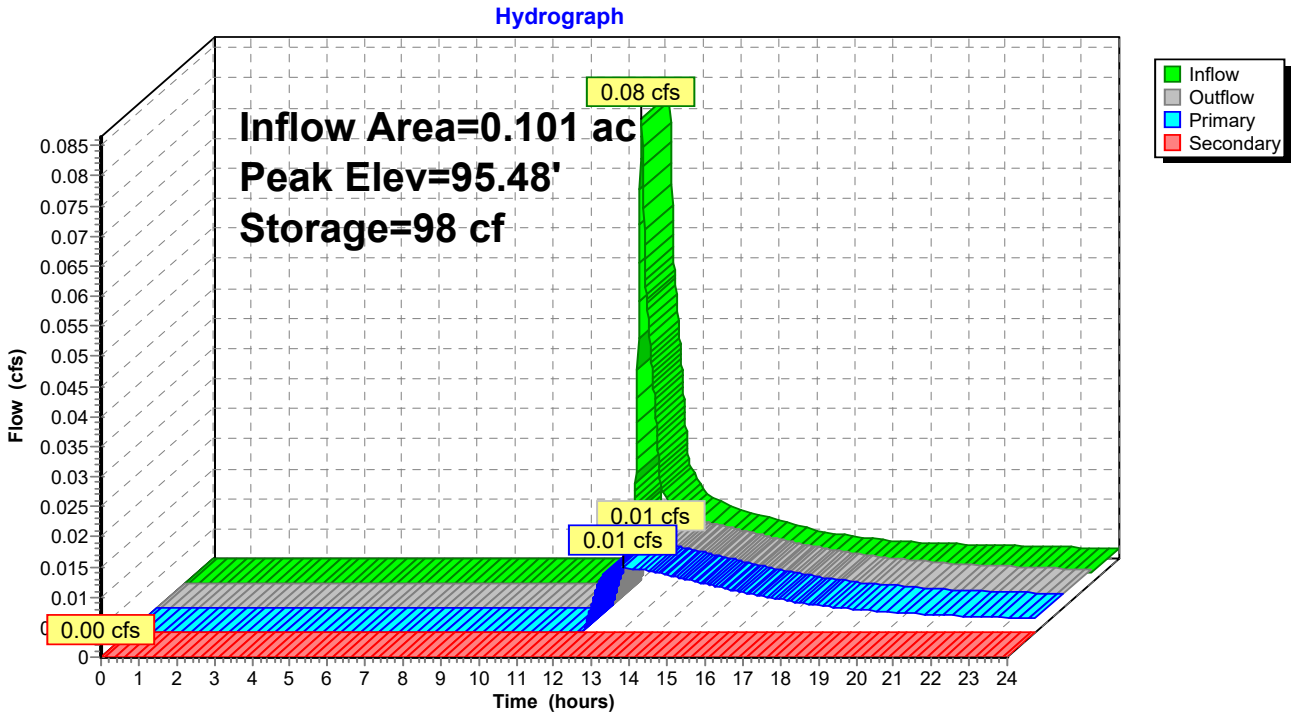
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
95.42	4,169	0.0	0	0
95.43	4,169	40.0	17	17
95.90	4,169	40.0	784	800
95.91	4,169	15.0	6	807
96.15	4,169	15.0	150	957
96.16	4,169	5.0	2	959
97.15	4,169	5.0	206	1,165
97.16	4,169	30.0	13	1,178
97.49	4,169	30.0	413	1,590
97.50	4,169	15.0	6	1,597
97.83	4,169	15.0	206	1,803

Device	Routing	Invert	Outlet Devices
#1	Primary	95.42'	**6.0" Round Culvert** L= 53.0' Ke= 0.500 Inlet / Outlet Invert= 95.42' / 94.00' S= 0.0268 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf
#2	Secondary	97.73'	**200.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.01 cfs @ 13.09 hrs HW=95.48' TW=92.31' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.01 cfs @ 0.83 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=95.42' TW=92.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond PP: Pervious Pavement



Summary for Pond ST: Stormtech

Inflow Area = 0.406 ac, 100.00% Impervious, Inflow Depth > 3.47" for 2 yr event
Inflow = 1.52 cfs @ 12.07 hrs, Volume= 0.118 af
Outflow = 1.40 cfs @ 12.10 hrs, Volume= 0.118 af, Atten= 8%, Lag= 2.0 min
Discarded = 0.11 cfs @ 11.25 hrs, Volume= 0.077 af
Primary = 1.28 cfs @ 12.10 hrs, Volume= 0.040 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 98.60' @ 12.10 hrs Surf.Area= 656 sf Storage= 386 cf

Plug-Flow detention time=5.1 min calculated for 0.118 af (100% of inflow)
Center-of-Mass det. time=5.1 min (757.1 - 752.0)

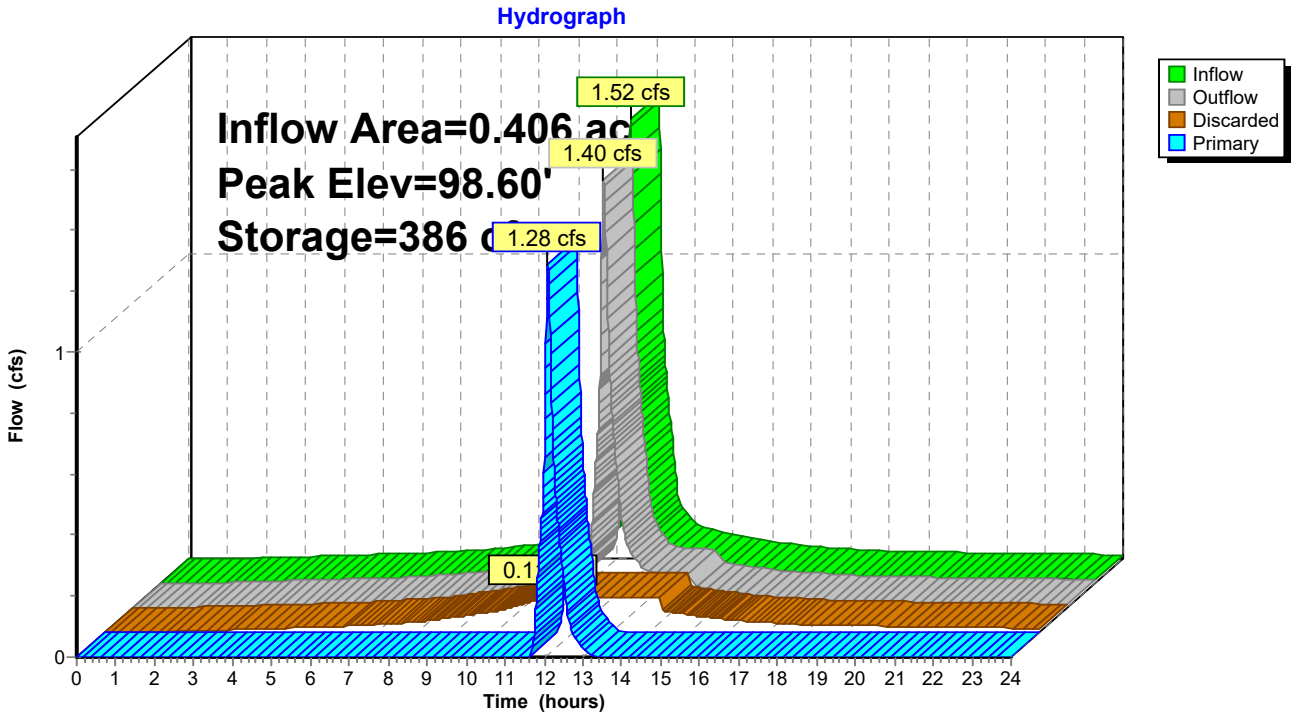
Volume	Invert	Avail.Storage	Storage Description
#1	97.58'	468 cf	**14.82'W x 44.24'L x 2.33'H Prismatoid** 1,528 cf Overall - 357 cf Embedded = 1,170 cf x 40.0% Voids
#2	98.08'	357 cf	**ADS_StormTech SC-310** x 24 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 4 rows
		826 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	**12.0" Round Culvert** L= 38.5' Ke= 0.500 Inlet / Outlet Invert= 98.00' / 95.40' S= 0.0675 '/' Cc= 0.900 n= 0.010, Flow Area= 0.79 sf
#2	Discarded	97.58'	**7.500 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.11 cfs @ 11.25 hrs HW=97.60' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.11 cfs)

Primary OutFlow Max=1.28 cfs @ 12.10 hrs HW=98.60' TW=93.50' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 1.28 cfs @ 2.63 fps)

Pond ST: Stormtech



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 4
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: WesternGrassedArea Runoff Area=14,469 sf 3.15% Impervious Runoff Depth>2.97"
Flow Length=316' Tc=7.5 min CN=75 Runoff=1.10 cfs 0.082 af

Subcatchment2S: SouthernGrassedArea Runoff Area=5,631 sf 54.43% Impervious Runoff Depth>4.17"
Tc=5.0 min CN=87 Runoff=0.64 cfs 0.045 af

Subcatchment3S: Roof Runoff Area=17,704 sf 100.00% Impervious Runoff Depth>5.40"
Tc=5.0 min CN=98 Runoff=2.33 cfs 0.183 af

Subcatchment4S: EasternSite Runoff Area=23,278 sf 80.70% Impervious Runoff Depth>4.82"
Flow Length=303' Tc=8.8 min CN=93 Runoff=2.57 cfs 0.215 af

Subcatchment5S: ParkingLot Runoff Area=38,818 sf 88.18% Impervious Runoff Depth>5.05"
Tc=5.0 min CN=95 Runoff=4.99 cfs 0.375 af

Subcatchment6S: ParkingLot Runoff Area=4,414 sf 5.55% Impervious Runoff Depth>1.93"
Tc=5.0 min CN=63 Runoff=0.23 cfs 0.016 af

ReachAP 1: AP 1 Inflow=8.13 cfs 0.761 af
Outflow=8.13 cfs 0.761 af

ReachAP2: AP2 Inflow=0.64 cfs 0.045 af
Outflow=0.64 cfs 0.045 af

Pond CB2: CB2 Peak Elev=95.67' Inflow=0.64 cfs 0.045 af
12.0" Round Culvert n=0.012 L=129.0' S=0.0093 '/' Outflow=0.64 cfs 0.045 af

Pond CB3: CB3 Peak Elev=94.57' Inflow=0.64 cfs 0.045 af
12.0" Round Culvert n=0.012 L=1.0' S=0.0000 '/' Outflow=0.64 cfs 0.045 af

Pond CBA: CB A Peak Elev=96.55' Inflow=2.57 cfs 0.215 af
12.0" Round Culvert n=0.012 L=10.0' S=0.0050 '/' Outflow=2.57 cfs 0.215 af

Pond DMH1: DMH1 Peak Elev=93.71' Inflow=4.60 cfs 0.292 af
24.0" Round Culvert n=0.012 L=47.2' S=0.0485 '/' Outflow=4.60 cfs 0.292 af

Pond DMH2: DMH2 Peak Elev=91.97' Inflow=8.13 cfs 0.761 af
24.0" Round Culvert n=0.012 L=105.9' S=0.0039 '/' Outflow=8.13 cfs 0.761 af

Pond DMHC: DMH C Peak Elev=95.95' Inflow=2.57 cfs 0.215 af
24.0" Round Culvert n=0.012 L=45.0' S=0.0424 '/' Outflow=2.57 cfs 0.215 af

Pond DP: Det. Pond Peak Elev=93.78' Storage=2,881 cf Inflow=6.01 cfs 0.472 af
Primary=3.83 cfs 0.469 af Secondary=0.00 cfs 0.000 af Outflow=3.83 cfs 0.469 af

Pond PP: PerviousPavement Peak Elev=95.56' Storage=238 cf Inflow=0.23 cfs 0.016 af
Primary=0.06 cfs 0.015 af Secondary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.015 af

Pond ST: Stormtech Peak Elev=98.80' Storage=479 cf Inflow=2.33 cfs 0.183 af
Discarded=0.11 cfs 0.105 af Primary=2.06 cfs 0.078 af Outflow=2.17 cfs 0.183 af

Total Runoff Area = 2.395 ac Runoff Volume = 0.916 af Average Runoff Depth = 4.59"
28.60% Pervious = 0.685 ac 71.40% Impervious = 1.710 ac

Summary for Subcatchment 1S: Western Grassed Area

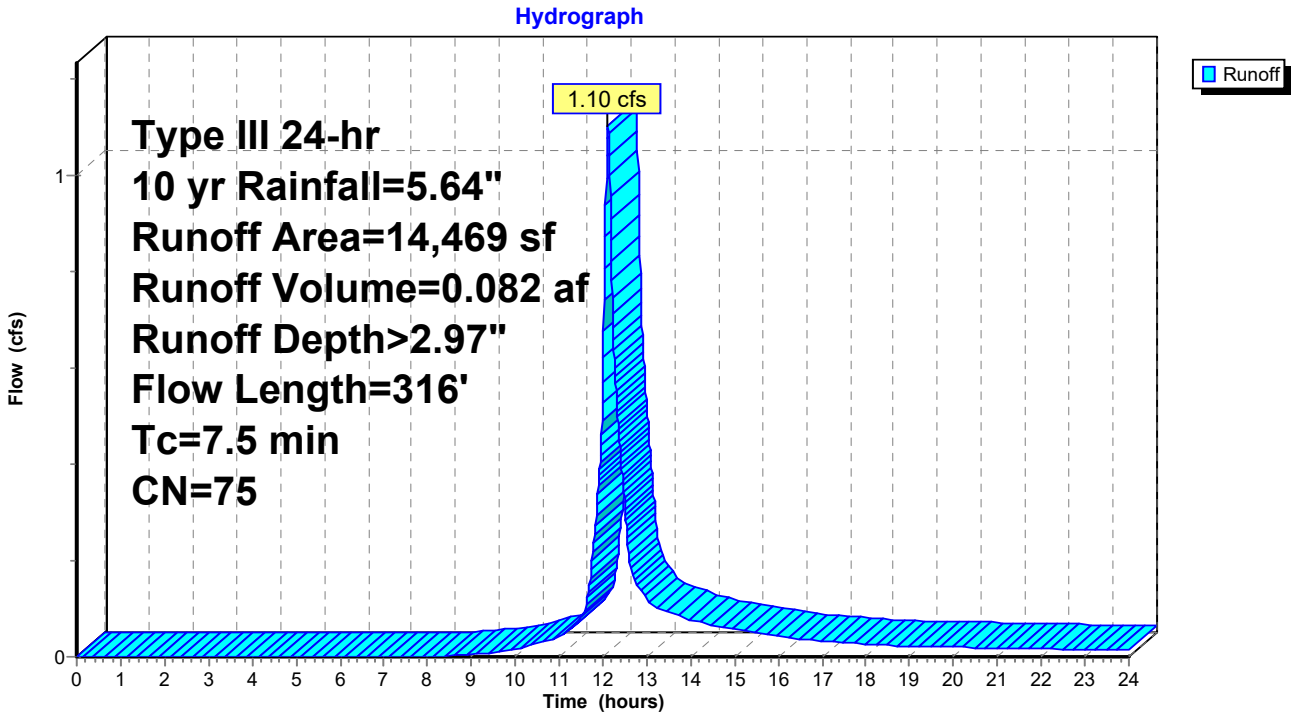
Runoff = 1.10 cfs @ 12.11 hrs, Volume= 0.082 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

	Area (sf)	CN	Description
	14,013	74	>75% Grass cover, Good, HSG C
	342	98	Paved roads w/curbs & sewers, HSG C
*	114	98	Concrete
	14,469	75	Weighted Average
	14,013		96.85% Pervious Area
	456		3.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0232	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
2.6	266	0.0132	1.72		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.5	316	Total			

Subcatchment 1S: Western Grassed Area



Summary for Subcatchment 2S: Southern Grassed Area

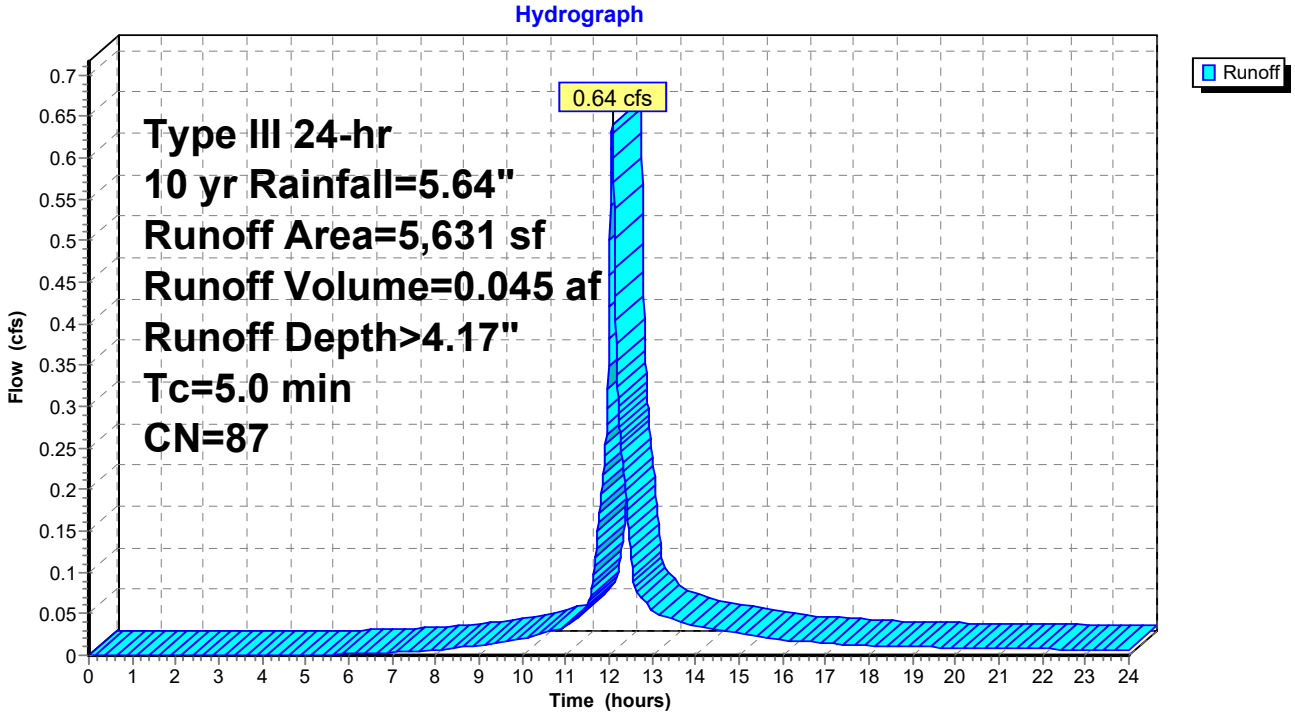
Runoff = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af, Depth> 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

Area (sf)	CN	Description
2,566	74	>75% Grass cover, Good, HSG C
3,065	98	Paved roads w/curbs & sewers, HSG C
5,631	87	Weighted Average
2,566		45.57% Pervious Area
3,065		54.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: Southern Grassed Area



Summary for Subcatchment 3S: Roof

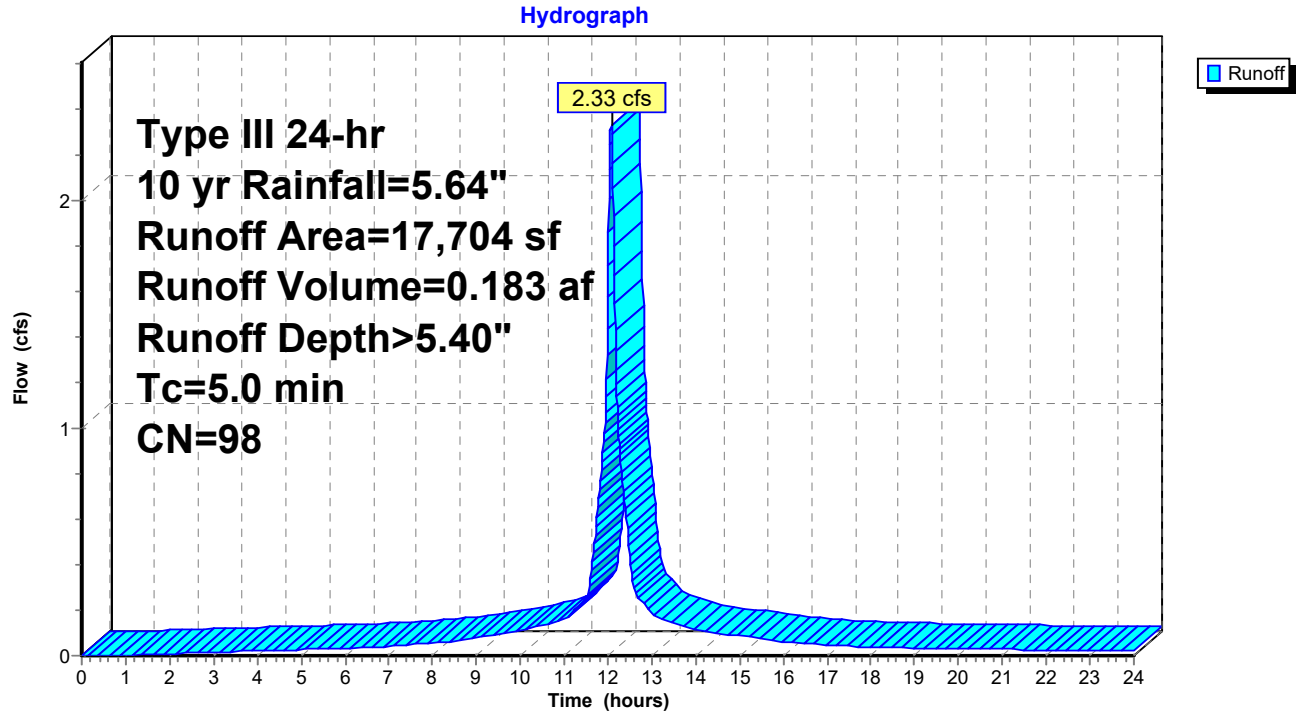
Runoff = 2.33 cfs @ 12.07 hrs, Volume= 0.183 af, Depth> 5.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

Area (sf)	CN	Description
17,704	98	Roofs, HSG C
17,704		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 3S: Roof



Summary for Subcatchment 4S: Eastern Site

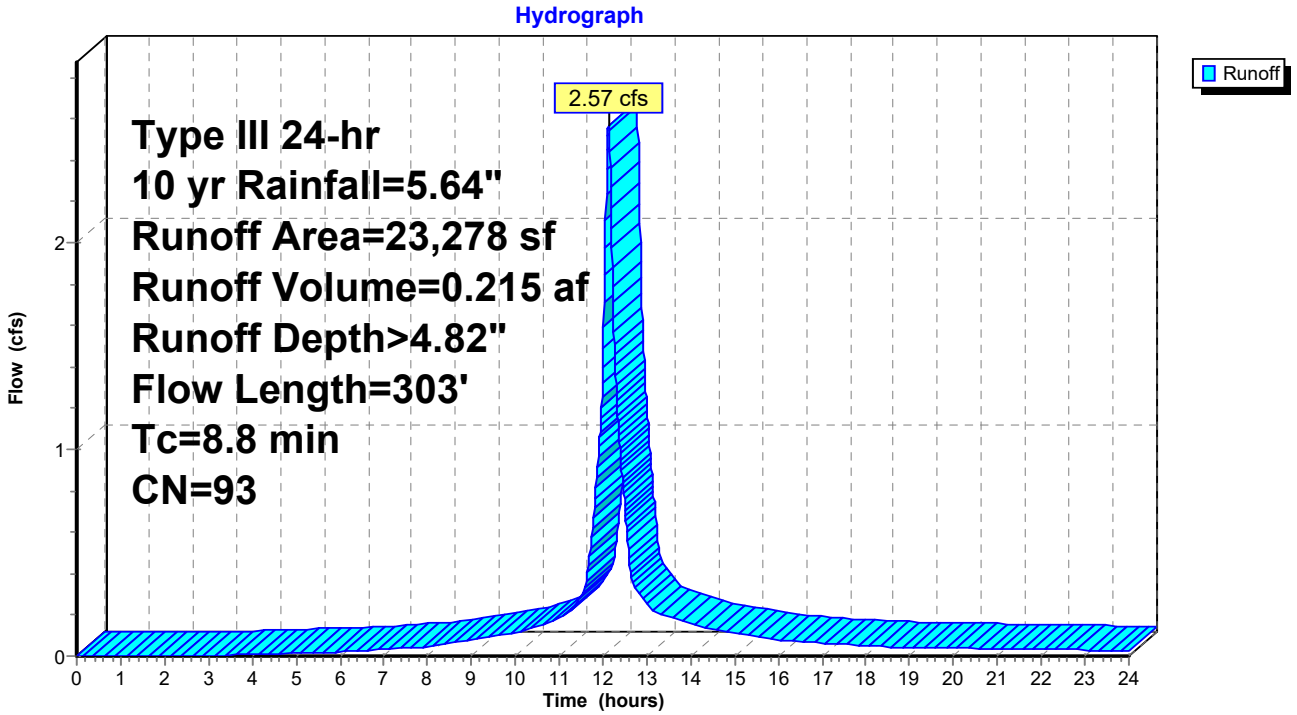
Runoff = 2.57 cfs @ 12.12 hrs, Volume= 0.215 af, Depth> 4.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

Area (sf)	CN	Description
4,492	74	>75% Grass cover, Good, HSG C
18,786	98	Paved roads w/curbs & sewers, HSG C
23,278	93	Weighted Average
4,492		19.30% Pervious Area
18,786		80.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0208	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.70"
4.6	37	0.0154	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
4.0	252	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	303	Total			

Subcatchment 4S: Eastern Site



Summary for Subcatchment 5S: Parking Lot

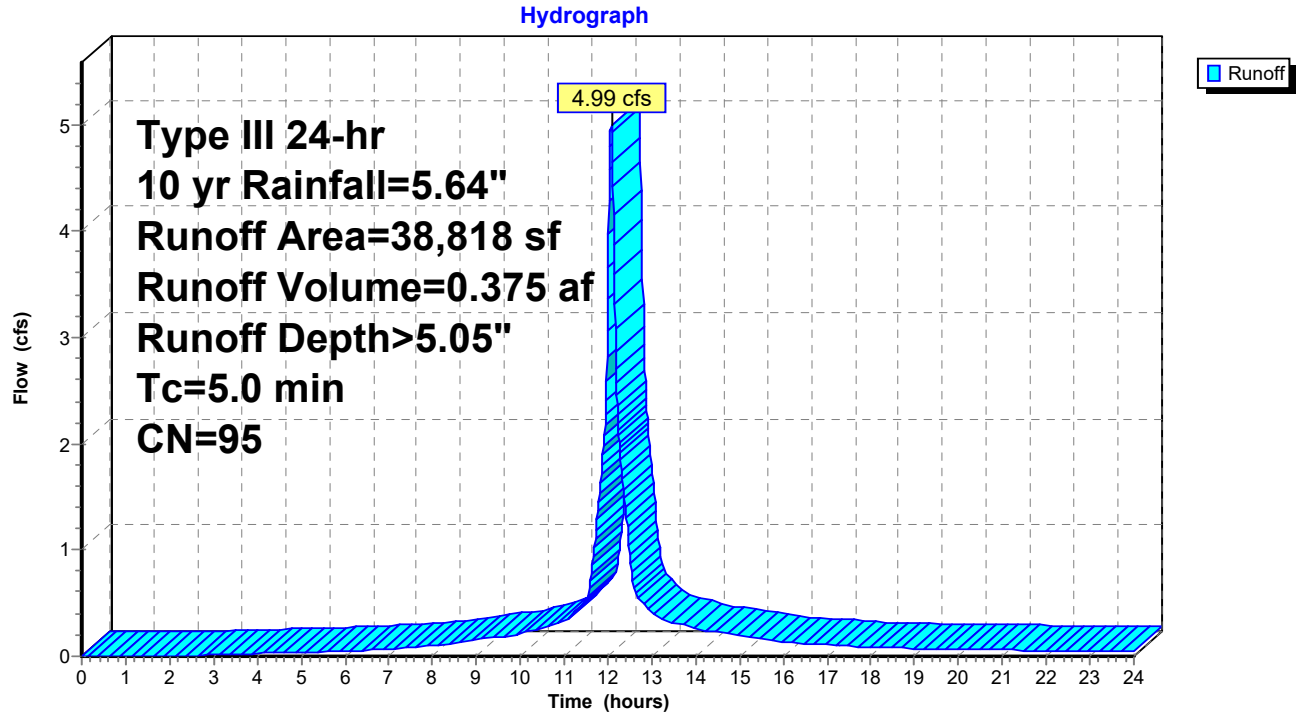
Runoff = 4.99 cfs @ 12.07 hrs, Volume= 0.375 af, Depth> 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

	Area (sf)	CN	Description
	4,359	74	>75% Grass cover, Good, HSG C
	33,846	98	Paved roads w/curbs & sewers, HSG C
*	26	98	Concrete
*	231	42	Pervious Pavers, HSG C
	248	98	Roofs, HSG C
*	108	98	Retaining Wall & Stairs, HSG C
	38,818	95	Weighted Average
	4,590		11.82% Pervious Area
	34,228		88.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 5S: Parking Lot



Summary for Subcatchment 6S: Parking Lot

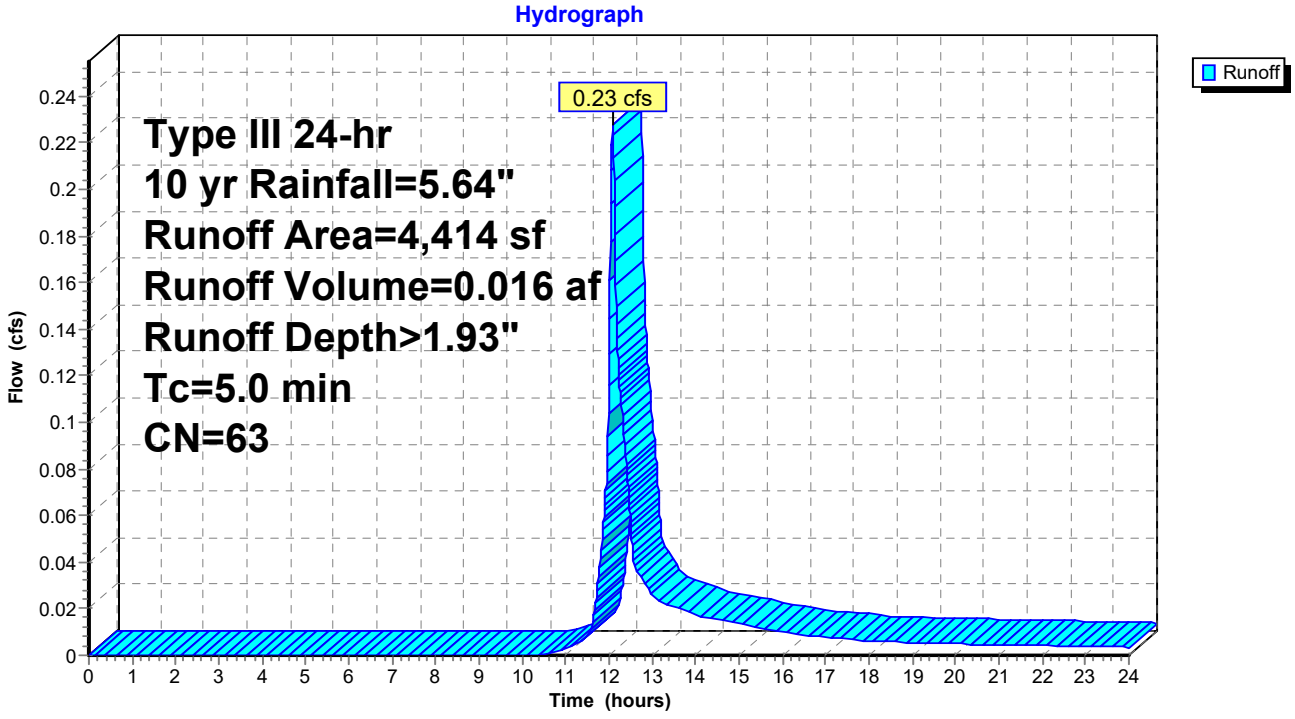
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.016 af, Depth> 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=5.64"

	Area (sf)	CN	Description
*	4,169	61	Pervious Pavement, HSG C
	245	98	Roofs, HSG C
	4,414	63	Weighted Average
	4,169		94.45% Pervious Area
	245		5.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 6S: Parking Lot



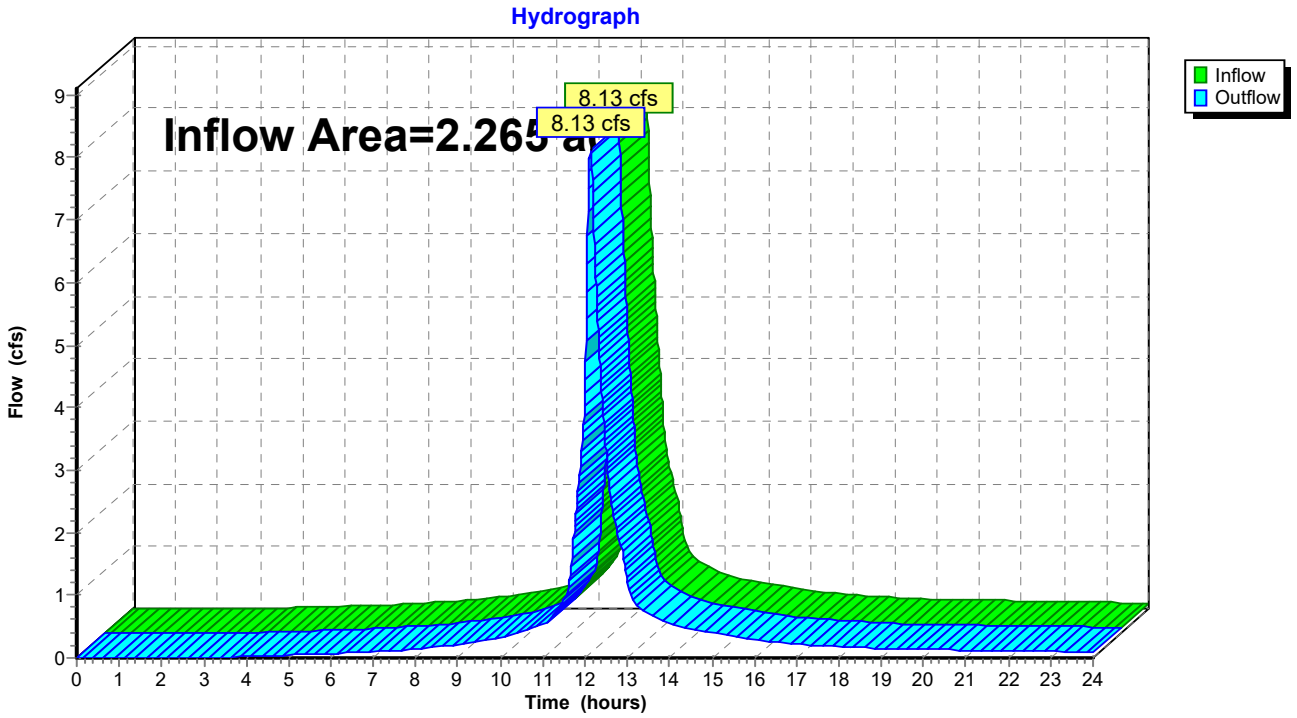
Summary for Reach AP 1: AP 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.265 ac, 72.37% Impervious, Inflow Depth > 4.03" for 10 yr event
Inflow = 8.13 cfs @ 12.13 hrs, Volume= 0.761 af
Outflow = 8.13 cfs @ 12.13 hrs, Volume= 0.761 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4

Reach AP 1: AP 1



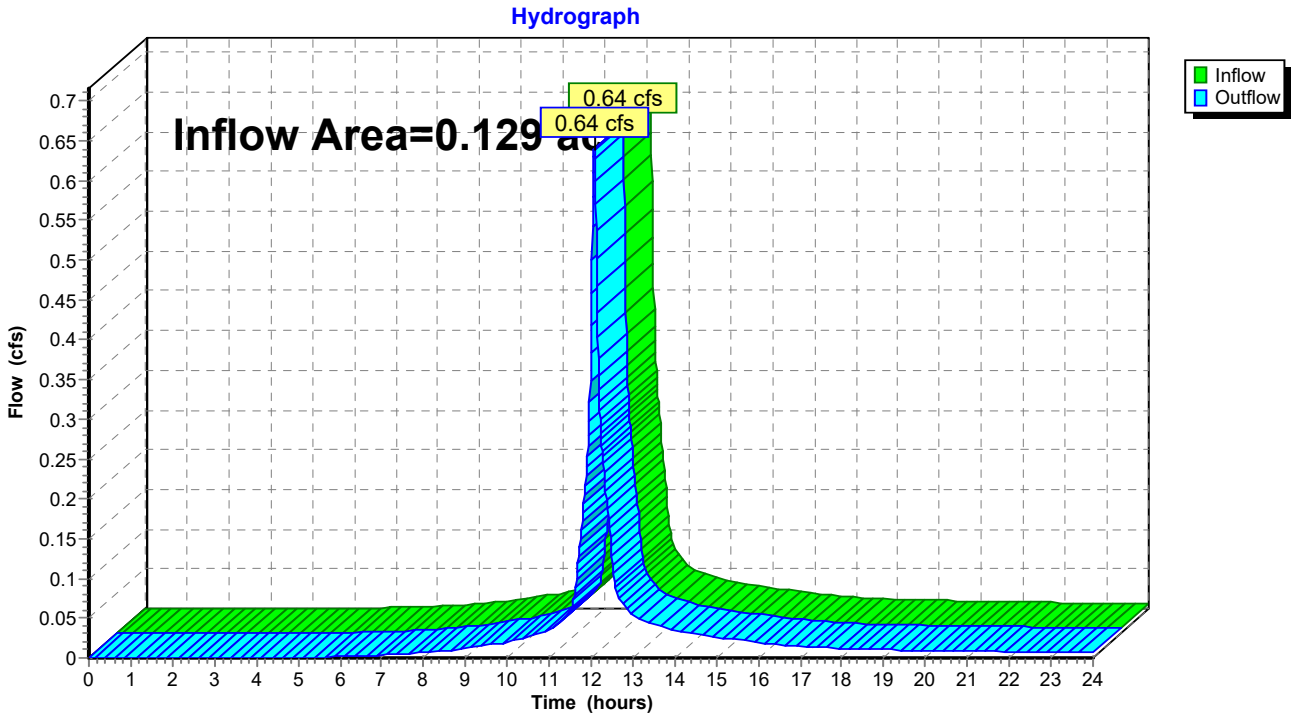
Summary for Reach AP2: AP2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 4.17" for 10 yr event
Inflow = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af
Outflow = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4

Reach AP2: AP2



Summary for Pond CB2: CB2

[57] Hint: Peaked at 95.67' (Flood elevation advised)

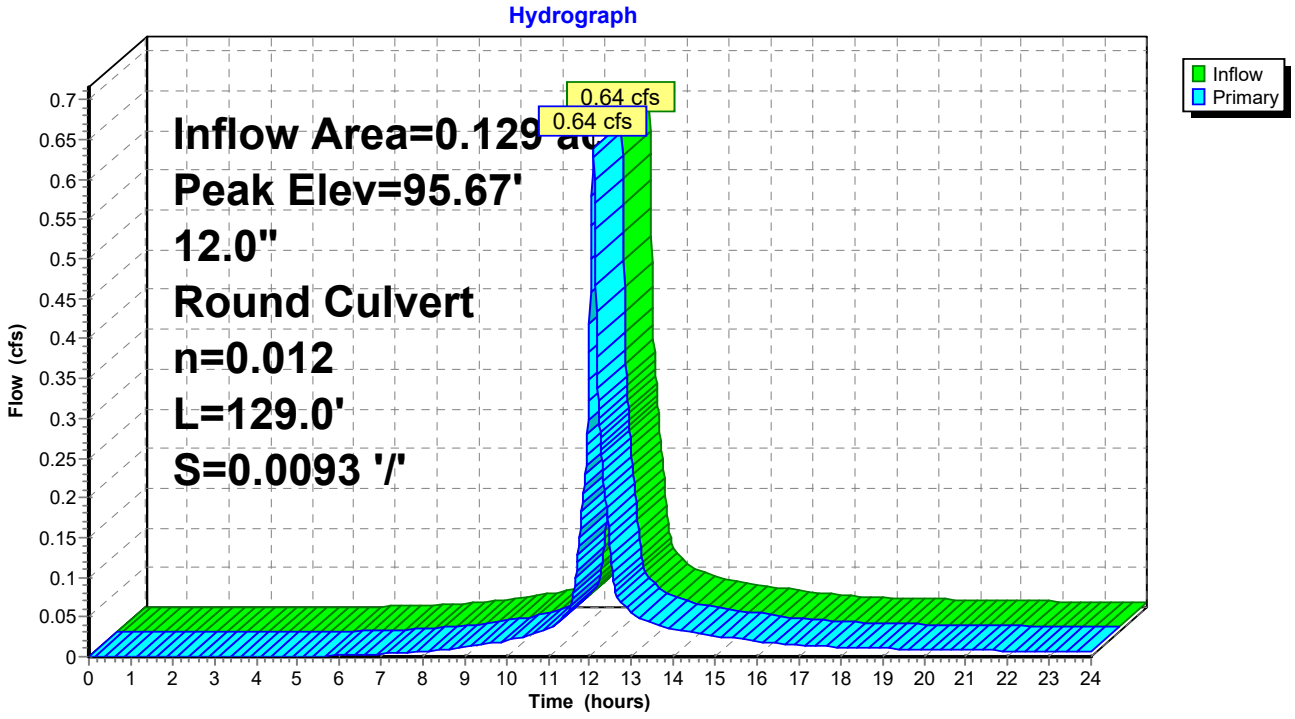
Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 4.17" for 10 yr event
Inflow = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af
Outflow = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min
Primary = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.67'@ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.26'	**12.0" Round Culvert** L= 129.0' Ke= 0.500 Inlet / Outlet Invert= 95.26' / 94.06' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.64 cfs @ 12.07 hrs HW=95.67' TW=94.57' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.64 cfs @ 3.15 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

[57] Hint: Peaked at 94.57' (Flood elevation advised)

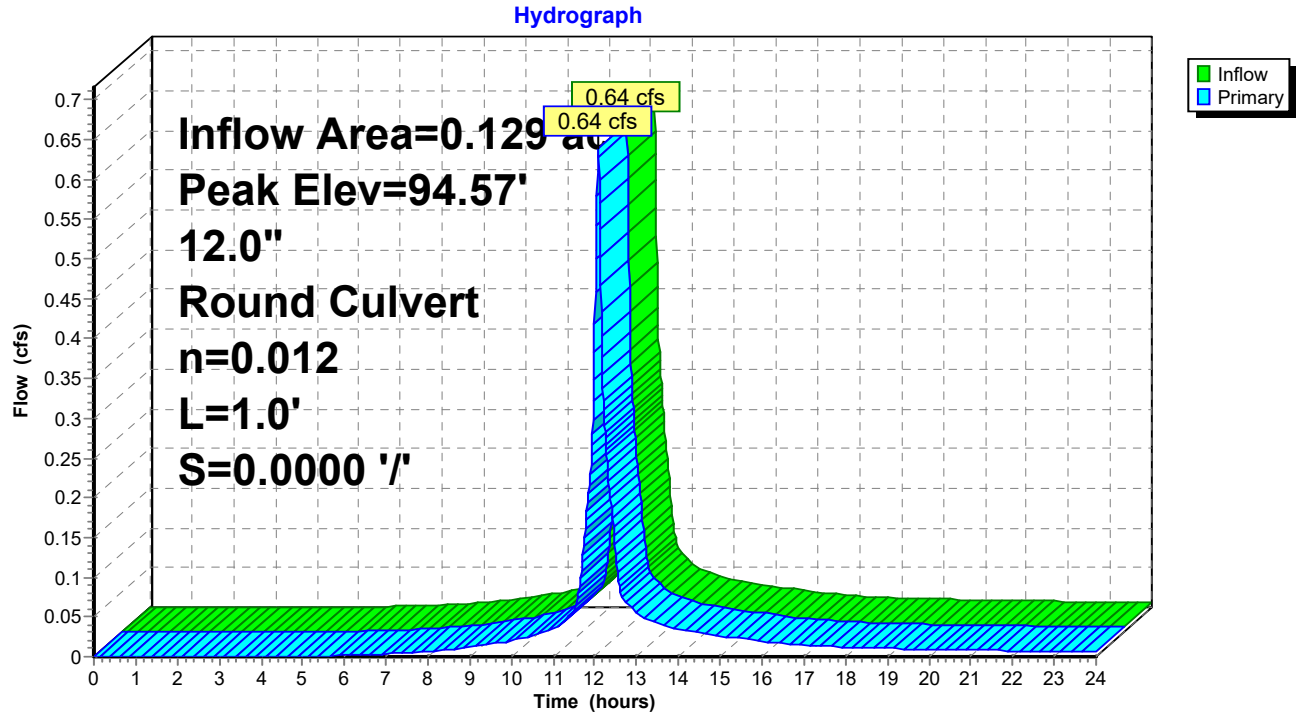
Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 4.17" for 10 yr event
Inflow = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af
Outflow = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min
Primary = 0.64 cfs @ 12.07 hrs, Volume= 0.045 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 94.57' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.06'	**12.0" Round Culvert** L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 94.06' / 94.06' S= 0.0000 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.64 cfs @ 12.07 hrs HW=94.57' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 0.64 cfs @ 2.31 fps)

Pond CB3: CB3



Summary for Pond CBA: CB A

[57] Hint: Peaked at 96.55' (Flood elevation advised)

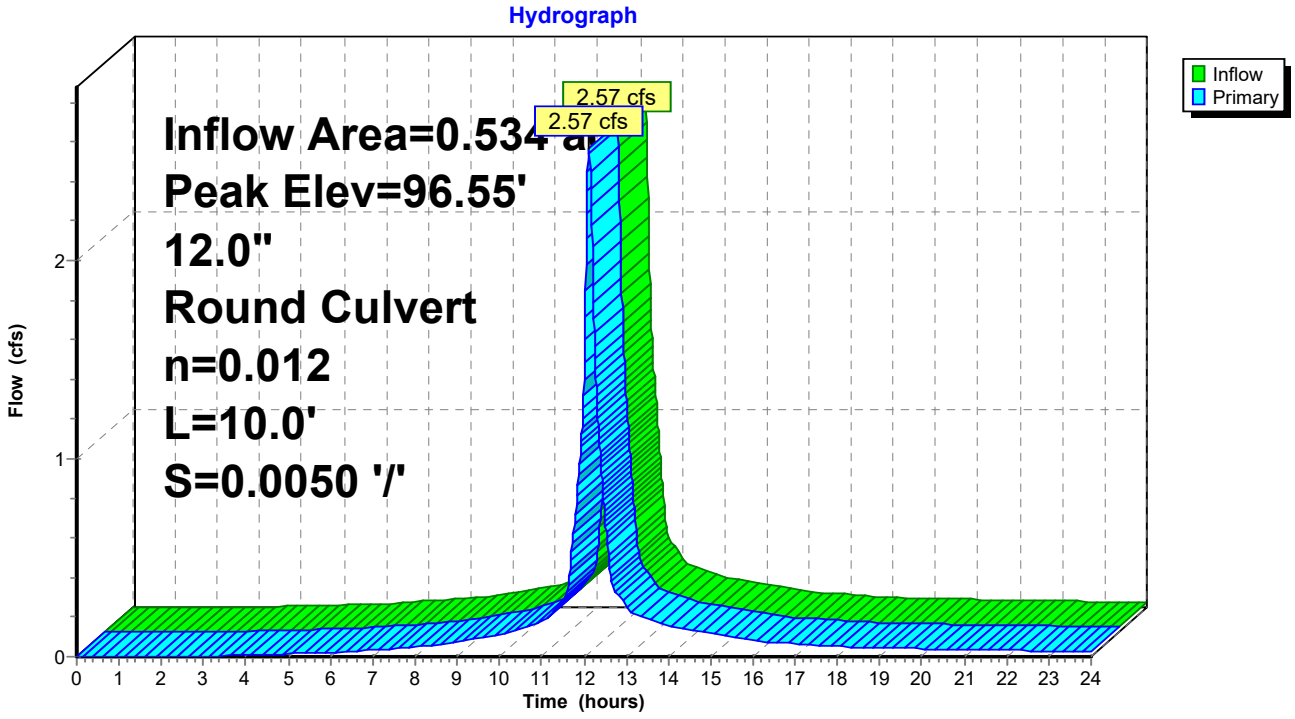
Inflow Area = 0.534 ac, 80.70% Impervious, Inflow Depth > 4.82" for 10 yr event
Inflow = 2.57 cfs @ 12.12 hrs, Volume= 0.215 af
Outflow = 2.57 cfs @ 12.12 hrs, Volume= 0.215 af, Atten= 0%, Lag= 0.0 min
Primary = 2.57 cfs @ 12.12 hrs, Volume= 0.215 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 96.55'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.40'	**12.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 95.40' / 95.35' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.57 cfs @ 12.12 hrs HW=96.55' TW=95.95' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.57 cfs @ 3.57 fps)

Pond CBA: CB A



Summary for Pond DMH1: DMH1

[57] Hint: Peaked at 93.71' (Flood elevation advised)

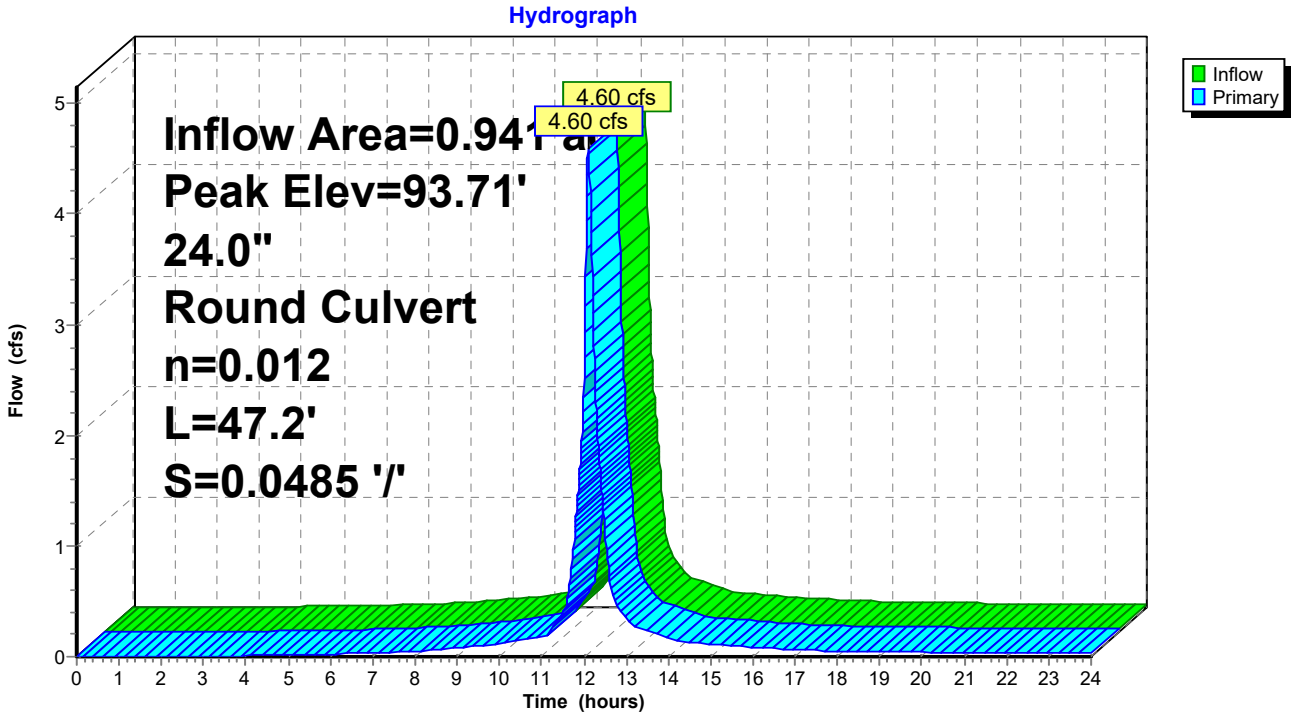
Inflow Area = 0.941 ac, 89.04% Impervious, Inflow Depth > 3.73" for 10 yr event
Inflow = 4.60 cfs @ 12.11 hrs, Volume= 0.292 af
Outflow = 4.60 cfs @ 12.11 hrs, Volume= 0.292 af, Atten= 0%, Lag= 0.0 min
Primary = 4.60 cfs @ 12.11 hrs, Volume= 0.292 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 93.71'@ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.79'	**24.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 92.79' / 90.50' S= 0.0485 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=4.59 cfs @ 12.11 hrs HW=93.71' TW=91.95' (Dynamic Tailwater)
1=Culvert (Inlet Controls 4.59 cfs @ 3.26 fps)

Pond DMH1: DMH1



Summary for Pond DMH2: DMH2

[57] Hint: Peaked at 91.97' (Flood elevation advised)

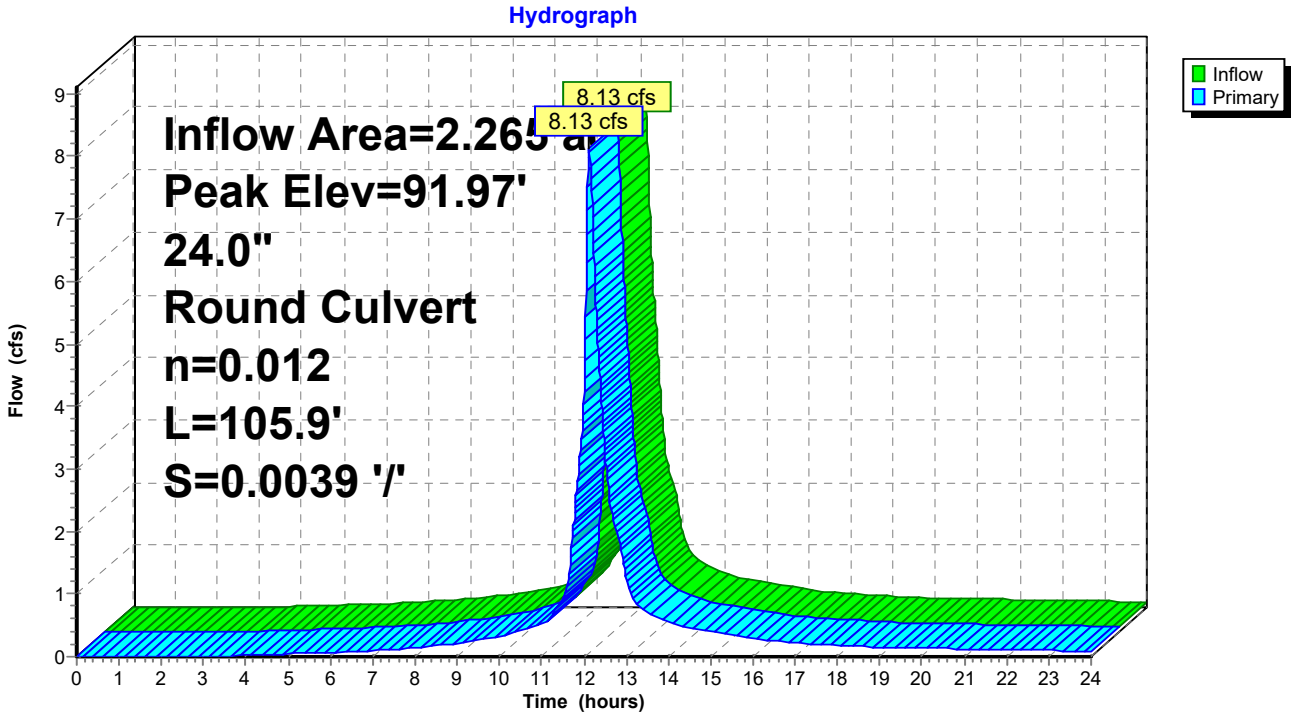
Inflow Area = 2.265 ac, 72.37% Impervious, Inflow Depth > 4.03" for 10 yr event
Inflow = 8.13 cfs @ 12.13 hrs, Volume= 0.761 af
Outflow = 8.13 cfs @ 12.13 hrs, Volume= 0.761 af, Atten= 0%, Lag= 0.0 min
Primary = 8.13 cfs @ 12.13 hrs, Volume= 0.761 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 91.97' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	90.47'	**24.0" Round Culvert** L= 105.9' Ke= 0.500 Inlet / Outlet Invert= 90.47' / 90.06' S= 0.0039 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=8.13 cfs @ 12.13 hrs HW=91.97' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 8.13 cfs @ 4.47 fps)

Pond DMH2: DMH2



Summary for Pond DMHC: DMH C

[57] Hint: Peaked at 95.95' (Flood elevation advised)

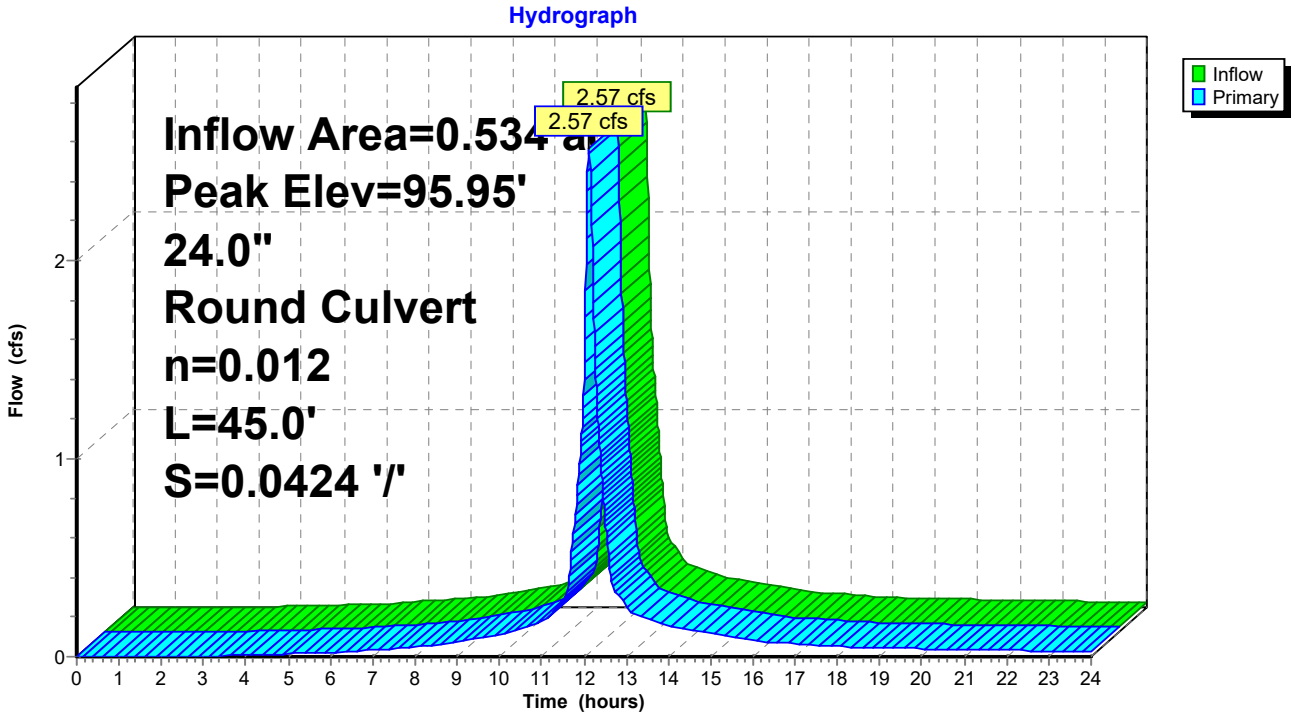
Inflow Area = 0.534 ac, 80.70% Impervious, Inflow Depth > 4.82" for 10 yr event
Inflow = 2.57 cfs @ 12.12 hrs, Volume= 0.215 af
Outflow = 2.57 cfs @ 12.12 hrs, Volume= 0.215 af, Atten= 0%, Lag= 0.0 min
Primary = 2.57 cfs @ 12.12 hrs, Volume= 0.215 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.95'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.28'	**24.0" Round Culvert** L= 45.0' Ke= 0.500 Inlet / Outlet Invert= 95.28' / 93.37' S= 0.0424 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=2.57 cfs @ 12.12 hrs HW=95.95' TW=93.71' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.57 cfs @ 2.79 fps)

Pond DMHC: DMH C



Summary for Pond DP: Det. Pond

Inflow Area = 1.325 ac, 60.53% Impervious, Inflow Depth > 4.28" for 10 yr event
Inflow = 6.01 cfs @ 12.08 hrs, Volume= 0.472 af
Outflow = 3.83 cfs @ 12.17 hrs, Volume= 0.469 af, Atten= 36%, Lag= 5.7 min
Primary = 3.83 cfs @ 12.17 hrs, Volume= 0.469 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 93.78' @ 12.17 hrs Surf.Area= 2,099 sf Storage= 2,881 cf

Plug-Flow detention time= 18.0 min calculated for 0.469 af (99% of inflow)
Center-of-Mass det. time= 13.6 min (793.9 - 780.3)

Volume	Invert	Avail.Storage	Storage Description
#1	92.00'	5,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

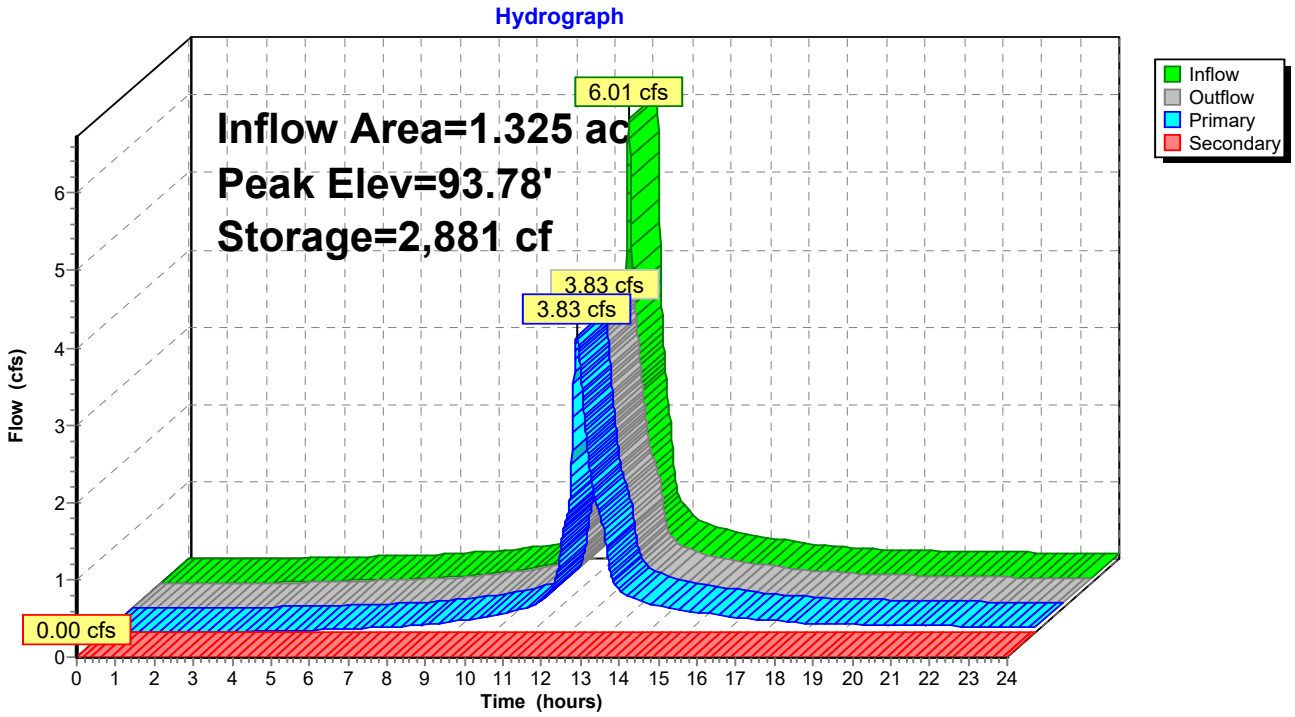
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
92.00	1	0.0	0	0
92.01	1,176	100.0	6	6
93.00	1,671	100.0	1,409	1,415
94.00	2,222	100.0	1,947	3,362
95.00	2,830	100.0	2,526	5,888

Device	Routing	Invert	Outlet Devices
#1	Primary	92.00'	**12.0" Round Culvert** L= 32.7' Ke= 0.500 Inlet / Outlet Invert= 92.00' / 90.75' S= 0.0382 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	94.90'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Device 1	92.00'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	93.10'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=3.83 cfs @ 12.17 hrs HW=93.78' TW=91.91' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 3.83 cfs of 4.27 cfs potential flow)
↑├**3=Orifice/Grate** (Orifice Controls 2.24 cfs @ 6.42 fps)
└**4=Orifice/Grate** (Orifice Controls 1.59 cfs @ 2.80 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=92.00' TW=0.00' (Dynamic Tailwater)
↑└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond DP: Det. Pond



Summary for Pond PP: Pervious Pavement

Inflow Area = 0.101 ac, 5.55% Impervious, Inflow Depth > 1.93" for 10 yr event
Inflow = 0.23 cfs @ 12.08 hrs, Volume= 0.016 af
Outflow = 0.06 cfs @ 12.49 hrs, Volume= 0.015 af, Atten= 74%, Lag= 24.6 min
Primary = 0.06 cfs @ 12.49 hrs, Volume= 0.015 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.56' @ 12.49 hrs Surf.Area= 4,169 sf Storage= 238 cf

Plug-Flow detention time= 109.0 min calculated for 0.015 af (91% of inflow)
Center-of-Mass det. time= 66.2 min (923.4 - 857.1)

Volume	Invert	Avail.Storage	Storage Description
#1	95.42'	1,803 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

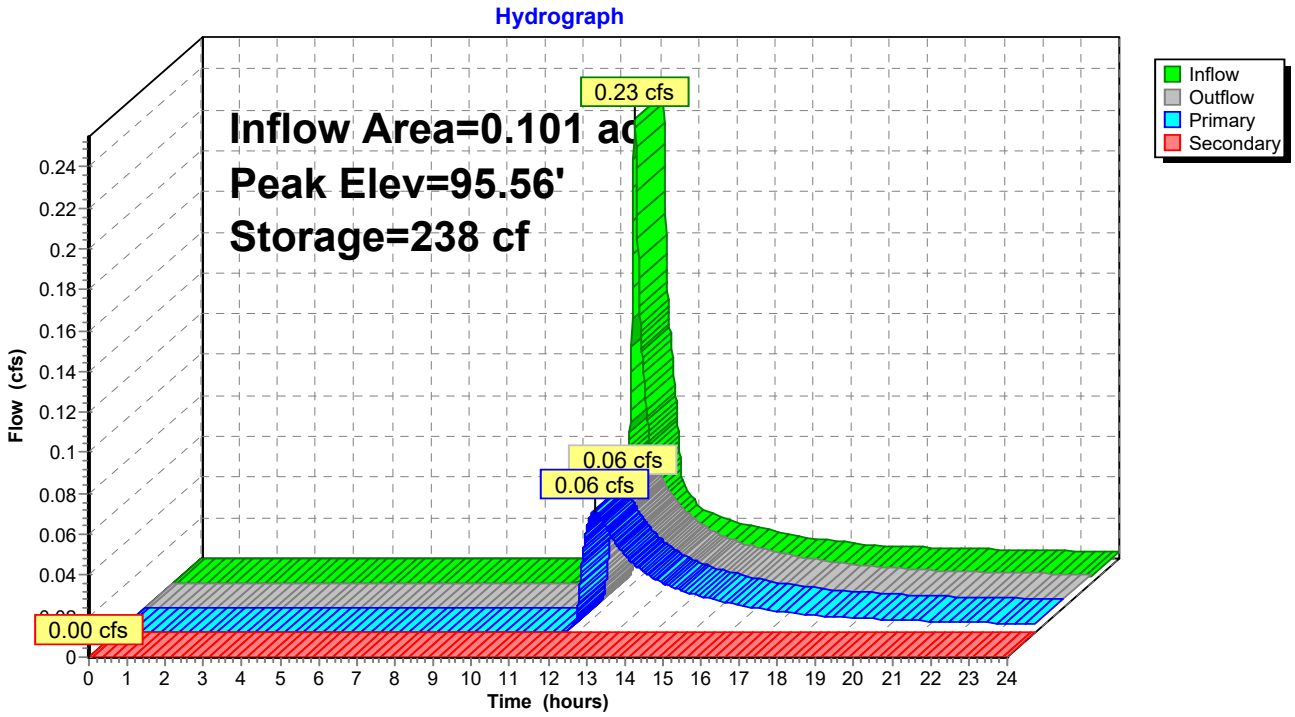
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
95.42	4,169	0.0	0	0
95.43	4,169	40.0	17	17
95.90	4,169	40.0	784	800
95.91	4,169	15.0	6	807
96.15	4,169	15.0	150	957
96.16	4,169	5.0	2	959
97.15	4,169	5.0	206	1,165
97.16	4,169	30.0	13	1,178
97.49	4,169	30.0	413	1,590
97.50	4,169	15.0	6	1,597
97.83	4,169	15.0	206	1,803

Device	Routing	Invert	Outlet Devices
#1	Primary	95.42'	**6.0" Round Culvert** L= 53.0' Ke= 0.500 Inlet / Outlet Invert= 95.42' / 94.00' S= 0.0268 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf
#2	Secondary	97.73'	**200.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.06 cfs @ 12.49 hrs HW=95.56' TW=93.35' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.06 cfs @ 1.29 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=95.42' TW=92.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond PP: Pervious Pavement



Summary for Pond ST: Stormtech

Inflow Area = 0.406 ac, 100.00% Impervious, Inflow Depth > 5.40" for 10 yr event
Inflow = 2.33 cfs @ 12.07 hrs, Volume= 0.183 af
Outflow = 2.17 cfs @ 12.10 hrs, Volume= 0.183 af, Atten= 7%, Lag= 1.8 min
Discarded = 0.11 cfs @ 10.34 hrs, Volume= 0.105 af
Primary = 2.06 cfs @ 12.10 hrs, Volume= 0.078 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 98.80' @ 12.10 hrs Surf.Area= 656 sf Storage= 479 cf

Plug-Flow detention time=5.8 min calculated for 0.183 af (100% of inflow)
Center-of-Mass det. time=5.8 min (750.5 - 744.7)

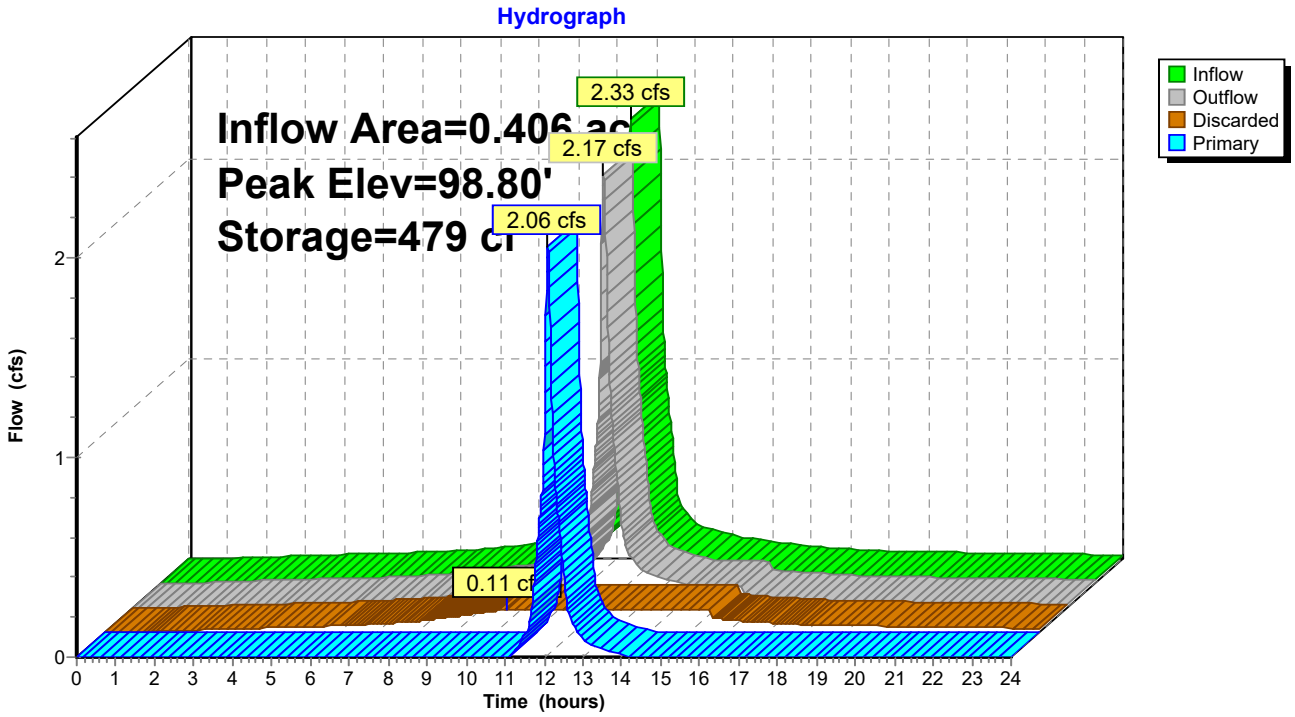
Volume	Invert	Avail.Storage	Storage Description
#1	97.58'	468 cf	**14.82'W x 44.24'L x 2.33'H Prismatoid** 1,528 cf Overall - 357 cf Embedded = 1,170 cf x 40.0% Voids
#2	98.08'	357 cf	**ADS_StormTech SC-310** x 24 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 4 rows
		826 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	**12.0" Round Culvert** L= 38.5' Ke= 0.500 Inlet / Outlet Invert= 98.00' / 95.40' S= 0.0675 '/' Cc= 0.900 n= 0.010, Flow Area= 0.79 sf
#2	Discarded	97.58'	**7.500 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.11 cfs @ 10.34 hrs HW=97.60' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.11 cfs)

Primary OutFlow Max=2.06 cfs @ 12.10 hrs HW=98.80' TW=93.71' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 2.06 cfs @ 3.05 fps)

Pond ST: Stormtech



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 4
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: WesternGrassedArea Runoff Area=14,469 sf 3.15% Impervious Runoff Depth>4.27"
Flow Length=316' Tc=7.5 min CN=75 Runoff=1.58 cfs 0.118 af

Subcatchment2S: SouthernGrassedArea Runoff Area=5,631 sf 54.43% Impervious Runoff Depth>5.61"
Tc=5.0 min CN=87 Runoff=0.85 cfs 0.060 af

Subcatchment3S: Roof Runoff Area=17,704 sf 100.00% Impervious Runoff Depth>6.90"
Tc=5.0 min CN=98 Runoff=2.95 cfs 0.234 af

Subcatchment4S: EasternSite Runoff Area=23,278 sf 80.70% Impervious Runoff Depth>6.30"
Flow Length=303' Tc=8.8 min CN=93 Runoff=3.31 cfs 0.281 af

Subcatchment5S: ParkingLot Runoff Area=38,818 sf 88.18% Impervious Runoff Depth>6.54"
Tc=5.0 min CN=95 Runoff=6.37 cfs 0.486 af

Subcatchment6S: ParkingLot Runoff Area=4,414 sf 5.55% Impervious Runoff Depth>3.00"
Tc=5.0 min CN=63 Runoff=0.37 cfs 0.025 af

ReachAP 1: AP 1 Inflow=10.63 cfs 1.016 af
Outflow=10.63 cfs 1.016 af

ReachAP2: AP2 Inflow=0.85 cfs 0.060 af
Outflow=0.85 cfs 0.060 af

Pond CB2: CB2 Peak Elev=95.74' Inflow=0.85 cfs 0.060 af
12.0" Round Culvert n=0.012 L=129.0' S=0.0093 '/' Outflow=0.85 cfs 0.060 af

Pond CB3: CB3 Peak Elev=94.65' Inflow=0.85 cfs 0.060 af
12.0" Round Culvert n=0.012 L=1.0' S=0.0000 '/' Outflow=0.85 cfs 0.060 af

Pond CBA: CB A Peak Elev=96.84' Inflow=3.31 cfs 0.281 af
12.0" Round Culvert n=0.012 L=10.0' S=0.0050 '/' Outflow=3.31 cfs 0.281 af

Pond DMH1: DMH1 Peak Elev=93.85' Inflow=5.90 cfs 0.392 af
24.0" Round Culvert n=0.012 L=47.2' S=0.0485 '/' Outflow=5.90 cfs 0.392 af

Pond DMH2: DMH2 Peak Elev=92.25' Inflow=10.63 cfs 1.016 af
24.0" Round Culvert n=0.012 L=105.9' S=0.0039 '/' Outflow=10.63 cfs 1.016 af

Pond DMHC: DMH C Peak Elev=96.05' Inflow=3.31 cfs 0.281 af
24.0" Round Culvert n=0.012 L=45.0' S=0.0424 '/' Outflow=3.31 cfs 0.281 af

Pond DP: Det. Pond Peak Elev=94.17' Storage=3,753 cf Inflow=7.88 cfs 0.628 af
Primary=4.89 cfs 0.624 af Secondary=0.00 cfs 0.000 af Outflow=4.89 cfs 0.624 af

Pond PP: PerviousPavement Peak Elev=95.63' Storage=351 cf Inflow=0.37 cfs 0.025 af
Primary=0.12 cfs 0.024 af Secondary=0.00 cfs 0.000 af Outflow=0.12 cfs 0.024 af

Pond ST: Stormtech Peak Elev=98.97' Storage=551 cf Inflow=2.95 cfs 0.234 af
Discarded=0.11 cfs 0.122 af Primary=2.62 cfs 0.111 af Outflow=2.73 cfs 0.234 af

Total Runoff Area = 2.395 ac Runoff Volume = 1.204 af Average Runoff Depth = 6.03"
28.60% Pervious = 0.685 ac 71.40% Impervious = 1.710 ac

Summary for Subcatchment 1S: Western Grassed Area

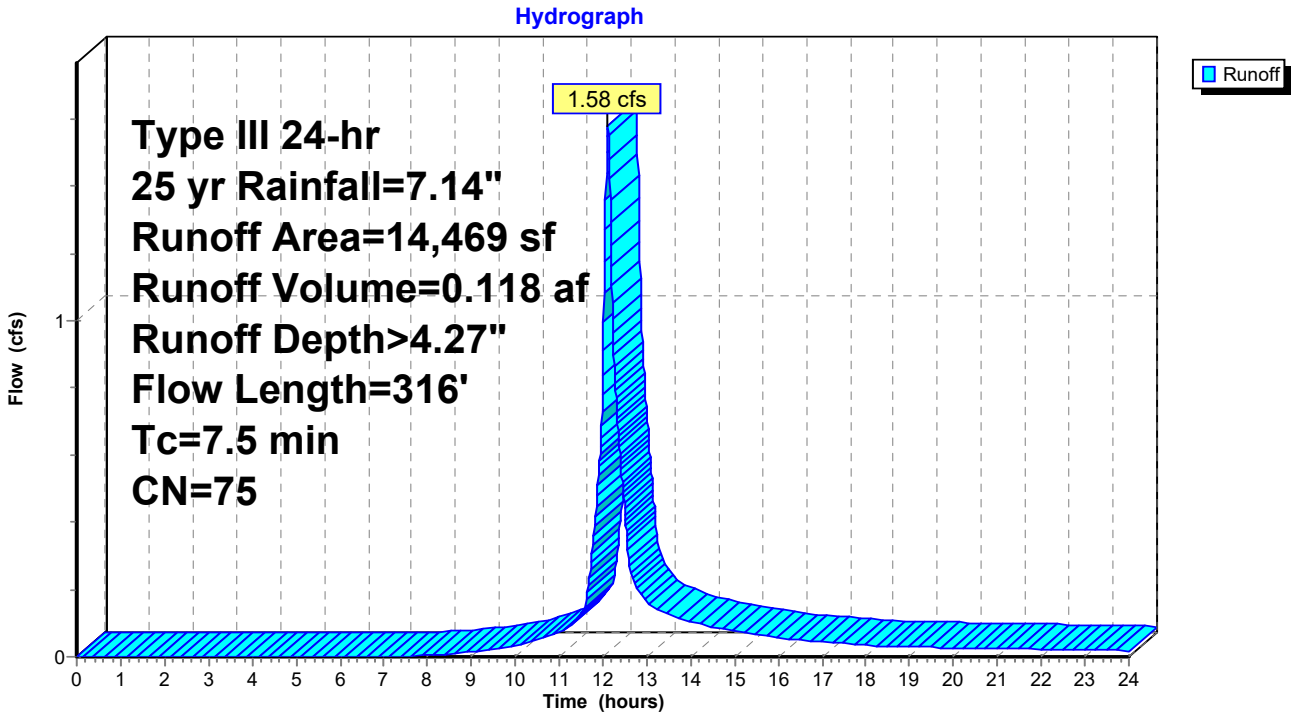
Runoff = 1.58 cfs @ 12.11 hrs, Volume= 0.118 af, Depth> 4.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

	Area (sf)	CN	Description
	14,013	74	>75% Grass cover, Good, HSG C
	342	98	Paved roads w/curbs & sewers, HSG C
*	114	98	Concrete
	14,469	75	Weighted Average
	14,013		96.85% Pervious Area
	456		3.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0232	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
2.6	266	0.0132	1.72		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.5	316	Total			

Subcatchment 1S: Western Grassed Area



Summary for Subcatchment 2S: Southern Grassed Area

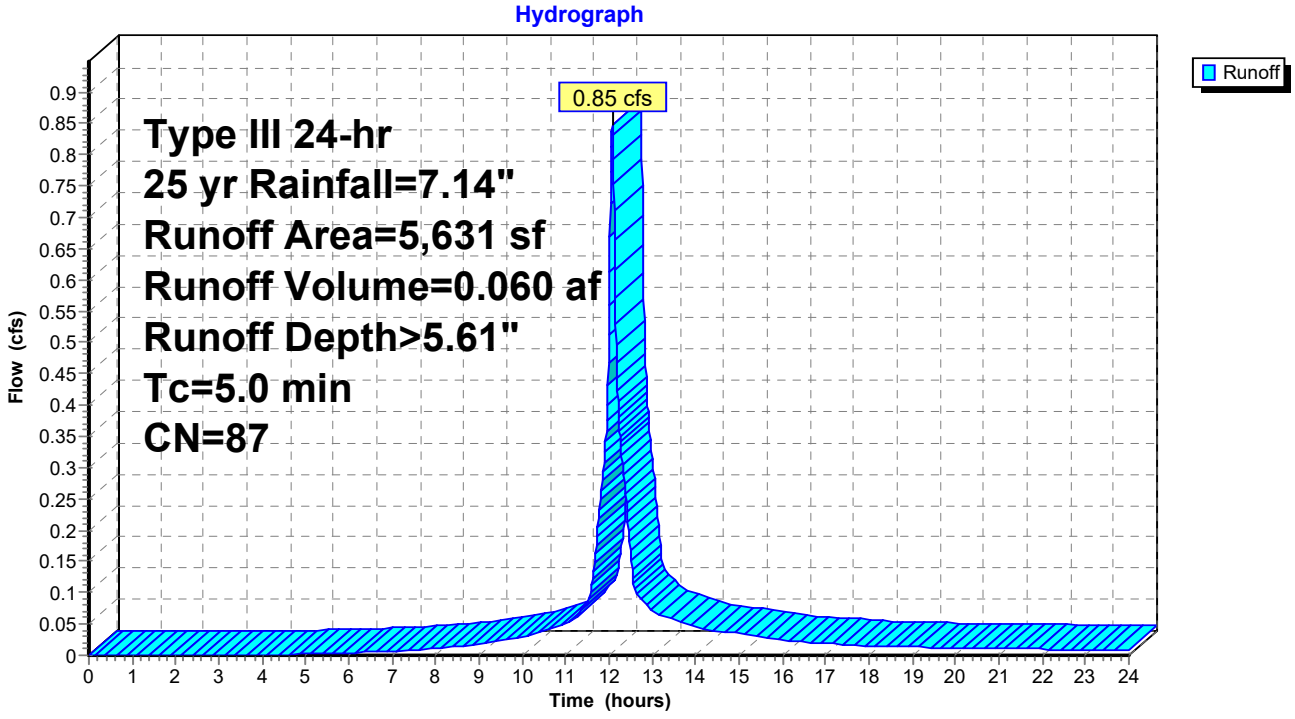
Runoff = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af, Depth> 5.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

Area (sf)	CN	Description
2,566	74	>75% Grass cover, Good, HSG C
3,065	98	Paved roads w/curbs & sewers, HSG C
5,631	87	Weighted Average
2,566		45.57% Pervious Area
3,065		54.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: Southern Grassed Area



Summary for Subcatchment 3S: Roof

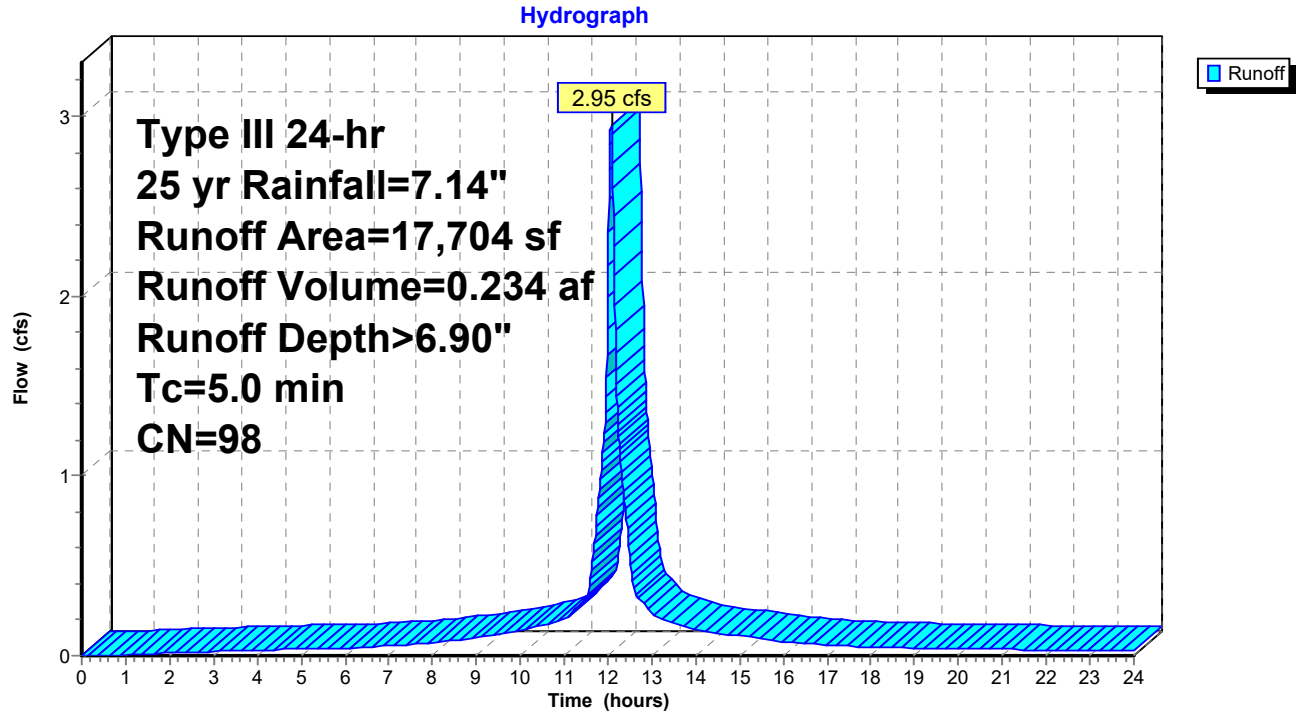
Runoff = 2.95 cfs @ 12.07 hrs, Volume= 0.234 af, Depth> 6.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

Area (sf)	CN	Description
17,704	98	Roofs, HSG C
17,704		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 3S: Roof



Summary for Subcatchment 4S: Eastern Site

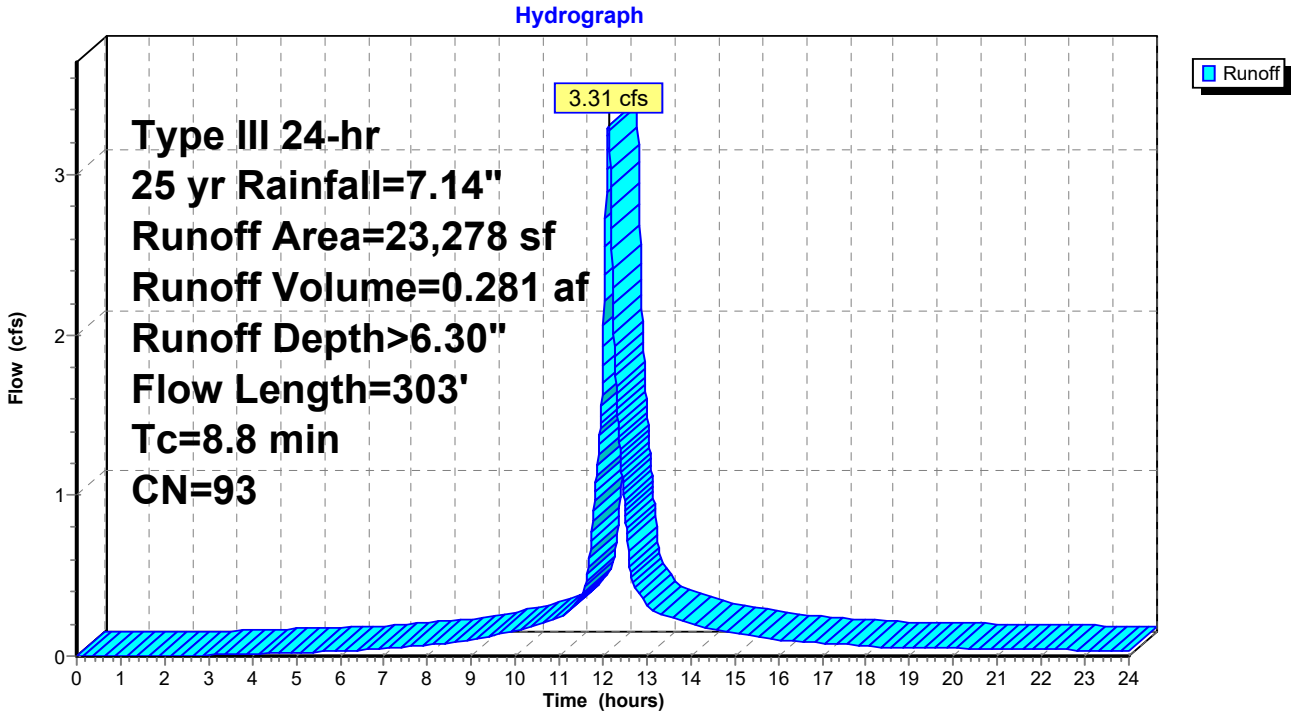
Runoff = 3.31 cfs @ 12.12 hrs, Volume= 0.281 af, Depth> 6.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

Area (sf)	CN	Description
4,492	74	>75% Grass cover, Good, HSG C
18,786	98	Paved roads w/curbs & sewers, HSG C
23,278	93	Weighted Average
4,492		19.30% Pervious Area
18,786		80.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0208	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.70"
4.6	37	0.0154	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
4.0	252	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	303	Total			

Subcatchment 4S: Eastern Site



Summary for Subcatchment 5S: Parking Lot

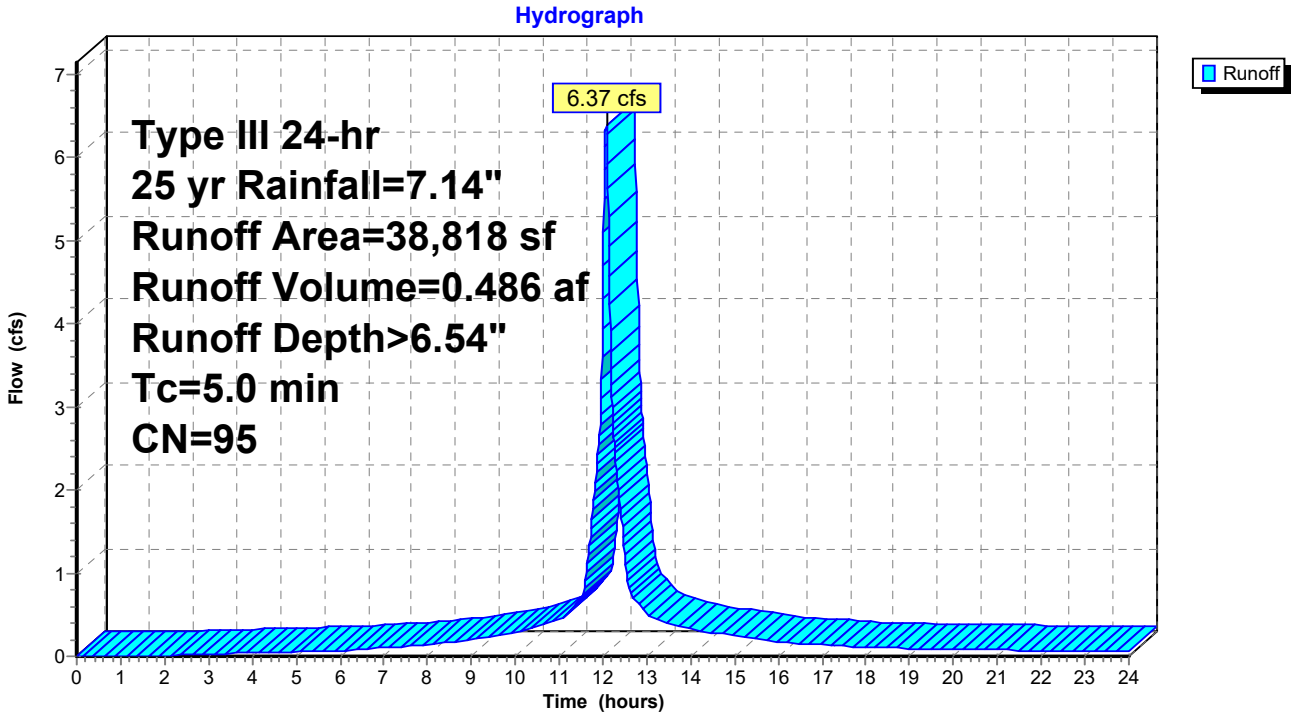
Runoff = 6.37 cfs @ 12.07 hrs, Volume= 0.486 af, Depth> 6.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

	Area (sf)	CN	Description
	4,359	74	>75% Grass cover, Good, HSG C
	33,846	98	Paved roads w/curbs & sewers, HSG C
*	26	98	Concrete
*	231	42	Pervious Pavers, HSG C
	248	98	Roofs, HSG C
*	108	98	Retaining Wall & Stairs, HSG C
	38,818	95	Weighted Average
	4,590		11.82% Pervious Area
	34,228		88.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 5S: Parking Lot



Summary for Subcatchment 6S: Parking Lot

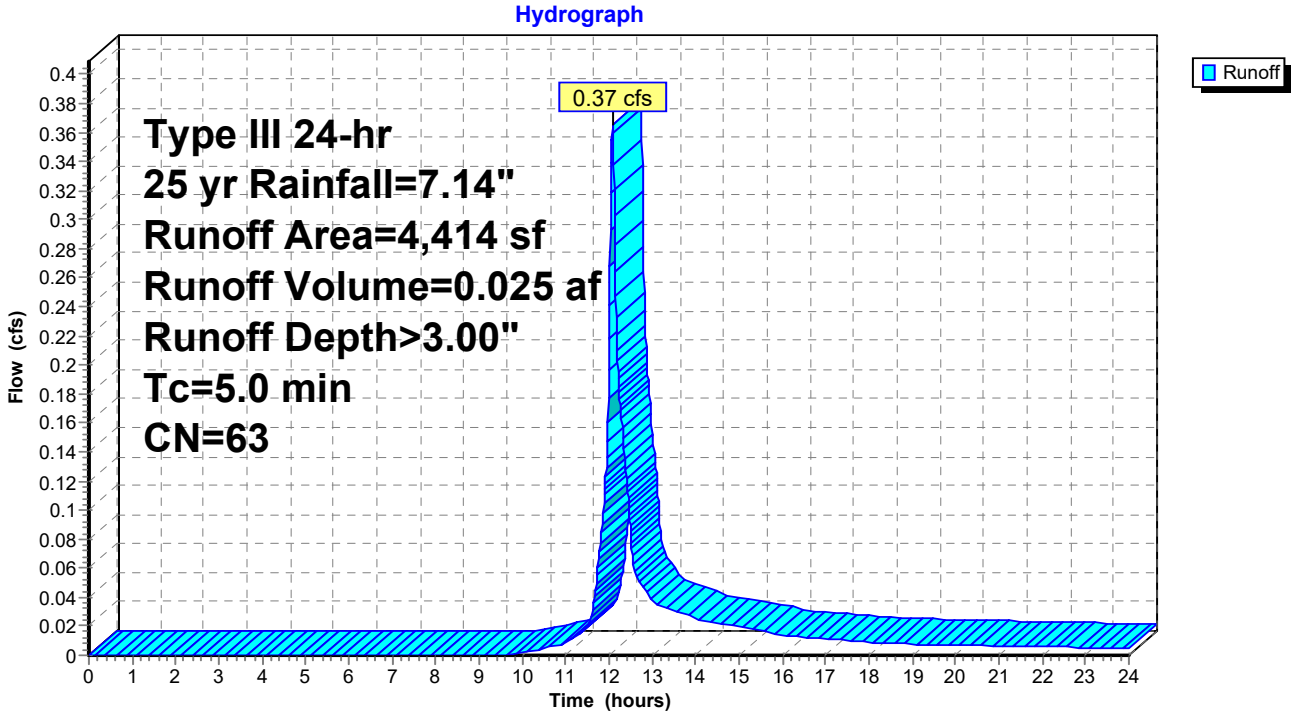
Runoff = 0.37 cfs @ 12.08 hrs, Volume= 0.025 af, Depth> 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=7.14"

	Area (sf)	CN	Description
*	4,169	61	Pervious Pavement, HSG C
	245	98	Roofs, HSG C
	4,414	63	Weighted Average
	4,169		94.45% Pervious Area
	245		5.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 6S: Parking Lot



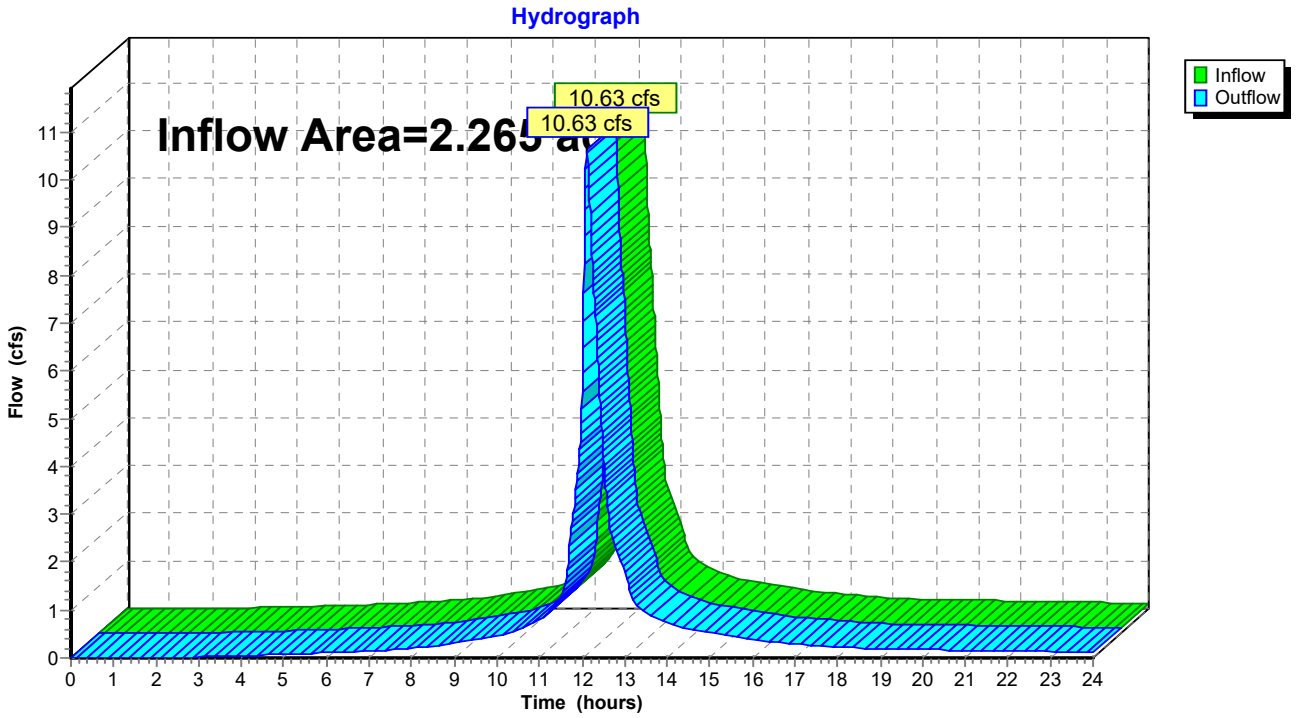
Summary for Reach AP 1: AP 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.265 ac, 72.37% Impervious, Inflow Depth > 5.38" for 25 yr event
Inflow = 10.63 cfs @ 12.12 hrs, Volume= 1.016 af
Outflow = 10.63 cfs @ 12.12 hrs, Volume= 1.016 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4

Reach AP 1: AP 1



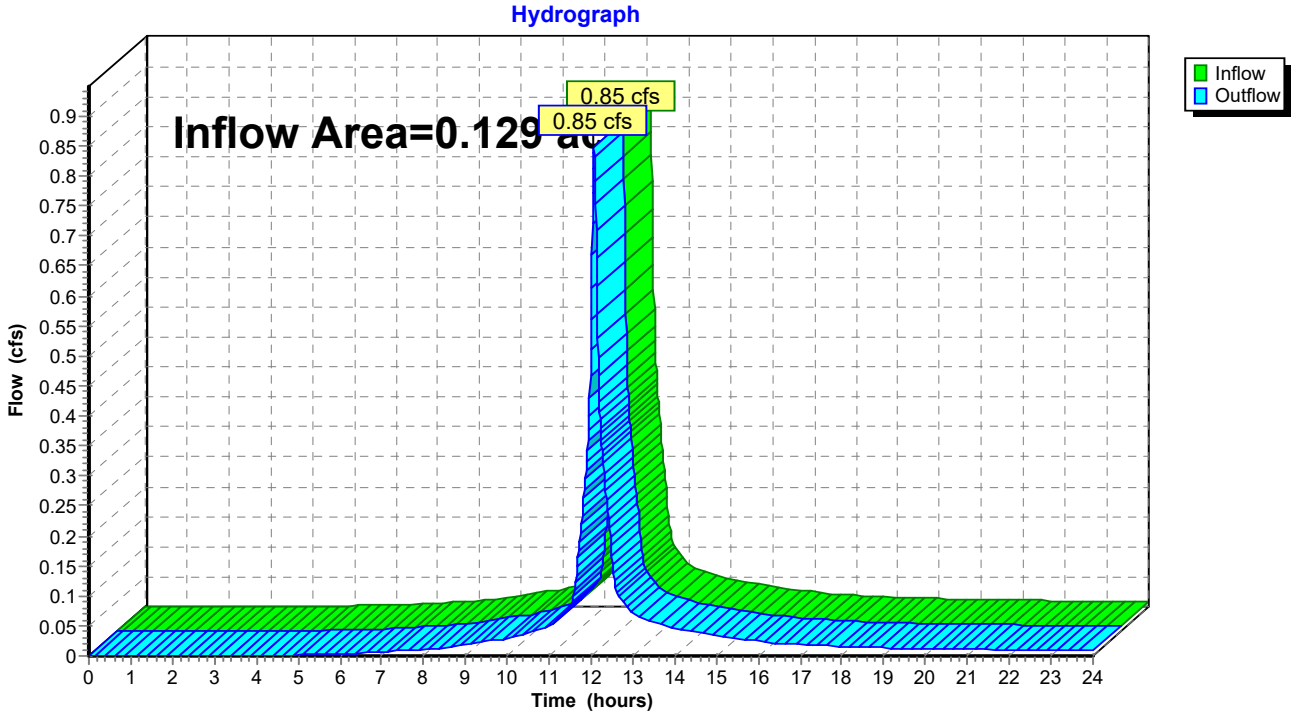
Summary for Reach AP2: AP2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 5.61" for 25 yr event
Inflow = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af
Outflow = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4

Reach AP2: AP2



Summary for Pond CB2: CB2

[57] Hint: Peaked at 95.74' (Flood elevation advised)

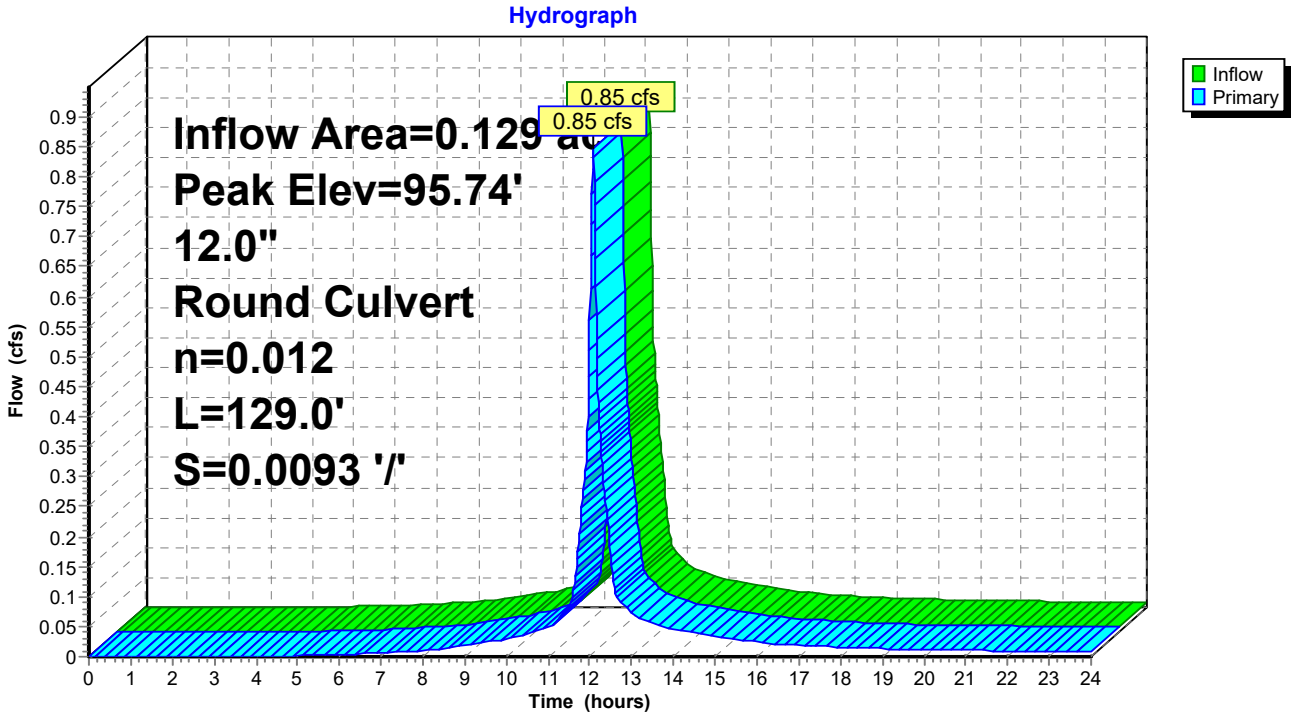
Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 5.61" for 25 yr event
Inflow = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af
Outflow = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min
Primary = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.74'@ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.26'	**12.0" Round Culvert** L= 129.0' Ke= 0.500 Inlet / Outlet Invert= 95.26' / 94.06' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.85 cfs @ 12.07 hrs HW=95.74' TW=94.65' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.85 cfs @ 3.34 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

[57] Hint: Peaked at 94.65' (Flood elevation advised)

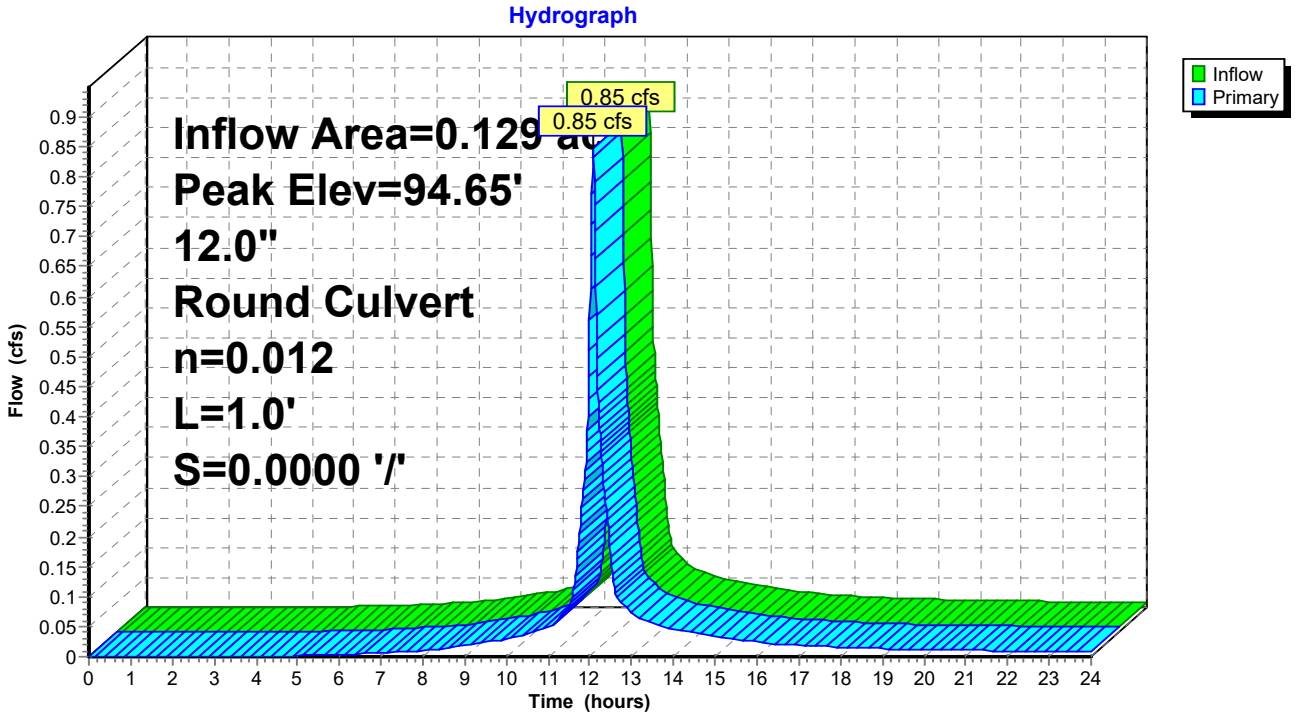
Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 5.61" for 25 yr event
Inflow = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af
Outflow = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min
Primary = 0.85 cfs @ 12.07 hrs, Volume= 0.060 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 94.65'@ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.06'	**12.0" Round Culvert** L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 94.06' / 94.06' S= 0.0000 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.85 cfs @ 12.07 hrs HW=94.65' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.85 cfs @ 2.50 fps)

Pond CB3: CB3



Summary for Pond CBA: CB A

[57] Hint: Peaked at 96.84' (Flood elevation advised)

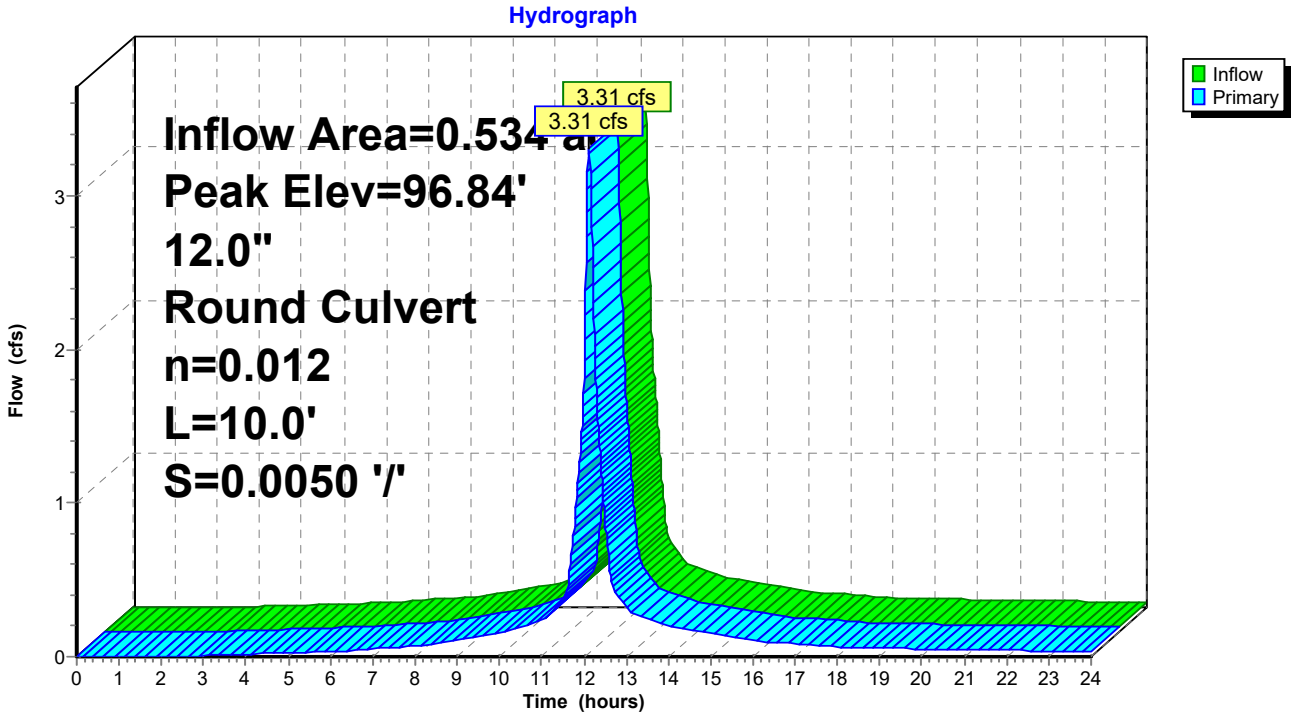
Inflow Area = 0.534 ac, 80.70% Impervious, Inflow Depth > 6.30" for 25 yr event
Inflow = 3.31 cfs @ 12.12 hrs, Volume= 0.281 af
Outflow = 3.31 cfs @ 12.12 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min
Primary = 3.31 cfs @ 12.12 hrs, Volume= 0.281 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 96.84' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.40'	**12.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 95.40' / 95.35' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=3.31 cfs @ 12.12 hrs HW=96.84' TW=96.05' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 3.31 cfs @ 4.21 fps)

Pond CBA: CB A



Summary for Pond DMH1: DMH1

[57] Hint: Peaked at 93.85' (Flood elevation advised)

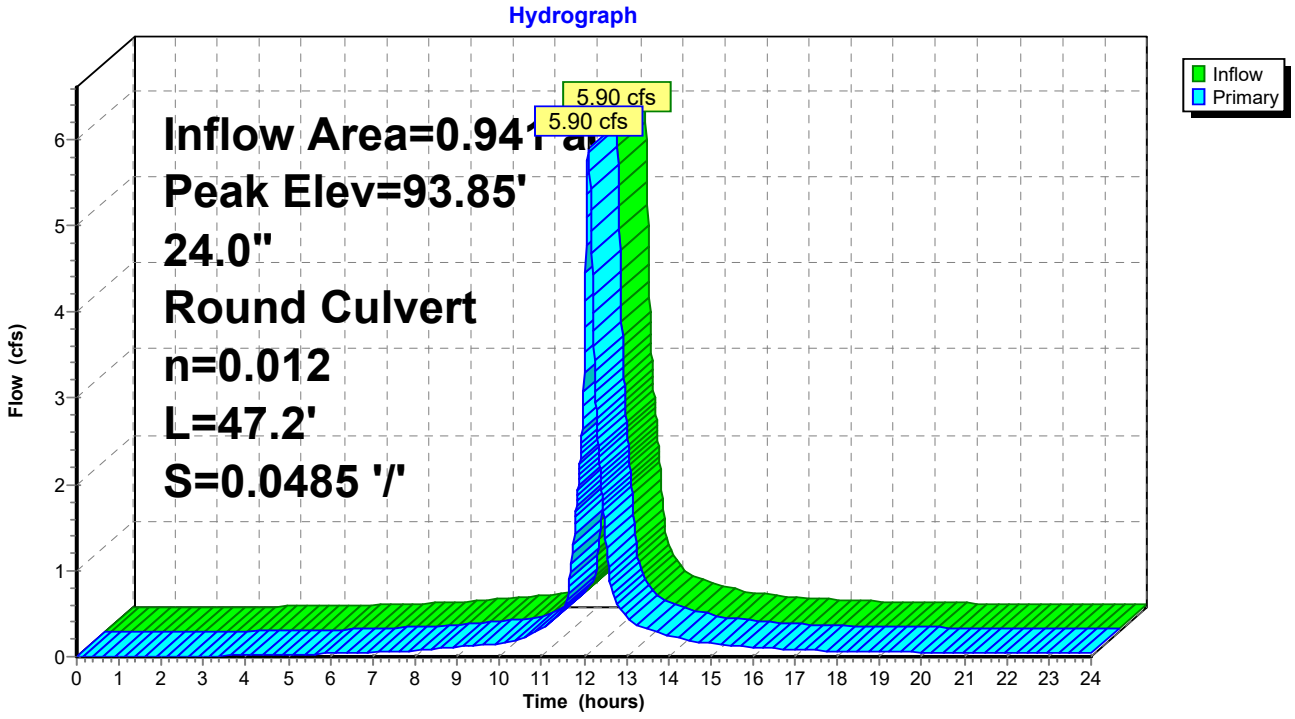
Inflow Area = 0.941 ac, 89.04% Impervious, Inflow Depth > 5.00" for 25 yr event
Inflow = 5.90 cfs @ 12.11 hrs, Volume= 0.392 af
Outflow = 5.90 cfs @ 12.11 hrs, Volume= 0.392 af, Atten= 0%, Lag= 0.0 min
Primary = 5.90 cfs @ 12.11 hrs, Volume= 0.392 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 93.85'@ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.79'	**24.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 92.79' / 90.50' S= 0.0485 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=5.90 cfs @ 12.11 hrs HW=93.85' TW=92.25' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 5.90 cfs @ 3.50 fps)

Pond DMH1: DMH1



Summary for Pond DMH2: DMH2

[57] Hint: Peaked at 92.25' (Flood elevation advised)

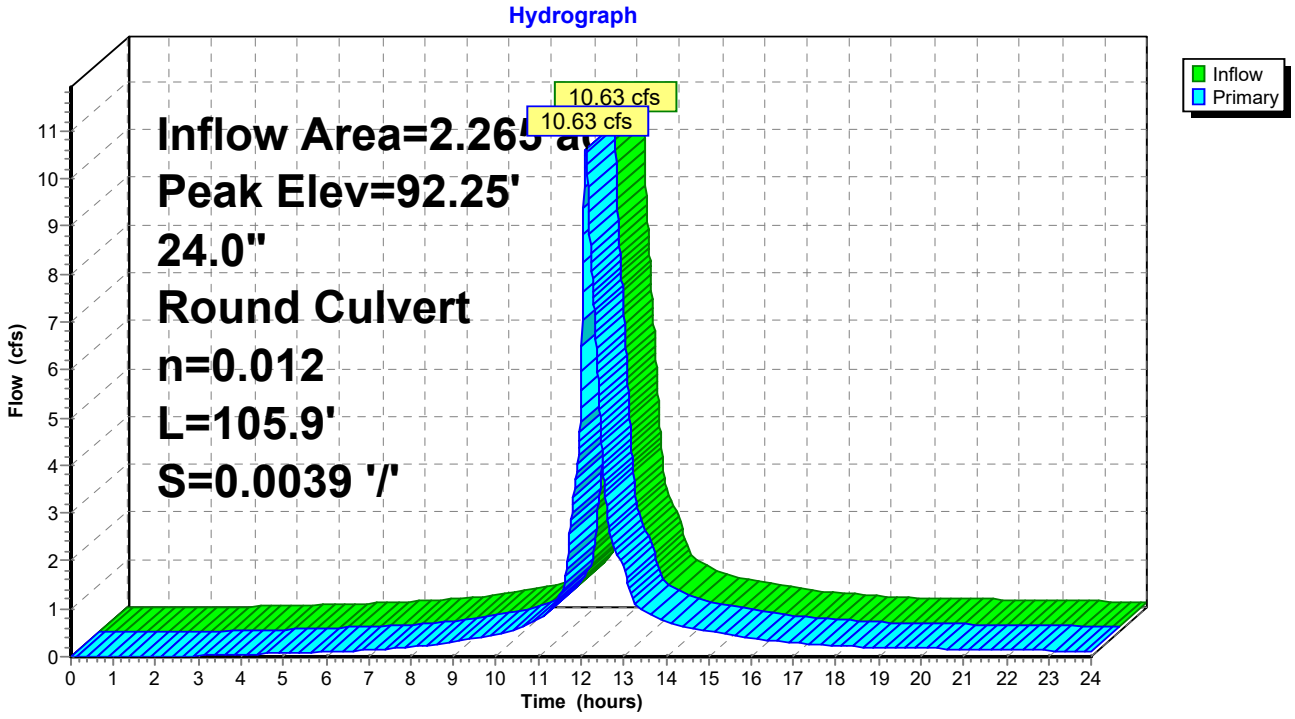
Inflow Area = 2.265 ac, 72.37% Impervious, Inflow Depth > 5.38" for 25 yr event
Inflow = 10.63 cfs @ 12.12 hrs, Volume= 1.016 af
Outflow = 10.63 cfs @ 12.12 hrs, Volume= 1.016 af, Atten= 0%, Lag= 0.0 min
Primary = 10.63 cfs @ 12.12 hrs, Volume= 1.016 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 92.25' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	90.47'	**24.0" Round Culvert** L= 105.9' Ke= 0.500 Inlet / Outlet Invert= 90.47' / 90.06' S= 0.0039 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=10.63 cfs @ 12.12 hrs HW=92.25' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 10.63 cfs @ 4.77 fps)

Pond DMH2: DMH2



Summary for Pond DMHC: DMH C

[57] Hint: Peaked at 96.05' (Flood elevation advised)

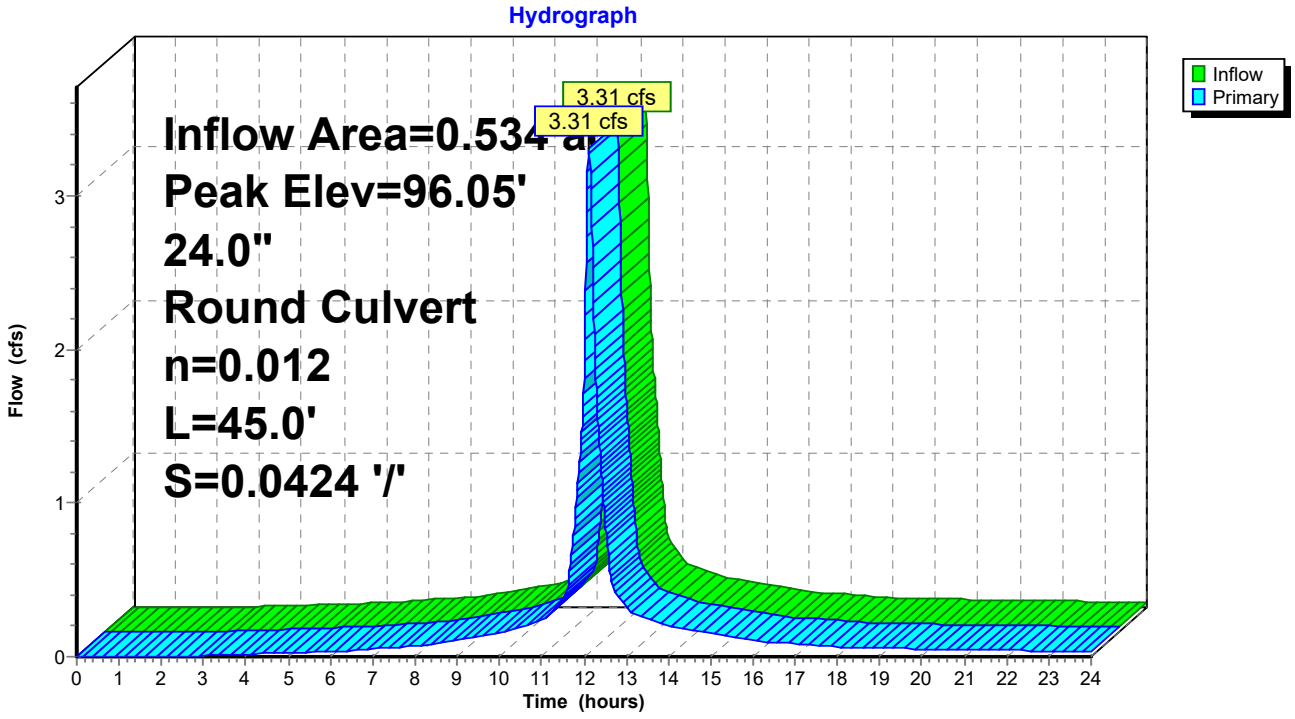
Inflow Area = 0.534 ac, 80.70% Impervious, Inflow Depth > 6.30" for 25 yr event
Inflow = 3.31 cfs @ 12.12 hrs, Volume= 0.281 af
Outflow = 3.31 cfs @ 12.12 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min
Primary = 3.31 cfs @ 12.12 hrs, Volume= 0.281 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 96.05' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.28'	**24.0" Round Culvert** L= 45.0' Ke= 0.500 Inlet / Outlet Invert= 95.28' / 93.37' S= 0.0424 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=3.31 cfs @ 12.12 hrs HW=96.05' TW=93.84' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 3.31 cfs @ 2.98 fps)

Pond DMHC: DMH C



Summary for Pond DP: Det. Pond

Inflow Area = 1.325 ac, 60.53% Impervious, Inflow Depth > 5.69" for 25 yr event
Inflow = 7.88 cfs @ 12.08 hrs, Volume= 0.628 af
Outflow = 4.89 cfs @ 12.18 hrs, Volume= 0.624 af, Atten= 38%, Lag= 6.0 min
Primary = 4.89 cfs @ 12.18 hrs, Volume= 0.624 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 94.17' @ 12.18 hrs Surf.Area= 2,327 sf Storage= 3,753 cf

Plug-Flow detention time= 16.6 min calculated for 0.624 af (99% of inflow)
Center-of-Mass det. time= 12.8 min (787.8 - 775.0)

Volume	Invert	Avail.Storage	Storage Description
#1	92.00'	5,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

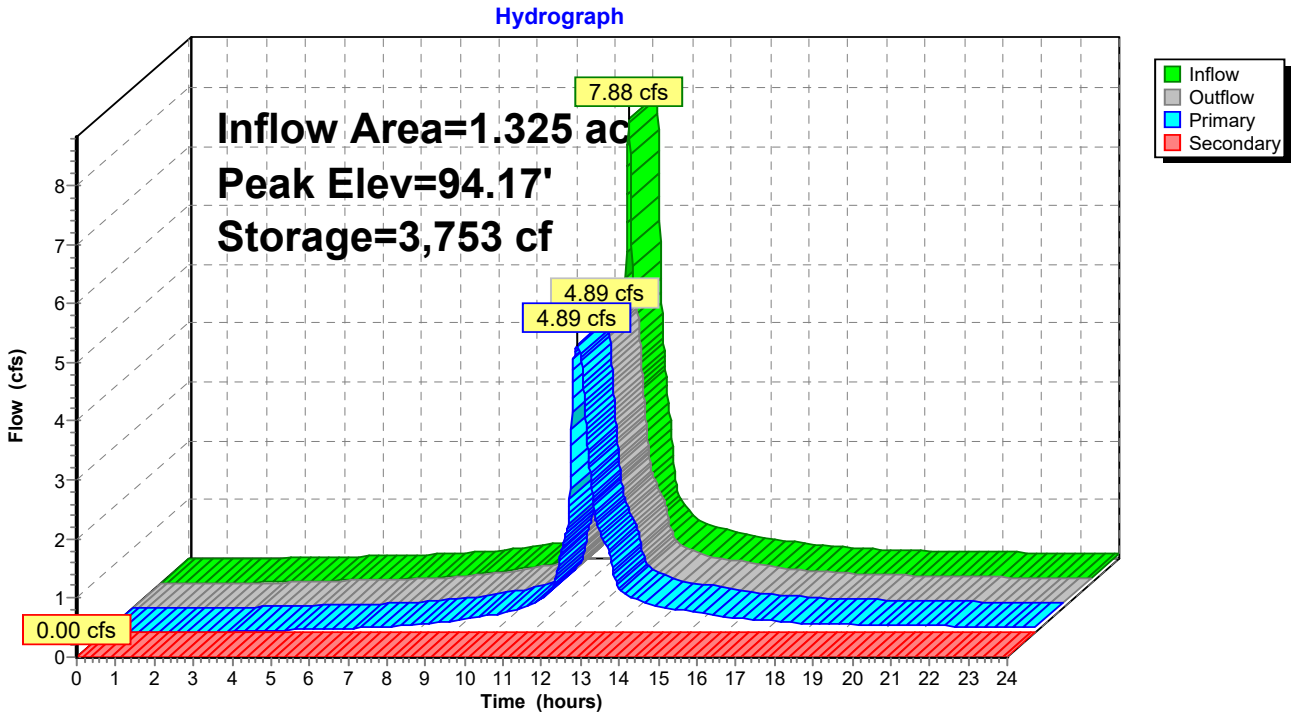
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
92.00	1	0.0	0	0
92.01	1,176	100.0	6	6
93.00	1,671	100.0	1,409	1,415
94.00	2,222	100.0	1,947	3,362
95.00	2,830	100.0	2,526	5,888

Device	Routing	Invert	Outlet Devices
#1	Primary	92.00'	**12.0" Round Culvert** L= 32.7' Ke= 0.500 Inlet / Outlet Invert= 92.00' / 90.75' S= 0.0382 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	94.90'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Device 1	92.00'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	93.10'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=4.89 cfs @ 12.18 hrs HW=94.17' TW=92.14' (Dynamic Tailwater)
↑└**1=Culvert** (Inlet Controls 4.89 cfs @ 6.22 fps)
↑ ├**3=Orifice/Grate** (Passes < 2.39 cfs potential flow)
 └**4=Orifice/Grate** (Passes < 2.86 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=92.00' TW=0.00' (Dynamic Tailwater)
↑└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond DP: Det. Pond



Summary for Pond PP: Pervious Pavement

Inflow Area = 0.101 ac, 5.55% Impervious, Inflow Depth > 3.00" for 25 yr event
Inflow = 0.37 cfs @ 12.08 hrs, Volume= 0.025 af
Outflow = 0.12 cfs @ 12.40 hrs, Volume= 0.024 af, Atten= 66%, Lag= 19.4 min
Primary = 0.12 cfs @ 12.40 hrs, Volume= 0.024 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.63' @ 12.40 hrs Surf.Area= 4,169 sf Storage= 351 cf

Plug-Flow detention time=88.0 min calculated for 0.024 af (93% of inflow)
Center-of-Mass det. time=54.4 min (898.3 - 843.9)

Volume	Invert	Avail.Storage	Storage Description
#1	95.42'	1,803 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

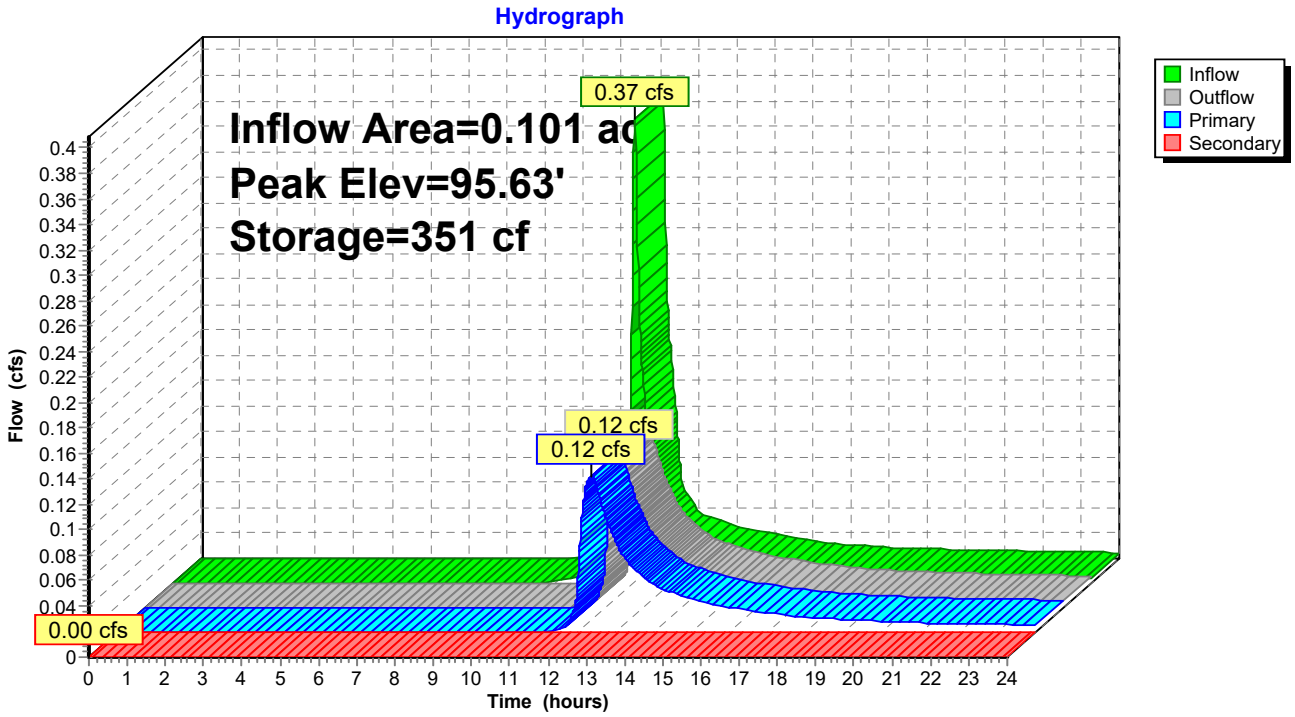
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
95.42	4,169	0.0	0	0
95.43	4,169	40.0	17	17
95.90	4,169	40.0	784	800
95.91	4,169	15.0	6	807
96.15	4,169	15.0	150	957
96.16	4,169	5.0	2	959
97.15	4,169	5.0	206	1,165
97.16	4,169	30.0	13	1,178
97.49	4,169	30.0	413	1,590
97.50	4,169	15.0	6	1,597
97.83	4,169	15.0	206	1,803

Device	Routing	Invert	Outlet Devices
#1	Primary	95.42'	**6.0" Round Culvert** L= 53.0' Ke= 0.500 Inlet / Outlet Invert= 95.42' / 94.00' S= 0.0268 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf
#2	Secondary	97.73'	**200.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.12 cfs @ 12.40 hrs HW=95.63' TW=93.75' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.12 cfs @ 1.56 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=95.42' TW=92.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond PP: Pervious Pavement



Summary for Pond ST: Stormtech

Inflow Area = 0.406 ac, 100.00% Impervious, Inflow Depth > 6.90" for 25 yr event
Inflow = 2.95 cfs @ 12.07 hrs, Volume= 0.234 af
Outflow = 2.73 cfs @ 12.10 hrs, Volume= 0.234 af, Atten= 7%, Lag= 1.8 min
Discarded = 0.11 cfs @ 9.53 hrs, Volume= 0.122 af
Primary = 2.62 cfs @ 12.10 hrs, Volume= 0.111 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 98.97' @ 12.10 hrs Surf.Area= 656 sf Storage= 551 cf

Plug-Flow detention time=6.2 min calculated for 0.233 af (100% of inflow)
Center-of-Mass det. time=6.2 min (747.5 - 741.3)

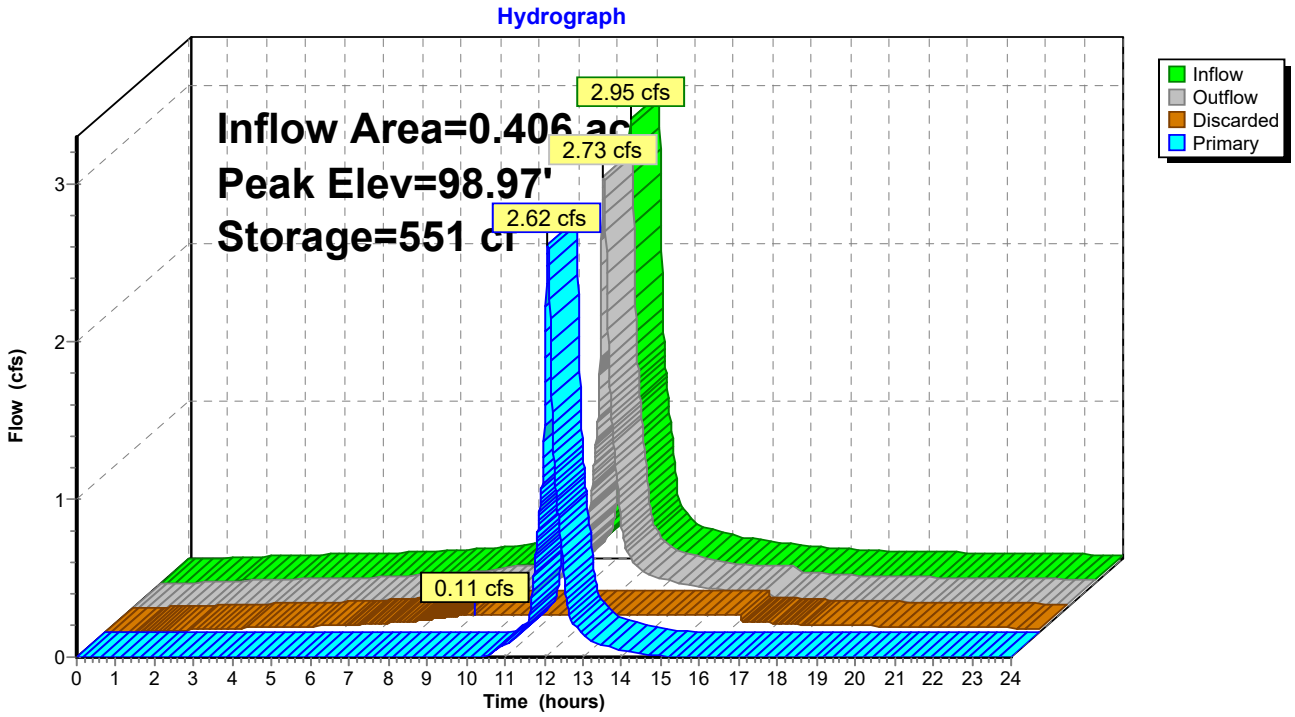
Volume	Invert	Avail.Storage	Storage Description
#1	97.58'	468 cf	**14.82'W x 44.24'L x 2.33'H Prismatoid** 1,528 cf Overall - 357 cf Embedded = 1,170 cf x 40.0% Voids
#2	98.08'	357 cf	**ADS_StormTech SC-310** x 24 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 4 rows
		826 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	**12.0" Round Culvert** L= 38.5' Ke= 0.500 Inlet / Outlet Invert= 98.00' / 95.40' S= 0.0675 '/' Cc= 0.900 n= 0.010, Flow Area= 0.79 sf
#2	Discarded	97.58'	**7.500 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.11 cfs @ 9.53 hrs HW=97.60' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.11 cfs)

Primary OutFlow Max=2.62 cfs @ 12.10 hrs HW=98.97' TW=93.84' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 2.62 cfs @ 3.36 fps)

Pond ST: Stormtech



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 4
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: WesternGrassedArea Runoff Area=14,469 sf 3.15% Impervious Runoff Depth>5.54"
Flow Length=316' Tc=7.5 min CN=75 Runoff=2.04 cfs 0.153 af

Subcatchment2S: SouthernGrassedArea Runoff Area=5,631 sf 54.43% Impervious Runoff Depth>6.99"
Tc=5.0 min CN=87 Runoff=1.04 cfs 0.075 af

Subcatchment3S: Roof Runoff Area=17,704 sf 100.00% Impervious Runoff Depth>8.31"
Tc=5.0 min CN=98 Runoff=3.54 cfs 0.282 af

Subcatchment4S: EasternSite Runoff Area=23,278 sf 80.70% Impervious Runoff Depth>7.71"
Flow Length=303' Tc=8.8 min CN=93 Runoff=4.00 cfs 0.343 af

Subcatchment5S: ParkingLot Runoff Area=38,818 sf 88.18% Impervious Runoff Depth>7.95"
Tc=5.0 min CN=95 Runoff=7.68 cfs 0.591 af

Subcatchment6S: ParkingLot Runoff Area=4,414 sf 5.55% Impervious Runoff Depth>4.11"
Tc=5.0 min CN=63 Runoff=0.50 cfs 0.035 af

ReachAP 1: AP 1 Inflow=12.35 cfs 1.262 af
Outflow=12.35 cfs 1.262 af

ReachAP2: AP2 Inflow=1.04 cfs 0.075 af
Outflow=1.04 cfs 0.075 af

Pond CB2: CB2 Peak Elev=95.80' Inflow=1.04 cfs 0.075 af
12.0" Round Culvert n=0.012 L=129.0' S=0.0093 '/' Outflow=1.04 cfs 0.075 af

Pond CB3: CB3 Peak Elev=94.73' Inflow=1.04 cfs 0.075 af
12.0" Round Culvert n=0.012 L=1.0' S=0.0000 '/' Outflow=1.04 cfs 0.075 af

Pond CBA: CB A Peak Elev=97.25' Inflow=4.00 cfs 0.343 af
12.0" Round Culvert n=0.012 L=10.0' S=0.0050 '/' Outflow=4.00 cfs 0.343 af

Pond DMH1: DMH1 Peak Elev=93.97' Inflow=7.11 cfs 0.489 af
24.0" Round Culvert n=0.012 L=47.2' S=0.0485 '/' Outflow=7.11 cfs 0.489 af

Pond DMH2: DMH2 Peak Elev=92.45' Inflow=12.35 cfs 1.262 af
24.0" Round Culvert n=0.012 L=105.9' S=0.0039 '/' Outflow=12.35 cfs 1.262 af

Pond DMHC: DMH C Peak Elev=96.13' Inflow=4.00 cfs 0.343 af
24.0" Round Culvert n=0.012 L=45.0' S=0.0424 '/' Outflow=4.00 cfs 0.343 af

Pond DP: Det. Pond Peak Elev=94.59' Storage=4,788 cf Inflow=9.68 cfs 0.777 af
Primary=5.47 cfs 0.773 af Secondary=0.00 cfs 0.000 af Outflow=5.47 cfs 0.773 af

Pond PP: PerviousPavement Peak Elev=95.69' Storage=455 cf Inflow=0.50 cfs 0.035 af
Primary=0.19 cfs 0.033 af Secondary=0.00 cfs 0.000 af Outflow=0.19 cfs 0.033 af

Pond ST: Stormtech Peak Elev=99.19' Storage=630 cf Inflow=3.54 cfs 0.282 af
Discarded=0.11 cfs 0.136 af Primary=3.13 cfs 0.146 af Outflow=3.25 cfs 0.282 af

Total Runoff Area = 2.395 ac Runoff Volume = 1.479 af Average Runoff Depth = 7.41"
28.60% Pervious = 0.685 ac 71.40% Impervious = 1.710 ac

Summary for Subcatchment 1S: Western Grassed Area

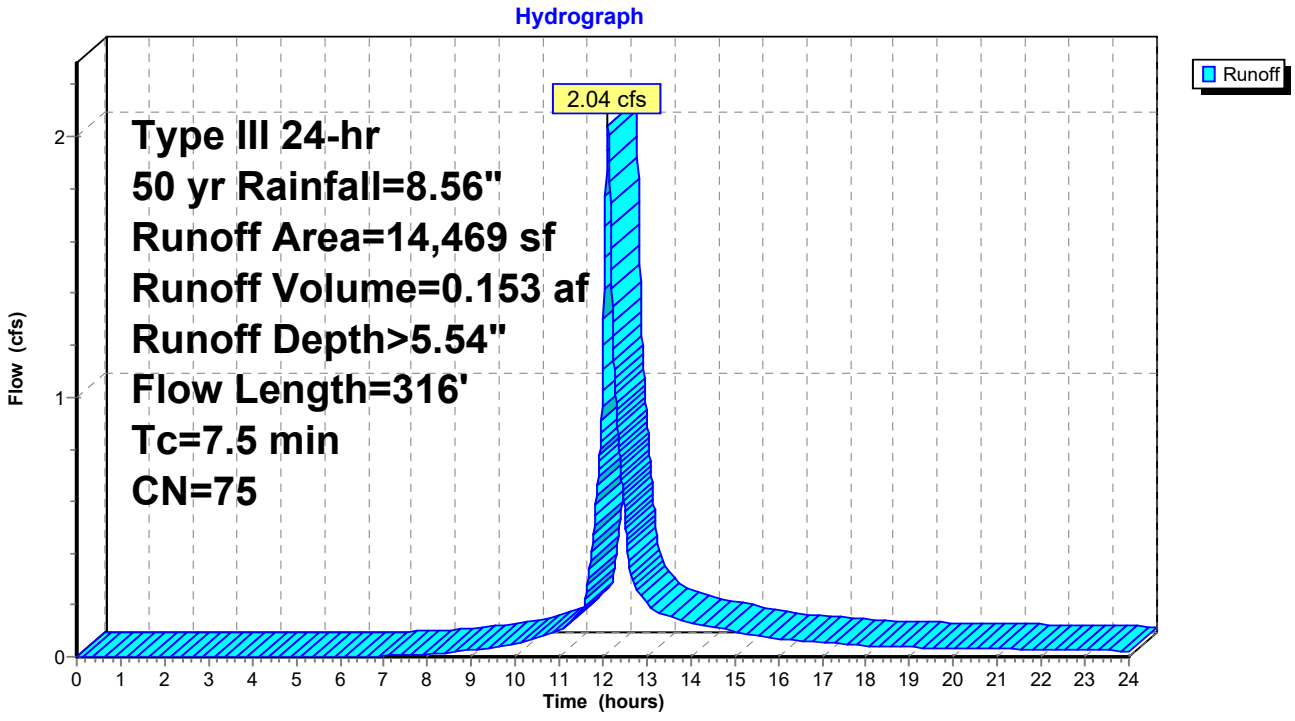
Runoff = 2.04 cfs @ 12.11 hrs, Volume= 0.153 af, Depth> 5.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

	Area (sf)	CN	Description
	14,013	74	>75% Grass cover, Good, HSG C
	342	98	Paved roads w/curbs & sewers, HSG C
*	114	98	Concrete
	14,469	75	Weighted Average
	14,013		96.85% Pervious Area
	456		3.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0232	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
2.6	266	0.0132	1.72		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.5	316	Total			

Subcatchment 1S: Western Grassed Area



Summary for Subcatchment 2S: Southern Grassed Area

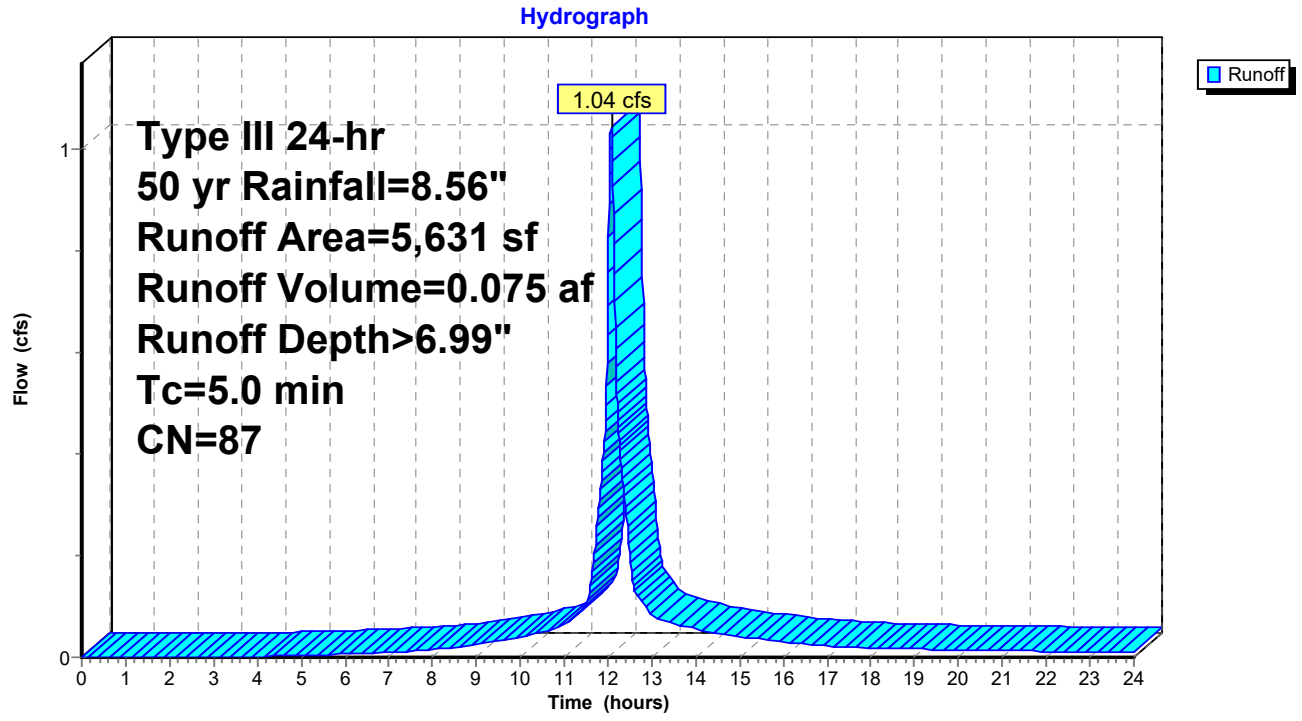
Runoff = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af, Depth> 6.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

Area (sf)	CN	Description
2,566	74	>75% Grass cover, Good, HSG C
3,065	98	Paved roads w/curbs & sewers, HSG C
5,631	87	Weighted Average
2,566		45.57% Pervious Area
3,065		54.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: Southern Grassed Area



Summary for Subcatchment 3S: Roof

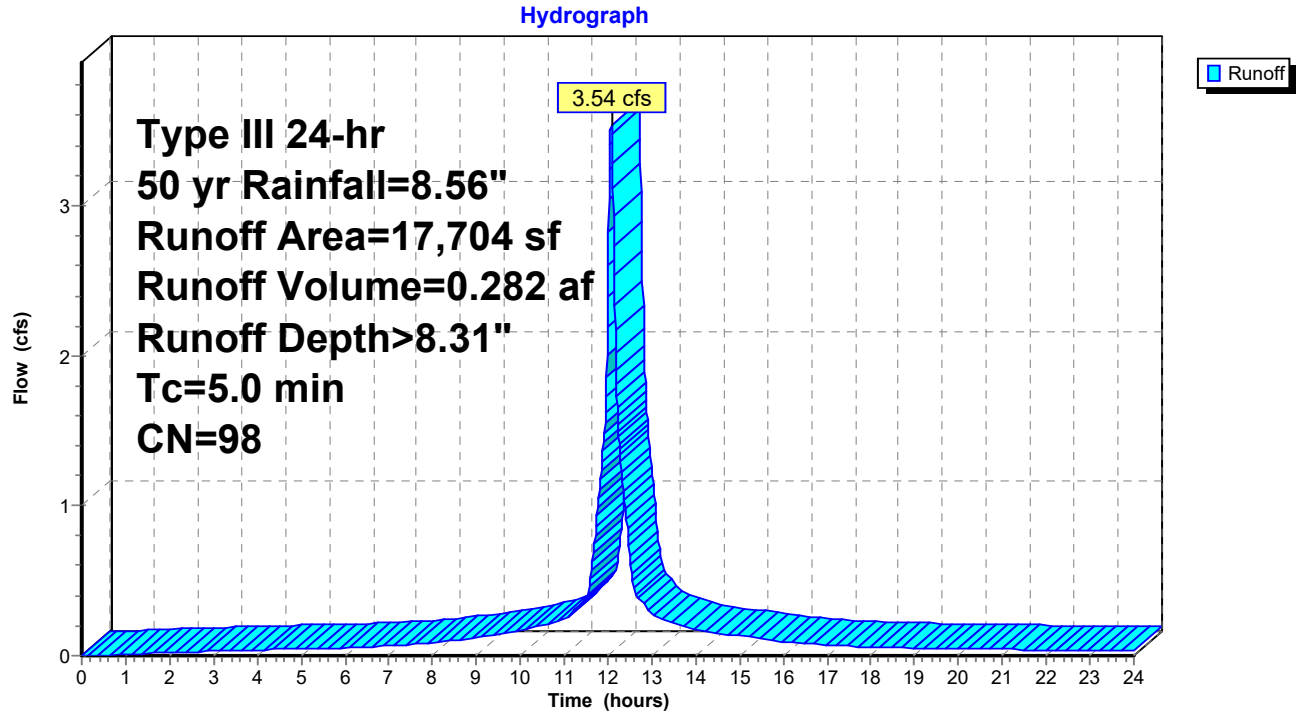
Runoff = 3.54 cfs @ 12.07 hrs, Volume= 0.282 af, Depth> 8.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

Area (sf)	CN	Description
17,704	98	Roofs, HSG C
17,704		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 3S: Roof



Summary for Subcatchment 4S: Eastern Site

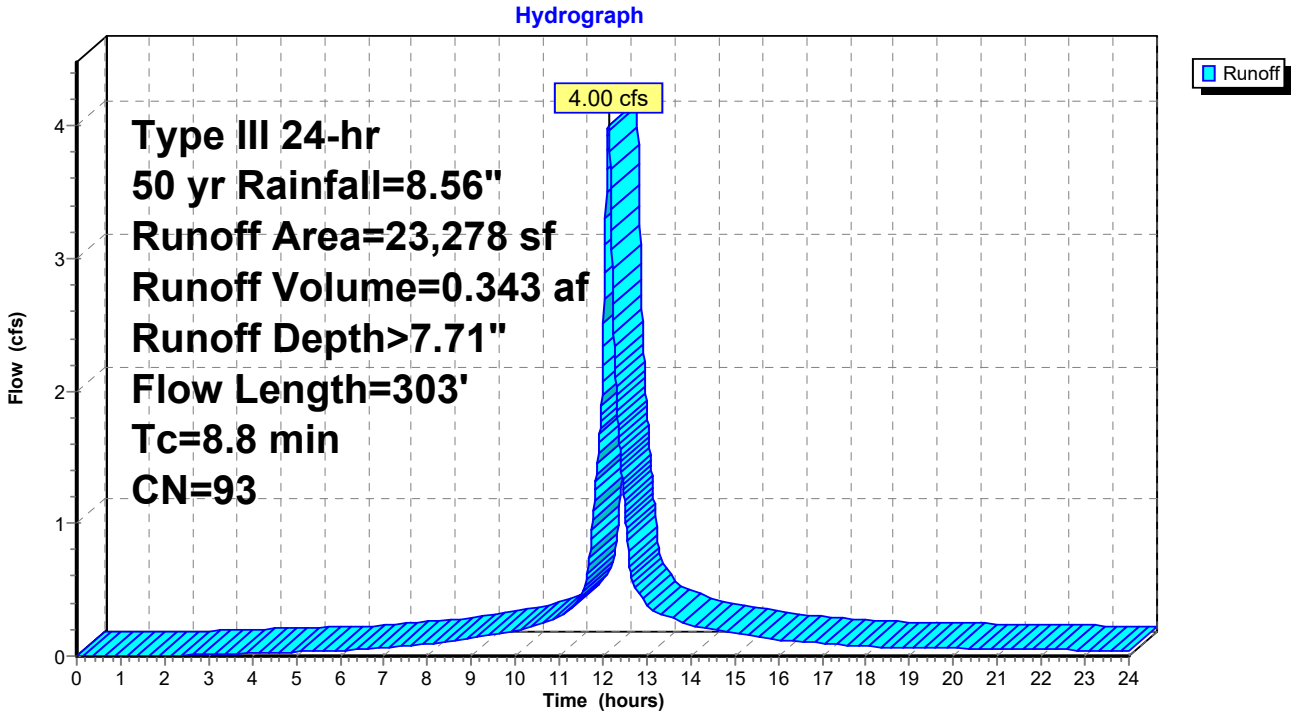
Runoff = 4.00 cfs @ 12.12 hrs, Volume= 0.343 af, Depth> 7.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

Area (sf)	CN	Description
4,492	74	>75% Grass cover, Good, HSG C
18,786	98	Paved roads w/curbs & sewers, HSG C
23,278	93	Weighted Average
4,492		19.30% Pervious Area
18,786		80.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0208	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.70"
4.6	37	0.0154	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.70"
4.0	252	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	303	Total			

Subcatchment 4S: Eastern Site



Summary for Subcatchment 5S: Parking Lot

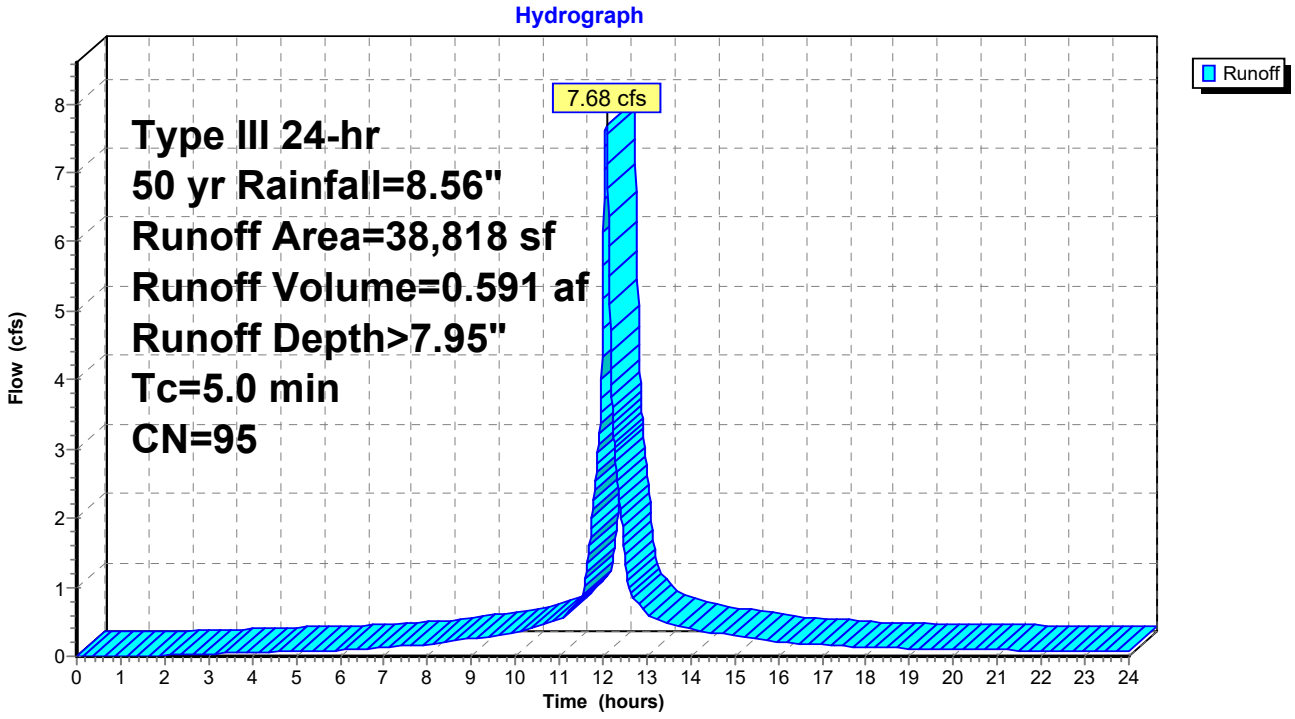
Runoff = 7.68 cfs @ 12.07 hrs, Volume= 0.591 af, Depth> 7.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

	Area (sf)	CN	Description
	4,359	74	>75% Grass cover, Good, HSG C
	33,846	98	Paved roads w/curbs & sewers, HSG C
*	26	98	Concrete
*	231	42	Pervious Pavers, HSG C
	248	98	Roofs, HSG C
*	108	98	Retaining Wall & Stairs, HSG C
	38,818	95	Weighted Average
	4,590		11.82% Pervious Area
	34,228		88.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 5S: Parking Lot



Summary for Subcatchment 6S: Parking Lot

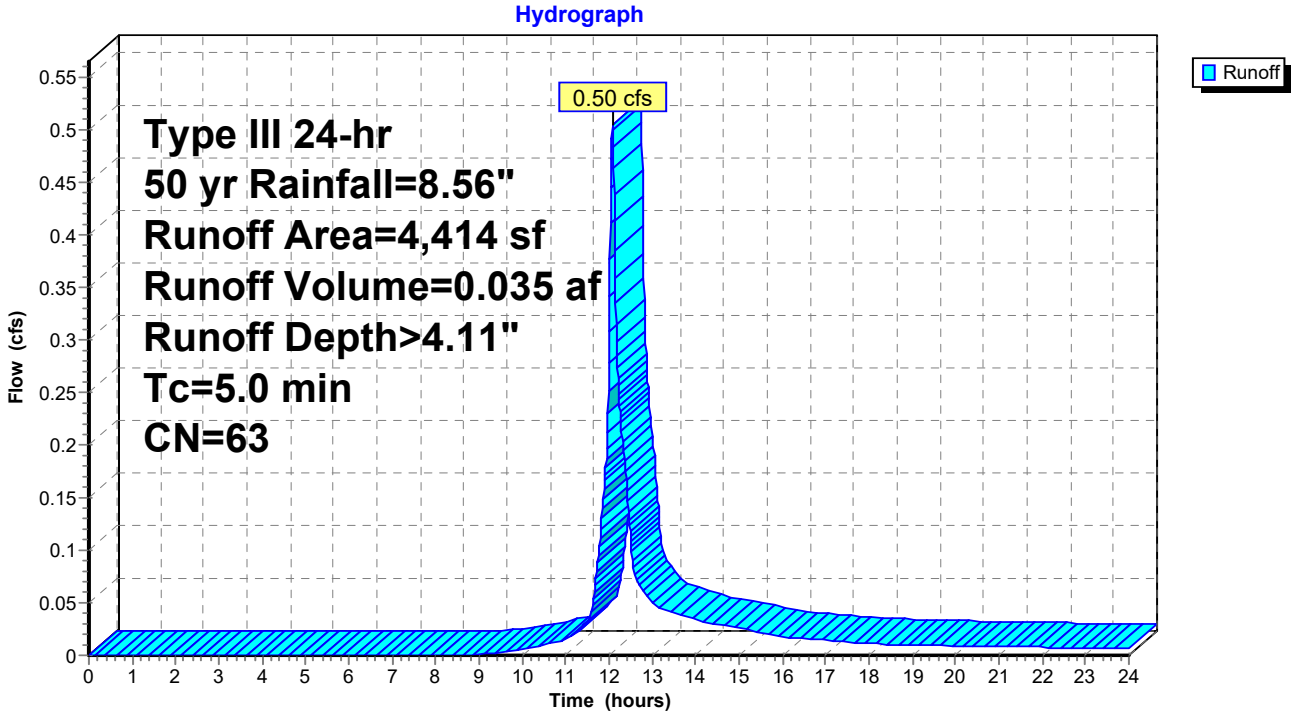
Runoff = 0.50 cfs @ 12.08 hrs, Volume= 0.035 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 50 yr Rainfall=8.56"

	Area (sf)	CN	Description
*	4,169	61	Pervious Pavement, HSG C
	245	98	Roofs, HSG C
	4,414	63	Weighted Average
	4,169		94.45% Pervious Area
	245		5.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 6S: Parking Lot



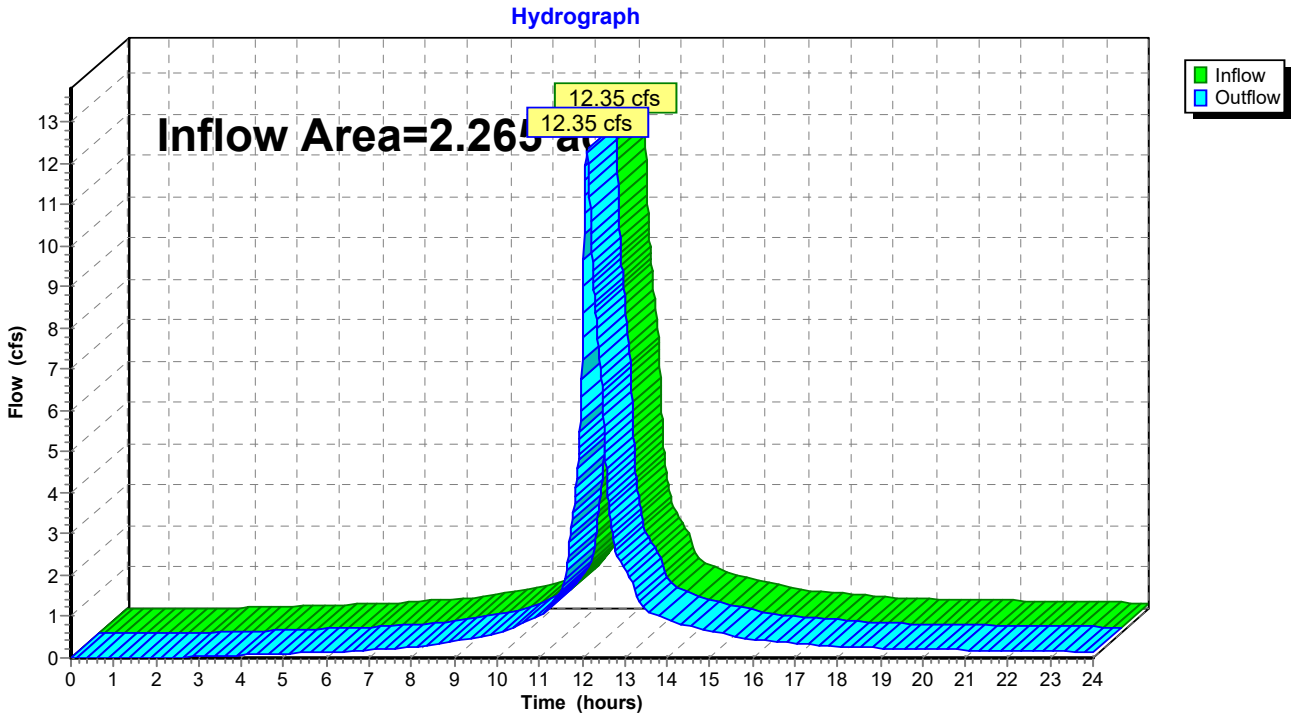
Summary for Reach AP 1: AP 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.265 ac, 72.37% Impervious, Inflow Depth > 6.69" for 50 yr event
Inflow = 12.35 cfs @ 12.12 hrs, Volume= 1.262 af
Outflow = 12.35 cfs @ 12.12 hrs, Volume= 1.262 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4

Reach AP 1: AP 1



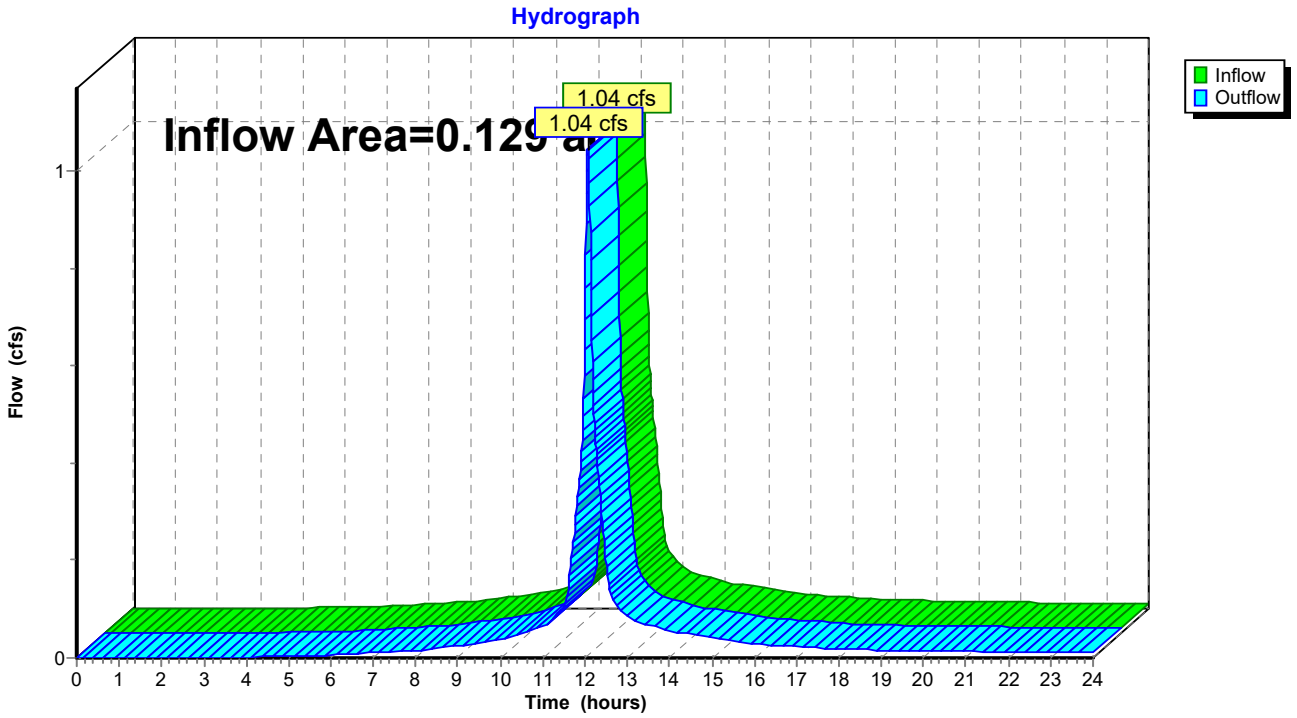
Summary for Reach AP2: AP2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 6.99" for 50 yr event
Inflow = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af
Outflow = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4

Reach AP2: AP2



Summary for Pond CB2: CB2

[57] Hint: Peaked at 95.80' (Flood elevation advised)

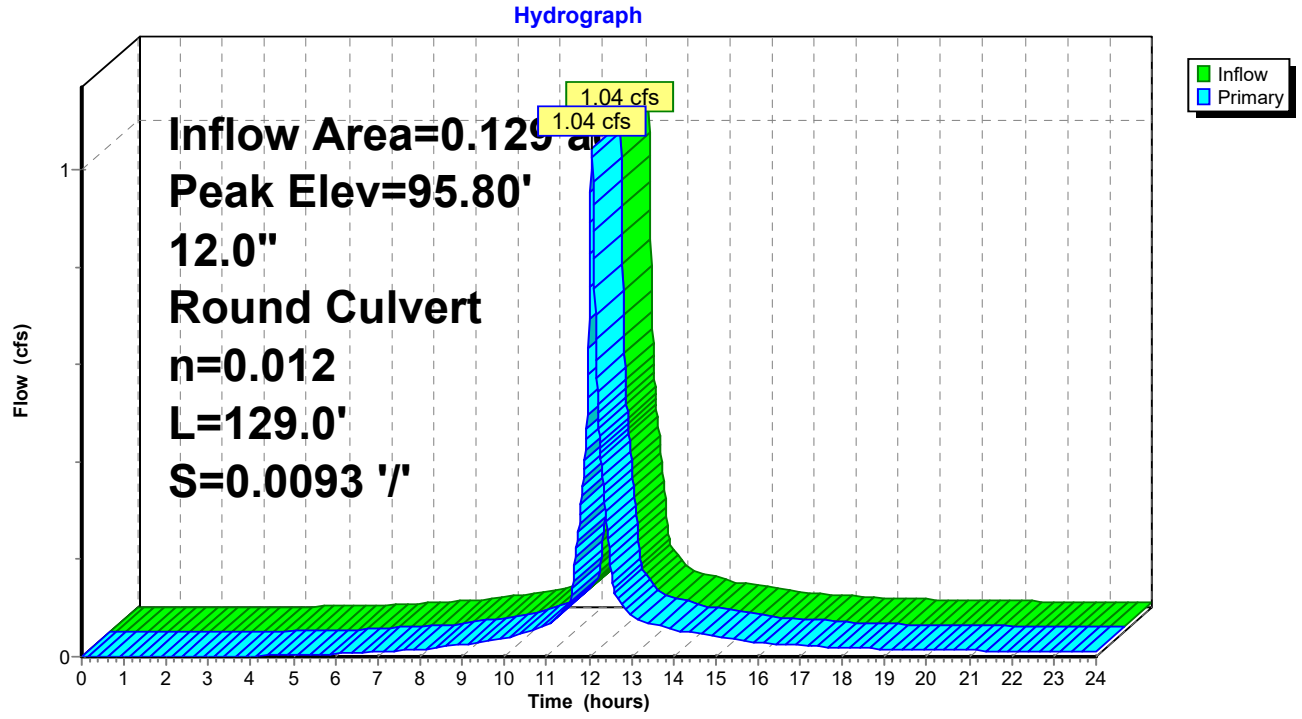
Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 6.99" for 50 yr event
Inflow = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af
Outflow = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af, Atten= 0%, Lag= 0.0 min
Primary = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.80' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.26'	**12.0" Round Culvert** L= 129.0' Ke= 0.500 Inlet / Outlet Invert= 95.26' / 94.06' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.04 cfs @ 12.07 hrs HW=95.80' TW=94.73' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 1.04 cfs @ 3.49 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

[57] Hint: Peaked at 94.73' (Flood elevation advised)

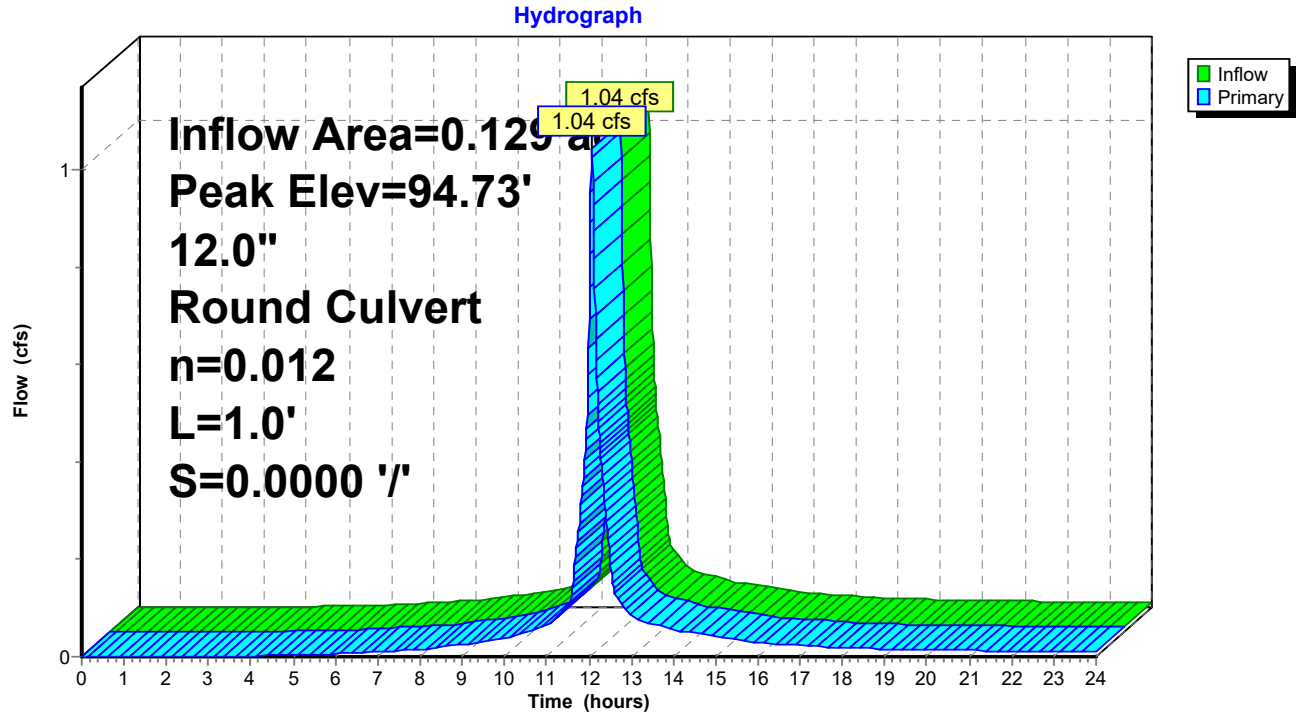
Inflow Area = 0.129 ac, 54.43% Impervious, Inflow Depth > 6.99" for 50 yr event
Inflow = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af
Outflow = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af, Atten= 0%, Lag= 0.0 min
Primary = 1.04 cfs @ 12.07 hrs, Volume= 0.075 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 94.73'@ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.06'	**12.0" Round Culvert** L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 94.06' / 94.06' S= 0.0000 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.04 cfs @ 12.07 hrs HW=94.73' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.04 cfs @ 2.65 fps)

Pond CB3: CB3



Summary for Pond CBA: CB A

[57] Hint: Peaked at 97.25' (Flood elevation advised)

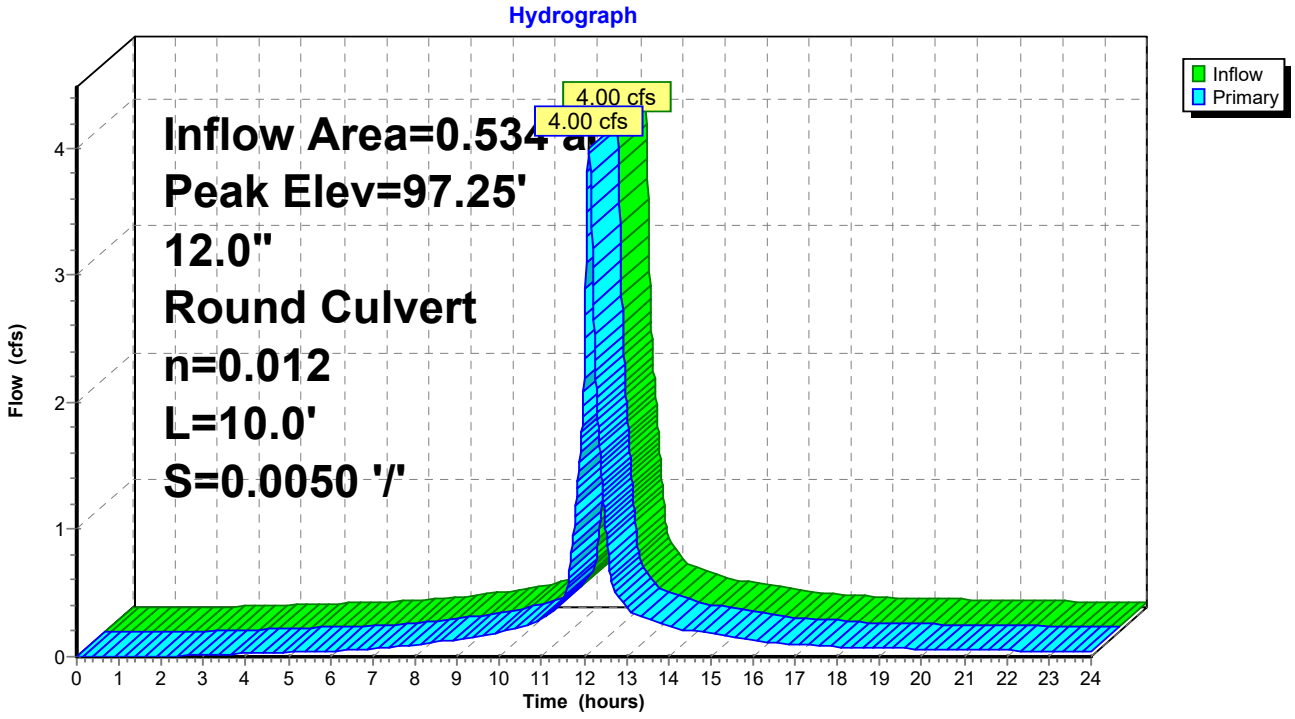
Inflow Area = 0.534 ac, 80.70% Impervious, Inflow Depth > 7.71" for 50 yr event
Inflow = 4.00 cfs @ 12.12 hrs, Volume= 0.343 af
Outflow = 4.00 cfs @ 12.12 hrs, Volume= 0.343 af, Atten= 0%, Lag= 0.0 min
Primary = 4.00 cfs @ 12.12 hrs, Volume= 0.343 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 97.25'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.40'	**12.0" Round Culvert** L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 95.40' / 95.35' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=4.00 cfs @ 12.12 hrs HW=97.25' TW=96.13' (Dynamic Tailwater)
1=Culvert (Inlet Controls 4.00 cfs @ 5.09 fps)

Pond CBA: CB A



Summary for Pond DMH1: DMH1

[57] Hint: Peaked at 93.97' (Flood elevation advised)

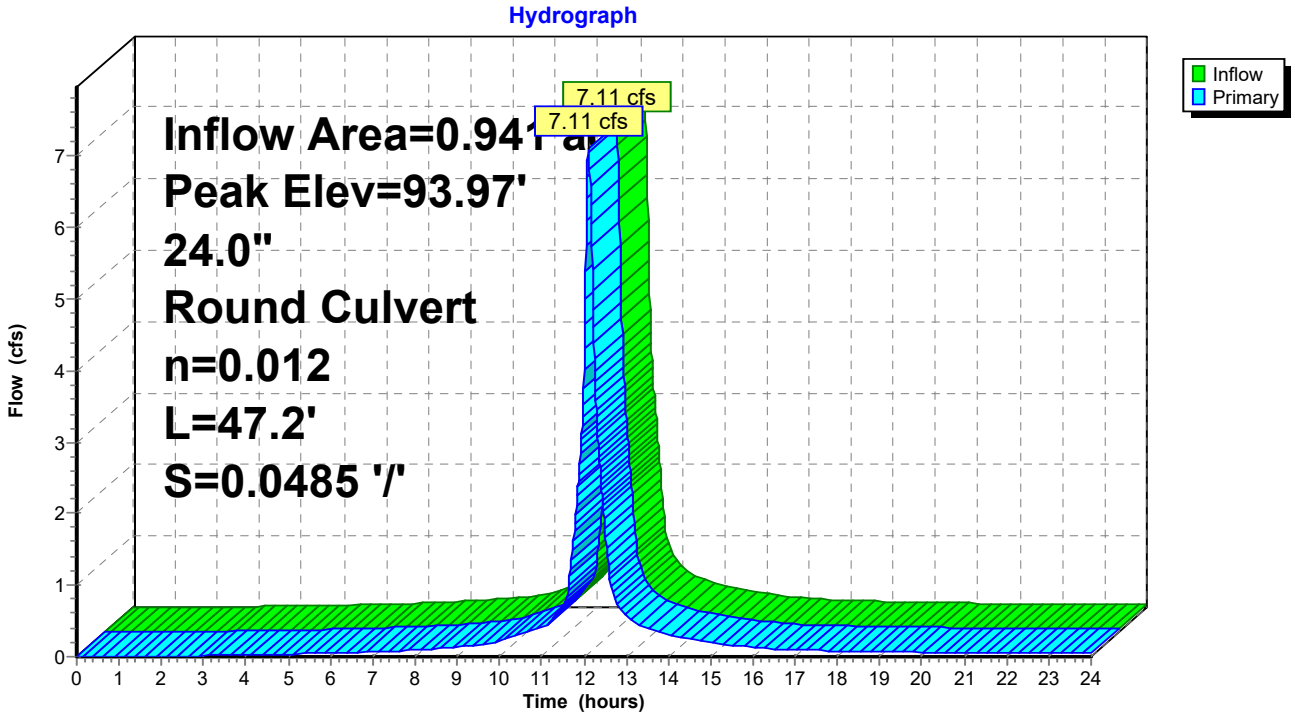
Inflow Area = 0.941 ac, 89.04% Impervious, Inflow Depth > 6.24" for 50 yr event
Inflow = 7.11 cfs @ 12.11 hrs, Volume= 0.489 af
Outflow = 7.11 cfs @ 12.11 hrs, Volume= 0.489 af, Atten= 0%, Lag= 0.0 min
Primary = 7.11 cfs @ 12.11 hrs, Volume= 0.489 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 93.97' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.79'	**24.0" Round Culvert** L= 47.2' Ke= 0.500 Inlet / Outlet Invert= 92.79' / 90.50' S= 0.0485 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=7.10 cfs @ 12.11 hrs HW=93.97' TW=92.44' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 7.10 cfs @ 3.69 fps)

Pond DMH1: DMH1



Summary for Pond DMH2: DMH2

[57] Hint: Peaked at 92.45' (Flood elevation advised)

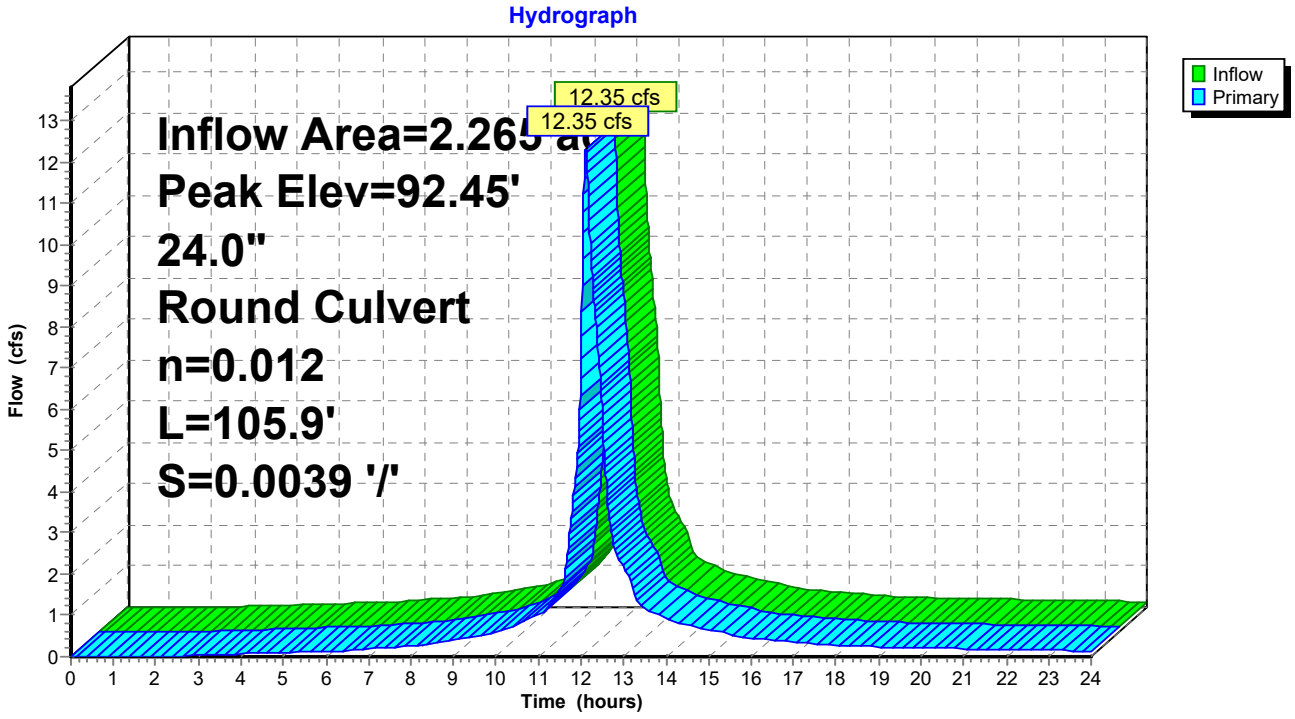
Inflow Area = 2.265 ac, 72.37% Impervious, Inflow Depth > 6.69" for 50 yr event
Inflow = 12.35 cfs @ 12.12 hrs, Volume= 1.262 af
Outflow = 12.35 cfs @ 12.12 hrs, Volume= 1.262 af, Atten= 0%, Lag= 0.0 min
Primary = 12.35 cfs @ 12.12 hrs, Volume= 1.262 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 92.45' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	90.47'	**24.0" Round Culvert** L= 105.9' Ke= 0.500 Inlet / Outlet Invert= 90.47' / 90.06' S= 0.0039 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=12.34 cfs @ 12.12 hrs HW=92.45' TW=0.00' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 12.34 cfs @ 4.95 fps)

Pond DMH2: DMH2



Summary for Pond DMHC: DMH C

[57] Hint: Peaked at 96.13' (Flood elevation advised)

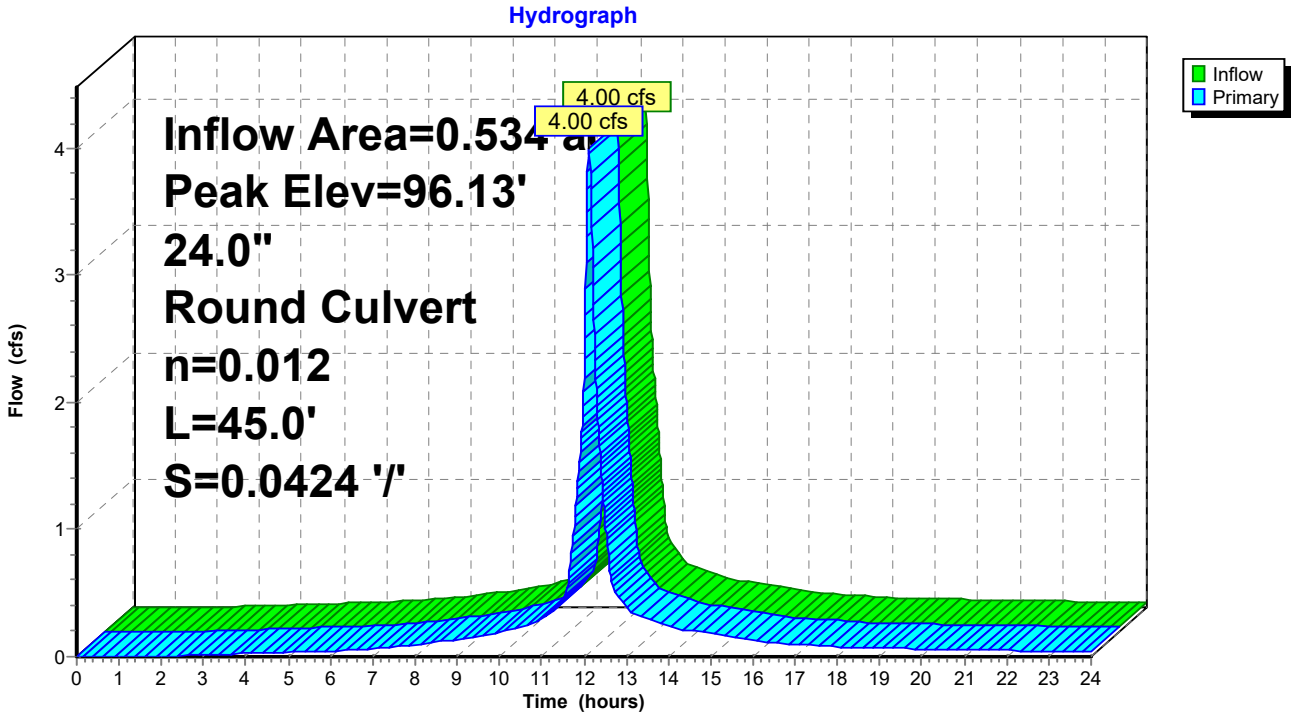
Inflow Area = 0.534 ac, 80.70% Impervious, Inflow Depth > 7.71" for 50 yr event
Inflow = 4.00 cfs @ 12.12 hrs, Volume= 0.343 af
Outflow = 4.00 cfs @ 12.12 hrs, Volume= 0.343 af, Atten= 0%, Lag= 0.0 min
Primary = 4.00 cfs @ 12.12 hrs, Volume= 0.343 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 96.13'@ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	95.28'	**24.0" Round Culvert** L= 45.0' Ke= 0.500 Inlet / Outlet Invert= 95.28' / 93.37' S= 0.0424 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=4.00 cfs @ 12.12 hrs HW=96.13' TW=93.96' (Dynamic Tailwater)
1=Culvert (Inlet Controls 4.00 cfs @ 3.14 fps)

Pond DMHC: DMH C



Summary for Pond DP: Det. Pond

Inflow Area = 1.325 ac, 60.53% Impervious, Inflow Depth > 7.04" for 50 yr event
Inflow = 9.68 cfs @ 12.08 hrs, Volume= 0.777 af
Outflow = 5.47 cfs @ 12.20 hrs, Volume= 0.773 af, Atten= 43%, Lag= 7.1 min
Primary = 5.47 cfs @ 12.20 hrs, Volume= 0.773 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 94.59' @ 12.20 hrs Surf.Area= 2,583 sf Storage= 4,788 cf

Plug-Flow detention time= 16.1 min calculated for 0.773 af (99% of inflow)
Center-of-Mass det. time= 12.7 min (783.7 - 771.1)

Volume	Invert	Avail.Storage	Storage Description
#1	92.00'	5,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

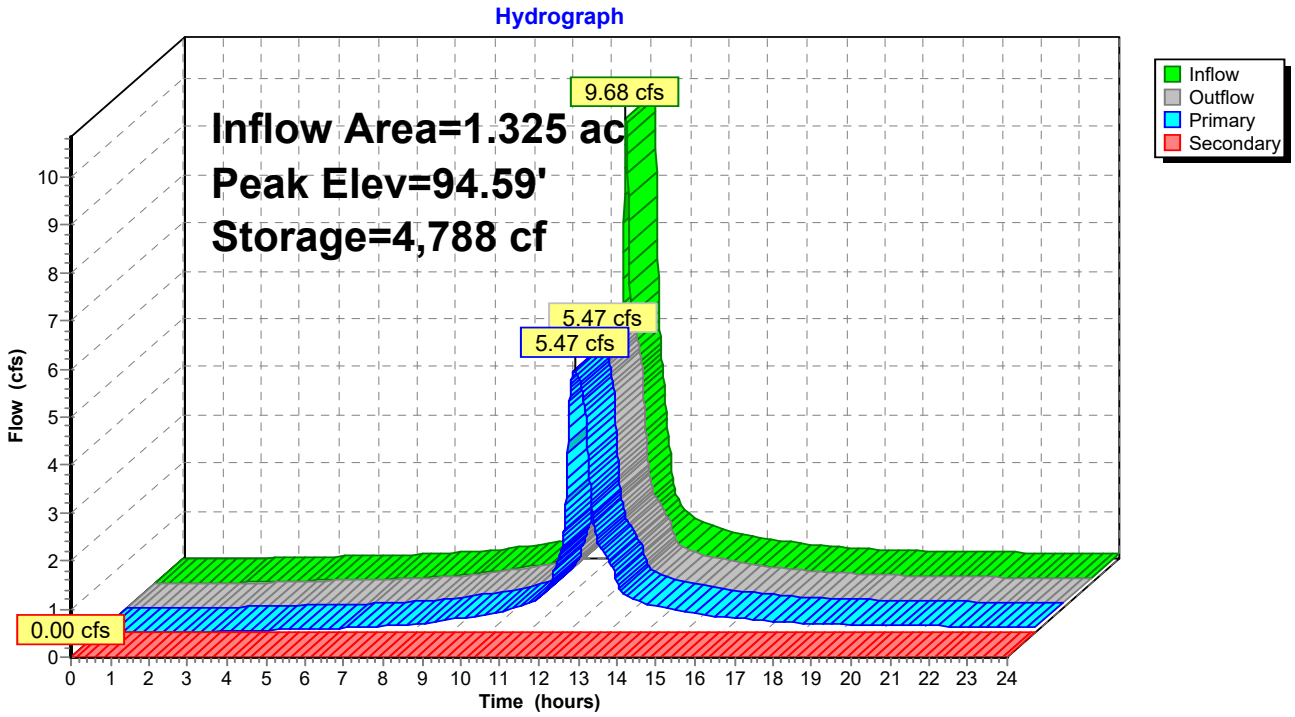
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
92.00	1	0.0	0	0
92.01	1,176	100.0	6	6
93.00	1,671	100.0	1,409	1,415
94.00	2,222	100.0	1,947	3,362
95.00	2,830	100.0	2,526	5,888

Device	Routing	Invert	Outlet Devices
#1	Primary	92.00'	**12.0" Round Culvert** L= 32.7' Ke= 0.500 Inlet / Outlet Invert= 92.00' / 90.75' S= 0.0382 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	94.90'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Device 1	92.00'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	93.10'	**12.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.47 cfs @ 12.20 hrs HW=94.59' TW=92.26' (Dynamic Tailwater)
↑└**1=Culvert** (Inlet Controls 5.47 cfs @ 6.97 fps)
↑ ├**3=Orifice/Grate** (Passes < 2.57 cfs potential flow)
 └**4=Orifice/Grate** (Passes < 3.77 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=92.00' TW=0.00' (Dynamic Tailwater)
↑└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond DP: Det. Pond



Summary for Pond PP: Pervious Pavement

Inflow Area = 0.101 ac, 5.55% Impervious, Inflow Depth > 4.11" for 50 yr event
Inflow = 0.50 cfs @ 12.08 hrs, Volume= 0.035 af
Outflow = 0.19 cfs @ 12.33 hrs, Volume= 0.033 af, Atten= 61%, Lag= 15.5 min
Primary = 0.19 cfs @ 12.33 hrs, Volume= 0.033 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 95.69' @ 12.33 hrs Surf.Area= 4,169 sf Storage= 455 cf

Plug-Flow detention time=76.3 min calculated for 0.033 af (95% of inflow)
Center-of-Mass det. time=47.9 min (882.6 - 834.7)

Volume	Invert	Avail.Storage	Storage Description
#1	95.42'	1,803 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

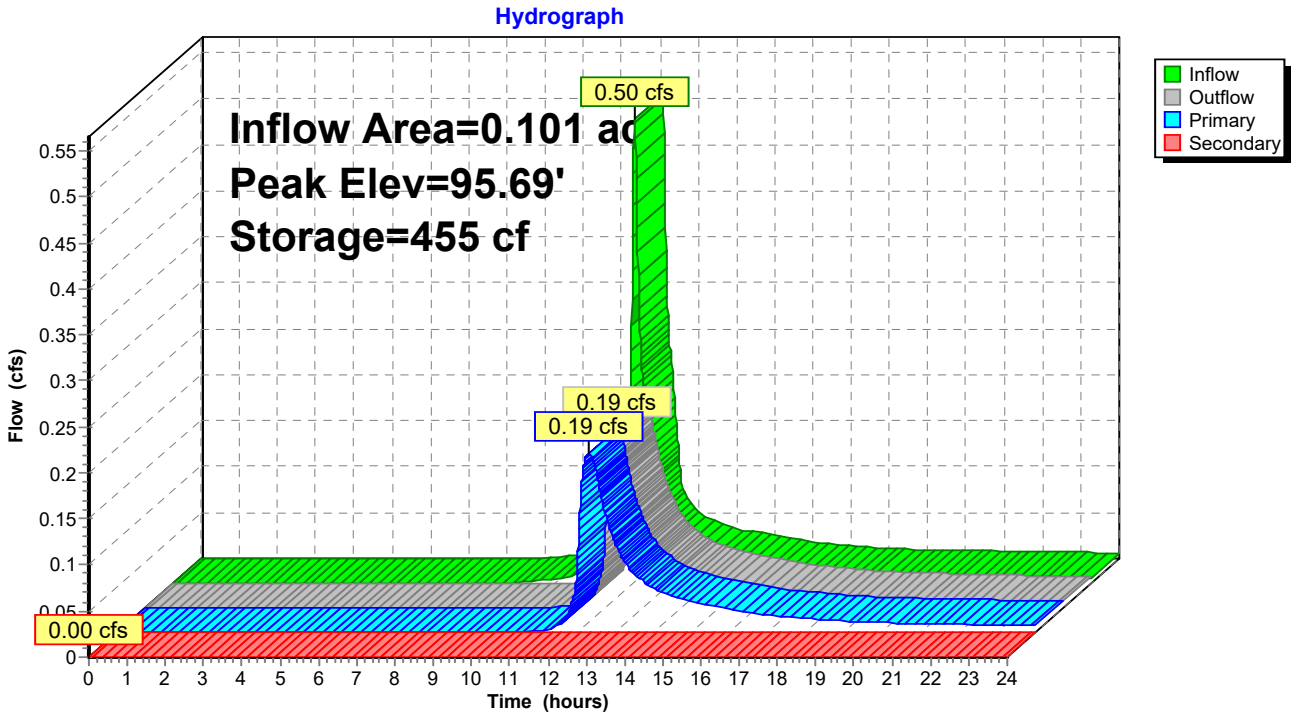
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
95.42	4,169	0.0	0	0
95.43	4,169	40.0	17	17
95.90	4,169	40.0	784	800
95.91	4,169	15.0	6	807
96.15	4,169	15.0	150	957
96.16	4,169	5.0	2	959
97.15	4,169	5.0	206	1,165
97.16	4,169	30.0	13	1,178
97.49	4,169	30.0	413	1,590
97.50	4,169	15.0	6	1,597
97.83	4,169	15.0	206	1,803

Device	Routing	Invert	Outlet Devices
#1	Primary	95.42'	**6.0" Round Culvert** L= 53.0' Ke= 0.500 Inlet / Outlet Invert= 95.42' / 94.00' S= 0.0268 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf
#2	Secondary	97.73'	**200.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.19 cfs @ 12.33 hrs HW=95.69' TW=94.40' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.19 cfs @ 1.78 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=95.42' TW=92.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond PP: Pervious Pavement



Summary for Pond ST: Stormtech

Inflow Area = 0.406 ac, 100.00% Impervious, Inflow Depth > 8.31" for 50 yr event
Inflow = 3.54 cfs @ 12.07 hrs, Volume= 0.282 af
Outflow = 3.25 cfs @ 12.10 hrs, Volume= 0.282 af, Atten= 8%, Lag= 2.0 min
Discarded = 0.11 cfs @ 8.93 hrs, Volume= 0.136 af
Primary = 3.13 cfs @ 12.10 hrs, Volume= 0.146 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 99.19' @ 12.10 hrs Surf.Area= 656 sf Storage= 630 cf

Plug-Flow detention time=6.4 min calculated for 0.282 af (100% of inflow)
Center-of-Mass det. time=6.3 min (745.4 - 739.0)

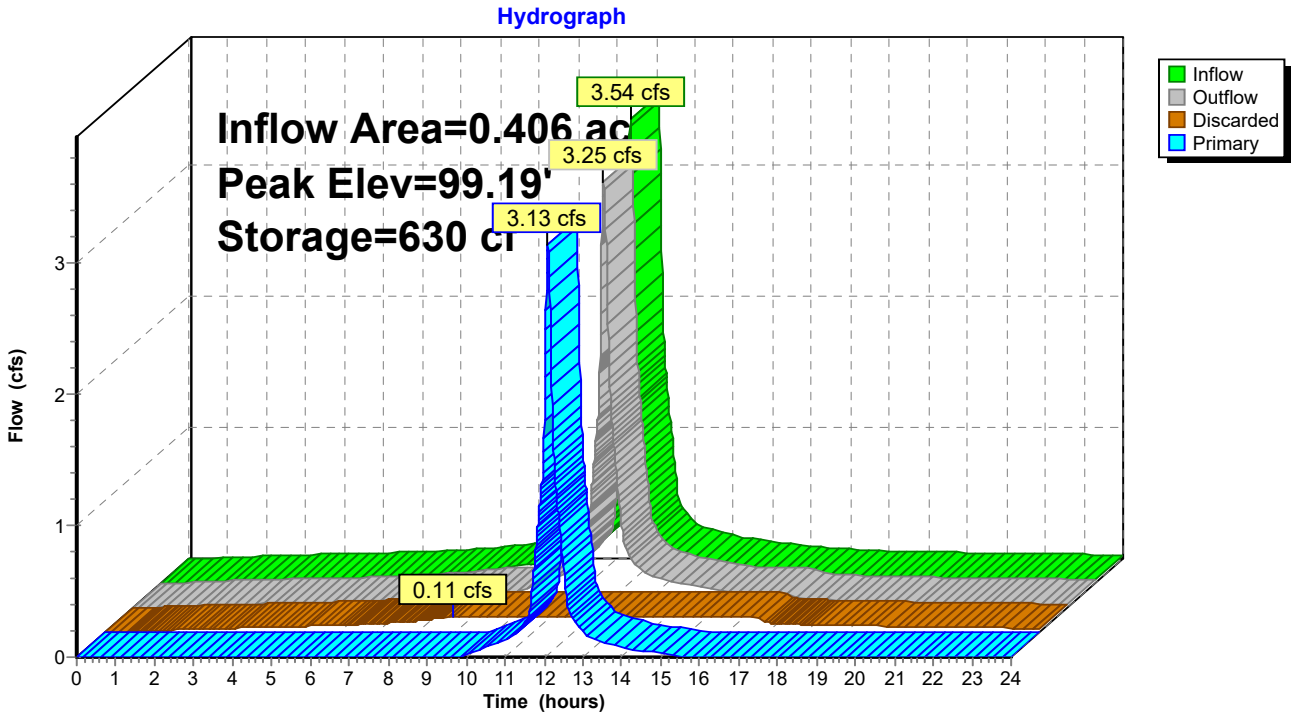
Volume	Invert	Avail.Storage	Storage Description
#1	97.58'	468 cf	**14.82'W x 44.24'L x 2.33'H Prismatoid** 1,528 cf Overall - 357 cf Embedded = 1,170 cf x 40.0% Voids
#2	98.08'	357 cf	**ADS_StormTech SC-310** x 24 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 2.07 sf x 4 rows
		826 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	**12.0" Round Culvert** L= 38.5' Ke= 0.500 Inlet / Outlet Invert= 98.00' / 95.40' S= 0.0675 '/' Cc= 0.900 n= 0.010, Flow Area= 0.79 sf
#2	Discarded	97.58'	**7.500 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.11 cfs @ 8.93 hrs HW=97.60' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.11 cfs)

Primary OutFlow Max=3.13 cfs @ 12.10 hrs HW=99.18' TW=93.96' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 3.13 cfs @ 3.98 fps)

Pond ST: Stormtech



Appendix - A

Extreme Precipitation Tables

Northeast Regional Climate Center

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	70.776 degrees West
Latitude	43.043 degrees North
Elevation	0 feet
Date/Time	Thu, 14 Apr 2022 16:44:01 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.82	1.04	**1yr**	0.71	0.98	1.22	1.57	2.04	2.67	2.94	**1yr**	2.37	2.83	3.24	3.96	4.58	**1yr**
2yr	0.32	0.50	0.62	0.81	1.02	1.30	**2yr**	0.88	1.18	1.52	1.94	2.50	3.23	3.59	**2yr**	2.86	3.45	3.96	4.71	5.36	**2yr**
5yr	0.37	0.58	0.73	0.98	1.25	1.61	**5yr**	1.08	1.47	1.89	2.44	3.15	4.09	4.61	**5yr**	3.62	4.43	5.08	5.97	6.74	**5yr**
10yr	0.41	0.65	0.82	1.12	1.45	1.90	**10yr**	1.26	1.73	2.24	2.90	3.77	4.90	5.57	**10yr**	4.34	5.35	6.13	7.16	8.03	**10yr**
25yr	0.48	0.76	0.97	1.34	1.78	2.35	**25yr**	1.54	2.15	2.79	3.65	4.77	6.21	7.15	**25yr**	5.50	6.87	7.87	9.09	10.12	**25yr**
50yr	0.54	0.86	1.10	1.54	2.08	2.77	**50yr**	1.79	2.53	3.30	4.35	5.70	7.44	8.64	**50yr**	6.59	8.31	9.51	10.90	12.06	**50yr**
100yr	0.60	0.97	1.25	1.78	2.43	3.27	**100yr**	2.09	2.99	3.92	5.19	6.81	8.92	10.45	**100yr**	7.89	10.05	11.49	13.08	14.38	**100yr**
200yr	0.68	1.11	1.43	2.05	2.84	3.85	**200yr**	2.45	3.53	4.64	6.17	8.14	10.69	12.64	**200yr**	9.46	12.16	13.90	15.69	17.16	**200yr**
500yr	0.80	1.32	1.72	2.50	3.49	4.79	**500yr**	3.02	4.40	5.80	7.75	10.29	13.59	16.27	**500yr**	12.03	15.64	17.87	19.97	21.67	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.44	0.59	0.72	0.88	**1yr**	0.63	0.87	0.92	1.33	1.68	2.25	2.54	**1yr**	1.99	2.45	2.88	3.18	3.92	**1yr**
2yr	0.32	0.49	0.60	0.81	1.00	1.19	**2yr**	0.86	1.16	1.37	1.82	2.33	3.08	3.48	**2yr**	2.72	3.35	3.85	4.58	5.11	**2yr**
5yr	0.35	0.54	0.67	0.92	1.17	1.41	**5yr**	1.01	1.38	1.61	2.12	2.73	3.82	4.24	**5yr**	3.38	4.07	4.76	5.59	6.30	**5yr**
10yr	0.39	0.60	0.74	1.03	1.33	1.60	**10yr**	1.15	1.57	1.81	2.39	3.06	4.41	4.92	**10yr**	3.91	4.74	5.52	6.49	7.27	**10yr**
25yr	0.44	0.67	0.84	1.19	1.57	1.91	**25yr**	1.36	1.86	2.10	2.75	3.53	4.76	5.99	**25yr**	4.21	5.76	6.77	7.91	8.79	**25yr**
50yr	0.49	0.74	0.92	1.32	1.78	2.17	**50yr**	1.54	2.13	2.35	3.07	3.93	5.38	6.93	**50yr**	4.77	6.66	7.89	9.20	10.16	**50yr**
100yr	0.54	0.82	1.02	1.48	2.03	2.48	**100yr**	1.75	2.42	2.63	3.41	4.35	6.06	8.02	**100yr**	5.36	7.71	9.21	10.72	11.74	**100yr**
200yr	0.60	0.90	1.14	1.65	2.31	2.83	**200yr**	1.99	2.76	2.94	3.77	4.79	6.80	9.28	**200yr**	6.02	8.92	10.75	12.50	13.59	**200yr**
500yr	0.70	1.04	1.33	1.94	2.75	3.38	**500yr**	2.38	3.31	3.42	4.31	5.46	7.93	11.25	**500yr**	7.02	10.82	13.20	15.34	16.47	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.44	0.54	0.72	0.89	1.09	**1yr**	0.77	1.06	1.26	1.74	2.20	3.00	3.17	**1yr**	2.66	3.05	3.60	4.39	5.08	**1yr**
2yr	0.34	0.52	0.64	0.86	1.07	1.27	**2yr**	0.92	1.24	1.48	1.96	2.51	3.44	3.72	**2yr**	3.05	3.57	4.10	4.86	5.66	**2yr**
5yr	0.40	0.62	0.77	1.05	1.34	1.62	**5yr**	1.16	1.59	1.88	2.53	3.25	4.36	4.97	**5yr**	3.86	4.78	5.41	6.39	7.18	**5yr**
10yr	0.47	0.72	0.89	1.25	1.61	1.98	**10yr**	1.39	1.93	2.28	3.10	3.95	5.37	6.20	**10yr**	4.75	5.97	6.81	7.85	8.77	**10yr**
25yr	0.58	0.88	1.09	1.56	2.05	2.57	**25yr**	1.77	2.52	2.95	4.07	5.14	7.82	8.33	**25yr**	6.92	8.01	9.12	10.35	11.42	**25yr**
50yr	0.67	1.02	1.27	1.83	2.47	3.14	**50yr**	2.13	3.07	3.59	4.99	6.30	9.79	10.42	**50yr**	8.66	10.02	11.37	12.73	13.97	**50yr**
100yr	0.79	1.20	1.50	2.16	2.97	3.82	**100yr**	2.56	3.73	4.37	6.15	7.74	12.24	13.04	**100yr**	10.84	12.54	14.19	15.69	17.08	**100yr**
200yr	0.93	1.39	1.77	2.56	3.56	4.66	**200yr**	3.08	4.56	5.33	7.57	9.50	15.36	16.33	**200yr**	13.59	15.70	17.72	19.32	20.90	**200yr**
500yr	1.15	1.71	2.20	3.19	4.54	6.05	**500yr**	3.92	5.92	6.92	10.01	12.49	20.74	21.99	**500yr**	18.36	21.15	23.77	25.45	27.30	**500yr**

Appendix - B

Soil Information

Map Scale: 1:860 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 24, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 19, 2021—Nov 1, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
299	Udorthents, smoothed	2.4	100.0%
Totals for Area of Interest		**2.4**	**100.0%**

Lumark

DESCRIPTION

The patented Lumark Crosstour™ MAXX LED wall pack series of luminaries provides low-profile architectural style with super bright, energy-efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall/surface, inverted mount for facade/canopy illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

Catalog #		**Type**
Project		
Comments		**Date**
Prepared by		

SPECIFICATION FEATURES

Construction
Low-profile LED design with rugged one-piece, die-cast aluminum back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff and refractive lens models are available in 58W, 81W and 102W. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes four 1/2" NPT threaded conduit entry points. The back box is secured by four lag bolts (supplied by others). External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Not recommended for car wash applications.

Optical
Silicone sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Full cutoff models integrate an impact-resistant molded refractive prism optical lens assembly meeting requirements for Dark Sky compliance. Refractive lens models incorporate a molded lens assembly designed for maximum forward throw. Solid state LED Crosstour MAXX luminaries are thermally optimized with eight lumen packages in cool 5000K, neutral 4000K, or warm 3000K LED color temperature (CCT).

Electrical
LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 58W, 81W and 102W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C [122°F] models available in 58W and 81W models only. Crosstour MAXX luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Four half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz, 480V 60Hz, or 347V 60Hz electrical operation. 480V is compatible for use with 480V Wye systems only.

Emergency Egress
Optional integral cold weather battery emergency egress includes emergency operation test switch (available in 58W and 81W models only), an AC-ON indicator light and a premium extended rated sealed maintenance-free nickel-metal hydride battery pack. The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Area and Site Pole Mounting
Optional extruded aluminum 6-1/2" arm features internal bolt guides for supplied twin support rods, allowing for easy positioning of the fixture during installation to pole. Supplied with round plate adapter plate. Optional tenon adapter fits 2-3/8" or 3-1/2" O.D. Tenon.

Finish
Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

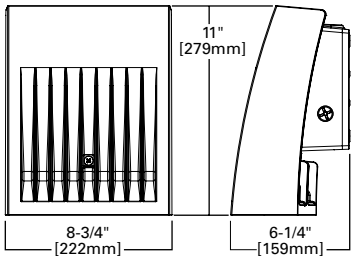
Warranty
Five-year warranty.

XTOR
CROSSTOUR
MAXX LED

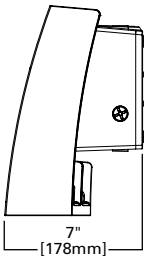
APPLICATIONS:
WALL / SURFACE
INVERTED
SITE LIGHTING

DIMENSIONS

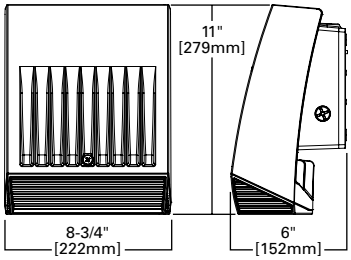
FULL CUTOFF



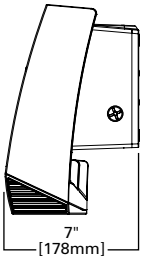
DEEP BACK BOX



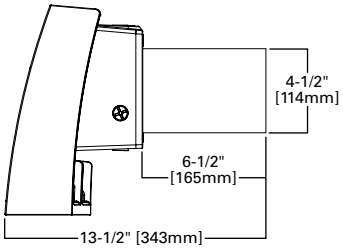
REFRACTIVE LENS



DEEP BACK BOX

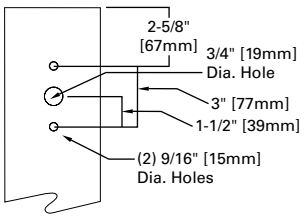


OPTIONAL POLE MOUNT ARM

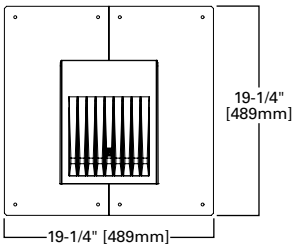


ARM DRILLING

TYPE "C"



ESCUTCHEON PLATES



CERTIFICATION DATA
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
NOM Compliant Models
3G Vibration Tested
UL924 Listed (CBP Models)
IP66 Rated
DesignLights Consortium® Qualified*

TECHNICAL DATA
40°C Ambient Temperature
External Supply Wiring 90°C Minimum

EPA
Effective Projected Area (Sq. Ft.):
XTOR6B, XTOR8B, XTOR12B=0.54
With Pole Mount Arm=0.98

SHIPPING DATA:
Approximate Net Weight:
12-15 lbs. [5.4-6.8 kgs.]

*www.designlights.org

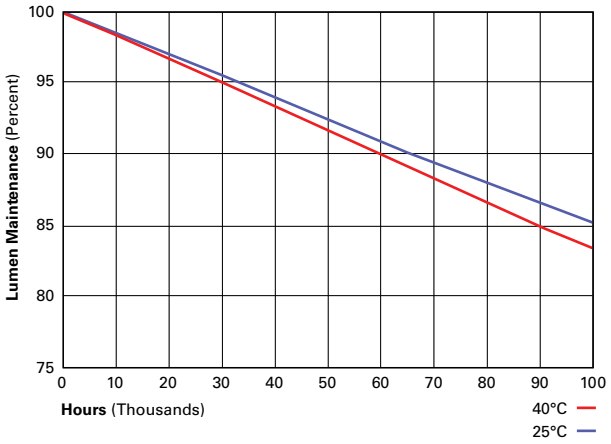
POWER AND LUMENS BY FIXTURE MODEL

58W Series						
LED Information	**XTOR6B**	**XTOR6BRL**	**XTOR6B-W**	**XTOR6BRL-W**	**XTOR6B-Y**	**XTOR6BRL-Y**
Delivered Lumens	6,129	6,225	6,038	6,133	5,611	5,826
B.U.G. Rating	B1-U0-G1	B2-U4-G3	B1-U0-G1	B2-U4-G3	B1-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K	3000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70
Power Consumption (Watts)	58W	58W	58W	58W	58W	58W
81W Series						
LED Information	**XTOR8B**	**XTOR8BRL**	**XTOR8B-W**	**XTOR8BRL-W**	**XTOR8B-Y**	**XTOR8BRL-Y**
Delivered Lumens	8,502	8,635	8,373	8,504	7,748	8,079
B.U.G. Rating	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K	3000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70
Power Consumption (Watts)	81W	81W	81W	81W	81W	81W
102W Series						
LED Information	**XTOR12B**	**XTOR12BRL**	**XTOR12B-W**	**XTOR12BRL-W**	**XTOR12B-Y**	**XTOR12BRL-Y**
Delivered Lumens	12,728	13,458	12,539	13,258	11,861	12,595
B.U.G. Rating	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K	3000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70
Power Consumption (Watts)	102W	102W	102W	102W	102W	102W

EGRESS Information	**XTOR6B, XTOR8B and XTOR12B Full Cutoff CBP Egress LED**	**XTOR6B, XTOR8B and XTOR12B Refractive Lens CBP Egress LED**
Delivered Lumens	509	468
B.U.G. Rating	N.A.	N.A.
CCT (Kelvin)	4000K	4000K
CRI (Color Rendering Index)	65	65
Power Consumption (Watts)	1.8W	1.8W

LUMEN MAINTENANCE

Ambient Temperature	**TM-21 Lumen Maintenance** (72,000 Hours)	**Theoretical L70** (Hours)
XTOR6B Model		
25°C	> 90%	246,000
40°C	> 88%	217,000
50°C	> 88%	201,000
XTOR8B Model		
25°C	> 89%	219,000
40°C	> 87%	195,000
50°C	> 86%	181,000
XTOR12B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000



CURRENT DRAW

Voltage	**Model Series**				
	XTOR6B	**XTOR8B**	**XTOR12B**	**XTOR6B-CBP (Fixture/Battery)**	**XTOR8B-CBP (Fixture/Battery)**
120V	0.51	0.71	0.94	0.60/0.25	0.92/0.25
208V	0.25	0.39	0.52	- -	- -
240V	0.25	0.35	0.45	- -	- -
277V	0.22	0.31	0.39	0.36/0.21	0.50/0.21
347V	0.19	0.25	0.33		- -
480V	0.14	0.19	0.24		- -

ORDERING INFORMATION

Sample Number: XTOR6B-W-WT-PC1

Series [1]	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)
Full Cutoff **XTOR6B**=58W **XTOR8B**=81W **XTOR12B**=102W **Refractive Lens** **XTOR6BRL**=58W **XTOR8BRL**=81W **XTOR12BRL**=102W	**[Blank]**=Bright White (Standard) 5000K **W**=Neutral, 4000K **Y**=Warm, 3000K	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **BZ**=Bronze **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**347V**=347V [2, 3, 4, 5] **480V**=480V [2, 3, 4, 5, 6] **PC1**=Photocontrol 120V [7] **PC2**=Photocontrol 208-277V [7, 8] **PMA**=Pole Mount Arm (C Drilling) with Round Adapter [3, 9] **MS-L20**=Motion Sensor for ON/OFF Operation [2, 3, 10, 11] **MS/DIM-L20**=Motion Sensor for Dimming Operation [2, 3, 10, 11, 12, 13, 14] **CBP**=Cold Weather Battery Pack [2, 3, 15, 16, 17] **HA**=50°C High Ambient [17]

Accessories (Order Separately)

WG-XTORMX=Crosstour MAXX Wire Guard	**VA1033-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon [18]
PB120V=Field Installed 120V Photocontrol	**VA1034-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon [18]
PB277V BUTTON PC=Field Installed 208-277V Photocontrol [8]	**VA1035-XX**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon [18]
VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon [18]	**VA1036-XX**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon [18]
VA1041-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon [18]	**VA1037-XX**=2@90° Tenon Adapter for 2-3/8" O.D. Tenon [18]
VA1042-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon [18]	**VA1038-XX**=3@90° Tenon Adapter for 2-3/8" O.D. Tenon [18]
VA1043-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon [18]	**VA1039-XX**=2@120° Tenon Adapter for 2-3/8" O.D. Tenon [18]
VA1044-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon [18]	**EWP/XTORMX**=Escutcheon Wall Plate, Carbon Bronze
VA1045-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon [18]	**EWP/XTORMX-WT**=Escutcheon Wall Plate, Summit White
VA1046-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon [18]	**FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [14]

NOTES:

1. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
2. Not available with HA option.
3. Deep back box is standard for 347V, 480V, CBP, PMA, MS-L20 and MS/DIM-L20.
4. Not available with CBP option.
5. Thru-branch wiring not available with HA option or with 347V.
6. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
7. Not available with MS-L20 and MS/DIM-L20 options.
8. Use PC2 with 347V or 480V option for photocontrol. Factory wired to 208-277V lead.
9. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
10. For use in downlight orientation only. Optimal coverage at mounting heights of 9'-20'.
11. 120V thru 277V only.
12. Factory set to 50% power reduction after 15-minutes of inactivity. Dimming driver included.
13. Includes integral photo sensor.
14. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff, and more. Consult your lighting representative at Eaton for more information.
15. 120V or 277V operation only.
16. Operating temperatures -20°C to 25°C.
17. Not available in XTOR12B or XTOR12BRL models.
18. Replace XX with housing color.

STOCK ORDERING INFORMATION

58W Series	**81W Series**	**102W Series**
Full Cutoff		
XTOR6B=58W, 5000K, Carbon Bronze	**XTOR8B**=81W, 5000K, Carbon Bronze	**XTOR12B**=102W, 5000K, Carbon Bronze
XTOR6B-PC1=58W, 5000K, 120V PC, Carbon Bronze	**XTOR8B-PC1**=81W, 5000K, 120V PC, Carbon Bronze	
XTOR6B-WT= 58W, 5000K, Summit White	**XTOR8B-WT**=81W, 5000K, Summit White	
XTOR6B-W=58W, 4000K, Carbon Bronze	**XTOR8B-PC2**=81W, 5000K, 208-277V PC, Carbon Bronze	
XTOR6B-PMA= 58W, 5000K, Pole Mount Arm, Carbon Bronze	**XTOR8B-PMA**=81W, 5000K, Pole Mount Arm, Carbon Bronze	
XTOR6B-PC2= 58W, 5000K, 208-277V PC, Carbon Bronze	**XTOR8B-347V**=81W, 5000K, Carbon Bronze, 347V	
Refractive Lens		
XTOR6BRL=58W, 5000K, Refractive Lens, Carbon Bronze	**XTOR8BRL**=81W, 5000K, Refractive Lens, Carbon Bronze	**XTOR12BRL**=102W, 5000K, Refractive Lens, Carbon Bronze
XTOR6BRL-PC1=58W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	**XTOR8BRL-PC1**=81W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	**XTOR12BRL-W**=102W, 4000K, Refractive Lens, Carbon Bronze
XTOR6BRL-WT=58W, 5000K, Refractive Lens, Summit White	**XTOR8BRL-WT**=81W, 5000K, Refractive Lens, Summit White	**XTOR12RBL-347V**=102W, 5000K, Refractive Lens, Carbon Bronze, 347V
XTOR6BRL-W=58W, 4000K, Refractive Lens, Carbon Bronze	**XTOR8BRL-PC2**=81W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	
XTOR6BRL-PMA=58W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	**XTOR8BRL-PMA**=81W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	
XTOR6BRL-PC2=58W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	**XTOR8BRL-W**=81W, 4000K, Refractive Lens, Carbon Bronze	
XTOR6BRL-347V=58W, 5000K, Refractive Lens, Carbon Bronze, 347V	**XTOR8BRL-347V** = 81W, 5000K, Refractive Lens, Carbon Bronze, 347V	

SL630 SOLANA SERIES

LED

EPA .8 (ft²)
WEIGHT 33 LBS

7 YEAR WARRANTY

LUMEN RANGE 2,820 to 14,020

LIFE SPAN L70 MINIMUM 100,000 HOURS

UL LISTED

CLICK FOR FAQ's

IP RATING IP66

JOB NAME 140 West Rd

FIXTURE TYPE EX-P2

MEMO

BUILD A PART NUMBER

ORDERING EXAMPLE: 1A-SL630-12L40T3-MDL18-SV1-RP34-FHD-BLOC/RSA14A500-D1-SL900-5/UGMT

Mounting Config.	Fixture	LED	CCT	Type	Driver	Lens	Option Round Pole Adapter	Optional Control Receptacle	Option Control	Option Motion Sensor	Option Fuse	Option House Side Shield	Pole See Pole Spec Sheets	Finish
	SL630	24L	40	T2	MDL014	SV1	RP56					BLOC	RSA20G50	

Mounting Configuration
(Click here to link to mounting configuration specification page)

- 1W
- 1A
- 2A
- 2A90
- 3A
- 3A90
- 4A
- 1AM
- 2AM

W = Wall Mount **A** = Arm Mount **AM** = Arm Mid-Mount

Fixture
- SL630

LED
- 24L
- 12L

CCT - Color Temperature (K)
- 27(00)
- 30(00)
- 35(00)
- 40(00)
- 50(00)

Distribution Type
- T2
- T3
- T4
- T5

Driver
- **MDL018** (120v-277v, 180mA)
- **MDH018** (347v-480v, 180mA)
- **MDL014** (120v-277v, 140mA)
- **MDH014** (347v-480v, 140mA)
- **MDL008**[1] (120v-277v, 80mA)
- **MDH008**[1] (347v-480v, 80mA)

[1] 12L system only.

Lens
- **CA** (Clear Acrylic)
- **FG** (Flat Glass)
- **SA** (Sag Acrylic)
- **FFG** (Frosted Flat Glass)
- **SV1** (Flat Soft Vue Light Diffused Acrylic)
- **SV2** (Flat Soft Vue Moderate Diffused Acrylic)
- **SV4** (Flat Soft Vue Maximum Diffused Acrylic)
- **SV1SA** (Soft Vue Light Diffused Sag Acrylic)
- **SV2SA** (Soft Vue Moderate Diffused Sag Acrylic)
- **SV4SA** (Soft Vue Maximum Diffused Sag Acrylic)

Options (Click here to view accessories sheet)
- **RP34**[2] For 3" to 4" diameter poles
- **RP56**[2] For 5" to 6" diameter poles
- **R** 3-Pin control receptacle only
- **R5** 5-Pin control receptacle only
- **R7** 7-Pin control receptacle only
- **PE**[3] Twist-Lock Photocontrol (120V-277V)
- **PE3**[3] Twist-Lock Photocontrol (347V)
- **PE4**[3] Twist-Lock Photocontrol (480V)
- **SC**[3] Shorting Cap
- **PEC** Electronic Button Photocontrol (120V-277V)
- **PEC4** Electronic Button Photocontrol (480V)
- **MOT1**[4] 360° lens, maximum coverage 40' diameter from 20' height
- **MOT2**[4] 360° lens, maximum coverage 70' diameter from 20' height
- **FHD**[5] Double Fuse and Holder
- **HSS** External 120° House Side Shield
- **BLOC** Back Light Optical Control

[2] Required for round poles
[3] Requires control receptacle
[4] Requires FLAT acrylic lens
[5] Ships loose for installation in base

Pole (Click here to link to pole specification page)
See Pole specification sheets.

Finish
TBD

Standard Urban Finishes (Click here to view paint finish sheet)
- **UGMT** Gun Metal Textured
- **UGM** Gun Metal Matte
- **UBT** Urban Bronze Textured
- **UB** Urban Bronze Matte
- **USLT** Urban Silver Textured
- **USL** Urban Silver Matte
- **UWHT** Urban White Textured
- **UWH** Urban White Matte
- **BKT** Black Textured

Custom Urban Finishes[6]
- **CM** Custom Match

[6] Smooth finishes are available upon request.

Specifications

Fixture
The medium scale SL630 Solana® arm mount luminaire's stylish design is a perfect accent for urban settings. The subtle, yet sophisticated look enhances the impact of any project. The Solana's wide array of optics, lenses and distributions makes this an easy choice for a variety of commercial, institutional and municipal projects. The Luminaire shall be UL listed in US and Canada.

LEDs
The luminaire shall use high output, high brightness LED's. They shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface. The arrays shall be roof mounted to minimize up-light. The LED's and printed circuit boards shall be 100% recyclable; they shall also be protected from moisture and corrosion by a conformal coating. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IESNA LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 5000K (4500K, 3000K, 3500K or 2700K option) color temperature with a minimum CRI of 70. Consult factory for custom color CCT. The luminaire shall have a minimum _____ (see table) delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Optics
The luminaire shall be provided with refractor type optics applied to each LED array. The luminaire shall provide Type ___ (2, 3, 4 or 5) light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.

BLOC Optic: An optional "Back Light Optical Control" shield can be provided at the factory. This is an internal optic level "House Side Shield" offering significantly reduced backlight and glare while maintaining the original design aesthetics of the luminaire.

Electronic Drivers
The LED driver shall be U.L. Recognized. It shall be securely mounted inside the fixture, for optimized performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload, overheat and short circuit

See next page

SternbergLighting
ESTABLISHED 1923

800-621-3376
555 Lawrence Ave., Roselle, IL 60172
contactus@sternberglighting.com
www.sternberglighting.com

SL630 SOLANA SERIES

LED

protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be a high efficiency driver with a THD less than 20% and a high power factor greater than .9. It shall be dimming capable using a 0-10v signal, consult factory for more information.

Photocontrols

Button Style: The photocontrol shall be mounted on the fixture and pre-wired to driver. The electronic button type photocontrol is instant on with a 5-10 second turn off, and shall turn on at 1.5 footcandles with a turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.See pole spec sheet for pole mounted version.

Twist-Lock Style: The photocontrol shall be mounted externally on the fixture and pre-wired to driver. The twist lock type photocontrol is instant on with a 3-6 second turn off, and shall turn on at 1.5 footcandles with a turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.

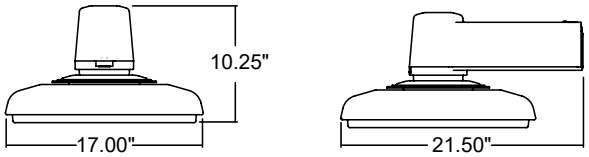
Warranty

Seven-year limited warranty. See product and finish warranty guide for details.

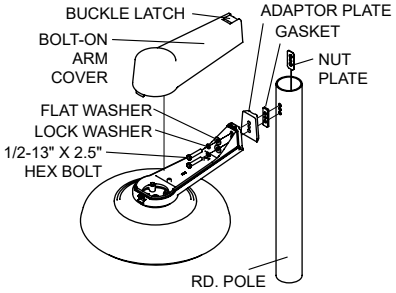
Finish

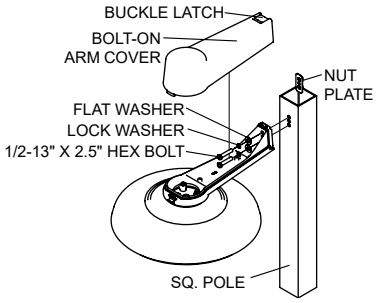
Refer to website for details.

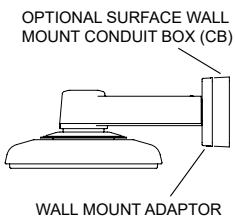
Fixtures

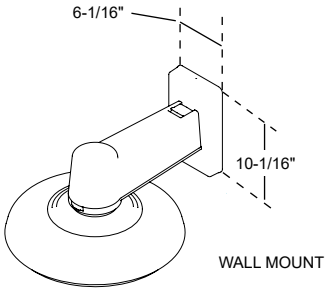


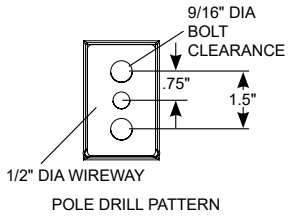
Mounting Details



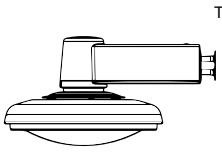




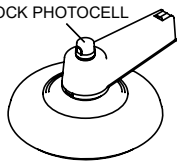




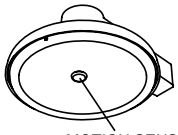
Options



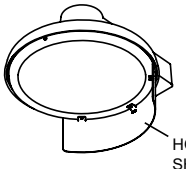
SV1SA/SV2SA



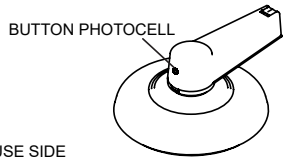
R-PE



MOT



HSS



PEC

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contactus@sternberglighting.com
www.sternberglighting.com

SL630 SOLANA SERIES

LED

Performance (Based on CA Lens)

MODEL #	T2 LUMENS	BUG	EFFICACY (LPW)	T3 LUMENS	BUG	EFFICACY (LPW)	T4 LUMENS	BUG	EFFICACY (LPW)	T5 LUMENS	BUG	EFFICACY (LPW)	WATTS
24L40T_-MDL018	13815	B2U0G2	117.1	13895	B2U0G2	117.8	13345	B2U0G2	113.1	14020	B3U0G1	118.8	118
24L30T_-MDL018	13170	B2U0G2	111.6	13250	B2U0G2	112.3	12725	B2U0G2	107.8	13365	B3U0G1	113.3	118
24L27T_-MDL018	11910	B2U0G2	100.9	11980	B2U0G2	101.5	11505	B2U0G2	97.5	12085	B3U0G1	102.4	118
24L40T_-MDL014	11105	B2U0G2	126.2	11190	B2U0G2	127.2	10720	B2U0G2	121.8	11270	B3U0G1	128.1	88
24L30T_-MDL014	10590	B2U0G2	120.3	10670	B2U0G2	121.3	10220	B2U0G2	116.1	10745	B3U0G1	122.1	88
24L27T_-MDL014	9575	B2U0G2	108.8	9645	B2U0G2	109.6	9240	B2U0G2	105.0	9715	B3U0G1	110.4	88
12L40T_-MDL018	6905	B1U0G1	115.1	6945	B1U0G1	115.8	6635	B1U0G1	110.6	6985	B2U0G1	116.4	60
12L30T_-MDL018	6585	B1U0G1	109.8	6620	B1U0G1	110.3	6325	B1U0G1	105.4	6660	B2U0G1	111.0	60
12L27T_-MDL018	5955	B1U0G1	99.3	5985	B1U0G1	99.8	5720	B1U0G1	95.3	6020	B2U0G1	100.3	60
12L40T_-MDL014	5635	B1U0G1	122.5	5640	B1U0G1	122.6	5400	B1U0G1	117.4	5690	B2U0G1	123.7	46
12L30T_-MDL014	5375	B1U0G1	116.8	5375	B1U0G1	116.8	5150	B1U0G1	112.0	5425	B2U0G1	117.9	46
12L27T_-MDL014	4860	B1U0G1	105.7	4860	B1U0G1	105.7	4655	B1U0G1	101.2	4905	B2U0G1	106.6	46
12L40T_-MDL008	3405	B1U0G1	126.1	3425	B1U0G1	126.9	3270	B1U0G1	121.1	3440	B1U0G0	127.4	27
12L30T_-MDL008	3245	B1U0G1	120.2	3265	B1U0G1	120.9	3120	B1U0G1	115.6	3280	B1U0G0	121.5	27
12L27T_-MDL008	2935	B1U0G1	108.7	2955	B1U0G1	109.4	2820	B1U0G1	104.4	2965	B1U0G0	109.8	27

SternbergLighting
ESTABLISHED 1923

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555 Lawrence Ave., Roselle, IL 60172
contactus@sternberglighting.com
www.sternberglighting.com

urbanline

SternbergLighting
ESTABLISHED 1923

10' TO 30' ROUND STRAIGHT ALUMINUM POLES (RSA)

Job Name 140 West Rd

Client Name

Job Location Portsmouth, NH

Created By

Date

Product RSA20G500

Quote

Customer Approval

Date

Sternberg Model	Pole Height	Shaft Size	Wall Thick-ness	Slotted SQ Base Width	Hand-hole Size	Weight Lbs	Bolt Circle	Bolt Proj +/- .25	DBL Nutted Anchor bolt ASTM F1554 GRADE 55 Galv thread	Max Loading Capacities								Base Cover Options
										90 MPH w/1.3 Gust		110MPH w/1.3 Gust		130MPH w/1.3 Gust		150MPH w/1.3 Gust		
										MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	
RSA10G400	10	4	0.125	8.91	2 x 4	34	6.75"-8.25"	3.25	0.75	4.3	100	2.6	100	1.8	100	1.2	100	2401-4, SL900-4
RSA10G500	10	5	0.125	9.61	2 x 4	39	7.75"-9.5"	3.25	0.75	8.9	100	5.8	100	4.1	100	3.0	100	2401-5, SL900-5
RSA12G400	12	4	0.125	8.91	2 x 4	38	6.75"-8.25"	3.25	0.75	3.0	100	1.7	100	1.1	100	0.7	100	2401-4, SL900-4
RSA12G500	12	5	0.125	9.61	2 x 4	44	7.75"-9.5"	3.25	0.75	6.9	100	4.4	100	3.0	100	2.2	100	2401-5, SL900-5
RSA12A500	12	5	0.156	9.61	2 x 4	50	7.75"-9.5"	3.25	0.75	8.9	100	5.8	100	4.0	100	2.9	100	2401-5, SL900-5
RSA12T500	12	5	0.188	9.61	2 x 4	57	7.75"-9.5"	3.25	0.75	10.9	100	7.1	100	4.9	100	3.6	100	2401-5, SL900-5
RSA14G400	14	4	0.125	8.91	2 x 4	41	6.75"-8.25"	3.25	0.75	1.9	100	0.9	100	-	100	-	100	2401-4, SL900-4
RSA14G500	14	5	0.125	9.61	2 x 4	48	7.75"-9.5"	3.25	0.75	5.3	100	3.3	100	2.2	100	1.5	100	2401-5, SL900-5
RSA14A500	14	5	0.156	9.61	2 x 4	56	7.75"-9.5"	3.25	0.75	7.0	100	4.4	100	3.0	100	2.2	100	2401-5, SL900-5
RSA14T500	14	5	0.188	9.61	2 x 4	63	7.75"-9.5"	3.25	0.75	8.7	100	5.6	100	3.8	100	2.8	100	2401-5, SL900-5
RSA16G400	16	4	0.125	8.91	2 x 4	45	6.75"-8.25"	3.25	0.75	1.0	100	-	100	-	100	-	100	2401-4, SL900-4
RSA16G500	16	5	0.125	9.61	2 x 4	53	7.75"-9.5"	3.25	0.75	3.8	100	2.3	100	1.5	100	1.0	100	2401-5, SL900-5
RSA16A500	16	5	0.156	9.61	2 x 4	61	7.75"-9.5"	3.25	0.75	5.3	100	3.3	100	2.2	100	1.5	100	2401-5, SL900-5
RSA16T500	16	5	0.188	9.61	2 x 4	70	7.75"-9.5"	3.25	0.75	6.7	100	4.2	100	2.8	100	2.0	100	2401-5, SL900-5
RSA18G500	18	5	0.125	9.61	2 x 4	57	7.75"-9.5"	3.25	0.75	2.7	100	1.5	100	0.9	100	-	100	2401-5, SL900-5
RSA18A500	18	5	0.156	9.61	2 x 4	67	7.75"-9.5"	3.25	0.75	3.9	100	2.3	100	1.5	100	1	100	2401-5, SL900-5
RSA18T500	18	5	0.188	9.61	2 x 4	77	7.75"-9.5"	3.25	0.75	5.1	100	3.2	100	2.1	100	1.4	100	2401-5, SL900-5
RSA18T600	18	6	0.188	10.32	2 x 4	96	8.75"-10.25"	3.50	0.75	10.5	100	6.7	100	4.6	100	3.1	100	2401-6
RSA20G500	20	5	0.125	9.61	2 x 4	62	7.75"-9.5"	3.25	0.75	1.7	100	0.8	100	-	100	-	100	2401-5, SL900-5
RSA20A500	20	5	0.156	9.61	2 x 4	73	7.75"-9.5"	3.25	0.75	2.8	100	1.5	100	0.9	100	-	100	2401-5, SL900-5
RSA20T500	20	5	0.188	9.61	2 x 4	84	7.75"-9.5"	3.25	0.75	3.8	100	2.2	100	1.4	100	0.9	100	2401-5, SL900-5
RSA20A600	20	6	0.156	10.32	2 x 4	90	8.75"-10.25"	3.50	0.75	6.7	100	4.2	100	2.8	100	1.6	100	2401-6
RSA20T600	20	6	0.188	10.32	2 x 4	104	8.75"-10.25"	3.50	0.75	8.5	100	5.4	100	3.6	100	2.3	100	2401-6
RSA25A600	25	6	0.156	10.32	2 x 4	115	8.75"-10.25"	3.50	0.75	3.6	100	2	100	1.1	100	-	100	2401-6
RSA25T600 *	25	6	0.188	10.32	2 x 4	124	8.75"-10.25"	3.50	0.75	4.9	100	2.9	100	1.8	100	0.8	100	2401-6
RSA30T600 *	30	6	0.188	10.32	2 x 4	151	8.75"-10.25"	3.50	1.0	2.3	100	1.1	100	-	100	-	100	2401-6

CROSS SECTION

RSA

RSA = Round Straight Aluminum

MODEL NUMBER

RSA20G500

RSA10G400	RSA14T500	RSA20A500
RSA12G500	RSA16G400	RSA20T500
RSA12G400	RSA16G500	RSA20A600
RSA12G500	RSA16A500	RSA20T600
RSA12A500	RSA16T500	RSA25A600
RSA12T500	RSA18G500	RSA25T600*
RSA14G400	RSA18A500	RSA30T600*
RSA14G500	RSA18T600	
RSA14A500	RSA20G500	

FIXTURE MOUNTING

D1

Arm Mounting
D1 = 1 Luminaire
D2 = 2 @ 180°
D3 = 3 @ 120°
D4 = 4 @ 90°
D5 = 2 @ 90°
D6 = 3 @ 90°

Tenon Mounting
P2 = 2.38" OD x 4.00"
P3 = 3.00" OD x 3.00"
P4 = 4.00" OD x 6.00"
P5 = 4.50" OD x 3.50"
P6 = 3.50" OD x 3.50"

BASE COVER

2401-5

2401-4
2401-5
2401-6
SL900-4
SL900-5
LU900-4
LU900-5

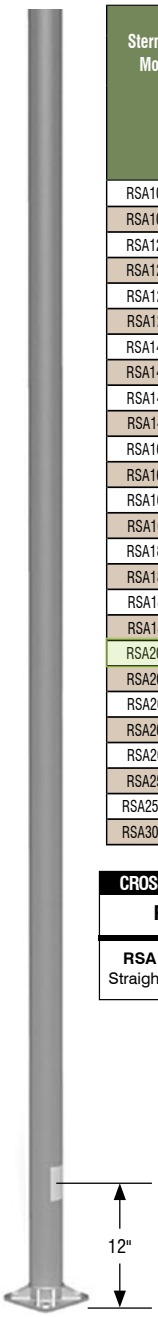
OPTIONS

See Accessories at www.sternberglighting.com (Please specify with code)

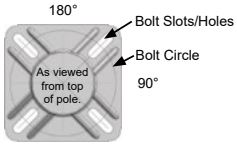
COLOR

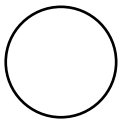
TO BE DETERMINED

UGMT - Urban Gun Metal Textured
UGM - Urban Gun Metal Matte
UBT - Urban Bronze Textured
USLT - Urban Silver Textured
UWHT - Urban White Textured
UB - Urban Bronze Matte
USL - Urban Silver Matte
UWH - Urban White Matte
BKT - Black Textured



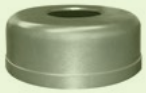
Anchor Base Detail





4", 5" or 6" Dia. Round Profile

OPTIONAL BASE COVERS



Round 2401
15" Dia. x 6" H
Throat Size 4", 5" or 6" Dia.
2401-4
2401-5
2401-6

Round SL900
18.5" Dia. x 6" H
Throat Size 4" or 5" Dia.
SL900-4
SL900-5

Round LU900
19" Dia. x 9" H
Throat Size 4" or 5" Dia.
LU900-4
LU900-5

FAQ **CLICK FOR FAQ's**

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* Factory installed vibration damper.

SL630 SOLANA SERIES

LED

EPA .8 (ft²)
WEIGHT 33 LBS

7 YEAR WARRANTY

LUMEN RANGE 2,820 to 14,020

LIFE SPAN L70 MINIMUM 100,000 HOURS

UL LISTED

CLICK FOR FAQ's

IP RATING IP66

JOB NAME 140 West Rd

FIXTURE TYPE EX-P3

MEMO

BUILD A PART NUMBER

ORDERING EXAMPLE: 1A-SL630-12L40T3-MDL18-SV1-RP34-FHD-BLOC/RSA14A500-D1-SL900-5/UGMT

Mounting Config.	Fixture	LED	CCT	Type	Driver	Lens	Option Round Pole Adapter	Optional Control Receptacle	Option Control	Option Motion Sensor	Option Fuse	Option House Side Shield	Pole See Pole Spec Sheets	Finish
	SL630	24L	40	T3	MDL014	SV1	RP56					BLOC	RSA20G50	

Mounting Configuration
(Click here to link to mounting configuration specification page)

- 1W
- 1A
- 2A
- 2A90
- 3A
- 3A90
- 4A
- 1AM
- 2AM

W = Wall Mount **A** = Arm Mount **AM** = Arm Mid-Mount

Fixture
- SL630

LED
- 24L
- 12L

CCT - Color Temperature (K)
- 27(00)
- 30(00)
- 35(00)
- 40(00)
- 50(00)

Distribution Type
- T2
- T3
- T4
- T5

Driver
- **MDL018** (120v-277v, 180mA)
- **MDH018** (347v-480v, 180mA)
- **MDL014** (120v-277v, 140mA)
- **MDH014** (347v-480v, 140mA)
- **MDL008**[1] (120v-277v, 80mA)
- **MDH008**[1] (347v-480v, 80mA)

[1] 12L system only.

Lens
- **CA** (Clear Acrylic)
- **FG** (Flat Glass)
- **SA** (Sag Acrylic)
- **FFG** (Frosted Flat Glass)
- **SV1** (Flat Soft Vue Light Diffused Acrylic)
- **SV2** (Flat Soft Vue Moderate Diffused Acrylic)
- **SV4** (Flat Soft Vue Maximum Diffused Acrylic)
- **SV1SA** (Soft Vue Light Diffused Sag Acrylic)
- **SV2SA** (Soft Vue Moderate Diffused Sag Acrylic)
- **SV4SA** (Soft Vue Maximum Diffused Sag Acrylic)

Options (Click here to view accessories sheet)
- **RP34**[2] For 3" to 4" diameter poles
- **RP56**[2] For 5" to 6" diameter poles
- **R** 3-Pin control receptacle only
- **R5** 5-Pin control receptacle only
- **R7** 7-Pin control receptacle only
- **PE**[3] Twist-Lock Photocontrol (120V-277V)
- **PE3**[3] Twist-Lock Photocontrol (347V)
- **PE4**[3] Twist-Lock Photocontrol (480V)
- **SC**[3] Shorting Cap
- **PEC** Electronic Button Photocontrol (120V-277V)
- **PEC4** Electronic Button Photocontrol (480V)
- **MOT1**[4] 360° lens, maximum coverage 40' diameter from 20' height
- **MOT2**[4] 360° lens, maximum coverage 70' diameter from 20' height
- **FHD**[5] Double Fuse and Holder
- **HSS** External 120° House Side Shield
- **BLOC** Back Light Optical Control

[2] Required for round poles
[3] Requires control receptacle
[4] Requires FLAT acrylic lens
[5] Ships loose for installation in base

Pole (Click here to link to pole specification page)
See Pole specification sheets.

Finish
TBD

Standard Urban Finishes (Click here to view paint finish sheet)
- **UGMT** Gun Metal Textured
- **UGM** Gun Metal Matte
- **UBT** Urban Bronze Textured
- **UB** Urban Bronze Matte
- **USLT** Urban Silver Textured
- **USL** Urban Silver Matte
- **UWHT** Urban White Textured
- **UWH** Urban White Matte
- **BKT** Black Textured

Custom Urban Finishes[6]
- **CM** Custom Match

[6] Smooth finishes are available upon request.

Specifications

Fixture
The medium scale SL630 Solana® arm mount luminaire's stylish design is a perfect accent for urban settings. The subtle, yet sophisticated look enhances the impact of any project. The Solana's wide array of optics, lenses and distributions makes this an easy choice for a variety of commercial, institutional and municipal projects. The Luminaire shall be UL listed in US and Canada.

LEDs
The luminaire shall use high output, high brightness LED's. They shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface. The arrays shall be roof mounted to minimize up-light. The LED's and printed circuit boards shall be 100% recyclable; they shall also be protected from moisture and corrosion by a conformal coating. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IESNA LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 5000K (4500K, 3000K, 3500K or 2700K option) color temperature with a minimum CRI of 70. Consult factory for custom color CCT. The luminaire shall have a minimum _____ (see table) delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Optics
The luminaire shall be provided with refractor type optics applied to each LED array. The luminaire shall provide Type ___ (2, 3, 4 or 5) light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.

BLOC Optic: An optional "Back Light Optical Control" shield can be provided at the factory. This is an internal optic level "House Side Shield" offering significantly reduced backlight and glare while maintaining the original design aesthetics of the luminaire.

Electronic Drivers
The LED driver shall be U.L. Recognized. It shall be securely mounted inside the fixture, for optimized performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload, overheat and short circuit

See next page

SternbergLighting
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SL630 SOLANA SERIES

LED

protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be a high efficiency driver with a THD less than 20% and a high power factor greater than .9. It shall be dimming capable using a 0-10v signal, consult factory for more information.

Photocontrols

Button Style: The photocontrol shall be mounted on the fixture and pre-wired to driver. The electronic button type photocontrol is instant on with a 5-10 second turn off, and shall turn on at 1.5 footcandles with a turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.See pole spec sheet for pole mounted version.

Twist-Lock Style: The photocontrol shall be mounted externally on the fixture and pre-wired to driver. The twist lock type photocontrol is instant on with a 3-6 second turn off, and shall turn on at 1.5 footcandles with a turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.

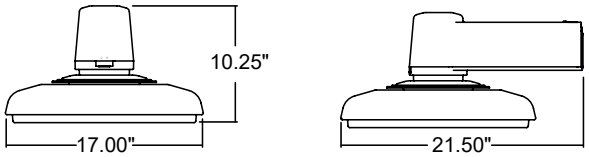
Warranty

Seven-year limited warranty. See product and finish warranty guide for details.

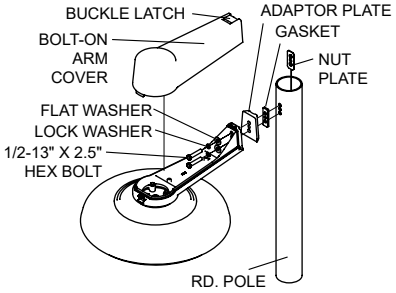
Finish

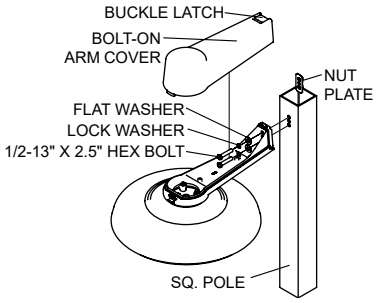
Refer to website for details.

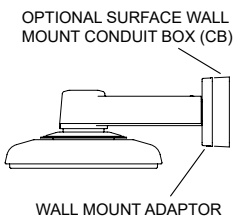
Fixtures

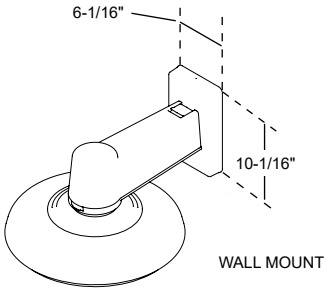


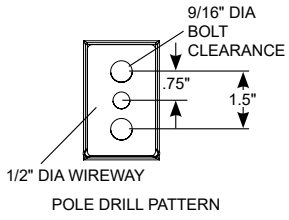
Mounting Details



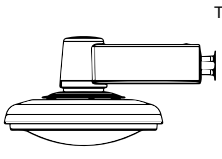




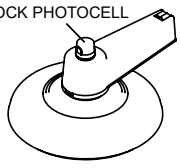




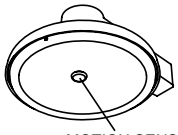
Options



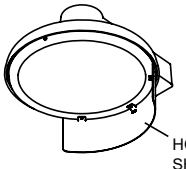
SV1SA/SV2SA



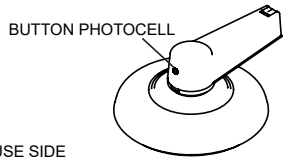
R-PE



MOT



HSS



PEC

SternbergLighting
ESTABLISHED 1923

800-621-3376
555 Lawrence Ave., Roselle, IL 60172
contactus@sternberglighting.com
www.sternberglighting.com

SL630 SOLANA SERIES

LED

Performance (Based on CA Lens)

MODEL #	T2 LUMENS	BUG	EFFICACY (LPW)	T3 LUMENS	BUG	EFFICACY (LPW)	T4 LUMENS	BUG	EFFICACY (LPW)	T5 LUMENS	BUG	EFFICACY (LPW)	WATTS
24L40T_-MDL018	13815	B2U0G2	117.1	13895	B2U0G2	117.8	13345	B2U0G2	113.1	14020	B3U0G1	118.8	118
24L30T_-MDL018	13170	B2U0G2	111.6	13250	B2U0G2	112.3	12725	B2U0G2	107.8	13365	B3U0G1	113.3	118
24L27T_-MDL018	11910	B2U0G2	100.9	11980	B2U0G2	101.5	11505	B2U0G2	97.5	12085	B3U0G1	102.4	118
24L40T_-MDL014	11105	B2U0G2	126.2	11190	B2U0G2	127.2	10720	B2U0G2	121.8	11270	B3U0G1	128.1	88
24L30T_-MDL014	10590	B2U0G2	120.3	10670	B2U0G2	121.3	10220	B2U0G2	116.1	10745	B3U0G1	122.1	88
24L27T_-MDL014	9575	B2U0G2	108.8	9645	B2U0G2	109.6	9240	B2U0G2	105.0	9715	B3U0G1	110.4	88
12L40T_-MDL018	6905	B1U0G1	115.1	6945	B1U0G1	115.8	6635	B1U0G1	110.6	6985	B2U0G1	116.4	60
12L30T_-MDL018	6585	B1U0G1	109.8	6620	B1U0G1	110.3	6325	B1U0G1	105.4	6660	B2U0G1	111.0	60
12L27T_-MDL018	5955	B1U0G1	99.3	5985	B1U0G1	99.8	5720	B1U0G1	95.3	6020	B2U0G1	100.3	60
12L40T_-MDL014	5635	B1U0G1	122.5	5640	B1U0G1	122.6	5400	B1U0G1	117.4	5690	B2U0G1	123.7	46
12L30T_-MDL014	5375	B1U0G1	116.8	5375	B1U0G1	116.8	5150	B1U0G1	112.0	5425	B2U0G1	117.9	46
12L27T_-MDL014	4860	B1U0G1	105.7	4860	B1U0G1	105.7	4655	B1U0G1	101.2	4905	B2U0G1	106.6	46
12L40T_-MDL008	3405	B1U0G1	126.1	3425	B1U0G1	126.9	3270	B1U0G1	121.1	3440	B1U0G0	127.4	27
12L30T_-MDL008	3245	B1U0G1	120.2	3265	B1U0G1	120.9	3120	B1U0G1	115.6	3280	B1U0G0	121.5	27
12L27T_-MDL008	2935	B1U0G1	108.7	2955	B1U0G1	109.4	2820	B1U0G1	104.4	2965	B1U0G0	109.8	27

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urbanline

SternbergLighting
ESTABLISHED 1923

10' TO 30' ROUND STRAIGHT ALUMINUM POLES (RSA)

Job Name 140 West Rd

Client Name

Job Location Portsmouth, NH

Created By

Date

Product RSA20G500

Quote

Customer Approval

Date

Sternberg Model	Pole Height	Shaft Size	Wall Thick-ness	Slotted SQ Base Width	Hand-hole Size	Weight Lbs	Bolt Circle	Bolt Proj +/- .25	DBL Nutted Anchor bolt ASTM F1554 GRADE 55 Galv thread	Max Loading Capacities								Base Cover Options
										90 MPH w/1.3 Gust		110MPH w/1.3 Gust		130MPH w/1.3 Gust		150MPH w/1.3 Gust		
										MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	
RSA10G400	10	4	0.125	8.91	2 x 4	34	6.75"-8.25"	3.25	0.75	4.3	100	2.6	100	1.8	100	1.2	100	2401-4, SL900-4
RSA10G500	10	5	0.125	9.61	2 x 4	39	7.75"-9.5"	3.25	0.75	8.9	100	5.8	100	4.1	100	3.0	100	2401-5, SL900-5
RSA12G400	12	4	0.125	8.91	2 x 4	38	6.75"-8.25"	3.25	0.75	3.0	100	1.7	100	1.1	100	0.7	100	2401-4, SL900-4
RSA12G500	12	5	0.125	9.61	2 x 4	44	7.75"-9.5"	3.25	0.75	6.9	100	4.4	100	3.0	100	2.2	100	2401-5, SL900-5
RSA12A500	12	5	0.156	9.61	2 x 4	50	7.75"-9.5"	3.25	0.75	8.9	100	5.8	100	4.0	100	2.9	100	2401-5, SL900-5
RSA12T500	12	5	0.188	9.61	2 x 4	57	7.75"-9.5"	3.25	0.75	10.9	100	7.1	100	4.9	100	3.6	100	2401-5, SL900-5
RSA14G400	14	4	0.125	8.91	2 x 4	41	6.75"-8.25"	3.25	0.75	1.9	100	0.9	100	-	100	-	100	2401-4, SL900-4
RSA14G500	14	5	0.125	9.61	2 x 4	48	7.75"-9.5"	3.25	0.75	5.3	100	3.3	100	2.2	100	1.5	100	2401-5, SL900-5
RSA14A500	14	5	0.156	9.61	2 x 4	56	7.75"-9.5"	3.25	0.75	7.0	100	4.4	100	3.0	100	2.2	100	2401-5, SL900-5
RSA14T500	14	5	0.188	9.61	2 x 4	63	7.75"-9.5"	3.25	0.75	8.7	100	5.6	100	3.8	100	2.8	100	2401-5, SL900-5
RSA16G400	16	4	0.125	8.91	2 x 4	45	6.75"-8.25"	3.25	0.75	1.0	100	-	100	-	100	-	100	2401-4, SL900-4
RSA16G500	16	5	0.125	9.61	2 x 4	53	7.75"-9.5"	3.25	0.75	3.8	100	2.3	100	1.5	100	1.0	100	2401-5, SL900-5
RSA16A500	16	5	0.156	9.61	2 x 4	61	7.75"-9.5"	3.25	0.75	5.3	100	3.3	100	2.2	100	1.5	100	2401-5, SL900-5
RSA16T500	16	5	0.188	9.61	2 x 4	70	7.75"-9.5"	3.25	0.75	6.7	100	4.2	100	2.8	100	2.0	100	2401-5, SL900-5
RSA18G500	18	5	0.125	9.61	2 x 4	57	7.75"-9.5"	3.25	0.75	2.7	100	1.5	100	0.9	100	-	100	2401-5, SL900-5
RSA18A500	18	5	0.156	9.61	2 x 4	67	7.75"-9.5"	3.25	0.75	3.9	100	2.3	100	1.5	100	1	100	2401-5, SL900-5
RSA18T500	18	5	0.188	9.61	2 x 4	77	7.75"-9.5"	3.25	0.75	5.1	100	3.2	100	2.1	100	1.4	100	2401-5, SL900-5
RSA18T600	18	6	0.188	10.32	2 x 4	96	8.75"-10.25"	3.50	0.75	10.5	100	6.7	100	4.6	100	3.1	100	2401-6
RSA20G500	20	5	0.125	9.61	2 x 4	62	7.75"-9.5"	3.25	0.75	1.7	100	0.8	100	-	100	-	100	2401-5, SL900-5
RSA20A500	20	5	0.156	9.61	2 x 4	73	7.75"-9.5"	3.25	0.75	2.8	100	1.5	100	0.9	100	-	100	2401-5, SL900-5
RSA20T500	20	5	0.188	9.61	2 x 4	84	7.75"-9.5"	3.25	0.75	3.8	100	2.2	100	1.4	100	0.9	100	2401-5, SL900-5
RSA20A600	20	6	0.156	10.32	2 x 4	90	8.75"-10.25"	3.50	0.75	6.7	100	4.2	100	2.8	100	1.6	100	2401-6
RSA20T600	20	6	0.188	10.32	2 x 4	104	8.75"-10.25"	3.50	0.75	8.5	100	5.4	100	3.6	100	2.3	100	2401-6
RSA25A600	25	6	0.156	10.32	2 x 4	115	8.75"-10.25"	3.50	0.75	3.6	100	2	100	1.1	100	-	100	2401-6
RSA25T600 *	25	6	0.188	10.32	2 x 4	124	8.75"-10.25"	3.50	0.75	4.9	100	2.9	100	1.8	100	0.8	100	2401-6
RSA30T600 *	30	6	0.188	10.32	2 x 4	151	8.75"-10.25"	3.50	1.0	2.3	100	1.1	100	-	100	-	100	2401-6

CROSS SECTION

RSA

RSA = Round Straight Aluminum

MODEL NUMBER

RSA20G500

RSA10G400	RSA14T500	RSA20A500
RSA12G500	RSA16G400	RSA20T500
RSA12G400	RSA16G500	RSA20A600
RSA12G500	RSA16A500	RSA20T600
RSA12A500	RSA16T500	RSA25A600
RSA12T500	RSA18G500	RSA25T600*
RSA14G400	RSA18A500	RSA30T600*
RSA14G500	RSA18T600	
RSA14A500	RSA20G500	

FIXTURE MOUNTING

D1

Arm Mounting
D1 = 1 Luminaire
D2 = 2 @ 180°
D3 = 3 @ 120°
D4 = 4 @ 90°
D5 = 2 @ 90°
D6 = 3 @ 90°

Tenon Mounting
P2 = 2.38" OD x 4.00"
P3 = 3.00" OD x 3.00"
P4 = 4.00" OD x 6.00"
P5 = 4.50" OD x 3.50"
P6 = 3.50" OD x 3.50"

BASE COVER

2401-5

2401-4
2401-5
2401-6
SL900-4
SL900-5
LU900-4
LU900-5

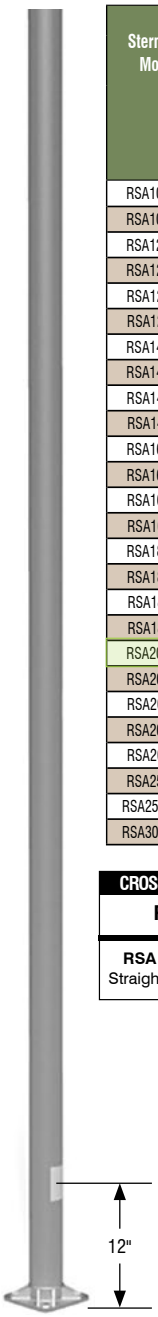
OPTIONS

See Accessories at www.sternberglighting.com (Please specify with code)

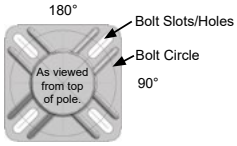
COLOR

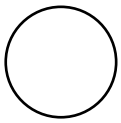
TO BE DETERMINED

UGMT - Urban Gun Metal Textured
UGM - Urban Gun Metal Matte
UBT - Urban Bronze Textured
USLT - Urban Silver Textured
UWHT - Urban White Textured
UB - Urban Bronze Matte
USL - Urban Silver Matte
UWH - Urban White Matte
BKT - Black Textured



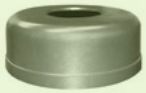
Anchor Base Detail





4", 5" or 6" Dia. Round Profile

OPTIONAL BASE COVERS



Round 2401
15" Dia. x 6" H
Throat Size 4", 5" or 6" Dia.
2401-4
2401-5
2401-6

Round SL900
18.5" Dia. x 6" H
Throat Size 4" or 5" Dia.
SL900-4
SL900-5

Round LU900
19" Dia. x 9" H
Throat Size 4" or 5" Dia.
LU900-4
LU900-5

FAQ **CLICK FOR FAQ's**

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* Factory installed vibration damper.

SL630 SOLANA SERIES

LED

EPA	7 YEAR WARRANTY	LUMEN RANGE	LIFE SPAN	UL LISTED	CLICK FOR FAQ's	IP RATING
.8 (ft²) WEIGHT 33 LBS	7	2,820 to 14,020	L70 MINIMUM 100,000 HOURS	UL	FAQ	IP 66

JOB NAME 140 West Rd

FIXTURE TYPE EX-P3

MEMO

BUILD A PART NUMBER

ORDERING EXAMPLE: 1A-SL630-12L40T3-MDL18-SV1-RP34-FHD-BLOC/RSA14A500-D1-SL900-5/UGMT

Mounting Config.	Fixture	LED	CCT	Type	Driver	Lens	Option Round Pole Adapter	Optional Control Receptacle	Option Control	Option Motion Sensor	Option Fuse	Option House Side Shield	Pole See Pole Spec Sheets	Finish
	SL630	24L	40	T4	MDL014	SV1	RP56					BLOC	RSA20G50	

Mounting Configuration

(Click here to link to mounting configuration specification page)

- 1W
- 1A
- 2A
- 2A90
- 3A
- 3A90
- 4A
- 1AM
- 2AM

W = Wall Mount **A** = Arm Mount **AM** = Arm Mid-Mount

Fixture

- SL630

LED

- 24L
- 12L

CCT - Color Temperature (K)

- 27(00)
- 30(00)
- 35(00)
- 40(00)
- 50(00)

Distribution Type

- T2
- T3
- T4
- T5

Driver

- **MDL018** (120v-277v, 180mA)
- **MDH018** (347v-480v, 180mA)
- **MDL014** (120v-277v, 140mA)
- **MDH014** (347v-480v, 140mA)
- **MDL008**[1] (120v-277v, 80mA)
- **MDH008**[1] (347v-480v, 80mA)

[1] 12L system only.

Lens

- **CA** (Clear Acrylic)
- **FG** (Flat Glass)
- **SA** (Sag Acrylic)
- **FFG** (Frosted Flat Glass)
- **SV1** (Flat Soft Vue Light Diffused Acrylic)
- **SV2** (Flat Soft Vue Moderate Diffused Acrylic)
- **SV4** (Flat Soft Vue Maximum Diffused Acrylic)
- **SV1SA** (Soft Vue Light Diffused Sag Acrylic)
- **SV2SA** (Soft Vue Moderate Diffused Sag Acrylic)
- **SV4SA** (Soft Vue Maximum Diffused Sag Acrylic)

Options (Click here to view accessories sheet)

- **RP34**[2] For 3" to 4" diameter poles
- **RP56**[2] For 5" to 6" diameter poles
- **R** 3-Pin control receptacle only
- **R5** 5-Pin control receptacle only
- **R7** 7-Pin control receptacle only
- **PE**[3] Twist-Lock Photocontrol (120V-277V)
- **PE3**[3] Twist-Lock Photocontrol (347V)
- **PE4**[3] Twist-Lock Photocontrol (480V)
- **SC**[3] Shorting Cap
- **PEC** Electronic Button Photocontrol (120V-277V)
- **PEC4** Electronic Button Photocontrol (480V)
- **MOT1**[4] 360° lens, maximum coverage 40' diameter from 20' height
- **MOT2**[4] 360° lens, maximum coverage 70' diameter from 20' height
- **FHD**[5] Double Fuse and Holder
- **HSS** External 120° House Side Shield
- **BLOC** Back Light Optical Control

[2] Required for round poles
[3] Requires control receptacle
[4] Requires FLAT acrylic lens
[5] Ships loose for installation in base

Pole (Click here to link to pole specification page)

See Pole specification sheets.

Finish

TBD

Standard Urban Finishes (Click here to view paint finish sheet)

- **UGMT** Gun Metal Textured
- **UGM** Gun Metal Matte
- **UBT** Urban Bronze Textured
- **UB** Urban Bronze Matte
- **USLT** Urban Silver Textured
- **USL** Urban Silver Matte
- **UWHT** Urban White Textured
- **UWH** Urban White Matte
- **BKT** Black Textured

Custom Urban Finishes[6]

- **CM** Custom Match

[6] Smooth finishes are available upon request.

Specifications

Fixture

The medium scale SL630 Solana® arm mount luminaire's stylish design is a perfect accent for urban settings. The subtle, yet sophisticated look enhances the impact of any project. The Solana's wide array of optics, lenses and distributions makes this an easy choice for a variety of commercial, institutional and municipal projects. The Luminaire shall be UL listed in US and Canada.

LEDs

The luminaire shall use high output, high brightness LED's. They shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface. The arrays shall be roof mounted to minimize up-light. The LED's and printed circuit boards shall be 100% recyclable; they shall also be protected from moisture and corrosion by a conformal coating. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IESNA LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 5000K (4500K, 3000K, 3500K or 2700K option) color temperature with a minimum CRI of 70. Consult factory for custom color CCT. The luminaire shall have a minimum _____ (see table) delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Optics

The luminaire shall be provided with refractor type optics applied to each LED array. The luminaire shall provide Type ___ (2, 3, 4 or 5) light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.

BLOC Optic: An optional "Back Light Optical Control" shield can be provided at the factory. This is an internal optic level "House Side Shield" offering significantly reduced backlight and glare while maintaining the original design aesthetics of the luminaire.

Electronic Drivers

The LED driver shall be U.L. Recognized. It shall be securely mounted inside the fixture, for optimized performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload, overheat and short circuit

See next page

SternbergLighting
ESTABLISHED 1923

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SL630 SOLANA SERIES

LED

protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be a high efficiency driver with a THD less than 20% and a high power factor greater than .9. It shall be dimming capable using a 0-10v signal, consult factory for more information.

Photocontrols

Button Style: The photocontrol shall be mounted on the fixture and pre-wired to driver. The electronic button type photocontrol is instant on with a 5-10 second turn off, and shall turn on at 1.5 footcandles with a turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.See pole spec sheet for pole mounted version.

Twist-Lock Style: The photocontrol shall be mounted externally on the fixture and pre-wired to driver. The twist lock type photocontrol is instant on with a 3-6 second turn off, and shall turn on at 1.5 footcandles with a turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.

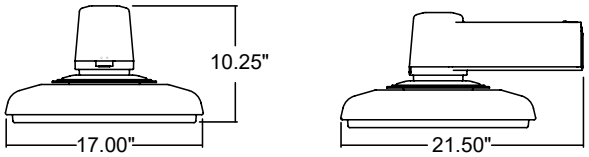
Warranty

Seven-year limited warranty. See product and finish warranty guide for details.

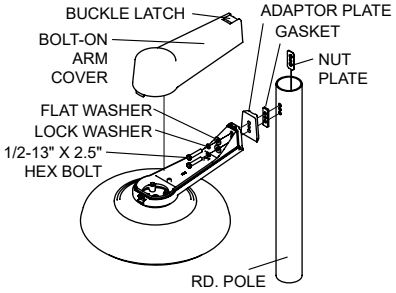
Finish

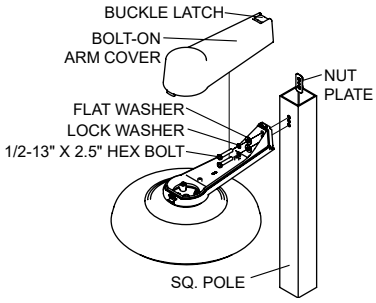
Refer to website for details.

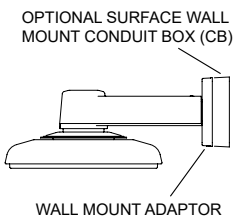
Fixtures

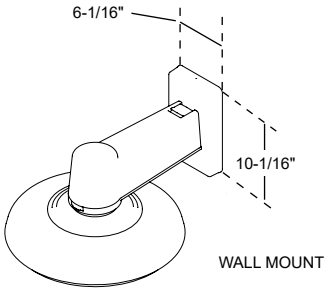


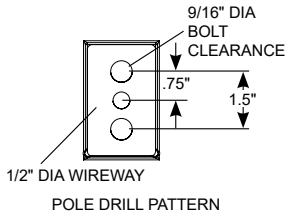
Mounting Details



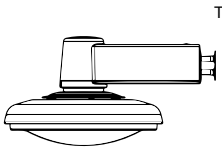




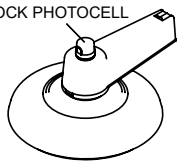




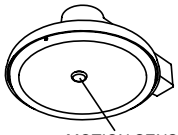
Options



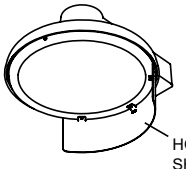
SV1SA/SV2SA



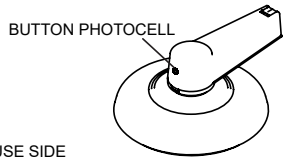
R-PE



MOT



HSS



PEC

SternbergLighting
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SL630 SOLANA SERIES

LED

Performance (Based on CA Lens)

MODEL #	T2 LUMENS	BUG	EFFICACY (LPW)	T3 LUMENS	BUG	EFFICACY (LPW)	T4 LUMENS	BUG	EFFICACY (LPW)	T5 LUMENS	BUG	EFFICACY (LPW)	WATTS
24L40T_-MDL018	13815	B2U0G2	117.1	13895	B2U0G2	117.8	13345	B2U0G2	113.1	14020	B3U0G1	118.8	118
24L30T_-MDL018	13170	B2U0G2	111.6	13250	B2U0G2	112.3	12725	B2U0G2	107.8	13365	B3U0G1	113.3	118
24L27T_-MDL018	11910	B2U0G2	100.9	11980	B2U0G2	101.5	11505	B2U0G2	97.5	12085	B3U0G1	102.4	118
24L40T_-MDL014	11105	B2U0G2	126.2	11190	B2U0G2	127.2	10720	B2U0G2	121.8	11270	B3U0G1	128.1	88
24L30T_-MDL014	10590	B2U0G2	120.3	10670	B2U0G2	121.3	10220	B2U0G2	116.1	10745	B3U0G1	122.1	88
24L27T_-MDL014	9575	B2U0G2	108.8	9645	B2U0G2	109.6	9240	B2U0G2	105.0	9715	B3U0G1	110.4	88
12L40T_-MDL018	6905	B1U0G1	115.1	6945	B1U0G1	115.8	6635	B1U0G1	110.6	6985	B2U0G1	116.4	60
12L30T_-MDL018	6585	B1U0G1	109.8	6620	B1U0G1	110.3	6325	B1U0G1	105.4	6660	B2U0G1	111.0	60
12L27T_-MDL018	5955	B1U0G1	99.3	5985	B1U0G1	99.8	5720	B1U0G1	95.3	6020	B2U0G1	100.3	60
12L40T_-MDL014	5635	B1U0G1	122.5	5640	B1U0G1	122.6	5400	B1U0G1	117.4	5690	B2U0G1	123.7	46
12L30T_-MDL014	5375	B1U0G1	116.8	5375	B1U0G1	116.8	5150	B1U0G1	112.0	5425	B2U0G1	117.9	46
12L27T_-MDL014	4860	B1U0G1	105.7	4860	B1U0G1	105.7	4655	B1U0G1	101.2	4905	B2U0G1	106.6	46
12L40T_-MDL008	3405	B1U0G1	126.1	3425	B1U0G1	126.9	3270	B1U0G1	121.1	3440	B1U0G0	127.4	27
12L30T_-MDL008	3245	B1U0G1	120.2	3265	B1U0G1	120.9	3120	B1U0G1	115.6	3280	B1U0G0	121.5	27
12L27T_-MDL008	2935	B1U0G1	108.7	2955	B1U0G1	109.4	2820	B1U0G1	104.4	2965	B1U0G0	109.8	27

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urbanline

SternbergLighting
ESTABLISHED 1923

10' TO 30' ROUND STRAIGHT ALUMINUM POLES (RSA)

Job Name 140 West Rd

Client Name

Job Location Portsmouth, NH

Created By

Date

Product RSA20G500

Quote

Customer Approval

Date

Sternberg Model	Pole Height	Shaft Size	Wall Thick-ness	Slotted SQ Base Width	Hand-hole Size	Weight Lbs	Bolt Circle	Bolt Proj +/- .25	DBL Nutted Anchor bolt ASTM F1554 GRADE 55 Galv thread	Max Loading Capacities								Base Cover Options
										90 MPH w/1.3 Gust		110MPH w/1.3 Gust		130MPH w/1.3 Gust		150MPH w/1.3 Gust		
										MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	MAX EPA 1 (SQ FT)	MAX WEIGHT (lbs)	
RSA10G400	10	4	0.125	8.91	2 x 4	34	6.75"-8.25"	3.25	0.75	4.3	100	2.6	100	1.8	100	1.2	100	2401-4, SL900-4
RSA10G500	10	5	0.125	9.61	2 x 4	39	7.75"-9.5"	3.25	0.75	8.9	100	5.8	100	4.1	100	3.0	100	2401-5, SL900-5
RSA12G400	12	4	0.125	8.91	2 x 4	38	6.75"-8.25"	3.25	0.75	3.0	100	1.7	100	1.1	100	0.7	100	2401-4, SL900-4
RSA12G500	12	5	0.125	9.61	2 x 4	44	7.75"-9.5"	3.25	0.75	6.9	100	4.4	100	3.0	100	2.2	100	2401-5, SL900-5
RSA12A500	12	5	0.156	9.61	2 x 4	50	7.75"-9.5"	3.25	0.75	8.9	100	5.8	100	4.0	100	2.9	100	2401-5, SL900-5
RSA12T500	12	5	0.188	9.61	2 x 4	57	7.75"-9.5"	3.25	0.75	10.9	100	7.1	100	4.9	100	3.6	100	2401-5, SL900-5
RSA14G400	14	4	0.125	8.91	2 x 4	41	6.75"-8.25"	3.25	0.75	1.9	100	0.9	100	-	100	-	100	2401-4, SL900-4
RSA14G500	14	5	0.125	9.61	2 x 4	48	7.75"-9.5"	3.25	0.75	5.3	100	3.3	100	2.2	100	1.5	100	2401-5, SL900-5
RSA14A500	14	5	0.156	9.61	2 x 4	56	7.75"-9.5"	3.25	0.75	7.0	100	4.4	100	3.0	100	2.2	100	2401-5, SL900-5
RSA14T500	14	5	0.188	9.61	2 x 4	63	7.75"-9.5"	3.25	0.75	8.7	100	5.6	100	3.8	100	2.8	100	2401-5, SL900-5
RSA16G400	16	4	0.125	8.91	2 x 4	45	6.75"-8.25"	3.25	0.75	1.0	100	-	100	-	100	-	100	2401-4, SL900-4
RSA16G500	16	5	0.125	9.61	2 x 4	53	7.75"-9.5"	3.25	0.75	3.8	100	2.3	100	1.5	100	1.0	100	2401-5, SL900-5
RSA16A500	16	5	0.156	9.61	2 x 4	61	7.75"-9.5"	3.25	0.75	5.3	100	3.3	100	2.2	100	1.5	100	2401-5, SL900-5
RSA16T500	16	5	0.188	9.61	2 x 4	70	7.75"-9.5"	3.25	0.75	6.7	100	4.2	100	2.8	100	2.0	100	2401-5, SL900-5
RSA18G500	18	5	0.125	9.61	2 x 4	57	7.75"-9.5"	3.25	0.75	2.7	100	1.5	100	0.9	100	-	100	2401-5, SL900-5
RSA18A500	18	5	0.156	9.61	2 x 4	67	7.75"-9.5"	3.25	0.75	3.9	100	2.3	100	1.5	100	1	100	2401-5, SL900-5
RSA18T500	18	5	0.188	9.61	2 x 4	77	7.75"-9.5"	3.25	0.75	5.1	100	3.2	100	2.1	100	1.4	100	2401-5, SL900-5
RSA18T600	18	6	0.188	10.32	2 x 4	96	8.75"-10.25"	3.50	0.75	10.5	100	6.7	100	4.6	100	3.1	100	2401-6
RSA20G500	20	5	0.125	9.61	2 x 4	62	7.75"-9.5"	3.25	0.75	1.7	100	0.8	100	-	100	-	100	2401-5, SL900-5
RSA20A500	20	5	0.156	9.61	2 x 4	73	7.75"-9.5"	3.25	0.75	2.8	100	1.5	100	0.9	100	-	100	2401-5, SL900-5
RSA20T500	20	5	0.188	9.61	2 x 4	84	7.75"-9.5"	3.25	0.75	3.8	100	2.2	100	1.4	100	0.9	100	2401-5, SL900-5
RSA20A600	20	6	0.156	10.32	2 x 4	90	8.75"-10.25"	3.50	0.75	6.7	100	4.2	100	2.8	100	1.6	100	2401-6
RSA20T600	20	6	0.188	10.32	2 x 4	104	8.75"-10.25"	3.50	0.75	8.5	100	5.4	100	3.6	100	2.3	100	2401-6
RSA25A600	25	6	0.156	10.32	2 x 4	115	8.75"-10.25"	3.50	0.75	3.6	100	2	100	1.1	100	-	100	2401-6
RSA25T600 *	25	6	0.188	10.32	2 x 4	124	8.75"-10.25"	3.50	0.75	4.9	100	2.9	100	1.8	100	0.8	100	2401-6
RSA30T600 *	30	6	0.188	10.32	2 x 4	151	8.75"-10.25"	3.50	1.0	2.3	100	1.1	100	-	100	-	100	2401-6

CROSS SECTION

RSA

RSA = Round Straight Aluminum

MODEL NUMBER

RSA20G500

RSA10G400	RSA14T500	RSA20A500
RSA12G500	RSA16G400	RSA20T500
RSA12G400	RSA16G500	RSA20A600
RSA12G500	RSA16A500	RSA20T600
RSA12A500	RSA16T500	RSA25A600
RSA12T500	RSA18G500	RSA25T600*
RSA14G400	RSA18A500	RSA30T600*
RSA14G500	RSA18T600	
RSA14A500	RSA20G500	

FIXTURE MOUNTING

D1

Arm Mounting
D1 = 1 Luminaire
D2 = 2 @ 180°
D3 = 3 @ 120°
D4 = 4 @ 90°
D5 = 2 @ 90°
D6 = 3 @ 90°

Tenon Mounting
P2 = 2.38" OD x 4.00"
P3 = 3.00" OD x 3.00"
P4 = 4.00" OD x 6.00"
P5 = 4.50" OD x 3.50"
P6 = 3.50" OD x 3.50"

BASE COVER

2401-5

2401-4
2401-5
2401-6
SL900-4
SL900-5
LU900-4
LU900-5

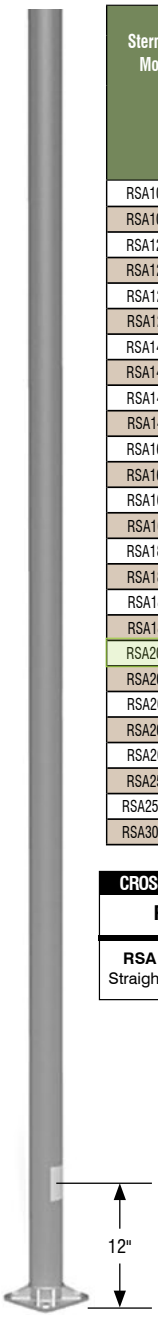
OPTIONS

See Accessories at www.sternberglighting.com (Please specify with code)

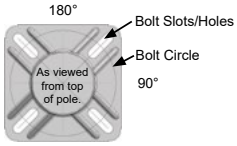
COLOR

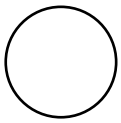
TO BE DETERMINED

UGMT - Urban Gun Metal Textured
UGM - Urban Gun Metal Matte
UBT - Urban Bronze Textured
USLT - Urban Silver Textured
UWHT - Urban White Textured
UB - Urban Bronze Matte
USL - Urban Silver Matte
UWH - Urban White Matte
BKT - Black Textured



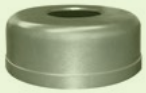
Anchor Base Detail





4", 5" or 6" Dia. Round Profile

OPTIONAL BASE COVERS



Round 2401
15" Dia. x 6" H
Throat Size 4", 5" or 6" Dia.
2401-4
2401-5
2401-6

Round SL900
18.5" Dia. x 6" H
Throat Size 4" or 5" Dia.
SL900-4
SL900-5

Round LU900
19" Dia. x 9" H
Throat Size 4" or 5" Dia.
LU900-4
LU900-5

FAQ **CLICK FOR FAQ's**

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* Factory installed vibration damper.

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

TRAFFIC MEMORANDUM

Date: July 14, 2022
July 26, 2022 Rev1

To: City of Portsmouth – Planning Department
1 Junkins Ave, 3rd Floor
Portsmouth, NH

From: Robert Duval, P.E.
Jen Porter, P.E.

Re: Proposed Change of Use – Black Rock Social Club
140 West Road, Portsmouth, NH 03801
TFM Project No. 47107.20

INTRODUCTION

TFMoran has prepared this traffic evaluation to determine the traffic impacts with the proposed change of use at 140 West Road in Portsmouth.

PROPOSAL

Anchor Management Group, Inc is proposing a change of use at the existing building at 140 West Road. The existing building with a 17,500 sf footprint is currently vacant, but previously was used as a trampoline park. This change of use is proposing to update the building to a social club and add a walk in cooler to bring the footprint to 18, 105 sf and add a second floor (12,000 sf+/-) to part of the building. Some of the internal uses will include golf simulators and a putting green, axe throwing, racing/flying simulators, arcade and table games, massage, office space and a bar with kitchen area.

Vehicular access is provided by two driveways along West Road and parking spaces are currently provided on three sides of the building. Minor modifications are proposed to the pavement to remove some mechanical equipment to provide additional angled parking at the rear of the building. New dumpsters and a walk in cooler are proposed at the north end of the building. Drainage improvements are also proposed to capture and treat runoff.

DESCRIPTION OF SITE

The existing site (Map 252 Lot 2-13) is located at West Road in Portsmouth, New Hampshire about a tenth of a mile west of US Route 1. The previous use was a trampoline park which is currently closed. The site has two existing curb cuts onto West Road, one of which is just offset of Wilson Road. The site pavement provides circulation around the building with 102 existing parking spaces distributed around three sides of the building.

DESCRIPTION OF ROADWAYS AND INTERSECTIONS

Roadways

Lafayette Road (US1)

- Classification. Lafayette Road (US1) is a State-maintained north-south arterial roadway. The roadway runs from points south in Hampton thru Portsmouth to points north in Maine.2.
- Lane widths and usage. In the project network, the roadway generally provides 2-lanes of travel in each direction with a TWLTL south of Wilson Road. Paved shoulder widths are about 4' in the project area.
- Pedestrian facilities. There are sidewalks along the east side of Lafayette Road.
- Signage. The speed limit is posted at 35 mph along the roadway. Other traffic signage includes lane use, directional signs, and street name signs. Pavement markings consist of a center TWLTL and shoulder markings in fair to good condition.

Wilson Road

- Classification. Wilson Road is a City-maintained east-west collector roadway. The west end starts at West Road and the east end terminates at Taft Road in a residential area.
- Lane widths and usage. In the project vicinity, the roadway generally provides a single lane in each direction with sloped granite curbing and no striped shoulder.
- Pedestrian facilities. There are no sidewalks along Wilson Road. There is a bus stop Shelter on the south side of Wilson Road (across from the Market Basket Plaza curb cut) between West Road and Lafayette Road.
- Signage. The speed limit is posted at 40 mph.in the vicinity of Cardinal Lane. Other traffic signage includes lane use, directional signs, bus stops, street name signs and stop signs at major driveways. Pavement markings consist of a center TWLTL and shoulder markings in fair to good condition.

West Road)

- Classification. West Road is a City-maintained north-south collector roadway. The north end of West Road starts at Peverly Hill Road and terminates at Campus Drive to the south.
- Lane widths and usage. In the project vicinity, the roadway generally provides a single lane in each direction. Paved shoulder widths vary 4' to 6' in the project area.
- Pedestrian facilities. There are no sidewalks along West Road. Two bus stops are provided on West Road, one at the intersection of Campus Drive and the other at 215 West Road.
- Signage. The speed limit is posted at 30 mph. Other traffic signage includes directional signs, bus stops, street name signs and stop signs at major driveways. Pavement markings consist of a center double yellow and shoulder markings in fair to good condition.

Intersections

Lafayette Road at Wilson Road.

- Traffic Control. This is an existing 4-way signalized intersection, with Lafayette Road forming the northbound and southbound approaches. Wilson Road forms the EB and WB approaches.
- Pedestrian facilities. Pedestrian crosswalks are provided across the northbound approach and the westbound approach.
- Approaches. The NB and SB approaches consists of three 12' lanes, which are marked left only, thru, and thru-right. The EB approach has two 12' lanes that are marked as a left-thru lane and an exclusive right turn lane. The WB approach is a single lane the provides left-thru-right movements.

- Signal Timing. Existing data provided by the State. AM: based on a coordinated Pattern2, PM based on a coordinated Pattern3 and SAT is based on Max2 from controller.

West Road at Driveway/Wilson Road.

- Traffic Control. This is an existing unsignalized intersection with two-way Stop control. West Road forms the NB and SB approaches and flow free. Wilson Road forms the WB approach and is Stop controlled. The EB approach is slightly offset from Wilson Drive to the north and serves a Private Drive with a Stop Sign.
- Pedestrian facilities. No crosswalks or sidewalks are present at the intersection.
- Approaches. Each approach accommodates two way traffic and there are no restricted movements. All approaches provide a minimum of 12' wide single lanes.

BACKGROUND VOLUMES

To quantify existing peak hour traffic volumes within the study area, turning movement counts were taken at the study intersections. These counts are tabulated in the Appendix of this report.

Counts were taken at all study intersections on:

- Thursday June 23, 2022 – 7AM to 9AM, 4PM to 6PM.
- Saturday June 25, 2022 – 11 AM to 1 PM.

Seasonal Adjustment.
To account for seasonal variations, the counts were seasonally adjusted using NHDOT Group 4 factors. The data was adjusted upward by 2% for June. The data is found in the Appendix.

COVID/Stay-at Home Adjustment.
Due to the Covid pandemic, in many places traffic volumes are still below normal levels. To determine an appropriate adjustment factor for current conditions, pre-Covid volume, the NHDOT has developed a methodology to calibrate current traffic volumes to pre-pandemic levels.

The methodology involves comparing traffic volumes at three permanent stations throughout an entire month and developing a pandemic adjustment factor for each peak hour. The process is conducted by using the NHDOT MS2 Transportation Data Management System. The data and calculations are in the Appendix.

The calculations show, that at the three permanent stations, traffic volumes in October 2021 are still below the March 2019 volumes. Therefore, per the calculations, the volumes for the Base conditions are adjusted as follows for for continued covid conditions:

- AM: 5.5%
- PM: 3.3%
- SAT: 6.6%

These adjusted volumes result in the Base condition and the diagrams are in the Appendix.

NO-BUILD VOLUMES

To establish No-Build traffic volumes for this study, the following adjustments were made to the Covid- and seasonally adjusted 2021 volumes:

Growth Factor.
A 1% compound annual growth rate was used to account for general population growth and possible traffic generated by smaller future developments in the area.

Other Developments
The City provided data for a proposed or approved development identified as generating traffic volumes that should be accounted for in the no-build volumes for this traffic study. This gas station development is described below and data and distribution are in the Appendix:

- 2255 Lafayette Road Gas Station:
  This project for a gasoline station/convenience store (with drive-through window) will replace the existing Burger King fast-food restaurant. The development site trips enter this traffic network via Lafayette Road and the trips were distributed prorata per the June 2022 counts through the network.

The total no-build volumes for the opening (2023) and future (2033) years are presented in the Appendix.

TRIP GENERATION

Standard trip generation rates published by the ITE[1] (11th Edition), were used to calculate the vehicle trips for the proposed development. The proposed uses within the social club fit with the description of the Athletic Club use. See calculations in the Appendix.

Table 1: Trip Generation

ITE LUC 493 Athletic Club: 18,105 sf (footprint) [1st floor 18,105 sf, 2nd floor 12,000 sf]	**In**	**Out**	**Total**
Weekday AM Peak Hour Adjacent Street	24	15	39
Weekday PM Peak Hour Adjacent Street	64	40	104
Weekend SAT Peak Hour of Generator	47	49	96

TRIP DISTRIBUTION:

For this use, all trips are expected to be primary trips. Primary trips go directly from origin to generator and return to origin. TFM used pro-rata as the basis of distribution per the existing traffic volume patterns for primary trips. However, based on comment from the City, there would not be many origin trips expected to/from the south on West Road within this roadway network. The trips are more likely to access the site by Route 1 via Wilson Road. Therefore, at the Wilson Road/West Road intersection, a 5% distribution was maintained to/from the south and the remaining southern distribution was transferred to the westbound approach.

[1] *Trip Generation Manual*, Institute of Transportation Engineers (ITE), 11th Edition.

LEVEL OF SERVICE/QUEUE ANALYSIS

Level of Service Analysis:
Level of service (LOS) is a qualitative description of operational conditions within a traffic stream measured in terms of control delay, a function of capacity, degree of saturation, and delay associated with traffic signals and "STOP" signs. Control delay includes initial deceleration, delay approaching a control device, stopped delay, queue move-up time, and acceleration delay from a stopped condition. The relationship between control delay and LOS is shown in the following table.

Level of Service (LOS)	Signalized Control Delay (sec)	Unsignalized Control Delay (sec)
A	≤10.0	≤10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	Over 80.0	Over 50.0

Study Area.
Analyses were performed for the study area intersections previously described, that is:

1. West Road at Driveway/Wilson Road
2. Lafayette Road at Wilson Road

Queue Analysis.
Vehicle queue lengths are determined by the capacity of the movement under study and the volume of traffic processed by the intersection during the analysis period. It is standard practice to report the 95th percentile queue, that is, the queue that will be exceeded no more than 5% of the time during the peak periods.

Methodology.
Trafficware "Synchro" v11 software was used to analyze signalized and unsignalized intersections (based on HCM 2000) within the study area intersections during the weekday AM/PM and Saturday peak hours.

Signal Timing.
Signal timing is based on data provided by the State and attached in the Appendix.

Volume to capacity (v/c) ratios, Level of Service (LOS), delays and queue results are summarized in the following tables:

Table 2 Level of Service Analysis Summary (2022/2023)

Location/ *Peak Hour*	2022 Base				2023 NoBuild				2023 Build			
Movement	v/c[a]	Del.[b]	LOS[c]	Q[d]	v/c[a]	Del.[b]	LOS[c]	Q[d]	v/c[a]	Del.[b]	LOS[c]	Q[d]
3: West Road at Driveway/Wilson Road												
AM Peak OVERALL	**---**	**1.8**	**A**	**---**	**---**	**1.9**	**A**	**---**	**---**	**2.4**	**A**	**---**
EB All	0.00	0.0	A	0	0.00	0.0	A	0	0.04	13.2	B	3
WB All	0.10	10.9	B	8	0.10	11.0	B	8	0.12	11.6	B	11
NB All	0.00	0.0	A	0	0.00	0.0	A	0	0.01	0.1	A	0
SB All	0.02	0.8	A	1	0.02	0.8	A	1	0.02	0.8	A	1
PM Peak OVERALL	**---**	**2.6**	**A**	**---**	**---**	**2.7**	**A**	**---**	**---**	**4.6**	**A**	**---**
EB All	0.01	12.8	B	1	0.01	12.9	B	1	0.11	14.5	B	9
WB All	0.11	10.8	B	9	0.11	10.8	B	9	0.23	13.3	B	23
NB All	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.1	A	0
SB All	0.04	3.7	A	3	0.05	3.7	A	4	0.05	3.3	A	4
SAT Peak OVERALL	**---**	**5.1**	**A**	**---**	**---**	**5.2**	**A**	**---**	**---**	**6.3**	**A**	**---**
EB All	0.01	10.2	B	0	0.01	10.3	B	0	0.09	11.3	B	7
WB All	0.08	8.9	A	7	0.09	8.9	A	7	0.13	9.7	A	11
NB All	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.5	A	1
SB All	0.03	3.7	A	2	0.03	3.8	A	2	0.03	3.1	A	2
6: Lafayette Road at Wilson Road												
AM Peak OVERALL	**0.37**	**8.9**	**A**	**---**	**0.38**	**8.9**	**A**	**---**	**0.39**	**9.2**	**A**	**---**
EB L/T	0.24	38.5	D	32	0.24	38.5	D	32	0.26	38.5	D	34
EB R	0.05	37.1	D	24	0.05	37.1	D	26	0.05	36.9	D	26
WB All	0.22	38.3	D	30	0.23	38.4	D	31	0.22	38.2	D	31
NB L	0.43	39.3	D	66	0.44	39.3	D	67	0.45	39.3	D	70
NB TT/R	0.29	3.6	A	111	0.30	3.7	A	117	0.30	3.8	A	119
SB L	0.04	42.5	D	6	0.04	42.5	D	6	0.04	42.5	D	6
SB TT/R	0.37	6.4	A	162	0.39	6.5	A	172	0.40	6.7	A	176
PM Peak OVERALL	**0.40**	**11.9**	**B**	**---**	**0.42**	**12.0**	**B**	**---**	**0.42**	**13.3**	**B**	**---**
EB L/T	0.43	49.7	D	75	0.44	49.6	D	76	0.49	49.6	D	87
EB R	0.10	46.4	D	51	0.11	46.3	D	51	0.12	45.7	D	53
WB All	0.19	47.1	D	34	0.19	47.0	D	34	0.18	46.2	D	34
NB L	0.51	51.7	D	90	0.52	52.3	D	93	0.58	53.8	D	109
NB TT/R	0.34	4.1	A	164	0.35	4.2	A	172	0.35	4.4	A	180
SB L	0.27	60.4	E	18	0.27	60.4	E	18	0.27	60.4	E	18
SB TT/R	0.39	6.8	A	213	0.40	7.0	A	224	0.42	7.9	A	251
SAT Peak OVERALL	**0.52**	**11.1**	**B**	**---**	**0.54**	**11.2**	**B**	**---**	**0.56**	**11.9**	**B**	**---**
EB L/T	0.35	26.4	C	55	0.36	27.4	C	57	0.39	27.7	C	66
EB R	0.09	24.6	C	33	0.10	25.4	C	34	0.11	25.6	C	35
WB All	0.17	25.0	C	39	0.17	25.9	C	41	0.16	25.9	C	41
NB L	0.49	27.8	C	99	0.52	28.9	C	106	0.56	30.4	C	117
NB TT/R	0.42	5.8	A	172	0.43	5.8	A	180	0.43	5.9	A	186
SB L	0.18	34.2	C	13	0.19	35.4	D	13	0.21	37.1	D	14
SB TT/R	0.58	10.7	B	256	0.59	10.7	B	270	0.60	11.3	B	286

[a] Volume-to-capacity ratio - [b] Average control delay (sec/veh) - [c] Level of service - [d] 95th percentile queue in feet

Table 3 Level of Service Analysis Summary (2033)

Location/ *Peak Hour*	2033 NoBuild				2033 Build			
Movement	v/c[a]	Del.[b]	LOS[c]	Q[d]	v/c[a]	Del.[b]	LOS[c]	Q[d]
3: West Road at Driveway/Wilson Road								
AM Peak OVERALL	**---**	**2.0**	**A**	**---**	**---**	**2.5**	**A**	**---**
EB All	0.00	0.0	A	0	0.04	14.0	B	3
WB All	0.12	11.5	B	10	0.14	12.1	B	13
NB All	0.00	0.0	A	0	0.00	0.1	A	0
SB All	0.02	0.8	A	2	0.02	0.8	A	2
PM Peak OVERALL	**---**	**2.7**	**A**	**---**	**---**	**4.7**	**A**	**---**
EB All	0.01	13.5	B	1	0.12	15.5	C	10
WB All	0.13	11.2	B	11	0.26	14.0	B	26
NB All	0.00	0.0	A	0	0.00	0.1	A	0
SB All	0.05	3.8	A	4	0.05	3.4	A	4
SAT Peak OVERALL	**---**	**5.2**	**A**	**---**	**---**	**6.4**	**A**	**---**
EB All	0.01	10.4	B	0	0.09	11.6	B	8
WB All	0.10	9.0	A	8	0.14	9.8	A	13
NB All	0.00	0.0	A	0	0.00	0.5	A	0
SB All	0.04	3.9	A	3	0.04	3.2	A	3
6: Lafayette Road at Wilson Road								
AM Peak OVERALL	**0.42**	**9.3**	**A**	**---**	**0.43**	**9.6**	**A**	**---**
EB L/T	0.27	38.5	D	35	0.29	38.5	D	37
EB R	0.06	36.8	D	26	0.06	36.7	D	27
WB All	0.24	38.2	D	32	0.24	38.0	D	32
NB L	0.46	39.3	D	72	0.48	39.3	D	75
NB TT/R	0.33	3.9	A	135	0.34	4.0	A	136
SB L	0.04	42.5	D	6	0.04	42.5	D	6
SB TT/R	0.44	7.2	A	202	0.44	7.4	A	207
PM Peak OVERALL	**0.46**	**12.5**	**B**	**---**	**0.49**	**13.9**	**B**	**---**
EB L/T	0.47	49.7	D	82	0.51	49.6	D	93
EB R	0.12	45.9	D	54	0.13	45.3	D	55
WB All	0.21	46.7	D	37	0.20	45.8	D	37
NB L	0.55	52.8	D	100	0.53	49.7	D	116
NB TT/R	0.38	4.5	A	202	0.39	4.8	A	211
SB L	0.32	62.0	E	20	0.32	62.0	E	20
SB TT/R	0.45	7.8	A	267	0.48	9.5	A	297
SAT Peak OVERALL	**0.58**	**12.0**	**B**	**---**	**0.60**	**12.7**	**B**	**---**
EB L/T	0.40	29.6	C	63	0.43	29.8	C	70
EB R	0.11	27.2	C	35	0.12	27.2	C	35
WB All	0.19	27.8	C	44	0.18	27.5	C	44
NB L	0.57	32.5	C	118	0.61	34.3	C	129
NB TT/R	0.47	5.9	A	210	0.47	6.2	A	217
SB L	0.24	39.2	D	15	0.24	39.7	D	16
SB TT/R	0.63	11.4	B	320	0.64	12.1	B	334

[a] Volume-to-capacity ratio - [b] Average control delay (sec/veh) - [c] Level of service - [d] 95th percentile queue in feet

CONCLUSION

Based on these factors, we find the additional traffic associated with this project will be minimal, and can be safely accommodated on the adjacent roadway without improvements.

Please let me know if you have any questions in regard to these items.

TFMORAN, INC.

Robert E. Duval, P.E.
Chief Engineer

APPENDICES

APPENDIX A **Trip Generation**

APPENDIX B **Distribution**
- Calculations
- Diagrams (Site Trip Assignment & Distribution)

APPENDIX C **Volume Adjustments**
- Covid Factor
- Seasonal Adjustment

APPENDIX D **Other Developments**

APPENDIX E **AM Volumes**
- Calculations
- Diagrams
  - 2022 Base, ProRata
  - 2023/2033 NoBuild
  - 2023/2033 Build

APPENDIX F **PM Volumes**
- Calculations
- Diagrams
  - 2022 Base, ProRata
  - 2023/2033 NoBuild
  - 2023/2033 Build

APPENDIX G **SAT Volumes**
- Calculations
- Diagrams
  - 2022 Base, ProRata
  - 2023/2033 NoBuild
  - 2023/2033 Build

APPENDIX H AM Synchro
- 2022 Base
- 2023/2033 NoBuild
- 2023/2033 Build

APPENDIX I PM Synchro
- 2022 Base
- 2023/2033 NoBuild
- 2023/2033 Build

APPENDIX J SAT Synchro
- 2022 Base
- 2023/2033 NoBuild
- 2023/2033 Build

APPENDIX K Signal Timing

APPENDIX L Turning Movement Counts

APPENDIX A

Based on ITE Trip Generation 11th Edition

Proposed Trip Generation

ITE LUC 493 - Athletic Club: 18,105 sf (footprint) [1st floor 18,105 sf, 2nd floor 12,000 sf]

Time Period	Rate/Equn		Rate/ Eq	Trip Ends	Directional Split		Directional Distribution	
	X	Rate	Used		In	Out	In	Out
Weekday AM Peak Hour Adjacent Street	30.1	1.31	Rate	39	61%	39%	24	15
Weekday PM Peak Hour Adjacent Street	30.1	3.45	Rate	104	62%	38%	64	40
Weekend SAT Peak Hour of Generator	30.1	3.19	Rate	96	49%	51%	47	49

Proposed Trip Composition

100% Primary Trips

APPENDIX B

AM Site Trip Distribution

Based on ProRata at counted intersections

Primary: AM Distribution

	In	Out
AM Totals	24	15

West Road at Driveway/Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL		57%	0	9
EBT		38%	0	6
EBR		5%	0	1
WBL			0	0
WBT	**38%**		9	0
WBR			0	0
NBL	**5%**		1	0
NBT			0	0
NBR			0	0
SBL			0	0
SBT			0	0
SBR	**57%**		14	0

Lafayette Road at Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL		10%	0	2
EBT	1%	0%	0	0
EBR		28%	0	4
WBL			0	0
WBT			0	0
WBR			0	0
NBL	16%		4	0
NBT			0	0
NBR			0	0
SBL			0	0
SBT			0	0
SBR	22%		5	0

PM Site Trip Distribution

Based on ProRata at counted intersections

Primary: PM Distribution

	In	Out
PM Totals	64	40

West Road at Driveway/Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL		27%	0	11
EBT		68%	0	27
EBR		5%	0	2
WBL			0	0
WBT	**68%**		44	0
WBR			0	0
NBL	**5%**		3	0
NBT			0	0
NBR			0	0
SBL			0	0
SBT			0	0
SBR	**27%**		17	0

Lafayette Road at Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL		14%	0	6
EBT	3%	4%	2	2
EBR		50%	0	20
WBL			0	0
WBT			0	0
WBR			0	0
NBL	27%		17	0
NBT			0	0
NBR			0	0
SBL			0	0
SBT			0	0
SBR	39%		25	0

SAT Site Trip Distribution

Based on ProRata at counted intersections

Primary: SAT Distribution

	In	Out
SAT Totals	47	49

West Road at Driveway/Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL		44%	0	22
EBT		51%	0	25
EBR		5%	0	2
WBL			0	0
WBT	**51%**		24	0
WBR			0	0
NBL	**5%**		2	0
NBT			0	0
NBR			0	0
SBL			0	0
SBT			0	0
SBR	**44%**		21	0

Lafayette Road at Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL		14%	0	7
EBT	3%	0%	1	0
EBR		37%	0	18
WBL			0	0
WBT			0	0
WBR			0	0
NBL	22%		10	0
NBT			0	0
NBR			0	0
SBL			0	0
SBT			0	0
SBR	26%		12	0

TOTAL Site Trip Distribution

AM Total Site Trips

AM TOTAL: 39

West Road at Driveway/Wilson Road

Movement	TRIPS
EBL	9
EBT	6
EBR	1
WBL	0
WBT	9
WBR	0
NBL	1
NBT	0
NBR	0
SBL	0
SBT	0
SBR	14

Lafayette Road at Wilson Road

Movement	TRIPS
EBL	2
EBT	0
EBR	4
WBL	0
WBT	0
WBR	0
NBL	4
NBT	0
NBR	0
SBL	0
SBT	0
SBR	5

PM Total Site Trips

PM TOTAL: 104

West Road at Driveway/Wilson Road

Movement	TRIPS
EBL	11
EBT	27
EBR	2
WBL	0
WBT	44
WBR	0
NBL	3
NBT	0
NBR	0
SBL	0
SBT	0
SBR	17

Lafayette Road at Wilson Road

Movement	TRIPS
EBL	6
EBT	4
EBR	20
WBL	0
WBT	0
WBR	0
NBL	17
NBT	0
NBR	0
SBL	0
SBT	0
SBR	25

SAT Total Site Trips

SAT TOTAL: 96

West Road at Driveway/Wilson Road

Movement	TRIPS
EBL	22
EBT	25
EBR	2
WBL	0
WBT	24
WBR	0
NBL	2
NBT	0
NBR	0
SBL	0
SBT	0
SBR	21

Lafayette Road at Wilson Road

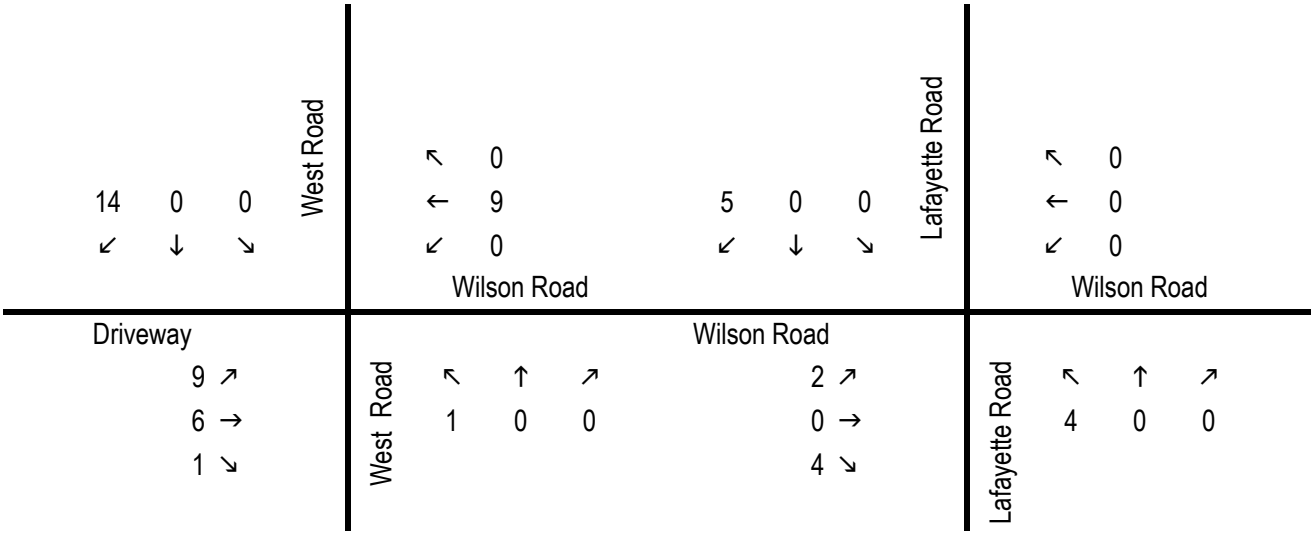
Movement	TRIPS
EBL	7
EBT	1
EBR	18
WBL	0
WBT	0
WBR	0
NBL	10
NBT	0
NBR	0
SBL	0
SBT	0
SBR	12

Site Trip Assignment

AM Peak Hour

Rev1

XX Total Trips

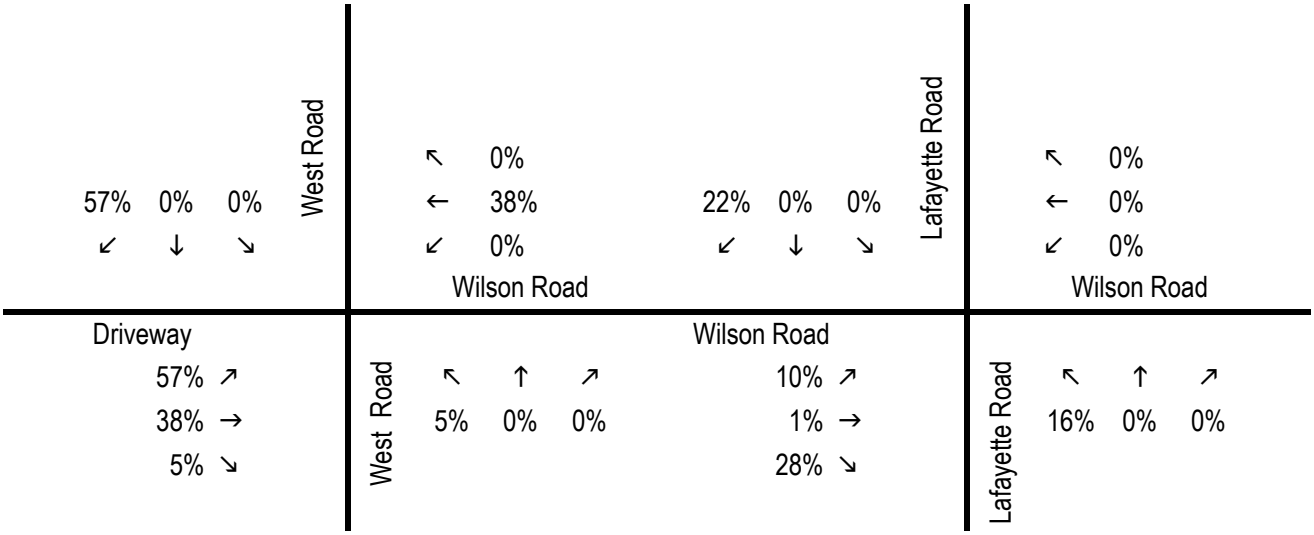


Site Trip Distribution

AM Peak Hour

Rev1

XX Primary

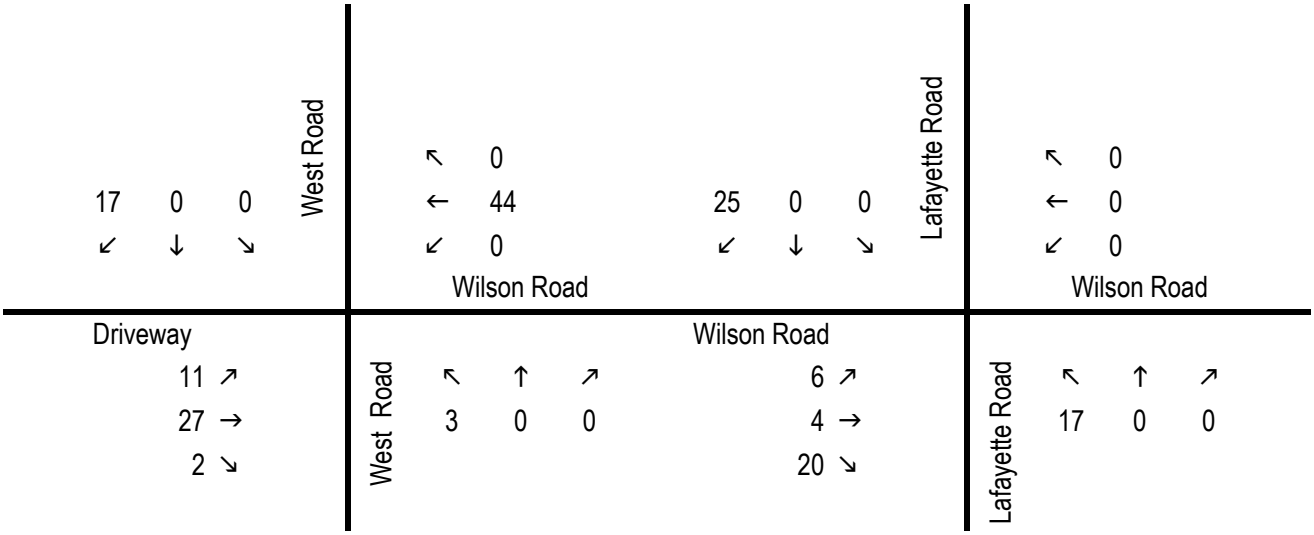


Site Trip Assignment

PM Peak Hour

Rev1

XX Total Trips

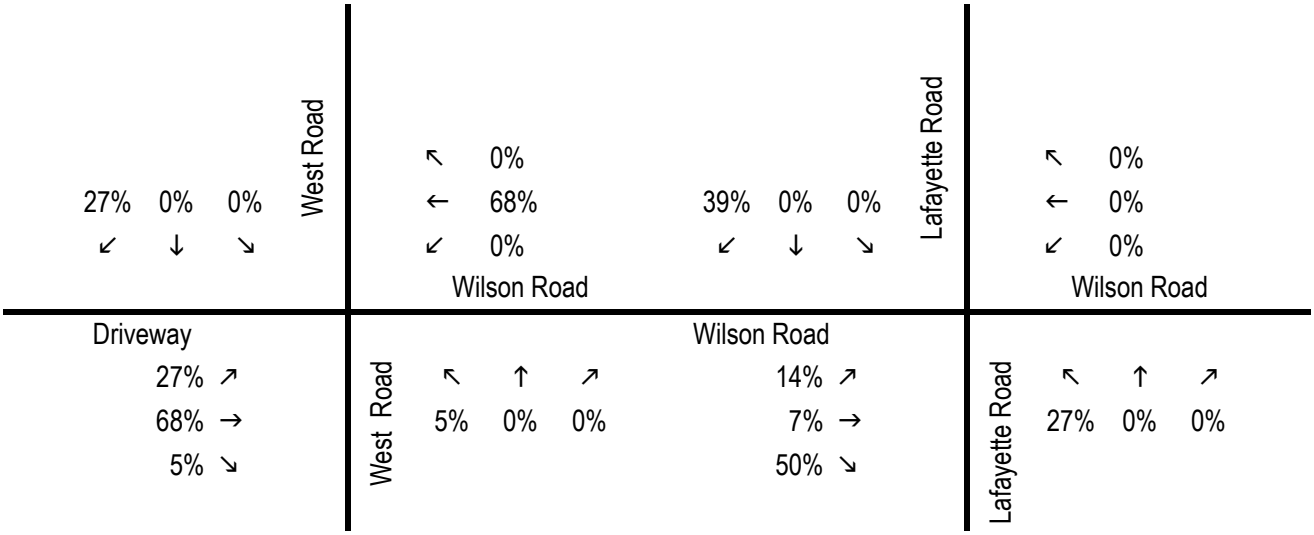


Site Trip Distribution

PM Peak Hour

Rev1

XX Primary

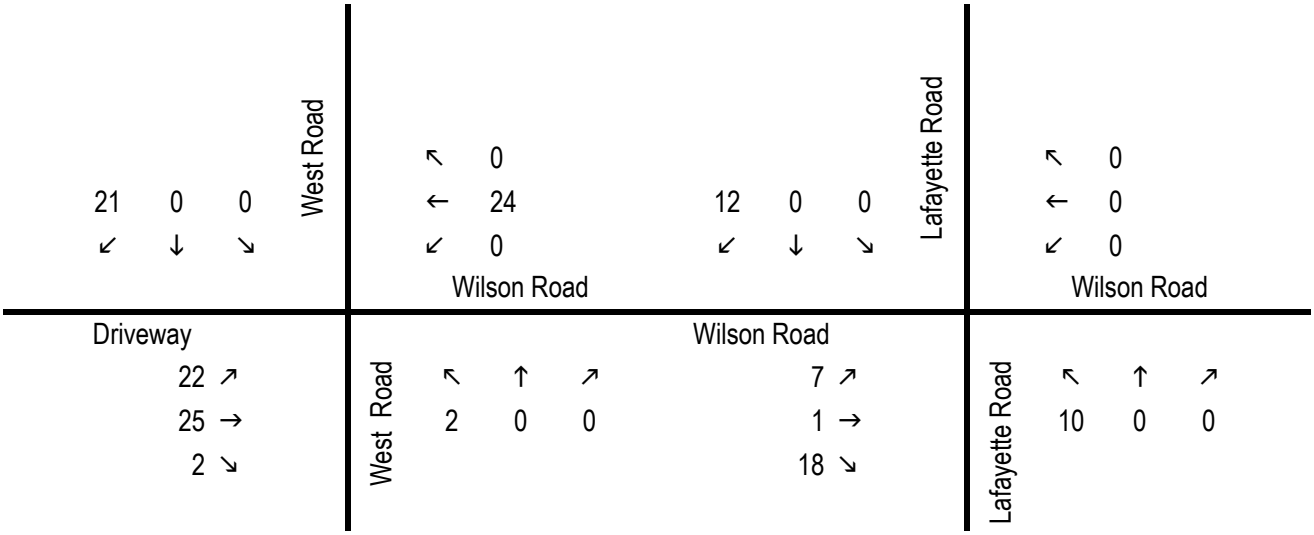


Site Trip Assignment

SAT Peak Hour

Rev1

XX Total Trips

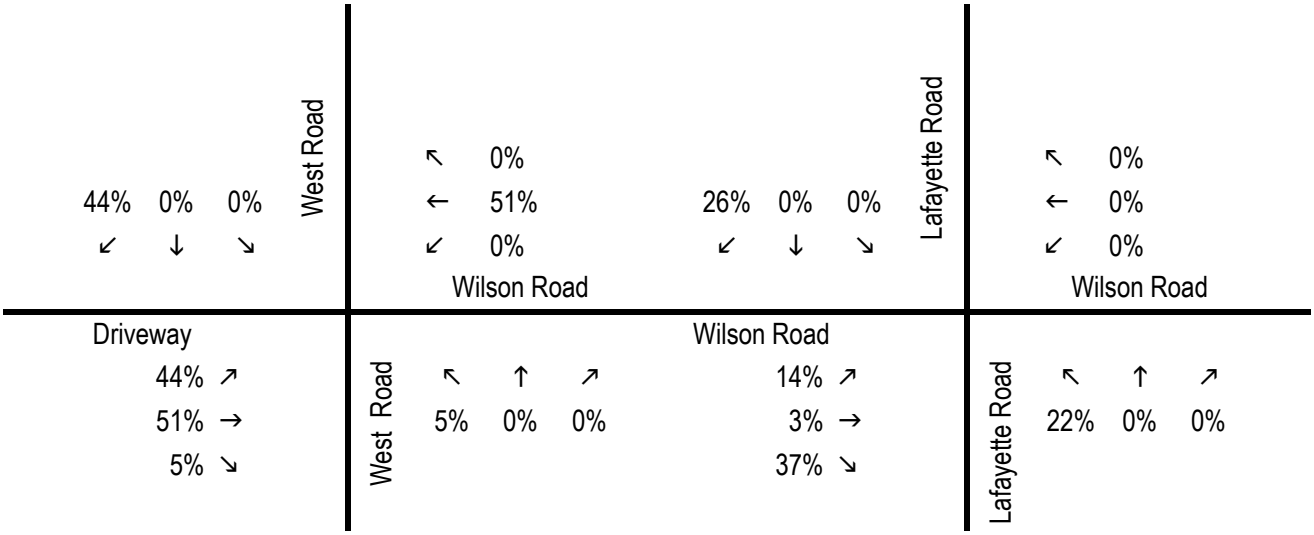


Site Trip Distribution

SAT Peak Hour

Rev1

XX Primary



APPENDIX C

Year 2019 Monthly Data

Group 4 Averages: Urban Highways

Month	ADT	Adjustment to Average	Adjustment to Peak
January	11,431	1.12	1.23
February	11,848	1.08	1.18
March	12,141	1.06	1.15
April	12,860	1.00	1.09
May	13,551	0.95	1.03
June	13,785	0.93	1.02
July	13,942	0.92	1.01
August	14,016	0.92	1.00
September	13,379	0.96	1.05
October	13,339	0.96	1.05
November	12,265	1.05	1.14
December	11,496	1.12	1.22

Average ADT: 12,838
Peak ADT: 14,016

Covid Factor Calculation - NHDOT Methodology

NHDOT currently has a preference on the methodology to be used in determining any required adjustments to traffic counts collected during the pandemic (to compare the month of counts in 2019 and in the pandemic year of the counts). This process is conducted by using the NHDOT MS2 Transportation Data Management System as follows:

1 Select the appropriate permanent count station.
2 Scroll to the "Volume Count" section and select on one of the eyeball icons.
3 A new screen will open and select the "Compare Count" tab at the bottom.
4 A new window will open and scroll to the "Date Range Selection" section and type in or select the Count Date Range. The first day of the month, to the last day of the month should be selected.
5 Since NHDOT prefers that separate pandemic adjustment factors be used for the different time periods, select Monday through Friday for the weekday daily, weekday AM peak hour, and weekday PM peak hour comparisons. A separate analysis would be performed in determining the Saturday daily and Saturday midday peak hour factors.
5 Click the "Add Count" button and the time period and days of the week selected will appear on the graph to the right.
7 For the pre-pandemic volume comparison, go to the "Count Date Range" and select the same month and days but use 2019 as the pre-pandemic base. For this project, the 2019 month (first day to last day) would be used.
8 Click the "Add Count" button and the 2019 data selected will appear on the graph to the right.
9 Go to the top of the screen and select the "Grid" tab.
10 Hourly and daily ("Total") data will then be shown for the time periods selected for comparison. To determine the weekday AM peak hour comparison, review the highest peak hour traffic volumes from the counts between 7-9 AM (weekday PM = 4-6 PM, Saturday midday = 11 AM-1 PM).

Rockingham County - Group 4 Highway Station

02197002	Seabrook	NH 1A (Ocean Boulevard) at Seabrook TL	**JUNE**			
			2022	**2019**	**change**	
		AM	448	466	-3.9%	
		PM	782	854	-8.4%	
		SAT	857	991	-13.5%	
		Weekday	10136	11498	-11.8%	
		Weekend (SAT)	13762	16324	-15.7%	

Rockingham County - Group 4 Highway Station

82197076	Hampton Falls	US 1 (Lafayette Road) south of Road Split to NH 101	**JANUARY**			
			2022	**2019**	**change**	
		AM	1450	1397	3.8%	
		PM	1763	1755	0.5%	
		SAT	1714	1782	-3.8%	
		Weekday	22630	23285	-2.8%	
		Weekend (SAT)	22384	24117	-7.2%	

Strafford County - Group 4 Highway Station

02125001	Dover	Dover Point Road south of Middlebrook Road	**JANUARY**			
			2022	**2019**	**change**	
		AM	698	835	-16.4%	
		PM	1019	1039	-1.9%	
		SAT	854	877	-2.6%	
		Weekday	11641	12691	-8.3%	
		Weekend (SAT)	10416	11186	-6.9%	

	Average	
Covid Adjust	-5.5%	AM
	-3.3%	PM
	-6.6%	SAT
	-7.6%	Weekday
	-9.9%	Weekend (SAT)

Station 02197002: Seabrook

Count 1

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	57	3.6
1:00-2:00	-	-	-	-	43	-8.9
2:00-3:00	-	-	-	-	18	-40.0
3:00-4:00	-	-	-	-	27	11.8
4:00-5:00	-	-	-	-	53	-15.7
5:00-6:00	-	-	-	-	155	-3.2
6:00-7:00	-	-	-	-	275	-8.0
7:00-8:00	-	-	-	-	439	-9.8
8:00-9:00	-	-	-	-	448	-7.5
9:00-10:00	-	-	-	-	497	-15.6
10:00-11:00	-	-	-	-	563	-24.3
11:00-12:00	-	-	-	-	630	-20.8
12:00-13:00	-	-	-	-	681	-17.5
13:00-14:00	-	-	-	-	696	-21.2
14:00-15:00	-	-	-	-	741	-25.4
15:00-16:00	-	-	-	-	771	-23.2
16:00-17:00	-	-	-	-	747	-15.3
17:00-18:00	-	-	-	-	782	-22.7
18:00-19:00	-	-	-	-	684	-25.7
19:00-20:00	-	-	-	-	602	-31.1
20:00-21:00	-	-	-	-	504	-27.5
21:00-22:00	-	-	-	-	337	-14.6
22:00-23:00	-	-	-	-	234	-5.0
23:00-24:00	-	-	-	-	152	-35.7
Total			Counts = 11		10136	-20.1

Count Criteria

Local Id	02197002
Start Date	06/01/2022
End Date	06/30/2022
Aggregation	AVG
Include Abnormal	False
Selected Days	Monday Tuesday Wednesday Thursday Friday

Count 2

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	77	33.3
1:00-2:00	-	-	-	-	48	2.1
2:00-3:00	-	-	-	-	22	-20.4
3:00-4:00	-	-	-	-	29	18.9
4:00-5:00	-	-	-	-	67	7.8
5:00-6:00	-	-	-	-	166	3.7
6:00-7:00	-	-	-	-	278	-6.9
7:00-8:00	-	-	-	-	449	-7.5
8:00-9:00	-	-	-	-	466	-3.6
9:00-10:00	-	-	-	-	548	-5.8
10:00-11:00	-	-	-	-	653	-9.6
11:00-12:00	-	-	-	-	719	-7.6
12:00-13:00	-	-	-	-	785	-3.4
13:00-14:00	-	-	-	-	796	-7.8
14:00-15:00	-	-	-	-	832	-14.0
15:00-16:00	-	-	-	-	838	-14.9
16:00-17:00	-	-	-	-	838	-3.9
17:00-18:00	-	-	-	-	854	-13.9
18:00-19:00	-	-	-	-	758	-15.6
19:00-20:00	-	-	-	-	702	-16.0
20:00-21:00	-	-	-	-	601	-10.1
21:00-22:00	-	-	-	-	455	15.4
22:00-23:00	-	-	-	-	330	29.2
23:00-24:00	-	-	-	-	187	-15.3
Total			Counts = 20		11498	-7.6

Count Criteria

Local Id	02197002
Start Date	06/01/2019
End Date	06/30/2019
Aggregation	AVG
Include Abnormal	False
Selected Days	Monday Tuesday Wednesday Thursday Friday

Count 1

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	195	112.0
1:00-2:00	-	-	-	-	136	97.3
2:00-3:00	-	-	-	-	48	56.0
3:00-4:00	-	-	-	-	26	8.0
4:00-5:00	-	-	-	-	48	-25.5
5:00-6:00	-	-	-	-	152	-5.1
6:00-7:00	-	-	-	-	237	-22.8
7:00-8:00	-	-	-	-	381	-23.8
8:00-9:00	-	-	-	-	461	-4.7
9:00-10:00	-	-	-	-	569	-2.1
10:00-11:00	-	-	-	-	724	0.7
11:00-12:00	-	-	-	-	785	1.2
12:00-13:00	-	-	-	-	857	5.4
13:00-14:00	-	-	-	-	874	1.5
14:00-15:00	-	-	-	-	992	3.6
15:00-16:00	-	-	-	-	1057	8.3
16:00-17:00	-	-	-	-	1030	16.7
17:00-18:00	-	-	-	-	994	1.2
18:00-19:00	-	-	-	-	978	9.9
19:00-20:00	-	-	-	-	878	6.3
20:00-21:00	-	-	-	-	781	16.0
21:00-22:00	-	-	-	-	662	51.7
22:00-23:00	-	-	-	-	524	72.2
23:00-24:00	-	-	-	-	373	52.5
Total			Counts = 2		13762	10.4

Count Criteria

Local Id	02197002
Start Date	06/01/2022
End Date	06/30/2022
Aggregation	AVG
Include Abnormal	False
Selected Days	Saturday

Count 2

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	280	134.3
1:00-2:00	-	-	-	-	220	129.6
2:00-3:00	-	-	-	-	55	68.3
3:00-4:00	-	-	-	-	32	28.6
4:00-5:00	-	-	-	-	61	-1.6
5:00-6:00	-	-	-	-	145	-9.8
6:00-7:00	-	-	-	-	284	-4.8
7:00-8:00	-	-	-	-	450	-7.3
8:00-9:00	-	-	-	-	615	24.0
9:00-10:00	-	-	-	-	779	29.1
10:00-11:00	-	-	-	-	894	21.7
11:00-12:00	-	-	-	-	968	22.0
12:00-13:00	-	-	-	-	991	19.9
13:00-14:00	-	-	-	-	1011	16.6
14:00-15:00	-	-	-	-	1094	13.4
15:00-16:00	-	-	-	-	1124	14.4
16:00-17:00	-	-	-	-	1112	24.3
17:00-18:00	-	-	-	-	1153	16.0
18:00-19:00	-	-	-	-	1103	21.8
19:00-20:00	-	-	-	-	1022	21.5
20:00-21:00	-	-	-	-	915	31.6
21:00-22:00	-	-	-	-	787	67.5
22:00-23:00	-	-	-	-	717	97.8
23:00-24:00	-	-	-	-	512	80.5
Total			Counts = 5		16324	27.3

Count Criteria

Local Id	02197002
Start Date	06/01/2019
End Date	06/30/2019
Aggregation	AVG
Include Abnormal	False
Selected Days	Saturday

Station 82197076: Hampton Falls

Count 1

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	78	-8.6
1:00-2:00	-	-	-	-	50	-2.0
2:00-3:00	-	-	-	-	41	5.0
3:00-4:00	-	-	-	-	62	-16.3
4:00-5:00	-	-	-	-	167	-6.9
5:00-6:00	-	-	-	-	531	-10.5
6:00-7:00	-	-	-	-	867	0.8
7:00-8:00	-	-	-	-	1450	-2.7
8:00-9:00	-	-	-	-	1374	-1.0
9:00-10:00	-	-	-	-	1244	-5.7
10:00-11:00	-	-	-	-	1343	-6.1
11:00-12:00	-	-	-	-	1463	-4.5
12:00-13:00	-	-	-	-	1505	-2.4
13:00-14:00	-	-	-	-	1506	-0.2
14:00-15:00	-	-	-	-	1663	5.7
15:00-16:00	-	-	-	-	1702	0.4
16:00-17:00	-	-	-	-	1763	-1.4
17:00-18:00	-	-	-	-	1694	-2.2
18:00-19:00	-	-	-	-	1333	-2.3
19:00-20:00	-	-	-	-	1003	-6.0
20:00-21:00	-	-	-	-	776	0.4
21:00-22:00	-	-	-	-	512	-0.8
22:00-23:00	-	-	-	-	328	-11.5
23:00-24:00	-	-	-	-	175	4.7
Total			Counts = 11		22630	-2.1

Count Criteria

Local Id	82197076
Start Date	06/01/2022
End Date	06/30/2022
Aggregation	AVG
Include Abnormal	False
Selected Days	Monday Tuesday Wednesday Thursday Friday

Count 2

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	104	20.1
1:00-2:00	-	-	-	-	55	7.5
2:00-3:00	-	-	-	-	41	5.0
3:00-4:00	-	-	-	-	59	-21.2
4:00-5:00	-	-	-	-	181	1.1
5:00-6:00	-	-	-	-	572	-3.1
6:00-7:00	-	-	-	-	1001	15.2
7:00-8:00	-	-	-	-	1342	-10.5
8:00-9:00	-	-	-	-	1397	0.6
9:00-10:00	-	-	-	-	1293	-1.8
10:00-11:00	-	-	-	-	1380	-3.3
11:00-12:00	-	-	-	-	1478	-3.5
12:00-13:00	-	-	-	-	1519	-1.4
13:00-14:00	-	-	-	-	1532	1.5
14:00-15:00	-	-	-	-	1616	2.8
15:00-16:00	-	-	-	-	1675	-1.2
16:00-17:00	-	-	-	-	1748	-2.3
17:00-18:00	-	-	-	-	1755	1.3
18:00-19:00	-	-	-	-	1416	3.7
19:00-20:00	-	-	-	-	1085	1.9
20:00-21:00	-	-	-	-	845	8.9
21:00-22:00	-	-	-	-	602	15.4
22:00-23:00	-	-	-	-	376	2.2
23:00-24:00	-	-	-	-	213	24.2
Total			Counts = 20		23285	0.7

Count Criteria

Local Id	82197076
Start Date	06/01/2019
End Date	06/30/2019
Aggregation	AVG
Include Abnormal	False
Selected Days	Monday Tuesday Wednesday Thursday Friday

Count 1

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	156	58.9
1:00-2:00	-	-	-	-	97	62.2
2:00-3:00	-	-	-	-	45	14.3
3:00-4:00	-	-	-	-	44	-49.6
4:00-5:00	-	-	-	-	102	-54.8
5:00-6:00	-	-	-	-	232	-87.1
6:00-7:00	-	-	-	-	434	-65.8
7:00-8:00	-	-	-	-	774	-63.3
8:00-9:00	-	-	-	-	1116	-21.7
9:00-10:00	-	-	-	-	1377	4.5
10:00-11:00	-	-	-	-	1619	12.6
11:00-12:00	-	-	-	-	1714	11.3
12:00-13:00	-	-	-	-	1695	9.5
13:00-14:00	-	-	-	-	1715	12.8
14:00-15:00	-	-	-	-	1676	6.5
15:00-16:00	-	-	-	-	1652	-2.6
16:00-17:00	-	-	-	-	1609	-10.5
17:00-18:00	-	-	-	-	1513	-13.5
18:00-19:00	-	-	-	-	1321	-3.2
19:00-20:00	-	-	-	-	1105	3.7
20:00-21:00	-	-	-	-	921	17.5
21:00-22:00	-	-	-	-	731	34.5
22:00-23:00	-	-	-	-	482	26.8
23:00-24:00	-	-	-	-	254	41.3
Total			Counts = 2		22384	-3.2

Count Criteria

Local Id	82197076
Start Date	06/01/2022
End Date	06/30/2022
Aggregation	AVG
Include Abnormal	False
Selected Days	Saturday

Count 2

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	190	76.4
1:00-2:00	-	-	-	-	125	84.1
2:00-3:00	-	-	-	-	74	61.9
3:00-4:00	-	-	-	-	57	-24.6
4:00-5:00	-	-	-	-	90	-66.2
5:00-6:00	-	-	-	-	238	-85.0
6:00-7:00	-	-	-	-	453	-62.0
7:00-8:00	-	-	-	-	785	-62.0
8:00-9:00	-	-	-	-	1159	-18.0
9:00-10:00	-	-	-	-	1488	12.2
10:00-11:00	-	-	-	-	1694	17.1
11:00-12:00	-	-	-	-	1770	14.5
12:00-13:00	-	-	-	-	1782	14.5
13:00-14:00	-	-	-	-	1716	12.8
14:00-15:00	-	-	-	-	1759	11.3
15:00-16:00	-	-	-	-	1752	3.2
16:00-17:00	-	-	-	-	1748	-2.3
17:00-18:00	-	-	-	-	1681	-3.0
18:00-19:00	-	-	-	-	1518	10.7
19:00-20:00	-	-	-	-	1254	16.3
20:00-21:00	-	-	-	-	1043	29.7
21:00-22:00	-	-	-	-	830	46.7
22:00-23:00	-	-	-	-	566	42.4
23:00-24:00	-	-	-	-	345	69.5
Total			Counts = 5		24117	4.2

Count Criteria

Local Id	82197076
Start Date	06/01/2019
End Date	06/30/2019
Aggregation	AVG
Include Abnormal	False
Selected Days	Saturday

Station 02125001: Dover

Count 1

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	62	-7.8
1:00-2:00	-	-	-	-	34	12.5
2:00-3:00	-	-	-	-	24	-22.2
3:00-4:00	-	-	-	-	34	9.2
4:00-5:00	-	-	-	-	92	2.2
5:00-6:00	-	-	-	-	230	-11.5
6:00-7:00	-	-	-	-	441	0.2
7:00-8:00	-	-	-	-	698	4.2
8:00-9:00	-	-	-	-	688	-2.6
9:00-10:00	-	-	-	-	589	-4.0
10:00-11:00	-	-	-	-	612	-3.4
11:00-12:00	-	-	-	-	671	-0.1
12:00-13:00	-	-	-	-	756	0.3
13:00-14:00	-	-	-	-	750	-3.3
14:00-15:00	-	-	-	-	860	5.5
15:00-16:00	-	-	-	-	986	-1.6
16:00-17:00	-	-	-	-	1019	2.4
17:00-18:00	-	-	-	-	1009	-2.0
18:00-19:00	-	-	-	-	667	-3.1
19:00-20:00	-	-	-	-	491	-5.7
20:00-21:00	-	-	-	-	375	-4.2
21:00-22:00	-	-	-	-	254	-7.6
22:00-23:00	-	-	-	-	179	10.0
23:00-24:00	-	-	-	-	120	0.0
Total			Counts = 11		11641	-1.0

Count Criteria

Local Id	02125001
Start Date	06/01/2022
End Date	06/30/2022
Aggregation	AVG
Include Abnormal	False
Selected Days	Monday Tuesday Wednesday Thursday Friday

Count 2

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	88	27.1
1:00-2:00	-	-	-	-	35	15.4
2:00-3:00	-	-	-	-	24	-22.2
3:00-4:00	-	-	-	-	30	-3.3
4:00-5:00	-	-	-	-	85	-5.7
5:00-6:00	-	-	-	-	241	-6.8
6:00-7:00	-	-	-	-	506	14.0
7:00-8:00	-	-	-	-	835	22.1
8:00-9:00	-	-	-	-	782	10.2
9:00-10:00	-	-	-	-	659	7.2
10:00-11:00	-	-	-	-	678	6.9
11:00-12:00	-	-	-	-	732	8.5
12:00-13:00	-	-	-	-	789	4.5
13:00-14:00	-	-	-	-	792	2.2
14:00-15:00	-	-	-	-	910	11.1
15:00-16:00	-	-	-	-	1017	1.5
16:00-17:00	-	-	-	-	1012	1.7
17:00-18:00	-	-	-	-	1039	1.0
18:00-19:00	-	-	-	-	717	4.1
19:00-20:00	-	-	-	-	584	11.6
20:00-21:00	-	-	-	-	450	14.0
21:00-22:00	-	-	-	-	338	20.9
22:00-23:00	-	-	-	-	210	25.8
23:00-24:00	-	-	-	-	138	14.0
Total			Counts = 20		12691	7.6

Count Criteria

Local Id	02125001
Start Date	06/01/2019
End Date	06/30/2019
Aggregation	AVG
Include Abnormal	False
Selected Days	Monday Tuesday Wednesday Thursday Friday

Count 1

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	89	28.2
1:00-2:00	-	-	-	-	51	51.9
2:00-3:00	-	-	-	-	27	-10.5
3:00-4:00	-	-	-	-	24	-25.5
4:00-5:00	-	-	-	-	41	-74.8
5:00-6:00	-	-	-	-	99	-89.1
6:00-7:00	-	-	-	-	189	-79.8
7:00-8:00	-	-	-	-	302	-75.6
8:00-9:00	-	-	-	-	443	-45.8
9:00-10:00	-	-	-	-	623	1.6
10:00-11:00	-	-	-	-	732	14.5
11:00-12:00	-	-	-	-	780	14.9
12:00-13:00	-	-	-	-	854	12.4
13:00-14:00	-	-	-	-	787	1.5
14:00-15:00	-	-	-	-	867	6.3
15:00-16:00	-	-	-	-	823	-19.6
16:00-17:00	-	-	-	-	755	-27.4
17:00-18:00	-	-	-	-	763	-29.7
18:00-19:00	-	-	-	-	592	-15.0
19:00-20:00	-	-	-	-	512	-1.6
20:00-21:00	-	-	-	-	402	2.8
21:00-22:00	-	-	-	-	325	17.0
22:00-23:00	-	-	-	-	197	19.5
23:00-24:00	-	-	-	-	139	14.7
Total			Counts = 2		10416	-12.1

Count Criteria

Local Id	02125001
Start Date	06/01/2022
End Date	06/30/2022
Aggregation	AVG
Include Abnormal	False
Selected Days	Saturday

Count 2

N/A For Aggregated Counts

INTERVAL:60-MIN

Time	60-min Interval 1st	2nd	3rd	4th	Hourly Count	% Diff
0:00-1:00	-	-	-	-	135	67.3
1:00-2:00	-	-	-	-	61	68.1
2:00-3:00	-	-	-	-	40	28.6
3:00-4:00	-	-	-	-	30	-3.3
4:00-5:00	-	-	-	-	43	-70.7
5:00-6:00	-	-	-	-	95	-92.4
6:00-7:00	-	-	-	-	205	-72.9
7:00-8:00	-	-	-	-	366	-58.6
8:00-9:00	-	-	-	-	534	-27.7
9:00-10:00	-	-	-	-	676	9.8
10:00-11:00	-	-	-	-	769	19.4
11:00-12:00	-	-	-	-	813	19.0
12:00-13:00	-	-	-	-	877	15.1
13:00-14:00	-	-	-	-	837	7.7
14:00-15:00	-	-	-	-	865	6.1
15:00-16:00	-	-	-	-	849	-16.5
16:00-17:00	-	-	-	-	791	-22.8
17:00-18:00	-	-	-	-	764	-29.6
18:00-19:00	-	-	-	-	647	-6.1
19:00-20:00	-	-	-	-	536	3.0
20:00-21:00	-	-	-	-	448	13.6
21:00-22:00	-	-	-	-	370	29.8
22:00-23:00	-	-	-	-	261	46.8
23:00-24:00	-	-	-	-	174	36.7
Total			Counts = 5		11186	-5.0

Count Criteria

Local Id	02125001
Start Date	06/01/2019
End Date	06/30/2019
Aggregation	AVG
Include Abnormal	False
Selected Days	Saturday

APPENDIX D

AM Site Trip Distribution

Trips Based on Pernaw Report,
Distribution ProRata per Counts

Primary: AM Distribution

	In	Out
AM Totals	27	27

West Road at Driveway/Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL			0	0
EBT			0	0
EBR			0	0
WBL	3%		1	0
WBT			0	0
WBR	4%		1	0
NBL			0	0
NBT			0	0
NBR		3%	0	1
SBL		4%	0	1
SBT			0	0
SBR			0	0

Lafayette Road at Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL			0	0
EBT			0	0
EBR		**7%**	0	2
WBL		**2%**	0	1
WBT			0	0
WBR			0	0
NBL	**7%**		2	0
NBT	**93%**		25	0
NBR	**0%**		0	0
SBL			0	0
SBT		**91%**	0	25
SBR			0	0

PM Site Trip Distribution

Trips Based on Pernaw Report,
Distribution ProRata per Counts

Primary: PM Distribution

	In	Out
PM Totals	24	23

West Road at Driveway/Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL			0	0
EBT			0	0
EBR			0	0
WBL	2%		0	0
WBT			0	0
WBR	9%		2	0
NBL			0	0
NBT			0	0
NBR		6%	0	1
SBL		8%	0	2
SBT			0	0
SBR			0	0

Lafayette Road at Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL			0	0
EBT			0	0
EBR		**14%**	0	3
WBL		**1%**	0	0
WBT			0	0
WBR			0	0
NBL	**10%**		2	0
NBT	**89%**		21	0
NBR	**0%**		0	0
SBL			0	0
SBT		**85%**	0	20
SBR			0	0

SAT Site Trip Distribution

Trips Based on Pernaw Report,
Distribution ProRata per Counts

Primary: SAT Distribution

	In	Out
SAT Totals	28	24

West Road at Driveway/Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL			0	0
EBT			0	0
EBR			0	0
WBL	1%		0	0
WBT			0	0
WBR	10%		3	0
NBL			0	0
NBT			0	0
NBR		1%	0	0
SBL		11%	0	3
SBT			0	0
SBR			0	0

Lafayette Road at Wilson Road

	PERCENTAGES		TRIPS	
Movement	In	Out	In	Out
EBL			0	0
EBT			0	0
EBR		**12%**	0	3
WBL		**1%**	0	0
WBT			0	0
WBR			0	0
NBL	**10%**		3	0
NBT	**90%**		25	0
NBR	**0%**		0	0
SBL			0	0
SBT		**87%**	0	21
SBR			0	0

TOTAL Site Trip Distribution

AM Total Site Trips

AM TOTAL: 54

West Road at Driveway/Wilson Road

Movement	TRIPS
EBL	0
EBT	0
EBR	0
WBL	1
WBT	0
WBR	1
NBL	0
NBT	0
NBR	1
SBL	1
SBT	0
SBR	0

Lafayette Road at Wilson Road

Movement	TRIPS
EBL	0
EBT	0
EBR	2
WBL	1
WBT	0
WBR	0
NBL	2
NBT	25
NBR	0
SBL	0
SBT	25
SBR	0

PM Total Site Trips

PM TOTAL: 47

West Road at Driveway/Wilson Road

Movement	TRIPS
EBL	0
EBT	0
EBR	0
WBL	0
WBT	0
WBR	2
NBL	0
NBT	0
NBR	1
SBL	2
SBT	0
SBR	0

Lafayette Road at Wilson Road

Movement	TRIPS
EBL	0
EBT	0
EBR	3
WBL	0
WBT	0
WBR	0
NBL	2
NBT	21
NBR	0
SBL	0
SBT	20
SBR	0

SAT Total Site Trips

SAT TOTAL: 52

West Road at Driveway/Wilson Road

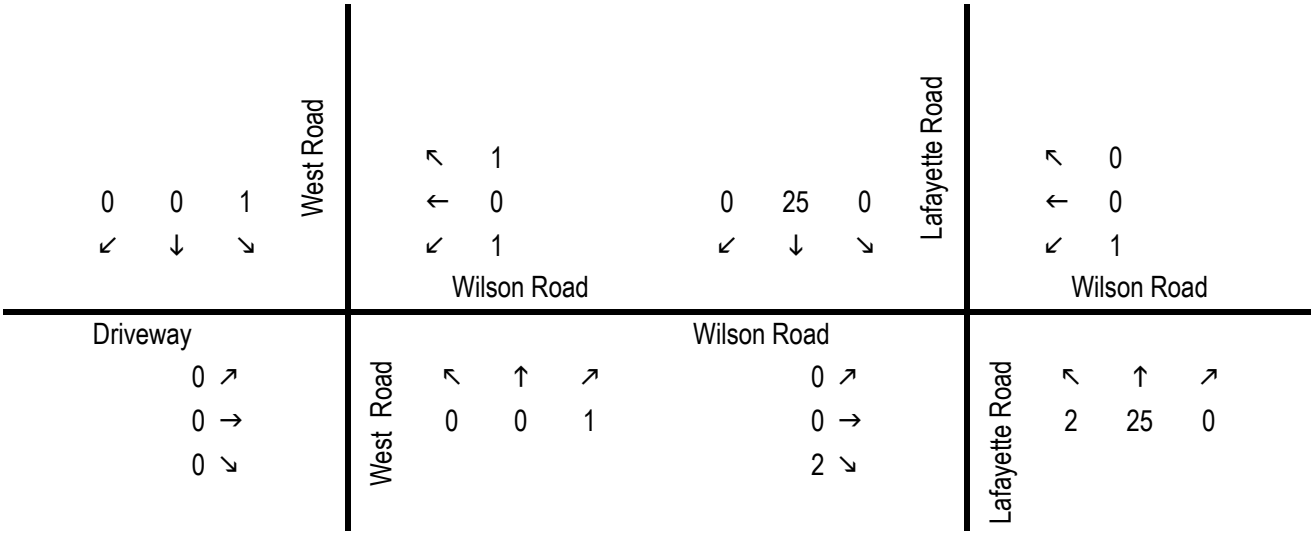
Movement	TRIPS
EBL	0
EBT	0
EBR	0
WBL	0
WBT	0
WBR	3
NBL	0
NBT	0
NBR	0
SBL	3
SBT	0
SBR	0

Lafayette Road at Wilson Road

Movement	TRIPS
EBL	0
EBT	0
EBR	3
WBL	0
WBT	0
WBR	0
NBL	3
NBT	25
NBR	0
SBL	0
SBT	21
SBR	0

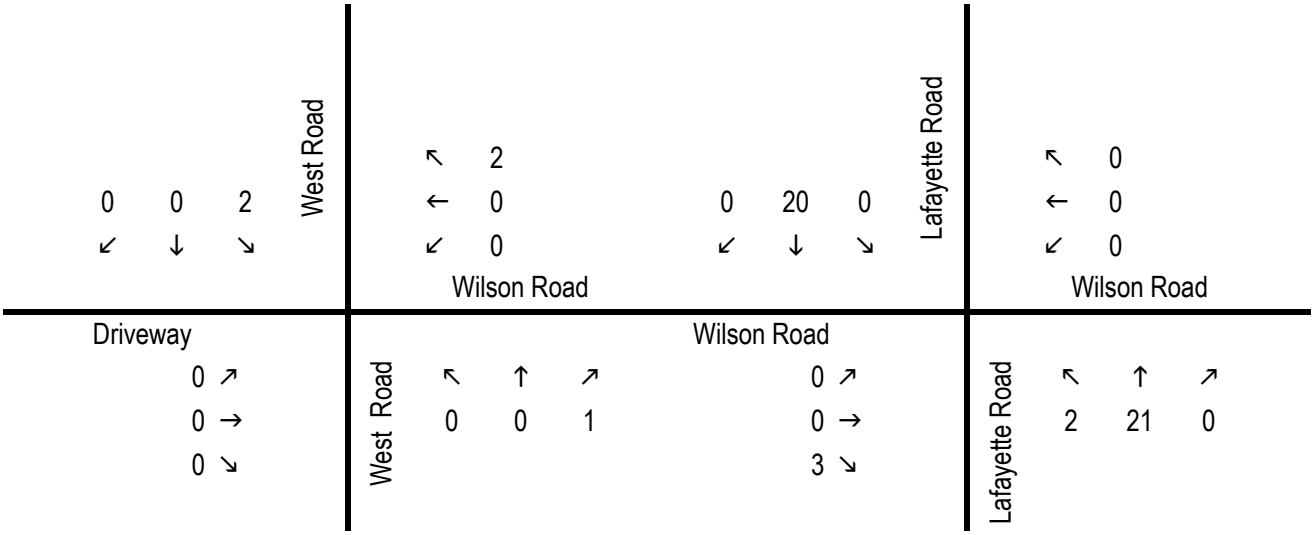
OTHER DEVELOPMENTS
Site Trips
AM Peak Hour

XX Other Development - Gas Station Trips



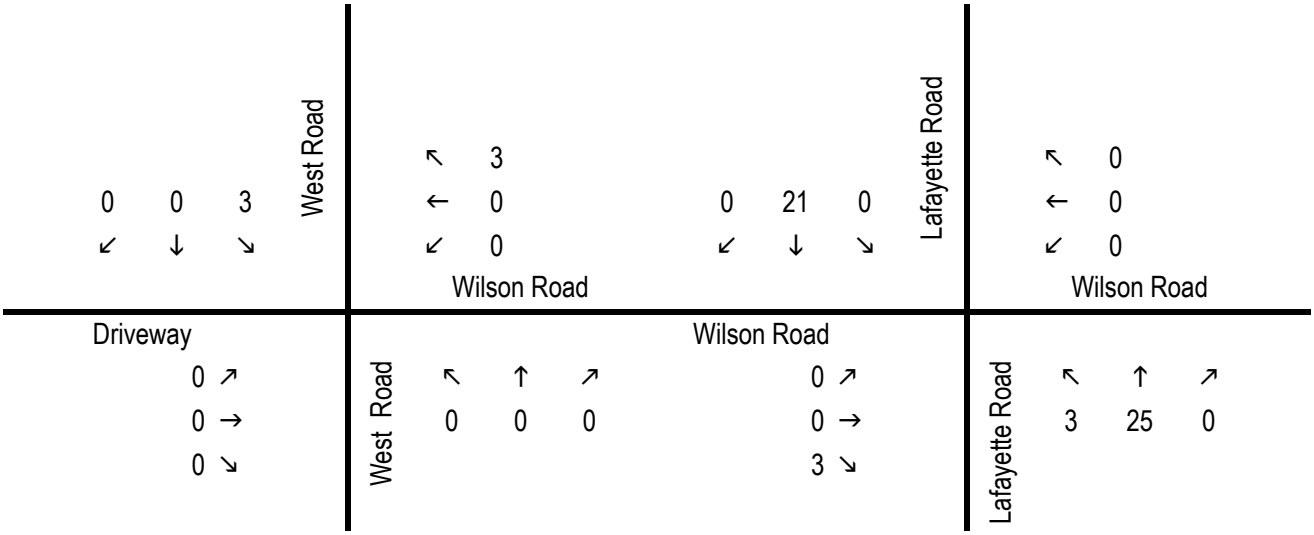
OTHER DEVELOPMENTS
Site Trips
PM Peak Hour

XX Other Development - Gas Station Trips



OTHER DEVELOPMENTS
Site Trips
SAT Peak Hour

XX Other Development - Gas Station Trips



APPENDIX E

Background Traffic Volumes
AM Peak data

Assumed growth rate	**0.01**	
June 2019 Seasonal Adjust	**1.02**	NHDOT monthly adjustment factors - Group 4
Covid/Stay-home factor	**1.055**	

AM Peak Hour	Existing 2022 (Raw data) [06/23/2022]	Existing 2022 w/ Seasonal Adjustment	Covid/Stay Home Adjustment	2022 BASE	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	AM PHF	% Heavy	Counted Heavy
West Road at Driveway/Wilson Road	**7:45 AM**																	
Movement																		
EBL	0	*0*	1.055	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
EBT	0	*0*	1.055	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	0.00	#DIV/0!	0
EBR	0	*0*	1.055	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
WBL	22	22	1.055	23.21	23.44	23.67	23.91	24.15	24.39	24.63	24.88	25.13	25.38	25.63	25.89		9%	2
WBT	0	*0*	1.055	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	0.88	#DIV/0!	0
WBR	31	32	1.055	33.76	34.10	34.44	34.78	35.13	35.48	35.83	36.19	36.55	36.92	37.29	37.66		6%	2
NBL	0	*0*	1.055	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
NBT	100	102	1.055	107.61	108.69	109.78	110.88	111.99	113.11	114.24	115.38	116.53	117.70	118.88	120.07	0.89	11%	11
NBR	14	14	1.055	14.77	14.92	15.07	15.22	15.37	15.52	15.68	15.84	16.00	16.16	16.32	16.48		21%	3
SBL	19	19	1.055	20.05	20.25	20.45	20.65	20.86	21.07	21.28	21.49	21.70	21.92	22.14	22.36		5%	1
SBT	204	208	1.055	219.44	221.63	223.85	226.09	228.35	230.63	232.94	235.27	237.62	240.00	242.40	244.82	0.77	6%	12
SBR	2	*2*	1.055	*2.11*	*2.11*	*2.11*	*2.11*	*2.11*	*2.11*	*2.11*	*2.11*	*2.11*	*2.11*	*2.11*	*2.11*		0%	0
Lafayette Road at Wilson Road	**8:00 AM**																	
Movement																		
EBL	20	20	1.055	21.10	21.31	21.52	21.74	21.96	22.18	22.40	22.62	22.85	23.08	23.31	23.54		15%	3
EBT	0	0	1.055	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	#DIV/0!	0
EBR	52	53	1.055	55.92	56.48	57.04	57.61	58.19	58.77	59.36	59.95	60.55	61.16	61.77	62.39		6%	3
WBL	12	12	1.055	12.66	12.79	12.92	13.05	13.18	13.31	13.44	13.57	13.71	13.85	13.99	14.13		0%	0
WBT	3	3	1.055	3.17	3.20	3.23	3.26	3.29	3.32	3.35	3.38	3.41	3.44	3.47	3.50	0.70	0%	0
WBR	13	13	1.055	13.72	13.86	14.00	14.14	14.28	14.42	14.56	14.71	14.86	15.01	15.16	15.31		0%	0
NBL	52	53	1.055	55.92	56.48	57.04	57.61	58.19	58.77	59.36	59.95	60.55	61.16	61.77	62.39		12%	6
NBT	647	660	1.055	696.30	703.26	710.29	717.39	724.56	731.81	739.13	746.52	753.99	761.53	769.15	776.84	0.94	6%	38
NBR	1	1	1.055	1.06	1.07	1.08	1.09	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17		0%	0
SBL	1	1	1.055	1.06	1.07	1.08	1.09	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17		0%	0
SBT	640	653	1.055	688.92	695.81	702.77	709.80	716.90	724.07	731.31	738.62	746.01	753.47	761.00	768.61	0.89	6%	39
SBR	73	74	1.055	78.07	78.85	79.64	80.44	81.24	82.05	82.87	83.70	84.54	85.39	86.24	87.10		4%	3

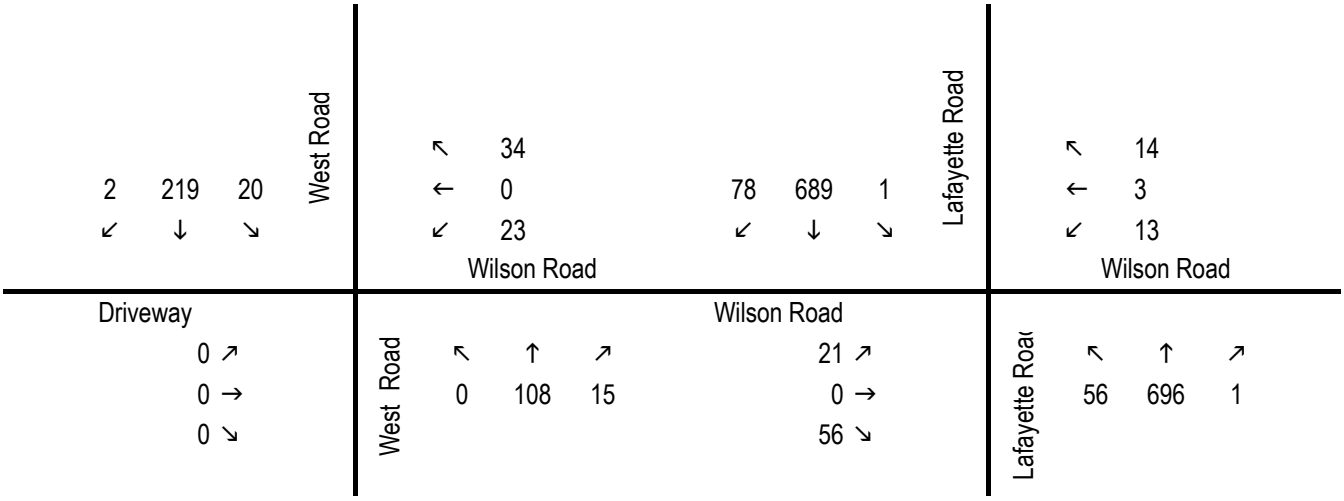
AM Peak Hour	2022 Base	2023	Other Development	2023 No-Build	Site Trip Distribution	2023 Build
West Road at Driveway/Wilson Road						
Movement						
EBL	0	0	0	0	9	9
EBT	0	0	0	0	6	6
EBR	0	0	0	0	1	1
WBL	23	23	1	24	0	24
WBT	0	0	0	0	9	9
WBR	34	34	1	35	0	35
NBL	0	0	0	0	1	1
NBT	108	109	0	109	0	109
NBR	15	15	1	16	0	16
SBL	20	20	1	21	0	21
SBT	219	222	0	222	0	222
SBR	2	2	0	2	14	16
Lafayette Road at Wilson Road						
Movement						
EBL	21	21	0	21	2	23
EBT	0	0	0	0	0	0
EBR	56	56	2	58	4	62
WBL	13	13	1	14	0	14
WBT	3	3	0	3	0	3
WBR	14	14	0	14	0	14
NBL	56	56	2	58	4	62
NBT	696	703	25	728	0	728
NBR	1	1	0	1	0	1
SBL	1	1	0	1	0	1
SBT	689	696	25	721	0	721
SBR	78	79	0	79	5	84

AM Peak Hour	2033	Other Development	2033 No-Build	Site Trip Distribution	2033 Build
West Road at Driveway/Wilson Road					
Movement					
EBL	0	0	0	9	9
EBT	0	0	0	6	6
EBR	0	0	0	1	1
WBL	26	1	27	0	27
WBT	0	0	0	9	9
WBR	38	1	39	0	39
NBL	0	0	0	1	1
NBT	120	0	120	0	120
NBR	16	1	17	0	17
SBL	22	1	23	0	23
SBT	245	0	245	0	245
SBR	2	0	2	14	16
Lafayette Road at Wilson Road					
Movement					
EBL	24	0	24	2	26
EBT	0	0	0	0	0
EBR	62	2	64	4	68
WBL	14	1	15	0	15
WBT	4	0	4	0	4
WBR	15	0	15	0	15
NBL	62	2	64	4	68
NBT	777	25	802	0	802
NBR	1	0	1	0	1
SBL	1	0	1	0	1
SBT	769	25	794	0	794
SBR	87	0	87	5	92

2022 BASE

AM Peak Hour

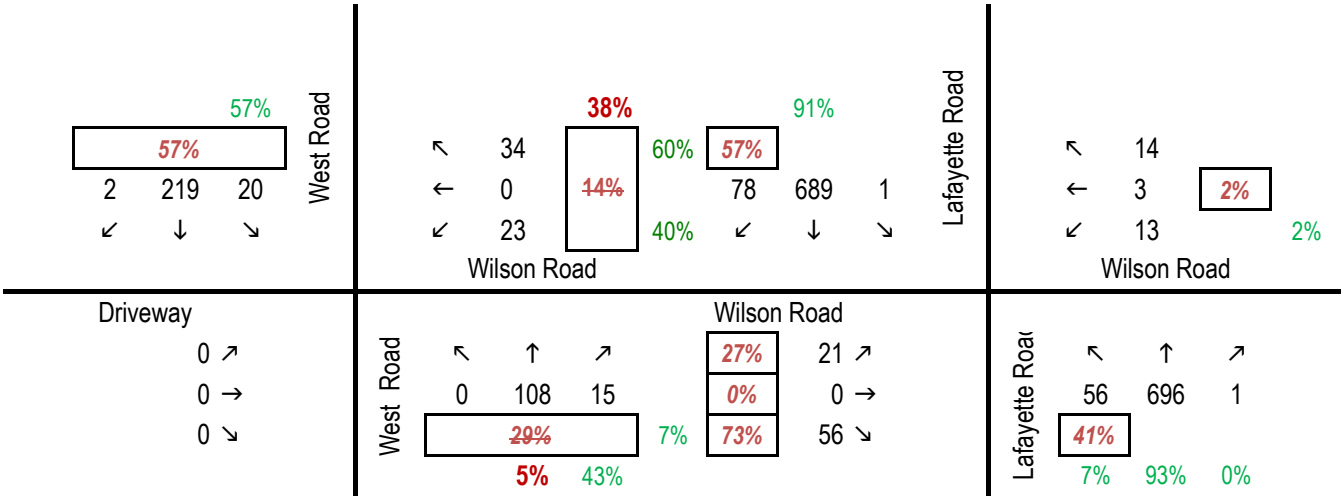
XX VOLUME



2022 BASE PRORATA
AM Peak Hour

Rev1

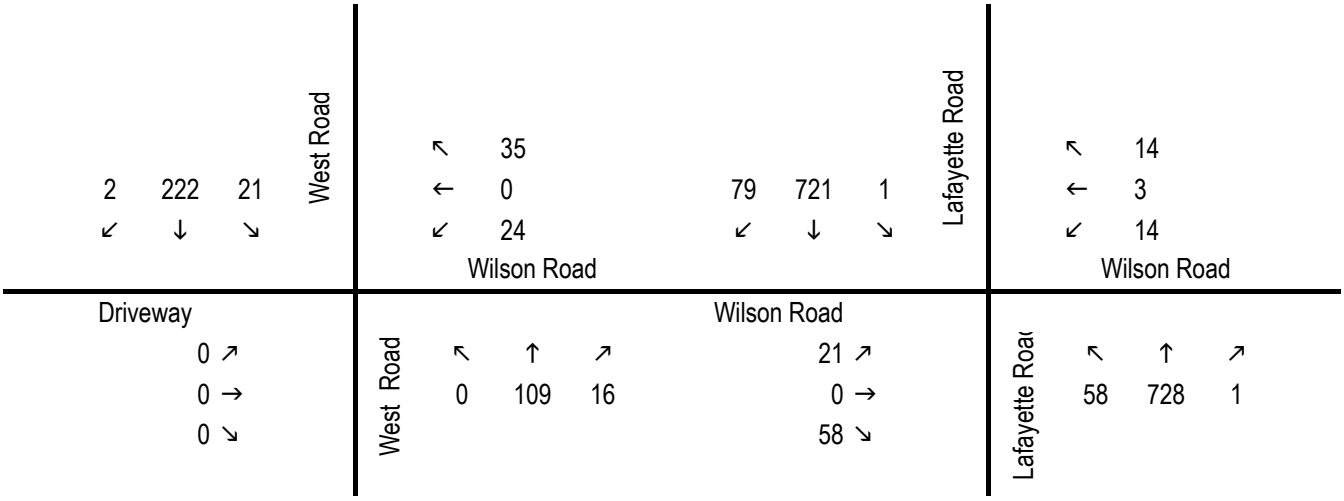
XX VOLUME
XX Site Trips ProRata
XX Other Development ProRata



2023 NoBUILD

AM Peak Hour

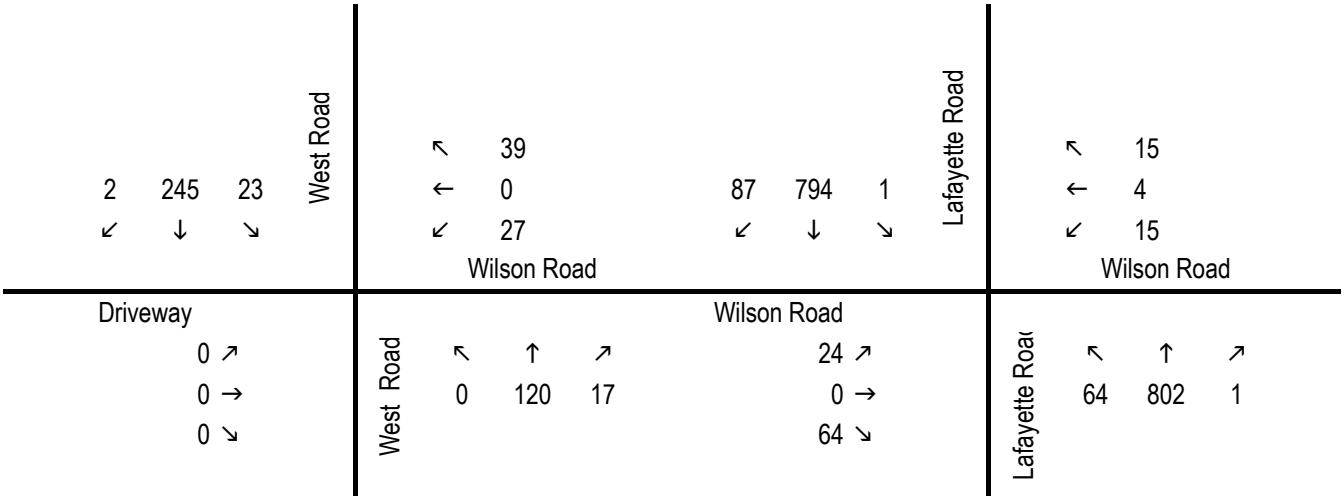
XX VOLUME



2033 NoBUILD

AM Peak Hour

XX VOLUME

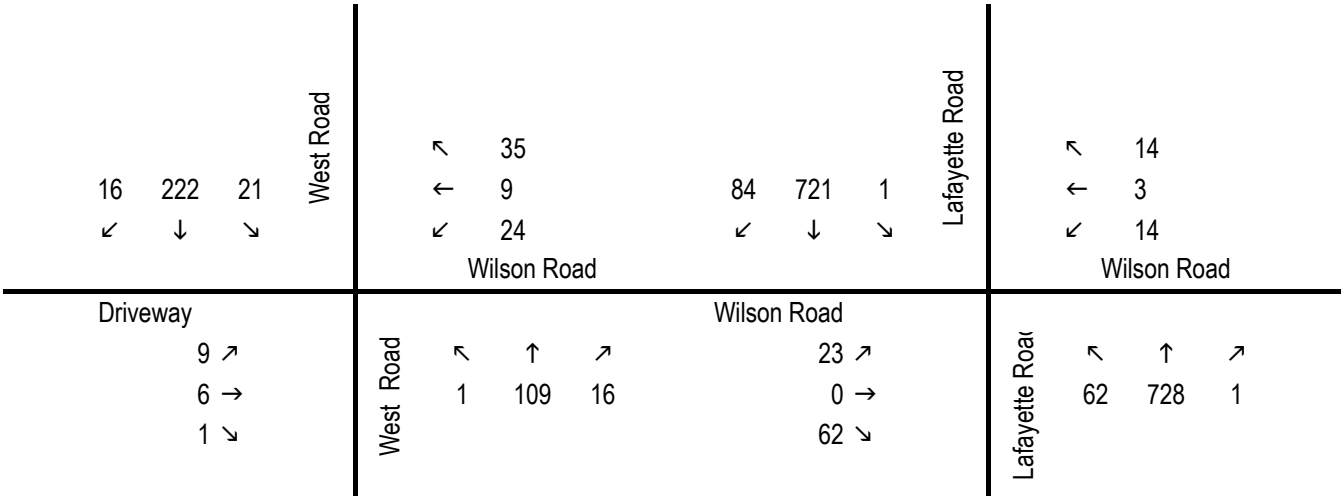


2023 BUILD

AM Peak Hour

Rev1

XX VOLUME

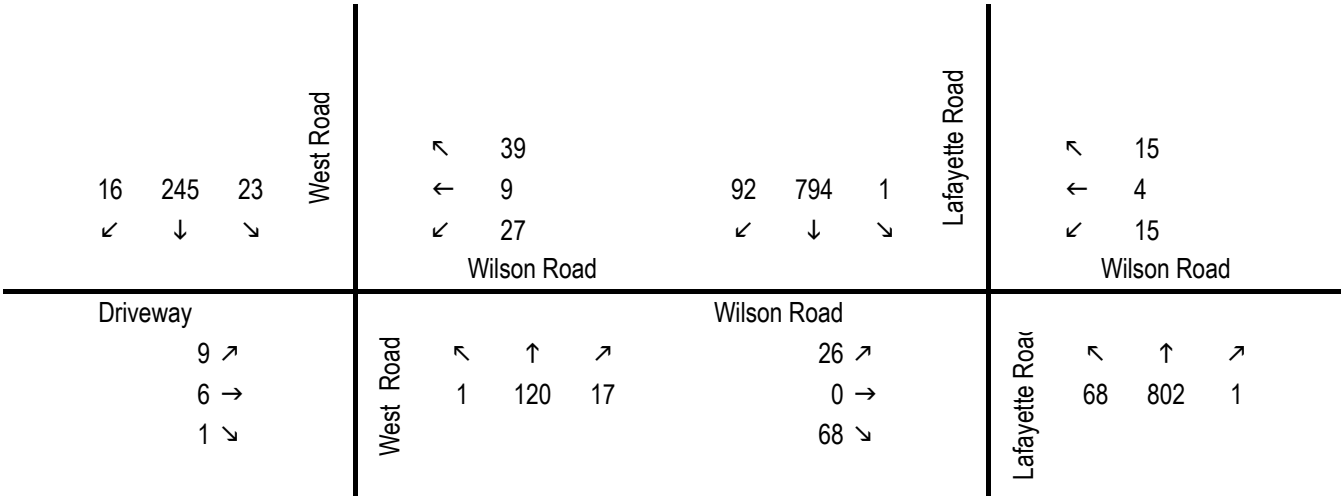


2033 BUILD

AM Peak Hour

Rev1

XX VOLUME



APPENDIX F

Background Traffic Volumes
PM Peak data

Assumed growth rate	**0.01**	
June 2019 Seasonal Adjust	**1.02**	NHDOT monthly adjustment factors - Group 4
Covid/Stay-home factor	**1.033**	

PM Peak Hour	Existing 2022 (Raw data) [06/23/2022]	Existing 2022 w/ Seasonal Adjustment	Covid/Stay Home Adjustment	2022 BASE	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	PM PHF	% Heavy	Counted Heavy
West Road at Driveway/Wilson Road	**4:30 PM**																	
Movement																		
EBL	0	*0*	1.033	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
EBT	1	*1*	1.033	*1.03*	*1.03*	*1.03*	*1.03*	*1.03*	*1.03*	*1.03*	*1.03*	*1.03*	*1.03*	*1.03*	*1.03*	0.25	0%	0
EBR	0	*0*	1.033	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
WBL	9	9	1.033	9.30	9.39	9.48	9.57	9.67	9.77	9.87	9.97	10.07	10.17	10.27	10.37		11%	1
WBT	0	*0*	1.033	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	0.82	#DIV/0!	0
WBR	50	51	1.033	52.68	53.21	53.74	54.28	54.82	55.37	55.92	56.48	57.04	57.61	58.19	58.77		2%	1
NBL	0	*0*	1.033	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
NBT	205	209	1.033	215.90	218.06	220.24	222.44	224.66	226.91	229.18	231.47	233.78	236.12	238.48	240.86	0.83	0%	1
NBR	33	34	1.033	35.12	35.47	35.82	36.18	36.54	36.91	37.28	37.65	38.03	38.41	38.79	39.18		6%	2
SBL	48	49	1.033	50.62	51.13	51.64	52.16	52.68	53.21	53.74	54.28	54.82	55.37	55.92	56.48		4%	2
SBT	64	65	1.033	67.15	67.82	68.50	69.19	69.88	70.58	71.29	72.00	72.72	73.45	74.18	74.92	0.93	8%	5
SBR	0	*0*	1.033	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
Lafayette Road at Wilson Road	**4:45 PM**																	
Movement																		
EBL	37	38	1.033	39.25	39.64	40.04	40.44	40.84	41.25	41.66	42.08	42.50	42.93	43.36	43.79		3%	1
EBT	11	11	1.033	11.36	11.47	11.58	11.70	11.82	11.94	12.06	12.18	12.30	12.42	12.54	12.67	0.85	0%	0
EBR	132	135	1.033	139.46	140.85	142.26	143.68	145.12	146.57	148.04	149.52	151.02	152.53	154.06	155.60		1%	1
WBL	11	11	1.033	11.36	11.47	11.58	11.70	11.82	11.94	12.06	12.18	12.30	12.42	12.54	12.67		0%	0
WBT	6	6	1.033	6.20	6.26	6.32	6.38	6.44	6.50	6.57	6.64	6.71	6.78	6.85	6.92	0.68	0%	0
WBR	10	10	1.033	10.33	10.43	10.53	10.64	10.75	10.86	10.97	11.08	11.19	11.30	11.41	11.52		0%	0
NBL	64	65	1.033	67.15	67.82	68.50	69.19	69.88	70.58	71.29	72.00	72.72	73.45	74.18	74.92		2%	1
NBT	859	876	1.033	904.91	913.96	923.10	932.33	941.65	951.07	960.58	970.19	979.89	989.69	999.59	1009.59	0.97	0%	4
NBR	4	4	1.033	4.13	4.17	4.21	4.25	4.29	4.33	4.37	4.41	4.45	4.49	4.53	4.58		0%	0
SBL	6	6	1.033	6.20	6.26	6.32	6.38	6.44	6.50	6.57	6.64	6.71	6.78	6.85	6.92		0%	0
SBT	781	797	1.033	823.30	831.53	839.85	848.25	856.73	865.30	873.95	882.69	891.52	900.44	909.44	918.53	0.94	1%	7
SBR	92	94	1.033	97.10	98.07	99.05	100.04	101.04	102.05	103.07	104.10	105.14	106.19	107.25	108.32		1%	1

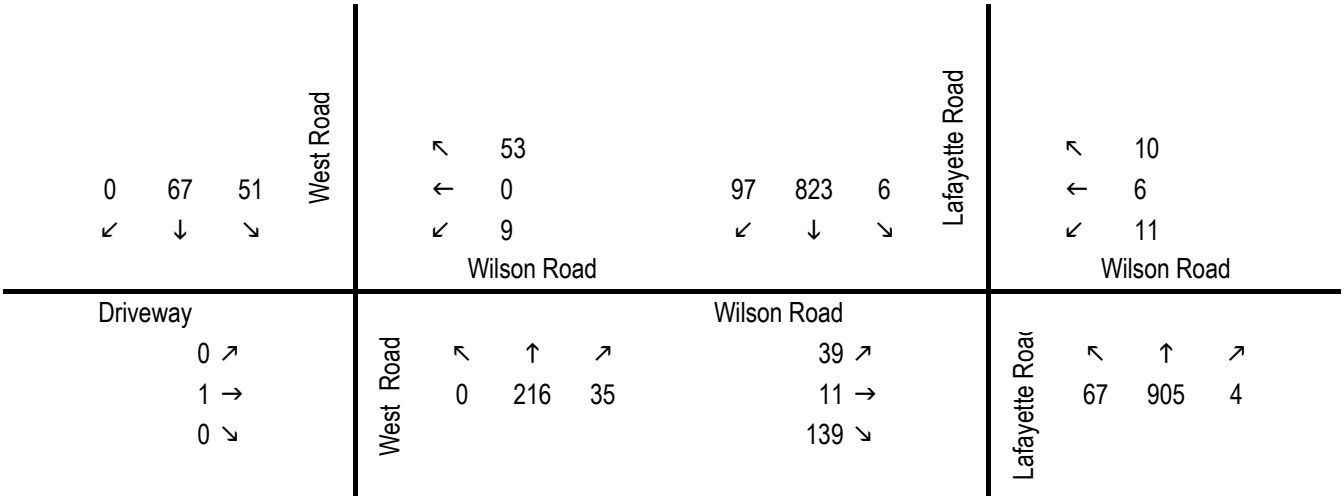
PM Peak Hour	2022 Base	2023	Other Development	2023 No-Build	Site Trip Distribution	2023 Build
West Road at Driveway/Wilson Road						
Movement						
EBL	0	0	0	0	11	11
EBT	1	1	0	1	27	28
EBR	0	0	0	0	2	2
WBL	9	9	0	9	0	9
WBT	0	0	0	0	44	44
WBR	53	53	2	55	0	55
NBL	0	0	0	0	3	3
NBT	216	218	0	218	0	218
NBR	35	35	1	36	0	36
SBL	51	51	2	53	0	53
SBT	67	68	0	68	0	68
SBR	0	0	0	0	17	17
Lafayette Road at Wilson Road						
Movement						
EBL	39	40	0	40	6	46
EBT	11	11	0	11	4	15
EBR	139	141	3	144	20	164
WBL	11	11	0	11	0	11
WBT	6	6	0	6	0	6
WBR	10	10	0	10	0	10
NBL	67	68	2	70	17	87
NBT	905	914	21	935	0	935
NBR	4	4	0	4	0	4
SBL	6	6	0	6	0	6
SBT	823	832	20	852	0	852
SBR	97	98	0	98	25	123

PM Peak Hour	2033	Other Development	2033 No-Build	Site Trip Distribution	2033 Build
West Road at Driveway/Wilson Road					
Movement					
EBL	0	0	0	11	11
EBT	1	0	1	27	28
EBR	0	0	0	2	2
WBL	10	0	10	0	10
WBT	0	0	0	44	44
WBR	59	2	61	0	61
NBL	0	0	0	3	3
NBT	241	0	241	0	241
NBR	39	1	40	0	40
SBL	56	2	58	0	58
SBT	75	0	75	0	75
SBR	0	0	0	17	17
Lafayette Road at Wilson Road					
Movement					
EBL	44	0	44	6	50
EBT	13	0	13	4	17
EBR	156	3	159	20	179
WBL	13	0	13	0	13
WBT	7	0	7	0	7
WBR	12	0	12	0	12
NBL	75	2	77	17	94
NBT	1010	21	1031	0	1031
NBR	5	0	5	0	5
SBL	7	0	7	0	7
SBT	919	20	939	0	939
SBR	108	0	108	25	133

2022 BASE

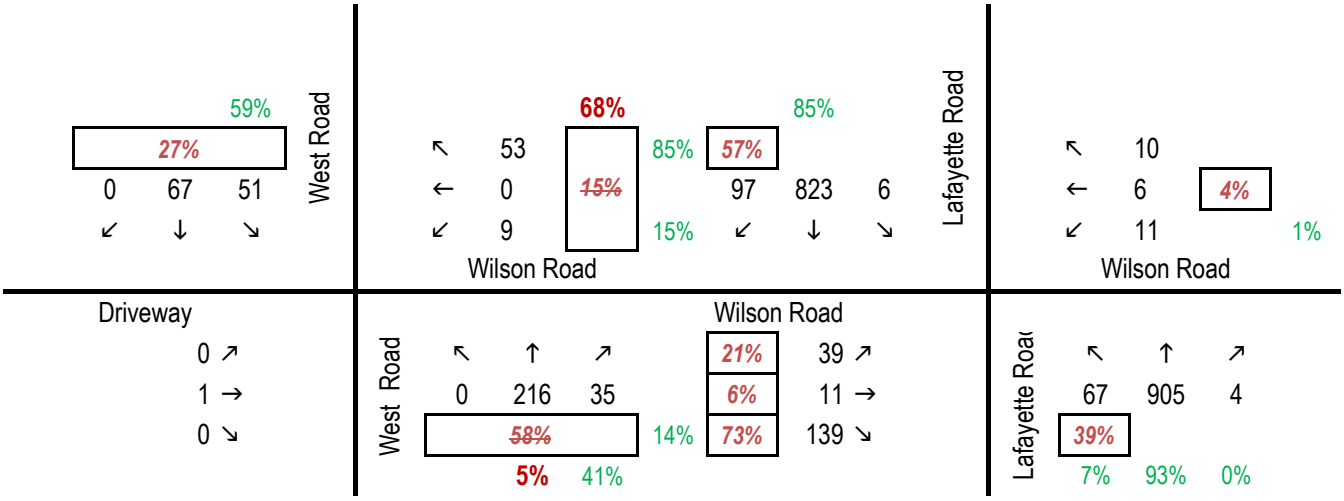
PM Peak Hour

XX VOLUME



2022 BASE PRORATA PM Peak Hour	Rev1

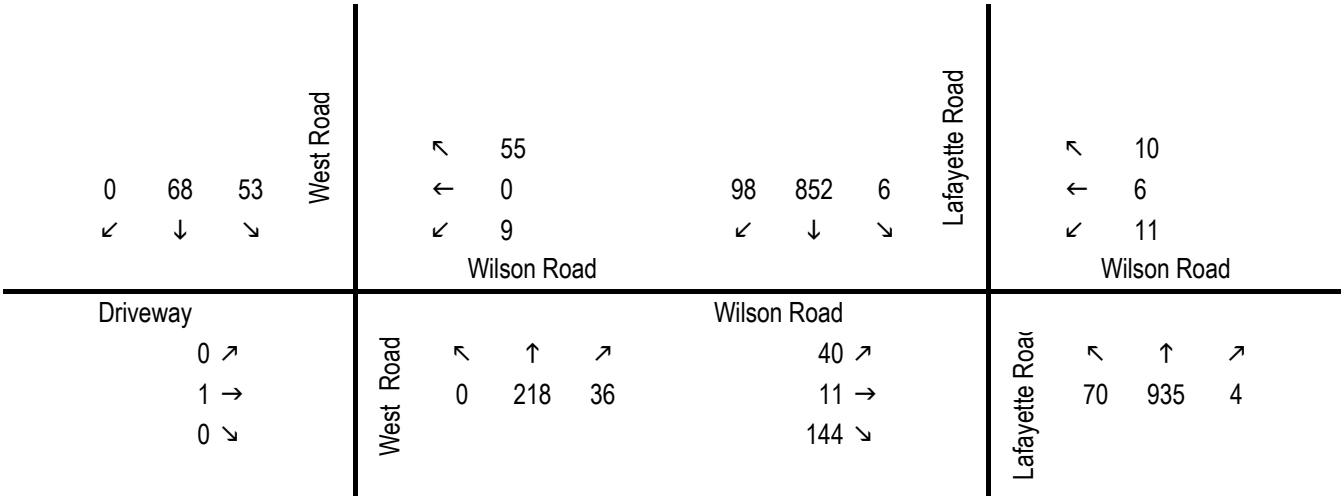
XX VOLUME
XX Site Trips ProRata
XX Other Development ProRata



2023 NoBUILD

PM Peak Hour

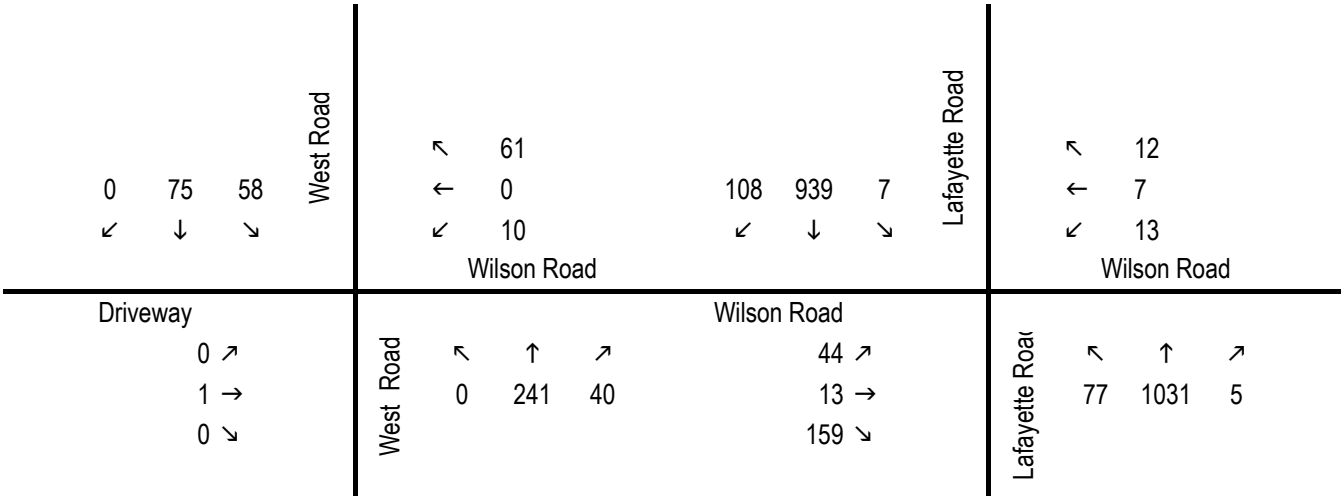
XX VOLUME



2033 NoBUILD

PM Peak Hour

XX VOLUME

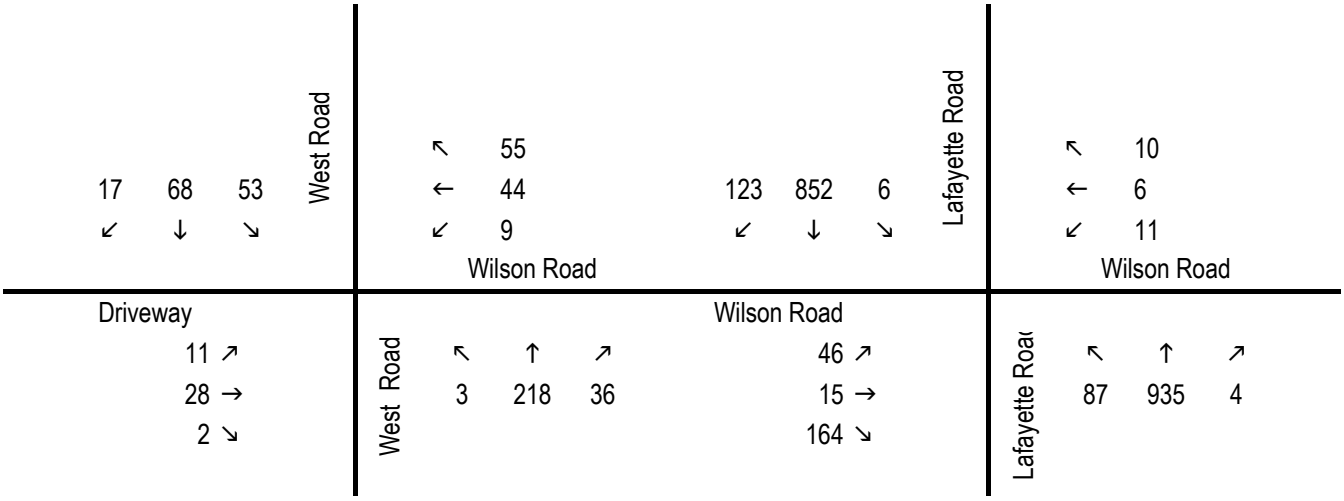


2023 BUILD

PM Peak Hour

Rev1

XX VOLUME

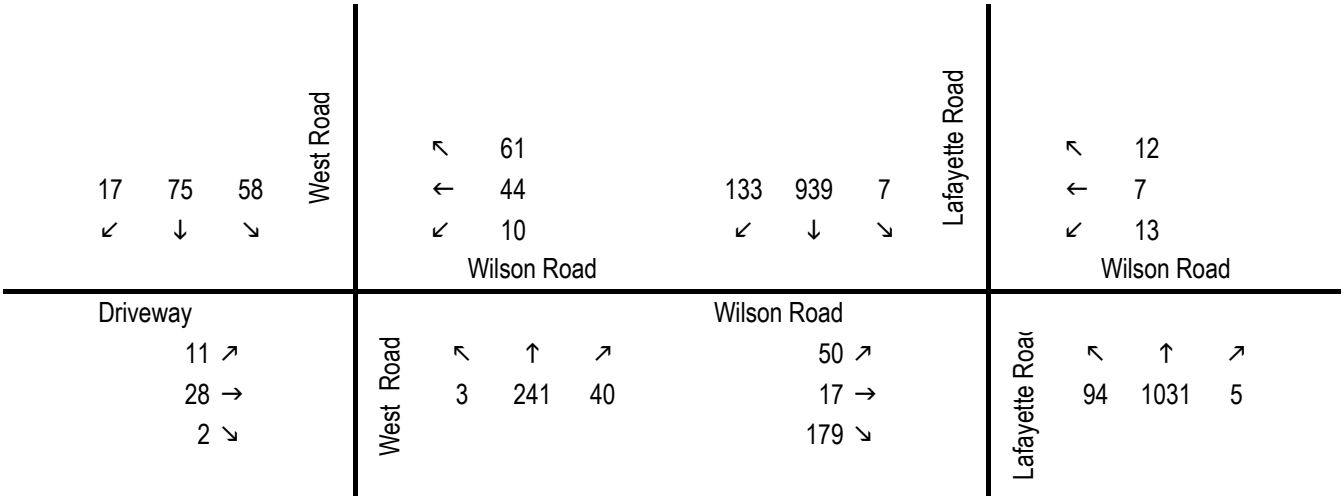


2033 BUILD

PM Peak Hour

Rev1

XX VOLUME



APPENDIX G

Background Traffic Volumes

SAT Peak data

Assumed growth rate	**0.01**	
June 2019 Seasonal Adjust	**1.02**	NHDOT monthly adjustment factors - Group 4
Covid/Stay-home factor	**1.066**	

SAT Peak Hour	Existing 2022 (Raw data) [06/23/2022]	Existing 2022 w/ Seasonal Adjustment	Covid/Stay Home Adjustment	2022 BASE	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	SAT PHF	% Heavy	Counted Heavy
West Road at Driveway/Wilson Road	**11:14 AM**																	
Movement																		
EBL	0	*0*	1.066	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
EBT	1	*1*	1.066	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	0.25	0%	0
EBR	0	*0*	1.066	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
WBL	3	3	1.066	3.20	3.23	3.26	3.29	3.32	3.35	3.38	3.41	3.44	3.47	3.50	3.54		0%	0
WBT	1	*1*	1.066	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	0.80	0%	0
WBR	57	58	1.066	61.83	62.45	63.07	63.70	64.34	64.98	65.63	66.29	66.95	67.62	68.30	68.98		2%	1
NBL	0	*0*	1.066	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
NBT	25	26	1.066	27.72	28.00	28.28	28.56	28.85	29.14	29.43	29.72	30.02	30.32	30.62	30.93	0.75	16%	4
NBR	2	2	1.066	2.13	2.15	2.17	2.19	2.21	2.23	2.25	2.27	2.29	2.31	2.33	2.35		0%	0
SBL	34	35	1.066	37.31	37.68	38.06	38.44	38.82	39.21	39.60	40.00	40.40	40.80	41.21	41.62		0%	0
SBT	36	37	1.066	39.44	39.83	40.23	40.63	41.04	41.45	41.86	42.28	42.70	43.13	43.56	44.00	0.80	11%	4
SBR	0	*0*	1.066	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		#DIV/0!	0
Lafayette Road at Wilson Road	**11:00 AM**																	
Movement																		
EBL	42	43	1.066	45.84	46.30	46.76	47.23	47.70	48.18	48.66	49.15	49.64	50.14	50.64	51.15		0%	0
EBT	2	2	1.066	2.13	2.15	2.17	2.19	2.21	2.23	2.25	2.27	2.29	2.31	2.33	2.35	0.78	0%	0
EBR	108	110	1.066	117.26	118.43	119.61	120.81	122.02	123.24	124.47	125.71	126.97	128.24	129.52	130.82		1%	1
WBL	13	13	1.066	13.86	14.00	14.14	14.28	14.42	14.56	14.71	14.86	15.01	15.16	15.31	15.46		0%	0
WBT	12	12	1.066	12.79	12.92	13.05	13.18	13.31	13.44	13.57	13.71	13.85	13.99	14.13	14.27	0.80	0%	0
WBR	10	10	1.066	10.66	10.77	10.88	10.99	11.10	11.21	11.32	11.43	11.54	11.66	11.78	11.90		0%	0
NBL	96	98	1.066	104.47	105.51	106.57	107.64	108.72	109.81	110.91	112.02	113.14	114.27	115.41	116.56		0%	0
NBT	825	842	1.066	897.57	906.55	915.62	924.78	934.03	943.37	952.80	962.33	971.95	981.67	991.49	#####	0.93	1%	7
NBR	4	4	1.066	4.26	4.30	4.34	4.38	4.42	4.46	4.50	4.55	4.60	4.65	4.70	4.75		0%	0
SBL	5	5	1.066	5.33	5.38	5.43	5.48	5.53	5.59	5.65	5.71	5.77	5.83	5.89	5.95		0%	0
SBT	814	830	1.066	884.78	893.63	902.57	911.60	920.72	929.93	939.23	948.62	958.11	967.69	977.37	987.14	0.93	1%	7
SBR	112	114	1.066	121.52	122.74	123.97	125.21	126.46	127.72	129.00	130.29	131.59	132.91	134.24	135.58		1%	1

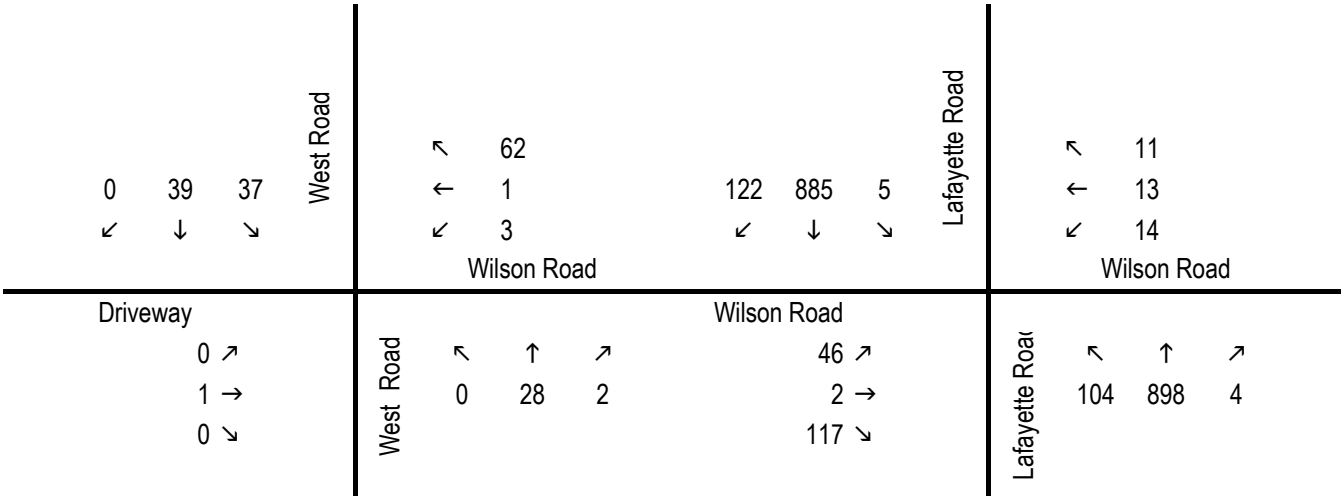
SAT Peak Hour	2022 Base	2023	Other Development	2023 No-Build	Site Trip Distribution	2023 Build
West Road at Driveway/Wilson Road						
Movement						
EBL	0	0	0	0	22	22
EBT	1	1	0	1	25	26
EBR	0	0	0	0	2	2
WBL	3	3	0	3	0	3
WBT	1	1	0	1	24	25
WBR	62	62	3	65	0	65
NBL	0	0	0	0	2	2
NBT	28	28	0	28	0	28
NBR	2	2	0	2	0	2
SBL	37	38	3	41	0	41
SBT	39	40	0	40	0	40
SBR	0	0	0	0	21	21
Lafayette Road at Wilson Road						
Movement						
EBL	46	46	0	46	7	53
EBT	2	2	0	2	1	3
EBR	117	118	3	121	18	139
WBL	14	14	0	14	0	14
WBT	13	13	0	13	0	13
WBR	11	11	0	11	0	11
NBL	104	106	3	109	10	119
NBT	898	907	25	932	0	932
NBR	4	4	0	4	0	4
SBL	5	5	0	5	0	5
SBT	885	894	21	915	0	915
SBR	122	123	0	123	12	135

SAT Peak Hour	2033	Other Development	2033 No-Build	Site Trip Distribution	2033 Build
West Road at Driveway/Wilson Road					
Movement					
EBL	0	0	0	22	22
EBT	1	0	1	25	26
EBR	0	0	0	2	2
WBL	4	0	4	0	4
WBT	1	0	1	24	25
WBR	69	3	72	0	72
NBL	0	0	0	2	2
NBT	31	0	31	0	31
NBR	2	0	2	0	2
SBL	42	3	45	0	45
SBT	44	0	44	0	44
SBR	0	0	0	21	21
Lafayette Road at Wilson Road					
Movement					
EBL	51	0	51	7	58
EBT	2	0	2	1	3
EBR	131	3	134	18	152
WBL	15	0	15	0	15
WBT	14	0	14	0	14
WBR	12	0	12	0	12
NBL	117	3	120	10	130
NBT	1001	25	1026	0	1026
NBR	5	0	5	0	5
SBL	6	0	6	0	6
SBT	987	21	1008	0	1008
SBR	136	0	136	12	148

2022 BASE

SAT Peak Hour

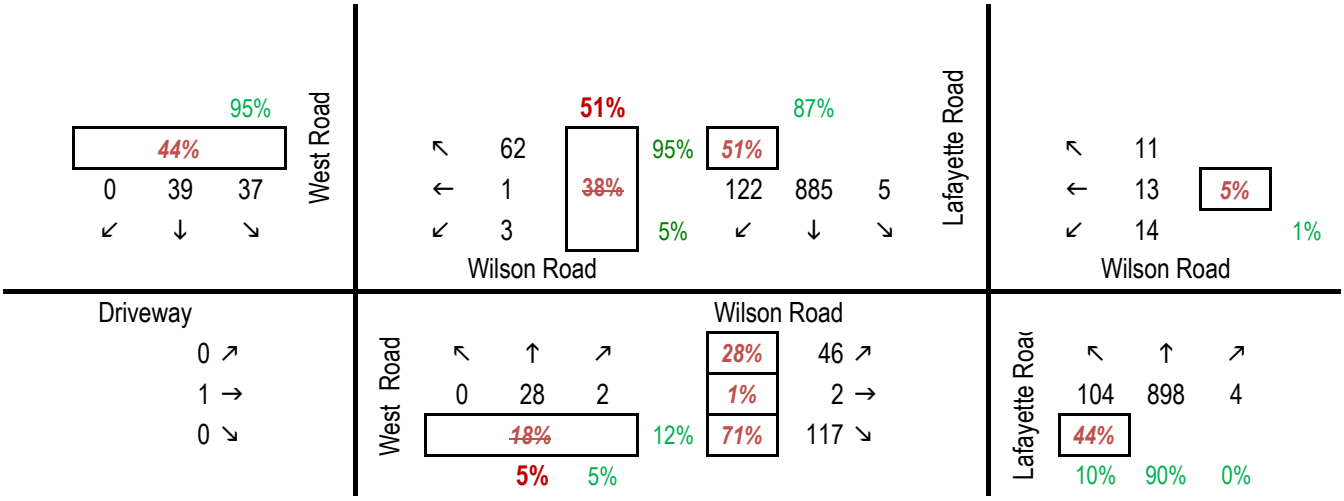
XX VOLUME



2022 BASE PRORATA
SAT Peak Hour

Rev1

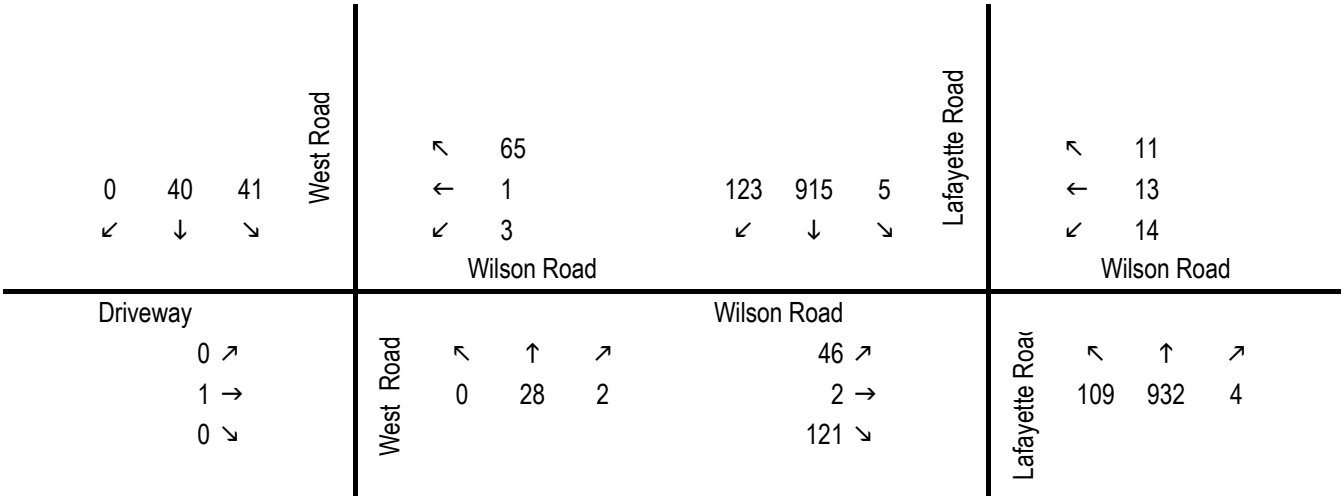
XX VOLUME
XX Site Trips ProRata
XX Other Development ProRata



2023 NoBUILD

SAT Peak Hour

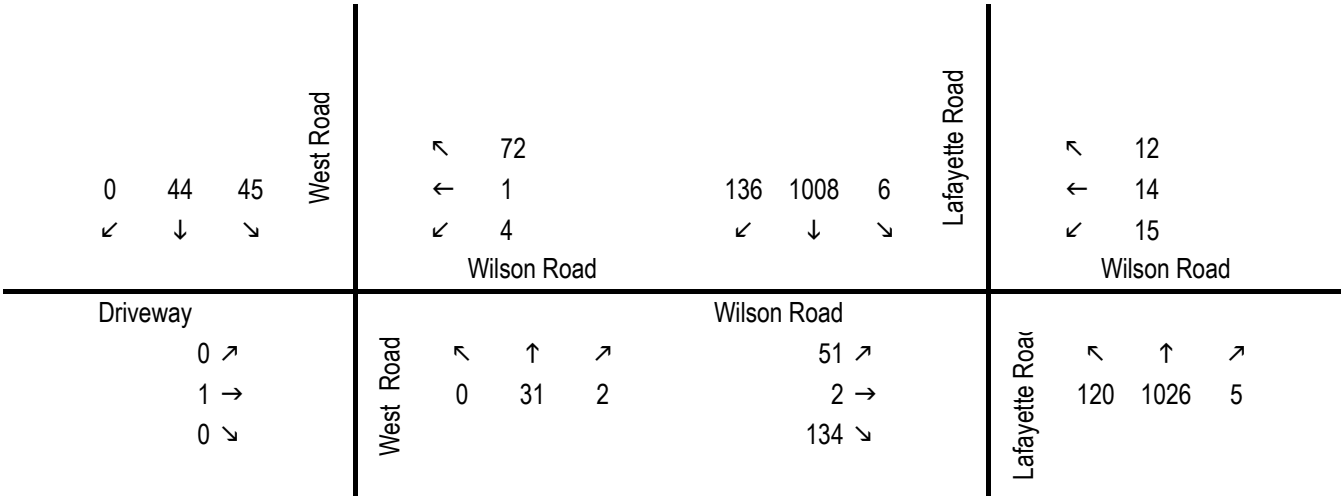
XX VOLUME



2033 NoBUILD

SAT Peak Hour

XX VOLUME

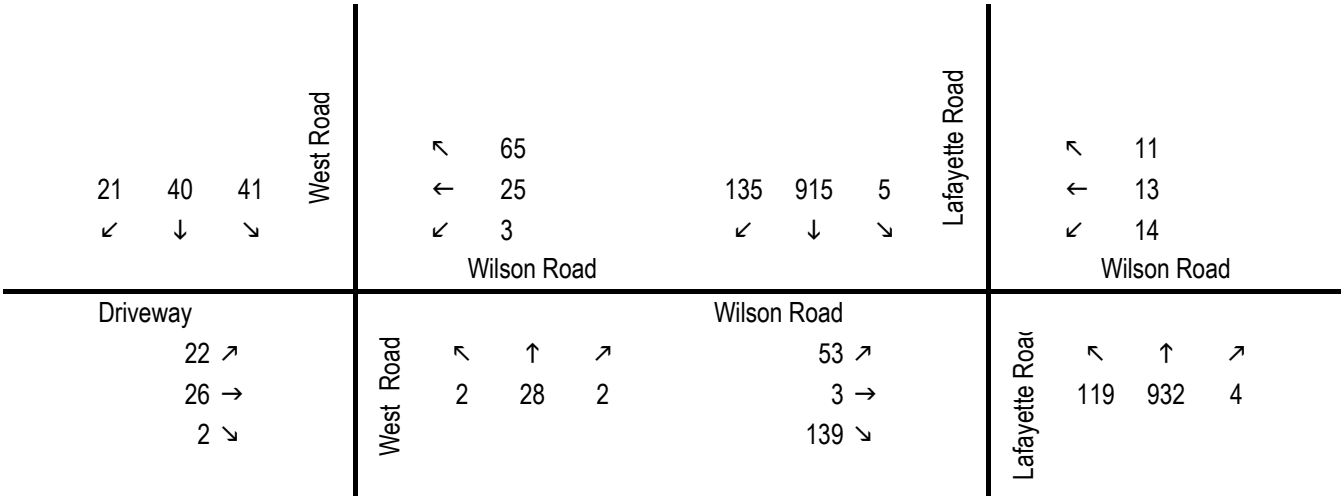


2023 BUILD

SAT Peak Hour

Rev1

XX VOLUME

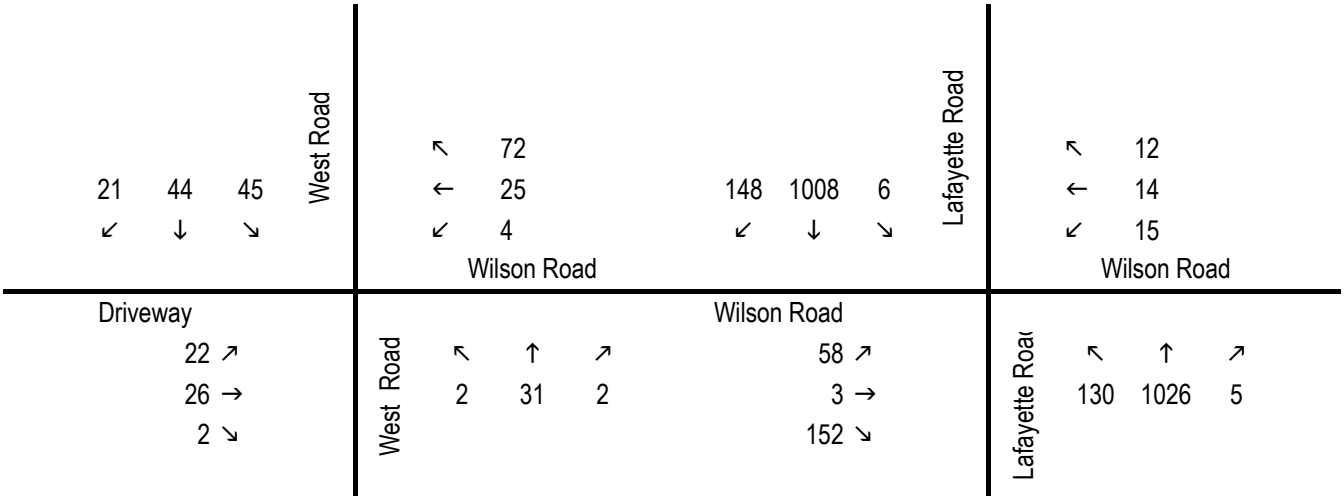


2033 BUILD

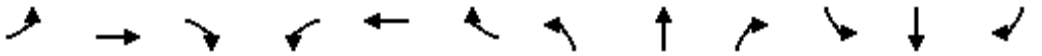
SAT Peak Hour

Rev1

XX VOLUME



APPENDIX H



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	23	0	34	0	108	15	20	219	2
Future Volume (Veh/h)	0	0	0	23	0	34	0	108	15	20	219	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.88	0.88	0.88	0.89	0.89	0.89	0.77	0.77	0.77
Hourly flow rate (vph)	0	0	0	26	0	39	0	121	17	26	284	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	506	476	286	467	468	130	287			138		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	506	476	286	467	468	130	287			138		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.4	2.2			2.2		
p0 queue free %	100	100	100	95	100	96	100			98		
cM capacity (veh/h)	453	482	758	488	486	910	1287			1427		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	65	138	313
Volume Left	0	26	0	26
Volume Right	0	39	17	3
cSH	1700	676	1287	1427
Volume to Capacity	0.00	0.10	0.00	0.02
Queue Length 95th (ft)	0	8	0	1
Control Delay (s)	0.0	10.9	0.0	0.8
Lane LOS	A	B		A
Approach Delay (s)	0.0	10.9	0.0	0.8
Approach LOS	A	B		

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	32.7%	ICU Level of Service	A	
Analysis Period (min)	15			

6: Lafayette Road & Wilson Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	0	56	13	3	56	696	1	689
Future Volume (vph)	21	0	56	13	3	56	696	1	689
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0	18.0	42.0	18.0	42.0
Total Split (%)	30.2%	30.2%	30.2%	30.2%	30.2%	20.9%	48.8%	20.9%	48.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		7.6	7.6		7.6	8.6	70.2	5.6	61.2
Actuated g/C Ratio		0.09	0.09		0.09	0.10	0.82	0.07	0.71
v/c Ratio		0.20	0.37		0.28	0.37	0.27	0.01	0.36
Control Delay		38.8	14.3		27.6	41.9	3.3	38.0	7.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		38.8	14.3		27.6	41.9	3.3	38.0	7.3
LOS		D	B		C	D	A	D	A
Approach Delay		21.0			27.6		6.2		7.3
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 60 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 8.1 Intersection LOS: A
Intersection Capacity Utilization 45.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	75	43	60	741	1	862
v/c Ratio	0.20	0.37	0.28	0.37	0.27	0.01	0.36
Control Delay	38.8	14.3	27.6	41.9	3.3	38.0	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	14.3	27.6	41.9	3.3	38.0	7.3
Queue Length 50th (ft)	14	0	12	31	36	1	97
Queue Length 95th (ft)	32	24	30	66	111	6	162
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	392	438	390	253	2780	283	2395
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.17	0.11	0.24	0.27	0.00	0.36

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	56	13	3	14	56	696	1	1	689	78
Future Volume (vph)	21	0	56	13	3	14	56	696	1	1	689	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.98	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1570	1524		1742		1612	3405		1805	3360	
Flt Permitted		0.95	1.00		0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1571	1524		1504		1612	3405		1805	3360	
Peak-hour factor, PHF	0.75	0.75	0.75	0.70	0.70	0.70	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	28	0	75	19	4	20	60	740	1	1	774	88
RTOR Reduction (vph)	0	0	69	0	18	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	28	6	0	25	0	60	741	0	1	856	0
Heavy Vehicles (%)	15%	0%	6%	0%	0%	0%	12%	6%	0%	0%	6%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		6.5	6.5		6.5		7.5	64.8		1.2	58.5	
Effective Green, g (s)		6.5	6.5		6.5		7.5	64.8		1.2	58.5	
Actuated g/C Ratio		0.08	0.08		0.08		0.09	0.75		0.01	0.68	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		118	115		113		140	2565		25	2285	
v/s Ratio Prot							c0.04	0.22		0.00	c0.25	
v/s Ratio Perm		c0.02	0.00		0.02							
v/c Ratio		0.24	0.05		0.22		0.43	0.29		0.04	0.37	
Uniform Delay, d1		37.4	36.9		37.4		37.2	3.3		41.8	5.9	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0	0.2		1.0		2.1	0.3		0.7	0.5	
Delay (s)		38.5	37.1		38.3		39.3	3.6		42.5	6.4	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		37.4			38.3			6.3			6.4	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	24	0	35	0	109	16	21	222	2
Future Volume (Veh/h)	0	0	0	24	0	35	0	109	16	21	222	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.88	0.88	0.88	0.89	0.89	0.89	0.77	0.77	0.77
Hourly flow rate (vph)	0	0	0	27	0	40	0	122	18	27	288	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	514	484	290	474	476	131	291			140		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	514	484	290	474	476	131	291			140		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.4	2.2			2.2		
p0 queue free %	100	100	100	94	100	96	100			98		
cM capacity (veh/h)	446	477	754	482	481	908	1282			1425		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	67	140	318
Volume Left	0	27	0	27
Volume Right	0	40	18	3
cSH	1700	669	1282	1425
Volume to Capacity	0.00	0.10	0.00	0.02
Queue Length 95th (ft)	0	8	0	1
Control Delay (s)	0.0	11.0	0.0	0.8
Lane LOS	A	B		A
Approach Delay (s)	0.0	11.0	0.0	0.8
Approach LOS	A	B		

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

6: Lafayette Road & Wilson Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	0	58	14	3	58	728	1	721
Future Volume (vph)	21	0	58	14	3	58	728	1	721
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0	18.0	42.0	18.0	42.0
Total Split (%)	30.2%	30.2%	30.2%	30.2%	30.2%	20.9%	48.8%	20.9%	48.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		7.6	7.6		7.6	8.7	70.2	5.6	61.1
Actuated g/C Ratio		0.09	0.09		0.09	0.10	0.82	0.07	0.71
v/c Ratio		0.20	0.38		0.29	0.38	0.28	0.01	0.38
Control Delay		38.9	14.6		28.1	42.1	3.4	38.0	7.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		38.9	14.6		28.1	42.1	3.4	38.0	7.5
LOS		D	B		C	D	A	D	A
Approach Delay		21.1			28.1		6.3		7.5
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 60 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.38
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 46.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	77	44	62	775	1	899
v/c Ratio	0.20	0.38	0.29	0.38	0.28	0.01	0.38
Control Delay	38.9	14.6	28.1	42.1	3.4	38.0	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	14.6	28.1	42.1	3.4	38.0	7.5
Queue Length 50th (ft)	14	0	12	32	37	1	103
Queue Length 95th (ft)	32	26	31	67	117	6	172
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	389	438	390	253	2780	283	2392
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.18	0.11	0.25	0.28	0.00	0.38

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	58	14	3	14	58	728	1	1	721	79
Future Volume (vph)	21	0	58	14	3	14	58	728	1	1	721	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1570	1524		1744		1612	3405		1805	3361	
Flt Permitted		0.94	1.00		0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1556	1524		1499		1612	3405		1805	3361	
Peak-hour factor, PHF	0.75	0.75	0.75	0.70	0.70	0.70	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	28	0	77	20	4	20	62	774	1	1	810	89
RTOR Reduction (vph)	0	0	71	0	18	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	28	6	0	26	0	62	775	0	1	894	0
Heavy Vehicles (%)	15%	0%	6%	0%	0%	0%	12%	6%	0%	0%	6%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		6.5	6.5		6.5		7.6	64.8		1.2	58.4	
Effective Green, g (s)		6.5	6.5		6.5		7.6	64.8		1.2	58.4	
Actuated g/C Ratio		0.08	0.08		0.08		0.09	0.75		0.01	0.68	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		117	115		113		142	2565		25	2282	
v/s Ratio Prot							c0.04	0.23		0.00	c0.27	
v/s Ratio Perm		c0.02	0.00		0.02							
v/c Ratio		0.24	0.05		0.23		0.44	0.30		0.04	0.39	
Uniform Delay, d1		37.4	36.9		37.4		37.2	3.4		41.8	6.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.1	0.2		1.0		2.1	0.3		0.7	0.5	
Delay (s)		38.5	37.1		38.4		39.3	3.7		42.5	6.5	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		37.4			38.4			6.3			6.6	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	27	0	39	0	120	17	23	245	2
Future Volume (Veh/h)	0	0	0	27	0	39	0	120	17	23	245	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.88	0.88	0.88	0.89	0.89	0.89	0.77	0.77	0.77
Hourly flow rate (vph)	0	0	0	31	0	44	0	135	19	30	318	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	568	534	320	524	526	144	321			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	568	534	320	524	526	144	321			154		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.4	2.2			2.2		
p0 queue free %	100	100	100	93	100	95	100			98		
cM capacity (veh/h)	408	446	726	446	450	892	1250			1408		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	75	154	351
Volume Left	0	31	0	30
Volume Right	0	44	19	3
cSH	1700	631	1250	1408
Volume to Capacity	0.00	0.12	0.00	0.02
Queue Length 95th (ft)	0	10	0	2
Control Delay (s)	0.0	11.5	0.0	0.8
Lane LOS	A	B		A
Approach Delay (s)	0.0	11.5	0.0	0.8
Approach LOS	A	B		

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

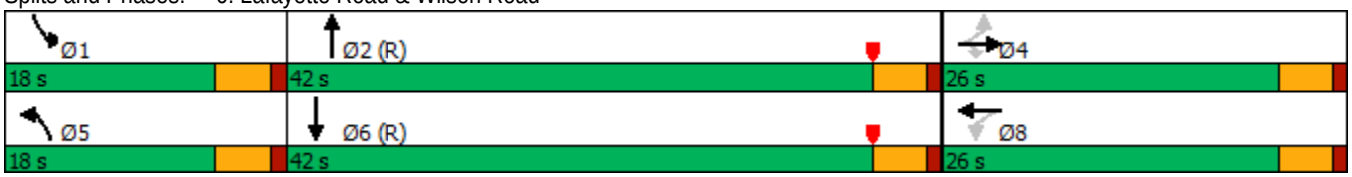
6: Lafayette Road & Wilson Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	24	0	64	15	4	64	802	1	794
Future Volume (vph)	24	0	64	15	4	64	802	1	794
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0	18.0	42.0	18.0	42.0
Total Split (%)	30.2%	30.2%	30.2%	30.2%	30.2%	20.9%	48.8%	20.9%	48.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		7.9	7.9		7.9	9.0	69.9	5.6	60.5
Actuated g/C Ratio		0.09	0.09		0.09	0.10	0.81	0.07	0.70
v/c Ratio		0.23	0.39		0.30	0.40	0.31	0.01	0.42
Control Delay		39.3	14.0		28.3	42.3	3.6	38.0	8.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		39.3	14.0		28.3	42.3	3.6	38.0	8.2
LOS		D	B		C	D	A	D	A
Approach Delay		20.9			28.3		6.5		8.2
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 60 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 8.6 Intersection LOS: A
Intersection Capacity Utilization 48.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	32	85	48	68	854	1	990
v/c Ratio	0.23	0.39	0.30	0.40	0.31	0.01	0.42
Control Delay	39.3	14.0	28.3	42.3	3.6	38.0	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	14.0	28.3	42.3	3.6	38.0	8.2
Queue Length 50th (ft)	16	0	14	35	44	1	121
Queue Length 95th (ft)	35	26	32	72	135	6	202
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	375	444	393	253	2768	283	2369
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.19	0.12	0.27	0.31	0.00	0.42

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	0	64	15	4	15	64	802	1	1	794	87
Future Volume (vph)	24	0	64	15	4	15	64	802	1	1	794	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1570	1524		1750		1612	3405		1805	3361	
Flt Permitted		0.91	1.00		0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1504	1524		1509		1612	3405		1805	3361	
Peak-hour factor, PHF	0.75	0.75	0.75	0.70	0.70	0.70	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	32	0	85	21	6	21	68	853	1	1	892	98
RTOR Reduction (vph)	0	0	78	0	19	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	32	7	0	29	0	68	854	0	1	984	0
Heavy Vehicles (%)	15%	0%	6%	0%	0%	0%	12%	6%	0%	0%	6%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		6.8	6.8		6.8		7.9	64.5		1.2	57.8	
Effective Green, g (s)		6.8	6.8		6.8		7.9	64.5		1.2	57.8	
Actuated g/C Ratio		0.08	0.08		0.08		0.09	0.75		0.01	0.67	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		118	120		119		148	2553		25	2258	
v/s Ratio Prot							c0.04	0.25		0.00	c0.29	
v/s Ratio Perm		c0.02	0.00		0.02							
v/c Ratio		0.27	0.06		0.24		0.46	0.33		0.04	0.44	
Uniform Delay, d1		37.3	36.6		37.2		37.0	3.6		41.8	6.5	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.2	0.2		1.1		2.3	0.4		0.7	0.6	
Delay (s)		38.5	36.8		38.2		39.3	3.9		42.5	7.2	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		37.3			38.2			6.5			7.2	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	6	1	24	9	35	1	109	16	21	222	16
Future Volume (Veh/h)	9	6	1	24	9	35	1	109	16	21	222	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.89	0.89	0.89	0.77	0.77	0.77
Hourly flow rate (vph)	10	7	1	27	10	40	1	122	18	27	288	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	530	494	298	490	496	131	309			140		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	530	494	298	490	496	131	309			140		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.4	2.2			2.2		
p0 queue free %	98	99	100	94	98	96	100			98		
cM capacity (veh/h)	428	470	746	464	469	908	1263			1425		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	77	141	336
Volume Left	10	27	1	27
Volume Right	1	40	18	21
cSH	455	623	1263	1425
Volume to Capacity	0.04	0.12	0.00	0.02
Queue Length 95th (ft)	3	11	0	1
Control Delay (s)	13.2	11.6	0.1	0.8
Lane LOS	B	B	A	A
Approach Delay (s)	13.2	11.6	0.1	0.8
Approach LOS	B	B		

Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	34.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	23	0	62	14	3	62	728	1	721
Future Volume (vph)	23	0	62	14	3	62	728	1	721
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0	18.0	42.0	18.0	42.0
Total Split (%)	30.2%	30.2%	30.2%	30.2%	30.2%	20.9%	48.8%	20.9%	48.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		7.8	7.8		7.8	8.9	70.0	5.6	60.7
Actuated g/C Ratio		0.09	0.09		0.09	0.10	0.81	0.07	0.71
v/c Ratio		0.22	0.39		0.29	0.40	0.28	0.01	0.38
Control Delay		39.0	14.2		27.7	42.2	3.5	38.0	7.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		39.0	14.2		27.7	42.2	3.5	38.0	7.7
LOS		D	B		C	D	A	D	A
Approach Delay		21.0			27.7		6.5		7.8
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 60 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 8.5 Intersection LOS: A
Intersection Capacity Utilization 46.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	31	83	44	66	775	1	904
v/c Ratio	0.22	0.39	0.29	0.40	0.28	0.01	0.38
Control Delay	39.0	14.2	27.7	42.2	3.5	38.0	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	14.2	27.7	42.2	3.5	38.0	7.7
Queue Length 50th (ft)	16	0	12	34	38	1	105
Queue Length 95th (ft)	34	26	31	70	119	6	176
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	387	443	389	253	2772	283	2375
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.19	0.11	0.26	0.28	0.00	0.38

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	0	62	14	3	14	62	728	1	1	721	84
Future Volume (vph)	23	0	62	14	3	14	62	728	1	1	721	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.98	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1570	1524		1744		1612	3405		1805	3359	
Flt Permitted		0.94	1.00		0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1547	1524		1497		1612	3405		1805	3359	
Peak-hour factor, PHF	0.75	0.75	0.75	0.70	0.70	0.70	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	31	0	83	20	4	20	66	774	1	1	810	94
RTOR Reduction (vph)	0	0	77	0	18	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	31	6	0	26	0	66	775	0	1	898	0
Heavy Vehicles (%)	15%	0%	6%	0%	0%	0%	12%	6%	0%	0%	6%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		6.7	6.7		6.7		7.8	64.6		1.2	58.0	
Effective Green, g (s)		6.7	6.7		6.7		7.8	64.6		1.2	58.0	
Actuated g/C Ratio		0.08	0.08		0.08		0.09	0.75		0.01	0.67	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		120	118		116		146	2557		25	2265	
v/s Ratio Prot							c0.04	0.23		0.00	c0.27	
v/s Ratio Perm		c0.02	0.00		0.02							
v/c Ratio		0.26	0.05		0.22		0.45	0.30		0.04	0.40	
Uniform Delay, d1		37.3	36.7		37.2		37.1	3.4		41.8	6.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.1	0.2		1.0		2.2	0.3		0.7	0.5	
Delay (s)		38.5	36.9		38.2		39.3	3.8		42.5	6.7	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		37.3			38.2			6.5			6.8	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	6	1	27	9	39	1	120	17	23	245	16
Future Volume (Veh/h)	9	6	1	27	9	39	1	120	17	23	245	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.89	0.89	0.89	0.77	0.77	0.77
Hourly flow rate (vph)	10	7	1	31	10	44	1	135	19	30	318	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	584	544	328	540	546	144	339			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	584	544	328	540	546	144	339			154		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.4	2.2			2.2		
p0 queue free %	97	98	100	93	98	95	100			98		
cM capacity (veh/h)	391	439	718	429	438	892	1231			1408		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	85	155	369
Volume Left	10	31	1	30
Volume Right	1	44	19	21
cSH	420	589	1231	1408
Volume to Capacity	0.04	0.14	0.00	0.02
Queue Length 95th (ft)	3	13	0	2
Control Delay (s)	14.0	12.1	0.1	0.8
Lane LOS	B	B	A	A
Approach Delay (s)	14.0	12.1	0.1	0.8
Approach LOS	B	B		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	37.3%	ICU Level of Service	A	
Analysis Period (min)	15			

6: Lafayette Road & Wilson Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	26	0	68	15	4	68	802	1	794
Future Volume (vph)	26	0	68	15	4	68	802	1	794
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0	18.0	42.0	18.0	42.0
Total Split (%)	30.2%	30.2%	30.2%	30.2%	30.2%	20.9%	48.8%	20.9%	48.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		8.1	8.1		8.1	9.2	69.7	5.6	60.1
Actuated g/C Ratio		0.09	0.09		0.09	0.11	0.81	0.07	0.70
v/c Ratio		0.25	0.40		0.30	0.42	0.31	0.01	0.42
Control Delay		39.5	13.7		27.9	42.4	3.7	38.0	8.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		39.5	13.7		27.9	42.4	3.7	38.0	8.5
LOS		D	B		C	D	A	D	A
Approach Delay		20.9			27.9		6.7		8.5
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 60 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 8.9 Intersection LOS: A
Intersection Capacity Utilization 48.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	35	91	48	72	854	1	995
v/c Ratio	0.25	0.40	0.30	0.42	0.31	0.01	0.42
Control Delay	39.5	13.7	27.9	42.4	3.7	38.0	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	13.7	27.9	42.4	3.7	38.0	8.5
Queue Length 50th (ft)	18	0	14	37	45	1	124
Queue Length 95th (ft)	37	27	32	75	136	6	207
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	374	449	392	253	2761	283	2352
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.20	0.12	0.28	0.31	0.00	0.42

Intersection Summary

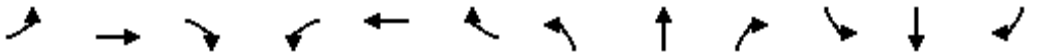
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	0	68	15	4	15	68	802	1	1	794	92
Future Volume (vph)	26	0	68	15	4	15	68	802	1	1	794	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.98	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1570	1524		1750		1612	3405		1805	3359	
Flt Permitted		0.91	1.00		0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1497	1524		1506		1612	3405		1805	3359	
Peak-hour factor, PHF	0.75	0.75	0.75	0.70	0.70	0.70	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	35	0	91	21	6	21	72	853	1	1	892	103
RTOR Reduction (vph)	0	0	84	0	19	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	35	7	0	29	0	72	854	0	1	989	0
Heavy Vehicles (%)	15%	0%	6%	0%	0%	0%	12%	6%	0%	0%	6%	4%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		7.0	7.0		7.0		8.1	64.3		1.2	57.4	
Effective Green, g (s)		7.0	7.0		7.0		8.1	64.3		1.2	57.4	
Actuated g/C Ratio		0.08	0.08		0.08		0.09	0.75		0.01	0.67	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		121	124		122		151	2545		25	2241	
v/s Ratio Prot							c0.04	0.25		0.00	c0.29	
v/s Ratio Perm		c0.02	0.00		0.02							
v/c Ratio		0.29	0.06		0.24		0.48	0.34		0.04	0.44	
Uniform Delay, d1		37.2	36.5		37.0		36.9	3.7		41.8	6.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3	0.2		1.0		2.4	0.4		0.7	0.6	
Delay (s)		38.5	36.7		38.0		39.3	4.0		42.5	7.4	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		37.2			38.0			6.8			7.4	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX I



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	0	9	0	53	0	216	35	51	67	0
Future Volume (Veh/h)	0	1	0	9	0	53	0	216	35	51	67	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.82	0.82	0.82	0.83	0.83	0.83	0.93	0.93	0.93
Hourly flow rate (vph)	0	4	0	11	0	65	0	260	42	55	72	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	528	484	72	465	463	281	72			302		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	528	484	72	465	463	281	72			302		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	98	100	91	100			96		
cM capacity (veh/h)	410	464	996	473	477	758	1541			1248		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	76	302	127
Volume Left	0	11	0	55
Volume Right	0	65	42	0
cSH	464	697	1541	1248
Volume to Capacity	0.01	0.11	0.00	0.04
Queue Length 95th (ft)	1	9	0	3
Control Delay (s)	12.8	10.8	0.0	3.7
Lane LOS	B	B		A
Approach Delay (s)	12.8	10.8	0.0	3.7
Approach LOS	B	B		

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	40.3%	ICU Level of Service	A	
Analysis Period (min)	15			

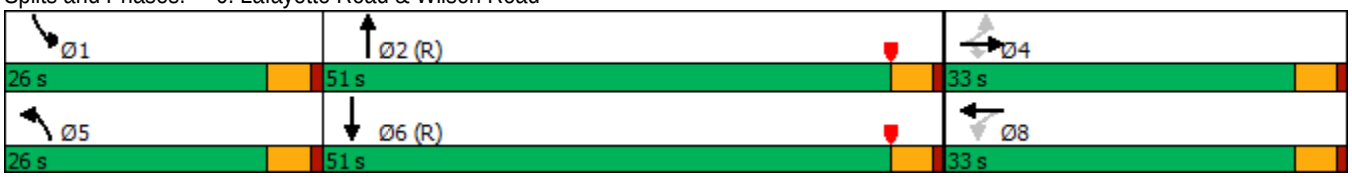
6: Lafayette Road & Wilson Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	39	11	139	11	6	67	905	6	823
Future Volume (vph)	39	11	139	11	6	67	905	6	823
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	33.0	33.0	33.0	33.0	33.0	26.0	51.0	26.0	51.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	23.6%	46.4%	23.6%	46.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		9.8	9.8		9.8	9.6	88.9	6.0	79.1
Actuated g/C Ratio		0.09	0.09		0.09	0.09	0.81	0.05	0.72
v/c Ratio		0.43	0.56		0.26	0.45	0.32	0.06	0.39
Control Delay		56.3	14.9		36.1	55.9	3.8	50.3	7.6
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		56.3	14.9		36.1	55.9	3.8	50.3	7.6
LOS		E	B		D	E	A	D	A
Approach Delay		25.8			36.1		7.3		7.8
Approach LOS		C			D		A		A

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 9.5 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 9.9 Intersection LOS: A
Intersection Capacity Utilization 49.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road



6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	59	164	40	69	937	6	979
v/c Ratio	0.43	0.56	0.26	0.45	0.32	0.06	0.39
Control Delay	56.3	14.9	36.1	55.9	3.8	50.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.3	14.9	36.1	55.9	3.8	50.3	7.6
Queue Length 50th (ft)	40	0	17	47	59	4	131
Queue Length 95th (ft)	75	51	34	90	164	18	213
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	397	535	413	345	2914	352	2534
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.31	0.10	0.20	0.32	0.02	0.39

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	11	139	11	6	10	67	905	4	6	823	97
Future Volume (vph)	39	11	139	11	6	10	67	905	4	6	823	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1787	1599		1768		1770	3608		1805	3518	
Flt Permitted		0.83	1.00		0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1533	1599		1555		1770	3608		1805	3518	
Peak-hour factor, PHF	0.85	0.85	0.85	0.68	0.68	0.68	0.97	0.97	0.97	0.94	0.94	0.94
Adj. Flow (vph)	46	13	164	16	9	15	69	933	4	6	876	103
RTOR Reduction (vph)	0	0	149	0	14	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	59	15	0	26	0	69	937	0	6	975	0
Heavy Vehicles (%)	3%	0%	1%	0%	0%	0%	2%	0%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		9.8	9.8		9.8		8.5	85.3		1.4	78.2	
Effective Green, g (s)		9.8	9.8		9.8		8.5	85.3		1.4	78.2	
Actuated g/C Ratio		0.09	0.09		0.09		0.08	0.78		0.01	0.71	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		136	142		138		136	2797		22	2500	
v/s Ratio Prot							c0.04	0.26		0.00	c0.28	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.43	0.10		0.19		0.51	0.34		0.27	0.39	
Uniform Delay, d1		47.5	46.1		46.4		48.7	3.7		53.8	6.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.2	0.3		0.7		3.0	0.3		6.6	0.5	
Delay (s)		49.7	46.4		47.1		51.7	4.1		60.4	6.8	
Level of Service		D	D		D		D	A		E	A	
Approach Delay (s)		47.3			47.1			7.3			7.1	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	1	0	9	0	55	0	218	36	53	68	0
Future Volume (Veh/h)	0	1	0	9	0	55	0	218	36	53	68	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.82	0.82	0.82	0.83	0.83	0.83	0.93	0.93	0.93
Hourly flow rate (vph)	0	4	0	11	0	67	0	263	43	57	73	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	538	493	73	474	472	284	73			306		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	538	493	73	474	472	284	73			306		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	98	100	91	100			95		
cM capacity (veh/h)	402	458	995	466	471	754	1540			1243		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	78	306	130
Volume Left	0	11	0	57
Volume Right	0	67	43	0
cSH	458	694	1540	1243
Volume to Capacity	0.01	0.11	0.00	0.05
Queue Length 95th (ft)	1	9	0	4
Control Delay (s)	12.9	10.8	0.0	3.7
Lane LOS	B	B		A
Approach Delay (s)	12.9	10.8	0.0	3.7
Approach LOS	B	B		

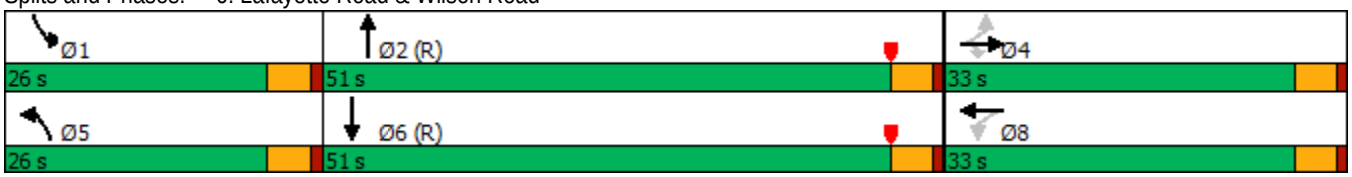
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	11	144	11	6	70	935	6	852
Future Volume (vph)	40	11	144	11	6	70	935	6	852
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	33.0	33.0	33.0	33.0	33.0	26.0	51.0	26.0	51.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	23.6%	46.4%	23.6%	46.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		9.9	9.9		9.9	9.8	88.8	6.0	78.9
Actuated g/C Ratio		0.09	0.09		0.09	0.09	0.81	0.05	0.72
v/c Ratio		0.44	0.57		0.26	0.46	0.33	0.06	0.40
Control Delay		56.2	14.8		35.9	56.0	3.9	50.3	7.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		56.2	14.8		35.9	56.0	3.9	50.3	7.8
LOS		E	B		D	E	A	D	A
Approach Delay		25.7			35.9		7.5		8.1
Approach LOS		C			D		A		A

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 9.5 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 10.0
Intersection LOS: B
Intersection Capacity Utilization 51.0%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road



6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	169	40	72	968	6	1010
v/c Ratio	0.44	0.57	0.26	0.46	0.33	0.06	0.40
Control Delay	56.2	14.8	35.9	56.0	3.9	50.3	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	14.8	35.9	56.0	3.9	50.3	7.8
Queue Length 50th (ft)	41	0	17	49	62	4	138
Queue Length 95th (ft)	76	51	34	93	172	18	224
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	396	539	413	345	2911	352	2528
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.31	0.10	0.21	0.33	0.02	0.40

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	11	144	11	6	10	70	935	4	6	852	98
Future Volume (vph)	40	11	144	11	6	10	70	935	4	6	852	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1786	1599		1768		1770	3608		1805	3519	
Flt Permitted		0.82	1.00		0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1531	1599		1555		1770	3608		1805	3519	
Peak-hour factor, PHF	0.85	0.85	0.85	0.68	0.68	0.68	0.97	0.97	0.97	0.94	0.94	0.94
Adj. Flow (vph)	47	13	169	16	9	15	72	964	4	6	906	104
RTOR Reduction (vph)	0	0	154	0	14	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	60	15	0	26	0	72	968	0	6	1006	0
Heavy Vehicles (%)	3%	0%	1%	0%	0%	0%	2%	0%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		9.9	9.9		9.9		8.6	85.2		1.4	78.0	
Effective Green, g (s)		9.9	9.9		9.9		8.6	85.2		1.4	78.0	
Actuated g/C Ratio		0.09	0.09		0.09		0.08	0.77		0.01	0.71	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		137	143		139		138	2794		22	2495	
v/s Ratio Prot							c0.04	0.27		0.00	c0.29	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.44	0.11		0.19		0.52	0.35		0.27	0.40	
Uniform Delay, d1		47.4	46.0		46.3		48.7	3.8		53.8	6.5	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.2	0.3		0.7		3.5	0.3		6.6	0.5	
Delay (s)		49.6	46.3		47.0		52.3	4.2		60.4	7.0	
Level of Service		D	D		D		D	A		E	A	
Approach Delay (s)		47.2			47.0			7.5			7.3	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	1	0	10	0	61	0	241	40	58	75	0
Future Volume (Veh/h)	0	1	0	10	0	61	0	241	40	58	75	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.82	0.82	0.82	0.83	0.83	0.83	0.93	0.93	0.93
Hourly flow rate (vph)	0	4	0	12	0	74	0	290	48	62	81	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	593	543	81	521	519	314	81			338		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	593	543	81	521	519	314	81			338		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	97	100	90	100			95		
cM capacity (veh/h)	363	427	985	431	440	726	1529			1210		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	86	338	143
Volume Left	0	12	0	62
Volume Right	0	74	48	0
cSH	427	663	1529	1210
Volume to Capacity	0.01	0.13	0.00	0.05
Queue Length 95th (ft)	1	11	0	4
Control Delay (s)	13.5	11.2	0.0	3.8
Lane LOS	B	B		A
Approach Delay (s)	13.5	11.2	0.0	3.8
Approach LOS	B	B		

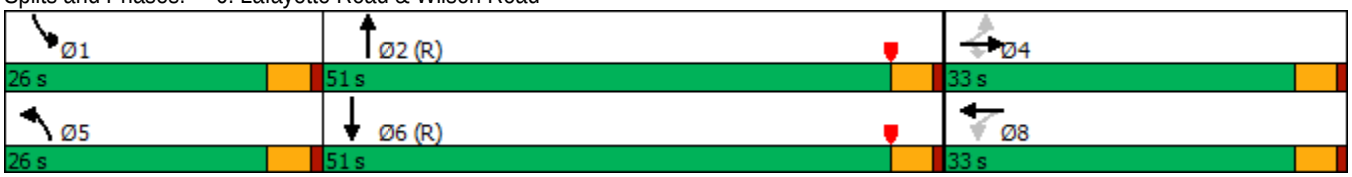
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	44	13	159	13	7	77	1031	7	939
Future Volume (vph)	44	13	159	13	7	77	1031	7	939
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	33.0	33.0	33.0	33.0	33.0	26.0	51.0	26.0	51.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	23.6%	46.4%	23.6%	46.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		10.4	10.4		10.4	10.3	88.3	6.0	78.0
Actuated g/C Ratio		0.09	0.09		0.09	0.09	0.80	0.05	0.71
v/c Ratio		0.47	0.58		0.29	0.48	0.37	0.07	0.45
Control Delay		56.9	14.2		35.4	56.2	4.2	50.4	8.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		56.9	14.2		35.4	56.2	4.2	50.4	8.7
LOS		E	B		D	E	A	D	A
Approach Delay		25.5			35.4		7.8		9.0
Approach LOS		C			D		A		A

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 9.5 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 10.6
Intersection LOS: B
Intersection Capacity Utilization 54.7%
ICU Level of Service A
Analysis Period (min) 15

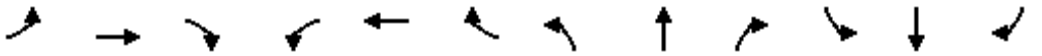
Splits and Phases: 6: Lafayette Road & Wilson Road



6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	187	47	79	1068	7	1114
v/c Ratio	0.47	0.58	0.29	0.48	0.37	0.07	0.45
Control Delay	56.9	14.2	35.4	56.2	4.2	50.4	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	14.2	35.4	56.2	4.2	50.4	8.7
Queue Length 50th (ft)	46	0	19	54	74	5	165
Queue Length 95th (ft)	82	54	37	100	202	20	267
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	389	552	412	345	2893	352	2499
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.34	0.11	0.23	0.37	0.02	0.45

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	13	159	13	7	12	77	1031	5	7	939	108
Future Volume (vph)	44	13	159	13	7	12	77	1031	5	7	939	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1787	1599		1766		1770	3607		1805	3519	
Flt Permitted		0.81	1.00		0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1505	1599		1542		1770	3607		1805	3519	
Peak-hour factor, PHF	0.85	0.85	0.85	0.68	0.68	0.68	0.97	0.97	0.97	0.94	0.94	0.94
Adj. Flow (vph)	52	15	187	19	10	18	79	1063	5	7	999	115
RTOR Reduction (vph)	0	0	169	0	16	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	67	18	0	31	0	79	1068	0	7	1110	0
Heavy Vehicles (%)	3%	0%	1%	0%	0%	0%	2%	0%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		10.4	10.4		10.4		9.0	84.7		1.4	77.1	
Effective Green, g (s)		10.4	10.4		10.4		9.0	84.7		1.4	77.1	
Actuated g/C Ratio		0.09	0.09		0.09		0.08	0.77		0.01	0.70	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		142	151		145		144	2777		22	2466	
v/s Ratio Prot							c0.04	0.30		0.00	c0.32	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.47	0.12		0.21		0.55	0.38		0.32	0.45	
Uniform Delay, d1		47.2	45.6		46.0		48.5	4.1		53.8	7.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.5	0.3		0.7		4.2	0.4		8.2	0.6	
Delay (s)		49.7	45.9		46.7		52.8	4.5		62.0	7.8	
Level of Service		D	D		D		D	A		E	A	
Approach Delay (s)		46.9			46.7			7.9			8.1	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	28	2	9	44	55	3	218	36	53	68	17
Future Volume (Veh/h)	11	28	2	9	44	55	3	218	36	53	68	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.82	0.82	0.82	0.83	0.83	0.83	0.93	0.93	0.93
Hourly flow rate (vph)	12	31	2	11	54	67	4	263	43	57	73	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	582	510	82	506	498	284	91			306		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	582	510	82	506	498	284	91			306		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	96	93	100	97	88	91	100			95		
cM capacity (veh/h)	341	447	983	421	454	754	1517			1243		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	45	132	310	148
Volume Left	12	11	4	57
Volume Right	2	67	43	18
cSH	422	564	1517	1243
Volume to Capacity	0.11	0.23	0.00	0.05
Queue Length 95th (ft)	9	23	0	4
Control Delay (s)	14.5	13.3	0.1	3.3
Lane LOS	B	B	A	A
Approach Delay (s)	14.5	13.3	0.1	3.3
Approach LOS	B	B		

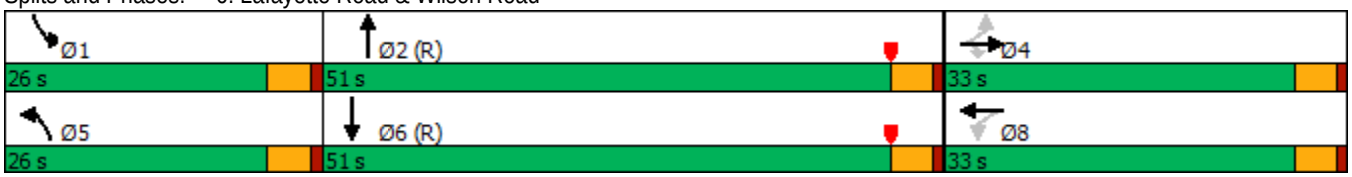
Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	46	15	164	11	6	87	935	6	852
Future Volume (vph)	46	15	164	11	6	87	935	6	852
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	33.0	33.0	33.0	33.0	33.0	26.0	51.0	26.0	51.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	23.6%	46.4%	23.6%	46.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		10.7	10.7		10.7	10.9	88.0	6.0	77.1
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.80	0.05	0.70
v/c Ratio		0.48	0.58		0.24	0.51	0.34	0.06	0.42
Control Delay		57.0	14.0		34.6	56.6	4.1	50.3	8.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		57.0	14.0		34.6	56.6	4.1	50.3	8.9
LOS		E	B		C	E	A	D	A
Approach Delay		25.7			34.6		8.6		9.1
Approach LOS		C			C		A		A

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 9.5 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 11.1
Intersection LOS: B
Intersection Capacity Utilization 53.0%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	72	193	40	90	968	6	1037
v/c Ratio	0.48	0.58	0.24	0.51	0.34	0.06	0.42
Control Delay	57.0	14.0	34.6	56.6	4.1	50.3	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	14.0	34.6	56.6	4.1	50.3	8.9
Queue Length 50th (ft)	49	0	16	61	66	4	153
Queue Length 95th (ft)	87	53	34	109	180	18	251
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	395	557	414	345	2884	352	2462
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.35	0.10	0.26	0.34	0.02	0.42

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	15	164	11	6	10	87	935	4	6	852	123
Future Volume (vph)	46	15	164	11	6	10	87	935	4	6	852	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1791	1599		1768		1770	3608		1805	3507	
Flt Permitted		0.82	1.00		0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1527	1599		1557		1770	3608		1805	3507	
Peak-hour factor, PHF	0.85	0.85	0.85	0.68	0.68	0.68	0.97	0.97	0.97	0.94	0.94	0.94
Adj. Flow (vph)	54	18	193	16	9	15	90	964	4	6	906	131
RTOR Reduction (vph)	0	0	174	0	14	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	72	19	0	26	0	90	968	0	6	1031	0
Heavy Vehicles (%)	3%	0%	1%	0%	0%	0%	2%	0%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		10.7	10.7		10.7		9.6	84.4		1.4	76.2	
Effective Green, g (s)		10.7	10.7		10.7		9.6	84.4		1.4	76.2	
Actuated g/C Ratio		0.10	0.10		0.10		0.09	0.77		0.01	0.69	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		148	155		151		154	2768		22	2429	
v/s Ratio Prot							c0.05	0.27		0.00	c0.29	
v/s Ratio Perm		c0.05	0.01		0.02							
v/c Ratio		0.49	0.12		0.18		0.58	0.35		0.27	0.42	
Uniform Delay, d1		47.0	45.4		45.6		48.3	4.1		53.8	7.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.5	0.4		0.6		5.6	0.3		6.6	0.5	
Delay (s)		49.6	45.7		46.2		53.8	4.4		60.4	7.9	
Level of Service		D	D		D		D	A		E	A	
Approach Delay (s)		46.8			46.2			8.6			8.2	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	28	2	10	44	61	3	241	40	58	75	17
Future Volume (Veh/h)	11	28	2	10	44	61	3	241	40	58	75	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.82	0.82	0.82	0.83	0.83	0.83	0.93	0.93	0.93
Hourly flow rate (vph)	12	31	2	12	54	74	4	290	48	62	81	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	637	560	90	554	545	314	99			338		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	637	560	90	554	545	314	99			338		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	96	93	100	97	87	90	100			95		
cM capacity (veh/h)	306	416	973	388	424	726	1507			1210		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	45	140	342	161
Volume Left	12	12	4	62
Volume Right	2	74	48	18
cSH	389	538	1507	1210
Volume to Capacity	0.12	0.26	0.00	0.05
Queue Length 95th (ft)	10	26	0	4
Control Delay (s)	15.5	14.0	0.1	3.4
Lane LOS	C	B	A	A
Approach Delay (s)	15.5	14.0	0.1	3.4
Approach LOS	C	B		

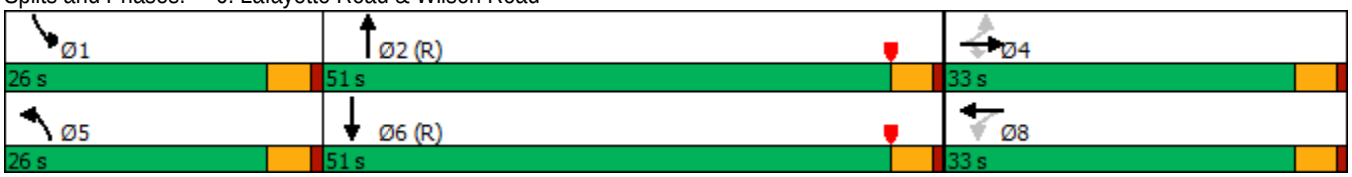
Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	40.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	17	179	13	7	94	1031	7	939
Future Volume (vph)	50	17	179	13	7	94	1031	7	939
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	33.0	33.0	33.0	33.0	33.0	26.0	51.0	26.0	51.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	23.6%	46.4%	23.6%	46.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)		11.3	11.3		11.3	11.4	87.4	6.0	73.8
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.79	0.05	0.67
v/c Ratio		0.51	0.60		0.27	0.53	0.37	0.07	0.48
Control Delay		57.3	13.5		34.0	56.7	4.6	50.4	10.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		57.3	13.5		34.0	56.7	4.6	50.4	10.4
LOS		E	B		C	E	A	D	B
Approach Delay		25.4			34.0		8.9		10.7
Approach LOS		C			C		A		B

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 9.5 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 11.9
Intersection LOS: B
Intersection Capacity Utilization 56.7%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road



6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	79	211	47	97	1068	7	1140
v/c Ratio	0.51	0.60	0.27	0.53	0.37	0.07	0.48
Control Delay	57.3	13.5	34.0	56.7	4.6	50.4	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	13.5	34.0	56.7	4.6	50.4	10.4
Queue Length 50th (ft)	54	0	19	66	79	5	183
Queue Length 95th (ft)	93	55	37	116	211	20	297
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	390	570	413	345	2864	352	2358
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.37	0.11	0.28	0.37	0.02	0.48

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	17	179	13	7	12	94	1031	5	7	939	133
Future Volume (vph)	50	17	179	13	7	12	94	1031	5	7	939	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1791	1599		1766		1770	3607		1805	3508	
Flt Permitted		0.81	1.00		0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1507	1599		1544		1770	3607		1805	3508	
Peak-hour factor, PHF	0.85	0.85	0.85	0.68	0.68	0.68	0.97	0.97	0.97	0.94	0.94	0.94
Adj. Flow (vph)	59	20	211	19	10	18	97	1063	5	7	999	141
RTOR Reduction (vph)	0	0	189	0	16	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	79	22	0	31	0	97	1068	0	7	1134	0
Heavy Vehicles (%)	3%	0%	1%	0%	0%	0%	2%	0%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		11.3	11.3		11.3		11.4	83.8		1.4	73.8	
Effective Green, g (s)		11.3	11.3		11.3		11.4	83.8		1.4	73.8	
Actuated g/C Ratio		0.10	0.10		0.10		0.10	0.76		0.01	0.67	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		154	164		158		183	2747		22	2353	
v/s Ratio Prot							c0.05	0.30		0.00	c0.32	
v/s Ratio Perm		c0.05	0.01		0.02							
v/c Ratio		0.51	0.13		0.20		0.53	0.39		0.32	0.48	
Uniform Delay, d1		46.7	44.9		45.2		46.8	4.4		53.8	8.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.9	0.4		0.6		2.9	0.4		8.2	0.7	
Delay (s)		49.6	45.3		45.8		49.7	4.8		62.0	9.5	
Level of Service		D	D		D		D	A		E	A	
Approach Delay (s)		46.4			45.8			8.6			9.8	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX J

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	0	3	1	62	0	28	2	37	39	0
Future Volume (Veh/h)	0	1	0	3	1	62	0	28	2	37	39	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.80	0.80	0.80	0.75	0.75	0.75	0.80	0.80	0.80
Hourly flow rate (vph)	0	4	0	4	1	78	0	37	3	46	49	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	258	181	49	182	180	38	49			40		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	258	181	49	182	180	38	49			40		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	99	100	92	100			97		
cM capacity (veh/h)	631	696	1025	764	697	1033	1571			1583		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	83	40	95
Volume Left	0	4	0	46
Volume Right	0	78	3	0
cSH	696	1010	1571	1583
Volume to Capacity	0.01	0.08	0.00	0.03
Queue Length 95th (ft)	0	7	0	2
Control Delay (s)	10.2	8.9	0.0	3.7
Lane LOS	B	A		A
Approach Delay (s)	10.2	8.9	0.0	3.7
Approach LOS	B	A		

Intersection Summary				
Average Delay	5.1			
Intersection Capacity Utilization	24.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	46	2	117	14	13	104	898	5	885
Future Volume (vph)	46	2	117	14	13	104	898	5	885
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	28.0	20.0	50.0	20.0	50.0
Total Split (%)	28.6%	28.6%	28.6%	28.6%	28.6%	20.4%	51.0%	20.4%	51.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)		8.6	8.6		8.6	9.7	41.1	6.0	31.2
Actuated g/C Ratio		0.14	0.14		0.14	0.16	0.68	0.10	0.51
v/c Ratio		0.33	0.42		0.20	0.39	0.40	0.03	0.60
Control Delay		31.9	9.9		23.0	29.9	5.7	31.8	13.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		31.9	9.9		23.0	29.9	5.7	31.8	13.4
LOS		C	A		C	C	A	C	B
Approach Delay		16.4			23.0		8.2		13.5
Approach LOS		B			C		A		B

Intersection Summary

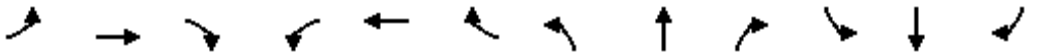
Cycle Length: 98
Actuated Cycle Length: 60.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 54.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	62	150	48	112	970	5	1083
v/c Ratio	0.33	0.42	0.20	0.39	0.40	0.03	0.60
Control Delay	31.9	9.9	23.0	29.9	5.7	31.8	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	9.9	23.0	29.9	5.7	31.8	13.4
Queue Length 50th (ft)	20	0	10	35	55	2	141
Queue Length 95th (ft)	55	33	39	99	172	13	256
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	537	734	649	480	2850	480	2746
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.20	0.07	0.23	0.34	0.01	0.39

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	2	117	14	13	11	104	898	4	5	885	122
Future Volume (vph)	46	2	117	14	13	11	104	898	4	5	885	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	0.98	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1814	1599		1792		1805	3572		1805	3509	
Flt Permitted		0.70	1.00		0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1332	1599		1588		1805	3572		1805	3509	
Peak-hour factor, PHF	0.78	0.78	0.78	0.80	0.80	0.80	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	59	3	150	18	16	14	112	966	4	5	952	131
RTOR Reduction (vph)	0	0	130	0	12	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	62	20	0	36	0	112	970	0	5	1074	0
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		8.6	8.6		8.6		8.1	41.1		1.0	34.0	
Effective Green, g (s)		8.6	8.6		8.6		8.1	41.1		1.0	34.0	
Actuated g/C Ratio		0.13	0.13		0.13		0.13	0.64		0.02	0.53	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		178	214		212		227	2286		28	1858	
v/s Ratio Prot							c0.06	0.27		0.00	c0.31	
v/s Ratio Perm		c0.05	0.01		0.02							
v/c Ratio		0.35	0.09		0.17		0.49	0.42		0.18	0.58	
Uniform Delay, d1		25.3	24.4		24.6		26.1	5.7		31.2	10.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.2	0.2		0.4		1.7	0.1		3.0	0.4	
Delay (s)		26.4	24.6		25.0		27.8	5.8		34.2	10.7	
Level of Service		C	C		C		C	A		C	B	
Approach Delay (s)		25.1			25.0			8.1			10.8	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	0	3	1	65	0	28	2	41	40	0
Future Volume (Veh/h)	0	1	0	3	1	65	0	28	2	41	40	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.80	0.80	0.80	0.75	0.75	0.75	0.80	0.80	0.80
Hourly flow rate (vph)	0	4	0	4	1	81	0	37	3	51	50	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	272	192	50	192	190	38	50			40		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	272	192	50	192	190	38	50			40		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	99	100	92	100			97		
cM capacity (veh/h)	615	684	1024	749	685	1033	1570			1583		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	86	40	101
Volume Left	0	4	0	51
Volume Right	0	81	3	0
cSH	684	1010	1570	1583
Volume to Capacity	0.01	0.09	0.00	0.03
Queue Length 95th (ft)	0	7	0	2
Control Delay (s)	10.3	8.9	0.0	3.8
Lane LOS	B	A		A
Approach Delay (s)	10.3	8.9	0.0	3.8
Approach LOS	B	A		

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	24.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	46	2	121	14	13	109	932	5	915
Future Volume (vph)	46	2	121	14	13	109	932	5	915
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	28.0	20.0	50.0	20.0	50.0
Total Split (%)	28.6%	28.6%	28.6%	28.6%	28.6%	20.4%	51.0%	20.4%	51.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)		8.6	8.6		8.6	10.0	42.8	6.0	32.6
Actuated g/C Ratio		0.14	0.14		0.14	0.16	0.69	0.10	0.52
v/c Ratio		0.34	0.44		0.21	0.41	0.41	0.03	0.61
Control Delay		33.2	10.2		23.9	31.0	5.6	33.0	13.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		33.2	10.2		23.9	31.0	5.6	33.0	13.4
LOS		C	B		C	C	A	C	B
Approach Delay		16.8			23.9		8.3		13.5
Approach LOS		B			C		A		B

Intersection Summary

Cycle Length: 98
Actuated Cycle Length: 62.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.6 Intersection LOS: B
Intersection Capacity Utilization 55.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	62	155	48	117	1006	5	1116
v/c Ratio	0.34	0.44	0.21	0.41	0.41	0.03	0.61
Control Delay	33.2	10.2	23.9	31.0	5.6	33.0	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	10.2	23.9	31.0	5.6	33.0	13.4
Queue Length 50th (ft)	21	0	11	38	58	2	149
Queue Length 95th (ft)	57	34	41	106	180	13	270
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	523	722	633	467	2813	467	2676
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.21	0.08	0.25	0.36	0.01	0.42

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	2	121	14	13	11	109	932	4	5	915	123
Future Volume (vph)	46	2	121	14	13	11	109	932	4	5	915	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	0.98	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1814	1599		1792		1805	3572		1805	3511	
Flt Permitted		0.70	1.00		0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1332	1599		1587		1805	3572		1805	3511	
Peak-hour factor, PHF	0.78	0.78	0.78	0.80	0.80	0.80	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	59	3	155	18	16	14	117	1002	4	5	984	132
RTOR Reduction (vph)	0	0	135	0	12	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	62	20	0	36	0	117	1006	0	5	1107	0
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		8.6	8.6		8.6		8.3	42.8		1.0	35.5	
Effective Green, g (s)		8.6	8.6		8.6		8.3	42.8		1.0	35.5	
Actuated g/C Ratio		0.13	0.13		0.13		0.13	0.65		0.02	0.54	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		173	208		207		227	2319		27	1891	
v/s Ratio Prot							c0.06	0.28		0.00	c0.32	
v/s Ratio Perm		c0.05	0.01		0.02							
v/c Ratio		0.36	0.10		0.17		0.52	0.43		0.19	0.59	
Uniform Delay, d1		26.1	25.2		25.5		26.9	5.6		32.0	10.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3	0.2		0.4		2.0	0.1		3.3	0.5	
Delay (s)		27.4	25.4		25.9		28.9	5.8		35.4	10.7	
Level of Service		C	C		C		C	A		D	B	
Approach Delay (s)		26.0			25.9			8.2			10.8	
Approach LOS		C			C			A			B	

Intersection Summary

HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	0	4	1	72	0	31	2	45	44	0
Future Volume (Veh/h)	0	1	0	4	1	72	0	31	2	45	44	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.80	0.80	0.80	0.75	0.75	0.75	0.80	0.80	0.80
Hourly flow rate (vph)	0	4	0	5	1	90	0	41	3	56	55	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	300	211	55	212	210	42	55			44		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	300	211	55	212	210	42	55			44		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	99	100	91	100			96		
cM capacity (veh/h)	582	665	1018	726	667	1028	1563			1577		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	96	44	111
Volume Left	0	5	0	56
Volume Right	0	90	3	0
cSH	665	1001	1563	1577
Volume to Capacity	0.01	0.10	0.00	0.04
Queue Length 95th (ft)	0	8	0	3
Control Delay (s)	10.4	9.0	0.0	3.9
Lane LOS	B	A		A
Approach Delay (s)	10.4	9.0	0.0	3.9
Approach LOS	B	A		

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	26.4%	ICU Level of Service	A	
Analysis Period (min)	15			

6: Lafayette Road & Wilson Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	51	2	134	15	14	120	1026	6	1008
Future Volume (vph)	51	2	134	15	14	120	1026	6	1008
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	28.0	20.0	50.0	20.0	50.0
Total Split (%)	28.6%	28.6%	28.6%	28.6%	28.6%	20.4%	51.0%	20.4%	51.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)		9.2	9.2		9.2	10.7	46.7	6.1	36.1
Actuated g/C Ratio		0.14	0.14		0.14	0.16	0.70	0.09	0.54
v/c Ratio		0.38	0.47		0.23	0.45	0.44	0.04	0.65
Control Delay		36.4	10.4		25.6	34.0	5.8	35.5	14.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		36.4	10.4		25.6	34.0	5.8	35.5	14.4
LOS		D	B		C	C	A	D	B
Approach Delay		17.8			25.6		8.8		14.5
Approach LOS		B			C		A		B

Intersection Summary

Cycle Length: 98
Actuated Cycle Length: 67
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 12.4 Intersection LOS: B
Intersection Capacity Utilization 59.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	68	172	52	129	1108	6	1230
v/c Ratio	0.38	0.47	0.23	0.45	0.44	0.04	0.65
Control Delay	36.4	10.4	25.6	34.0	5.8	35.5	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	10.4	25.6	34.0	5.8	35.5	14.4
Queue Length 50th (ft)	25	0	13	47	70	2	183
Queue Length 95th (ft)	63	35	44	118	210	15	320
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	486	696	593	437	2740	437	2504
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.25	0.09	0.30	0.40	0.01	0.49

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	2	134	15	14	12	120	1026	5	6	1008	136
Future Volume (vph)	51	2	134	15	14	12	120	1026	5	6	1008	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	0.98	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1813	1599		1793		1805	3572		1805	3511	
Flt Permitted		0.70	1.00		0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1325	1599		1591		1805	3572		1805	3511	
Peak-hour factor, PHF	0.78	0.78	0.78	0.80	0.80	0.80	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	65	3	172	19	18	15	129	1103	5	6	1084	146
RTOR Reduction (vph)	0	0	150	0	13	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	68	22	0	39	0	129	1108	0	6	1221	0
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		9.1	9.1		9.1		8.8	46.7		1.0	38.9	
Effective Green, g (s)		9.1	9.1		9.1		8.8	46.7		1.0	38.9	
Actuated g/C Ratio		0.13	0.13		0.13		0.13	0.66		0.01	0.55	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		171	206		205		225	2372		25	1942	
v/s Ratio Prot							c0.07	0.31		0.00	c0.35	
v/s Ratio Perm		c0.05	0.01		0.02							
v/c Ratio		0.40	0.11		0.19		0.57	0.47		0.24	0.63	
Uniform Delay, d1		28.1	27.0		27.3		29.0	5.7		34.3	10.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5	0.2		0.5		3.5	0.1		4.9	0.6	
Delay (s)		29.6	27.2		27.8		32.5	5.9		39.2	11.4	
Level of Service		C	C		C		C	A		D	B	
Approach Delay (s)		27.9			27.8			8.7			11.5	
Approach LOS		C			C			A			B	

Intersection Summary

HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	70.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	26	2	3	25	65	2	28	2	41	40	21
Future Volume (Veh/h)	22	26	2	3	25	65	2	28	2	41	40	21
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.80	0.80	0.80	0.75	0.75	0.75	0.80	0.80	0.80
Hourly flow rate (vph)	24	29	2	4	31	81	3	37	3	51	50	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	306	211	63	226	222	38	76			40		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	306	211	63	226	222	38	76			40		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	96	100	99	95	92	100			97		
cM capacity (veh/h)	563	666	1007	690	657	1033	1536			1583		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	55	116	43	127
Volume Left	24	4	3	51
Volume Right	2	81	3	26
cSH	624	883	1536	1583
Volume to Capacity	0.09	0.13	0.00	0.03
Queue Length 95th (ft)	7	11	0	2
Control Delay (s)	11.3	9.7	0.5	3.1
Lane LOS	B	A	A	A
Approach Delay (s)	11.3	9.7	0.5	3.1
Approach LOS	B	A		

Intersection Summary				
Average Delay	6.3			
Intersection Capacity Utilization	28.4%	ICU Level of Service	A	
Analysis Period (min)	15			

6: Lafayette Road & Wilson Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	53	3	139	14	13	119	932	5	915
Future Volume (vph)	53	3	139	14	13	119	932	5	915
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	28.0	20.0	50.0	20.0	50.0
Total Split (%)	28.6%	28.6%	28.6%	28.6%	28.6%	20.4%	51.0%	20.4%	51.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)		9.3	9.3		9.3	10.5	43.5	6.1	33.0
Actuated g/C Ratio		0.15	0.15		0.15	0.16	0.68	0.10	0.52
v/c Ratio		0.37	0.46		0.20	0.43	0.41	0.03	0.62
Control Delay		34.4	9.9		24.1	32.3	5.8	34.4	14.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		34.4	9.9		24.1	32.3	5.8	34.4	14.2
LOS		C	A		C	C	A	C	B
Approach Delay		17.0			24.1		8.8		14.2
Approach LOS		B			C		A		B

Intersection Summary

Cycle Length: 98
Actuated Cycle Length: 63.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 12.3 Intersection LOS: B
Intersection Capacity Utilization 56.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	72	178	48	128	1006	5	1129
v/c Ratio	0.37	0.46	0.20	0.43	0.41	0.03	0.62
Control Delay	34.4	9.9	24.1	32.3	5.8	34.4	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	9.9	24.1	32.3	5.8	34.4	14.2
Queue Length 50th (ft)	25	0	11	44	61	2	158
Queue Length 95th (ft)	66	35	41	117	186	14	286
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	519	730	626	462	2800	462	2630
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.24	0.08	0.28	0.36	0.01	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	3	139	14	13	11	119	932	4	5	915	135
Future Volume (vph)	53	3	139	14	13	11	119	932	4	5	915	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	0.98	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1814	1599		1792		1805	3572		1805	3505	
Flt Permitted		0.70	1.00		0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1335	1599		1590		1805	3572		1805	3505	
Peak-hour factor, PHF	0.78	0.78	0.78	0.80	0.80	0.80	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	68	4	178	18	16	14	128	1002	4	5	984	145
RTOR Reduction (vph)	0	0	153	0	12	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	72	25	0	36	0	128	1006	0	5	1119	0
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		9.3	9.3		9.3		8.6	43.5		0.9	35.8	
Effective Green, g (s)		9.3	9.3		9.3		8.6	43.5		0.9	35.8	
Actuated g/C Ratio		0.14	0.14		0.14		0.13	0.65		0.01	0.53	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		184	221		220		230	2312		24	1867	
v/s Ratio Prot							c0.07	0.28		0.00	c0.32	
v/s Ratio Perm		c0.05	0.02		0.02							
v/c Ratio		0.39	0.11		0.16		0.56	0.43		0.21	0.60	
Uniform Delay, d1		26.4	25.3		25.5		27.5	5.8		32.8	10.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.4	0.2		0.4		2.9	0.1		4.3	0.5	
Delay (s)		27.7	25.6		25.9		30.4	5.9		37.1	11.3	
Level of Service		C	C		C		C	A		D	B	
Approach Delay (s)		26.2			25.9			8.7			11.4	
Approach LOS		C			C			A			B	

Intersection Summary

HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	26	2	4	25	72	2	31	2	45	44	21
Future Volume (Veh/h)	22	26	2	4	25	72	2	31	2	45	44	21
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.80	0.80	0.80	0.75	0.75	0.75	0.80	0.80	0.80
Hourly flow rate (vph)	24	29	2	5	31	90	3	41	3	56	55	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	334	230	68	245	242	42	81			44		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	334	230	68	245	242	42	81			44		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	96	100	99	95	91	100			96		
cM capacity (veh/h)	532	648	1001	668	639	1028	1529			1577		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	55	126	47	137
Volume Left	24	5	3	56
Volume Right	2	90	3	26
cSH	599	878	1529	1577
Volume to Capacity	0.09	0.14	0.00	0.04
Queue Length 95th (ft)	8	13	0	3
Control Delay (s)	11.6	9.8	0.5	3.2
Lane LOS	B	A	A	A
Approach Delay (s)	11.6	9.8	0.5	3.2
Approach LOS	B	A		

Intersection Summary				
Average Delay	6.4			
Intersection Capacity Utilization	28.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	58	3	152	15	14	130	1026	6	1008
Future Volume (vph)	58	3	152	15	14	130	1026	6	1008
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	28.0	20.0	50.0	20.0	50.0
Total Split (%)	28.6%	28.6%	28.6%	28.6%	28.6%	20.4%	51.0%	20.4%	51.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)		9.8	9.8		9.8	11.2	46.9	6.2	36.2
Actuated g/C Ratio		0.14	0.14		0.14	0.16	0.69	0.09	0.53
v/c Ratio		0.41	0.49		0.21	0.47	0.45	0.04	0.66
Control Delay		37.2	10.1		25.5	35.3	6.1	36.5	15.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		37.2	10.1		25.5	35.3	6.1	36.5	15.1
LOS		D	B		C	D	A	D	B
Approach Delay		17.8			25.5		9.4		15.2
Approach LOS		B			C		A		B

Intersection Summary

Cycle Length: 98
Actuated Cycle Length: 68
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 13.1 Intersection LOS: B
Intersection Capacity Utilization 60.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Lafayette Road & Wilson Road

6: Lafayette Road & Wilson Road

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	78	195	52	140	1108	6	1243
v/c Ratio	0.41	0.49	0.21	0.47	0.45	0.04	0.66
Control Delay	37.2	10.1	25.5	35.3	6.1	36.5	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	10.1	25.5	35.3	6.1	36.5	15.1
Queue Length 50th (ft)	31	0	14	54	75	2	197
Queue Length 95th (ft)	70	35	44	129	217	16	334
Internal Link Dist (ft)	460		320		245		320
Turn Bay Length (ft)		100				225	
Base Capacity (vph)	487	710	594	437	2754	437	2476
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.27	0.09	0.32	0.40	0.01	0.50

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	3	152	15	14	12	130	1026	5	6	1008	148
Future Volume (vph)	58	3	152	15	14	12	130	1026	5	6	1008	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	0.98	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1814	1599		1793		1805	3572		1805	3506	
Flt Permitted		0.70	1.00		0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1328	1599		1594		1805	3572		1805	3506	
Peak-hour factor, PHF	0.78	0.78	0.78	0.80	0.80	0.80	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	74	4	195	19	18	15	140	1103	5	6	1084	159
RTOR Reduction (vph)	0	0	168	0	13	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	78	27	0	39	0	140	1108	0	6	1233	0
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		9.8	9.8		9.8		9.0	46.9		1.0	38.9	
Effective Green, g (s)		9.8	9.8		9.8		9.0	46.9		1.0	38.9	
Actuated g/C Ratio		0.14	0.14		0.14		0.13	0.66		0.01	0.55	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		182	220		219		228	2352		25	1915	
v/s Ratio Prot							c0.08	0.31		0.00	c0.35	
v/s Ratio Perm		c0.06	0.02		0.02							
v/c Ratio		0.43	0.12		0.18		0.61	0.47		0.24	0.64	
Uniform Delay, d1		28.1	26.9		27.1		29.5	6.0		34.7	11.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.6	0.2		0.4		4.8	0.1		4.9	0.8	
Delay (s)		29.8	27.2		27.5		34.3	6.2		39.7	12.1	
Level of Service		C	C		C		C	A		D	B	
Approach Delay (s)		27.9			27.5			9.3			12.2	
Approach LOS		C			C			A			B	

Intersection Summary

HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	71.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX K

NH DOT - SEQUENCE AND TIMING CHART

7/11/2022 10:22:05 AM

CITY/TOWN: PORTSMOUTH **SIGNAL ID#:** S-379-16

LOCATION: US 1

INTERSECT: WILSON AVENUE/INDUSTRIAL PARK ENTRA

CABINET TYPE: P TYPE-1 **METER NUMBER and MFR:** 74-398-049 ES

CONTROLLER INFO

INSTALL DATE: 6 /27/1995 **FIRE PREEMPT** TOMAR

*****CONTROLLER TIMINGS*****

	PH 1	PH 2	PH 4	PH 5	PH 6	PH 8
INITIAL	5	10	7	5	10	7
PASSAGE	4	5	4	4	5	4
YELLOW	4	4	4	4	4	4
ALL RED	2	2	2	2	2	4
MAXIMUM 1	16	32	24	16	32	24
MAXIMUM 2	20	50	28	20	50	28
MAXIMUM 3						
MAXIMUM EXT						
RECALL	NL	MIN	NL	NL	MIN	NL
WALK		4				4
DON'T WALK		8				16
FL YEL ARROW						
MOVEMENT	SLT	1N	EAST	NLT	1S	WEST
TIME TO REDUCE						
REDUCE BY						
MIN GAP						
DYN MAX LIMI						
DYN MAX STEP						

NOTES:

SYS 906
PAT 2 CYCLE = 86s OFF = 60s
SPLIT = 18, 42, 26, 18, 42, 26 cord 2

PAT 3 CYCLE = 110s OFF = 73s
SPLIT = 26, 51, 33, 26, 51, 33 cord 2
DP1 0000 54, 0700 2, 1000 3, 1900 54, 2000 1(254) M-F

APPENDIX L

Location Map: 228713 Portsmouth, NH

Precision Data Industries, LLC 157 Washington Street, Suite 2, Hudson, MA 01749 ph: 508-875-0100 email: datarequests@pdillc.com

Client:	Engineer:	Site Code:	Date:	PDI Job #	City, State:
TFMoran	J. Porter	47107.02	Thurs 6/23 and Sat 6/25/2022	228713	Portsmouth, NH

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	27	5	0	32	3	0	3	0	6	1	18	0	0	19	0	0	0	0	0	57
7:15 AM	0	24	4	0	28	3	0	1	0	4	0	10	0	0	10	0	0	0	0	0	42
7:30 AM	0	35	4	0	39	4	0	0	0	4	4	24	0	0	28	0	0	0	0	0	71
7:45 AM	2	61	2	0	65	7	0	7	0	14	4	22	0	0	26	0	0	0	0	0	105
Total	2	147	15	0	164	17	0	11	0	28	9	74	0	0	83	0	0	0	0	0	275
8:00 AM	0	65	8	0	73	7	0	3	0	10	1	25	0	0	26	0	0	0	0	0	109
8:15 AM	0	46	4	0	50	8	0	7	0	15	6	24	0	0	30	0	0	0	0	0	95
8:30 AM	0	32	5	0	37	9	0	5	0	14	3	29	0	0	32	0	0	0	0	0	83
8:45 AM	0	39	7	0	46	5	0	1	0	6	5	26	0	0	31	0	0	0	0	0	83
Total	0	182	24	0	206	29	0	16	0	45	15	104	0	0	119	0	0	0	0	0	370
Grand Total	2	329	39	0	370	46	0	27	0	73	24	178	0	0	202	0	0	0	0	0	645
Approach %	0.5	88.9	10.5	0.0		63.0	0.0	37.0	0.0		11.9	88.1	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.3	51.0	6.0	0.0	57.4	7.1	0.0	4.2	0.0	11.3	3.7	27.6	0.0	0.0	31.3	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					224					63					356					2	645
Cars	2	309	37	0	348	43	0	22	0	65	18	153	0	0	171	0	0	0	0	0	584
% Cars	100.0	93.9	94.9	0.0	94.1	93.5	0.0	81.5	0.0	89.0	75.0	86.0	0.0	0.0	84.7	0.0	0.0	0.0	0.0	0.0	90.5
Exiting Leg Total					196					55					331					2	584
Heavy Vehicles	0	20	2	0	22	3	0	5	0	8	6	25	0	0	31	0	0	0	0	0	61
% Heavy Vehicles	0.0	6.1	5.1	0.0	5.9	6.5	0.0	18.5	0.0	11.0	25.0	14.0	0.0	0.0	15.3	0.0	0.0	0.0	0.0	0.0	9.5
Exiting Leg Total					28					8					25					0	61

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:45 AM	2	61	2	0	65	7	0	7	0	14	4	22	0	0	26	0	0	0	0	0	105
8:00 AM	0	65	8	0	73	7	0	3	0	10	1	25	0	0	26	0	0	0	0	0	109
8:15 AM	0	46	4	0	50	8	0	7	0	15	6	24	0	0	30	0	0	0	0	0	95
8:30 AM	0	32	5	0	37	9	0	5	0	14	3	29	0	0	32	0	0	0	0	0	83
Total Volume	2	204	19	0	225	31	0	22	0	53	14	100	0	0	114	0	0	0	0	0	392
% Approach Total	0.9	90.7	8.4	0.0		58.5	0.0	41.5	0.0		12.3	87.7	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.250	0.785	0.594	0.000	0.771	0.861	0.000	0.786	0.000	0.883	0.583	0.862	0.000	0.000	0.891	0.000	0.000	0.000	0.000	0.000	0.899
Cars	2	192	18	0	212	29	0	20	0	49	11	89	0	0	100	0	0	0	0	0	361
Cars %	100.0	94.1	94.7	0.0	94.2	93.5	0.0	90.9	0.0	92.5	78.6	89.0	0.0	0.0	87.7	0.0	0.0	0.0	0.0	0.0	92.1
Heavy Vehicles	0	12	1	0	13	2	0	2	0	4	3	11	0	0	14	0	0	0	0	0	31
Heavy Vehicles %	0.0	5.9	5.3	0.0	5.8	6.5	0.0	9.1	0.0	7.5	21.4	11.0	0.0	0.0	12.3	0.0	0.0	0.0	0.0	0.0	7.9
Cars Enter Leg	2	192	18	0	212	29	0	20	0	49	11	89	0	0	100	0	0	0	0	0	361
Heavy Enter Leg	0	12	1	0	13	2	0	2	0	4	3	11	0	0	14	0	0	0	0	0	31
Total Entering Leg	2	204	19	0	225	31	0	22	0	53	14	100	0	0	114	0	0	0	0	0	392
Cars Exiting Leg					118					29					212					2	361
Heavy Exiting Leg					13					4					14					0	31
Total Exiting Leg					131					33					226					2	392

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Cars

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	24	5	0	29	3	0	1	0	4	0	15	0	0	15	0	0	0	0	0	48
7:15 AM	0	23	4	0	27	3	0	1	0	4	0	8	0	0	8	0	0	0	0	0	39
7:30 AM	0	33	3	0	36	4	0	0	0	4	2	20	0	0	22	0	0	0	0	0	62
7:45 AM	2	60	2	0	64	6	0	7	0	13	3	20	0	0	23	0	0	0	0	0	100
Total	2	140	14	0	156	16	0	9	0	25	5	63	0	0	68	0	0	0	0	0	249
8:00 AM	0	60	7	0	67	7	0	1	0	8	0	23	0	0	23	0	0	0	0	0	98
8:15 AM	0	41	4	0	45	8	0	7	0	15	6	22	0	0	28	0	0	0	0	0	88
8:30 AM	0	31	5	0	36	8	0	5	0	13	2	24	0	0	26	0	0	0	0	0	75
8:45 AM	0	37	7	0	44	4	0	0	0	4	5	21	0	0	26	0	0	0	0	0	74
Total	0	169	23	0	192	27	0	13	0	40	13	90	0	0	103	0	0	0	0	0	335
Grand Total	2	309	37	0	348	43	0	22	0	65	18	153	0	0	171	0	0	0	0	0	584
Approach %	0.6	88.8	10.6	0.0		66.2	0.0	33.8	0.0		10.5	89.5	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.3	52.9	6.3	0.0	59.6	7.4	0.0	3.8	0.0	11.1	3.1	26.2	0.0	0.0	29.3	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					196					55					331					2	584

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:45 AM	2	60	2	0	64	6	0	7	0	13	3	20	0	0	23	0	0	0	0	0	100
8:00 AM	0	60	7	0	67	7	0	1	0	8	0	23	0	0	23	0	0	0	0	0	98
8:15 AM	0	41	4	0	45	8	0	7	0	15	6	22	0	0	28	0	0	0	0	0	88
8:30 AM	0	31	5	0	36	8	0	5	0	13	2	24	0	0	26	0	0	0	0	0	75
Total Volume	2	192	18	0	212	29	0	20	0	49	11	89	0	0	100	0	0	0	0	0	361
% Approach Total	0.9	90.6	8.5	0.0		59.2	0.0	40.8	0.0		11.0	89.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.250	0.800	0.643	0.000	0.791	0.906	0.000	0.714	0.000	0.817	0.458	0.927	0.000	0.000	0.893	0.000	0.000	0.000	0.000	0.000	0.903
Entering Leg	2	192	18	0	212	29	0	20	0	49	11	89	0	0	100	0	0	0	0	0	361
Exiting Leg					118					29					212					2	361
Total					330					78					312					2	722

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	3	0	0	3	0	0	2	0	2	1	3	0	0	4	0	0	0	0	0	9
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
7:30 AM	0	2	1	0	3	0	0	0	0	0	2	4	0	0	6	0	0	0	0	0	9
7:45 AM	0	1	0	0	1	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	5
Total	0	7	1	0	8	1	0	2	0	3	4	11	0	0	15	0	0	0	0	0	26
8:00 AM	0	5	1	0	6	0	0	2	0	2	1	2	0	0	3	0	0	0	0	0	11
8:15 AM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
8:30 AM	0	1	0	0	1	1	0	0	0	1	1	5	0	0	6	0	0	0	0	0	8
8:45 AM	0	2	0	0	2	1	0	1	0	2	0	5	0	0	5	0	0	0	0	0	9
Total	0	13	1	0	14	2	0	3	0	5	2	14	0	0	16	0	0	0	0	0	35
Grand Total	0	20	2	0	22	3	0	5	0	8	6	25	0	0	31	0	0	0	0	0	61
Approach %	0.0	90.9	9.1	0.0		37.5	0.0	62.5	0.0		19.4	80.6	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	32.8	3.3	0.0	36.1	4.9	0.0	8.2	0.0	13.1	9.8	41.0	0.0	0.0	50.8	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					28					8					25					0	61
Buses	0	1	0	0	1	0	0	2	0	2	2	1	0	0	3	0	0	0	0	0	6
% Buses	0.0	5.0	0.0	0.0	4.5	0.0	0.0	40.0	0.0	25.0	33.3	4.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	9.8
Exiting Leg Total					1					2					3					0	6
Single-Unit Trucks	0	17	2	0	19	2	0	3	0	5	3	22	0	0	25	0	0	0	0	0	49
% Single-Unit	0.0	85.0	100.0	0.0	86.4	66.7	0.0	60.0	0.0	62.5	50.0	88.0	0.0	0.0	80.6	0.0	0.0	0.0	0.0	0.0	80.3
Exiting Leg Total					24					5					20					0	49
Articulated Trucks	0	2	0	0	2	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	6
% Articulated	0.0	10.0	0.0	0.0	9.1	33.3	0.0	0.0	0.0	12.5	16.7	8.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	9.8
Exiting Leg Total					3					1					2					0	6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	5	1	0	6	0	0	2	0	2	1	2	0	0	3	0	0	0	0	0	11
8:15 AM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
8:30 AM	0	1	0	0	1	1	0	0	0	1	1	5	0	0	6	0	0	0	0	0	8
8:45 AM	0	2	0	0	2	1	0	1	0	2	0	5	0	0	5	0	0	0	0	0	9
Total Volume	0	13	1	0	14	2	0	3	0	5	2	14	0	0	16	0	0	0	0	0	35
% Approach Total	0.0	92.9	7.1	0.0		40.0	0.0	60.0	0.0		12.5	87.5	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.650	0.250	0.000	0.583	0.500	0.000	0.375	0.000	0.625	0.500	0.700	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.795
Buses	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	20.0	50.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	5.7
Single-Unit Trucks	0	11	1	0	12	1	0	2	0	3	1	12	0	0	13	0	0	0	0	0	28
Single-Unit %	0.0	84.6	100.0	0.0	85.7	50.0	0.0	66.7	0.0	60.0	50.0	85.7	0.0	0.0	81.3	0.0	0.0	0.0	0.0	0.0	80.0
Articulated Trucks	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	5
Articulated %	0.0	15.4	0.0	0.0	14.3	50.0	0.0	0.0	0.0	20.0	0.0	14.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	14.3
Buses	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
Single-Unit Trucks	0	11	1	0	12	1	0	2	0	3	1	12	0	0	13	0	0	0	0	0	28
Articulated Trucks	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	5
Total Entering Leg	0	13	1	0	14	2	0	3	0	5	2	14	0	0	16	0	0	0	0	0	35
Buses					0					1					1					0	2
Single-Unit Trucks					13					2					13					0	28
Articulated Trucks					3					0					2					0	5
Total Exiting Leg					16					3					16					0	35

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
Grand Total	0	1	0	0	1	0	0	2	0	2	2	1	0	0	3	0	0	0	0	0	6
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		66.7	33.3	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	16.7	0.0	0.0	16.7	0.0	0.0	33.3	0.0	33.3	33.3	16.7	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					1					2					3					0	6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.250	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.333
Entering Leg	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
Exiting Leg					1					1					2					0	4
Total					2					2					4					0	8

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Single-Unit Trucks

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	3	0	0	3	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	8
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
7:30 AM	0	1	1	0	2	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	6
7:45 AM	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4
Total	0	6	1	0	7	1	0	1	0	2	2	10	0	0	12	0	0	0	0	0	21
8:00 AM	0	3	1	0	4	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	8
8:15 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
8:30 AM	0	1	0	0	1	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	6
8:45 AM	0	2	0	0	2	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	8
Total	0	11	1	0	12	1	0	2	0	3	1	12	0	0	13	0	0	0	0	0	28
Grand Total	0	17	2	0	19	2	0	3	0	5	3	22	0	0	25	0	0	0	0	0	49
Approach %	0.0	89.5	10.5	0.0		40.0	0.0	60.0	0.0		12.0	88.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	34.7	4.1	0.0	38.8	4.1	0.0	6.1	0.0	10.2	6.1	44.9	0.0	0.0	51.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					24					5					20					0	49

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	3	1	0	4	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	8
8:15 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
8:30 AM	0	1	0	0	1	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	6
8:45 AM	0	2	0	0	2	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	8
Total Volume	0	11	1	0	12	1	0	2	0	3	1	12	0	0	13	0	0	0	0	0	28
% Approach Total	0.0	91.7	8.3	0.0		33.3	0.0	66.7	0.0		7.7	92.3	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.550	0.250	0.000	0.600	0.250	0.000	0.500	0.000	0.750	0.250	0.600	0.000	0.000	0.650	0.000	0.000	0.000	0.000	0.000	0.875
Entering Leg	0	11	1	0	12	1	0	2	0	3	1	12	0	0	13	0	0	0	0	0	28
Exiting Leg					13					2					13					0	28
Total					25					5					26					0	56

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Articulated Trucks

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	5
Grand Total	0	2	0	0	2	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	6
Approach %	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		33.3	66.7	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.3	0.0	0.0	33.3	16.7	0.0	0.0	0.0	16.7	16.7	33.3	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					3					1					2					0	6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	5
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		33.3	66.7	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.625
Entering Leg	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	5
Exiting Leg					2					1					2					0	5
Total					4					1					5					0	10

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0	0	0	0	0	0		0	0	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							1							0							0	1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg							0							1							0							0	1
Total							0							2							0							0	2

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	24	5	0	29	15	0	3	0	18	11	52	0	0	63	0	0	0	0	0	110
4:15 PM	0	17	6	0	23	11	1	2	0	14	7	34	0	0	41	0	0	1	0	1	79
4:30 PM	0	18	11	0	29	9	0	1	0	10	17	55	0	0	72	0	0	0	0	0	111
4:45 PM	0	16	10	0	26	12	0	3	0	15	6	46	0	0	52	0	0	0	0	0	93
Total	0	75	32	0	107	47	1	9	0	57	41	187	0	0	228	0	0	1	0	1	393
5:00 PM	0	17	10	0	27	14	0	4	0	18	6	64	0	0	70	0	1	0	0	1	116
5:15 PM	0	13	17	0	30	15	0	1	0	16	4	40	0	0	44	0	0	0	0	0	90
5:30 PM	0	12	13	0	25	14	0	1	0	15	4	27	0	0	31	1	0	0	0	1	72
5:45 PM	0	3	9	0	12	7	0	0	0	7	2	24	0	0	26	0	0	0	0	0	45
Total	0	45	49	0	94	50	0	6	0	56	16	155	0	0	171	1	1	0	0	2	323
Grand Total	0	120	81	0	201	97	1	15	0	113	57	342	0	0	399	1	1	1	0	3	716
Approach %	0.0	59.7	40.3	0.0		85.8	0.9	13.3	0.0		14.3	85.7	0.0	0.0		33.3	33.3	33.3	0.0		
Total %	0.0	16.8	11.3	0.0	28.1	13.5	0.1	2.1	0.0	15.8	8.0	47.8	0.0	0.0	55.7	0.1	0.1	0.1	0.0	0.4	
Exiting Leg Total					440					139					136					1	716
Cars	0	113	79	0	192	95	1	12	0	108	53	334	0	0	387	1	1	1	0	3	690
% Cars	0.0	94.2	97.5	0.0	95.5	97.9	100.0	80.0	0.0	95.6	93.0	97.7	0.0	0.0	97.0	100.0	100.0	100.0	0.0	100.0	96.4
Exiting Leg Total					430					133					126					1	690
Heavy Vehicles	0	7	2	0	9	2	0	3	0	5	4	8	0	0	12	0	0	0	0	0	26
% Heavy Vehicles	0.0	5.8	2.5	0.0	4.5	2.1	0.0	20.0	0.0	4.4	7.0	2.3	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.6
Exiting Leg Total					10					6					10					0	26

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:30 PM	0	18	11	0	29	9	0	1	0	10	17	55	0	0	72	0	0	0	0	0	111
4:45 PM	0	16	10	0	26	12	0	3	0	15	6	46	0	0	52	0	0	0	0	0	93
5:00 PM	0	17	10	0	27	14	0	4	0	18	6	64	0	0	70	0	1	0	0	1	116
5:15 PM	0	13	17	0	30	15	0	1	0	16	4	40	0	0	44	0	0	0	0	0	90
Total Volume	0	64	48	0	112	50	0	9	0	59	33	205	0	0	238	0	1	0	0	1	410
% Approach Total	0.0	57.1	42.9	0.0		84.7	0.0	15.3	0.0		13.9	86.1	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.889	0.706	0.000	0.933	0.833	0.000	0.563	0.000	0.819	0.485	0.801	0.000	0.000	0.826	0.000	0.250	0.000	0.000	0.250	0.884
Cars	0	59	46	0	105	49	0	8	0	57	31	204	0	0	235	0	1	0	0	1	398
Cars %	0.0	92.2	95.8	0.0	93.8	98.0	0.0	88.9	0.0	96.6	93.9	99.5	0.0	0.0	98.7	0.0	100.0	0.0	0.0	100.0	97.1
Heavy Vehicles	0	5	2	0	7	1	0	1	0	2	2	1	0	0	3	0	0	0	0	0	12
Heavy Vehicles %	0.0	7.8	4.2	0.0	6.3	2.0	0.0	11.1	0.0	3.4	6.1	0.5	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	2.9
Cars Enter Leg	0	59	46	0	105	49	0	8	0	57	31	204	0	0	235	0	1	0	0	1	398
Heavy Enter Leg	0	5	2	0	7	1	0	1	0	2	2	1	0	0	3	0	0	0	0	0	12
Total Entering Leg	0	64	48	0	112	50	0	9	0	59	33	205	0	0	238	0	1	0	0	1	410
Cars Exiting Leg					253					78					67					0	398
Heavy Exiting Leg					2					4					6					0	12
Total Exiting Leg					255					82					73					0	410

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Cars

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	24	5	0	29	14	0	2	0	16	11	50	0	0	61	0	0	0	0	0	106
4:15 PM	0	15	6	0	21	11	1	1	0	13	6	31	0	0	37	0	0	1	0	1	72
4:30 PM	0	17	10	0	27	9	0	1	0	10	16	55	0	0	71	0	0	0	0	0	108
4:45 PM	0	16	10	0	26	12	0	3	0	15	5	46	0	0	51	0	0	0	0	0	92
Total	0	72	31	0	103	46	1	7	0	54	38	182	0	0	220	0	0	1	0	1	378
5:00 PM	0	15	9	0	24	13	0	4	0	17	6	63	0	0	69	0	1	0	0	1	111
5:15 PM	0	11	17	0	28	15	0	0	0	15	4	40	0	0	44	0	0	0	0	0	87
5:30 PM	0	12	13	0	25	14	0	1	0	15	3	27	0	0	30	1	0	0	0	1	71
5:45 PM	0	3	9	0	12	7	0	0	0	7	2	22	0	0	24	0	0	0	0	0	43
Total	0	41	48	0	89	49	0	5	0	54	15	152	0	0	167	1	1	0	0	2	312
Grand Total	0	113	79	0	192	95	1	12	0	108	53	334	0	0	387	1	1	1	0	3	690
Approach %	0.0	58.9	41.1	0.0		88.0	0.9	11.1	0.0		13.7	86.3	0.0	0.0		33.3	33.3	33.3	0.0		
Total %	0.0	16.4	11.4	0.0	27.8	13.8	0.1	1.7	0.0	15.7	7.7	48.4	0.0	0.0	56.1	0.1	0.1	0.1	0.0	0.4	
Exiting Leg Total					430					133					126					1	690

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:30 PM	0	17	10	0	27	9	0	1	0	10	16	55	0	0	71	0	0	0	0	0	108
4:45 PM	0	16	10	0	26	12	0	3	0	15	5	46	0	0	51	0	0	0	0	0	92
5:00 PM	0	15	9	0	24	13	0	4	0	17	6	63	0	0	69	0	1	0	0	1	111
5:15 PM	0	11	17	0	28	15	0	0	0	15	4	40	0	0	44	0	0	0	0	0	87
Total Volume	0	59	46	0	105	49	0	8	0	57	31	204	0	0	235	0	1	0	0	1	398
% Approach Total	0.0	56.2	43.8	0.0		86.0	0.0	14.0	0.0		13.2	86.8	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.868	0.676	0.000	0.938	0.817	0.000	0.500	0.000	0.838	0.484	0.810	0.000	0.000	0.827	0.000	0.250	0.000	0.000	0.250	0.896
Entering Leg	0	59	46	0	105	49	0	8	0	57	31	204	0	0	235	0	1	0	0	1	398
Exiting Leg					253					78					67					0	398
Total					358					135					302					1	796

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	1	0	1	0	2	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	2	0	0	2	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	7
4:30 PM	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	3	1	0	4	1	0	2	0	3	3	5	0	0	8	0	0	0	0	0	15
5:00 PM	0	2	1	0	3	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	5
5:15 PM	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	4	1	0	5	1	0	1	0	2	1	3	0	0	4	0	0	0	0	0	11
Grand Total	0	7	2	0	9	2	0	3	0	5	4	8	0	0	12	0	0	0	0	0	26
Approach %	0.0	77.8	22.2	0.0		40.0	0.0	60.0	0.0		33.3	66.7	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	26.9	7.7	0.0	34.6	7.7	0.0	11.5	0.0	19.2	15.4	30.8	0.0	0.0	46.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					10					6					10					0	26
Buses	0	0	0	0	0	0	0	2	0	2	2	1	0	0	3	0	0	0	0	0	5
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	40.0	50.0	12.5	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	19.2
Exiting Leg Total					1					2					2					0	5
Single-Unit Trucks	0	7	2	0	9	2	0	1	0	3	1	6	0	0	7	0	0	0	0	0	19
% Single-Unit	0.0	100.0	100.0	0.0	100.0	100.0	0.0	33.3	0.0	60.0	25.0	75.0	0.0	0.0	58.3	0.0	0.0	0.0	0.0	0.0	73.1
Exiting Leg Total					8					3					8					0	19
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	12.5	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	7.7
Exiting Leg Total					1					1					0					0	2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:15 PM	0	2	0	0	2	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	7
4:30 PM	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
5:00 PM	0	2	1	0	3	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	5
Total Volume	0	5	2	0	7	1	0	1	0	2	3	4	0	0	7	0	0	0	0	0	16
% Approach Total	0.0	71.4	28.6	0.0		50.0	0.0	50.0	0.0		42.9	57.1	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.625	0.500	0.000	0.583	0.250	0.000	0.250	0.000	0.500	0.750	0.333	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.571
Buses	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	25.0	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	12.5
Single-Unit Trucks	0	5	2	0	7	1	0	1	0	2	1	3	0	0	4	0	0	0	0	0	13
Single-Unit %	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	33.3	75.0	0.0	0.0	57.1	0.0	0.0	0.0	0.0	0.0	81.3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	6.3
Buses	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Single-Unit Trucks	0	5	2	0	7	1	0	1	0	2	1	3	0	0	4	0	0	0	0	0	13
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total Entering Leg	0	5	2	0	7	1	0	1	0	2	3	4	0	0	7	0	0	0	0	0	16
Buses					1					1					0					0	2
Single-Unit Trucks					4					3					6					0	13
Articulated Trucks					0					1					0					0	1
Total Exiting Leg					5					5					6					0	16

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	2	0	2	2	1	0	0	3	0	0	0	0	0	5
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		66.7	33.3	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	40.0	40.0	20.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					1					2					2					0	5

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	3
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	3
Exiting Leg					1					1					1					0	3
Total					1					2					3					0	6

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Single-Unit Trucks**

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	2	0	0	2	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	6
4:30 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	1	0	4	1	0	1	0	2	1	3	0	0	4	0	0	0	0	0	10
5:00 PM	0	2	1	0	3	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	5
5:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	4	1	0	5	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	9
Grand Total	0	7	2	0	9	2	0	1	0	3	1	6	0	0	7	0	0	0	0	0	19
Approach %	0.0	77.8	22.2	0.0		66.7	0.0	33.3	0.0		14.3	85.7	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	36.8	10.5	0.0	47.4	10.5	0.0	5.3	0.0	15.8	5.3	31.6	0.0	0.0	36.8	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					8					3					8					0	19

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:15 PM	0	2	0	0	2	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	6
4:30 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	2	1	0	3	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	5
Total Volume	0	5	2	0	7	1	0	1	0	2	1	3	0	0	4	0	0	0	0	0	13
% Approach Total	0.0	71.4	28.6	0.0		50.0	0.0	50.0	0.0		25.0	75.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.625	0.500	0.000	0.583	0.250	0.000	0.250	0.000	0.500	0.250	0.375	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.542
Entering Leg	0	5	2	0	7	1	0	1	0	2	1	3	0	0	4	0	0	0	0	0	13
Exiting Leg					4					3					6					0	13
Total					11					5					10					0	26

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Articulated Trucks

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					1					1					0					0	2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Exiting Leg					1					1					0					0	2
Total					1					1					2					0	4

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	8	12	0	20	7	0	1	0	8	3	8	0	0	11	0	0	0	0	0	39
11:15 AM	0	12	10	0	22	8	0	0	0	8	0	6	0	0	6	0	0	0	0	0	36
11:30 AM	0	9	8	0	17	15	1	2	0	18	1	8	0	0	9	0	1	0	0	1	45
11:45 AM	0	7	6	0	13	16	0	0	0	16	1	7	0	0	8	0	0	0	0	0	37
Total	0	36	36	0	72	46	1	3	0	50	5	29	0	0	34	0	1	0	0	1	157
12:00 PM	0	8	10	0	18	18	0	1	0	19	0	4	0	0	4	0	0	0	0	0	41
12:15 PM	0	6	6	0	12	15	0	1	0	16	1	6	0	0	7	0	0	0	0	0	35
12:30 PM	0	8	5	0	13	10	0	1	0	11	1	4	0	0	5	0	0	0	0	0	29
12:45 PM	0	5	4	0	9	9	0	2	0	11	3	8	0	0	11	0	0	0	0	0	31
Total	0	27	25	0	52	52	0	5	0	57	5	22	0	0	27	0	0	0	0	0	136
1:00 PM	0	11	6	0	17	10	0	1	0	11	2	9	1	0	12	1	0	0	0	1	41
1:15 PM	0	3	4	0	7	8	0	0	0	8	0	7	0	0	7	0	0	0	0	0	22
1:30 PM	0	5	5	0	10	7	0	3	0	10	3	4	0	0	7	0	0	0	0	0	27
1:45 PM	0	4	4	0	8	11	0	3	0	14	3	8	0	0	11	0	0	0	0	0	33
Total	0	23	19	0	42	36	0	7	0	43	8	28	1	0	37	1	0	0	0	1	123
Grand Total	0	86	80	0	166	134	1	15	0	150	18	79	1	0	98	1	1	0	0	2	416
Approach %	0.0	51.8	48.2	0.0		89.3	0.7	10.0	0.0		18.4	80.6	1.0	0.0		50.0	50.0	0.0	0.0		
Total %	0.0	20.7	19.2	0.0	39.9	32.2	0.2	3.6	0.0	36.1	4.3	19.0	0.2	0.0	23.6	0.2	0.2	0.0	0.0	0.5	
Exiting Leg Total					213					99					102					2	416
Cars	0	78	78	0	156	133	1	15	0	149	18	72	1	0	91	1	1	0	0	2	398
% Cars	0.0	90.7	97.5	0.0	94.0	99.3	100.0	100.0	0.0	99.3	100.0	91.1	100.0	0.0	92.9	100.0	100.0	0.0	0.0	100.0	95.7
Exiting Leg Total					205					97					94					2	398
Heavy Vehicles	0	8	2	0	10	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	18
% Heavy Vehicles	0.0	9.3	2.5	0.0	6.0	0.7	0.0	0.0	0.0	0.7	0.0	8.9	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	4.3
Exiting Leg Total					8					2					8					0	18

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:15 AM	0	12	10	0	22	8	0	0	0	8	0	6	0	0	6	0	0	0	0	0	36
11:30 AM	0	9	8	0	17	15	1	2	0	18	1	8	0	0	9	0	1	0	0	1	45
11:45 AM	0	7	6	0	13	16	0	0	0	16	1	7	0	0	8	0	0	0	0	0	37
12:00 PM	0	8	10	0	18	18	0	1	0	19	0	4	0	0	4	0	0	0	0	0	41
Total Volume	0	36	34	0	70	57	1	3	0	61	2	25	0	0	27	0	1	0	0	1	159
% Approach Total	0.0	51.4	48.6	0.0		93.4	1.6	4.9	0.0		7.4	92.6	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.750	0.850	0.000	0.795	0.792	0.250	0.375	0.000	0.803	0.500	0.781	0.000	0.000	0.750	0.000	0.250	0.000	0.000	0.250	0.883
Cars	0	32	34	0	66	56	1	3	0	60	2	21	0	0	23	0	1	0	0	1	150
Cars %	0.0	88.9	100.0	0.0	94.3	98.2	100.0	100.0	0.0	98.4	100.0	84.0	0.0	0.0	85.2	0.0	100.0	0.0	0.0	100.0	94.3
Heavy Vehicles	0	4	0	0	4	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	9
Heavy Vehicles %	0.0	11.1	0.0	0.0	5.7	1.8	0.0	0.0	0.0	1.6	0.0	16.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0	0.0	5.7
Cars Enter Leg	0	32	34	0	66	56	1	3	0	60	2	21	0	0	23	0	1	0	0	1	150
Heavy Enter Leg	0	4	0	0	4	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	9
Total Entering Leg	0	36	34	0	70	57	1	3	0	61	2	25	0	0	27	0	1	0	0	1	159
Cars Exiting Leg					77					37					35					1	150
Heavy Exiting Leg					5					0					4					0	9
Total Exiting Leg					82					37					39					1	159

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	7	11	0	18	7	0	1	0	8	3	8	0	0	11	0	0	0	0	0	37
11:15 AM	0	9	10	0	19	8	0	0	0	8	0	4	0	0	4	0	0	0	0	0	31
11:30 AM	0	8	8	0	16	15	1	2	0	18	1	8	0	0	9	0	1	0	0	1	44
11:45 AM	0	7	6	0	13	15	0	0	0	15	1	6	0	0	7	0	0	0	0	0	35
Total	0	31	35	0	66	45	1	3	0	49	5	26	0	0	31	0	1	0	0	1	147
12:00 PM	0	8	10	0	18	18	0	1	0	19	0	3	0	0	3	0	0	0	0	0	40
12:15 PM	0	6	5	0	11	15	0	1	0	16	1	5	0	0	6	0	0	0	0	0	33
12:30 PM	0	7	5	0	12	10	0	1	0	11	1	4	0	0	5	0	0	0	0	0	28
12:45 PM	0	4	4	0	8	9	0	2	0	11	3	8	0	0	11	0	0	0	0	0	30
Total	0	25	24	0	49	52	0	5	0	57	5	20	0	0	25	0	0	0	0	0	131
1:00 PM	0	10	6	0	16	10	0	1	0	11	2	8	1	0	11	1	0	0	0	1	39
1:15 PM	0	3	4	0	7	8	0	0	0	8	0	6	0	0	6	0	0	0	0	0	21
1:30 PM	0	5	5	0	10	7	0	3	0	10	3	4	0	0	7	0	0	0	0	0	27
1:45 PM	0	4	4	0	8	11	0	3	0	14	3	8	0	0	11	0	0	0	0	0	33
Total	0	22	19	0	41	36	0	7	0	43	8	26	1	0	35	1	0	0	0	1	120
Grand Total	0	78	78	0	156	133	1	15	0	149	18	72	1	0	91	1	1	0	0	2	398
Approach %	0.0	50.0	50.0	0.0		89.3	0.7	10.1	0.0		19.8	79.1	1.1	0.0		50.0	50.0	0.0	0.0		
Total %	0.0	19.6	19.6	0.0	39.2	33.4	0.3	3.8	0.0	37.4	4.5	18.1	0.3	0.0	22.9	0.3	0.3	0.0	0.0	0.5	
Exiting Leg Total					205					97					94					2	398

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:30 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:30 AM	0	8	8	0	16	15	1	2	0	18	1	8	0	0	9	0	1	0	0	1	44
11:45 AM	0	7	6	0	13	15	0	0	0	15	1	6	0	0	7	0	0	0	0	0	35
12:00 PM	0	8	10	0	18	18	0	1	0	19	0	3	0	0	3	0	0	0	0	0	40
12:15 PM	0	6	5	0	11	15	0	1	0	16	1	5	0	0	6	0	0	0	0	0	33
Total Volume	0	29	29	0	58	63	1	4	0	68	3	22	0	0	25	0	1	0	0	1	152
% Approach Total	0.0	50.0	50.0	0.0		92.6	1.5	5.9	0.0		12.0	88.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.906	0.725	0.000	0.806	0.875	0.250	0.500	0.000	0.895	0.750	0.688	0.000	0.000	0.694	0.000	0.250	0.000	0.000	0.250	0.864
Entering Leg	0	29	29	0	58	63	1	4	0	68	3	22	0	0	25	0	1	0	0	1	152
Exiting Leg					85					33					33					1	152
Total					143					101					58					2	304

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
11:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
Total	0	5	1	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	10
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
12:15 PM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	1	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Grand Total	0	8	2	0	10	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	18
Approach %	0.0	80.0	20.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	44.4	11.1	0.0	55.6	5.6	0.0	0.0	0.0	5.6	0.0	38.9	0.0	0.0	38.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					8					2					8					0	18
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0
Single-Unit Trucks	0	8	2	0	10	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	18
% Single-Unit	0.0	100.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Exiting Leg Total					8					2					8					0	18
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
11:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
Total Volume	0	5	1	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	10
% Approach Total	0.0	83.3	16.7	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.417	0.250	0.000	0.500	0.250	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.500
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	5	1	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	10
Single-Unit %	0.0	100.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	5	1	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	10
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	5	1	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	10
Buses					0					0					0					0	0
Single-Unit Trucks					4					1					5					0	10
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					4					1					5					0	10

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0					0	0
Total					0					0					0					0	0

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Single-Unit Trucks

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
11:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
Total	0	5	1	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	10
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
12:15 PM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	1	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Grand Total	0	8	2	0	10	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	18
Approach %	0.0	80.0	20.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	44.4	11.1	0.0	55.6	5.6	0.0	0.0	0.0	5.6	0.0	38.9	0.0	0.0	38.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					8					2					8					0	18

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
11:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
Total Volume	0	5	1	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	10
% Approach Total	0.0	83.3	16.7	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.417	0.250	0.000	0.500	0.250	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	5	1	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	10
Exiting Leg					4					1					5					0	10
Total					10					2					8					0	20

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Articulated Trucks

	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	West Road from North					Wilson Road from East					West Road from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0					0	0
Total					0					0					0					0	0

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Bicycles (on Roadway and Crosswalks)

	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							2							0							0	2

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Exiting Leg							0							1							0							0	1
Total							0							1							1							0	2

PDI File #: **228713 A**
Location: **N: West Road S: West Road**
Location: **E: Wilson Road W: Driveway**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
Approach %	0	0	0	0	0	100		0	0	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	100		
Total %	0	0	0	0	0	33.3	33.3	0	0	0	0	0	33.3	33.3	0	0	0	0	0	0	0	0	0	0	0	0	33.3	33.3	
Exiting Leg Total							1							1							0							1	3

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	West Road from North							Wilson Road from East							West Road from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Exiting Leg							1							1							0							0	2
Total							2							2							0							0	4

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	10	102	0	0	112	4	1	0	0	5	0	118	11	0	129	4	1	2	0	7	253
7:15 AM	12	116	0	0	128	2	1	0	0	3	0	131	12	0	143	8	1	4	0	13	287
7:30 AM	12	104	1	0	117	2	1	1	0	4	0	180	13	0	193	12	1	5	0	18	332
7:45 AM	12	128	5	0	145	5	3	3	0	11	2	177	16	0	195	9	0	8	0	17	368
Total	46	450	6	0	502	13	6	4	0	23	2	606	52	0	660	33	3	19	0	55	1240
8:00 AM	17	148	1	0	166	3	1	4	0	8	0	179	8	0	187	12	0	1	0	13	374
8:15 AM	16	168	0	0	184	3	1	2	0	6	0	161	11	0	172	13	0	5	0	18	380
8:30 AM	7	157	0	0	164	1	0	3	0	4	0	162	19	0	181	12	0	5	0	17	366
8:45 AM	33	167	0	0	200	6	1	3	0	10	1	145	14	0	160	15	0	9	0	24	394
Total	73	640	1	0	714	13	3	12	0	28	1	647	52	0	700	52	0	20	0	72	1514
Grand Total	119	1090	7	0	1216	26	9	16	0	51	3	1253	104	0	1360	85	3	39	0	127	2754
Approach %	9.8	89.6	0.6	0.0		51.0	17.6	31.4	0.0		0.2	92.1	7.6	0.0		66.9	2.4	30.7	0.0		
Total %	4.3	39.6	0.3	0.0	44.2	0.9	0.3	0.6	0.0	1.9	0.1	45.5	3.8	0.0	49.4	3.1	0.1	1.4	0.0	4.6	
Exiting Leg Total					1318					13					1191					232	2754
Cars	113	1031	5	0	1149	26	9	16	0	51	3	1166	92	0	1261	78	3	29	0	110	2571
% Cars	95.0	94.6	71.4	0.0	94.5	100.0	100.0	100.0	0.0	100.0	100.0	93.1	88.5	0.0	92.7	91.8	100.0	74.4	0.0	86.6	93.4
Exiting Leg Total					1221					11					1125					214	2571
Heavy Vehicles	6	59	2	0	67	0	0	0	0	0	0	87	12	0	99	7	0	10	0	17	183
% Heavy Vehicles	5.0	5.4	28.6	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	6.9	11.5	0.0	7.3	8.2	0.0	25.6	0.0	13.4	6.6
Exiting Leg Total					97					2					66					18	183

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	17	148	1	0	166	3	1	4	0	8	0	179	8	0	187	12	0	1	0	13	374
8:15 AM	16	168	0	0	184	3	1	2	0	6	0	161	11	0	172	13	0	5	0	18	380
8:30 AM	7	157	0	0	164	1	0	3	0	4	0	162	19	0	181	12	0	5	0	17	366
8:45 AM	33	167	0	0	200	6	1	3	0	10	1	145	14	0	160	15	0	9	0	24	394
Total Volume	73	640	1	0	714	13	3	12	0	28	1	647	52	0	700	52	0	20	0	72	1514
% Approach Total	10.2	89.6	0.1	0.0		46.4	10.7	42.9	0.0		0.1	92.4	7.4	0.0		72.2	0.0	27.8	0.0		
PHF	0.553	0.952	0.250	0.000	0.893	0.542	0.750	0.750	0.000	0.700	0.250	0.904	0.684	0.000	0.936	0.867	0.000	0.556	0.000	0.750	0.961
Cars	70	601	1	0	672	13	3	12	0	28	1	609	46	0	656	49	0	17	0	66	1422
Cars %	95.9	93.9	100.0	0.0	94.1	100.0	100.0	100.0	0.0	100.0	100.0	94.1	88.5	0.0	93.7	94.2	0.0	85.0	0.0	91.7	93.9
Heavy Vehicles	3	39	0	0	42	0	0	0	0	0	0	38	6	0	44	3	0	3	0	6	92
Heavy Vehicles %	4.1	6.1	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	5.9	11.5	0.0	6.3	5.8	0.0	15.0	0.0	8.3	6.1
Cars Enter Leg	70	601	1	0	672	13	3	12	0	28	1	609	46	0	656	49	0	17	0	66	1422
Heavy Enter Leg	3	39	0	0	42	0	0	0	0	0	0	38	6	0	44	3	0	3	0	6	92
Total Entering Leg	73	640	1	0	714	13	3	12	0	28	1	647	52	0	700	52	0	20	0	72	1514
Cars Exiting Leg					639					2					662					119	1422
Heavy Exiting Leg					41					0					42					9	92
Total Exiting Leg					680					2					704					128	1514

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Cars**

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	8	101	0	0	109	4	1	0	0	5	0	110	8	0	118	3	1	1	0	5	237
7:15 AM	11	105	0	0	116	2	1	0	0	3	0	112	11	0	123	7	1	4	0	12	254
7:30 AM	12	100	1	0	113	2	1	1	0	4	0	166	12	0	178	11	1	3	0	15	310
7:45 AM	12	124	3	0	139	5	3	3	0	11	2	169	15	0	186	8	0	4	0	12	348
Total	43	430	4	0	477	13	6	4	0	23	2	557	46	0	605	29	3	12	0	44	1149
8:00 AM	14	137	1	0	152	3	1	4	0	8	0	170	8	0	178	10	0	0	0	10	348
8:15 AM	16	162	0	0	178	3	1	2	0	6	0	147	11	0	158	13	0	4	0	17	359
8:30 AM	7	147	0	0	154	1	0	3	0	4	0	155	15	0	170	11	0	4	0	15	343
8:45 AM	33	155	0	0	188	6	1	3	0	10	1	137	12	0	150	15	0	9	0	24	372
Total	70	601	1	0	672	13	3	12	0	28	1	609	46	0	656	49	0	17	0	66	1422
Grand Total	113	1031	5	0	1149	26	9	16	0	51	3	1166	92	0	1261	78	3	29	0	110	2571
Approach %	9.8	89.7	0.4	0.0		51.0	17.6	31.4	0.0		0.2	92.5	7.3	0.0		70.9	2.7	26.4	0.0		
Total %	4.4	40.1	0.2	0.0	44.7	1.0	0.4	0.6	0.0	2.0	0.1	45.4	3.6	0.0	49.0	3.0	0.1	1.1	0.0	4.3	
Exiting Leg Total					1221					11					1125					214	2571

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	14	137	1	0	152	3	1	4	0	8	0	170	8	0	178	10	0	0	0	10	348
8:15 AM	16	162	0	0	178	3	1	2	0	6	0	147	11	0	158	13	0	4	0	17	359
8:30 AM	7	147	0	0	154	1	0	3	0	4	0	155	15	0	170	11	0	4	0	15	343
8:45 AM	33	155	0	0	188	6	1	3	0	10	1	137	12	0	150	15	0	9	0	24	372
Total Volume	70	601	1	0	672	13	3	12	0	28	1	609	46	0	656	49	0	17	0	66	1422
% Approach Total	10.4	89.4	0.1	0.0		46.4	10.7	42.9	0.0		0.2	92.8	7.0	0.0		74.2	0.0	25.8	0.0		
PHF	0.530	0.927	0.250	0.000	0.894	0.542	0.750	0.750	0.000	0.700	0.250	0.896	0.767	0.000	0.921	0.817	0.000	0.472	0.000	0.688	0.956
Entering Leg	70	601	1	0	672	13	3	12	0	28	1	609	46	0	656	49	0	17	0	66	1422
Exiting Leg					639					2					662					119	1422
Total					1311					30					1318					185	2844

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	2	1	0	0	3	0	0	0	0	0	0	8	3	0	11	1	0	1	0	2	16
7:15 AM	1	11	0	0	12	0	0	0	0	0	0	19	1	0	20	1	0	0	0	1	33
7:30 AM	0	4	0	0	4	0	0	0	0	0	0	14	1	0	15	1	0	2	0	3	22
7:45 AM	0	4	2	0	6	0	0	0	0	0	0	8	1	0	9	1	0	4	0	5	20
Total	3	20	2	0	25	0	0	0	0	0	0	49	6	0	55	4	0	7	0	11	91
8:00 AM	3	11	0	0	14	0	0	0	0	0	0	9	0	0	9	2	0	1	0	3	26
8:15 AM	0	6	0	0	6	0	0	0	0	0	0	14	0	0	14	0	0	1	0	1	21
8:30 AM	0	10	0	0	10	0	0	0	0	0	0	7	4	0	11	1	0	1	0	2	23
8:45 AM	0	12	0	0	12	0	0	0	0	0	0	8	2	0	10	0	0	0	0	0	22
Total	3	39	0	0	42	0	0	0	0	0	0	38	6	0	44	3	0	3	0	6	92
Grand Total	6	59	2	0	67	0	0	0	0	0	0	87	12	0	99	7	0	10	0	17	183
Approach %	9.0	88.1	3.0	0.0		0.0	0.0	0.0	0.0		0.0	87.9	12.1	0.0		41.2	0.0	58.8	0.0		
Total %	3.3	32.2	1.1	0.0	36.6	0.0	0.0	0.0	0.0	0.0	0.0	47.5	6.6	0.0	54.1	3.8	0.0	5.5	0.0	9.3	
Exiting Leg Total					97					2					66					18	183
Buses	3	1	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	9
% Buses	50.0	1.7	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	2.0	0.0	0.0	30.0	0.0	17.6	4.9
Exiting Leg Total					5					0					1					3	9
Single-Unit Trucks	3	48	1	0	52	0	0	0	0	0	0	70	11	0	81	7	0	6	0	13	146
% Single-Unit	50.0	81.4	50.0	0.0	77.6	0.0	0.0	0.0	0.0	0.0	0.0	80.5	91.7	0.0	81.8	100.0	0.0	60.0	0.0	76.5	79.8
Exiting Leg Total					76					1					55					14	146
Articulated Trucks	0	10	1	0	11	0	0	0	0	0	0	15	1	0	16	0	0	1	0	1	28
% Articulated	0.0	16.9	50.0	0.0	16.4	0.0	0.0	0.0	0.0	0.0	0.0	17.2	8.3	0.0	16.2	0.0	0.0	10.0	0.0	5.9	15.3
Exiting Leg Total					16					1					10					1	28

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	1	11	0	0	12	0	0	0	0	0	0	19	1	0	20	1	0	0	0	1	33
7:30 AM	0	4	0	0	4	0	0	0	0	0	0	14	1	0	15	1	0	2	0	3	22
7:45 AM	0	4	2	0	6	0	0	0	0	0	0	8	1	0	9	1	0	4	0	5	20
8:00 AM	3	11	0	0	14	0	0	0	0	0	0	9	0	0	9	2	0	1	0	3	26
Total Volume	4	30	2	0	36	0	0	0	0	0	0	50	3	0	53	5	0	7	0	12	101
% Approach Total	11.1	83.3	5.6	0.0		0.0	0.0	0.0	0.0		0.0	94.3	5.7	0.0		41.7	0.0	58.3	0.0		
PHF	0.333	0.682	0.250	0.000	0.643	0.000	0.000	0.000	0.000	0.000	0.000	0.658	0.750	0.000	0.663	0.625	0.000	0.438	0.000	0.600	0.765
Buses	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4
Buses %	50.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	14.3	0.0	8.3	4.0
Single-Unit Trucks	2	23	1	0	26	0	0	0	0	0	0	43	3	0	46	5	0	5	0	10	82
Single-Unit %	50.0	76.7	50.0	0.0	72.2	0.0	0.0	0.0	0.0	0.0	0.0	86.0	100.0	0.0	86.8	100.0	0.0	71.4	0.0	83.3	81.2
Articulated Trucks	0	7	1	0	8	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	15
Articulated %	0.0	23.3	50.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	11.3	0.0	0.0	14.3	0.0	8.3	14.9
Buses	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4
Single-Unit Trucks	2	23	1	0	26	0	0	0	0	0	0	43	3	0	46	5	0	5	0	10	82
Articulated Trucks	0	7	1	0	8	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	15
Total Entering Leg	4	30	2	0	36	0	0	0	0	0	0	50	3	0	53	5	0	7	0	12	101
Buses					2					0					0					2	4
Single-Unit Trucks					48					1					28					5	82
Articulated Trucks					7					1					7					0	15
Total Exiting Leg					57					2					35					7	101

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	3
8:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	6
Grand Total	3	1	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	9
Approach %	75.0	25.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	33.3	11.1	0.0	0.0	44.4	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	22.2	0.0	0.0	33.3	0.0	33.3	
Exiting Leg Total					5					0					1					3	9

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	6
% Approach Total	66.7	33.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.250	0.250	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	6
Exiting Leg					3					0					1					2	6
Total					6					0					2					4	12

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Single-Unit Trucks

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	1	1	0	0	2	0	0	0	0	0	0	7	3	0	10	1	0	1	0	2	14
7:15 AM	1	10	0	0	11	0	0	0	0	0	0	16	1	0	17	1	0	0	0	1	29
7:30 AM	0	3	0	0	3	0	0	0	0	0	0	12	1	0	13	1	0	1	0	2	18
7:45 AM	0	4	1	0	5	0	0	0	0	0	0	6	1	0	7	1	0	3	0	4	16
Total	2	18	1	0	21	0	0	0	0	0	0	41	6	0	47	4	0	5	0	9	77
8:00 AM	1	6	0	0	7	0	0	0	0	0	0	9	0	0	9	2	0	1	0	3	19
8:15 AM	0	6	0	0	6	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	16
8:30 AM	0	8	0	0	8	0	0	0	0	0	0	6	4	0	10	1	0	0	0	1	19
8:45 AM	0	10	0	0	10	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	15
Total	1	30	0	0	31	0	0	0	0	0	0	29	5	0	34	3	0	1	0	4	69
Grand Total	3	48	1	0	52	0	0	0	0	0	0	70	11	0	81	7	0	6	0	13	146
Approach %	5.8	92.3	1.9	0.0		0.0	0.0	0.0	0.0		0.0	86.4	13.6	0.0		53.8	0.0	46.2	0.0		
Total %	2.1	32.9	0.7	0.0	35.6	0.0	0.0	0.0	0.0	0.0	0.0	47.9	7.5	0.0	55.5	4.8	0.0	4.1	0.0	8.9	
Exiting Leg Total					76					1					55					14	146

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	1	10	0	0	11	0	0	0	0	0	0	16	1	0	17	1	0	0	0	1	29
7:30 AM	0	3	0	0	3	0	0	0	0	0	0	12	1	0	13	1	0	1	0	2	18
7:45 AM	0	4	1	0	5	0	0	0	0	0	0	6	1	0	7	1	0	3	0	4	16
8:00 AM	1	6	0	0	7	0	0	0	0	0	0	9	0	0	9	2	0	1	0	3	19
Total Volume	2	23	1	0	26	0	0	0	0	0	0	43	3	0	46	5	0	5	0	10	82
% Approach Total	7.7	88.5	3.8	0.0		0.0	0.0	0.0	0.0		0.0	93.5	6.5	0.0		50.0	0.0	50.0	0.0		
PHF	0.500	0.575	0.250	0.000	0.591	0.000	0.000	0.000	0.000	0.000	0.000	0.672	0.750	0.000	0.676	0.625	0.000	0.417	0.000	0.625	0.707
Entering Leg	2	23	1	0	26	0	0	0	0	0	0	43	3	0	46	5	0	5	0	10	82
Exiting Leg					48					1					28					5	82
Total					74					1					74					15	164

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Articulated Trucks

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
7:45 AM	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	4
Total	0	2	1	0	3	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	11
8:00 AM	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	6
Total	0	8	0	0	8	0	0	0	0	0	0	8	1	0	9	0	0	0	0	0	17
Grand Total	0	10	1	0	11	0	0	0	0	0	0	15	1	0	16	0	0	1	0	1	28
Approach %	0.0	90.9	9.1	0.0		0.0	0.0	0.0	0.0		0.0	93.8	6.3	0.0		0.0	0.0	100.0	0.0		
Total %	0.0	35.7	3.6	0.0	39.3	0.0	0.0	0.0	0.0	0.0	0.0	53.6	3.6	0.0	57.1	0.0	0.0	3.6	0.0	3.6	
Exiting Leg Total					16					1					10					1	28

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	6
Total Volume	0	8	0	0	8	0	0	0	0	0	0	8	1	0	9	0	0	0	0	0	17
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	88.9	11.1	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.400	0.000	0.000	0.400	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.708
Entering Leg	0	8	0	0	8	0	0	0	0	0	0	8	1	0	9	0	0	0	0	0	17
Exiting Leg					8					0					8					1	17
Total					16					0					17					1	34

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							1							0							0	1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg							0							1							0							0	1
Total							0							2							0							0	2

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
Approach %	0	0	0	0	0	0		0	0	0	0	50	50		0	0	0	0	0	0		0	0	0	0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	40	40	80	0	0	0	0	0	0	0	0	0	0	0	20	0	20	
Exiting Leg Total							0							4							0							1	5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.625
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
Exiting Leg							0							4							0							1	5
Total							0							8							0							2	10

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	21	202	2	0	225	1	1	2	0	4	2	209	13	0	224	31	2	11	0	44	497
4:15 PM	23	203	5	0	231	4	1	1	0	6	3	187	20	0	210	31	1	9	0	41	488
4:30 PM	26	203	2	0	231	4	0	2	0	6	2	180	24	0	206	27	4	12	0	43	486
4:45 PM	25	193	1	0	219	3	1	3	0	7	2	171	22	0	195	13	1	10	0	24	445
Total	95	801	10	0	906	12	3	8	0	23	9	747	79	0	835	102	8	42	0	152	1916
5:00 PM	27	205	0	0	232	3	4	3	0	10	1	213	18	0	232	35	4	14	0	53	527
5:15 PM	20	201	2	1	224	3	0	2	0	5	1	212	22	0	235	29	4	9	0	42	506
5:30 PM	28	204	2	0	234	0	1	4	0	5	2	209	11	0	222	39	1	10	0	50	511
5:45 PM	17	171	2	0	190	4	1	2	0	7	0	225	13	0	238	29	2	4	0	35	470
Total	92	781	6	1	880	10	6	11	0	27	4	859	64	0	927	132	11	37	0	180	2014
Grand Total	187	1582	16	1	1786	22	9	19	0	50	13	1606	143	0	1762	234	19	79	0	332	3930
Approach %	10.5	88.6	0.9	0.1		44.0	18.0	38.0	0.0		0.7	91.1	8.1	0.0		70.5	5.7	23.8	0.0		
Total %	4.8	40.3	0.4	0.0	45.4	0.6	0.2	0.5	0.0	1.3	0.3	40.9	3.6	0.0	44.8	6.0	0.5	2.0	0.0	8.4	
Exiting Leg Total					1708					48					1835					339	3930
Cars	184	1563	16	1	1764	22	9	18	0	49	13	1590	141	0	1744	231	19	75	0	325	3882
% Cars	98.4	98.8	100.0	100.0	98.8	100.0	100.0	94.7	0.0	98.0	100.0	99.0	98.6	0.0	99.0	98.7	100.0	94.9	0.0	97.9	98.8
Exiting Leg Total					1688					48					1812					334	3882
Heavy Vehicles	3	19	0	0	22	0	0	1	0	1	0	16	2	0	18	3	0	4	0	7	48
% Heavy Vehicles	1.6	1.2	0.0	0.0	1.2	0.0	0.0	5.3	0.0	2.0	0.0	1.0	1.4	0.0	1.0	1.3	0.0	5.1	0.0	2.1	1.2
Exiting Leg Total					20					0					23					5	48

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	27	205	0	0	232	3	4	3	0	10	1	213	18	0	232	35	4	14	0	53	527
5:15 PM	20	201	2	1	224	3	0	2	0	5	1	212	22	0	235	29	4	9	0	42	506
5:30 PM	28	204	2	0	234	0	1	4	0	5	2	209	11	0	222	39	1	10	0	50	511
5:45 PM	17	171	2	0	190	4	1	2	0	7	0	225	13	0	238	29	2	4	0	35	470
Total Volume	92	781	6	1	880	10	6	11	0	27	4	859	64	0	927	132	11	37	0	180	2014
% Approach Total	10.5	88.8	0.7	0.1		37.0	22.2	40.7	0.0		0.4	92.7	6.9	0.0		73.3	6.1	20.6	0.0		
PHF	0.821	0.952	0.750	0.250	0.940	0.625	0.375	0.688	0.000	0.675	0.500	0.954	0.727	0.000	0.974	0.846	0.688	0.661	0.000	0.849	0.955
Cars	91	774	6	1	872	10	6	11	0	27	4	855	63	0	922	131	11	36	0	178	1999
Cars %	98.9	99.1	100.0	100.0	99.1	100.0	100.0	100.0	0.0	100.0	100.0	99.5	98.4	0.0	99.5	99.2	100.0	97.3	0.0	98.9	99.3
Heavy Vehicles	1	7	0	0	8	0	0	0	0	0	0	4	1	0	5	1	0	1	0	2	15
Heavy Vehicles %	1.1	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.6	0.0	0.5	0.8	0.0	2.7	0.0	1.1	0.7
Cars Enter Leg	91	774	6	1	872	10	6	11	0	27	4	855	63	0	922	131	11	36	0	178	1999
Heavy Enter Leg	1	7	0	0	8	0	0	0	0	0	0	4	1	0	5	1	0	1	0	2	15
Total Entering Leg	92	781	6	1	880	10	6	11	0	27	4	859	64	0	927	132	11	37	0	180	2014
Cars Exiting Leg					902					21					916					160	1999
Heavy Exiting Leg					5					0					8					2	15
Total Exiting Leg					907					21					924					162	2014

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Cars**

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	20	198	2	0	220	1	1	2	0	4	2	204	12	0	218	30	2	11	0	43	485
4:15 PM	23	198	5	0	226	4	1	1	0	6	3	185	20	0	208	31	1	9	0	41	481
4:30 PM	25	200	2	0	227	4	0	2	0	6	2	178	24	0	204	26	4	11	0	41	478
4:45 PM	25	193	1	0	219	3	1	2	0	6	2	168	22	0	192	13	1	8	0	22	439
Total	93	789	10	0	892	12	3	7	0	22	9	735	78	0	822	100	8	39	0	147	1883
5:00 PM	27	204	0	0	231	3	4	3	0	10	1	212	17	0	230	35	4	14	0	53	524
5:15 PM	19	197	2	1	219	3	0	2	0	5	1	211	22	0	234	28	4	9	0	41	499
5:30 PM	28	203	2	0	233	0	1	4	0	5	2	208	11	0	221	39	1	9	0	49	508
5:45 PM	17	170	2	0	189	4	1	2	0	7	0	224	13	0	237	29	2	4	0	35	468
Total	91	774	6	1	872	10	6	11	0	27	4	855	63	0	922	131	11	36	0	178	1999
Grand Total	184	1563	16	1	1764	22	9	18	0	49	13	1590	141	0	1744	231	19	75	0	325	3882
Approach %	10.4	88.6	0.9	0.1		44.9	18.4	36.7	0.0		0.7	91.2	8.1	0.0		71.1	5.8	23.1	0.0		
Total %	4.7	40.3	0.4	0.0	45.4	0.6	0.2	0.5	0.0	1.3	0.3	41.0	3.6	0.0	44.9	6.0	0.5	1.9	0.0	8.4	
Exiting Leg Total					1688					48					1812					334	3882

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	27	204	0	0	231	3	4	3	0	10	1	212	17	0	230	35	4	14	0	53	524
5:15 PM	19	197	2	1	219	3	0	2	0	5	1	211	22	0	234	28	4	9	0	41	499
5:30 PM	28	203	2	0	233	0	1	4	0	5	2	208	11	0	221	39	1	9	0	49	508
5:45 PM	17	170	2	0	189	4	1	2	0	7	0	224	13	0	237	29	2	4	0	35	468
Total Volume	91	774	6	1	872	10	6	11	0	27	4	855	63	0	922	131	11	36	0	178	1999
% Approach Total	10.4	88.8	0.7	0.1		37.0	22.2	40.7	0.0		0.4	92.7	6.8	0.0		73.6	6.2	20.2	0.0		
PHF	0.813	0.949	0.750	0.250	0.936	0.625	0.375	0.688	0.000	0.675	0.500	0.954	0.716	0.000	0.973	0.840	0.688	0.643	0.000	0.840	0.954
Entering Leg	91	774	6	1	872	10	6	11	0	27	4	855	63	0	922	131	11	36	0	178	1999
Exiting Leg					902					21					916					160	1999
Total					1774					48					1838					338	3998

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	4	0	0	5	0	0	0	0	0	0	5	1	0	6	1	0	0	0	1	12
4:15 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
4:30 PM	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	8
4:45 PM	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	0	2	0	2	6
Total	2	12	0	0	14	0	0	1	0	1	0	12	1	0	13	2	0	3	0	5	33
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3
5:15 PM	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	7
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	3
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	1	7	0	0	8	0	0	0	0	0	0	4	1	0	5	1	0	1	0	2	15
Grand Total	3	19	0	0	22	0	0	1	0	1	0	16	2	0	18	3	0	4	0	7	48
Approach %	13.6	86.4	0.0	0.0		0.0	0.0	100.0	0.0		0.0	88.9	11.1	0.0		42.9	0.0	57.1	0.0		
Total %	6.3	39.6	0.0	0.0	45.8	0.0	0.0	2.1	0.0	2.1	0.0	33.3	4.2	0.0	37.5	6.3	0.0	8.3	0.0	14.6	
Exiting Leg Total					20					0					23					5	48
Buses	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	6
% Buses	0.0	10.5	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	11.1	0.0	0.0	50.0	0.0	28.6	12.5
Exiting Leg Total					4					0					2					0	6
Single-Unit Trucks	3	15	0	0	18	0	0	1	0	1	0	11	2	0	13	3	0	1	0	4	36
% Single-Unit	100.0	78.9	0.0	0.0	81.8	0.0	0.0	100.0	0.0	100.0	0.0	68.8	100.0	0.0	72.2	100.0	0.0	25.0	0.0	57.1	75.0
Exiting Leg Total					12					0					19					5	36
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	6
% Articulated	0.0	10.5	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	18.8	0.0	0.0	16.7	0.0	0.0	25.0	0.0	14.3	12.5
Exiting Leg Total					4					0					2					0	6

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	4	0	0	5	0	0	0	0	0	0	5	1	0	6	1	0	0	0	1	12
4:15 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
4:30 PM	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	8
4:45 PM	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	0	2	0	2	6
Total Volume	2	12	0	0	14	0	0	1	0	1	0	12	1	0	13	2	0	3	0	5	33
% Approach Total	14.3	85.7	0.0	0.0		0.0	0.0	100.0	0.0		0.0	92.3	7.7	0.0		40.0	0.0	60.0	0.0		
PHF	0.500	0.600	0.000	0.000	0.700	0.000	0.000	0.250	0.000	0.250	0.000	0.600	0.250	0.000	0.542	0.500	0.000	0.375	0.000	0.625	0.688
Buses	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Buses %	0.0	16.7	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	20.0	9.1
Single-Unit Trucks	2	9	0	0	11	0	0	1	0	1	0	10	1	0	11	2	0	1	0	3	26
Single-Unit %	100.0	75.0	0.0	0.0	78.6	0.0	0.0	100.0	0.0	100.0	0.0	83.3	100.0	0.0	84.6	100.0	0.0	33.3	0.0	60.0	78.8
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	4
Articulated %	0.0	8.3	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	15.4	0.0	0.0	33.3	0.0	20.0	12.1
Buses	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Single-Unit Trucks	2	9	0	0	11	0	0	1	0	1	0	10	1	0	11	2	0	1	0	3	26
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	4
Total Entering Leg	2	12	0	0	14	0	0	1	0	1	0	12	1	0	13	2	0	3	0	5	33
Buses					1					0					2					0	3
Single-Unit Trucks					11					0					12					3	26
Articulated Trucks					3					0					1					0	4
Total Exiting Leg					15					0					15					3	33

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	3
Grand Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	6
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	33.3	0.0	33.3	
Exiting Leg Total					4					0					2					0	6

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.375
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Exiting Leg					1					0					2					0	3
Total					3					0					2					1	6

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Single-Unit Trucks

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	3	0	0	4	0	0	0	0	0	0	4	1	0	5	1	0	0	0	1	10
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:30 PM	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	6
4:45 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	1	0	1	4
Total	2	9	0	0	11	0	0	1	0	1	0	10	1	0	11	2	0	1	0	3	26
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
5:15 PM	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	6
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	1	6	0	0	7	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	10
Grand Total	3	15	0	0	18	0	0	1	0	1	0	11	2	0	13	3	0	1	0	4	36
Approach %	16.7	83.3	0.0	0.0		0.0	0.0	100.0	0.0		0.0	84.6	15.4	0.0		75.0	0.0	25.0	0.0		
Total %	8.3	41.7	0.0	0.0	50.0	0.0	0.0	2.8	0.0	2.8	0.0	30.6	5.6	0.0	36.1	8.3	0.0	2.8	0.0	11.1	
Exiting Leg Total					12					0					19					5	36

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	3	0	0	4	0	0	0	0	0	0	4	1	0	5	1	0	0	0	1	10
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:30 PM	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	6
4:45 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	1	0	1	4
Total Volume	2	9	0	0	11	0	0	1	0	1	0	10	1	0	11	2	0	1	0	3	26
% Approach Total	18.2	81.8	0.0	0.0		0.0	0.0	100.0	0.0		0.0	90.9	9.1	0.0		66.7	0.0	33.3	0.0		
PHF	0.500	0.563	0.000	0.000	0.688	0.000	0.000	0.250	0.000	0.250	0.000	0.625	0.250	0.000	0.550	0.500	0.000	0.250	0.000	0.750	0.650
Entering Leg	2	9	0	0	11	0	0	1	0	1	0	10	1	0	11	2	0	1	0	3	26
Exiting Leg					11					0					12					3	26
Total					22					1					23					6	52

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Articulated Trucks

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Grand Total	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	6
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	16.7	0.0	16.7	
Exiting Leg Total					4					0					2					0	6

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
Total Volume	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	4
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	4
Exiting Leg					3					0					1					0	4
Total					4					0					3					1	8

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	2	0	0	0	0	3	5	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:45 PM	0	0	0	0	3	0	3	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total	2	0	0	0	3	3	8	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Grand Total	2	0	0	0	5	3	10	0	0	0	0	3	4	7	0	0	1	0	0	0	1	0	0	0	0	1	0	1	19
Approach %	20.0	0.0	0.0	0.0	50.0	30.0		0.0	0.0	0.0	0.0	42.9	57.1		0.0	0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	0.0		
Total %	10.5	0.0	0.0	0.0	26.3	15.8	52.6	0.0	0.0	0.0	0.0	15.8	21.1	36.8	0.0	0.0	5.3	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	5.3	0.0	5.3	
Exiting Leg Total							8							7							0							4	19

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	2	0	0	0	0	3	5	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:45 PM	0	0	0	0	3	0	3	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total Volume	2	0	0	0	3	3	8	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
% Approach Total	25.0	0.0	0.0	0.0	37.5	37.5		0.0	0.0	0.0	0.0	42.9	57.1		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.250	0.400	0.000	0.000	0.000	0.000	0.250	0.333	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.469
Entering Leg	2	0	0	0	3	3	8	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Exiting Leg							6							7							0							2	15
Total							14							14							0							2	30

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Thursday, June 23, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0	0	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							1							0							0							0	1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg							1							0							0							0	1
Total							2							0							0							0	2

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	23	199	2	0	224	4	3	3	0	10	1	218	29	0	248	22	0	14	0	36	518
11:15 AM	24	194	1	1	220	2	1	3	0	6	3	193	26	0	222	28	0	9	0	37	485
11:30 AM	32	216	2	0	250	2	4	2	0	8	0	201	24	0	225	37	1	11	0	49	532
11:45 AM	33	205	0	1	239	2	4	5	0	11	0	213	17	0	230	21	1	8	0	30	510
Total	112	814	5	2	933	10	12	13	0	35	4	825	96	0	925	108	2	42	0	152	2045
12:00 PM	28	206	0	0	234	3	1	2	0	6	0	200	21	0	221	30	2	11	0	43	504
12:15 PM	22	193	2	0	217	4	2	4	0	10	1	204	22	0	227	26	1	11	0	38	492
12:30 PM	24	189	0	0	213	1	0	5	0	6	0	176	25	0	201	32	1	5	0	38	458
12:45 PM	29	195	4	0	228	4	0	1	0	5	1	207	25	0	233	25	1	10	0	36	502
Total	103	783	6	0	892	12	3	12	0	27	2	787	93	0	882	113	5	37	0	155	1956
1:00 PM	26	203	1	0	230	4	1	2	0	7	1	223	13	0	237	21	1	4	0	26	500
1:15 PM	23	187	0	0	210	0	1	5	0	6	0	231	16	0	247	30	2	11	0	43	506
1:30 PM	26	190	1	0	217	6	1	2	0	9	1	195	12	0	208	22	0	12	0	34	468
1:45 PM	31	202	1	0	234	6	1	4	0	11	0	187	19	0	206	15	3	10	0	28	479
Total	106	782	3	0	891	16	4	13	0	33	2	836	60	0	898	88	6	37	0	131	1953
Grand Total	321	2379	14	2	2716	38	19	38	0	95	8	2448	249	0	2705	309	13	116	0	438	5954
Approach %	11.8	87.6	0.5	0.1		40.0	20.0	40.0	0.0		0.3	90.5	9.2	0.0		70.5	3.0	26.5	0.0		
Total %	5.4	40.0	0.2	0.0	45.6	0.6	0.3	0.6	0.0	1.6	0.1	41.1	4.2	0.0	45.4	5.2	0.2	1.9	0.0	7.4	
Exiting Leg Total					2604					35					2726					589	5954
Cars	320	2355	14	2	2691	38	19	38	0	95	8	2424	249	0	2681	308	13	116	0	437	5904
% Cars	99.7	99.0	100.0	100.0	99.1	100.0	100.0	100.0	0.0	100.0	100.0	99.0	100.0	0.0	99.1	99.7	100.0	100.0	0.0	99.8	99.2
Exiting Leg Total					2580					35					2701					588	5904
Heavy Vehicles	1	24	0	0	25	0	0	0	0	0	0	24	0	0	24	1	0	0	0	1	50
% Heavy Vehicles	0.3	1.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.9	0.3	0.0	0.0	0.0	0.2	0.8
Exiting Leg Total					24					0					25					1	50

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	23	199	2	0	224	4	3	3	0	10	1	218	29	0	248	22	0	14	0	36	518
11:15 AM	24	194	1	1	220	2	1	3	0	6	3	193	26	0	222	28	0	9	0	37	485
11:30 AM	32	216	2	0	250	2	4	2	0	8	0	201	24	0	225	37	1	11	0	49	532
11:45 AM	33	205	0	1	239	2	4	5	0	11	0	213	17	0	230	21	1	8	0	30	510
Total Volume	112	814	5	2	933	10	12	13	0	35	4	825	96	0	925	108	2	42	0	152	2045
% Approach Total	12.0	87.2	0.5	0.2		28.6	34.3	37.1	0.0		0.4	89.2	10.4	0.0		71.1	1.3	27.6	0.0		
PHF	0.848	0.942	0.625	0.500	0.933	0.625	0.750	0.650	0.000	0.795	0.333	0.946	0.828	0.000	0.932	0.730	0.500	0.750	0.000	0.776	0.961
Cars	111	807	5	2	925	10	12	13	0	35	4	818	96	0	918	107	2	42	0	151	2029
Cars %	99.1	99.1	100.0	100.0	99.1	100.0	100.0	100.0	0.0	100.0	100.0	99.2	100.0	0.0	99.2	99.1	100.0	100.0	0.0	99.3	99.2
Heavy Vehicles	1	7	0	0	8	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	16
Heavy Vehicles %	0.9	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.9	0.0	0.0	0.0	0.7	0.8
Cars Enter Leg	111	807	5	2	925	10	12	13	0	35	4	818	96	0	918	107	2	42	0	151	2029
Heavy Enter Leg	1	7	0	0	8	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	16
Total Entering Leg	112	814	5	2	933	10	12	13	0	35	4	825	96	0	925	108	2	42	0	152	2045
Cars Exiting Leg					872					11					927					219	2029
Heavy Exiting Leg					7					0					8					1	16
Total Exiting Leg					879					11					935					220	2045

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Cars

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	23	197	2	0	222	4	3	3	0	10	1	215	29	0	245	21	0	14	0	35	512
11:15 AM	24	192	1	1	218	2	1	3	0	6	3	192	26	0	221	28	0	9	0	37	482
11:30 AM	32	214	2	0	248	2	4	2	0	8	0	199	24	0	223	37	1	11	0	49	528
11:45 AM	32	204	0	1	237	2	4	5	0	11	0	212	17	0	229	21	1	8	0	30	507
Total	111	807	5	2	925	10	12	13	0	35	4	818	96	0	918	107	2	42	0	151	2029
12:00 PM	28	204	0	0	232	3	1	2	0	6	0	197	21	0	218	30	2	11	0	43	499
12:15 PM	22	188	2	0	212	4	2	4	0	10	1	202	22	0	225	26	1	11	0	38	485
12:30 PM	24	186	0	0	210	1	0	5	0	6	0	175	25	0	200	32	1	5	0	38	454
12:45 PM	29	193	4	0	226	4	0	1	0	5	1	204	25	0	230	25	1	10	0	36	497
Total	103	771	6	0	880	12	3	12	0	27	2	778	93	0	873	113	5	37	0	155	1935
1:00 PM	26	202	1	0	229	4	1	2	0	7	1	218	13	0	232	21	1	4	0	26	494
1:15 PM	23	186	0	0	209	0	1	5	0	6	0	229	16	0	245	30	2	11	0	43	503
1:30 PM	26	188	1	0	215	6	1	2	0	9	1	195	12	0	208	22	0	12	0	34	466
1:45 PM	31	201	1	0	233	6	1	4	0	11	0	186	19	0	205	15	3	10	0	28	477
Total	106	777	3	0	886	16	4	13	0	33	2	828	60	0	890	88	6	37	0	131	1940
Grand Total	320	2355	14	2	2691	38	19	38	0	95	8	2424	249	0	2681	308	13	116	0	437	5904
Approach %	11.9	87.5	0.5	0.1		40.0	20.0	40.0	0.0		0.3	90.4	9.3	0.0		70.5	3.0	26.5	0.0		
Total %	5.4	39.9	0.2	0.0	45.6	0.6	0.3	0.6	0.0	1.6	0.1	41.1	4.2	0.0	45.4	5.2	0.2	2.0	0.0	7.4	
Exiting Leg Total					2580					35					2701					588	5904

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	23	197	2	0	222	4	3	3	0	10	1	215	29	0	245	21	0	14	0	35	512
11:15 AM	24	192	1	1	218	2	1	3	0	6	3	192	26	0	221	28	0	9	0	37	482
11:30 AM	32	214	2	0	248	2	4	2	0	8	0	199	24	0	223	37	1	11	0	49	528
11:45 AM	32	204	0	1	237	2	4	5	0	11	0	212	17	0	229	21	1	8	0	30	507
Total Volume	111	807	5	2	925	10	12	13	0	35	4	818	96	0	918	107	2	42	0	151	2029
% Approach Total	12.0	87.2	0.5	0.2		28.6	34.3	37.1	0.0		0.4	89.1	10.5	0.0		70.9	1.3	27.8	0.0		
PHF	0.867	0.943	0.625	0.500	0.932	0.625	0.750	0.650	0.000	0.795	0.333	0.951	0.828	0.000	0.937	0.723	0.500	0.750	0.000	0.770	0.961
Entering Leg	111	807	5	2	925	10	12	13	0	35	4	818	96	0	918	107	2	42	0	151	2029
Exiting Leg					872					11					927					219	2029
Total					1797					46					1845					370	4058

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	6
11:15 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
11:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
11:45 AM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total	1	7	0	0	8	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	16
12:00 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
12:15 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
12:30 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
12:45 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Total	0	12	0	0	12	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	21
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
1:15 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
1:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	5	0	0	5	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	13
Grand Total	1	24	0	0	25	0	0	0	0	0	0	24	0	0	24	1	0	0	0	1	50
Approach %	4.0	96.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	2.0	48.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	48.0	0.0	0.0	48.0	2.0	0.0	0.0	0.0	2.0	
Exiting Leg Total					24					0					25					1	50
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0
Single-Unit Trucks	1	22	0	0	23	0	0	0	0	0	0	21	0	0	21	1	0	0	0	1	45
% Single-Unit	100.0	91.7	0.0	0.0	92.0	0.0	0.0	0.0	0.0	0.0	0.0	87.5	0.0	0.0	87.5	100.0	0.0	0.0	0.0	100.0	90.0
Exiting Leg Total					21					0					23					1	45
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
% Articulated	0.0	8.3	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	10.0
Exiting Leg Total					3					0					2					0	5

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
12:15 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
12:30 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
12:45 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
Total Volume	0	11	0	0	11	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	22
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.550	0.000	0.000	0.550	0.000	0.000	0.000	0.000	0.000	0.000	0.550	0.000	0.000	0.550	0.000	0.000	0.000	0.000	0.000	0.786
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	19
Single-Unit %	0.0	81.8	0.0	0.0	81.8	0.0	0.0	0.0	0.0	0.0	0.0	90.9	0.0	0.0	90.9	0.0	0.0	0.0	0.0	0.0	86.4
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Articulated %	0.0	18.2	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	13.6
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	19
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total Entering Leg	0	11	0	0	11	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	22
Buses					0					0					0					0	0
Single-Unit Trucks					10					0					9					0	19
Articulated Trucks					1					0					2					0	3
Total Exiting Leg					11					0					11					0	22

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0					0	0
Total					0					0					0					0	0

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Single-Unit Trucks

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	6
11:15 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
11:30 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
11:45 AM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total	1	7	0	0	8	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	15
12:00 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
12:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
12:30 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
12:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total	0	10	0	0	10	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	18
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
1:15 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
1:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	5	0	0	5	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	12
Grand Total	1	22	0	0	23	0	0	0	0	0	0	21	0	0	21	1	0	0	0	1	45
Approach %	4.3	95.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	2.2	48.9	0.0	0.0	51.1	0.0	0.0	0.0	0.0	0.0	0.0	46.7	0.0	0.0	46.7	2.2	0.0	0.0	0.0	2.2	
Exiting Leg Total					21					0					23					1	45

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
12:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
12:30 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
12:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
1:00 PM	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
Total Volume	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	19
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.792
Entering Leg	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	19
Exiting Leg					10					0					9					0	19
Total					19					0					19					0	38

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Articulated Trucks

	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					3					0					2					0	5

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:30 AM	Lafayette Road (Route 1) from North					Wilson Road from East					Lafayette Road (Route 1) from South					Wilson Road from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Exiting Leg					1					0					2					0	3
Total					3					0					3					0	6

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	5	0	0	0	0	5	0	0	0	0	0	0	0	6
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	0	0	0	5	0	0	0	0	0	1	1	8
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	2	0	0	0	0	2	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	6
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	2
1:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	0	0	2	1	0	1	0	3	0	5	0	0	0	0	0	0	0	1	1	0	0	0	1	3	10
Grand Total	0	2	0	0	0	1	3	1	0	1	0	5	1	8	0	5	0	0	0	0	5	1	1	0	0	0	2	4	20
Approach %	0.0	66.7	0.0	0.0	0.0	33.3		12.5	0.0	12.5	0.0	62.5	12.5		0.0	100.0	0.0	0.0	0.0	0.0		25.0	25.0	0.0	0.0	0.0	50.0		
Total %	0.0	10.0	0.0	0.0	0.0	5.0	15.0	5.0	0.0	5.0	0.0	25.0	5.0	40.0	0.0	25.0	0.0	0.0	0.0	0.0	25.0	5.0	5.0	0.0	0.0	0.0	10.0	20.0	
Exiting Leg Total							7							7							4							2	20

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

1:00 PM	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	2	0	0	0	0	2	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	6
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	2
1:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	0	0	0	2	1	0	1	0	3	0	5	0	0	0	0	0	0	0	1	1	0	0	0	1	3	10
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		20.0	0.0	20.0	0.0	60.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		33.3	33.3	0.0	0.0	0.0	33.3		
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.250	0.000	0.250	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.375	0.417
Entering Leg	0	2	0	0	0	0	2	1	0	1	0	3	0	5	0	0	0	0	0	0	0	1	1	0	0	0	1	3	10
Exiting Leg							1							4							4							1	10
Total							3							9							4							4	20

PDI File #: **228713 B**
Location: **N: Lafayette Road (Route 1) S: Lafayette Road (Route 1)**
Location: **E: Wilson Road W: Wilson Road**
City, State: **Portsmouth, NH**
Client: **TFMoran/J. Porter**
Site Code: **47107.02**
Count Date: **Saturday, June 25, 2022**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	1	5	6	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	5	6	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
12:00 PM	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	6	0	6	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	7	5	12	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Approach %	0	0	0	0	58.3	41.7		0	0	0	0	50	50		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	43.8	31.3	75	0	0	0	0	12.5	12.5	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							12							4							0							0	16

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Lafayette Road (Route 1) from North							Wilson Road from East							Lafayette Road (Route 1) from South							Wilson Road from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
11:00 AM	0	0	0	0	1	5	6	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	5	6	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
% Approach Total	0.0	0.0	0.0	0.0	16.7	83.3		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.286
Entering Leg	0	0	0	0	1	5	6	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Exiting Leg							6							2							0							0	8
Total							12							4							0							0	16

CITY OF PORTSMOUTH

Planning Department
1 Junkins Avenue
Portsmouth, New
Hampshire 03801
(603) 610-7216

TECHNICAL ADVISORY COMMITTEE

August 3, 2022

One Hundred Forty West Road Condos
140 West Road
Portsmouth, New Hampshire 03801

RE: Amended Site Plan Approval for property located at 140 West Road (LU-22-99)

Dear Property Owner:

The Technical Advisory Committee, at its regularly scheduled meeting of Tuesday, August 2, 2022, considered your application for Amended Site Plan Approval to improve and install stormwater infrastructure, relocated dumpsters, install landscaping, and increase parking spaces from 102 spaces to 122 spaces where 119 are required. Said property is shown on Assessor Map 252 Lot 2-13 and lies within the Industrial (I) District. As a result of said consideration, the Committee voted to to recommend **approval** to the Planning Board with the following **stipulations**:

1.1) Plans will be updated to include treatment swale details and calculations. DPW to review and approve prior to Planning Board consideration.
1.2) Catch Basin A will be changed to a manhole.
1.3) Sewer manhole detail, in accordance with State standard, will be added to the plans.
1.4) Landscape plans will be updated to include additional plantings and loam planting beds within the three landscape islands.
1.5) Cistern operation and maintenance details will be added to the plans. DPW to review and approve prior to Planning Board consideration.
1.6) All State and Federal permits as required for this project will be listed on the plans.
1.7) Plans will be updated to show granite curbing around entire parking lot in the vicinity of Catch Basin B for drainage.
1.8) Grading Plan will be adjusted to correct reduction in grade behind building. DPW to review and approve prior to Planning Board consideration.
1.9) Light poles will be shown on plans at least 10 feet from the overhead power lines with details that will show light temperature, cutoff shields, and mounting height. DPW to review and approve prior to Planning Board consideration.
1.10) Outfall structure will be added to the plans.
1.11) Catch Basin B will be moved to the curb and a note will be added regarding jellyfish filter.
1.12) A letter will be provided to the Planning Department with the updated submission stating where resolved conditions can be found on within the submission and how outstanding conditions will be resolved subsequent to Planning Board approval.
Conditions precedent to Building Permit:
1.13) Drainage easements will be dedicated and accepted by the City.
1.14) Plantings in the public Right of Way receive approval from the Trees and Greenery Committee.

1.15) A full set of documents including all plans, studies, and the aforementioned letter will be submitted for staff review and Planning Board consideration.

This matter will be placed on the agenda for the Planning Board meeting scheduled for **Thursday, August 18, 2022**. One (1) hard copy of all plans and supporting reports and exhibits as well as an updated electronic file (in a PDF format) must be filed in the Planning Department and uploaded to the online permit system no later than **Monday, August 8, 2022**.

Per Section 2.5 of the Site Plan Regulations, a site plan review application to the Planning Board must include all applicable information and supporting materials including but not limited to the following items:

- *Full updated plan set*
- *Draft Easements*
- *Drainage Analysis*
- *Traffic Studies*
- *Etc.*

All comments, corrections, and conditions identified as "Items to be addressed before Planning Board submittal' must be resolved/corrected for the Planning Board application submittal to be deemed complete.

The minutes and audio recording of this meeting are available by contacting the Planning Department.

Very truly yours,

Beverly Mesa-Zendt,
Planning Director

cc:

Christopher Mulligan, Bosen & Associates
Alex Ross, Ross Engineering
Mark Gianniny, McHenry Architecture