



Public Facilities Committee Budget Agenda

City of Newton **In City Council**

Wednesday, May 27, 2020

The Public Facilities Committee will hold this meeting as a virtual meeting on Wednesday, May 27, 2020 at **6:00 p.m.** To view this meeting use this link at the above date and time:

<https://us02web.zoom.us/j/80572434>

Please note the early start time of 6:00 p.m.

Dial by your location

+1 646 558 8656 US (New York)

Meeting ID:

805 724 346

Items Scheduled for Discussion:

Referred to Public Facilities and Finance Committees

#255-20 Transfer \$400,000 to the DPW Roads Program

HER HONOR THE MAYOR requesting authorization to repurpose and transfer the sum of four hundred thousand dollars (\$400,000) from Acct #01C10402-579500 originally set aside for DPW 25% Design of Washington Street to the DPW Roads Program to repair the roadway section of Washington Street between Chestnut Street and Walnut Street.

PLEASE BRING YOUR BUDGET, CIP BOOKS AND SUPPLEMENTAL CIP

BUDGET & CIP DISCUSSIONS: Public Works Department

Referred to Finance and Appropriate Committees

#8-20(2) Submittal of the FY 2021 Municipal/School Operating Budget

HER HONOR THE MAYOR submitting in accordance with Section 5-1 of the City of Newton Charter the FY21 Municipal/School Operating Budget, passage of which shall be concurrent with the FY21-FY25 Capital Improvement Program (#8-20).

EFFECTIVE DATE OF SUBMISSION 05/11/20; LAST DATE TO PASS THE BUDGET

The location of this meeting is accessible and reasonable accommodations will be provided to persons with disabilities who require assistance. If you need a reasonable accommodation, please contact the city of Newton's ADA Coordinator, Jini Fairley, at least two business days in advance of the meeting: jfairley@newtonma.gov or (617) 796-1253. The city's TTY/TDD direct line is: 617-796-1089. For the Telecommunications Relay Service (TRS), please dial 711.

Referred to Finance and Appropriate Committees

#8-20

Submittal of the FY 2021 to FY 2025 Capital Improvement Plan (#8-20)

HER HONOR THE MAYOR submitting the Fiscal Years 2021 to 2025 Capital Improvement Plan pursuant to section 5-3 of the Newton City Charter.

Referred to Finance and Appropriate Committees

#8-20(3)

Submittal of the FY 2021 – FY 2025 Supplemental Capital Improvement Plan

HER HONOR THE MAYOR submitting the FY 2021 – FY 2025 Supplemental Capital Improvement Plan.

#234-20

5-58 for the Oak Hill Middle School at 130 Wheeler Road

DESIGN REVIEW COMMITTEE petition, pursuant to 5-58, for schematic design and site plan approval at 130 Wheeler Road for the construction of three-classroom additions to accommodate a significant and sustained increase in enrollment.

Public Facilities Approved 4-0-4 (Councilors Laredo, Kelley, Crossley and Kalis abstaining) on 05/14/20 and was referred back to the Public Facilities Committee on 05/18/20

Respectfully submitted,

Alison M. Leary, Chair



RUTHANNE FULLER
MAYOR

City of Newton, Massachusetts
Office of the Mayor

255-20
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Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to repurpose and transfer the sum of \$400,000 from the Comptroller's Reserve Acct # 01C10402-579500 originally set aside for DPW 25% Design of Washington Street to the DPW Roads Program.

The Coronavirus Pandemic has dramatically changed our world. The financial impact to the City's revenues due to the COVID-19 economic shutdown will be significant. Consequently, plans must be deferred and initiatives postponed. Realistically, it may take us a few years to recover financially from the devastating effects of closing our economy.

The roadway section of Washington St between Chestnut St and Walnut St is in desperate need of repair and paving. The repair and paving need to happen over the next year to avoid a costly and disruptive reclamation process which will be required if the road deteriorates any further; performing this repair now will add 8-10 years additional life to the street. The total cost of this project will approximate \$700,000. Funding from the roads program will make up the required difference.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller
Mayor

RECEIVED
MAY 4 4 53 PM
CITY CLERK
NEWTON, MA. 02459

The background image shows a construction scene. In the foreground, a large concrete mixer truck is partially visible. Two workers wearing yellow hard hats and high-visibility vests are working on a concrete surface. One worker is standing and looking down, while the other is bent over. In the background, there are orange traffic cones, a red car, and a white car on a street. The scene is set outdoors with trees and a clear sky.

Department of Public Works

Mission

The DPW is responsible for designing, constructing and maintaining roadways and sidewalks, signals and streetscapes, storm response, and collecting and disposing of solid waste and recyclables; while promoting environmental sustainability

The mission of the Department of Public Works is to construct and maintain roadways, sidewalks, and traffic control signals; to optimize traffic flow with proper signage, signals & street designs; to respond to snow and rain storms; and to dispose of solid waste and recyclables.

Of the Public Works department over 150 employees are dedicated to providing these services for residents, businesses, and visitors to the City of Newton. Whether fixing a pothole, responding to a weather disaster, or fielding a resident's request the Department of Public Works provides round the clock assistance to the City. We believe deeply in responsive and respectful customer service.

At the forefront of department's objectives for fiscal year 2021 is the continued implementation of the Accelerated Roads Program and the Complete Streets approach. This program seeks to improve and maintain an unprecedented amount of City streets and sidewalks to provide safe and accessible streets and sidewalks for drivers, pedestrians, and bicyclists.

The Public Works Department is committed to keeping Newton safe for all. That includes ensuring that the drinking water continues to be top quality by continuing the annual water lining and cleaning projects. This also includes the continued effort to provide fast and thorough snow removal during winter events so that residents and travelers can safely get where they need to be.

Public Works has put a large emphasis on promoting environmental sustainability to ensure a bright future for generations to come. The Department will continue to promote proper waste and recycling initiatives, to improve sewer and stormwater systems to reduce pollution, and to take steps towards having an entirely electric and hybrid passenger vehicle fleet within two years.

FY2020 was an extremely busy year for the many facets of Public Works. Some of the highlights are listed below in individual sections:

Streets

- Paved 1.14 miles of roadway and installed 1.08 miles of curbing through fall construction season
- Installed and repaired 1.8 miles of concrete sidewalks through fall construction season
- Installed 6 ADA ramps through fall construction season
- Met target of streets cleared of snow within eight (8) hours of end of each storm
- Continued streamlining of snow processes for city workforce and contractors
- Continued refinement of city snow sidewalk policy and compliance
- Completed construction of the school bus turn in at the Horace Mann School

Transportation

- Installed 90 Accessible Pedestrian Signal buttons
- Rectangular Rapid Flash Beacons installed at four unsignalized crosswalks
- Completed second phase of 3-year streetlight outage backlog project
- Year 2 of Traffic Calming studies and design successfully completed
- Implemented Employee Parking permit program in Newton Highlands
- Added 1.5 miles of bike lanes on major corridors, including Nahanton Street and Washington Street

Sustainable Materials Management

- Maintained a 9% contamination rate in curbside recycling program through aggressive education program
- Made 99.87% solid waste pickups and 99.94% recycling pickups on time
- Launched curbside compost collection partnership with local vendor
- Successfully negotiated a new 5-year waste and recycling hauling contract
- Held a successful first annual Pumpkin Smash to draw attention to organics management
- Upgraded Rumford Resource Recovery Center facilities including office space, safety wash station, restroom, compactors, and hazardous waste shed
- Maintained a robust curbside education and feedback program based on the MassDEP Recycling IQ program
- Implemented household hazardous waste reuse program that diverted 1.5 tons of HHW from disposal
- Worked with 5 schools on a voluntary basis to improve recycling and solid waste handling and/or implement organics collection

Engineering

- Completed construction on the Oak at Christina Intersection Alignment Project
- Began Construction of the West Newton Square Village Enhancement Project
- Began Construction in June for the Newtonville Village Enhancement Project
- Engineered over 8 miles of new paving projects
- Engineered over 10 miles of roadway maintenance projects
- Completed Dedham/Nahanton intersection improvement project

- Completed the Chestnut St at Ellis St intersection improvement project
- Completed the Upland Ave extension rehabilitation project
- Completed the Fair Oaks Ave at Bemis St intersection improvement project
- Completed the Braeland Rd bicycle lane improvement project
- Completed safety improvements at the Walnut St at Minot Place intersection

Fleet

- Continued updating and implementation of 10-year vehicle replacement schedule
- Completed full implementation of all electric City Hall motor pool and Crafts St motor pool
- Grew electric and hybrid vehicle fleet to over 30 vehicles city-wide
- Increased the usage of green diesel biofuel year-round.

Customer Service

- Maintained average answer speed of under goal of 15 seconds or less
- Successfully deployed an ongoing DPW WebQA resign to help increase communication standards and user experience

In order to maintain the strong performance of the Public Works Department we are making a number of changes for FY2021. This year we are dedicating \$178,000 towards year two of our vehicle lease program to help us maintain a safe, green, and cost-effective electric vehicle fleet. In a push to continue promoting a sustainable environment and deal with rising costs, we are increasing the Sustainable Materials budget by \$836,000 for the collection and processing of recycling, trash, and all other types of waste.

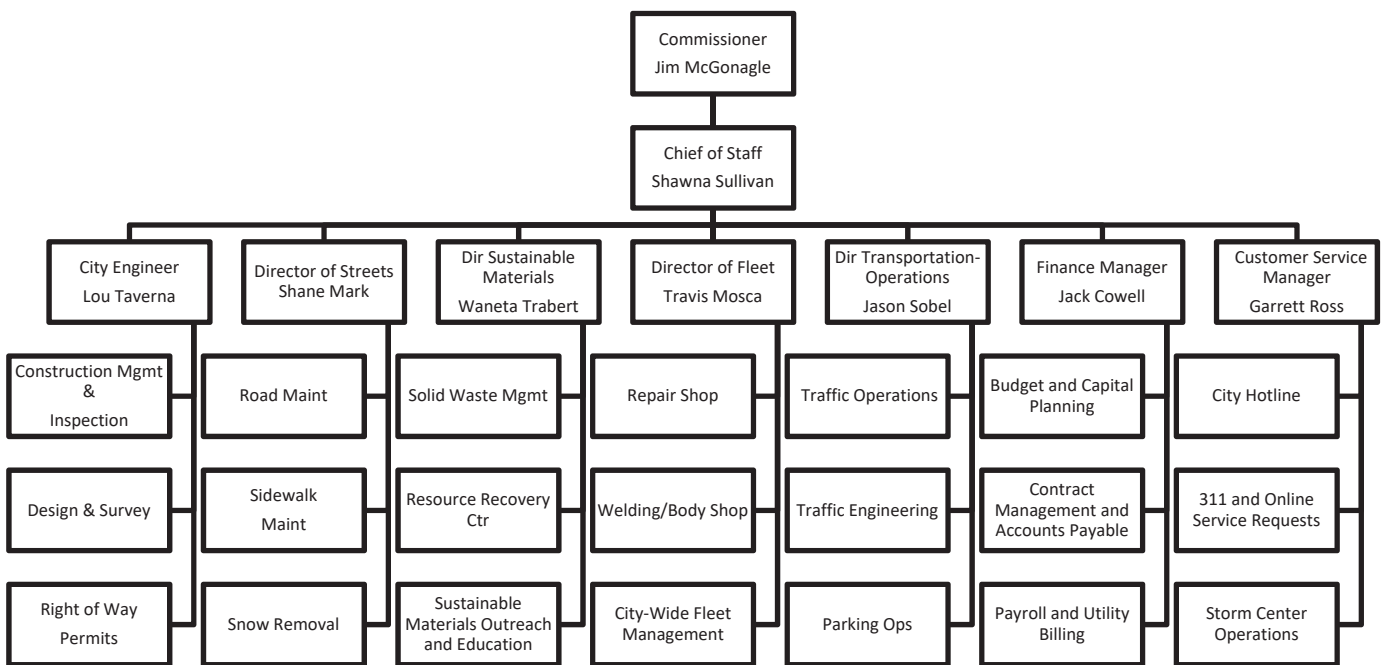
Additionally, the Transportation Division will benefit from the addition of an Assistant Superintendent to help oversee day to day operations including the implementation of smart meter technology, the addition of an in house line painting crew, and to help oversee operations for special events such as the Boston Marathon.

Jim McGonagle

Jim McGonagle

Commissioner of Public Works

PUBLIC WORKS



Financial and Operating Highlights

Financial Highlights

	<-----Actual----->				<-Adj Budget->	<-Proposed->
	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
Expenditure by Department						
Admin	\$ 1,154,655	\$ 1,267,698	\$ 1,473,105	\$ 1,515,247	\$ 1,576,288	\$ 1,764,668
Vehicle Maint	\$ 2,168,585	\$ 2,240,015	\$ 2,370,032	\$ 2,734,319	\$ 2,862,617	\$ 2,648,690
Street/Sidewalk	\$ 3,815,072	\$ 3,230,576	\$ 3,691,876	\$ 4,523,143	\$ 4,920,708	\$ 4,762,874
Street Cleaning	\$ -	\$ 565,048	\$ 648,249	\$ 676,568	\$ 700,833	\$ 835,046
Street Lighting	\$ 308,315	\$ 320,267	\$ 473,611	\$ 490,400	\$ 455,000	\$ 377,000
Snow/Ice Control	\$ 3,663,363	\$ 5,661,791	\$ 6,412,886	\$ 4,249,875	\$ 1,500,000	\$ 3,000,000
Sanitation	\$ 7,677,652	\$ 7,345,484	\$ 7,872,178	\$ 8,888,079	\$ 9,446,840	\$ 10,197,961
Engineering	\$ 1,043,087	\$ 1,370,723	\$ 1,798,345	\$ 2,082,330	\$ 2,161,725	\$ 2,365,287
Transportation	\$ 1,453,932	\$ 1,421,321	\$ 2,089,909	\$ 2,324,238	\$ 2,672,747	\$ 2,573,477
Total	\$ 21,284,661	\$ 23,422,923	\$ 26,830,191	\$ 27,484,199	\$ 26,296,758	\$ 28,525,003
% Incr		10.05%	14.55%	2.44%	-4.32%	8.47%

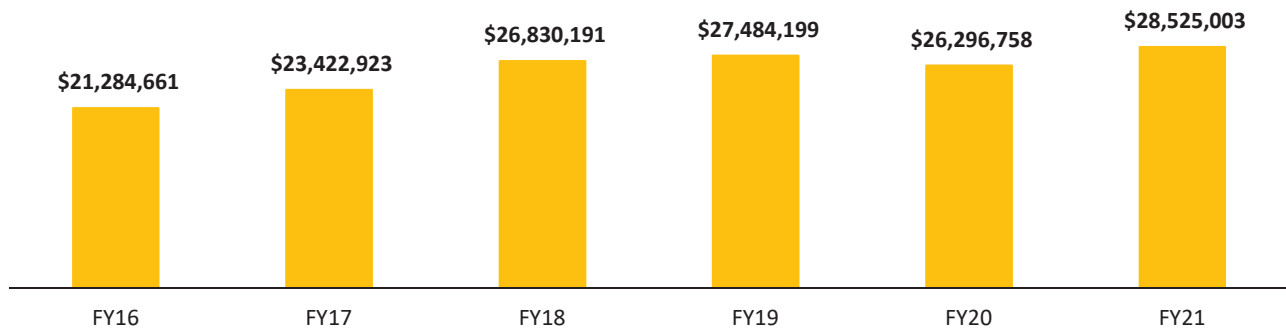
Personnel (Includes Employees in Stormwater, Water and Sewer Funds)

Full-Time	193	193	197	199	201	198*
Part-Time	5	5	6	9	12	12
Total	198	198	203	208	213	210

*Motor Equipment Repairman and Senior Traffic Engineer deferred to FY2022

Note: Each year the DPW budget only includes \$1.5 million for Snow/Ice removal. An additional \$3.0 million is carried in the Comptroller's budget.

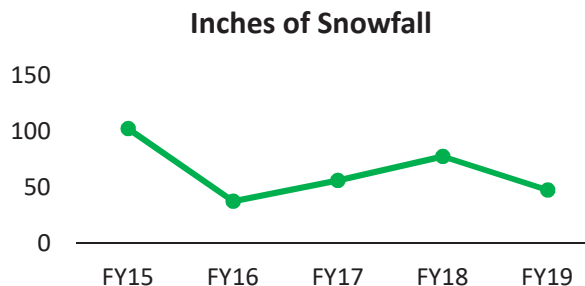
Total Department of Public Works Expenditures



Operating Highlights

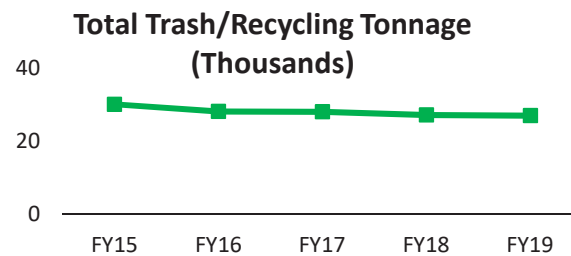
Inches of Snowfall By Year

Year	Inches	Events	Costs
FY15	102	23	\$ 7,288,599
FY16	38	12	\$ 3,608,531
FY17	56	16	\$ 5,195,180
FY18	78	25	\$ 7,403,836
FY19	47	25	\$ 5,010,572



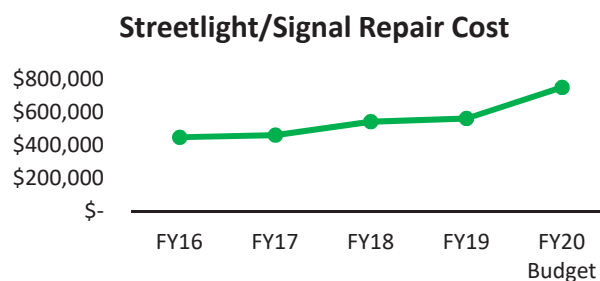
Trash Tonnage by Year

Year	Trash	Recycling	Total Tons
FY15	19,741	10,360	30,100
FY16	17,630	10,515	28,144
FY17	17,754	10,311	28,065
FY18	17,514	9,633	27,146
FY19	17,635	9,336	26,971



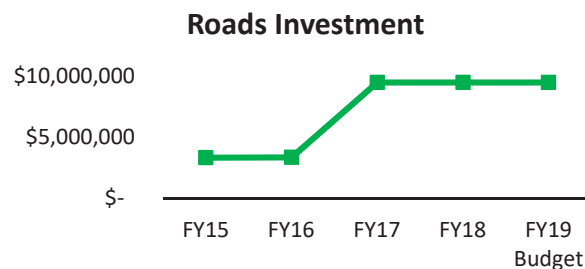
Streetlight/Signal Repairs by Year

Year	Lights	Signals	Total Cost
FY16	77,805	369,334	\$ 447,139
FY17	159,397	300,039	\$ 459,436
FY18	222,714	317,882	\$ 540,596
FY19	209,558	351,855	\$ 561,412
FY20	310,000	440,000	\$ 750,000



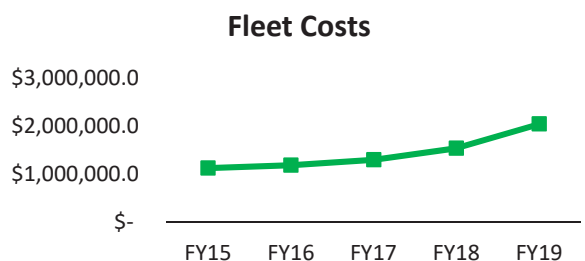
Roads Investment By Year

Year	City Funds	Chapter 90	Total Funds
FY16	\$ 1,050,625	\$ 2,300,000	\$ 3,350,625
FY17	\$ 1,076,891	\$ 2,300,000	\$ 3,376,891
FY18	\$ 7,200,000	\$ 2,300,000	\$ 9,500,000
FY19	\$ 7,200,000	\$ 2,300,000	\$ 9,500,000
FY20	\$ 7,200,000	\$ 2,300,000	\$ 9,500,000



Citywide Fleet Maintenance Costs By Year

Year	Rep. Costs	Parts Costs	Total Costs
FY15	\$ 460,195	\$ 663,913	\$ 1,124,108
FY16	\$ 475,330	\$ 706,742	\$ 1,182,072
FY17	\$ 441,429	\$ 858,101	\$ 1,299,530
FY18	\$ 803,425	\$ 732,235	\$ 1,535,660
FY19	\$ 738,860	\$ 1,303,006	\$ 2,041,866



Department of Public Works' Customer Service

Fiscal Year 2021 Outcomes and Strategies

Outcome 1

Provide Valuable Service to Residents and Businesses

As the City of Newton's front facing divisions, it is vital for Customer Service to be viewed as a trustworthy and helpful resource for the residents and visitors of Newton.

In FY2021 we will look to develop new practices for training and ensuring quality

assurance of the services we provide. We will continue to strive towards increasing proactive communication with residents and businesses during large and emergency events by utilizing our call volume data from past events to predict customer needs for upcoming events such as large storms, the Boston Marathon, electrical outages, etc. Identifying high volume call events in advance will allow us to send out proactive notices to residents and prepare communications for common inquiries. Customer Service will continue to provide support before, during, and/or after large and emergency events as needed as part of the Emergency Operations Center activation plan.

Outcome 2

Provide Efficient Service to Residents and Businesses

In FY2021 we will continue to build on our reputation for delivery of superior customer service. We will continue to leverage the FY2020 successful redesign of the Department of Public Works communication and user experience of Newton's 311 system in FY2021. We look to

expand the consistency in communication and ease of use to all departments that use Newton 311.

In order to provide efficient, friendly, and accurate service, we will continue to concentrate efforts towards increasing the percentage of calls answered within 15 seconds.

DPW

Fleet Management Division

Fiscal Year 2021 Outcomes and Strategies

Outcome 1

Ensure City Fleet is Safe, Operational, and Environmentally Friendly

Ensuring that a fleet of safe and reliable vehicles is available for city operations is critical for the success of the City. We strive to keep 100% of the fleet safe and operational at all times. We will continue the initiative to have an entirely electric city sedan fleet and a fully hybrid SUV and AWD fleet. Utilizing our newly implemented lease program to replace older vehicles we will effectively reduce the overall age of the fleet. This will push out old vehicle technology and replace it with newer and safer technologies for operators, as well as lower fleet repair costs and improve overall fuel consumption and meet the city's sustainability goals as part of the climate action plan. We have a carefully balanced vehicle replacement schedule to help plan and prioritize the purchasing of vehicles and equipment each year. Gathering numerous facets of City fleet data to utilize a vehicle condition scoring program helps us accomplish an accurate vehicle replacement schedule. We will continue to intensify the vehicle preventative maintenance program to reduce future more costly repairs and to help us maximize the value of our fleet.

Another goal of the division is to ensure that all of the city's construction and passenger vehicles are standardized in order to ensure that all vehicles are functional for all year-round operations. Most vehicles and equipment will be designed and purchased with the intention of maximizing operational efficiency for both construction projects, daily operations, and snow removal. Transitioning to these types of trucks will help us cut down on vehicles sitting idle during certain times of the year, reduce the need for contracting services, and increase productivity in the City's workforce. Additionally, streamlining standards for our vehicles will allow the Fleet division to maintain vehicles in a faster and more cost-effective manner. We will continue to work diligently to explore new technologies and methodologies and push to make smarter, more calculated decisions based on the city's climate action plan goals.

Outcome 2

Streamline Fleet Standards to Improve Operational and Cost Efficiency

DPW

Streets Division

Fiscal Year 2021 Outcomes and Strategies

Outcome 1

Provide Safe, User-friendly and Durable streets

The Streets Division maintains and repairs our city streets and ensures that snow is removed quickly and effectively. Our goal is to improve city streets in order to provide all users a safe means of travel and transportation. Multiple preventative maintenance processes are used to increase the quality and lifespan of all city streets. The Streets Division's target is to clear snow and ice from streets and sidewalks abutting city property within eight hours of the end of each storm. The target for clearing the 80 plus miles of city sidewalk routes is within 24 hours.

A well-connected walking network will help to support Newton's sustainability, economic vibrancy, and public health goals. Repairing sidewalks and making connections where no sidewalk exists helps people of all abilities who seek to walk to their destinations. Repairing sidewalks that are in disrepair or are not ADA compliant supports the goals of Newton's Transportation plan and provides for a better quality of life for Newton residents. The Streets Division and Engineering Division will work in conjunction to bring ADA accessible ramps into compliance and prioritize sidewalk repair efforts on safe routes to schools, transportation nodes, and village centers.

Outcome 2

Ensure a Safe City-wide Sidewalk System

Outcome 3

Utilize New Technologies to Improve Operations

The Streets Division will be implementing and increasing usage of new technologies through our asset management program in several areas in the coming year. A snow operations module will be used to track both the resources and time on tasks associated with snow and ice control including live labor and contractor costs, GPS tracking for all snow vehicles, and live tracking of salting usage. The asset management system will be utilized to track and map future maintenance and repairs of all streets and sidewalks to allow Public Works to be more proactive in street maintenance. Additionally, the asset management system will allow the department to monitor the usage and fuel consumption of all vehicles to ensure that we are using our equipment effectively and efficiently.

DPW

Sustainable Materials Management Division

Fiscal Year 2021 Outcomes and Strategies

Outcome 1

Strive for Resident Satisfaction with Curbside Collection Service

The Sustainable Materials Management Division is responsible for the curbside collection of residential and municipal waste and recycling. Providing reliable curbside collection services is a critical municipal responsibility that is highly visible to residents each week and has significant

impacts on quality of life. Data on missed pickups reported by residents is tracked monthly to ensure that operations with the contracted waste hauler are meeting targets. Informing residents about curbside collection regulations, as well as end-of-life management for various waste streams, is done through city-wide mailings and an e-newsletter. The goal is to improve resident satisfaction with curbside collection service, while increasing recycling and reducing waste tonnage.

Residents find waste collection disruptions deeply concerning. Disruptions in service for residents may be caused by carts being set out in a manner that is out of compliance with the Recycling & Trash Ordinance or from holidays or snow/ice events. Tracking and communicating on issues of non-compliance will continue to be managed daily in order to educate residents in effort to prevent future disruptions. In addition to posting a holiday pickup schedule on the city website, the *Recycle Right Newton* app and website tool will continue to provide a collection day reminder that alerts residents to holidays and weather disruptions. The Sustainable Materials Management Division encourages residents to use the *Recycle Right Newton* app by touting its features in education tools, including a bill insert.

Waste diversion decreases pollution and greenhouse gas emissions, reduces the amount of material sent to landfills, and conserves energy and natural resources. Diversion activities also create more jobs than waste disposal. Education and outreach is a key responsibility of the Sustainable Materials Management Division to maximize material diversion away from disposal. As more material is diverted from disposal, long-term sustainable materials management is achieved through waste reduction, reuse, and recycling, as well as other diversion efforts such as toxics recovery through household hazardous waste events.

Measurement of diversion efforts is accomplished through monthly tracking of material quantities collected curbside and from the Newton Resource Recovery Center. In addition, the quality of the single stream recycling is tracked using audit data from the Avon Materials Recovery Facility.

The existing service contract requires less than 10% contamination in the recycling stream. Through educational outreach programs conducted by the Sustainable Materials Management division, the city

Outcome 2

Maximize material diversion away from disposal and decrease recycling contamination

DPW

Sustainable Materials Management Division

Fiscal Year 2021 Outcomes and Strategies

has been able to lower and maintain a recycling contamination rate of 9% in FY2019 and FY2020. In FY2021, curbside inspections will be performed to monitor the contamination rate to keep it under 10%.

Outcome 3

Execute the 5-year Strategy to Enhance the Sustainable Materials Management Program

the bulky waste pickup service and advancing residential organics diversion opportunities.

Long term planning for the Sustainable Materials Management Division is based on the 5-year strategy developed this past year. The primary goals are to reduce trash tonnage and avoid cost increases for program operations. Trash tonnage is anticipated to be reduced by the changes to

In FY2021, focus will be put on increasing diversion of organics from our municipal and residential waste stream in an effort to increase environmental sustainability. To achieve this, organics collection will be added on a voluntary basis in up to 12

Newton Public Schools. In an effort to increase residential organics diversion, the curbside collection partnership with our vendor will be heavily promoted through a citywide mailing and paid social media campaigns. Backyard composting will continue to be promoted and backyard composters will continue to be sold at a subsidized rate for Newton residents. Drop-off collection of organics will continue at various city locations using closed deposit-style containers (ex. Big Belly). Measurement of diversion efforts will be accomplished through monthly tracking of material quantities collected curbside and from our drop off sites.

Outcome 4

Expand Organics Diversion

DPW

Engineering Division

Fiscal Year 2021 Outcomes and Strategies

Outcome 1

Successful and Efficient Project Management

The Engineering Division oversees many projects throughout the city along with residential and commercial projects. Some of the major projects in FY2021 include the construction of village enhancement projects in West Newton Square and Newtonville Square, and the pilot design of the Washington Street improvement

project from Chestnut Street to Lowell Ave. The Engineering Division strives to complete projects effectively and efficiently, working closely with the community and other city departments.

Outcome 2

Design and Manage Street and Sidewalk Improvements

The Engineering Division uses state-of-the-art technology to study and rate the quality of all city streets. Using this data, we will continue to follow our robust paving and maintenance strategy for the Accelerated Roads Program. In FY2021 we plan to pave 4.3 miles of roadways, and complete

maintenance work on 3.6 miles of existing pavement utilizing multiple paving and maintenance solutions. All paving projects will include new pavement markings, sidewalk repairs and installations along with bringing ramps and street crossings into ADA compliance.

DPW

Transportation Division

Fiscal Year 2021 Outcomes and Strategies

Outcome 1

Implement Efficient and Effective Parking Systems

The City of Newton has approximately 1,100 on-street parking meters and 11 metered municipal parking lots. Multi-space parking meter kiosks are currently installed in five of the municipal parking lots and the individual parking meter infrastructure is beyond its useful life.

By the end of FY21, we will replace all of the on-street individual parking meters and install parking kiosks at all municipal parking lots. The new parking infrastructure will provide a more efficient and convenient experience for residents and visitors, and allow for more efficient management of the infrastructure by Transportation Division staff. The new infrastructure will also allow staff to better monitor parking utilization and decide how to better manage the limited resource of parking spaces.

There are many components of improving Newton's streets and intersections to provide a safe and efficient mode of transportation for all users of the public roads. A significant on-going project is working with the City's ADA coordinator to replace the pedestrian pushbuttons at signalized intersections with Accessible Pedestrian Signal (APS) buttons. A primary feature of APS buttons is that audible indications are provided which significantly enhances safety for visually impaired pedestrians. In FY21, we expect to complete the replacement of all pedestrian push buttons and have APS buttons at 100% of the signalized intersections and signalized crossings in the City.

Another aspect of the Complete Streets strategy is the implementation of traffic calming measures to reduce vehicular travel speeds and improve safety, especially in residential neighborhoods. In FY21, we expect to implement Traffic Calming solutions at many locations currently under design, including Waltham Street at Derby Street / Fairway Street, Beethoven Avenue, and Allen Avenue. The traffic calming actions will also include some short-term measures, with flexible reflective posts to test and trial curb bump-outs, median islands, and other potential changes to the curb line. The traffic calming funds will be used for the design and construction of permanent traffic calming measures, such as horizontal and/or vertical deflection, static and/or dynamic signage, changes to intersection geometry, curb extensions/bump-outs, and median islands. In cooperation with the Transportation Planning Director in the Planning Department, the Division will assist in the designing, prioritizing, and implementation of several miles of new bicycle lanes across the City

Outcome 2

Provide Safe and Efficient Complete Streets Infrastructure

DPW

Transportation Division

Fiscal Year 2021 Outcomes and Strategies

Outcome 3

Provide Safe and Energy Efficient Street Lighting

In FY21, we will continue to address maintenance of the City's street lighting infrastructure. We will maintain the existing infrastructure and address key street light knockdowns when they occur.

In our on-going effort to maintain the City's pavement markings, our goal in FY21 is to add continue to add roadway pavement markings to a GIS management system. This GIS system will allow us to better track the condition of all pavement markings and schedule timely replacement when needed.

Outcome 4

Provide Efficient and Strategic Pavement Markings

In FY21, we are also planning to increase our in-house staff capabilities for pavement marking applications. This equipment will allow DPW to do more of the pavement marking work in-house (primarily crosswalks), be more responsive to individual requests, and complete the pavement marking work in a more timely manner with more durable thermoplastic materials, which will extend useable life of the pavement markings compared to paint.

FUND: 0001 - GENERAL FUND
DEPARTMENT: 401 - PUBLIC WORKS DEPARTMENT

CITY OF NEWTON BUDGET
DEPARTMENT LEGAL LEVEL OF CONTROL

	ACTUAL 2017	ACTUAL 2018	ACTUAL 2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
PUBLIC WORKS SUMMARY						
51 - PERSONAL SERVICES	8,377,686	8,991,143	8,804,505	9,123,506	9,505,404	381,898
52 - EXPENSES	15,682,328	17,551,610	17,041,037	14,967,205	16,892,172	1,924,967
58 - DEBT AND CAPITAL	529,384	474,650	835,473	360,000	200,000	-160,000
57 - FRINGE BENEFITS	1,535,175	1,483,890	1,653,888	1,846,048	1,927,427	81,379
TOTAL DEPARTMENT	26,124,574	28,501,293	28,334,902	26,296,759	28,525,004	2,228,244
ENGINEERING SERVICES						
51 - PERSONAL SERVICES	1,080,715	1,177,056	1,249,046	1,389,180	1,364,208	-24,972
52 - EXPENSES	161,283	1,242,630	853,113	567,631	768,161	200,530
58 - DEBT AND CAPITAL	0	0	17,989	0	0	0
57 - FRINGE BENEFITS	138,700	132,780	166,039	204,913	232,918	28,005
TOTAL ENGINEERING SERVICES	1,380,698	2,552,467	2,286,187	2,161,725	2,365,287	203,562
STREET DIVISION						
51 - PERSONAL SERVICES	2,309,421	2,712,777	2,859,692	3,140,799	3,161,771	20,972
52 - EXPENSES	580,155	725,736	608,187	1,015,000	834,847	-180,153
57 - FRINGE BENEFITS	658,927	636,294	743,644	764,909	766,256	1,347
TOTAL STREET DIVISION	3,548,502	4,074,807	4,211,522	4,920,708	4,762,874	-157,834
DPW ADMIN/SUPPT						
51 - PERSONAL SERVICES	958,232	873,226	857,489	925,741	935,010	9,270
52 - EXPENSES	199,589	517,648	631,967	453,617	637,011	183,394
58 - DEBT AND CAPITAL	6,800	679	0	0	0	0
57 - FRINGE BENEFITS	171,611	163,363	170,586	196,931	192,646	-4,285
TOTAL DPW ADMIN/SUPPT	1,336,233	1,554,916	1,660,042	1,576,289	1,764,668	188,379
SUPPL STREET/SIDEWALK SVS						
51 - PERSONAL SERVICES	67,698	0	0	0	0	0
52 - EXPENSES	1,062,794	9,169	0	0	0	0
57 - FRINGE BENEFITS	1,503	0	0	0	0	0
TOTAL SUPPL STREET/SIDEWALK SV	1,131,996	9,169	0	0	0	0
SNOW/ICE CONTROL						
51 - PERSONAL SERVICES	1,311,380	1,413,268	1,013,434	283,300	700,000	416,700
52 - EXPENSES	4,004,622	4,967,755	3,795,876	1,216,700	2,300,000	1,083,300
58 - DEBT AND CAPITAL	331,787	20,252	179,000	0	0	0
57 - FRINGE BENEFITS	15,179	17,159	12,215	0	0	0
TOTAL SNOW/ICE CONTROL	5,662,969	6,418,434	5,000,525	1,500,000	3,000,000	1,500,000

<p align="center">CITY OF NEWTON BUDGET DEPARTMENT LEGAL LEVEL OF CONTROL</p>
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	ACTUAL 2017	ACTUAL 2018	ACTUAL 2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
STREET LIGHTING						
52 - EXPENSES	489,847	473,611	483,405	455,000	377,000	-78,000
TOTAL STREET LIGHTING	489,847	473,611	483,405	455,000	377,000	-78,000
VEHICLE MAINT						
51 - PERSONAL SERVICES	1,010,262	981,581	959,873	1,161,592	1,072,340	-89,252
52 - EXPENSES	873,751	859,418	1,314,374	1,108,245	1,153,340	45,095
58 - DEBT AND CAPITAL	121,333	320,546	453,071	350,000	200,000	-150,000
57 - FRINGE BENEFITS	243,945	208,976	204,097	242,780	223,011	-19,770
TOTAL VEHICLE MAINT	2,249,291	2,370,521	2,931,416	2,862,617	2,648,690	-213,927
STREET CLEANING						
51 - PERSONAL SERVICES	393,531	451,493	447,934	461,428	555,608	94,180
52 - EXPENSES	104,356	106,533	113,500	135,850	135,850	0
57 - FRINGE BENEFITS	67,161	92,673	96,719	103,555	143,588	40,033
TOTAL STREET CLEANING	565,048	650,699	658,153	700,833	835,046	134,213
SUSTAINABLE MATRLS MGT						
51 - PERSONAL SERVICES	307,997	314,816	422,700	437,034	439,872	2,837
52 - EXPENSES	7,505,267	7,793,629	8,228,374	8,897,362	9,656,503	759,141
58 - DEBT AND CAPITAL	35,000	111,883	91,387	10,000	0	-10,000
57 - FRINGE BENEFITS	70,429	58,321	81,016	102,444	101,586	-857
TOTAL SUSTAINABLE MATRLS MGT	7,918,694	8,278,649	8,823,478	9,446,840	10,197,961	751,121
TRANSPORTATION						
51 - PERSONAL SERVICES	938,450	1,066,926	994,338	1,324,432	1,276,596	-47,836
52 - EXPENSES	700,664	855,479	1,012,240	1,117,800	1,029,460	-88,340
58 - DEBT AND CAPITAL	34,464	21,291	94,025	0	0	0
57 - FRINGE BENEFITS	167,719	174,324	179,571	230,515	267,421	36,906
TOTAL TRANSPORTATION	1,841,297	2,118,020	2,280,174	2,672,747	2,573,477	-99,270

FUND: 0001 - GENERAL FUND
DEPARTMENT: 401 - PUBLIC WORKS DEPARTMENT

CITY OF NEWTON BUDGET
DEPARTMENTAL DETAIL

		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
401 - PUBLIC WORKS							
0140110 - ENGINEERING SERVICES							
PERSONAL SERVICES							
511001	FULL TIME SALARIES	1,016,865	1,001,407	1,136,117	1,241,415	1,282,050	40,636
511101	PART TIME < 20 HRS/WK	0	23,407	26,077	62,841	35,207	-27,634
511102	PART TIME > 20 HRS/WK	0	35,131	0	0	0	0
512001	SEASONAL WAGES	4,975	3,154	0	0	0	0
512003	WORK STUDY WAGES	0	3,263	1,463	39,300	1	-39,299
512008	INTERNS	0	7,209	11,304	0	0	0
513010	REGULAR OVERTIME	31,976	85,239	24,938	25,000	25,000	0
513040	WORK BY OTHER DEPTS.	0	0	4,606	0	0	0
514001	LONGEVITY	9,308	9,325	12,392	9,625	10,950	1,325
514309	OTHER STIPENDS	0	500	500	0	0	0
515005	BONUSES	5,000	0	0	0	0	0
515006	VACATION BUY BACK	6,132	421	21,649	0	0	0
515101	CLOTHING ALLOWANCE	6,458	8,000	10,000	11,000	11,000	0
TOTAL PERSONAL SERVICES		1,080,715	1,177,056	1,249,046	1,389,180	1,364,208	-24,972
EXPENSES							
524080	DEPARTMENTAL EQUIP R-	0	0	1,375	1,200	840	-360
524100	SOFTWARE MAINTENANC	0	0	6,885	21,000	32,500	11,500
527400	RENTAL - EQUIPMENT	0	0	2,831	3,831	3,831	0
530100	CONSULTANTS	0	0	5,000	0	0	0
530203	ENGINEERING SERVICES	150,290	478,157	453,304	510,000	0	-510,000
531400	REGIST/RECORDING FEES	110	0	0	200	200	0
531900	TRAINING EXPENSES	135	2,400	6,677	3,000	0	-3,000
534300	ADVERTISING/PUBLICATIO	36	325	257	250	750	500
542000	OFFICE SUPPLIES	1,834	3,321	5,046	3,000	6,500	3,500
543200	SMALL TOOLS	0	0	543	650	1,260	610
553300	PAVING SUPPLIES OVERRI	0	750,000	357,917	0	710,000	710,000
558100	UNIFORMS/PROTECTIVE	2,640	3,515	3,080	4,020	3,600	-420
558700	ENGINEERING SURVEY SU	6,239	3,670	7,944	17,800	5,000	-12,800
571000	VEHICLE USE REIMBURSE	0	175	205	0	40	40
571100	IN-STATE CONFERENCES	0	0	275	750	750	0
571200	REFRESHMENTS/MEALS	0	968	0	0	0	0
573000	DUES & SUBSCRIPTIONS	0	0	940	830	990	160
577100	PROFESSIONAL LICENSES	0	100	834	1,100	1,900	800
TOTAL EXPENSES		161,283	1,242,630	853,113	567,631	768,161	200,530
FRINGE BENEFITS							
57DENT	DENTAL INSURANCE	3,400	3,816	4,632	5,358	4,776	-582
57HLTH	HEALTH INSURANCE	117,190	106,973	135,815	163,814	190,735	26,921
57LIFE	BASIC LIFE INSURANCE	472	477	496	513	456	-57
57MEDA	MEDICARE PAYROLL TAX	13,870	16,301	17,545	17,562	19,418	1,856
57OPEB	OPEB CONTRIBUTION	3,768	5,213	7,552	17,666	17,532	-134
TOTAL FRINGE BENEFITS		138,700	132,780	166,039	204,913	232,918	28,005
DEBT AND CAPITAL							
585111	PC HARDWARE-ADMIN	0	0	17,989	0	0	0

<p>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</p>

	ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
TOTAL DEBT AND CAPITAL	0	0	17,989	0	0	0
TOTAL ENGINEERING SERVICES	1,380,698	2,552,467	2,286,187	2,161,725	2,365,287	203,562

<p>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</p>

		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
0140120 - STREET DIVISION							
PERSONAL SERVICES							
511001	FULL TIME SALARIES	452,767	483,625	609,384	639,562	577,803	-61,759
511002	FULL TIME WAGES	1,686,941	1,905,038	1,929,461	2,478,204	2,484,756	6,551
511003	WORK FOR OTHER DEPTS	0	0	0	-100,000	-50,000	50,000
511004	UTILITY WORK FOR OTHE	0	0	0	-150,000	-100,000	50,000
511101	PART TIME < 20 HRS/WK	0	6,545	31,107	0	0	0
511102	PART TIME > 20 HRS/WK	0	0	0	20,000	1	-19,999
512001	SEASONAL WAGES	0	593	0	0	0	0
513010	REGULAR OVERTIME	2,465	133,640	100,090	75,000	75,000	0
513040	WORK BY OTHER DEPTS.	33,498	50,806	89,135	80,000	80,000	0
513090	DPW CH 90 PAYRL SUSPE	2,507	0	0	0	0	0
514001	LONGEVITY	41,281	37,059	35,679	39,032	39,211	179
514308	PUBLIC SAFETY SPECIALI	0	0	0	0	5,000	5,000
514309	OTHER STIPENDS	0	0	5,000	5,000	0	-5,000
514321	PROMPTNESS PAY STIPE	0	50	0	0	0	0
515003	SPECIAL LEAVE BUY BACK	9,782	6,000	0	0	0	0
515005	BONUSES	0	18,200	2,100	0	0	0
515006	VACATION BUY BACK	23,096	12,221	1,236	0	0	0
515101	CLOTHING ALLOWANCE	53,333	59,000	56,500	54,000	50,000	-4,000
515102	CLEANING ALLOWANCE	3,750	0	0	0	0	0
TOTAL PERSONAL SERVICES		2,309,421	2,712,777	2,859,692	3,140,799	3,161,771	20,972
EXPENSES							
521000	ELECTRICITY	56,250	25,223	34,000	26,000	31,000	5,000
521100	NATURAL GAS	60,581	56,584	59,500	60,000	55,000	-5,000
523000	WATER & SEWER SERVIC	21,040	21,942	26,870	35,000	30,000	-5,000
524080	DEPARTMENTAL EQUIP R-	0	734	0	1,000	3,760	2,760
524090	PUBLIC PROPERTY R-M	0	0	2,159	2,500	20,000	17,500
527400	RENTAL - EQUIPMENT	0	9,286	9,284	7,000	12,500	5,500
531000	BACKFLOW PREV INSPEC	180	0	0	0	0	0
531900	TRAINING EXPENSES	0	135	8,943	45,000	45,000	0
537100	MEDICAL SERVICES	1,043	0	0	0	0	0
539000	POLICE PRIVATE DETAIL S	9,612	0	10,154	25,000	10,000	-15,000
539100	ROCK CRUSHING SVS	33,510	0	2,999	0	0	0
541200	HEATING OIL	31,000	14,477	0	0	0	0
542000	OFFICE SUPPLIES	0	709	3,266	3,000	2,000	-1,000
543000	BUILDING MAINT SUPPLIE	2,977	962	0	2,500	3,000	500
543200	SMALL TOOLS	0	40	8,675	8,500	7,000	-1,500
543600	LARGE TOOLS	0	0	1,620	0	5,000	5,000
545000	CLEANING/CUSTODIAL SU	8,462	0	2,818	5,000	3,000	-2,000
546000	GROUNDS MAINT SUPPLIE	1,068	0	3,594	5,000	5,000	0
553000	CONSTRUCTION SUPPLIE	135,854	250,462	19,671	25,000	25,000	0
553001	EMULSION	0	0	0	10,000	5,000	-5,000
553002	WOOD	0	1,331	4,869	6,237	10,000	3,763
553100	PAVING SUPPLIES	201,904	267,811	0	0	10,000	10,000
553101	ASPHALT	0	0	304,920	130,520	200,000	69,480
553102	PAVING REPAIRS	0	0	74,897	388,685	300,000	-88,685
553103	WINTER POTHOLE REPAIR	0	0	0	54,558	0	-54,558

<p>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</p>

		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
553400	CURBING SUPPLIES	14,905	75,284	0	0	0	0
553401	GRANITE CURBING	0	0	1,997	135,000	0	-135,000
554800	SIGNS & SIGN PARTS	0	0	3,615	0	7,445	7,445
558000	PUBLIC SAFETY SUPPLIES	0	0	0	0	12,442	12,442
558100	UNIFORMS/PROTECTIVE	0	0	20,166	28,000	23,050	-4,950
571000	VEHICLE USE REIMBURSE	0	0	63	0	0	0
571100	IN-STATE CONFERENCES	0	75	500	2,200	0	-2,200
571200	REFRESHMENTS/MEALS	1,768	122	917	3,000	3,000	0
573000	DUES & SUBSCRIPTIONS	0	0	1,200	1,200	4,000	2,800
577100	PROFESSIONAL LICENSES	0	559	1,488	5,100	2,650	-2,450
TOTAL EXPENSES		580,155	725,736	608,187	1,015,000	834,847	-180,153
FRINGE BENEFITS							
57DENT	DENTAL INSURANCE	12,691	12,857	15,230	16,206	12,822	-3,384
57HLTH	HEALTH INSURANCE	590,341	555,786	644,152	653,220	652,643	-577
57LIFE	BASIC LIFE INSURANCE	991	1,095	1,331	1,425	1,026	-399
57MEDA	MEDICARE PAYROLL TAX	34,466	39,410	40,401	45,467	45,786	319
57OPEB	OPEB CONTRIBUTION	20,437	27,146	42,530	48,591	53,980	5,388
TOTAL FRINGE BENEFITS		658,927	636,294	743,644	764,909	766,256	1,347
TOTAL STREET DIVISION		3,548,502	4,074,807	4,211,522	4,920,708	4,762,874	-157,834

<p>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</p>

		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
0140121 - DPW ADMIN/SUPPT							
PERSONAL SERVICES							
511001	FULL TIME SALARIES	916,034	834,788	834,530	843,305	853,286	9,981
511002	FULL TIME WAGES	0	0	0	61,706	63,955	2,249
513010	REGULAR OVERTIME	7,260	3,212	0	5,000	0	-5,000
513050	WORK FOR OTHER DEPT	0	220	0	0	0	0
514001	LONGEVITY	9,983	4,900	3,400	6,730	8,769	2,039
514308	PUBLIC SAFETY SPECIALI	0	0	0	0	2,500	2,500
514309	OTHER STIPENDS	0	10,521	4,404	5,000	0	-5,000
514317	ADMINISTRATIVE STIPEND	0	0	0	0	2,500	2,500
515002	SEVERANCE PAY	0	4,393	0	0	0	0
515003	SPECIAL LEAVE BUY BACK	12,000	0	0	0	0	0
515005	BONUSES	0	1,750	1,800	0	0	0
515006	VACATION BUY BACK	8,955	11,192	10,189	0	0	0
515101	CLOTHING ALLOWANCE	0	0	0	1,000	1,000	0
515102	CLEANING ALLOWANCE	4,000	2,250	3,167	3,000	3,000	0
TOTAL PERSONAL SERVICES		958,232	873,226	857,489	925,741	935,010	9,270
EXPENSES							
521000	ELECTRICITY	0	302,729	488,793	300,000	473,000	173,000
524010	OFFICE EQUIPMENT R-M	1,376	765	0	1,450	1,450	0
524050	COMPUTER EQUIPMT R-M	1,121	0	0	750	750	0
524080	DEPARTMENTAL EQUIP R-	3,613	331	0	0	0	0
524090	PUBLIC PROPERTY R-M	0	833	0	1,000	1,000	0
524103	WEB QA SERVICES	9,550	22,260	24,520	24,696	26,061	1,365
527400	RENTAL - EQUIPMENT	3,551	1,479	556	4,322	3,050	-1,272
530100	CONSULTANTS	0	1,409	0	0	0	0
531900	TRAINING EXPENSES	8,128	1,248	240	3,500	3,500	0
532100	TUITION ASSISTANCE	2,559	1,740	500	1,500	1,500	0
534010	TELEPHONE	23,079	18,903	24,543	22,000	26,000	4,000
534020	CELLULAR TELEPHONES	62,536	55,992	58,149	60,000	60,000	0
534100	POSTAGE	8,996	7,151	7,911	8,902	9,000	98
534200	PRINTING	4,249	7,874	8,806	7,497	9,000	1,503
534300	ADVERTISING/PUBLICATIO	245	466	0	0	200	200
537100	MEDICAL SERVICES	144	0	0	0	0	0
539000	POLICE PRIVATE DETAIL S	0	11,302	0	0	0	0
542000	OFFICE SUPPLIES	13,278	10,607	2,281	3,000	3,500	500
543200	SMALL TOOLS	7,697	10,532	0	0	0	0
558100	UNIFORMS/PROTECTIVE	29,324	39,121	0	0	0	0
558500	COMPUTER SUPPLIES	5,030	9,734	8,176	8,000	9,000	1,000
559200	BOOKS/MANUALS/PERIODI	278	33	701	0	0	0
571000	VEHICLE USE REIMBURSE	604	448	37	0	0	0
571100	IN-STATE CONFERENCES	3,996	2,979	1,435	2,000	2,000	0
571200	REFRESHMENTS/MEALS	729	1,574	1,465	0	0	0
571600	SPECIAL EVENT EXPENSE	0	880	604	3,000	3,000	0
572000	OUT-OF-STATE TRAVEL	477	0	1,531	0	0	0
573000	DUES & SUBSCRIPTIONS	6,389	6,336	1,718	2,000	5,000	3,000
577100	PROFESSIONAL LICENSES	2,641	923	0	0	0	0
TOTAL EXPENSES		199,589	517,648	631,967	453,617	637,011	183,394

CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL
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		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
FRINGE BENEFITS							
57DENT	DENTAL INSURANCE	3,268	3,621	3,381	3,846	3,612	-234
57HLTH	HEALTH INSURANCE	139,476	126,324	131,292	157,756	155,385	-2,371
57LIFE	BASIC LIFE INSURANCE	406	302	278	285	342	57
57MEDA	MEDICARE PAYROLL TAX	11,697	11,766	11,568	13,147	13,521	375
57OPEB	OPEB CONTRIBUTION	16,765	21,351	24,067	21,898	19,786	-2,112
TOTAL FRINGE BENEFITS		171,611	163,363	170,586	196,931	192,646	-4,285
DEBT AND CAPITAL							
585140	OFFICE EQUIPMENT	5,800	0	0	0	0	0
585150	OFFICE FURNITURE	1,000	679	0	0	0	0
TOTAL DEBT AND CAPITAL		6,800	679	0	0	0	0
TOTAL DPW ADMIN/SUPPT		1,336,233	1,554,916	1,660,042	1,576,289	1,764,668	188,379
0140122 - SUPPL STREET/SIDEWALK SVS							
PERSONAL SERVICES							
511001	FULL TIME SALARIES	64,036	0	0	0	0	0
511102	PART TIME > 20 HRS/WK	1,291	0	0	0	0	0
513010	REGULAR OVERTIME	471	0	0	0	0	0
514001	LONGEVITY	900	0	0	0	0	0
515102	CLEANING ALLOWANCE	1,000	0	0	0	0	0
TOTAL PERSONAL SERVICES		67,698	0	0	0	0	0
EXPENSES							
524090	PUBLIC PROPERTY R-M	1,025,634	0	0	0	0	0
553000	CONSTRUCTION SUPPLIE	2,160	9,169	0	0	0	0
553400	CURBING SUPPLIES	35,000	0	0	0	0	0
TOTAL EXPENSES		1,062,794	9,169	0	0	0	0
FRINGE BENEFITS							
57LIFE	BASIC LIFE INSURANCE	57	0	0	0	0	0
57MEDA	MEDICARE PAYROLL TAX	1,447	0	0	0	0	0
TOTAL FRINGE BENEFITS		1,503	0	0	0	0	0
TOTAL SUPPL STREET/SIDEWALK SVS		1,131,996	9,169	0	0	0	0

<p>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</p>

		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
0140123 - SNOW/ICE CONTROL							
PERSONAL SERVICES							
511101	PART TIME < 20 HRS/WK	0	1,155	0	0	0	0
513010	REGULAR OVERTIME	769,237	866,463	595,017	250,000	700,000	450,000
51301A	REG OVERTIME-BLDG/SCH	191,636	146,243	111,172	33,300	0	-33,300
51301C	OVERTIME/VEH MAINT-SN	99,676	86,030	101,023	0	0	0
513040	WORK BY OTHER DEPTS.	18,019	16,479	8,565	0	0	0
514311	SNOW STAND-BY PAY	204,496	265,650	165,514	0	0	0
514318	SNOW WATCH PAY	27,276	30,483	31,708	0	0	0
514321	PROMPTNESS PAY STIPE	1,040	766	435	0	0	0
TOTAL PERSONAL SERVICES		1,311,380	1,413,268	1,013,434	283,300	700,000	416,700
EXPENSES							
524030	MOTOR VEHICLE R-M	15,124	253,842	204,512	0	350,000	350,000
524050	COMPUTER EQUIPMT R-M	537	791	0	0	0	0
524090	PUBLIC PROPERTY R-M	3,845	12,715	71	0	0	0
524100	SOFTWARE MAINTENANC	73,585	89,349	50,102	0	0	0
527300	RENTAL - VEHICLES	1,331,249	1,810,594	1,745,341	700,000	800,000	100,000
527301	RENTAL-VEH BLDG/SCHLS	904,956	1,194,895	589,911	100,000	500,000	400,000
527303	RENTAL-BOB CATS/SNOW	65,464	64,923	21,641	0	0	0
531900	TRAINING EXPENSES	0	1,425	15,120	0	0	0
534020	CELLULAR TELEPHONES	6,593	10,774	18,646	0	0	0
538600	WEATHER FORECAST SV	4,591	4,839	1,650	1,700	0	-1,700
539000	POLICE PRIVATE DETAIL S	0	818	0	0	0	0
542000	OFFICE SUPPLIES	0	3,319	1,455	0	0	0
543200	SMALL TOOLS	0	0	3,344	0	0	0
546000	GROUNDS MAINT SUPPLIE	2,650	11,051	11,169	0	0	0
548000	GASOLINE	7,996	6,422	983	0	0	0
548100	DIESEL FUEL	20,873	14,298	1,863	0	0	0
548200	TIRES & TIRE SUPPLIES	0	28,390	6,941	0	0	0
548400	VEHICLE REPAIR PARTS	272,917	500,817	451,178	75,000	250,000	175,000
553200	SAND & SALT	1,292,375	941,179	669,482	335,000	400,000	65,000
558000	PUBLIC SAFETY SUPPLIES	0	4,864	1,130	0	0	0
571000	VEHICLE USE REIMBURSE	0	0	25	0	0	0
571100	IN-STATE CONFERENCES	1,170	4,975	0	0	0	0
571200	REFRESHMENTS/MEALS	57	6,652	1,313	0	0	0
572000	OUT-OF-STATE TRAVEL	641	824	0	0	0	0
578300	PRIVATE PROPERTY DAM	0	0	0	5,000	0	-5,000
TOTAL EXPENSES		4,004,622	4,967,755	3,795,876	1,216,700	2,300,000	1,083,300
FRINGE BENEFITS							
57MEDA	MEDICARE PAYROLL TAX	14,627	16,239	11,627	0	0	0
57OPEB	OPEB CONTRIBUTION	552	920	588	0	0	0
TOTAL FRINGE BENEFITS		15,179	17,159	12,215	0	0	0
DEBT AND CAPITAL							
585020	CONSTRUCTION EQUIPME	331,787	18,293	179,000	0	0	0
585121	PC SOFTWARE-ADMIN	0	1,959	0	0	0	0
TOTAL DEBT AND CAPITAL		331,787	20,252	179,000	0	0	0

<p>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</p>

		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
TOTAL SNOW/ICE CONTROL		5,662,969	6,418,434	5,000,525	1,500,000	3,000,000	1,500,000
0140124 - STREET LIGHTING							
EXPENSES							
521000	ELECTRICITY	270,826	198,087	147,355	75,000	75,000	0
521100	NATURAL GAS	33,930	38,685	43,000	40,000	40,000	0
524040	ELECTRICAL EQUIP R-M	168,815	0	0	0	0	0
524160	STREET LIGHT REPAIRS	0	213,830	162,344	180,000	150,000	-30,000
524161	STREET LIGHT KNOCKDO	0	8,884	101,229	130,000	100,000	-30,000
530100	CONSULTANTS	0	0	12,800	15,000	0	-15,000
543100	ELECTRICAL SUPPLIES	765	0	0	0	0	0
559500	GAS LAMP PARTS	15,512	14,125	16,677	15,000	12,000	-3,000
TOTAL EXPENSES		489,847	473,611	483,405	455,000	377,000	-78,000
TOTAL STREET LIGHTING		489,847	473,611	483,405	455,000	377,000	-78,000

CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL
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		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
0140125 - VEHICLE MAINT							
PERSONAL SERVICES							
511001	FULL TIME SALARIES	153,325	169,635	154,428	167,553	170,063	2,511
511002	FULL TIME WAGES	760,259	709,039	721,567	917,829	854,640	-63,189
511101	PART TIME < 20 HRS/WK	0	0	7,873	0	0	0
511102	PART TIME > 20 HRS/WK	0	7,938	0	19,650	1	-19,649
512008	INTERNS	0	0	2,763	0	0	0
513010	REGULAR OVERTIME	43,842	13,889	14,281	20,000	15,000	-5,000
514001	LONGEVITY	19,350	17,743	15,233	14,561	12,635	-1,925
514308	PUBLIC SAFETY SPECIALI	0	0	0	0	5,000	5,000
514309	OTHER STIPENDS	0	0	2,500	5,000	0	-5,000
514321	PROMPTNESS PAY STIPE	0	53	0	0	0	0
515003	SPECIAL LEAVE BUY BACK	6,000	18,000	6,000	0	0	0
515005	BONUSES	1,000	6,300	4,600	0	0	0
515006	VACATION BUY BACK	8,487	19,984	15,379	0	0	0
515101	CLOTHING ALLOWANCE	18,000	19,000	15,250	17,000	15,000	-2,000
TOTAL PERSONAL SERVICES		1,010,262	981,581	959,873	1,161,592	1,072,340	-89,252
EXPENSES							
523000	WATER & SEWER SERVIC	0	0	1,331	0	0	0
524030	MOTOR VEHICLE R-M	175,925	223,719	262,120	220,000	220,000	0
524080	DEPARTMENTAL EQUIP R-	11,516	15,237	1,206	13,000	10,550	-2,450
524100	SOFTWARE MAINTENANC	0	4,462	1,717	5,500	5,500	0
527400	RENTAL - EQUIPMENT	4,788	3,519	806	1,500	1,500	0
527800	VEHICLE LEASES	0	0	50,000	160,000	178,000	18,000
529000	CLEANING/CUSTODIAL SV	405	489	0	0	1,000	1,000
530300	MOTOR VEHICLE INSPECT	1,665	2,048	1,820	2,000	5,500	3,500
531900	TRAINING EXPENSES	0	0	495	1,000	1,000	0
538800	VEHICLE TOWING	0	0	2,450	0	0	0
542000	OFFICE SUPPLIES	0	366	2,968	2,500	2,500	0
543200	SMALL TOOLS	3,119	1,621	4,307	7,000	10,000	3,000
545000	CLEANING/CUSTODIAL SU	1,985	528	0	1,500	1,500	0
548000	GASOLINE	85,945	79,681	134,068	105,000	140,000	35,000
548100	DIESEL FUEL	117,317	131,990	150,951	130,000	150,000	20,000
548200	TIRES & TIRE SUPPLIES	27,459	41,279	22,248	40,000	5,000	-35,000
548400	VEHICLE REPAIR PARTS	443,627	353,338	657,539	400,000	400,000	0
558100	UNIFORMS/PROTECTIVE	0	0	13,746	14,920	15,090	170
571100	IN-STATE CONFERENCES	0	0	0	500	0	-500
573000	DUES & SUBSCRIPTIONS	0	0	200	200	200	0
576400	TOLL CHARGES	0	0	1,600	2,500	1,000	-1,500
577100	PROFESSIONAL LICENSES	0	1,141	4,801	1,125	5,000	3,875
TOTAL EXPENSES		873,751	859,418	1,314,374	1,108,245	1,153,340	45,095
FRINGE BENEFITS							
57DENT	DENTAL INSURANCE	6,060	5,571	5,230	5,478	5,010	-468
57HLTH	HEALTH INSURANCE	219,920	184,379	177,611	214,218	192,016	-22,202
57LIFE	BASIC LIFE INSURANCE	439	363	373	342	399	57
57MEDA	MEDICARE PAYROLL TAX	13,752	13,326	13,405	15,838	15,331	-507
57OPEB	OPEB CONTRIBUTION	3,775	5,337	7,479	6,904	10,254	3,350

CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL
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		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
TOTAL FRINGE BENEFITS		243,945	208,976	204,097	242,780	223,011	-19,770
DEBT AND CAPITAL							
585000	EQUIPMENT & MACHINER	0	0	2,053	0	0	0
585010	AUTOMOBILES/LIGHT TRU	0	0	0	0	200,000	200,000
585011	USED AUTOS/LIGHT TRUC	62,461	220,000	250,000	350,000	0	-350,000
585020	CONSTRUCTION EQUIPME	50,000	100,546	188,071	0	0	0
585070	VEHL MAINT GARAGE EQU	8,872	0	0	0	0	0
585899	OTHER CAP EQUIP <\$15,0	0	0	12,947	0	0	0
TOTAL DEBT AND CAPITAL		121,333	320,546	453,071	350,000	200,000	-150,000
TOTAL VEHICLE MAINT		2,249,291	2,370,521	2,931,416	2,862,617	2,648,690	-213,927
0140132 - STREET CLEANING							
PERSONAL SERVICES							
511001	FULL TIME SALARIES	0	0	0	0	76,363	76,363
511002	FULL TIME WAGES	339,854	380,219	379,567	395,266	410,596	15,330
513010	REGULAR OVERTIME	36,128	52,530	51,404	50,000	50,000	0
514001	LONGEVITY	10,549	9,295	9,361	9,162	10,649	1,487
514321	PROMPTNESS PAY STIPE	0	0	85	0	0	0
515005	BONUSES	0	2,450	0	0	0	0
515006	VACATION BUY BACK	0	0	182	0	0	0
515101	CLOTHING ALLOWANCE	7,000	7,000	7,333	7,000	8,000	1,000
TOTAL PERSONAL SERVICES		393,531	451,493	447,934	461,428	555,608	94,180
EXPENSES							
529250	DISPOSAL-STREET SWEE	80,000	93,000	93,500	102,850	102,850	0
553500	SWEEPER/PARTS	24,356	13,533	20,000	33,000	33,000	0
TOTAL EXPENSES		104,356	106,533	113,500	135,850	135,850	0
FRINGE BENEFITS							
57DENT	DENTAL INSURANCE	1,792	2,552	2,549	2,682	3,612	930
57HLTH	HEALTH INSURANCE	60,843	81,201	84,676	88,934	126,534	37,600
57LIFE	BASIC LIFE INSURANCE	260	227	227	228	285	57
57MEDA	MEDICARE PAYROLL TAX	3,592	4,165	4,309	5,966	7,331	1,366
57OPEB	OPEB CONTRIBUTION	674	4,528	4,958	5,745	5,826	81
TOTAL FRINGE BENEFITS		67,161	92,673	96,719	103,555	143,588	40,033
TOTAL STREET CLEANING		565,048	650,699	658,153	700,833	835,046	134,213

CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL
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		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
0140133 - SUSTAINABLE MATRLS MGT							
PERSONAL SERVICES							
511001	FULL TIME SALARIES	0	0	104,019	127,020	135,384	8,363
511002	FULL TIME WAGES	242,262	216,504	232,847	231,879	240,469	8,590
511101	PART TIME < 20 HRS/WK	9,354	0	15,437	15,000	1	-14,999
511102	PART TIME > 20 HRS/WK	0	20,830	0	0	0	0
513010	REGULAR OVERTIME	46,963	50,091	56,234	50,000	55,000	5,000
513040	WORK BY OTHER DEPTS.	0	0	495	0	0	0
514001	LONGEVITY	4,806	5,606	3,297	3,635	4,518	883
514321	PROMPTNESS PAY STIPE	613	4,845	4,964	5,000	0	-5,000
515003	SPECIAL LEAVE BUY BACK	0	6,000	0	0	0	0
515005	BONUSES	0	1,400	300	0	0	0
515006	VACATION BUY BACK	0	5,541	1,440	0	0	0
515101	CLOTHING ALLOWANCE	4,000	4,000	3,000	4,000	4,000	0
515102	CLEANING ALLOWANCE	0	0	667	500	500	0
TOTAL PERSONAL SERVICES		307,997	314,816	422,700	437,034	439,872	2,837
EXPENSES							
521000	ELECTRICITY	0	0	0	0	5,000	5,000
524080	DEPARTMENTAL EQUIP R-	9,041	7,835	2,452	2,000	3,034	1,034
524090	PUBLIC PROPERTY R-M	1,500	9,572	8,434	0	6,309	6,309
527400	RENTAL - EQUIPMENT	1,513	4,060	3,350	1,000	3,000	2,000
529200	SOLID WASTE COLL/DISP	3,845,007	4,378,058	3,986,978	4,457,906	4,205,268	-252,638
529202	YARD WASTE	0	0	1,233,539	1,246,171	1,529,793	283,622
529203	MUNICIPAL WASTE	0	0	385,211	93,180	474,230	381,050
529204	MULTI FAMILY COLL	0	0	173,248	174,786	199,030	24,244
529205	RESIDENTIAL DROP OFF C	0	0	152,209	136,950	192,154	55,204
529206	CART SERVICES	0	0	108,618	108,618	176,400	67,782
529220	COLLECTION-RECYCLABL	3,025,806	2,955,417	2,075,317	2,474,031	2,802,707	328,676
529240	PROCESSING RECYCLABL	572,743	394,930	0	0	0	0
530100	CONSULTANTS	0	0	300	0	0	0
530203	ENGINEERING SERVICES	45,375	21,642	35,000	35,000	26,713	-8,287
531700	MAILING SERVICES	0	0	0	1,500	0	-1,500
531900	TRAINING EXPENSES	0	0	2,790	1,000	2,000	1,000
534200	PRINTING	1,646	3,119	2,729	3,500	0	-3,500
538200	PEST CONTROL SERVICE	0	0	912	1,000	1,000	0
538400	ANIMAL CARE	500	0	450	1,000	1,000	0
542000	OFFICE SUPPLIES	484	159	1,890	2,000	1,536	-464
543200	SMALL TOOLS	636	1,428	1,639	1,900	1,779	-121
546000	GROUPS MAINT SUPPLIE	0	0	0	10,000	4,690	-5,310
553800	TRASH CARTS- RESALE	0	0	34,235	125,000	0	-125,000
558100	UNIFORMS/PROTECTIVE	0	0	438	1,040	1,080	40
571100	IN-STATE CONFERENCES	0	0	290	500	500	0
571200	REFRESHMENTS/MEALS	467	0	0	0	0	0
573000	DUES & SUBSCRIPTIONS	550	17,159	18,134	19,000	19,000	0
577100	PROFESSIONAL LICENSES	0	250	210	280	280	0
TOTAL EXPENSES		7,505,267	7,793,629	8,228,374	8,897,362	9,656,503	759,141

<p>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</p>

		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
FRINGE BENEFITS							
57DENT	DENTAL INSURANCE	1,854	1,583	2,146	2,448	1,980	-468
57HLTH	HEALTH INSURANCE	64,292	52,558	70,856	89,531	88,700	-831
57LIFE	BASIC LIFE INSURANCE	236	189	212	285	171	-114
57MEDA	MEDICARE PAYROLL TAX	4,045	3,987	5,122	5,607	5,537	-70
57OPEB	OPEB CONTRIBUTION	3	5	2,680	4,573	5,199	626
TOTAL FRINGE BENEFITS		70,429	58,321	81,016	102,444	101,586	-857
DEBT AND CAPITAL							
585270	TRASH RECEPTACLES	35,000	111,883	91,387	0	0	0
585899	OTHER CAP EQUIP <\$15,0	0	0	0	10,000	0	-10,000
TOTAL DEBT AND CAPITAL		35,000	111,883	91,387	10,000	0	-10,000
TOTAL SUSTAINABLE MATRLS MGT		7,918,694	8,278,649	8,823,478	9,446,840	10,197,961	751,121

<p>CITY OF NEWTON BUDGET</p> <p>DEPARTMENTAL DETAIL</p>

		ACTUAL	ACTUAL	ACTUAL	ORIGINAL	RECOMMENDED	CHANGE
		FY2017	FY2018	FY2019	2020	2021	2020 to 2021
0140180 - TRANSPORTATION							
PERSONAL SERVICES							
511001	FULL TIME SALARIES	384,569	443,405	431,031	554,955	549,524	-5,432
511002	FULL TIME WAGES	466,734	506,285	470,704	606,918	618,207	11,290
511101	PART TIME < 20 HRS/WK	989	8,434	7,939	20,000	20,000	0
512003	WORK STUDY WAGES	0	903	1,990	39,000	1	-38,999
513010	REGULAR OVERTIME	60,754	71,050	48,887	75,000	50,000	-25,000
513040	WORK BY OTHER DEPTS.	1,236	2,097	8,906	0	5,000	5,000
514001	LONGEVITY	13,972	15,011	14,322	16,559	11,591	-4,967
514317	ADMINISTRATIVE STIPEND	0	0	0	0	9,273	9,273
514321	PROMPTNESS PAY STIPE	52	361	370	0	0	0
514399	ADMIN SUPPORT STIPEND	0	6,592	0	0	0	0
515005	BONUSES	0	3,500	300	0	0	0
515006	VACATION BUY BACK	1,394	1,286	2,890	0	0	0
515101	CLOTHING ALLOWANCE	8,000	8,000	7,000	12,000	13,000	1,000
515102	CLEANING ALLOWANCE	750	0	0	0	0	0
TOTAL PERSONAL SERVICES		938,450	1,066,926	994,338	1,324,432	1,276,596	-47,836
EXPENSES							
521000	ELECTRICITY	51,016	48,465	54,101	50,000	60,000	10,000
524040	ELECTRICAL EQUIP R-M	300,039	0	0	0	0	0
524080	DEPARTMENTAL EQUIP R-	0	2,237	3,565	4,000	4,000	0
524090	PUBLIC PROPERTY R-M	69,694	0	0	0	0	0
524100	SOFTWARE MAINTENANC	0	0	2,969	0	0	0
524170	SIGNAL REPAIRS	0	240,798	260,951	300,000	250,000	-50,000
524171	SIGNAL KNOCKDOWNS	0	112,385	105,000	140,000	125,000	-15,000
527400	RENTAL - EQUIPMENT	0	0	2,860	3,000	3,500	500
530100	CONSULTANTS	2,500	0	0	0	0	0
530203	ENGINEERING SERVICES	61,300	86,000	44,187	40,000	30,000	-10,000
531300	TEMP STAFFING SERVICE	12,529	0	0	0	0	0
531900	TRAINING EXPENSES	0	2,920	180	1,000	860	-140
534050	PK METER COMM SVS	3,062	28,451	3,571	8,000	60,000	52,000
534200	PRINTING	1,364	1,518	32	1,000	0	-1,000
534300	ADVERTISING/PUBLICATIO	295	0	714	500	500	0
539000	POLICE PRIVATE DETAIL S	16,955	0	400	5,000	2,500	-2,500
539200	PAVEMENT MARKING	113,222	225,024	275,000	275,000	225,000	-50,000
542000	OFFICE SUPPLIES	0	112	2,233	2,500	2,000	-500
543200	SMALL TOOLS	0	0	1,325	1,500	1,500	0
543600	LARGE TOOLS	0	0	5,318	0	0	0
545000	CLEANING/CUSTODIAL SU	1,326	1,123	1,425	1,300	1,500	200
553000	CONSTRUCTION SUPPLIE	12,148	12,652	554	0	0	0
554300	PARKING METER PARTS	8,935	12,606	9,569	15,000	5,000	-10,000
554800	SIGNS & SIGN PARTS	5,981	50,890	74,177	64,400	64,400	0
554900	TRAFFIC CALMING MATERI	0	0	147,541	175,000	175,000	0
558000	PUBLIC SAFETY SUPPLIES	40,298	29,290	9,560	20,000	10,000	-10,000
558100	UNIFORMS/PROTECTIVE	0	0	4,244	8,650	5,800	-2,850
571000	VEHICLE USE REIMBURSE	0	475	542	0	0	0
571100	IN-STATE CONFERENCES	0	0	525	0	500	500
571200	REFRESHMENTS/MEALS	0	8	0	0	0	0

<p>CITY OF NEWTON BUDGET DEPARTMENTAL DETAIL</p>

		ACTUAL FY2017	ACTUAL FY2018	ACTUAL FY2019	ORIGINAL 2020	RECOMMENDED 2021	CHANGE 2020 to 2021
572000	OUT-OF-STATE TRAVEL	0	220	0	0	0	0
573000	DUES & SUBSCRIPTIONS	0	0	1,158	650	1,200	550
577100	PROFESSIONAL LICENSES	0	307	539	1,300	1,200	-100
TOTAL EXPENSES		700,664	855,479	1,012,240	1,117,800	1,029,460	-88,340
FRINGE BENEFITS							
57DENT	DENTAL INSURANCE	3,138	3,630	3,403	5,130	3,846	-1,284
57HLTH	HEALTH INSURANCE	145,650	146,233	150,494	188,124	219,703	31,579
57LIFE	BASIC LIFE INSURANCE	448	481	510	570	342	-228
57MEDA	MEDICARE PAYROLL TAX	11,244	12,928	11,862	17,800	17,499	-300
57OPEB	OPEB CONTRIBUTION	7,239	11,052	13,302	18,892	26,031	7,139
TOTAL FRINGE BENEFITS		167,719	174,324	179,571	230,515	267,421	36,906
DEBT AND CAPITAL							
585899	OTHER CAP EQUIP <\$15,0	34,464	21,291	94,025	0	0	0
TOTAL DEBT AND CAPITAL		34,464	21,291	94,025	0	0	0
TOTAL TRANSPORTATION		1,841,297	2,118,020	2,280,174	2,672,747	2,573,477	-99,270
TOTAL PUBLIC WORKS		26,124,574	28,501,293	28,334,902	26,296,759	28,525,004	2,228,244

**CITY OF NEWTON BUDGET
PERSONNEL DETAIL**

Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
401 - PUBLIC WORKS										
0140110 - ENGINEERING SERVICES										
511001	CITY ENGINEER	6/3/2002				0		FY 2020	1.00	135,856
	TAVERNA, LOUIS	6/3/2002	18.08	1,000	0	0	H12-32	FY 2021	1.00	139,398
	ASSOCIATE CITY ENGINEER	11/2/1998				0		FY 2020	1.00	110,775
	DAGHLIAN, JOHN	11/2/1998	21.66	2,000	0	0	H10-27	FY 2021	1.00	113,662
	PROJECT MANAGER	1/1/2020				0		FY 2020	0.50	53,750
	NICHOLS, FRANK	1/1/2020	0.5	450	1,956	0	H10-25	FY 2021	0.50	54,340
	DESIGN PROJECT MANAGER	3/20/2017				0		FY 2020	0.50	52,174
	VARGAS, ALFREDO	3/20/2017	3.28	0	1,899	0	H10-23	FY 2021	0.50	52,746
	CHIEF OF SURVEY	5/26/2015				0		FY 2020	1.00	93,422
	HIGGINS, PATRICK	5/26/2015	5.1	675	0	1,000	E45-12	FY 2021	1.00	93,066
	DESIGN ENGINEER					0		FY 2020	1.00	91,405
	VACANT, VACANT			0	3,327	1,000	E46-10	FY 2021	1.00	92,407
	PERMITS ENGINEER					0		FY 2020	1.00	95,436
	VACANT, VACANT			0	3,525	0	H8-28	FY 2021	1.00	97,923
	CONSTRUCTION ENGINEER	4/17/2012				0		FY 2020	1.00	93,422
	FEDERICO, GABRIEL	4/17/2012	8.21	675	0	1,000	E45-12	FY 2021	1.00	93,066
	OFFICE ENGINEER	6/1/2009				0		FY 2020	1.00	87,387
	WOODRUFF, MATTHEW	6/1/2009	11.08	900	0	1,000	E44-12	FY 2021	1.00	87,053
	ASSISTANT DESIGN ENGINE	12/16/2002				0		FY 2020	1.00	74,166
	PANZA, MELISSA	12/16/2002	17.54	1,000	0	1,000	E44-8	FY 2021	1.00	75,227
	SENIOR SURVEY INST TECH	2/25/2019				0		FY 2020	1.00	62,712
	METCALF, RUSSELL	2/25/2019	1.35	0	2,276	1,000	E42-7	FY 2021	1.00	63,214
	CONSTRUCTION INSPECTOR	6/2/2005				0		FY 2020	1.00	54,233
	LAVOIE, PAUL	6/2/2005	15.08	1,000	0	1,000	E42-3	FY 2021	1.00	54,614
	CONSTRUCTION INSPECTOR	11/2/2009				0		FY 2020	1.00	67,293
	FADDEN, CHRISTOPHER	11/2/2009	10.66	900	0	1,000	E42-9	FY 2021	1.00	68,362
	CONSTRUCTION INSPECTOR	8/10/2015				0		FY 2020	1.00	62,712
	ARPINO, RUSSELL	8/10/2015	4.89	675	2,273	1,000	E42-7	FY 2021	1.00	63,137
	CONSTRUCTION INSPECTOR	6/17/2013				0		FY 2020	1.00	62,712
	CENCE, NICHOLAS	6/17/2013	7.04	675	2,277	1,000	E42-7	FY 2021	1.00	63,244
	CONSTRUCTION INSPECTOR	5/22/2006				0		FY 2020	1.00	69,985
	MASTROIANNI, MICHAEL	5/22/2006	14.11	1,000	0	1,000	E42-10	FY 2021	1.00	70,591
	Account Totals:					0		FY 2020	15.00	1,267,440
				10,950	17,532	11,000		FY 2021	15.00	1,282,050
511101	CONSTRUCTION INSPECTOR	9/9/1968				0		FY 2020	0.50	35,000
	DEVOY, JAMES	9/9/1968	51.81	0	0	0	QQQ	FY 2021	0.50	35,206
	PT ADMIN					0		FY 2020		27,500
	VACANT,VACANT			0	0	0	QQQ	FY 2021	0.00	1
	Account Totals:					0		FY 2020	0.50	62,500
				0	0	0		FY 2021	0.50	35,207

**CITY OF NEWTON BUDGET
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Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
512003	ENGINEERING CO-OP					0		FY 2020		39,300
	VACANT,VACANT			0	0	0	QQQ	FY 2021	0.00	1
	Account Totals:					0		FY 2020		39,300
				0	0	0		FY 2021	0.00	1
TOTAL ENGINEERING SERVICES						0		FY 2020	15.50	1,369,240
					10,950	17,532	11,000	FY 2021	15.50	1,317,258
0140120 - STREET DIVISION										
511001	DIRECTOR OF STREET	4/21/2015				0		FY 2020	1.00	119,834
	MARK, SHANE	4/21/2015	5.19	750	4,426	5,000	H13-20	FY 2021	1.00	122,958
	DISTRICT HIGHWAY SUPERV	1/28/2011				0		FY 2020	1.00	80,605
	ARPINO, MICHAEL	1/28/2011	9.43	900	0	1,000	C11-6	FY 2021	1.00	81,310
	DISTRICT HIGHWAY SUPERV	10/17/1981				0		FY 2020	1.00	80,105
	MACKAY, MICHAEL	10/17/1981	38.71	2,500	0	1,000	C10-8	FY 2021	1.00	80,707
	ASSISTANT HIGHWAY SUPER	3/5/2001				0		FY 2020	1.00	75,199
	DETHOMASIS, ANTHONY	3/5/2001	19.32	2,000	0	1,000	C9-10	FY 2021	1.00	76,023
	ASSISTANT HIGHWAY SUPER	11/12/2012				0		FY 2020	1.00	75,199
	CINCOTTA, RICHARD	11/12/2012	7.64	675	2,748	1,000	C9-10	FY 2021	1.00	76,332
	ASSISTANT HIGHWAY SUPER	8/14/2012				0		FY 2020	1.00	62,978
	PISANO, JASON	8/14/2012	7.88	675	2,320	1,000	C9-4	FY 2021	1.00	64,449
	ASSISTANT HIGHWAY SUPER	12/23/2003				0		FY 2020	1.00	75,199
	SEMENTELLI, NORMAN	12/23/2003	16.52	1,000	0	1,000	C9-10	FY 2021	1.00	76,023
	Account Totals:					0		FY 2020	7.00	569,119
				8,500	9,495	11,000		FY 2021	7.00	577,803
511002	WF/HIGHWAY CONSTRUCTION	4/18/2017				0		FY 2020	1.00	55,754
	RICHARDSON, JOSHUA	4/18/2017	3.2	0	2,039	1,000	R9-4	FY 2021	1.00	56,649
	WF/HIGHWAY CONSTRUCTION	10/30/1995				0		FY 2020	1.00	67,994
	FINELLI, ROBERT	10/30/1995	24.67	2,032	0	1,000	R9-8	FY 2021	1.00	67,735
	WF/HIGHWAY CONSTRUCTION					0		FY 2020	1.00	52,148
	VACANT, VACANT			0	1,901	1,000	R9-2	FY 2021	1.00	52,796
	WF/HIGHWAY CONSTRUCTION	1/5/1998				0		FY 2020	1.00	67,994
	BLEAKNEY, SCOTT	1/5/1998	22.49	1,693	0	1,000	R9-8	FY 2021	1.00	67,735
	WF/HIGHWAY CONSTRUCTION	4/14/2014				0		FY 2020	1.00	61,748
	BARRILE, MICHAEL	4/14/2014	6.21	943	0	1,000	R9-7	FY 2021	1.00	62,898
	WF/HIGHWAY CONSTRUCTION	2/5/2007				0		FY 2020	1.00	67,994
	PANZA, DENNIS	2/5/2007	13.41	1,185	0	1,000	R9-8	FY 2021	1.00	67,735
	WF/HIGHWAY CONSTRUCTION	8/20/2007				0		FY 2020	1.00	67,994
	FLORESTAL, JACKSON	8/20/2007	12.86	1,185	0	1,000	R9-8	FY 2021	1.00	67,735
	WF/HIGHWAY CONSTRUCTION	9/29/2014				0		FY 2020	1.00	61,748
	DE ALMEIDA, CLEBER	9/29/2014	5.76	943	0	1,000	R9-7	FY 2021	1.00	62,898
	WF/HIGHWAY CONSTRUCTION	4/14/2014				0		FY 2020	1.00	61,748
	SPINELLI, PETER	4/14/2014	6.21	959	2,301	1,000	R9-7	FY 2021	1.00	63,914
	WF/HIGHWAY CONSTRUCTION	8/24/2015				0		FY 2020	1.00	59,673
	PERPETUA, RUI	8/24/2015	4.85	910	2,183	1,000	R9-6	FY 2021	1.00	60,638

**CITY OF NEWTON BUDGET
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Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
511002	YARD MAINTENANCE SUPERV	5/23/1988				0		FY 2020	1.00	66,087
	BOUDROT, GERALD	5/23/1988	32.11	2,633	0	1,000	R8-8	FY 2021	1.00	65,835
	YARD MAINTENANCE SUPERV	6/15/1987				0		FY 2020	1.00	66,087
	DANIELE, MICHAEL	6/15/1987	33.04	2,633	0	1,000	R8-8	FY 2021	1.00	65,835
	SHMEO CDL CLASS A	4/9/2007				0		FY 2020	1.00	52,610
	BUTERA, BRAD	4/9/2007	13.23	936	0	1,000	R7-4	FY 2021	1.00	53,506
	SHMEO CDL CLASS A	7/29/2013				0		FY 2020	1.00	60,532
	CALORE, EUTICHIO	7/29/2013	6.92	936	2,247	1,000	R7-8	FY 2021	1.00	62,410
	SHMEO CDL CLASS A	6/27/2017				0		FY 2020	1.00	56,320
	ECCLES, JEFFREY	6/27/2017	3.01	0	2,034	1,000	R7-6	FY 2021	1.00	56,487
	SHMEO CDL CLASS A	11/6/2017				0		FY 2020	1.00	64,200
	MARQUEZ, RODOLFO	11/6/2017	2.65	0	2,302	1,000	R7-8	FY 2021	1.00	63,955
	SHMEO	11/6/2017				0		FY 2020	1.00	51,142
	SAULNIER, BRIAN	11/6/2017	2.65	0	0	1,000	R6-4	FY 2021	1.00	51,971
	SHMEO	11/6/2017				0		FY 2020	1.00	51,142
	MATTERAZZO, EUGENE	11/6/2017	2.65	0	1,876	1,000	R6-4	FY 2021	1.00	52,098
	SHMEO	1/20/2017				0		FY 2020	1.00	52,924
	BINDON, PAUL	1/20/2017	3.45	0	1,912	1,000	R6-5	FY 2021	1.00	53,122
	SHMEO	10/28/2013				0		FY 2020	1.00	58,772
	WANSIEWICZ, GREGORY	10/28/2013	6.68	909	2,181	1,000	R6-8	FY 2021	1.00	60,595
	SHMEO	11/6/2017				0		FY 2020	1.00	51,142
	BYTHEWOOD, SEAN	11/6/2017	2.65	0	1,873	1,000	R6-4	FY 2021	1.00	52,030
	SHMEO					0		FY 2020	1.00	51,142
	VACANT, VACANT			0	0	0		FY 2021	0.00	0
	SHMEO					0		FY 2020	1.00	51,142
	VACANT, VACANT			0	0	0		FY 2021	0.00	0
	SHMEO					0		FY 2020	1.00	52,924
	VACANT, VACANT			0	1,930	1,000	R6-5	FY 2021	1.00	53,609
	HMEO/MASON/CURBSETTER	10/4/2017				0		FY 2020	1.00	51,352
	CAPOCCIA, ERIK	10/4/2017	2.74	0	1,889	1,000	R5-5	FY 2021	1.00	52,483
	HMEO/MASON/CURBSETTER	12/8/2014				0		FY 2020	1.00	57,095
	DELEON, LEONARDO	12/8/2014	5.56	869	2,086	1,000	R5-8	FY 2021	1.00	57,934
	HMEO/MASON/CURBSETTER	10/14/2003				0		FY 2020	1.00	60,574
	GREELEY, FRANCIS	10/14/2003	16.71	1,207	0	1,000	R5-8	FY 2021	1.00	60,343
	HMEO/MASON/CURBSETTER	10/6/2003				0		FY 2020	1.00	60,574
	CAVALLO, JOHNNY	10/6/2003	16.74	1,207	0	1,000	R5-8	FY 2021	1.00	60,343
	HMEO/MASON/CURBSETTER	10/17/2017				0		FY 2020	1.00	51,352
	DRAKOS, MATTHEW	10/17/2017	2.71	0	1,880	1,000	R5-5	FY 2021	1.00	52,222
	HMEO/MASON/CURBSETTER	5/9/2005				0		FY 2020	1.00	60,574
	CAMILLI, DOMINIC	5/9/2005	15.14	1,207	0	1,000	R5-8	FY 2021	1.00	60,343
	HMEO/MASON/CURBSETTER	11/21/2016				0		FY 2020	1.00	48,019
	DOUCET, DENNIS	11/21/2016	3.61	0	1,765	1,000	R5-3	FY 2021	1.00	49,040
	HMEO/MASON/CURBSETTER					0		FY 2020	1.00	53,155
	VACANT, VACANT		2.65	0	1,938	1,000	R5-6	FY 2021	1.00	53,829

<p>CITY OF NEWTON BUDGET PERSONNEL DETAIL</p>
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Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
511002	HMEO	3/18/1995				0		FY 2020	1.00	58,835
	MURPHY, JOHN	3/18/1995	25.29	1,758	0	1,000	R4-8	FY 2021	1.00	58,610
	HMEO	4/28/1986				0		FY 2020	1.00	58,835
	DOBSON, ARNOLD	4/28/1986	34.17	2,344	0	1,000	R4-8	FY 2021	1.00	58,610
	HMEO	10/20/1997				0		FY 2020	1.00	58,835
	CARROLL, JOHN	10/20/1997	22.7	1,465	0	1,000	R4-8	FY 2021	1.00	58,610
	HMEO	1/27/2004				0		FY 2020	1.00	58,835
	SECINARO, ALPHONSE	1/27/2004	16.43	1,172		1,000	R4-8	FY 2021	1.00	58,610
	HMEO	10/11/2011				0		FY 2020	1.00	58,835
	BIANCO, FRANK	10/11/2011	8.72	879		1,000	R4-8	FY 2021	1.00	58,610
	HMEO	10/17/2017				0		FY 2020	1.00	48,229
	FUENTES, JOSE	10/17/2017	2.71	0	1,772	1,000	R4-4	FY 2021	1.00	49,234
	HMEO	1/17/2019				0		FY 2020	1.00	46,657
	SANDERS, KELVIN	1/17/2019	1.46	0	1,675	1,000	R4-3	FY 2021	1.00	46,522
	HMEO	10/29/2019				0		FY 2020	1.00	46,657
	BUTLER, BRENDAN	10/29/2019	0.67	0	1,687	1,000	R4-3	FY 2021	1.00	46,866
	HMEO	4/14/2014				0		FY 2020	1.00	46,657
	DRISCOLL, JOSEPH	4/14/2014	6.21	703	1,686	1,000	R4-3	FY 2021	1.00	46,836
	HMEO	5/11/2018				0		FY 2020	1.00	48,229
	SHABANIAN, NICHOLAS	5/11/2018	2.14	0	1,732	1,000	R4-4	FY 2021	1.00	48,101
	HMEO	11/21/2016				0		FY 2020	1.00	49,927
	HARRIS, CONNOR	11/21/2016	3.61	0	0	1,000	R4-5	FY 2021	1.00	50,940
	HMEO	12/2/2020				0		FY 2020	1.00	45,106
	D'AGOSTINO, MATTHEW	12/2/2020	0.42	0	0	1,000	R4-2	FY 2021	1.00	45,825
	HMEO					0		FY 2020	1.00	46,301
	VACANT, VACANT			0	0	0		FY 2021	0.00	0
	HMEO					0		FY 2020	1.00	46,301
	VACANT, VACANT			0	0	0		FY 2021	0.00	0
	LABORER	1/21/2020				0		FY 2020	1.00	43,827
	PEREZ, GREGORY	1/21/2020	0.44	0	1,596	1,000	R3-2	FY 2021	1.00	44,330
	LABORER	1/21/2020				0		FY 2020	1.00	43,827
	WOODS, MARK	1/21/2020	0.44	0	0	1,000	R3-2	FY 2021	1.00	44,330
Account Totals:						0		FY 2020	48.00	2,659,552
					30,711	44,485	44,000	FY 2021	44.00	2,484,756
511102	PT LABORER					0		FY 2020		20,000
	LABORER, LABORER			0	0	0	QQQ	FY 2021	0.00	1
	Account Totals:					0		FY 2020		20,000
					0	0	0	FY 2021	0.00	1
TOTAL STREET DIVISION						0		FY 2020	55.00	3,248,671
					39,211	53,980	55,000	FY 2021	51.00	3,062,560
0140121 - DPW ADMIN/SUPPT										
511001	DPW COMMISSIONER	8/24/2015				0		FY 2020	1.00	151,426
	MCGONAGLE, JAMES	8/24/2015	4.85	750	5,593	0	H15-27	FY 2021	1.00	155,373

CITY OF NEWTON BUDGET PERSONNEL DETAIL

Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
511001	CHIEF OF STAFF	6/26/1995				0		FY 2020	0.50	53,108
	SULLIVAN, SHAWNA	6/26/1995	25.01	1,250	0	2,500	H14-7	FY 2021	0.50	54,492
	FINANCE MANAGER	8/11/2014				0		FY 2020	1.00	96,902
	COWELL, JACK	8/11/2014	5.89	750	3,579	0	H10-18	FY 2021	1.00	99,428
	FINANCIAL ANALYST II	7/31/2017				0		FY 2020	1.00	57,283
	NABI, DANIEL	7/31/2017	2.92	0	0	0	H6-3	FY 2021	1.00	58,777
	ACCOUNTING SUPERVISOR	9/4/2019				0		FY 2020	1.00	56,171
	MURPHY, ERIN	9/4/2019	0.82	0	0	500	S8-3	FY 2021	1.00	56,146
	PAYROLL COORDINATOR	10/12/1989				0		FY 2020	1.00	61,482
	PINNONE, MARILYN	10/12/1989	30.72	2,500	0	500	S6-11	FY 2021	1.00	61,247
	COMM & CONSTRUCTION COO	8/18/2014				0		FY 2020	1.00	76,668
	CROWLEY, TERRY	8/18/2014	5.87	750	2,832	0	H7-17	FY 2021	1.00	78,667
	EXECUTIVE ADMIN	9/14/2007				0		FY 2020	1.00	73,291
	RITCEY, KIMBERLY	9/14/2007	12.8	900	0	500	S8-11	FY 2021	1.00	73,011
	CUSTOMER SERVICE ADMIN	8/25/2014				0		FY 2020	1.00	82,273
	ROSS, GARRETT	8/25/2014	5.85	750	3,039	0	H8-16	FY 2021	1.00	84,418
	CUSTOMER SERVICE SUPERV	3/28/2019				0		FY 2020	1.00	49,947
	MORRELL, LORETTA	3/28/2019	1.26	0	1,841	500	S7-2	FY 2021	1.00	51,135
	CUSTOMER SERVICE REP	8/21/2017				0		FY 2020	1.00	40,736
	ANDERSEN, BARBARA	8/21/2017	2.86	0	1,499	500	S4-4	FY 2021	1.00	41,631
	CUSTOMER SERVICE REP	11/18/2020				0		FY 2020	1.00	38,402
	RADULOV, JULIE	11/18/2020	0.38	0	1,403	500	S4-2	FY 2021	1.00	38,962
Account Totals:						0		FY 2020	11.50	837,688
					7,650	19,786		FY 2021	11.50	853,286
511002	TIME/CONSTRUCTION CLERK	4/8/2010				0		FY 2020	1.00	64,200
	CATRAMBONE, KIARA	4/8/2010	10.23	1,119	0	1,000	R7-8	FY 2021	1.00	63,955
	Account Totals:					0		FY 2020	1.00	64,200
					1,119	0		FY 2021	1.00	63,955
TOTAL DPW ADMIN/SUPPT						0		FY 2020	12.50	901,889
					8,769	19,786		FY 2021	12.50	917,241
0140125 - VEHICLE MAINT										
511001	DIRECTOR OF FLEET	4/18/2017				0		FY 2020	1.00	103,974
	MOSCA, TRAVIS	4/18/2017	3.2	0	0	5,000	H12-14	FY 2021	1.00	105,113
	ASSISTANT FOREMAN	4/29/2013				0		FY 2020	1.00	64,867
	SILVA, CHRISTOPHER	4/29/2013	7.17	675	2,338	1,000	C9-5	FY 2021	1.00	64,950
Account Totals:						0		FY 2020	2.00	168,841
					675	2,338		FY 2021	2.00	170,063
511002	WF MOTOR EQUIP REPAIRMA	3/15/2018				0		FY 2020	1.00	55,754
	CRISAFULLI, JOHN DEREK	3/15/2018	2.29	0	0	1,000	R9-4	FY 2021	1.00	56,422
	WF METAL WELD	9/12/1994				0		FY 2020	1.00	67,994
	BRYSON, MICHAEL	9/12/1994	25.8	2,032	0	1,000	R9-8	FY 2021	1.00	67,735
	LEAD METAL WORKER/WELD	8/17/1992				0		FY 2020	1.00	67,994
	JOHANSEN, DANIEL	8/17/1992	27.87	2,032	0	1,000	R9-8	FY 2021	1.00	67,735

CITY OF NEWTON BUDGET PERSONNEL DETAIL

Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
511002	WF MOTOR EQUIP REPAIRMA					0		FY 2020	1.00	64,159
	VACANT, VACANT			0	2,370	1,000	R9-8	FY 2021	1.00	65,824
	LEAD MOTOR EQUIP REPAIR	8/13/2007				0		FY 2020	1.00	67,994
	FITZGERALD, KEVIN	8/13/2007	12.88	1,185	0	1,000	R9-8	FY 2021	1.00	67,735
	LEAD MOTOR EQUIP REPAIR	11/21/2005				0		FY 2020	1.00	64,200
	MACCORMACK, JAMES	11/21/2005	14.61	1,279	0	1,000	R7-8	FY 2021	1.00	63,955
	MOTOR EQUIP REPAIRMAN	7/26/2010				0		FY 2020	1.00	66,087
	TRACEY, KEVIN	7/26/2010	9.93	1,152	0	1,000	R8-8	FY 2021	1.00	65,835
	METAL BODY WORKER 2	1/13/1992				0		FY 2020	1.00	64,200
	OLIVEIRA, MANUEL	1/13/1992	28.47	1,919	0	1,000	R7-8	FY 2021	1.00	63,955
	METAL BODY WORKER 1	11/21/2016				0		FY 2020	1.00	54,475
	DESIMONE, MICHAEL	11/21/2016	3.61	0	0	1,000	R7-5	FY 2021	1.00	55,327
	SENIOR STOREKEEPER	10/12/2010				0		FY 2020	1.00	64,200
	GATELY, RICHARD	10/12/2010	9.72	1,119	0	1,000	R7-8	FY 2021	1.00	63,955
	MOTOR EQUIP REPAIRMAN	5/28/2002				0		FY 2020	1.00	62,335
	RENDEROS, MARCELINO	5/28/2002	18.09	1,242	0	1,000	R6-8	FY 2021	1.00	62,097
	MOTOR EQUIP REPAIRMAN	7/29/2019				0		FY 2020	1.00	47,789
	LOPEZ, DEREK	7/29/2019	0.92	0	1,769	1,000	R6-2	FY 2021	1.00	49,129
	MOTOR EQUIP REPAIRMAN					0		FY 2020	1.00	49,445
	VACANT, VACANT			0	0	0	R6-3	FY 2021	1.00	1
	MOTOR EQUIP REPAIRMAN	4/17/2018				0		FY 2020	1.00	51,142
	ABORN, PAUL	4/17/2018	2.21	0	1,847	1,000	R6-4	FY 2021	1.00	51,308
	GARAGE ATTENDANT	11/21/2016				0		FY 2020	1.00	53,155
	PORTNOY, DAVID	11/21/2016	3.61	0	1,931	1,000	R5-5	FY 2021	1.00	53,626
Account Totals:						0		FY 2020	15.00	900,924
					11,960	7,916		FY 2021	15.00	854,640
511102	CLERK PT					0		FY 2020	0.49	19,650
	VACANT, VACANT			0	0	0	QQQ	FY 2021	0.49	1
	Account Totals:					0		FY 2020	0.49	19,650
				0	0	0		FY 2021	0.49	1
TOTAL VEHICLE MAINT						0		FY 2020	17.49	1,089,415
					12,635	10,254		FY 2021	17.49	1,024,704
0140132 - STREET CLEANING										
511001	ASSISTANT HIGHWAY SUPER	5/25/2005				0		FY 2020	1.00	75,199
	CACCIOLA, PERRY	5/25/2005	15.1	1,000	0	1,000	C9-10	FY 2021	1.00	76,363
	Account Totals:					0		FY 2020	1.00	75,199
					1,000	0		FY 2021	1.00	76,363
511002	WORKING FOREMAN	2/6/1966				0		FY 2020	1.00	67,994
	LEONE, RICHARD	2/6/1966	54.4	2,709	0	1,000	R9-8	FY 2021	1.00	67,735
	HMEO SWEEPER	10/7/1985				0		FY 2020	1.00	60,574
	FRYAR, NORMAN	10/7/1985	34.73	2,414	0	1,000	R5-8	FY 2021	1.00	60,343
	HMEO SWEEPER	6/25/2018				0		FY 2020	1.00	48,019
	SULLIVAN, JASON	6/25/2018	2.02	0	1,765	1,000	R5-3	FY 2021	1.00	49,040

CITY OF NEWTON BUDGET PERSONNEL DETAIL

Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
511002	HMEO SWEEPER	4/25/1988				0		FY 2020	1.00	60,574
	DICKENS, NICHOLAS	4/25/1988	32.18	2,414	0	1,000	R5-8	FY 2021	1.00	60,343
	HMEO SWEEPER	6/12/2006				0		FY 2020	1.00	60,574
	WICKSTROM, FREDERICK	6/12/2006	14.05	1,207	0	1,000	R5-8	FY 2021	1.00	60,343
	HMEO SWEEPER	7/30/2012				0		FY 2020	1.00	60,574
	DOHERTY, PETER	7/30/2012	7.92	905	2,172	1,000	R5-8	FY 2021	1.00	60,343
	HMEO SWEEPER	10/11/2016				0		FY 2020	1.00	51,352
	DOCKETT, JAMES	10/11/2016	3.72	0	1,888	1,000	R5-5	FY 2021	1.00	52,448
	Account Totals:					0		FY 2020	7.00	409,663
				9,649	5,826	7,000		FY 2021	7.00	410,596
	TOTAL STREET CLEANING					0		FY 2020	8.00	484,862
				10,649	5,826	8,000		FY 2021	8.00	486,959
0140133 - SUSTAINABLE MATRLS MGT										
511001	RECYCLING/ENVIRONMENTAL	5/16/2016				0		FY 2020	1.00	91,339
	TRABERT, WANETA	5/16/2016	4.12	750	3,324	0	H10-14	FY 2021	1.00	92,340
	WATER DIVERSION COORDIN	8/29/2018				0		FY 2020	1.00	43,170
	BRAMAN, ERICA	8/29/2018	1.84	0	0	500	S5-3	FY 2021	1.00	43,044
	Account Totals:					0		FY 2020	2.00	134,508
				750	3,324	500		FY 2021	2.00	135,384
511002	RESOURCE RECOVERY CENTE	1/3/2005				0		FY 2020	1.00	66,087
	PERRON, DAVID	1/3/2005	15.49	1,317	0	1,000	R8-8	FY 2021	1.00	65,835
	SHMEO CDL CLASS A	6/20/2005				0		FY 2020	1.00	64,200
	FERGUSON, MARK	6/20/2005	15.03	1,279	0	1,000	R7-8	FY 2021	1.00	63,955
	SHMEO	9/10/2018				0		FY 2020	1.00	51,142
	CANNISTRARO, JOEL	9/10/2018	1.81	0	1,874	1,000	R6-4	FY 2021	1.00	52,069
	HANDYMAN	11/30/2003				0		FY 2020	1.00	58,835
	GENTILE, THOMAS	11/30/2003	16.59	1,172	0	1,000	R4-8	FY 2021	1.00	58,610
	Account Totals:					0		FY 2020	4.00	240,264
				3,768	1,874	4,000		FY 2021	4.00	240,469
511101	PT ADMIN ASST					0		FY 2020		15,000
	VACANT,VACANT			0	0	0	QQQ	FY 2021	0.00	1
	Account Totals:					0		FY 2020		15,000
				0	0	0		FY 2021	0.00	1
TOTAL SUSTAINABLE MATRLS MGT										
				4,518	5,199	4,500		FY 2020	6.00	389,773
								FY 2021	6.00	375,854
0140180 - TRANSPORTATION										
511001	DIRECTOR OF TRANSPORTAT	12/26/2017				0		FY 2020	1.00	118,818
	SOBEL, JASON	12/26/2017	2.51	0	4,389	9,273	H12-23	FY 2021	1.00	121,915
	SENIOR TRAFFIC ENGINEER					0		FY 2020	1.00	99,132
	VACANT, VACANT			0	0	0	H11-15	FY 2021	1.00	1
	TRAFFIC ENGINEER	10/24/2018				0		FY 2020	1.00	79,970
	PRIZANT, ISSAC	10/24/2018	1.69	0	2,954	0	H10-5	FY 2021	1.00	82,055

**CITY OF NEWTON BUDGET
PERSONNEL DETAIL**

Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
511001	TRANSPORTATION COORDINA	1/12/2004				0		FY 2020	1.00	92,635
	KOSES, DAVID	1/12/2004	16.47	1,000	0	0	H8-24	FY 2021	1.00	95,050
	PARKING MANAGER	5/18/2016				0		FY 2020	1.00	74,199
	MORRISON, FAYE	5/18/2016	4.12	750	2,741	0	H8-9	FY 2021	1.00	76,134
	TRANSPORTATION SUPERINT	9/23/1996				0		FY 2020	1.00	92,865
	WANG, NING	9/23/1996	23.77	2,000	0	1,000	C10-12	FY 2021	1.00	92,510
	ASST TRANSPORTATION SUP	7/1/2020				0		FY 2020	1.00	82,172
	VACANT, VACANT	7/1/2020	0	0	0	1,000	C9-12	FY 2021	1.00	81,858
	Account Totals:					0		FY 2020	7.00	639,791
				3,750	10,084	11,273		FY 2021	7.00	549,524
511002	WORKING FOREMAN	9/4/2012				0		FY 2020	1.00	67,994
	RIORDAN, BRIAN	9/4/2012	7.82	1,016	2,438	1,000	R9-8	FY 2021	1.00	67,735
	WF LINE PAINTER					0		FY 2020	1.00	57,682
	VACANT, VACANT			0	2,104	1,000	R9-5	FY 2021	1.00	58,454
	LEAD PARKING METER REPA					0		FY 2020	1.00	52,148
	VACANT, VACANT			0	1,901	1,000	R9-1	FY 2021	1.00	52,796
	TRAFFIC MAINTENANCE MAN	6/1/1987				0		FY 2020	1.00	66,087
	PERKINS, THOMAS	6/1/1987	33.08	2,633	0	1,000	R8-8	FY 2021	1.00	65,835
	TRANSPORTATION CLERK	3/18/1985				0		FY 2020	1.00	64,200
	BIANCHI, LAWRENCE	3/18/1985	35.29	2,558	0	1,000	R7-8	FY 2021	1.00	63,955
	SHMEO LINE PAINTER					0		FY 2020	1.00	56,529
	VACANT, VACANT			0	2,067	1,000	R6-7	FY 2021	1.00	57,430
	HMEO/MASON/CURBSETTER	3/1/2019				0		FY 2020	1.00	48,019
	JONES, LARRY	3/1/2019	1.33	0	1,743	1,000	R5-3	FY 2021	1.00	48,405
	PARKING METER REPAIRMAN	10/17/2017				0		FY 2020	1.00	48,229
	SARGSYAN, NORAYR	10/17/2017	2.71	0	1,772	1,000	R4-4	FY 2021	1.00	49,234
	PARKING METER REPAIRMAN	3/1/2020				0		FY 2020	1.00	45,106
	VACANT, VACANT			0	0	1,000	R4-2	FY 2021	1.00	45,447
	HMEO	5/28/2015				0		FY 2020	1.00	53,385
	BROOKS, KEVIN	5/28/2015	5.09	801	1,921	1,000	R4-7	FY 2021	1.00	53,371
	HMEO	8/3/2015				0		FY 2020	1.00	54,706
	NAPOLITANO, BRIAN	8/3/2015	4.91	833	2,000	1,000	R6-5	FY 2021	1.00	55,545
	Account Totals:					0		FY 2020	11.00	614,086
				7,841	15,947	11,000		FY 2021	11.00	618,207
511101	PT PARKING ADMIN					0		FY 2020	0.49	20,000
	COE, KATHLEEN			0	0	0	QQQ	FY 2021	0.49	20,000
	Account Totals:					0		FY 2020	0.49	20,000
				0	0	0		FY 2021	0.49	20,000
512003	ENGINEERING CO-OP					0		FY 2020	0.00	39,000
	VACANT, VACANT			0	0	0	QQQ	FY 2021	0.00	1
	Account Totals:					0		FY 2020	0.00	39,000
				0	0	0		FY 2021	0.00	1

CITY OF NEWTON BUDGET PERSONNEL DETAIL

Account	Position Title	Benefits Date			Holiday		Grade	F.Y.	FTE	GROSS
	Employee Name	Hire Date	Yrs. Service	Longevity	OPEB	Add Comp				
TOTAL TRANSPORTATION						0		FY 2020	18.49	1,312,877
				11,591	26,031	22,273		FY 2021	18.49	1,187,732
TOTAL PUBLIC WORKS						0		FY 2020	132.98	8,796,727
				98,324	138,608	127,273		FY 2021	128.98	8,372,308



Design Review Committee
PUBLIC BUILDINGS DEPARTMENT
Ellen Light and Peter Barrer, Co-Chairs
Joshua R. Morse, Commissioner
Telephone (617) 796-1600
FAX (617) 796-1601
TTY: (617) 796-1089
52 Elliot Street
Newton Highlands, MA 02461-1605

Ruthanne Fuller
Mayor

Honorable City Council
City of Newton
1000 Commonwealth Avenue
Newton Centre, MA 02459

7 April 2020

RE: Oak Hill Middle School Three Classroom Addition Project

SUBJECT: Site Plan Review

Honorable Council:

The City of Newton is proposing to construct a three-classroom addition to the existing Oak Hill Middle School at 130 Wheeler Road to accommodate a significant and sustained increase in enrollment. Newton Public Schools, NPS, has asked the administration and Public Buildings Department to move as expeditiously as possible to deliver three instructional classrooms to meet the rising enrollment needs. Although NPS recognizes that there are many areas at the Oak Hill Middle School, which could use evaluation and modification, at this time based on the district priorities, funding availability, and enrollment, NPS recommends focusing on delivering the best three-classroom addition as soon as possible. The goal is to have these classrooms designed, bid, and built by the summer of 2021.

On Monday, 6 April 2020 the Design Review Committee, DRC, met remotely via Zoom and reviewed the proposed site plan and schematic design for the Oak Hill Middle School Three Classroom Addition. The project was presented by Raymond Design Associates, RDA, on behalf of Newton Public Schools and the Public Buildings Department.

The project proposes a new single story, 5,000 S.F. addition on the southwest corner of the existing school and fronting on Wheeler Road. The addition provides three classrooms to accommodate 75 additional students and includes two small group and individualized learning spaces, toilets and associated support space. The existing school building will have interior modifications to connect and support access / egress from both the existing facility and the new addition, and also include required building code and accessibility upgrades. To address programmatic concerns with existing core space, should construction bidding prove favorable, the project has identified two existing spaces for renovation, which can create a multi-purpose room to augment cafeteria space and provide additional group program space.

Additional site improvement will include a new ADA accessible ramp, rain garden - best management practice (BMP), and minor drainage upgrades to accommodate same. The proposed rain garden is designed to meet the latest storm water management regulation instituted by Mass DEP and meets the design requirements of the City of Newton.

During the reviews of the project and design approach the DRC requested that the team provide an option that could accommodate the immediate need but which is designed to accommodate a future second floor addition to provide an additional four classrooms should the need arise. Although the current project budget does not allow for this approach the Committee is concerned that the City will miss out on a valuable opportunity. Therefore, the DRC strongly encourages the City to consider adjusting the project scope and funding to take advantage of this opportunity.

That said and recognizing the current funding limitations the Committee voted unanimously to recommend that the proposed single-story project be presented for site plan approval. In accordance with Section 5-58 of the Revised Ordinances, this letter is

to petition the City Council on behalf of the School Department for Site Plan Approval. The DRC identified the following conditions of its approval which will continue to be evaluated and refined by the design team and City throughout the design process:

- The project will continue to pursue sustainability initiatives, reduce project energy consumption and embodied carbon, and eliminate fossil fuel consumption.
- The project will evaluate opportunities to incorporate PV and will endeavor to achieve a net zero energy project.
- The project will develop landscaping and site lighting to minimize the impact to the abutters and the neighborhood.
- Accessible walks, rails, landscaping and rain garden plantings and details shall be coordinated with Parks & Recreation.
- Earthwork and foundation design shall be further reviewed with the DRC during design development.
- Existing foundation, exterior walls and interior finishes shall be examined in consideration of potential vibratory design options and prior to construction. Specifications shall set strict limits on allowable vibrations and equipment.
- The project will continue to refine and address all parking, traffic, and site circulation challenges both during construction and in the final condition.

Sincerely,



Ellen Light, AIA, LEED AP BD+C



Peter J. Barrer

Design Review Committee, Co-Chairs

CC: Joshua R. Morse, Commissioner of Public Buildings
Jonathan Yeo, Chief Operations Officer
Maureen Lemieux, Chief Financial Officer
Dr. David Fleishman, School Superintendent
Liam Hurly, Deputy Superintendent/Chief Administrative Officer



Business, Finance and Planning

TO: Josh Morse, Newton Public Building Commissioner

FROM: Liam Hurley, Assistant Superintendent/Chief Financial & Administrative Officer

DATE: February 7, 2020

RE: Oak Hill Three Classroom Addition

The Oak Hill Middle School is on the cusp of a significant and sustained enrollment increase. Currently, there are 632 students attending Oak Hill, but due to rising enrollment at the feeder elementary schools such as Zervas, enrollment is projected to rise significantly in over the next few years. The following is the projected enrollment for the Oak Hill Middle School:

- FY21: 674
- FY22: 695
- FY23: 705
- FY24: 711
- FY25: 710

As identified above, the school will experience a very significant increase in student population over the next two years, with modest gains after that before leveling out. Based on the elementary school enrollment projections, Oak Hill projects to sustain enrollments above 700 students for the foreseeable future.

To address this sudden increase in student enrollment, we have asked the administration and Public Buildings Department to move as expeditiously as possible to deliver three instructional classrooms to meet the rising enrollment needs. Although we recognize there are many areas at the Oak Hill Middle School which could use evaluation and modification, at this time based on the district priorities, funding availability, and enrollment, our recommendation is to focus on delivering the best three-classroom addition as soon as possible. The goal is to have these classrooms designed, bid, and built by the summer of 2021.

There would be a significant impact to the educational learning environment at Oak Hill, should we not be able to complete the project in time for the incoming students. The total project budget is \$3,000,000, with \$2,500,000 coming from the City, and \$500,000 coming from Newton Public Schools.

We believe the existing parking at Oak Hill as well as the shared parking between Oak Hill and Brown will satisfy the minimal staffing increase we may have in the coming years to address our rising enrollment. Additionally, bus and parent pick-up operations should not be adversely impacted by the anticipated enrollment increases due to the staggered end times with Brown and Oak Hill as well as the very long Wheeler road pick-up and drop-off zone in front of Oak Hill.

OAK HILL MIDDLE SCHOOL

130 WHEELER ROAD, NEWTON, MASSACHUSETTS 02459

PROPOSED CLASSROOM ADDITION 5-58 SCHEMATIC DESIGN / SITE PLAN APPROVAL SUBMITTAL

RAYMOND DESIGN ASSOCIATES, INC • ARCHITECT

60 LEDGEWOOD PLACE, ROCKLAND, MASSACHUSETTS 02370

781.561.5270

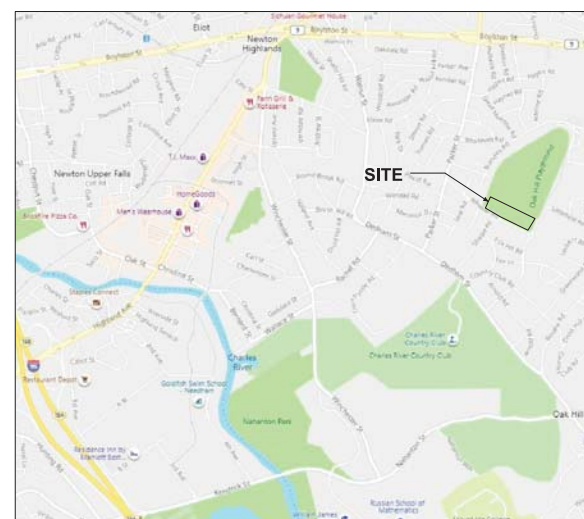
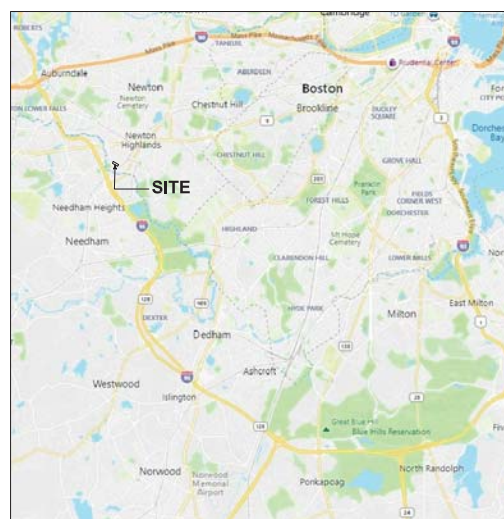
DRAWING LIST

- SV-1 - EXISTING SITE SURVEY
- SITE CIRCULATION
- CONSTRUCTION PLAN
- UTILITY AND STORM WATER MANAGEMENT
- C-1.1 - SITE PREPARATION & EROSION CONTROL PLAN
- C-1.2 - SITE GRADING AND LAYOUT PLAN
- C-1.3 - UTILITY PLAN
- C-2.1 - CIVIL DETAIL SHEET
- C-2.2 - CIVIL DETAIL SHEET
- A-1.1 - OVERALL FIRST FLOOR PLAN
- A-1.2 - OVERALL SECOND FLOOR PLAN AND ROOF PLAN
- A-1.3 - ENLARGED FLOOR PLANS
- A-3.1 - EXTERIOR ELEVATIONS



LOCATION PLANS

NO SCALE



OAK HILL MIDDLE SCHOOL

5-58 SCHEMATIC DESIGN / SITE
PLAN APPROVAL SUBMITTAL

130 WHEELER ROAD, NEWTON, MASSACHUSETTS 02459

APRIL 17, 2020

[illegible][illegible]

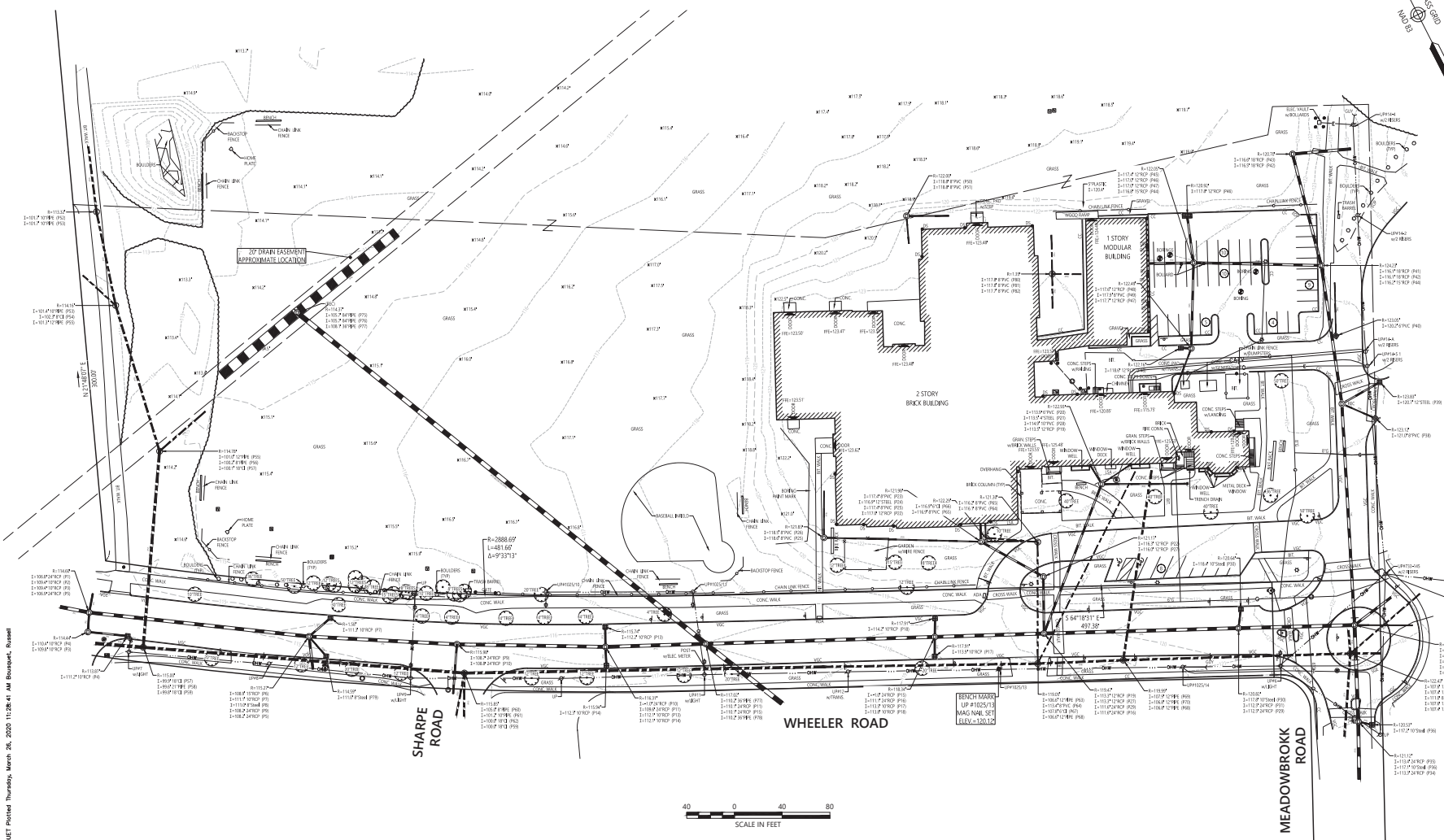
March 4, 2020

Sv-1

Sheet _____ of _____

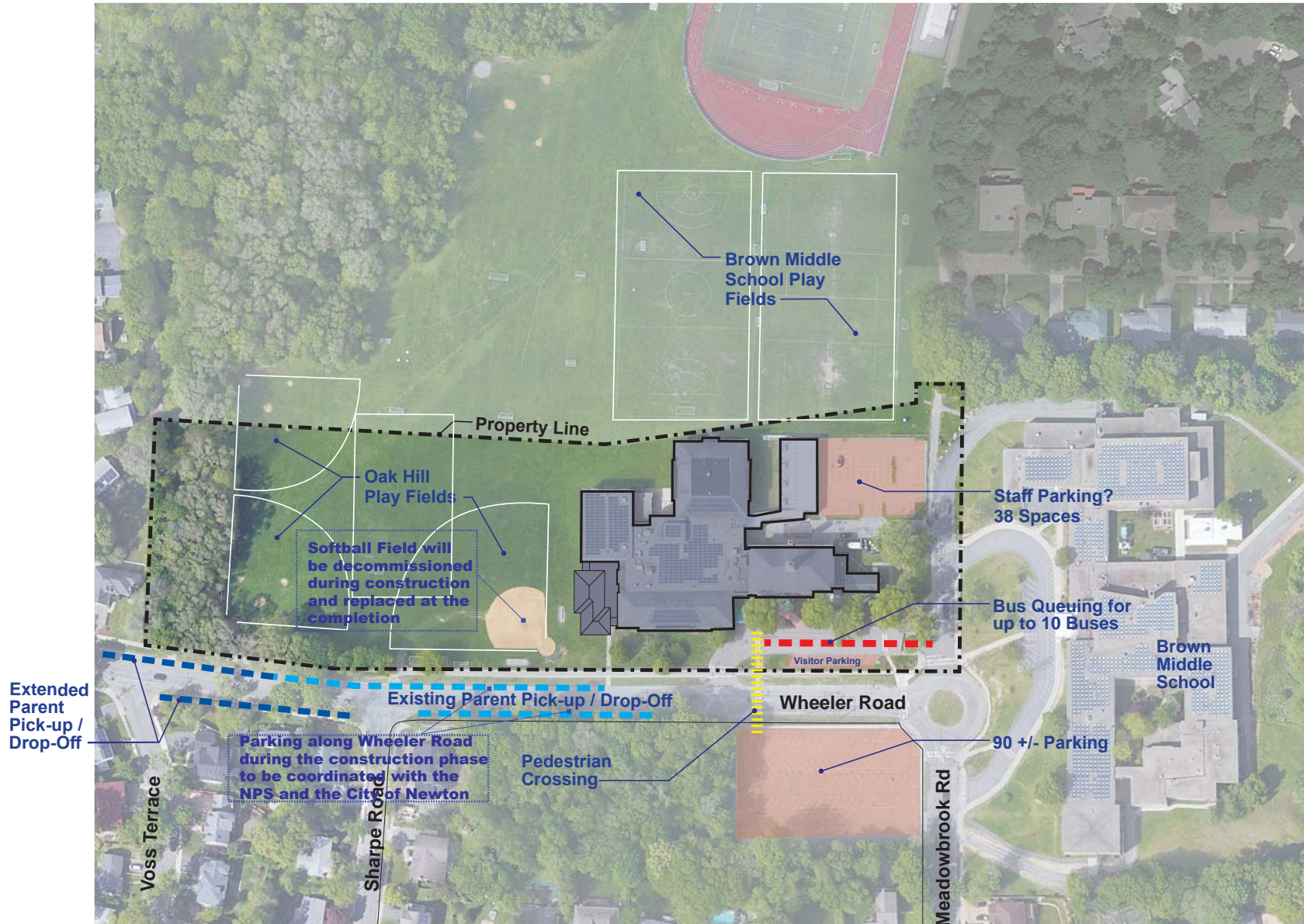
Project Number
04687.01

- 1) THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VHS INC. IN APRIL, 1996 AND FROM DEEDS AND PLANS OF RECORD AND VERIFIED IN FEBRUARY, 2020.
- 2) THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON A VISUAL INSPECTION ON-THE-GROUND DURING SURVEY PERFORMED BY VHS INC. IN MARCH, 2020.
- 3) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND INFORMATION OF RECORD. THEY ARE NOT WARRANTED TO BE EXACTLY LOCATED NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN.
- 4) HORIZONTAL DATUM IS BASED ON MASS GRID SYSTEM, NAD 1983. ELEVATIONS SHOWN ON THIS SURVEY TO NAVD 83.
- 5) THE TREE SYMBOL OUTLINE SHOWN ON THIS PLAN DOES NOT REPRESENT THE ACTUAL TREE CANOPY.
- 6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND MAY BE SUBJECT TO ADDITIONAL INFORMATION DISCLOSED IN SUCH A REPORT.



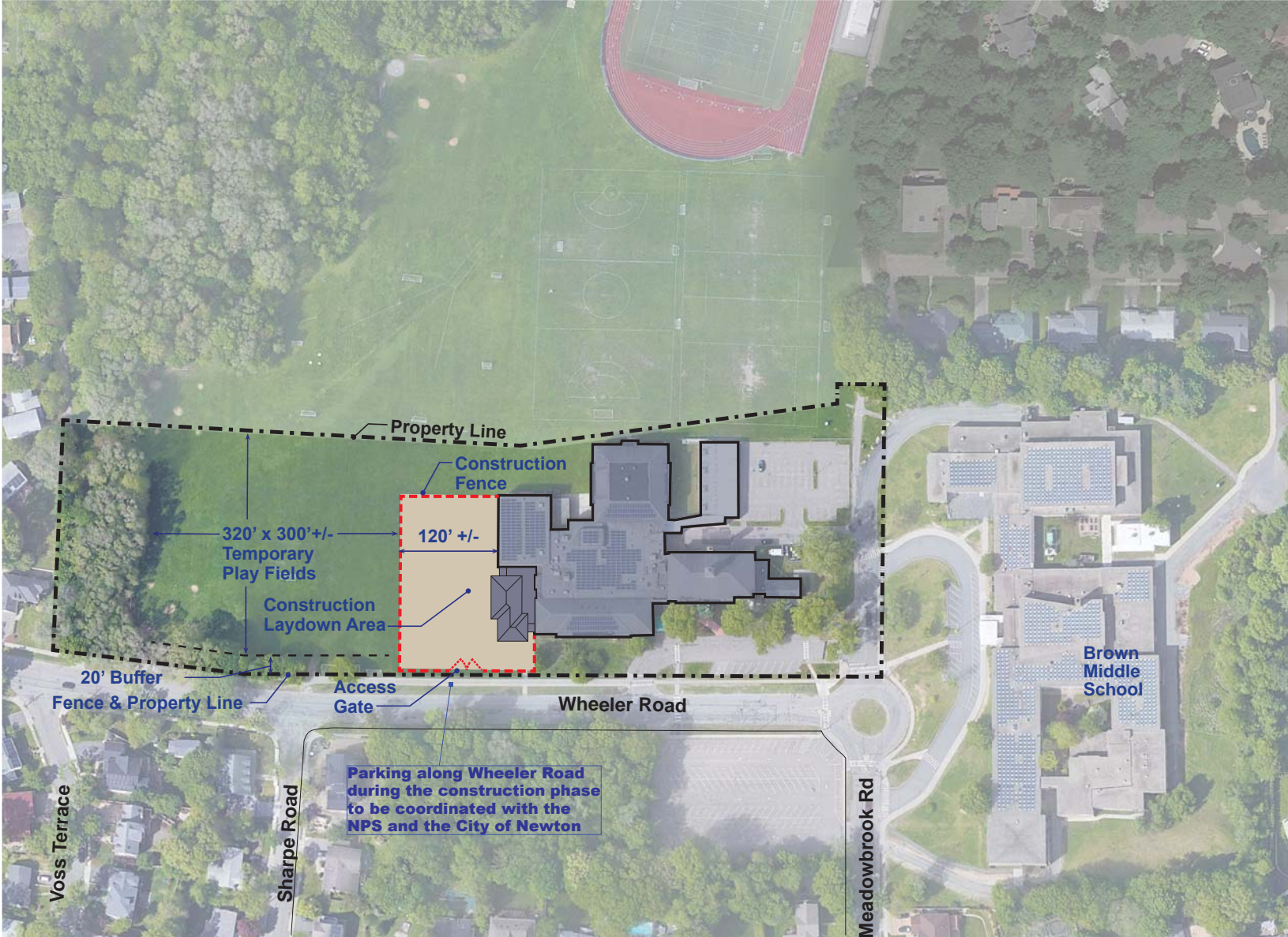
Revisions:		
No.	Date	Description
Drawn By: ND		
Checked By: GR		
Approved By: GR		
Drawing Scale: as noted		
Project Number:		
Date: May 6, 2020		

PROGRESS SET - NOT FOR PERMIT - NOT FOR CONSTRUCTION



Site Circulation

Revisions		
No.	Date	Description
Drawn By: ND		
Checked By: DR		
Approved By: GR		
Drawing Scale: as noted		
Project Number:		
Date: May 6, 2020		



Construction Plan

PROGRESS SET - NOT FOR PERMIT - NOT FOR CONSTRUCTION



Samiotes Consultants Inc.
Civil Engineers - Land Surveyors
20 A Street
Framingham, MA 01701
T 508.877.4488
F 508.877.8349
www.samiotes.com

OAK HILL SCHOOL
130 WHEELER ROAD
NEWTON, MASSACHUSETTS

SITE
PREPARATION
AND EROSION
CONTROL PLAN

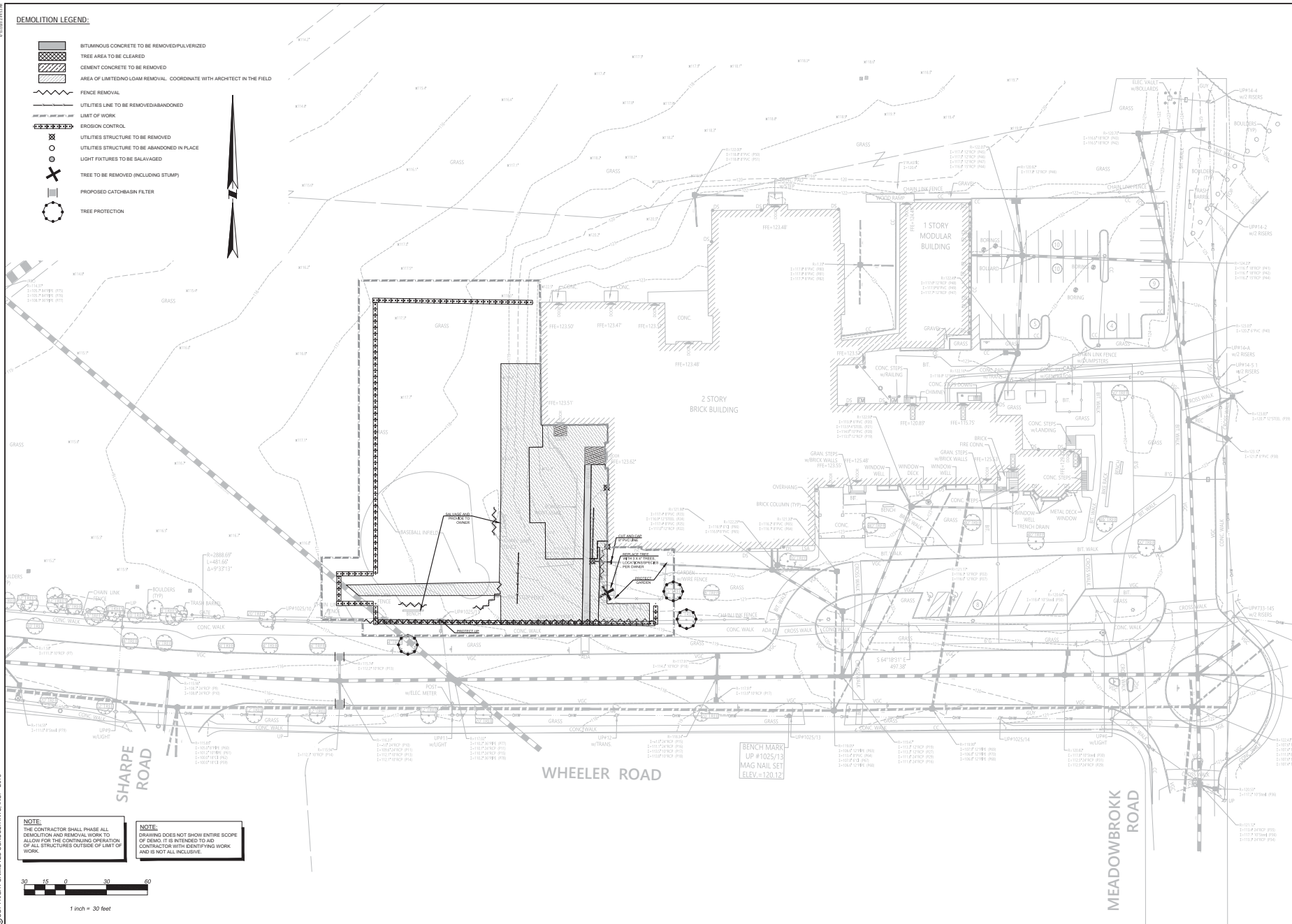
C-1.1

JOB # 1909-00
DATE 04.06.20
SCALE: 1"=50'
DRAWN BY: WGP
APPROVED BY: SBC

FILE: 1909-0001 OAK HILL SCHOOL.DWG

DEMOLITION LEGEND:

- BITUMINOUS CONCRETE TO BE REMOVED/PULVERIZED
- TREE AREA TO BE CLEARED
- CEMENT CONCRETE TO BE REMOVED
- AREA OF LIMITED LOAD REMOVAL. COORDINATE WITH ARCHITECT IN THE FIELD
- FENCE REMOVAL
- UTILITIES LINE TO BE REMOVED/ABANDONED
- LIMIT OF WORK
- EROSION CONTROL
- UTILITIES STRUCTURE TO BE REMOVED
- UTILITIES STRUCTURE TO BE ABANDONED IN PLACE
- LIGHT FIXTURES TO BE SALVAGED
- TREE TO BE REMOVED (INCLUDING STUMP)
- PROPOSED CATCH-BASIN FILTER
- TREE PROTECTION



NOTE:
THE CONTRACTOR SHALL PHASE ALL
DEMOLITION AND REMOVAL WORK TO
ALLOW FOR THE CONTINUING OPERATION
OF ALL STRUCTURES OUTSIDE OF LIMIT OF
WORK.

NOTE:
DRAWING DOES NOT SHOW ENTIRE SCOPE
OF DEMO. IT IS INTENDED TO AID
CONTRACTOR WITH IDENTIFYING WORK
AND IS NOT ALL INCLUSIVE.



Samnotes Consultants Inc.
Civil Engineers - Land Surveyors
30 A Street
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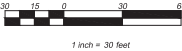
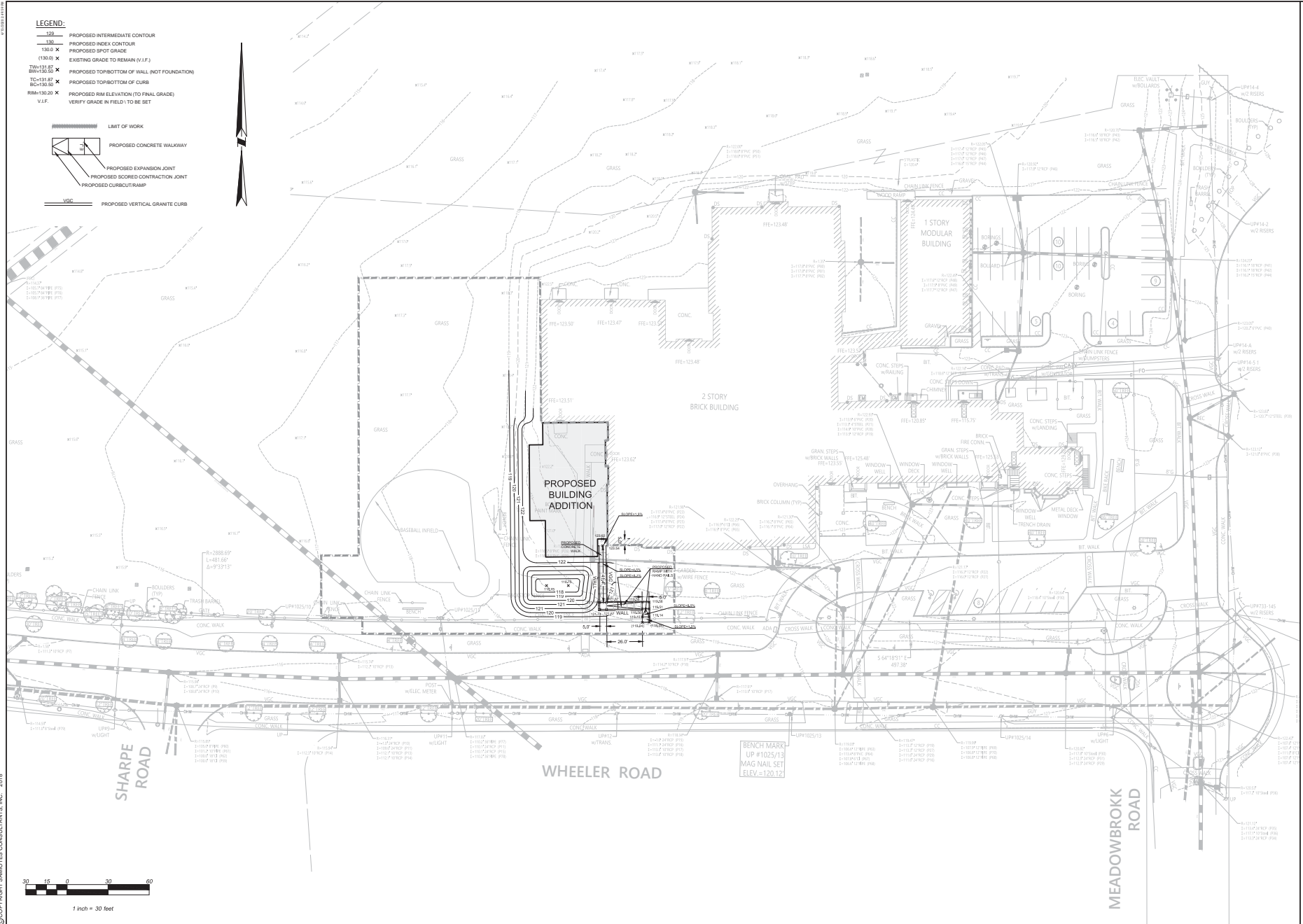
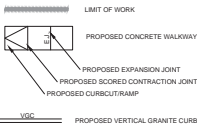
OAK HILL SCHOOL
130 WHEELER ROAD
NEWTON, MASSACHUSETTS

SITE
GRADING AND
LAYOUT PLAN

C-1.2

JOB # 19109.00
DATE 04.08.20
SCALE: 1"=30'
DRAWN BY: WGP
APPROVED BY: SBC
FILE: 19109.0001 OAK HILL SCHOOL.DWG

- LEGEND:
- 129 PROPOSED INTERMEDIATE CONTOUR
 - 130 PROPOSED INDEX CONTOUR
 - 130.0 X PROPOSED SPOT GRADE
 - 130.0 X EXISTING GRADE TO REMAIN (V.I.F.)
 - TM=131.87 PROPOSED TOP OF WALL (NOT FOUNDATION)
 - BM=130.50 PROPOSED FINISH GRADE (TO FINAL GRADE)
 - TC=131.87 PROPOSED TOP OF CURB
 - BC=130.50 PROPOSED FINISH GRADE (TO FINAL GRADE)
 - V.I.F. VERIFY GRADE IN FIELD TO BE SET





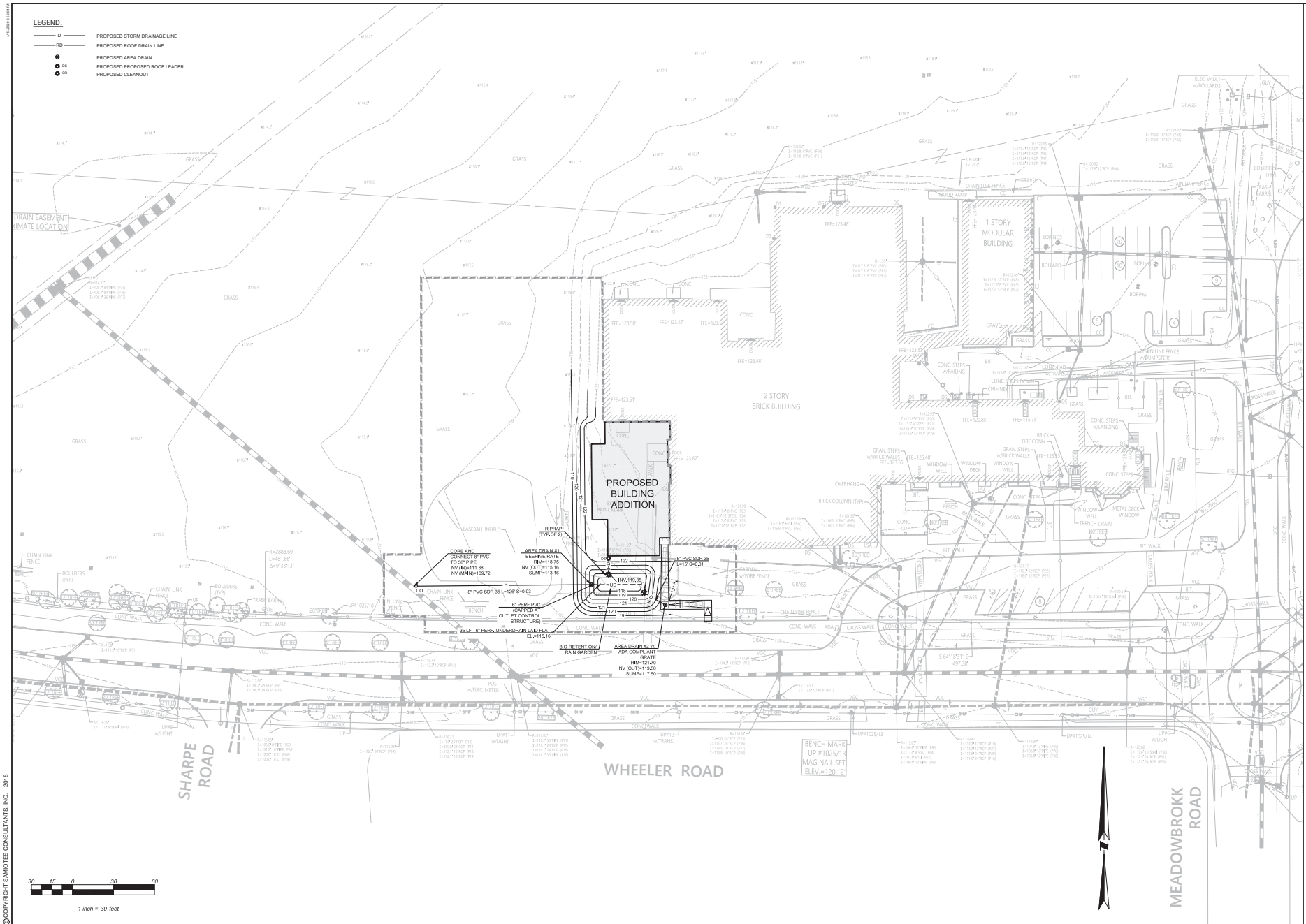
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OAK HILL SCHOOL
130 WHEELER ROAD
NEWTON, MASSACHUSETTS

UTILITY
PLAN

C-1.3

- LEGEND:
- D— PROPOSED STORM DRAINAGE LINE
 - RD— PROPOSED ROOF DRAIN LINE
 - PROPOSED AREA DRAIN
 - PROPOSED PROPOSED ROOF LEADER
 - PROPOSED CLEANDOUT



JOB # 1909-00
DATE: 04.08.20
SCALE: 1"=30'
DRAWN BY: WGP
APPROVED BY: SBC



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OAK HILL SCHOOL
130 WHEELER ROAD
NEWTON, MASSACHUSETTS

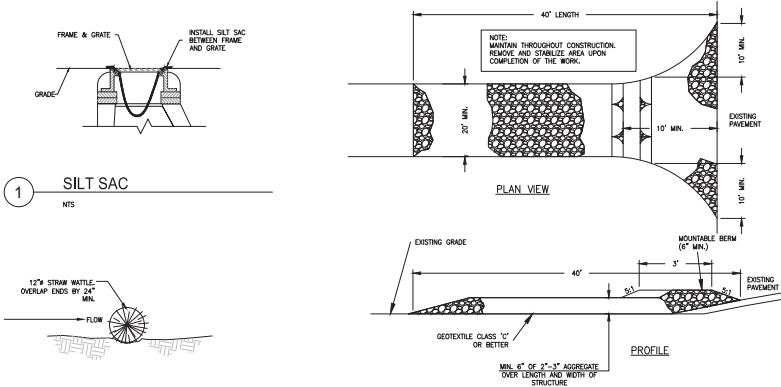
SCALE

REVISION

CIVIL
DETAIL SHEET

C-2.1

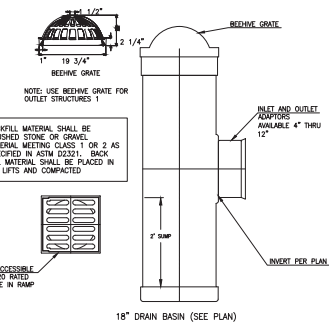
JOB # 19109-00
DATE: 04.08.20
SCALE: NTS
DRAWN BY: WJP
APPROVED BY: SBC
FILE: 19109.0001 OAK HILL SCHOOL.DWG



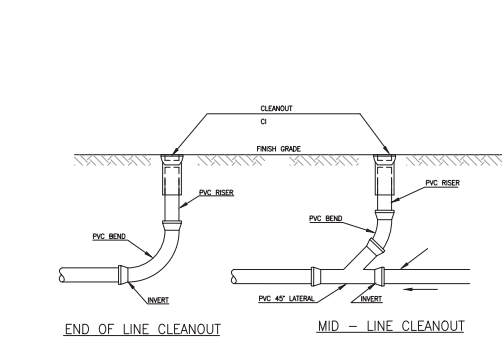
1 SILT SAC
NTS

2 STRAW WATTLE
NTS

3 STABILIZED CONSTRUCTION ENTRANCE
NTS



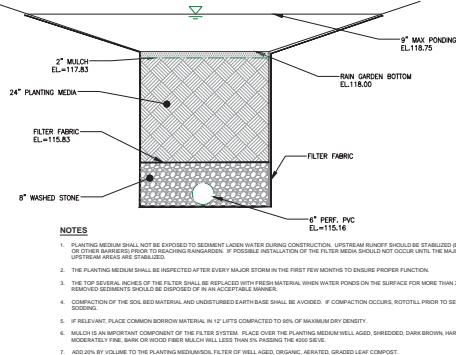
4 TRENCH DETAILS FOR PVC PIPE
NTS



5 BROOM FINISH CONCRETE WALKWAY
NTS

6 AREA DRAIN - OUTLET STRUCTURE
NTS

7 CLEANOUT
NTS



7 CLEANOUT
NTS

8 BIORETENTION/RAIN GARDEN - PLAN
NTS

9 CONNECTION TO LARGE STORM DRAINAGE MAIN
NTS

8 BIORETENTION/RAIN GARDEN - PLAN
NTS

9 CONNECTION TO LARGE STORM DRAINAGE MAIN
NTS

10 BIORETENTION/RAIN GARDEN - SECTION
NTS

11 4'-0" CHAIN LINK FENCE AND GATE
SCALE: N.T.S.

12 ROOF LEADER
NTS

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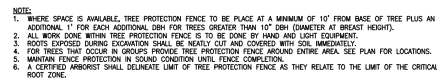
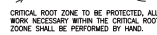
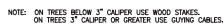
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GENERAL

1. ALL SURVEY INFORMATION OF EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO PROPERTY LINES, FENCES, PAVEMENT, OVERHEAD WIRES, ETC. BASED ON THE DATA SURVEY BY VME, INC. AS DEPECTED EXISTING SITE PLAN, ALL SUCH INFORMATION IS APPROPRIATE AND THE CONTRACTOR IS RESPONSIBLE TO SURVEY THE FIELD TO VERIFY SUCH INFORMATION PRIOR TO CONSTRUCTION. CONSTRUCTION DELAYS AND/OR OTHER DAMAGES RESULTING FROM DISCREPANCIES BETWEEN INFORMATION PROVIDED AND ACTUAL EXISTING CONDITIONS WILL BE AT NO ADDITIONAL COST TO THE OWNER.
2. AS OF JANUARY 1, 2009, ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 270B, SECTION 27B. THE CONTRACTOR SHALL PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNWATTEHED TRENCHES. TRENCH EXCAVATION PERMIT REQUIRED. THIS APPLIES TO ALL TRENCHES ON PUBLIC AND PRIVATE PROPERTY.
3. PRIOR TO OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN BY THE GENERAL CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND IN HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES, ANY EASEMENTS AND FINAL GRADING.
4. THE CONTRACTOR SHALL HAVE TO APPLY FOR A STREET OPENING & UTILITIES CONNECTION PERMITS AS WELL AS A SIDEWALK CROSSING PERMIT WITH THE NEWTON DPW.
5. THE CONTRACTOR SHALL NOTIFY AND COORDINATE ALL WORK WITH THE RESPECTIVE UTILITY COMPANIES 48 HOURS PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL REGISTER WITH "DO NOT SAFE" AT 8881 DO-SAFE, 72 HOURS PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY REGISTRATION AND "DO-SAFE" MARKINGS.
7. ALL WASTE MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, CITY AND MUNICIPAL REGULATIONS.
8. ALL WORK SHALL COMPLY WITH FEDERAL, STATE AND MUNICIPAL REGULATIONS AND STANDARDS.
9. THE CONTRACTOR SHALL HAVE THE PROPER LICENSES AS REQUIRED BY THE STATE AND ANY OTHER GOVERNING AGENCIES.
10. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUILDINGS AT NO ADDITIONAL COST TO THE OWNER.
11. THE CONTRACTOR SHALL MAINTAIN APPROPRIATE DIRECTION SIGNS WHEN WORK WILL IMPED TRAFFIC FLOW.
12. ALL UTILITY RIMS SHALL BE ADJUSTED TO MEET FINAL GRADE AND SHALL CONFORM WITH THE CONSTRUCTION SPECIFICATIONS OF THE RESPECTIVE UTILITY COMPANY.
13. FILL SHALL BE PLACED IN NO GREATER THAN 4" LIFTS AND COMPACTED TO AT LEAST 65% MAXIMUM COMPACTION.
14. CEMENT CONCRETE SHALL CONFORM TO AC SPECIFICATION 308, ASTM A & M 1567.
15. ADA AND WALK COMPLIANCE
 - A SPECIAL ATTENTION IS TO BE GIVEN TO COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE CRUTCHFIELD PERENNIPERINCE ACT TO TRAVEL ALL WALKWAYS AND PATHS SHALL BE CONSTRUCTED AT 1.5% THROU-OUT OF ALL RAMP AND SIDE SLOPES OF HANDICAP CURBS CUTS AND DEFINED BY SECTION 21.1 OF 321 CMR TO CONSTRUCTION 1% MAXIMUM. RAMP AS DEFINED IN SECTION 24.1 OF 321 CMR SHALL BE CONSTRUCTED TO MAXIMUM SLOPE OF 7%.
 - B. THE CONTRACTOR IS TO ASSUME THAT ALL GRADES IN PEDESTRIAN PATHS OF TRAVEL SHALL BE VERIFIED WITH A 2.0% MINIMUM SLOPE.
 - C. A 5.0% MINIMUM LEVEL (1.5% SLOPE) AREA SHALL BE PROVIDED AT ALL FLUSH ENTRANCES TO BUILDING PUCKING OF WATER (ENTRANCES WILL NOT BE ALLOWED).
16. THE ABOVE REQUIREMENTS SHALL SUPERSEDE THE GRADES SHOWN ON THE PLANS. IF THESE REQUIREMENTS CONTRADICT WITH THE GRADES SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR DIRECTION.
17. THE CONTRACTOR SHALL EFFECT A SMOOTH TRANSITION IN LANDSCAPED AREAS BETWEEN THE EXISTING GROUND AND THE PROPOSED GRADE.
18. NEW PAVEMENT SHALL BE LINTO EXISTING PAVEMENT WITH A SMOOTH TRANSITION. THE EXISTING PAVEMENT SHALL BE SAW CUT.
19. CONCRETE SIDEWALK SHALL BE NON-REINFORCED. CONCRETE SHALL BE "CLASS II" IN ACCORDANCE WITH SECTION 21.1 OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES. MAXIMUM - HIGHWAY STANDARD SPECIFICATIONS LATEST EDITION, WITH LHD OF 100.

Date	Description

Drawn By: ND
Checked By: DB
Approved By: GR

Drawing Scale as noted

Project Number:

Date May 6, 2020



1 OVERALL GROUND FLOOR PLAN
SCALE: 1/16" = 1'-0"

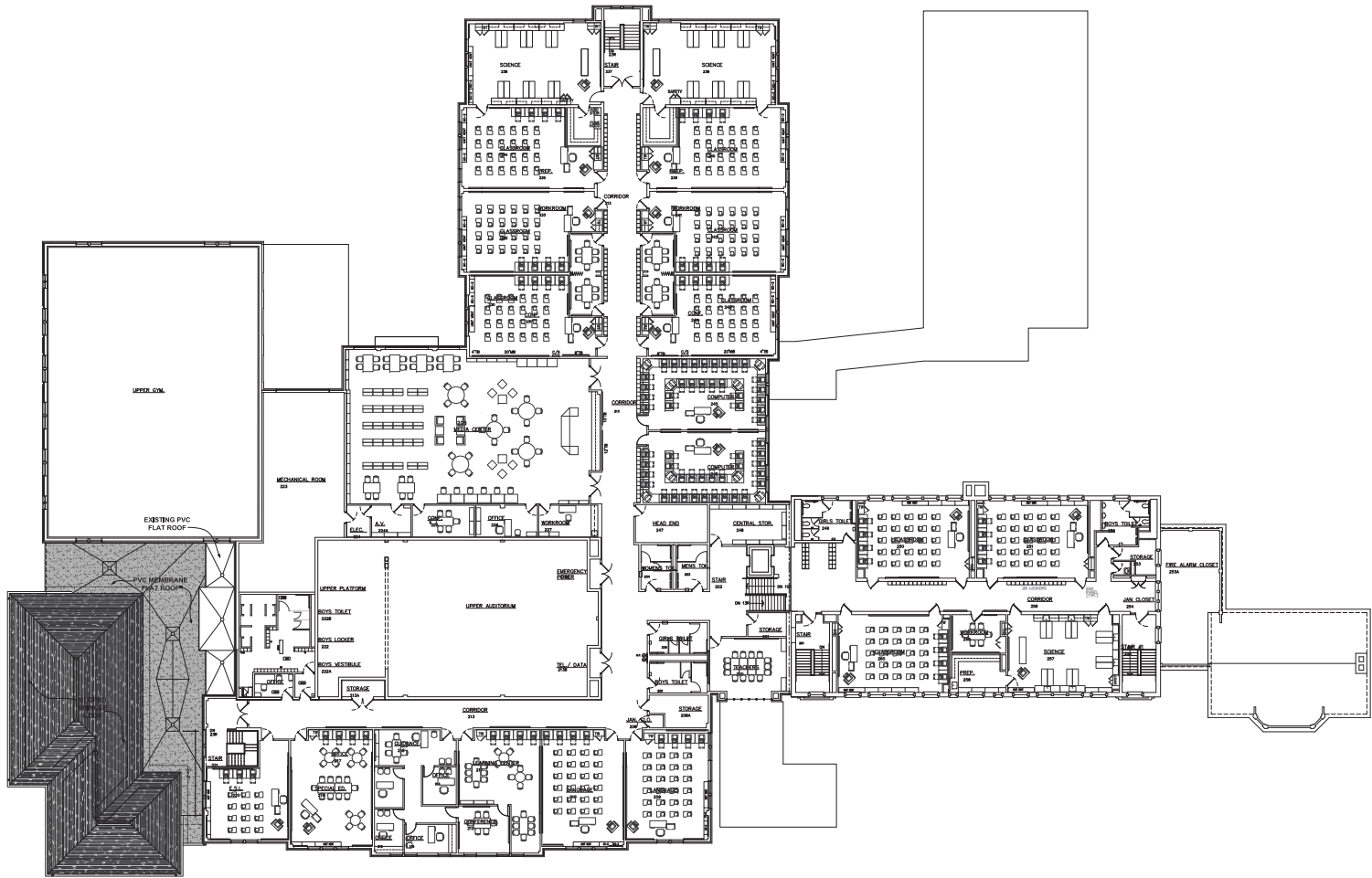
No.	Date	Description

Drawn By: ND
Checked By: DB
Approved By: GR

Drawing Scale: as noted

Project Number:

Date: April 17, 2020



1 OVERALL SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"

PROGRESS SET - NOT FOR PERMIT - NOT FOR CONSTRUCTION

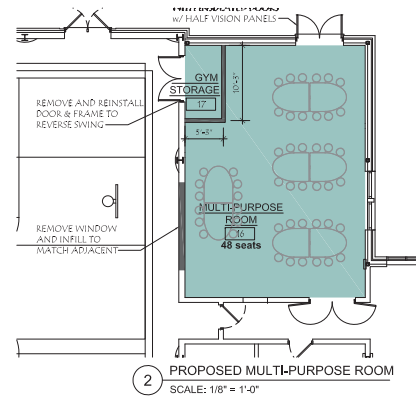
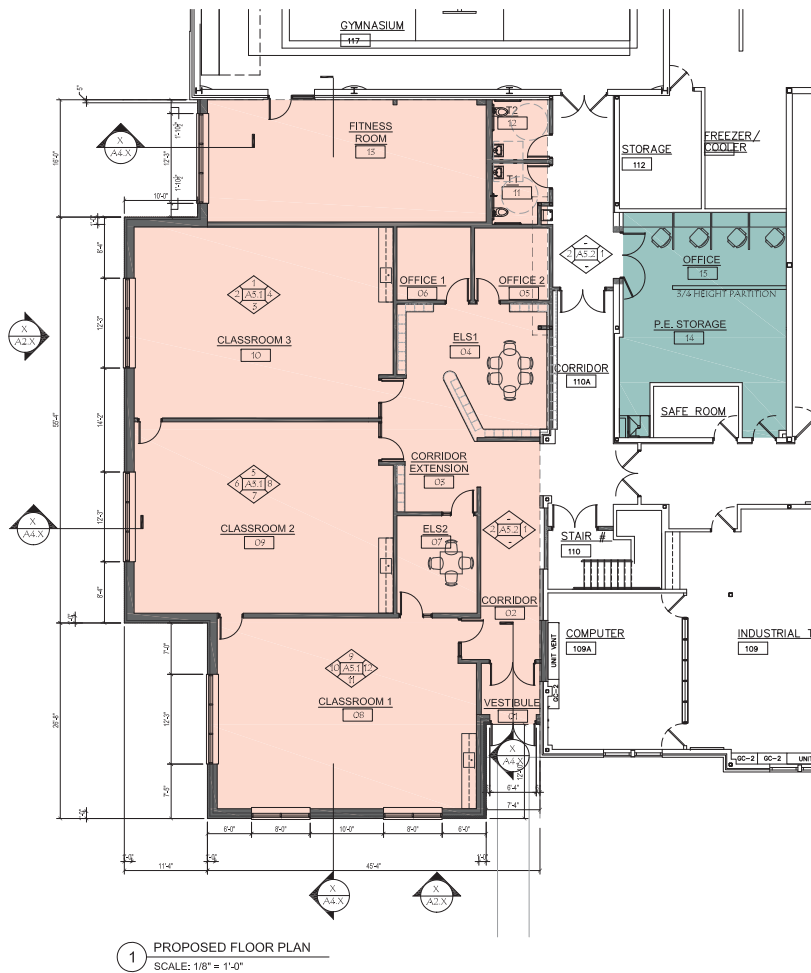
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Drawn By: ND
Checked By: DB
Approved By: GR

Drawing Scale: as noted

Project Number:

Date: May 6, 2020

[illegible]

Revisions:

No.	Date	Description

Drawn By: ND
Checked By: DB
Approved By: GR

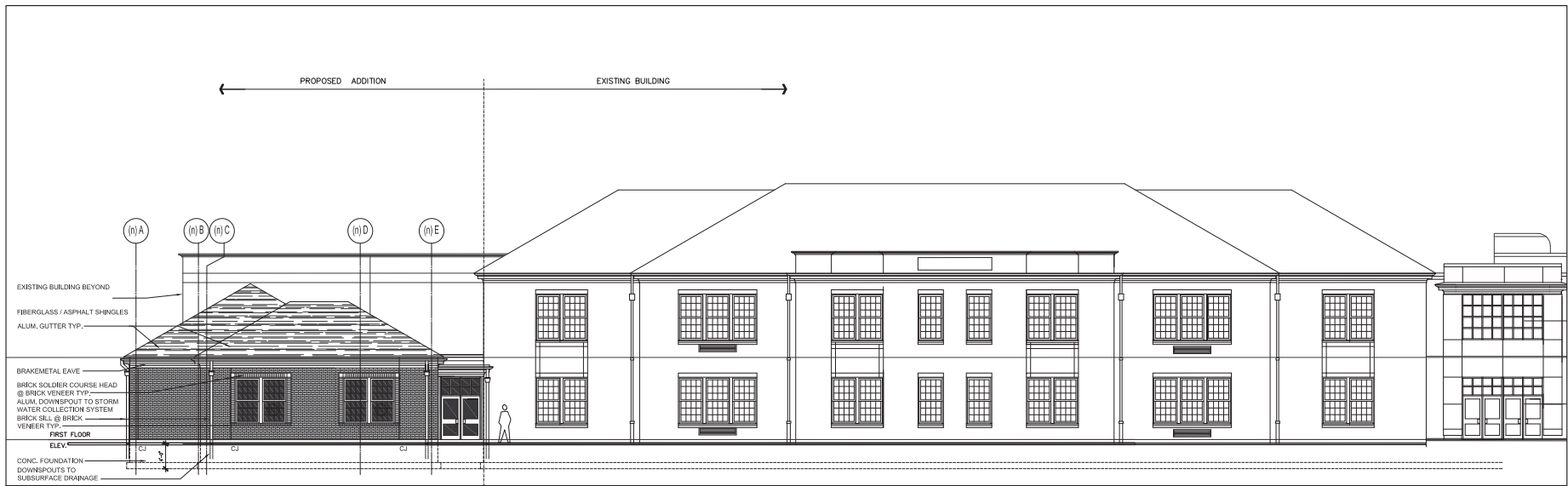
Drawing Scale: as noted

Project Number:

Date: April 17, 2020



2 WEST ELEVATION
SCALE: 1/8" = 1'-0"



1 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

Presentation to the
Newton Public Facilities Committee

Classroom Addition to the
OAK HILL
MIDDLE SCHOOL

Meeting Agenda

1. Site Information
 - Survey Plans
 - Logistics Plans
 - Civil Design Plans
2. Building Design Plans
 - Floor Plans
 - Interior and Exterior 3-D views
 - Exterior Envelop Construction
3. Estimates



PROJECT BENCHMARK SCHEDULE

1. Schematic Design

•Meetings, hearings, and activities

- ✓ -Working Group (12-12-2019, 1-9-2020, 1-23-2020, 2-6-2020, 2-13-2020, 3-5-2020)
- ✓ -DRC - Introduction Meeting (January 15, 2020)
- ✓ -Historic Commission
- ✓ -Preliminary Cost Estimate (by February 12, 2020)
- ✓ -DRC - Preliminary Meeting (February 12, 2020)
- ✓ -DRT - Preliminary (February 19, 2020)
- ✓ -Generate a survey plan March 6, 2020)
- ✓ -Perform borings (March 6, 2020)
- ✓ -Generate code review report (March 13, 2020)
- Cancelled -DRC - Site Plan Development (March 18, 2020)
- ✓ -Produce a soil analysis report (March 19, 2020)
- ✓ -Perform soil analysis for Storm Water Management (March 20, 2020)
- ✓ -Meet with City Engineer (March 24, 2020)
- Community Presentation (March 25, 2020) (Postponed, - to be a future webcast)
- ✓ -DRT - 90% Schematic Design - Site Plan (March 25, 2020)
- ✓ -DRC - Final Site Review (April 6, 2020)
- ✓ -DRT Submission - 100% Site Plan (April 17, 2020)
- ⇒ -Public Facilities Committee (May 6, 2020)
- Finance Committee (May 11, 2020)
- City Council (May 18, 2020)

2. Design Development/Construction Documents and Estimate— **complete by June 1, 2020**

3. Bidding & Award – **complete by July 15, 2020**

4. Construction (13 1/2 months) – **complete by August 15, 2021**



Bird's Eye View Looking North West



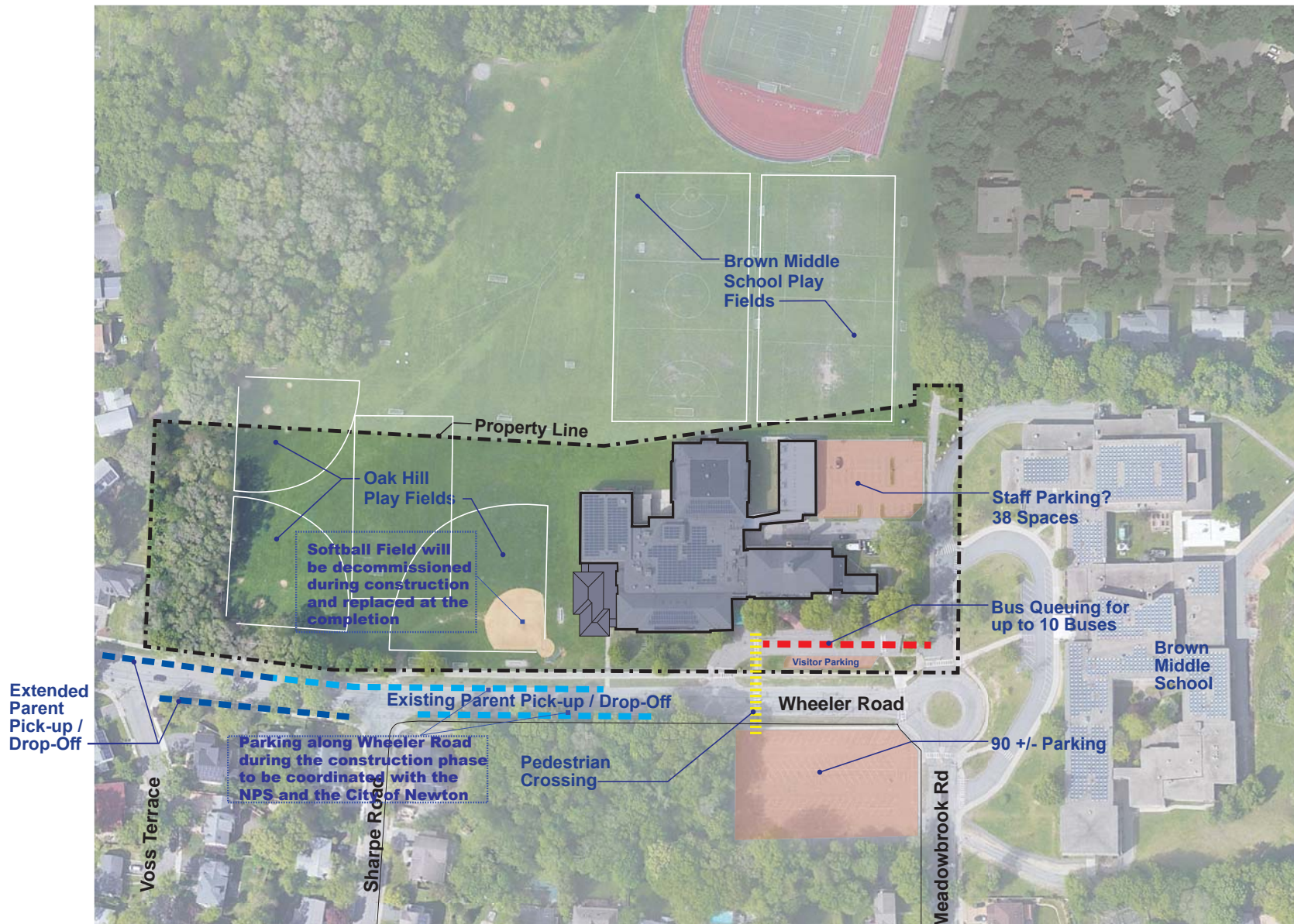
Bird's Eye View Looking East



Bird's Eye View Looking North East

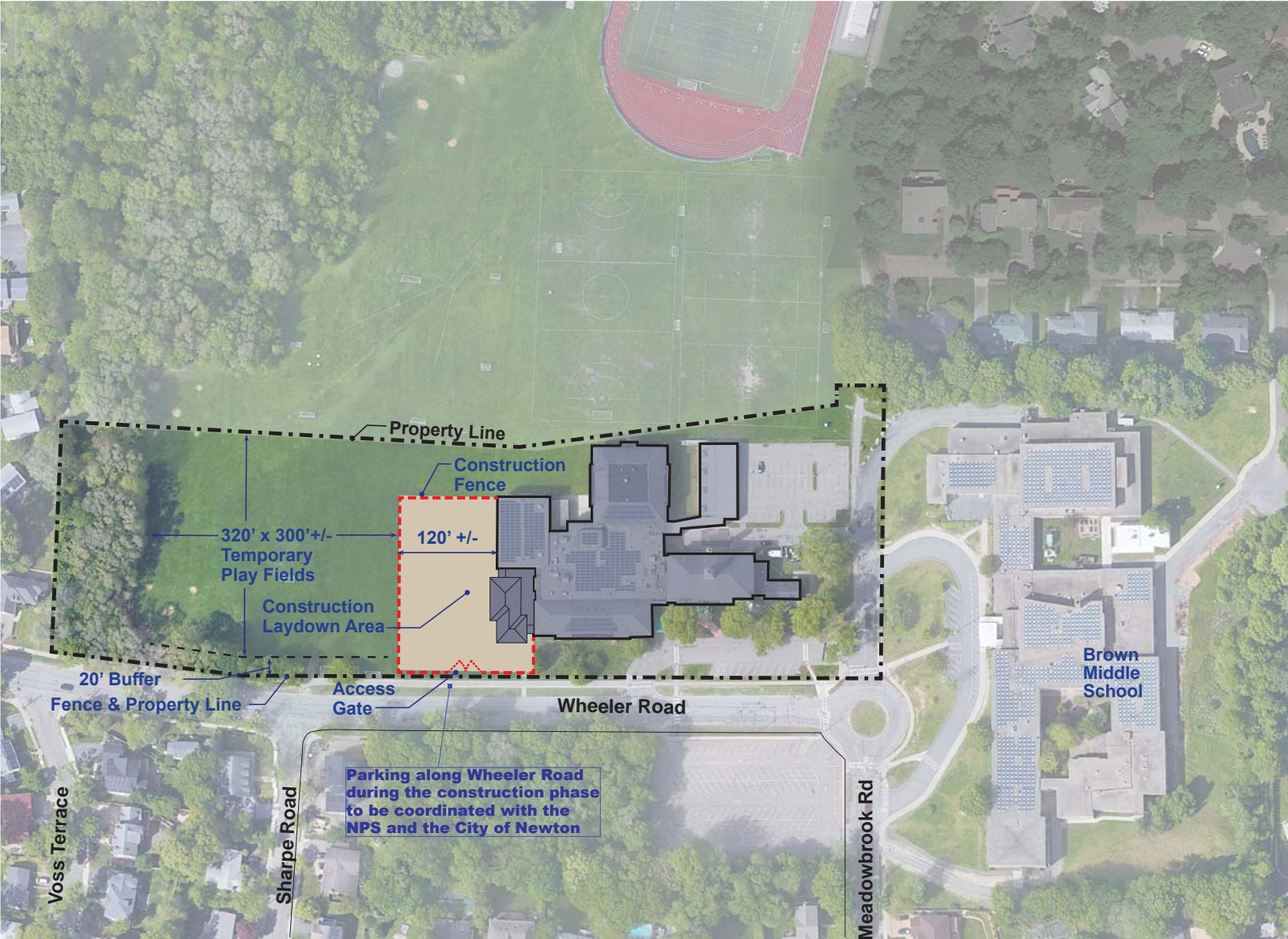
Revisions:		
No.	Date	Description
Drawn By: ND		
Checked By: GR		
Approved By: GR		
Drawing Scale: as noted		
Project Number:		
Date: May 6, 2020		

PROGRESS SET - NOT FOR PERMIT - NOT FOR CONSTRUCTION



Site Circulation

Revisions		
No.	Date	Description
Drawn By: ND		
Checked By: DR		
Approved By: GR		
Drawing Scale: as noted		
Project Number:		
Date: May 6, 2020		



Construction Plan

PROGRESS SET - NOT FOR PERMIT - NOT FOR CONSTRUCTION



LEGEND

- Fire Hydrant
- Electrical Pole
- ⬇ Light Pole
- G Generator
- W Water Line
- E Electrical Line
- S Sewer Line
- SPK Fire Sprinkler
- SD Storm Drain

RDA

Raymond Design
Associates, Inc.
Architects &
Planners
60 Ledgewood Place
Rochland MA, 02570

Oak Hill Middle School
Classroom Addition
130 Wheeler Road, Newton, Massachusetts 02459

Revisions

No.	Date	Description

Drawn By: ND
Checked By: DB
Approved By: GR

Drawing Scale: as noted

Project Number

Date: May 6, 2020

Utility & Stormwater Management Plan

PROGRESS SET - NOT FOR PERMIT - NOT FOR CONSTRUCTION



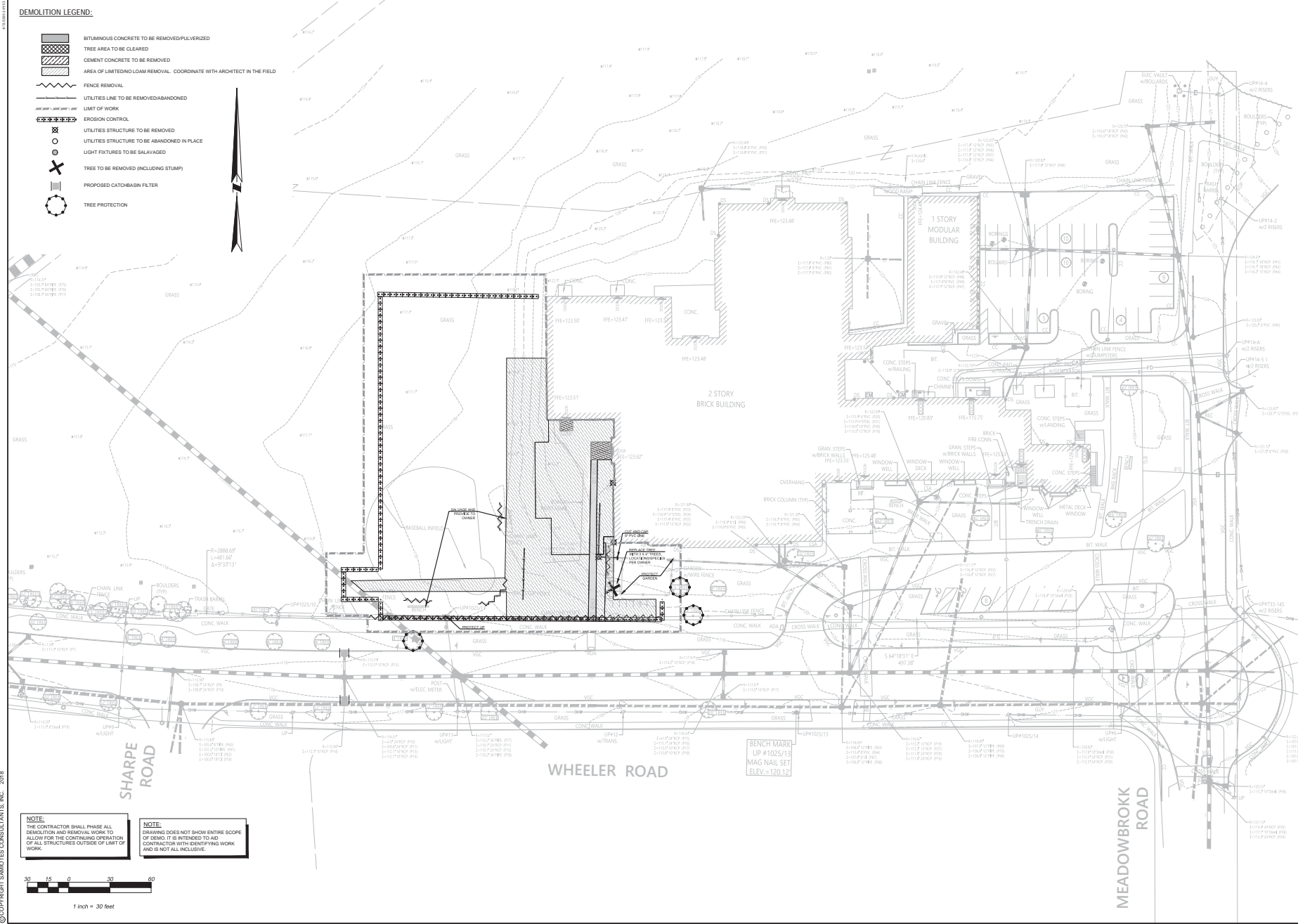
Stormwater Management Report

Synopsis

- The development will entail removal of existing site amenities such as pavement areas, fences, trees, utilities etc. to accommodate a new 5,000+/- sf. building additional along the south west section of the building. Additional site improvement will include a new ADA accessible ramp, rain garden - Best management practice (BMP), and minor drainage upgrades to accommodate same.
- The proposed Rain Garden is designed to meet the latest stormwater management regulation instituted by MassDEP. Some of the stormwater requirements that was addressed are as follows:
 - Water quality
 - Recharge
 - Draw down
 - Flow rate mitigation
- Existing site drainage infrastructure will be modified to accommodate new roof leader and ramp drain will be routed to the onsite rain garden facility.
- As per soil testing performed on March 19, 2020, estimate seasonal high ground water (ESHGW) from redoximorphic observation was depicted at 84" below finish grade. This elevation was approx. 113.00 which is 7 feet below existing grade at testing location. The facility was designed to maintain at least a 2 feet minimum groundwater separation to the bottom of the rain garden envelop set at el. 115.16 per MassDEP requirements.
- Onsite soil testing performed on March 19, 2020, test pit results depicted predominately fill and sandy loam horizons from approx. 16" to 120" below finish grade. Therefore, an infiltration rate of 0.17 in/hr was used for the design of the system which is consistent with onsite testing observation.
- Site drainage will discharge to the existing 84" open culvert located along the western portion of the site via a 36" culvert that crosses the site.
- The post-development rates of runoff are reduced when compared to the existing peak rates at the point of analysis. Site drainage improvement will not exhibit erosive characteristic at said discharge nor adversely affect the surrounding areas as per the design included in the stormwater report.
- The Operation and Maintenance procedure essentially provides guidance to the contractor/owner to ensure site construction activities does not negatively affect the surrounding environment from a drainage/earthwork standpoint. It also provides guidance on performing periodic maintenance of the proposed stormwater system.

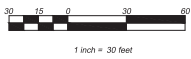
DEMOLITION LEGEND:

- BITUMINOUS CONCRETE TO BE REMOVED/PULVERIZED
- TREE AREA TO BE CLEARED
- CEMENT CONCRETE TO BE REMOVED
- AREA OF LIMITED LOAD REMOVAL. COORDINATE WITH ARCHITECT IN THE FIELD
- FENCE REMOVAL
- UTILITIES LINE TO BE REMOVED/ABANDONED
- LIMIT OF WORK
- EROSION CONTROL
- UTILITIES STRUCTURE TO BE REMOVED
- UTILITIES STRUCTURE TO BE ABANDONED IN PLACE
- LIGHT FIXTURES TO BE SALVAGED
- TREE TO BE REMOVED (INCLUDING STUMP)
- PROPOSED CATCH-BASIN FILTER
- TREE PROTECTION



NOTE:
THE CONTRACTOR SHALL PHASE ALL
DEMOLITION AND REMOVAL WORK TO
ALLOW FOR THE CONTINUING OPERATION
OF ALL STRUCTURES OUTSIDE OF LIMIT OF
WORK.

NOTE:
DRAWING DOES NOT SHOW ENTIRE SCOPE
OF DEMO. IT IS INTENDED TO AID
CONTRACTOR WITH IDENTIFYING WORK
AND IS NOT ALL INCLUSIVE.



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OAK HILL SCHOOL
130 WHEELER ROAD
NEWTON, MASSACHUSETTS

REVISION	

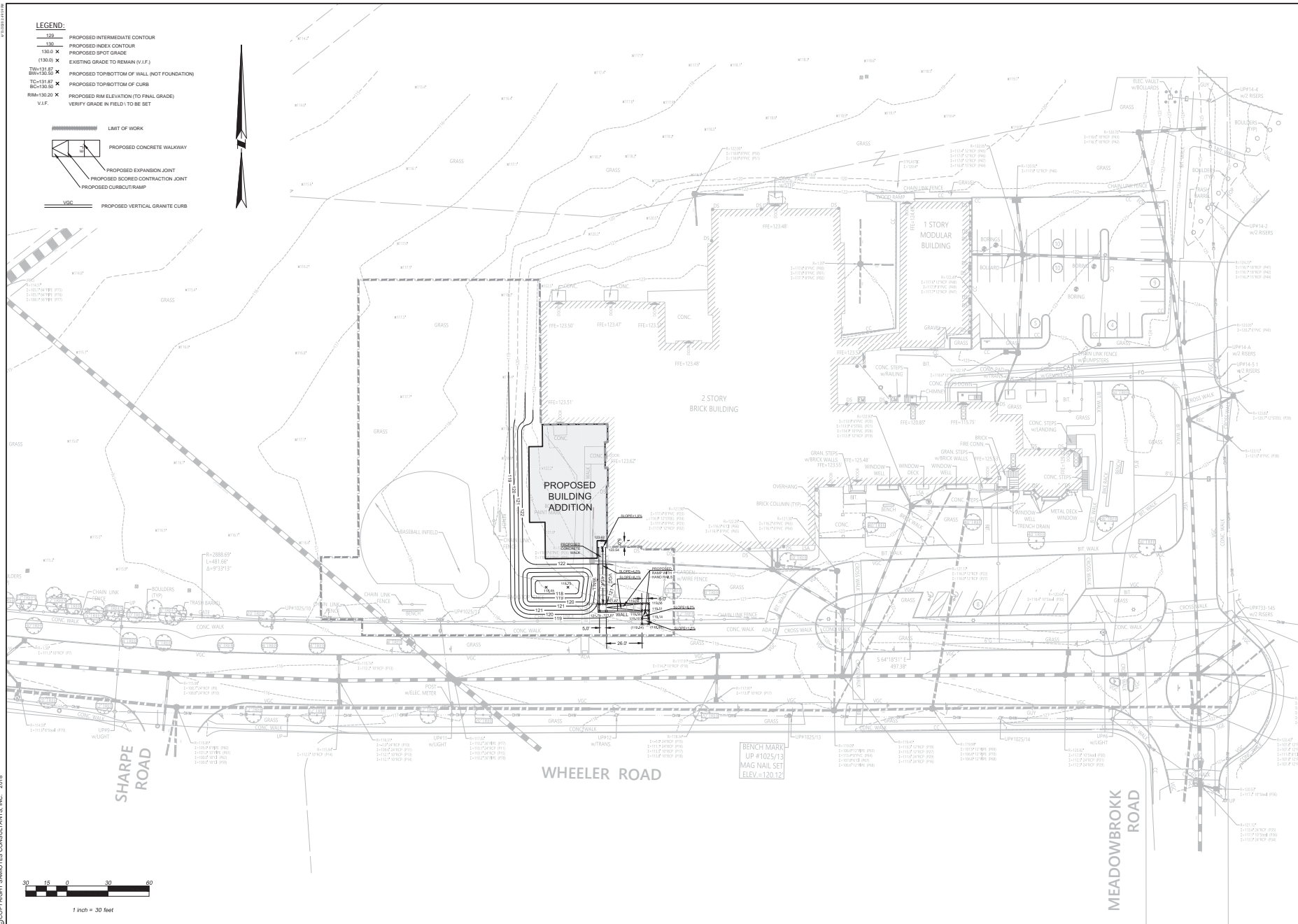
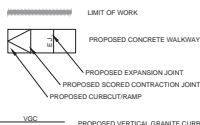
SITE
PREPARATION
AND EROSION
CONTROL PLAN

C-1.1

JOB # 1909-00
DATE 04.08.20
SCALE: 1"=30'
DRAWN BY: WGP
APPROVED BY: SBC
FILE: 19109.0001 OAK HILL SCHOOL.DWG

LEGEND:

- 129 PROPOSED INTERMEDIATE CONTOUR
 130 PROPOSED INDEX CONTOUR
 130.0 X PROPOSED SPOT GRADE
 (130.0) X EXISTING GRADE TO REMAIN (V.I.F.)
 TW=131.87 PROPOSED TOP OF WALL (NOT FOUNDATION)
 BW=130.50 PROPOSED BOTTOM OF CURB
 TC=131.87 PROPOSED TOP OF CURB
 BC=130.50 PROPOSED FIN ELEVATION (TO FINAL GRADE)
 RM=130.50 PROPOSED FIN ELEVATION (TO FINAL GRADE)
 V.I.F. VERIFY GRADE IN FIELD TO BE SET



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 www.saniotes.com

OAK HILL SCHOOL
 130 WHEELER ROAD
 NEWTON, MASSACHUSETTS

REVISION

SITE
 LAYOUT PLAN

JOB # 19109-00
 DATE 04.08.20
 SCALE 1"=30'

DRAWN BY: WAP
 APPROVED BY: SBC

C-1.2

FILE: 19109-0001 OAK HILL SCHOOL.DWG

LEGEND:

- D — PROPOSED STORM DRAINAGE LINE
- RD — PROPOSED ROOF DRAIN LINE
- — PROPOSED AREA DRAIN
- OS PROPOSED PROPOSED ROOF LEADER
- OS PROPOSED CLEARDOUT



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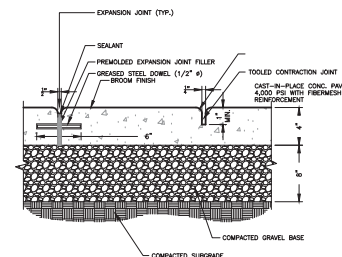
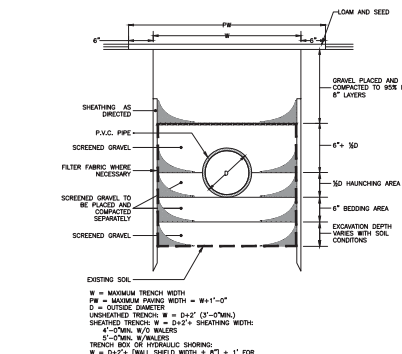
OAK HILL SCHOOL
130 WHEELER ROAD
NEWTON, MASSACHUSETTS

REVISION	

UTILITY PLAN

C-1.3

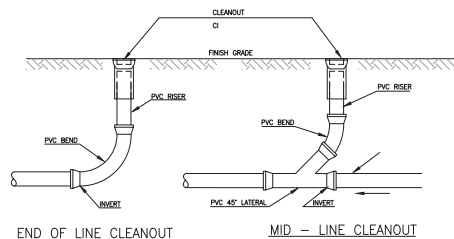
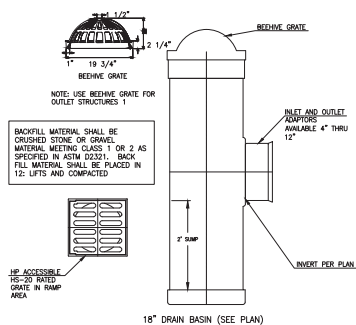
JOB # 1909-00
DATE: 04.06.20
SCALE: 1"=50'
DRAWN BY: WAP
APPROVED BY: SBC
FILE: 19109.0001 OAK HILL SCHOOL.DWG



3 STABILIZED CONSTRUCTION ENTRANCE

4 TRENCH DETAILS FOR PVC PIPE

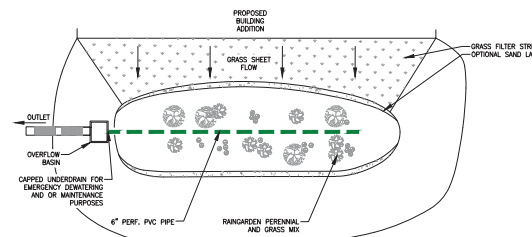
5 BROOM FINISH CONCRETE WALKWAY



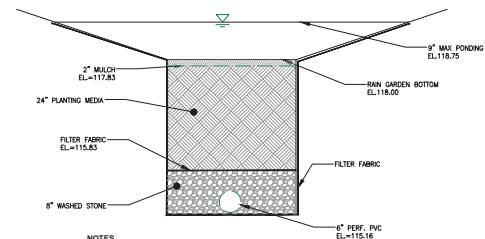
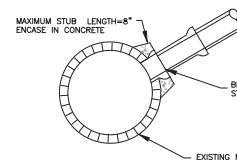
6 AREA DRAIN - OUTLET STRUCTURE
NTS

7 CLEANOUT
NTS

8 BIORETENTION/ RAIN GARDEN - PLAN

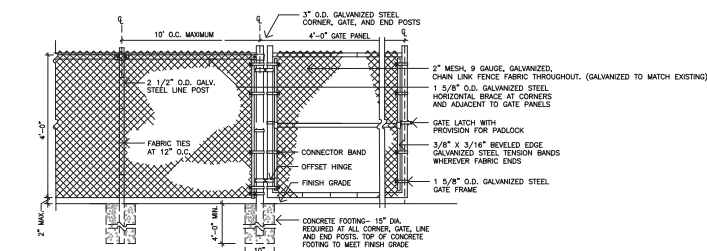


9 CONNECTION TO LARGE STORM DRAINAGE MAIN NTS



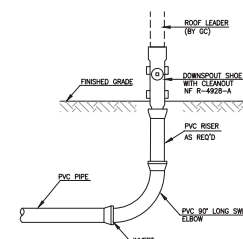
- NOTES**
1. PLANTING MEDIA SHALL NOT BE EXPOSED TO SEGMENT LAGEN WATER DURING CONSTRUCTION. UPSTREAM RUNOFF SHOULD BE STABILIZED (E.G. HAY BALE OR OTHER BARRIERS) PRIOR TO BEGINNING ANY WORK. IF POSSIBLE INSTALLATION OF THE FILTER MEDIA SHOULD NOT OCCUR UNTIL THE MAJORITY OF UPRIVER AREAS ARE STABILIZED.
2. THE PLANTING MEDIA SHALL BE INSPECTED AFTER EACH WORK STOP IN THE FIRST FIVE MONTHS TO ENSURE PROPER FUNCTION.
3. THE TOP SEVERAL INCHES OF THE FILTER SHALL BE REPLACED WITH FRESH MATERIAL WHEN WATER PONDING ON THE SURFACE FOR MORE THAN 72 HOURS. THE REMOVED SEGMENTS SHOULD BE DISPOSSED OF IN AN ACCEPTABLE MANNER.
4. COMPLETION OF THE SLOPE BERM AND UNDISTURBED EARTH SHALL BE AVOIDED. IF COMPLETION OCCURS, ROTOTILL PRIOR TO SEEDING OR SOILING.
5. IF RELEVANT, PLACE CORRAL BORROW MATERIAL IN 15' LATHS COMPACTED TO 90% OF MAXIMUM DRY DENSITY.
6. MULCH AN IMPORTANT COMPONENT OF THE FILTER SYSTEM. PLACE OVER THE PLANTING MEDIA AND AREAS. SHREDDED, DARK BROWN, HANDSOME. MULCH SHOULD BE 2" DEEP AND COVER ALL EXPOSED AREAS.
7. ADD 20% BY VOLUME TO THE PLANTING MEDIUMS, FILTER, WALLS, AND BEDS. ORGANIC, NUTRIENT, GRADE LEAF COMPOST.

10 BIORETENTION/ RAIN GARDEN - SECTION

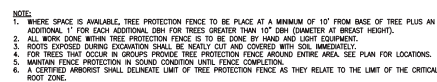
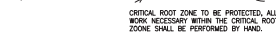
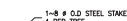


- NOTES:
1. ALL MATERIALS SHALL BE GALVANIZED STEEL UNLESS OTHERWISE NOTED.
 2. POST SPACING SHALL BE EQUIDISTANT. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED MAINTENANCE OF FENCE DURING CONSTRUCTION.

11 4'-0" CHAIN LINK FENCE AND GATE
SCM F: N.T.S.



13 ROOF LEADER



GENERAL

- ALL SURVEY INFORMATION OF EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO PROPERTY LINES, FENCES, PAVEMENT, OVERHEAD WIRES ETC., ARE BASED ON THE DATA SURVEY BY VME, INC. AS DEPICTED EXISTING SITE PLAN. ALL SUCH INFORMATION IS APPROXIMATE AND THE CONTRACTOR IS RESPONSIBLE TO THE SURVEYOR TO FIELD VERIFY SUCH INFORMATION PRIOR TO CONSTRUCTION. CONSTRUCTION DELAYS AND/OR OTHER DAMAGES RESULTING FROM DISCREPANCIES BETWEEN INFORMATION PROVIDED AND ACTUAL EXISTING CONDITIONS WILL BE AT NO ADDITIONAL COST TO THE OWNER.
- AS OF JANUARY 1, 2009, ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 278B, SECTION 27C WHICH PROVIDES FOR PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNWATTEHED TRENCHES. TRENCH EXCAVATION PERMIT REQUIRED. THIS APPLIES TO ALL TRENCHES ON PUBLIC AND PRIVATE PROPERTY.
- PRIOR TO OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN BY THE GENERAL CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND IN HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES, ANY EASEMENTS AND FINAL GRADING.
- THE CONTRACTOR SHALL HAVE TO APPLY FOR A STREET OPENING & UTILITIES CONNECTION PERMITS AS WELL AS A SIDEWALK CROSSING PERMIT WITH THE NEWTON DPW.
- THE CONTRACTOR SHALL NOTIFY AND COORDINATE ALL WORK WITH THE RESPECTIVE UTILITY COMPANIES 48 HOURS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL REGISTER WITH "DO SAFE" AT 888J-DO-SAFE. 72 HOURS BEFORE CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN NECESSARY REGISTRATION AND "DO-SAFE" MARKINGS.
- ALL WASTE MATERIAL SHALL BE DISPOSSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, CITY AND MUNICIPAL REGULATIONS.
- ALL WORK SHALL COMPLY WITH FEDERAL, STATE AND MUNICIPAL REGULATIONS AND STANDARDS.
- THE CONTRACTOR SHALL HAVE THE PROPER LICENSES AS REQUIRED BY THE STATE AND ANY OTHER GOVERNING AGENCIES.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUILDINGS AT NO ADDITIONAL COST TO THE OWNER.
- ALL SUCH INFORMATION SHALL MAINTAIN APPROPRIATE DIRECTION SIGNS WHEN WORK WILL IMPIDE TRAFFIC FLOW.
- ALL UTILITY RIMS SHALL BE ADJUSTED TO MEET FINAL GRADE AND SHALL CONFORM WITH THE SPECIFICATIONS OF THE RESPECTIVE UTILITY COMPANY.
- FILL SHALL BE PLACED IN NO GREATER THAN 4" LIFTS AND COMPACTED TO AT LEAST 65% MAXIMUM COMPACTION.
- ELEMENT CONTRACT SHALL CONFORM TO ASTM SPECIFICATION B-36, ASTM A-618 AND D 1567.
- ADA AND WALKWAY COMPLIANCE
 - A SPECIAL ATTENTION IS TO BE GIVEN TO COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE CRATCHFELD PERENNIAL NEEDS TO TRAVEL ALL WALKWAYS AND PATHS SHALL BE CONSTRUCTED AT 1.5% THROUSL OF ALL RAMPS AND BOE SLOPES OF HANDICAP CURBS OUT AS DEFINED BY SECTION 21.1 OF 521 CMR TO CONSTRUCTION. 1% MAXIMUM. RAMPS AS DEFINED IN SECTION 24.1 OF 521 CMR SHALL BE CONSTRUCTED TO MAXIMUM SLOPE OF 7%.
 - THE CONTRACTOR IS TO ASSUME THAT ALL GRADES IN PEDESTRIAN PATHS OF TRAVEL SHALL BE VERIFIED WITH A 2.0% MINIMUM SLOPE.
 - A 5.0% MINIMUM LEVELLE (1.5% SLOPE) AREA SHALL BE PROVIDED AT ALL FLUSH ENTRANCES TO BUILDING PUCKING UP WATER (THE ENTRANCES WILL NOT BE ALLOWED).
- THE ABOVE REQUIREMENTS SHALL SUPERSEDE THE GRADES SHOWN ON THE PLANS. IF THESE REQUIREMENTS CONTRADICT THEM WITH THE GRADES SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR DIRECTION.
- THE CONTRACTOR SHALL EFFECT A SMOOTH TRANSITION IN LANDSCAPED AREAS BETWEEN THE EXISTING GROUND AND THE PROPOSED GRADE.
- NEW PAVEMENT SHALL BE INTO EXISTING PAVEMENT WITH A SMOOTH TRANSITION. THE EXISTING PAVEMENT SHALL BE SAW CUT.
- CONCRETE SIDEWALK SHALL BE NON-CURED. NON-CURED CONCRETE SHALL BE "CLASS II" IN ACCORDANCE WITH SECTION 21.1 OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION - HIGHWAY DESIGN STANDARD SPECIFICATIONS FOR BRIDGES AND BRIDGES MAINTENANCE - HIGHWAY STANDARD SPECIFICATIONS LATEST EDITION, WITH LHD OF LESS THAN .0005 INCHES PER FOOT.



Geotech Report Summary

- On March 6, 2020, four soil test borings were drilled to depths of approximately 12 to 19 feet below the existing ground surface within the proposed addition footprint. The borings were advanced by flush joint casing using a Geoprobe 6610DT drill rig equipped with an automatic hammer.
- The subsurface conditions encountered consist of very loose to very dense, undocumented fill material (~5 to 9 feet) underlain by stiff to hard silt and medium dense to very dense glacial till soils to the depths explored.
- The depth at which groundwater was observed within the borings during drilling operations was approximately 10 to 12 feet below surface grade. Therefore, excavations are not expected to encounter groundwater.
- Foundations and grade-supported concrete floor slabs supported on undocumented fill carry with it less confidence and, therefore, more risk.
- In order to completely eliminate the risk of excessive settlement of the new foundations, the existing fill would have to be completely removed and replaced, or ground improvement would be required, such as aggregate piers.
- Because the addition is immediately adjacent to the existing structure on two sides, complete removal of existing fill would require extensive underpinning of existing foundations.
- PSI has proposed a risk mitigation program that, while not eliminating the risk, substantially lessens the risk and is more economical. Provided the risk is accepted by the Owner, a partial over-excavation and replacement program may be considered.
 - At a minimum, within the building addition plus a minimum of 5 feet from the south and west edges, we recommend existing Fill be over-excavated to a depth of at least 2 feet below existing surface grades. Exposed subgrades should be proof-rolled, and placement/compaction of new fill should be in lifts compacted to at least 95 percent of the maximum dry density determined in accordance with ASTM D1557 at plus/minus 2% of the optimum moisture content. All of these activities should be observed on a full-time basis by the geotechnical engineer.
 - The depths of removal and replacement for foundations will need to be determined at the time of excavation and will need to account for the proximity to existing footings. Those bearing materials that are observed to contain debris or organics, or are determined to exhibit loose conditions should be removed and replaced.
 - In areas of the new addition that are away from the existing building edges, the foundations can be over-excavated to bottom of fill to reduce risk of settlement without having to be concerned with underpinning.
- Accounting for existing surficial topsoil removal, new floor slab concrete and new granular base materials, we estimate that as much as approximately 5½ feet of new fill may be required to attain the finished soil subgrade elevation. Fill material placed below footings should be Structural Fill material, while Granular Fill can be used above footing grade.
- The concrete slabs may be designed as grade-supported slabs provided the slab subgrade is proof-rolled to verify that the soil is firm prior to constructing the slab base course layer.



Building Code Review

The code report identifies the applicable code sections of 780 CMR (building) and 521 CMR (accessibility). More specifically, the report identifies the applicable criteria for the project code compliance relative to:

- Use/Occupancy Classification
- Construction Type
- Interior Finish
- Fire Protection Systems
- Egress
- Accessibility

Notable items are as follows:

1. Construction Classification - The existing building and the addition have to be within specific "limits" for height and area based on the construction type. In order for the addition to be constructed without a structurally independent fire wall the construction type limits of the existing building must be satisfied. A fire wall can be very expensive, extremely distributive to the "flow" of the building use and architecturally undesirable. So it is desirable to build an addition without a fire wall if possible.

- The analysis concludes the addition may be constructed with Type IIB materials, without the need for a fire wall, and the overall building is compliant with the height and area limits.
- The key to this outcome, is the consideration that the modular element (Northeast plan) is a separate building from the remainder of the existing building. This is accomplished because of the pedestrian walkway connected between the buildings.

2. Fire Protection Systems - Because the addition is "new construction" under the code, it is required to be provided with all the fire protection features of a new building including sprinklers, voice fire alarm and emergency responder radio coverage. If the existing building does not have a voice fire alarm system and or emergency responder radio coverage, upgrades within the existing building may be necessary.

3. Egress - The existing egress system is more than adequate in terms of number of exits and capacity even with the occupants of the addition. The design is compliant.

4. Toilet & Lavatory Fixture Counts - The existing fixtures, along with the 2 new single user gender neutral bathrooms is sufficient to accommodate the total number of students and staff. The new bathrooms also resolve a potential existing nonconforming condition relative to cafeteria staff.



FIRST FLOOR PLAN

SCALE: 1/32" = 1'-0"
0' 8' 16' 32'



Raymond Design
Associates, Inc.
Architects & Planners
60 Ledgewood Place
Rockland, MA 02370

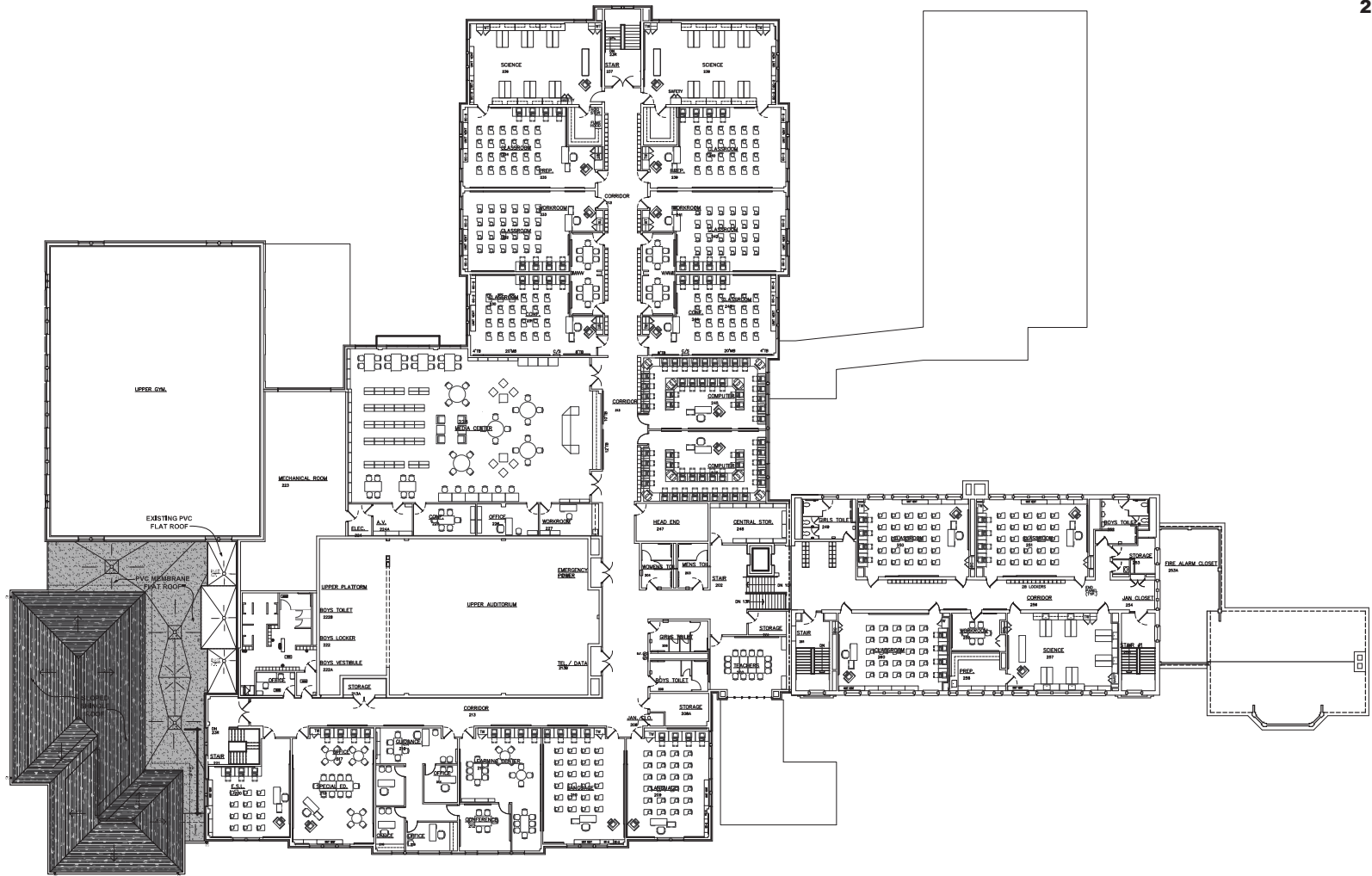


PROPOSED FLOOR PLAN

OAK HILL MIDDLE SCHOOL
PROPOSED ADDITION

May 6, 2020

PREFERRED
OPTION



ROOF / SECOND FLOOR PLAN

SCALE: 1/32" = 1'-0"
0' 8' 16' 32'



PROPOSED FLOOR PLAN

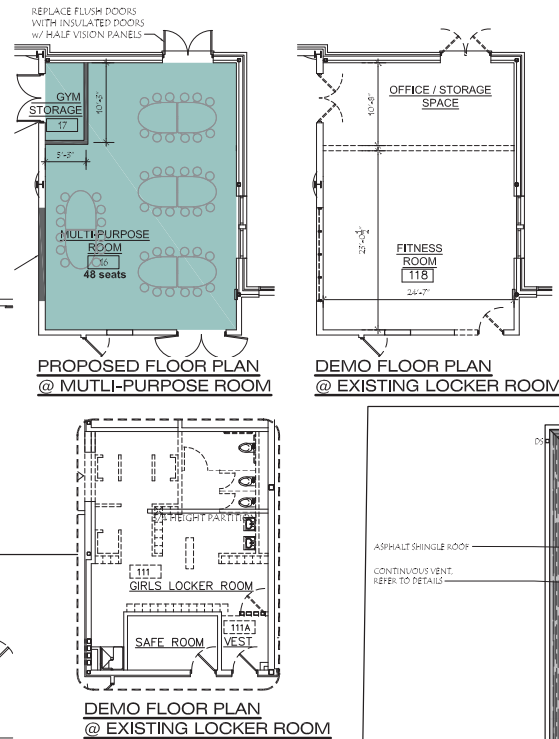
OAK HILL MIDDLE SCHOOL
PROPOSED ADDITION

May 6, 2020

PREFERRED
OPTION

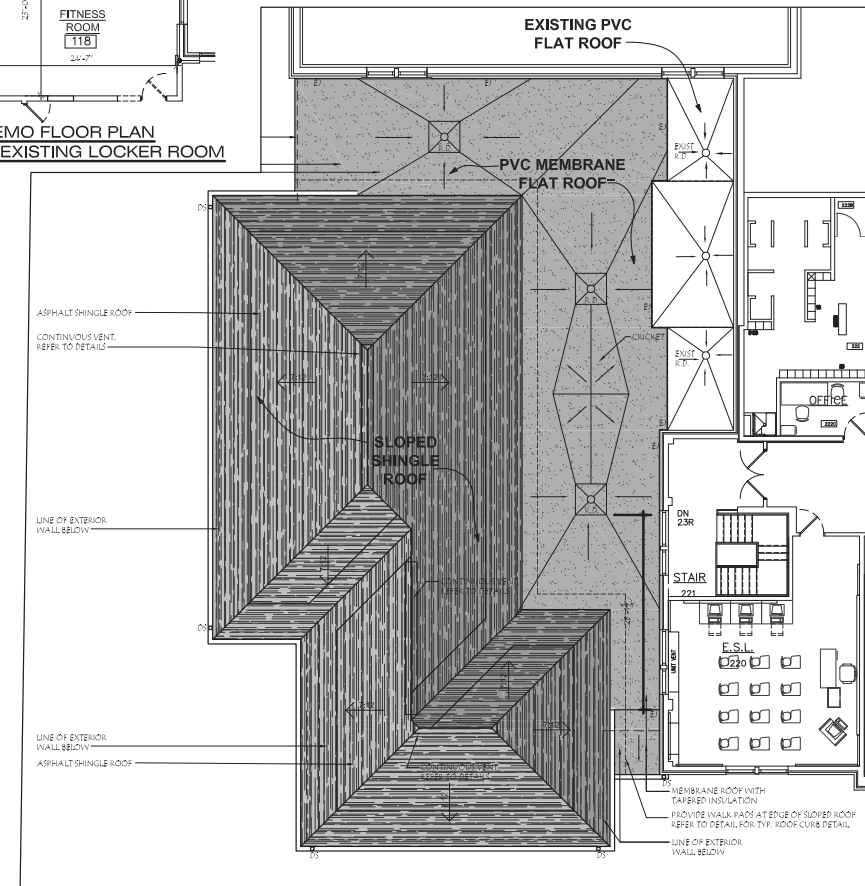


ONE STORY- 3 CLASSROOMS
(5,004 S.F.)



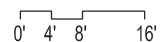
DEMO FLOOR PLAN
@ EXISTING LOCKER ROOM

DEMO FLOOR PLAN
@ EXISTING LOCKER ROOM



OAK HILL MIDDLE SCHOOL PROPOSED ADDITION

SCALE: 1/16" = 1'-0"



**PREFERRED
OPTION**



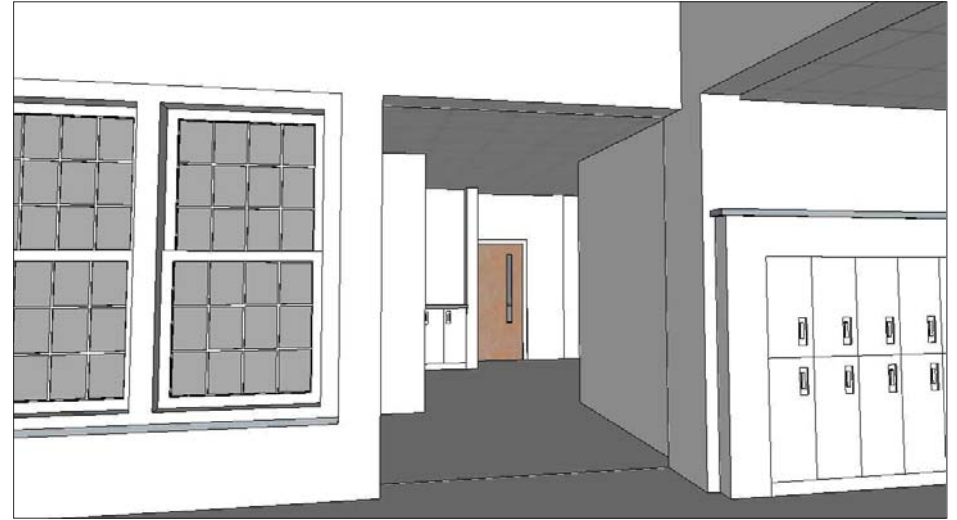
INTERIOR VIEWS

OAK HILL MIDDLE SCHOOL PROPOSED ADDITION

May 6, 2020



VIEW OF EXTENDED LEARNING SPACES



VIEW FROM EXISTING BUILDING



BUILDING SECTION

INTERIOR VIEWS

OAK HILL MIDDLE SCHOOL
PROPOSED ADDITION

May 6, 2020



STREET VIEW LOOKING NORTHEAST



STREET VIEW LOOKING EAST

PERSPECTIVE VIEWS

OAK HILL MIDDLE SCHOOL
PROPOSED ADDITION

May 6, 2020

Energy Model Report

Mechanical Lifecycle Engineering Economic Analysis

GOAL - Assess the performance of various mechanical systems in comparison to a baseline mechanical system.

- Each option is compared to the baseline system to determine the lowest combined savings over a 30-year cycle to determine the most advantageous system considering electrical costs, gas costs, maintenance costs, and initial construction costs.
- An air-source heat pump unit system was selected as the baseline system as it is an International Energy Conservation Code (IECC) 2018 baseline system for an all-electric building that generally results in a low installed cost system. The selection may result in overall ownership costs that in some cases could be higher when compared to the alternative systems primarily relating to the increased annual operating costs for the building. The option comparison of each alternative system to the baseline assesses the benefits of improved systems with potentially reduced combined operating costs and improved thermal comfort with the goal of selecting the system with the highest ownership savings over the 30-year study period.

MECHANICAL SYSTEM OPTIONS STUDIED

- **Baseline System** – Air-Source Heat Pump Rooftop Units
- **Option One** – Electric Resistance Heating/DX Cooling Fan-Powered Variable Air Volume (VAV) Rooftop Unit System
- **Option Two** – Air-Source Variable Refrigerant Flow (VRF) Heat Pump System (Design System)
- **Option Three** – Hot Water Heating/DX Cooling Variable Air Volume (VAV) Air Handling Unit System (connecting to existing HW plant)

MECHANICAL SYSTEM ANALYSIS CONCLUSION

- Annual electrical consumption is calculated thru the results of a thermal dynamic heat transfer analysis utilizing Department of Energy (DOE-2)/eQuest software with all architectural data provided by Raymond Design Associates.
- The building envelope consists of the following insulation values: The roof has R-32.9 continuous insulation, the walls have R-20.68 continuous insulation, and the windows have a U-Value of 0.45 and 0.40 SHGC.
- Our observations of the Mechanical System Payback Summary suggest that **Option 2, air-source variable refrigerant flow (VRF) heat pump units, represents the most cost effective system** by yielding an approximate \$184,565 savings over the 30 year study period with an instant payback as it has the lowest installed and operating utility costs of all systems studied including the baseline system.

INTERNATIONAL ENERGY CONSERVATION CODE (IECC) 2018 ENERGY SAVINGS SUMMARY

- To predict the anticipated energy cost savings percentage the project achieves beyond code, an updated energy model simulation has been performed comparing the design building to a baseline IECC 2018 building. A comparison of the Design Building against the IECC 2018 Baseline Building results in **a projected energy cost savings of 31.5%.**

Revisions:

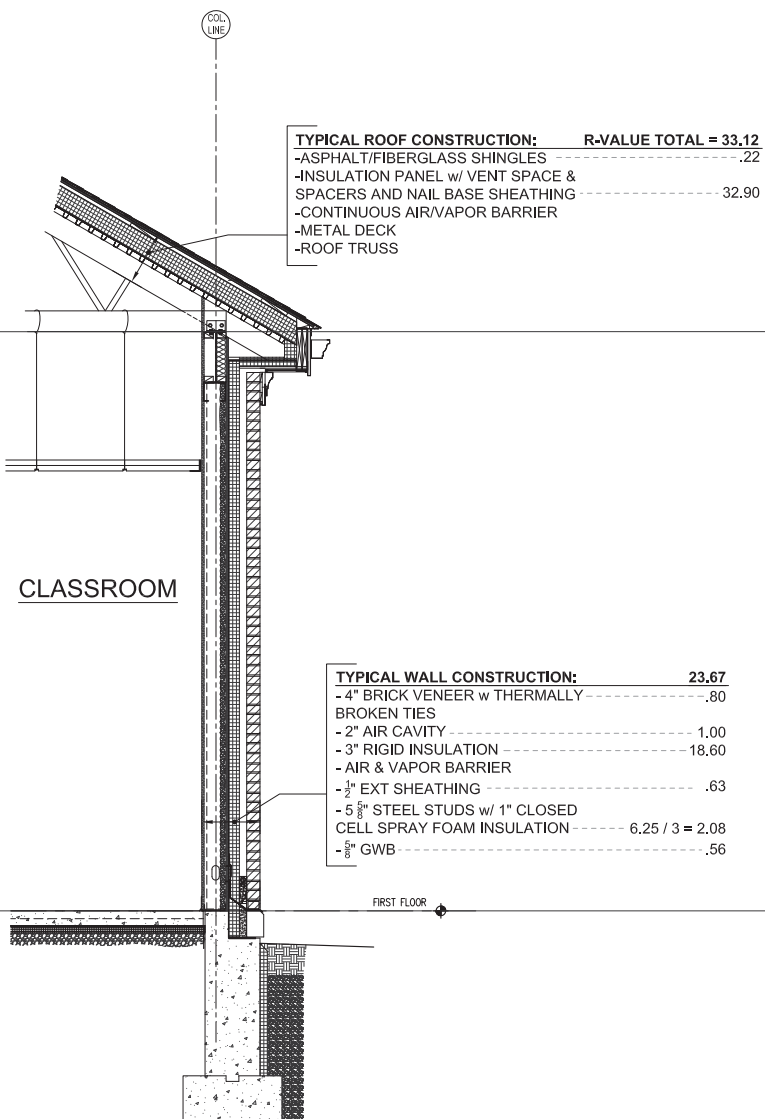
No.	Date	Description

Drawn By: ND
Checked By: DB
Approved By: GR

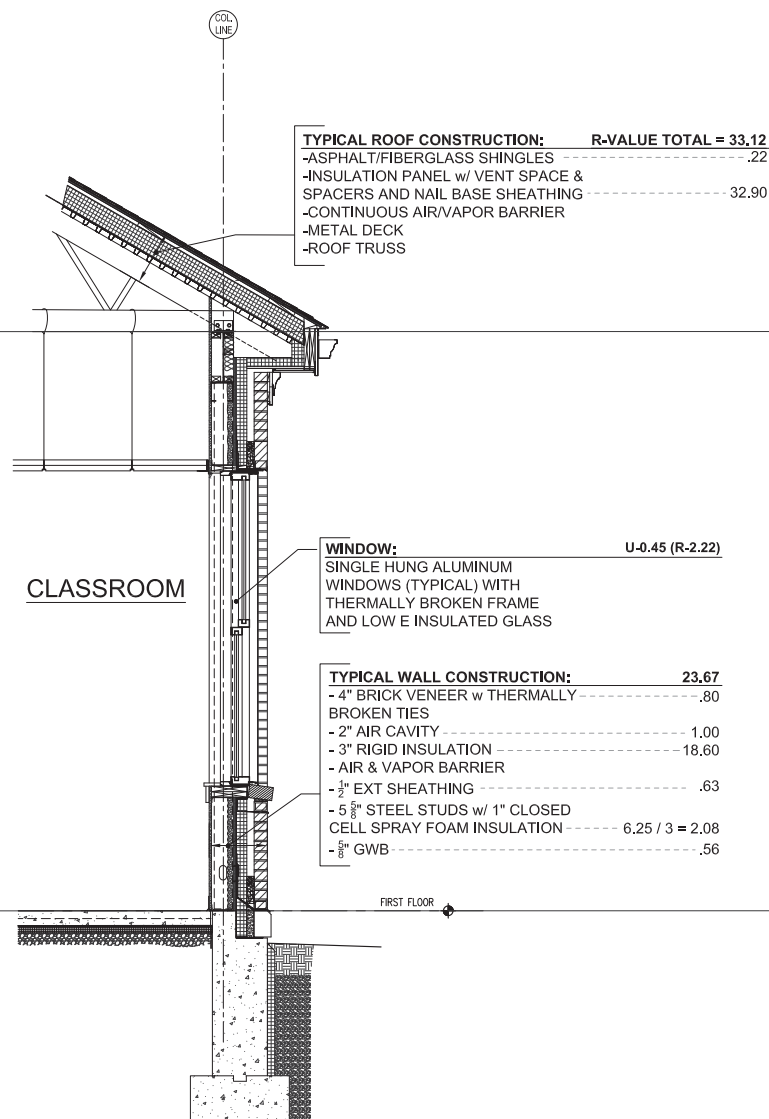
Drawing Scale: as noted

Project Number:

Date: May 6, 2020



2 TYPICAL WALL SECTION
SCALE: 3/4" = 1'-0"



1 TYPICAL WALL SECTION
SCALE: 3/4" = 1'-0"



Oak Hill Middle School
Addition/Renovation
Newton, MA

12-Mar-20

Schematic Design Estimate

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
RENOVATION + ADDITION				
	Jun-20			
RENOVATIONS TO EXISTING SCHOOL		1,700	\$113.68	\$193,256
ADDITIONS		5,100	\$336.25	\$1,714,895
REMOVE HAZARDOUS MATERIALS				NIC
SITEWORK				\$68,212
SUB-TOTAL		6,800	\$290.64	\$1,976,363
DESIGN AND PRICING CONTINGENCY	10.0%			\$197,636
ESCALATION (3% p.a.)	1.3%			\$25,693
PHASING & LOGISTICS				\$39,527
SUB-TOTAL		6,800	\$329.30	\$2,239,219
GENERAL CONDITIONS	10	MTHS	\$40,000	\$400,000
GENERAL REQUIREMENTS				assumed above
BONDS	1.00%			\$22,392
INSURANCE	1.25%			\$33,270
PERMIT				Waived
FEE	5.00%			\$134,744
TOTAL OF ALL CONSTRUCTION		6,800	\$416.12	\$2,829,625

ADDITION VS RENOVATION COST BREAKDOWN

		Addition/Renovation Estimate	Interior Renovations to Existing School	3 Classroom Addition and Sitework
		\$ 1,976,363	\$ 193,256	\$ 1,783,107
Design and Pricing Contingency	10%	\$ 197,636	\$ 19,326	\$ 178,311
Escalation (3% p.a.)	1.30%	\$ 25,693	\$ 2,512	\$ 23,180
Phasing and Logistics	1.90%	\$ 39,527	\$ 5,648	\$ 33,879
Sub-Total		\$ 2,239,219	\$ 220,742	\$ 2,018,477
General Conditions		\$ 400,000	\$ 40,000	\$ 360,000
Bonds	1.00%	\$ 22,392	\$ 2,207	\$ 20,185
Insurance	1.25%	\$ 33,270	\$ 3,287	\$ 29,983
Fee	5%	\$ 134,744	\$ 13,312	\$ 121,432
Sub-Total		\$ 590,406	\$ 58,806	\$ 531,600
Construction Totals		\$ 2,829,625	\$ 279,548	\$ 2,550,077



Stormwater Management Report

Synopsis

- The development will entail removal of existing site amenities such as pavement areas, fences, trees, utilities etc. to accommodate a new 5,000+/- sf. building additional along the south west section of the building. Additional site improvement will include a new ADA accessible ramp, rain garden - Best management practice (BMP), and minor drainage upgrades to accommodate same.
- The proposed Rain Garden is designed to meet the latest stormwater management regulation instituted by MassDEP. Some of the stormwater requirements that was addressed are as follows:
 - Water quality
 - Recharge
 - Draw down
 - Flow rate mitigation
- Existing site drainage infrastructure will be modified to accommodate new roof leader and ramp drain will be routed to the onsite rain garden facility.
- As per soil testing performed on March 19, 2020, estimate seasonal high ground water (ESHGW) from redoximorphic observation was depicted at 84" below finish grade. This elevation was approx. 113.00 which is 7 feet below existing grade at testing location. The facility was designed to maintain at least a 2 feet minimum groundwater separation to the bottom of the rain garden envelop set at el. 115.16 per MassDEP requirements.
- Onsite soil testing performed on March 19, 2020, test pit results depicted predominately fill and sandy loam horizons from approx. 16" to 120" below finish grade. Therefore, an infiltration rate of 0.17 in/hr was used for the design of the system which is consistent with onsite testing observation.
- Site drainage will discharge to the existing 84" open culvert located along the western portion of the site via a 36" culvert that crosses the site.
- The post-development rates of runoff are reduced when compared to the existing peak rates at the point of analysis. Site drainage improvement will not exhibit erosive characteristic at said discharge nor adversely affect the surrounding areas as per the design included in the stormwater report.
- The Operation and Maintenance procedure essentially provides guidance to the contractor/owner to ensure site construction activities does not negatively affect the surrounding environment from a drainage/earthwork standpoint. It also provides guidance on performing periodic maintenance of the proposed stormwater system.

**OAK HILL MIDDLE SCHOOL
130 WHEELER ROAD
NEWTON, MASSACHUSETTS
STORMWATER REPORT**

Submitted to:

Department of Public Works
Newton City Hall, Room 102
1000 Commonwealth Avenue
Newton Centre, MA 02459

Applicant:

Oak Hill Middle School
130 Wheeler Road
Newton, MA 02459

Civil Engineer:

Samiotes Consultants, Inc.
20 A Street
Framingham, MA 01701

Architect:

Raymond Design Associates, Inc.
60 Ledgewood Place,
Rockland, MA 02370



April 2020

OAK HILL MIDDLE SCHOOL STORMWATER MANAGEMENT NARRATIVE

April 1, 2020

Synopsis:

The site development resides at 130 Wheeler Road in Newton, MA. Currently, the site harbors an existing school that includes drainage and utility infrastructure along with associated parking and landscaped areas. The development will entail removal of existing site amenities such as pavement areas, fences, trees, utilities etc. to accommodate a new 5,000 +/- sf. building additional along the south west section of the building. Additional site improvement will include a new ADA accessible ramp, rain garden - Best management practice (BMP), and minor drainage upgrades to accommodate same.

Soils:

A Natural Resource Conservation (NRCS) Soil Report generated for the subject property has mapped the following soils with corresponding hydrologic soil groups (HSG): Udorthents and Urban lands with inconclusive HSG values (See appendix of this report). Based on onsite soil testing performed on March 19, 2020, test pit results depicted predominately fill horizons from approx. 16" to 120" below finish grade. estimate seasonal high ground water (ESHGW) from redoximorphic observation was depicted at 84" below finish grade (See appendix of this report).

Existing Stormwater Management:

The existing site consists of the stormwater runoff being captures by onsite drainage infrastructure that hydraulically connects to the the City of Newtons drainage system within Wheeler Road. This system eventually routes through a 36" culvert before entering an existing 84" open channel culvert. It is to be noted that the 84" culvert is located within an easement that runs across the a portion of the property

Proposed Stormwater Management:

The proposed stormwater runoff generated from the proposed development will be routed and mitigated through the proposed rain garden facility. The rain garden will be designed to recharge the increase to impervious area, treat the required water quality volume and attenuate pre and post rainfall associated with the 2 yr, 10 yr, 100 yr and 100 yr (local 24 hr- rainfall event value of 8.78) rainfall events based on local and MassDEP stormwater regulations (See calculations within narrative of this report). The mitigated stormwater from the rain garden will flow through an outlet control structure that connects to a 36" pipe before ultimately discharging to a 84" culvert at the design POA.

Watershed Routing:

Below is a summary of the various existing and proposed watersheds with a brief narrative describing the routing. The descriptions of the watersheds are depicted in sketches EX-HYD and PR-HYD located in the Appendix.

EX-WS1: The watershed consists of 4.579 ac. of pervious area and 0.14 ac. of impervious area. The runoff from this watershed runs overland to a low lying area along the western boundary of the site before ultimately entering the 84" culvert system designated as POA.

EX-WS2: The watershed consists of 0.855 ac. of pervious area and 2.44 ac. of impervious area. The runoff from this watershed runs is captured by onsite drainage infrastructure that hydraulically connects to the City of Newtons drainage system within Wheeler Road. This system eventually routes through a

36" culvert before entering an existing 84" pipe designated as POA. It is to be noted that the 84" culvert is located within an easement that runs across a portion of the property.

Proposed Watersheds:

PWS-1: The watershed consists of 0.047 ac. of pervious area and 0.115 ac. of impervious area. The runoff from this watershed is mitigated by the rain garden which also provides water quality through the sub planting media. Stormwater from this system is further filtrated into the underlying soil. A beehive grate outlet control structure will be utilized to mitigate peak storm events. A 6" underdrain will be provided as a means to dewater the system in the event the subsurface infiltration process get inundated. Ultimately, the outlet control structure conveys flow to a 36" pipe before discharging to the 84" culvert system designated as POA.

PWS-2: The watershed consists of 0.713ac. of pervious area and 2.415 ac. of impervious area. The runoff from this watershed runs is captured by onsite drainage infrastructure that hydraulically connects to the City of Newtons drainage system within Wheeler Road. This system eventually routes through a 36" culvert before entering an existing 84" pipe designated as POA. It is to be noted that the 84" culvert is located within an easement that runs across a portion of the property.

PWS-3: The watershed consists of 4.575 ac. of pervious area and 0.14 ac. of impervious area. The runoff from this watershed runs overland to a low lying area along the western boundary of the site before ultimately entering the 84" culvert system designated as POA.

Analysis

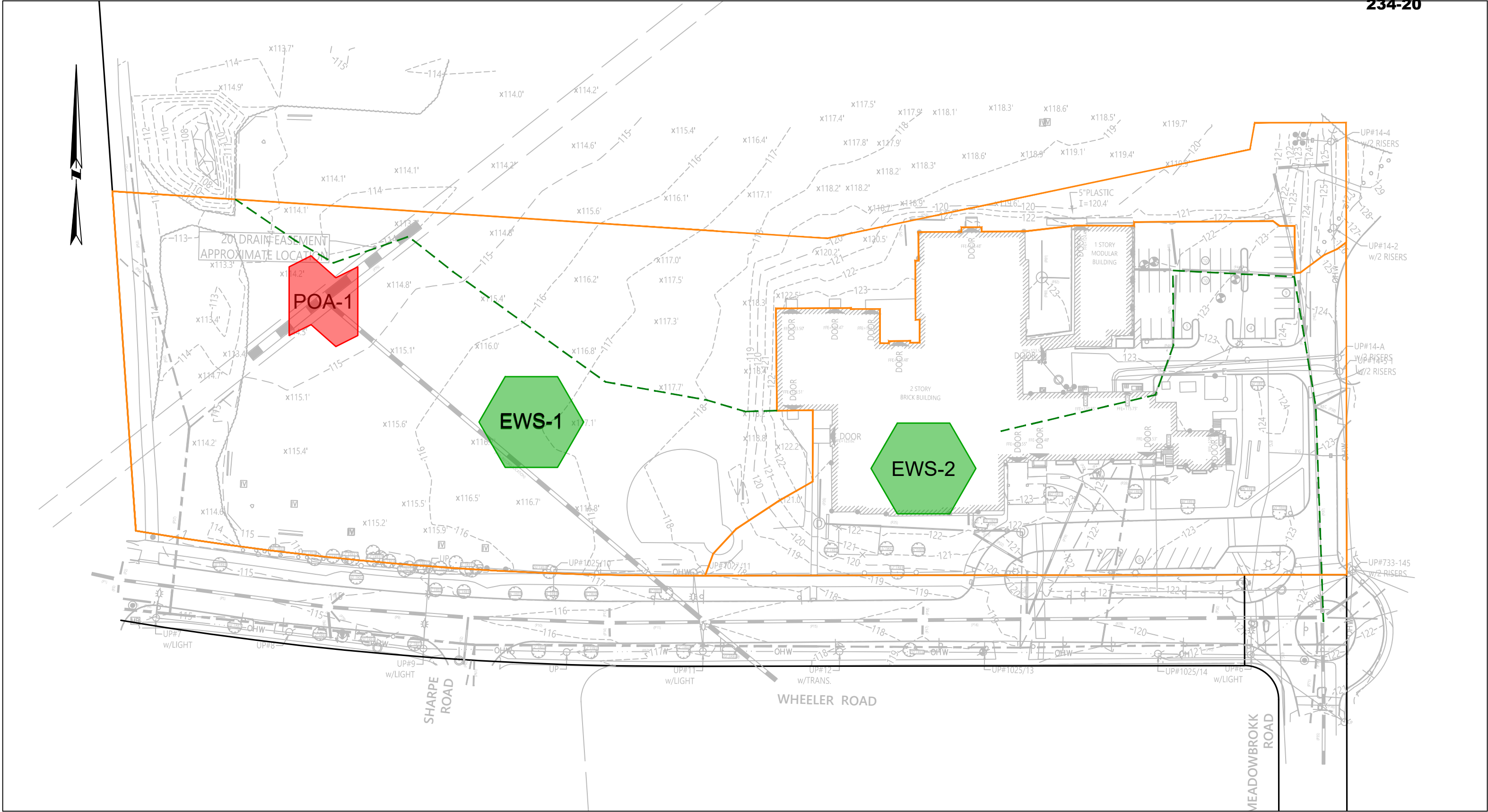
The analysis was based on the pre and post development peak discharge rates at the point of analysis. The proposed construction of the 130 Wheeler Road site improvements will result in an increase in impervious area of approx. 5,319 sf. or 0.122 ac, therefore the proposed stormwater management system will be designed to mitigate any increase in the rate of runoff and will recharge the requisite volume (See appendix of this report).

Results of Analysis

Through the use of the HydroCAD Software, the curve numbers, times of concentrations, total volume of runoff, and peak discharge rates were determined for both the existing conditions and the proposed conditions. The results of the study shows that the post-development rates of runoff are reduced when compared to the existing peak rates at the point of analysis.

Table 1: Analysis Point Peak Rate of Runoff (cubic feet per second, cfs)

Oak Hill School				
	Flow Rate (cfs)			
	Storm Event (Yr)			
	2	10	100	100 - Local
Existing	14.99	24.02	41.77	54.77
Proposed	13.48	22.68	40.97	54.18
Change Δ	-0.10	-0.06	-0.02	-0.01



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Sketch No.
EX-WS
Reference Drawing
-

Job #:	19109.00
Drawn by:	DTB
Scale:	1" = 80'
Date:	4-1-20

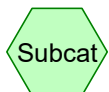
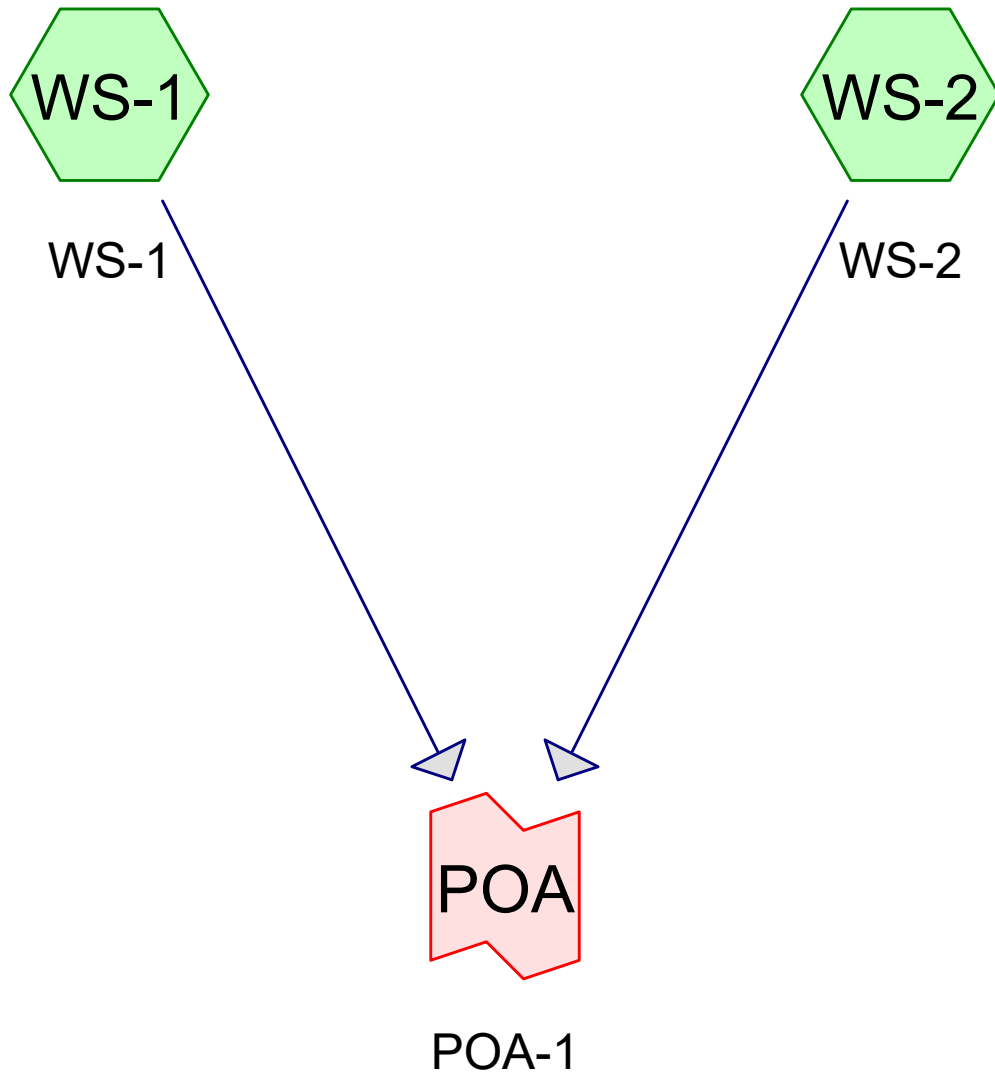
Project:	OAK HILL SCHOOL
Title:	EXISTING WATERSHEDS

Samiotes Consultants Inc.
Civil Engineers + Land Surveyors

20 A Street
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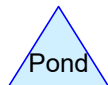




Subcat



Reach



Pond



Link

Routing Diagram for 19109.00 Oak Hill ExistingPrepared by {enter your company name here}, Printed 4/1/2020
HydroCAD® 10.00-24 s/n 03575 © 2018 HydroCAD Software Solutions LLC

19109.00 Oak Hill Existing

Prepared by {enter your company name here}

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Oak Hill Existing Watershed
Type III 24-hr 2 yr Rainfall=3.20"

Printed 4/1/2020

Page 2

Summary for Subcatchment WS-1: WS-1

Runoff = 6.84 cfs @ 12.15 hrs, Volume= 0.578 af, Depth= 1.47"

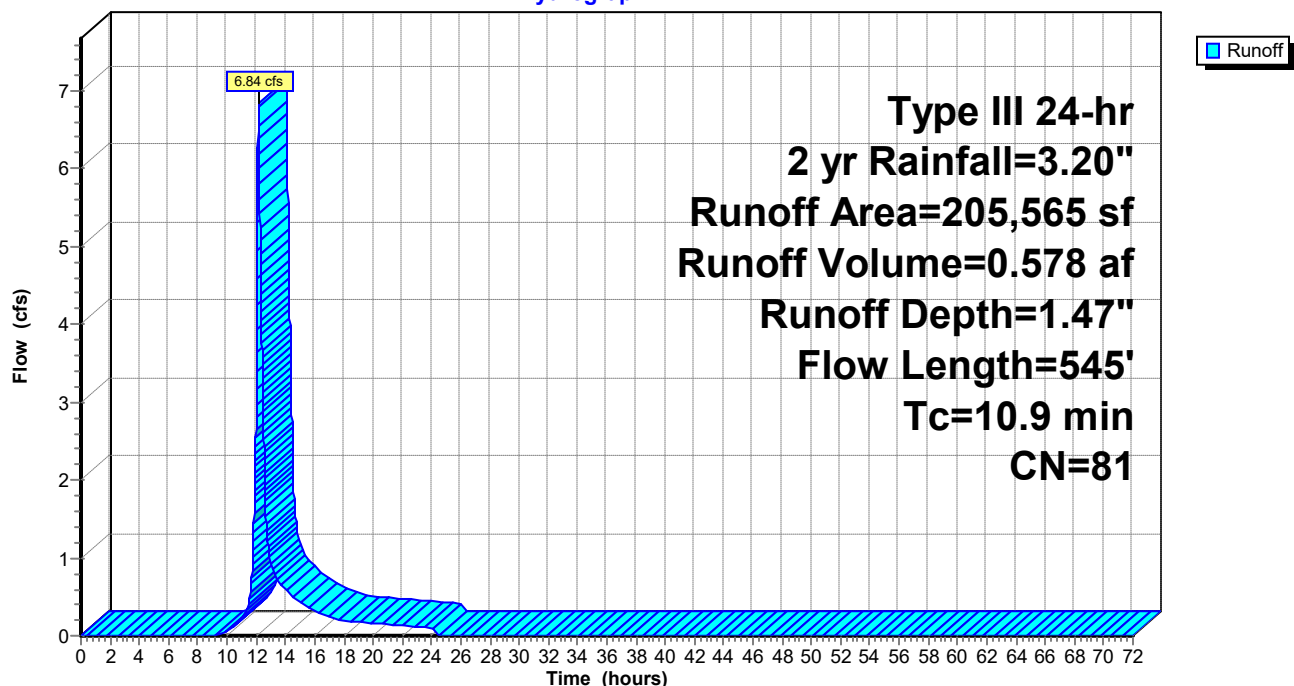
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.20"

Area (sf)	CN	Description
6,009	98	Paved parking, HSG D
75	98	Paved parking, HSG D
199,481	80	>75% Grass cover, Good, HSG D
205,565	81	Weighted Average
199,481		97.04% Pervious Area
6,084		2.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
3.7	21	0.0100	0.09		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.5	493	0.0100	1.50		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
10.9	545	Total			

Subcatchment WS-1: WS-1

Hydrograph



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Oak Hill Existing Watershed
Type III 24-hr 2 yr Rainfall=3.20"

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Summary for Subcatchment WS-2: WS-2

Runoff = 9.15 cfs @ 12.09 hrs, Volume= 0.672 af, Depth= 2.45"

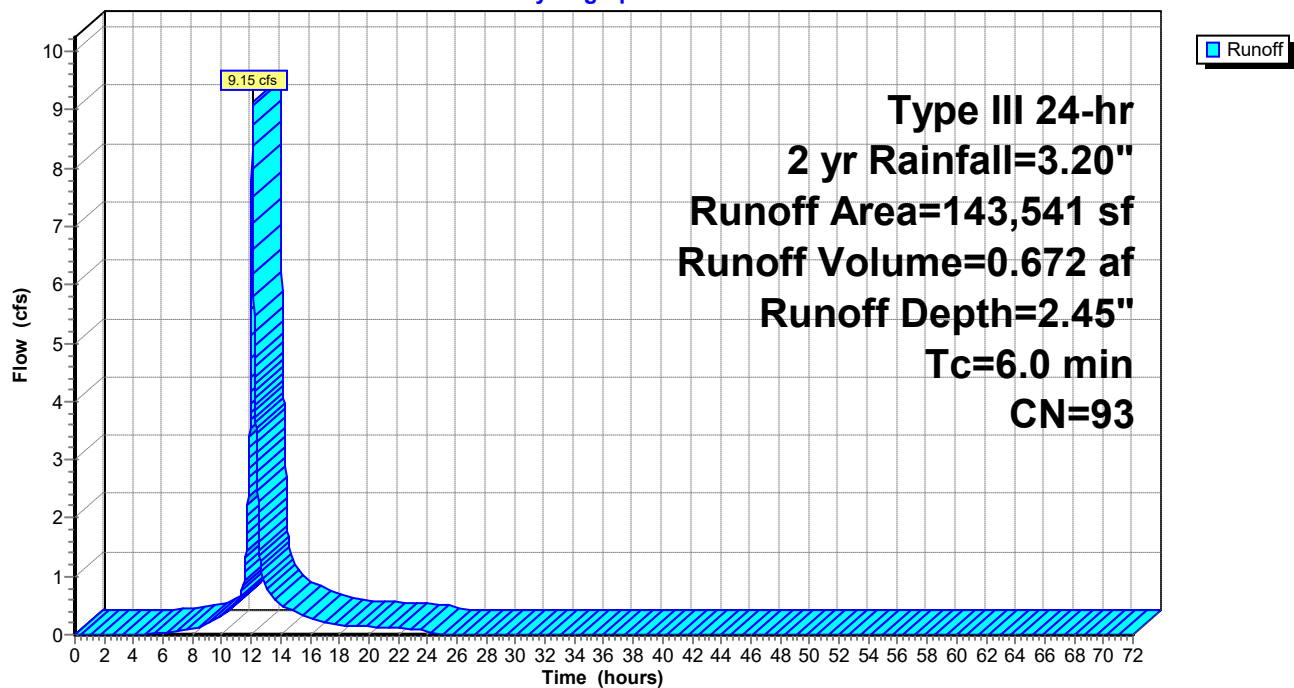
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.20"

Area (sf)	CN	Description
54,962	98	Roofs, HSG D
781	98	Paved parking, HSG D
377	98	Paved parking, HSG D
127	98	Paved parking, HSG D
47	98	Paved parking, HSG D
49,986	98	Paved parking, HSG D
37,261	80	>75% Grass cover, Good, HSG D
143,541	93	Weighted Average
37,261		25.96% Pervious Area
106,280		74.04% Impervious Area

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

Subcatchment WS-2: WS-2

Hydrograph



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Oak Hill Existing Watershed
Type III 24-hr 2 yr Rainfall=3.20"

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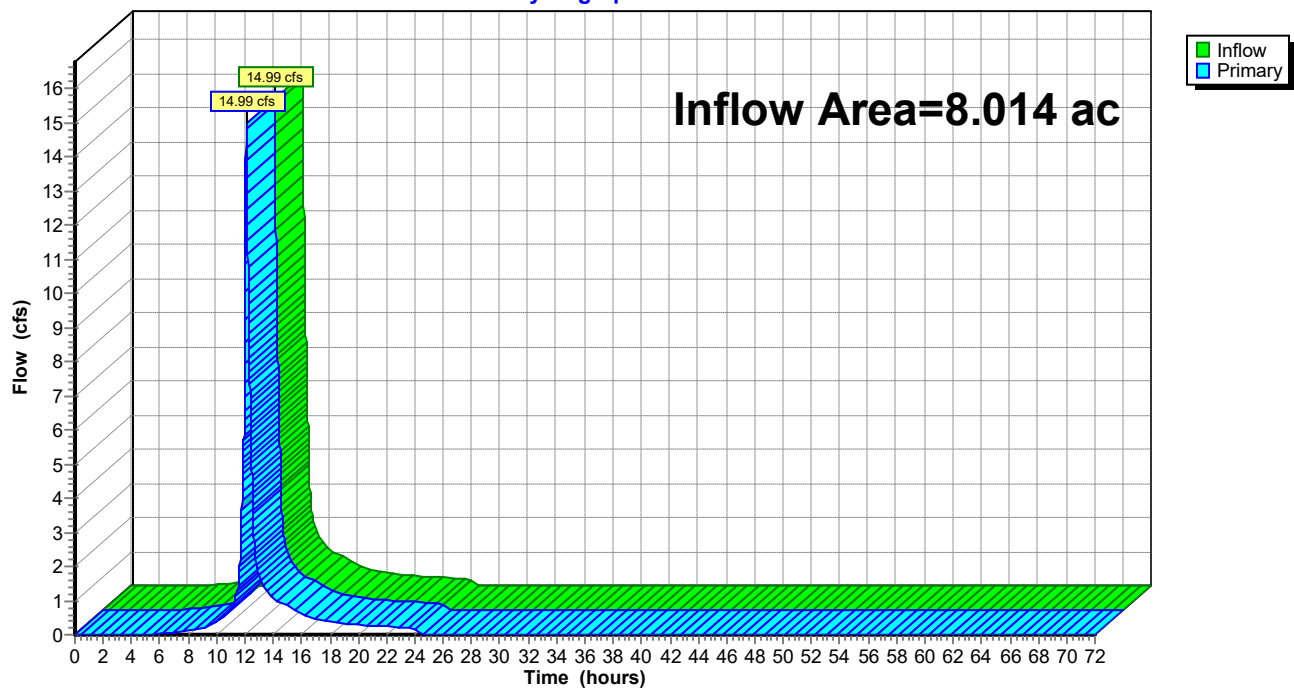
Summary for Link POA: POA-1

Inflow Area = 8.014 ac, 32.19% Impervious, Inflow Depth = 1.87" for 2 yr event
Inflow = 14.99 cfs @ 12.11 hrs, Volume= 1.249 af
Primary = 14.99 cfs @ 12.11 hrs, Volume= 1.249 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link POA: POA-1

Hydrograph



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Oak Hill Existing Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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Summary for Subcatchment WS-1: WS-1

Runoff = 11.98 cfs @ 12.15 hrs, Volume= 1.002 af, Depth= 2.55"

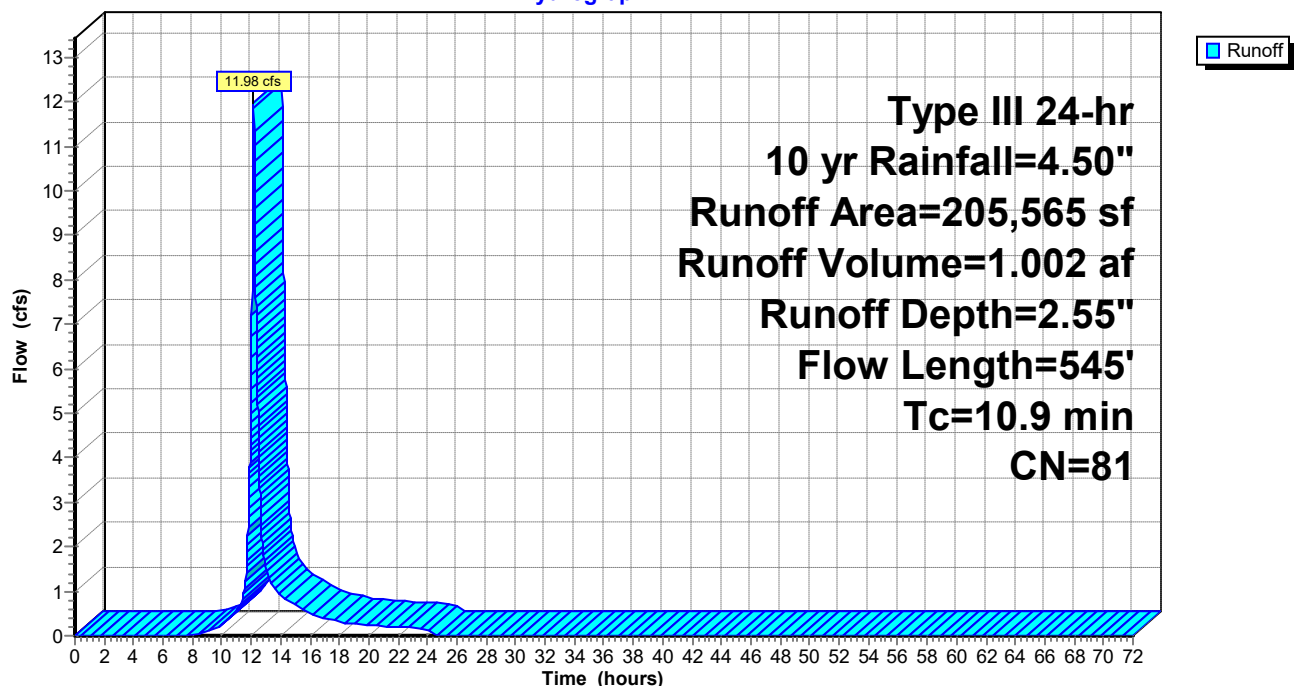
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=4.50"

Area (sf)	CN	Description
6,009	98	Paved parking, HSG D
75	98	Paved parking, HSG D
199,481	80	>75% Grass cover, Good, HSG D
205,565	81	Weighted Average
199,481		97.04% Pervious Area
6,084		2.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
3.7	21	0.0100	0.09		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.5	493	0.0100	1.50		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
10.9	545	Total			

Subcatchment WS-1: WS-1

Hydrograph



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Oak Hill Existing Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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Summary for Subcatchment WS-2: WS-2

Runoff = 13.56 cfs @ 12.08 hrs, Volume= 1.018 af, Depth= 3.71"

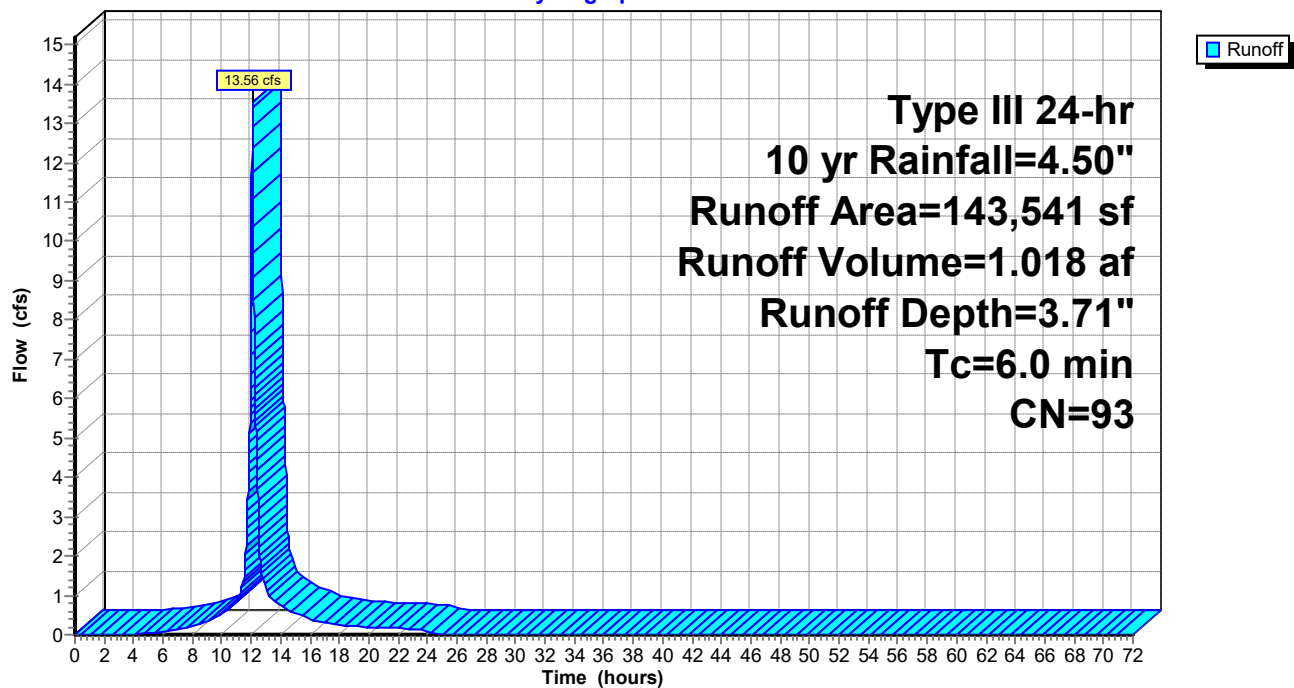
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=4.50"

Area (sf)	CN	Description
54,962	98	Roofs, HSG D
781	98	Paved parking, HSG D
377	98	Paved parking, HSG D
127	98	Paved parking, HSG D
47	98	Paved parking, HSG D
49,986	98	Paved parking, HSG D
37,261	80	>75% Grass cover, Good, HSG D
143,541	93	Weighted Average
37,261		25.96% Pervious Area
106,280		74.04% Impervious Area

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

Subcatchment WS-2: WS-2

Hydrograph



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Oak Hill Existing Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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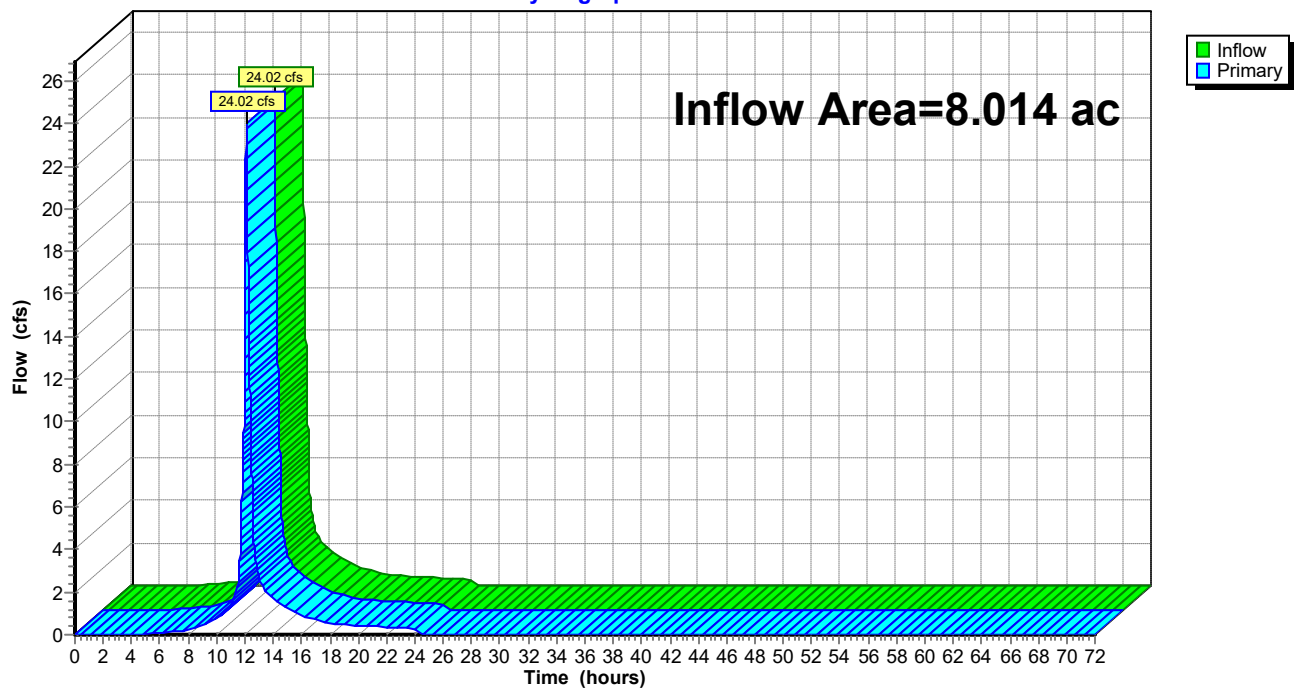
Summary for Link POA: POA-1

Inflow Area = 8.014 ac, 32.19% Impervious, Inflow Depth = 3.02" for 10 yr event
 Inflow = 24.02 cfs @ 12.11 hrs, Volume= 2.020 af
 Primary = 24.02 cfs @ 12.11 hrs, Volume= 2.020 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link POA: POA-1

Hydrograph



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Oak Hill Existing Watershed
Type III 24-hr 100 yr Rainfall=7.00"

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Summary for Subcatchment WS-1: WS-1

Runoff = 22.36 cfs @ 12.15 hrs, Volume= 1.890 af, Depth= 4.81"

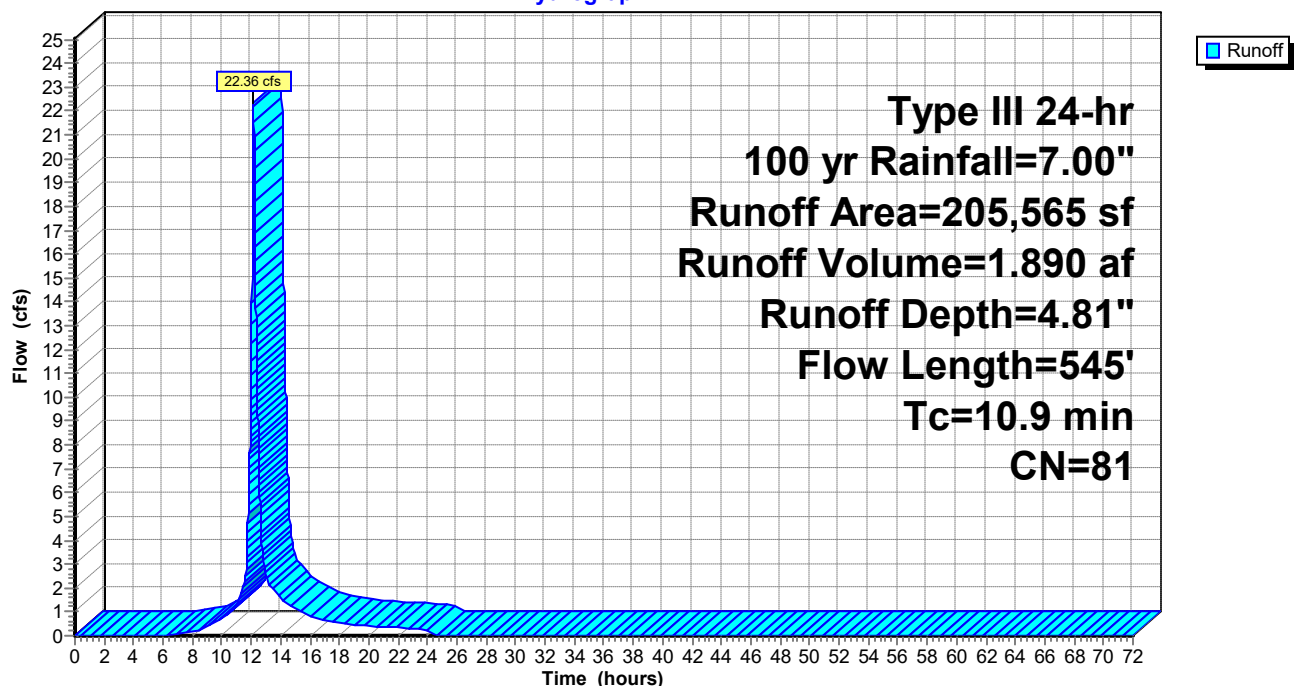
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 yr Rainfall=7.00"

Area (sf)	CN	Description
6,009	98	Paved parking, HSG D
75	98	Paved parking, HSG D
199,481	80	>75% Grass cover, Good, HSG D
205,565	81	Weighted Average
199,481		97.04% Pervious Area
6,084		2.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
3.7	21	0.0100	0.09		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.5	493	0.0100	1.50		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
10.9	545	Total			

Subcatchment WS-1: WS-1

Hydrograph



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Type III 24-hr 100 yr Rainfall=7.00"

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Summary for Subcatchment WS-2: WS-2

Runoff = 21.92 cfs @ 12.08 hrs, Volume= 1.695 af, Depth= 6.17"

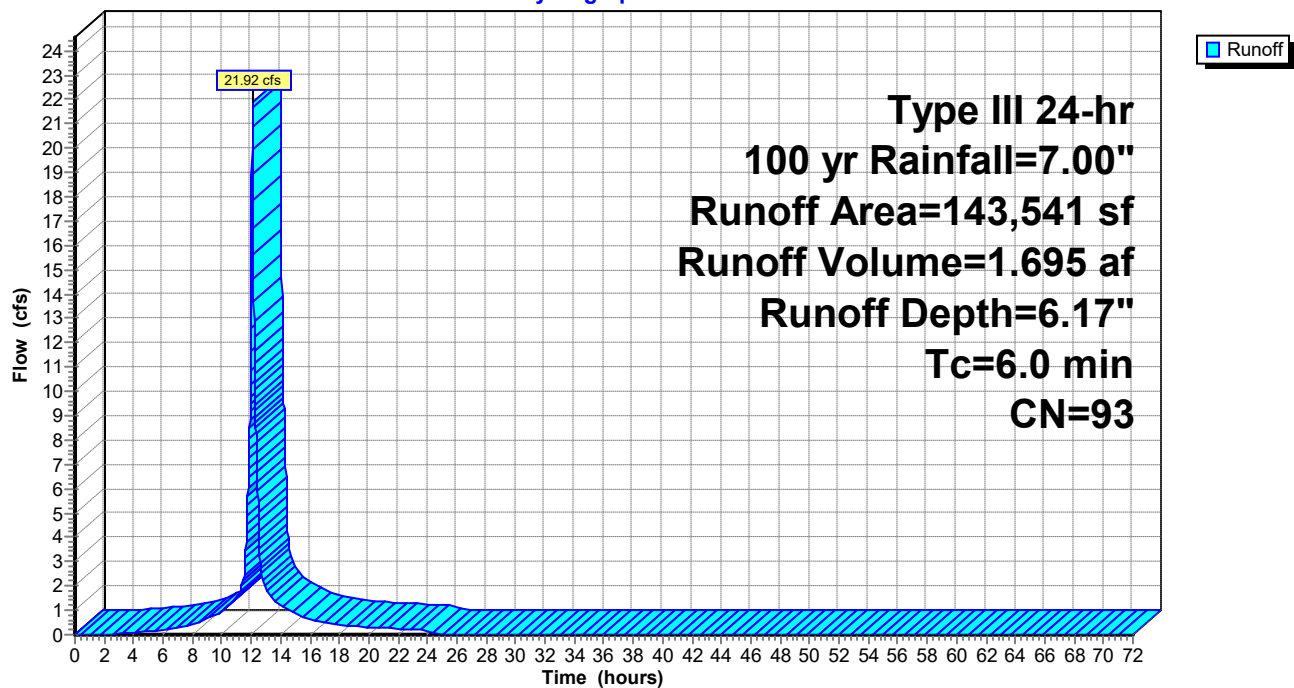
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 yr Rainfall=7.00"

Area (sf)	CN	Description
54,962	98	Roofs, HSG D
781	98	Paved parking, HSG D
377	98	Paved parking, HSG D
127	98	Paved parking, HSG D
47	98	Paved parking, HSG D
49,986	98	Paved parking, HSG D
37,261	80	>75% Grass cover, Good, HSG D
143,541	93	Weighted Average
37,261		25.96% Pervious Area
106,280		74.04% Impervious Area

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

Subcatchment WS-2: WS-2

Hydrograph



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Oak Hill Existing Watershed
Type III 24-hr 100 yr Rainfall=7.00"

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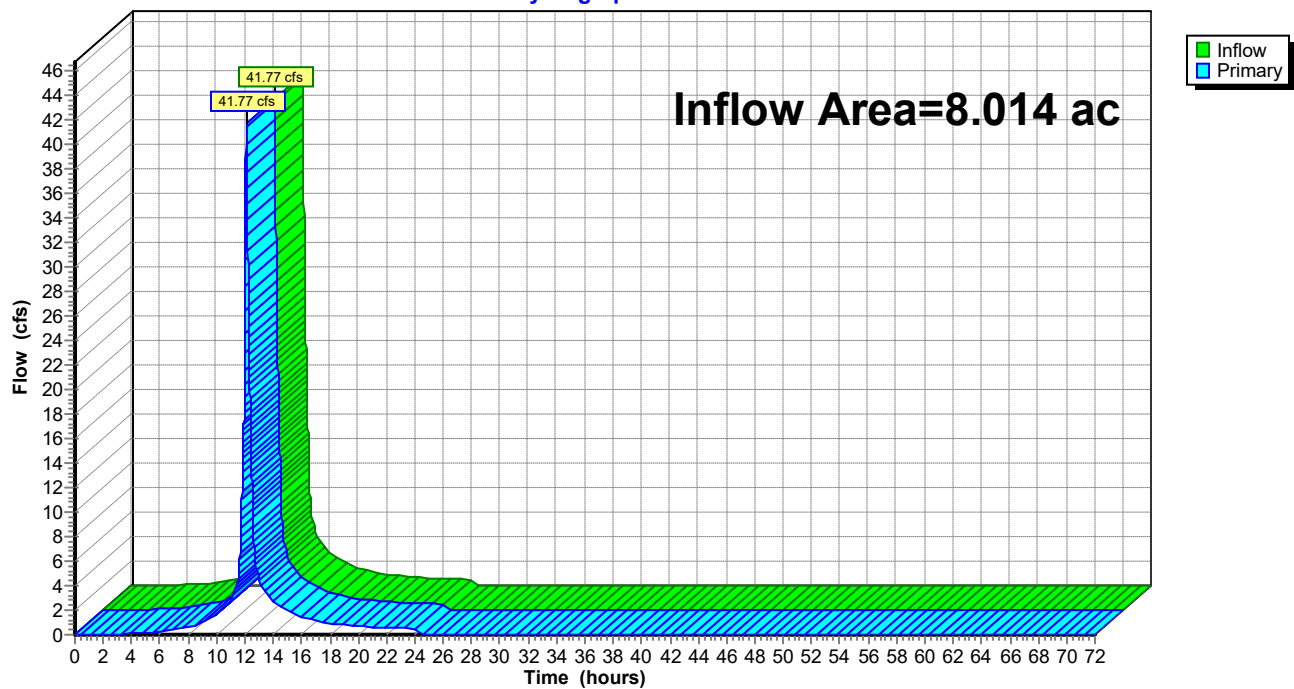
Summary for Link POA: POA-1

Inflow Area = 8.014 ac, 32.19% Impervious, Inflow Depth = 5.37" for 100 yr event
Inflow = 41.77 cfs @ 12.11 hrs, Volume= 3.584 af
Primary = 41.77 cfs @ 12.11 hrs, Volume= 3.584 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link POA: POA-1

Hydrograph



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Oak Hill Existing Watershed

Type III 24-hr Newton-8.78" Rainfall=8.78"

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Summary for Subcatchment WS-1: WS-1

Runoff = 29.83 cfs @ 12.15 hrs, Volume= 2.549 af, Depth= 6.48"

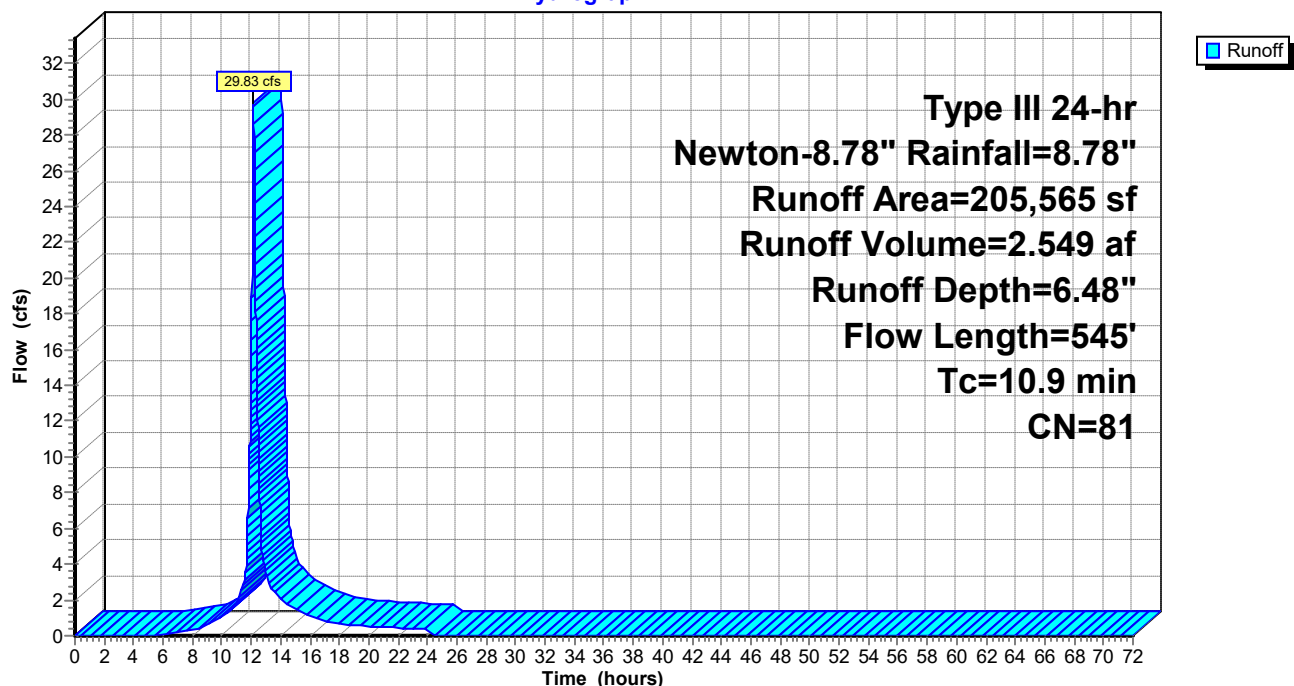
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr Newton-8.78" Rainfall=8.78"

Area (sf)	CN	Description
6,009	98	Paved parking, HSG D
75	98	Paved parking, HSG D
199,481	80	>75% Grass cover, Good, HSG D
205,565	81	Weighted Average
199,481		97.04% Pervious Area
6,084		2.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
3.7	21	0.0100	0.09		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.5	493	0.0100	1.50		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
10.9	545	Total			

Subcatchment WS-1: WS-1

Hydrograph



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Oak Hill Existing Watershed

Type III 24-hr Newton-8.78" Rainfall=8.78"

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Summary for Subcatchment WS-2: WS-2

Runoff = 27.81 cfs @ 12.08 hrs, Volume= 2.180 af, Depth= 7.94"

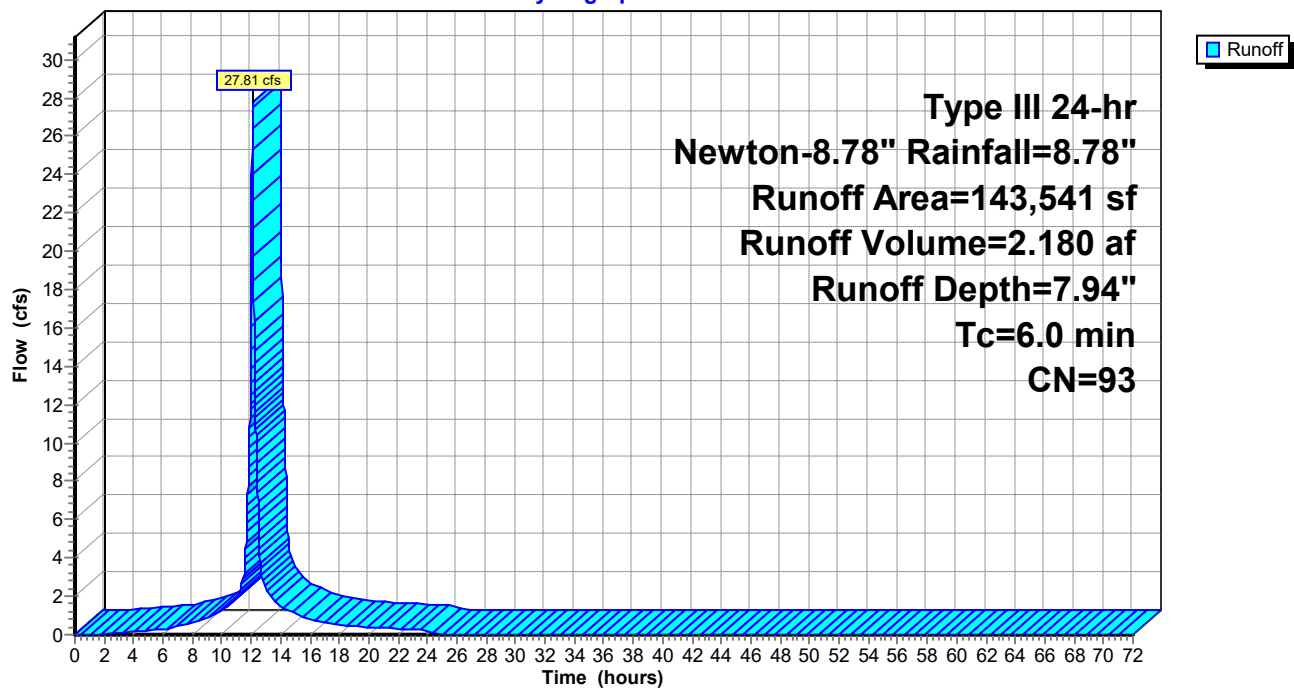
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr Newton-8.78" Rainfall=8.78"

Area (sf)	CN	Description
54,962	98	Roofs, HSG D
781	98	Paved parking, HSG D
377	98	Paved parking, HSG D
127	98	Paved parking, HSG D
47	98	Paved parking, HSG D
49,986	98	Paved parking, HSG D
37,261	80	>75% Grass cover, Good, HSG D
143,541	93	Weighted Average
37,261		25.96% Pervious Area
106,280		74.04% Impervious Area

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

Subcatchment WS-2: WS-2

Hydrograph



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Oak Hill Existing Watershed

Type III 24-hr Newton-8.78" Rainfall=8.78"

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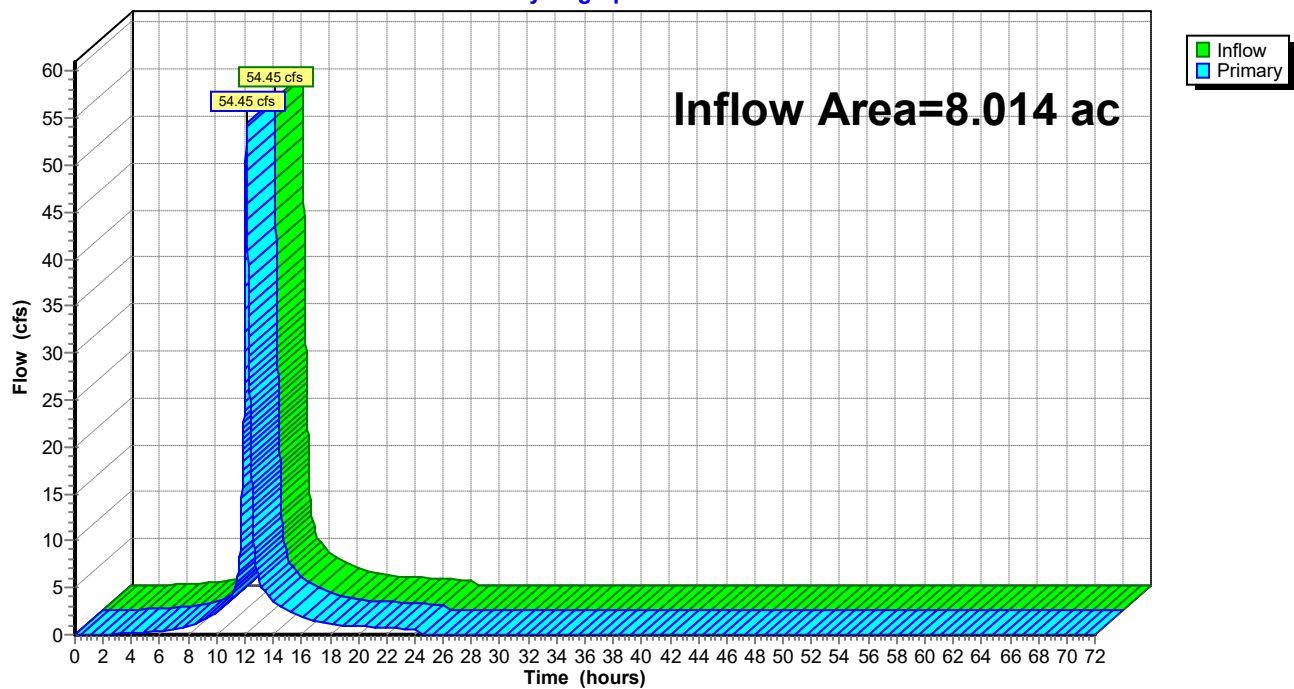
Summary for Link POA: POA-1

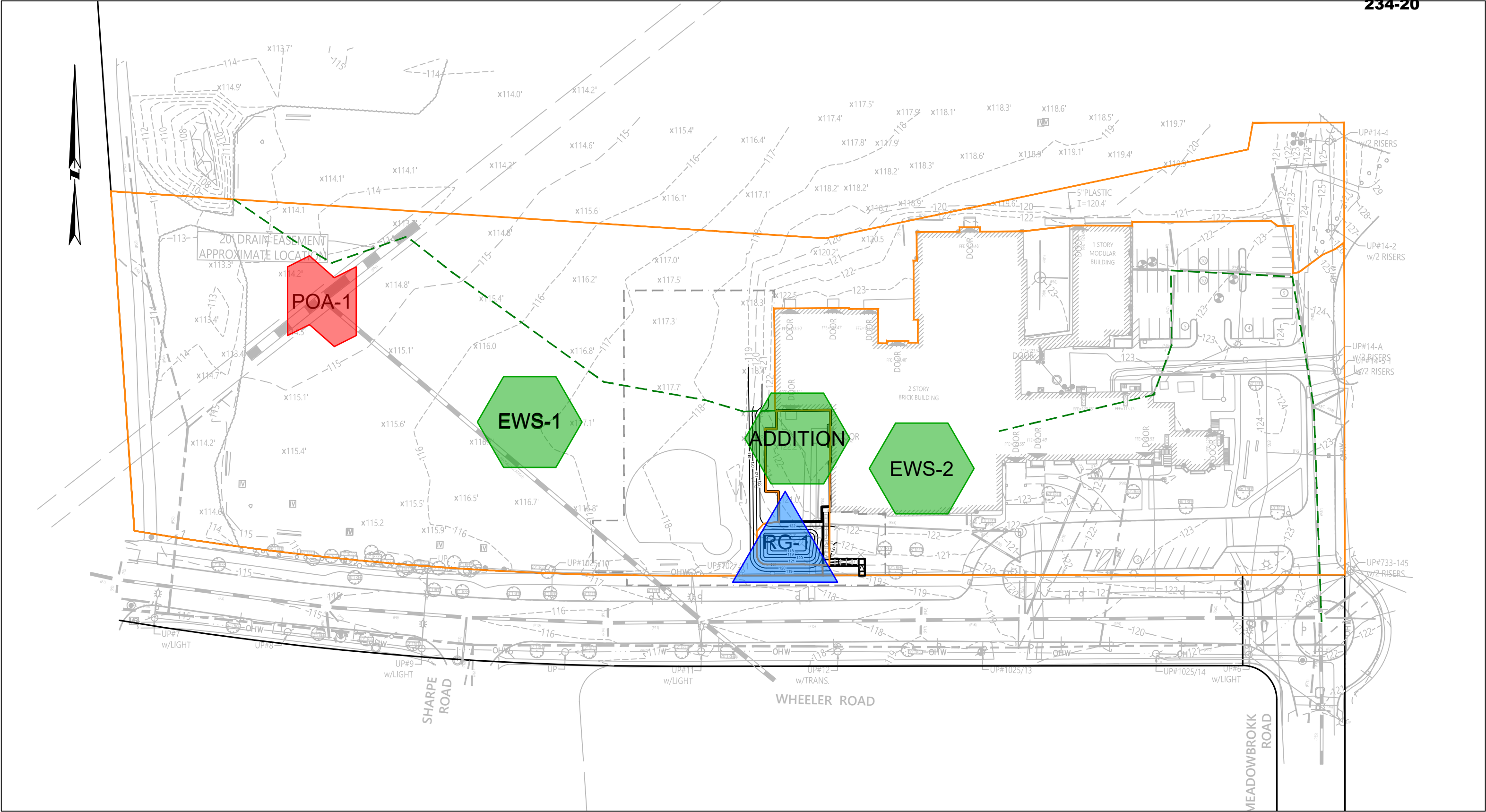
Inflow Area = 8.014 ac, 32.19% Impervious, Inflow Depth = 7.08" for Newton-8.78" event
 Inflow = 54.45 cfs @ 12.11 hrs, Volume= 4.728 af
 Primary = 54.45 cfs @ 12.11 hrs, Volume= 4.728 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link POA: POA-1

Hydrograph





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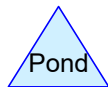
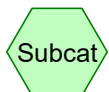
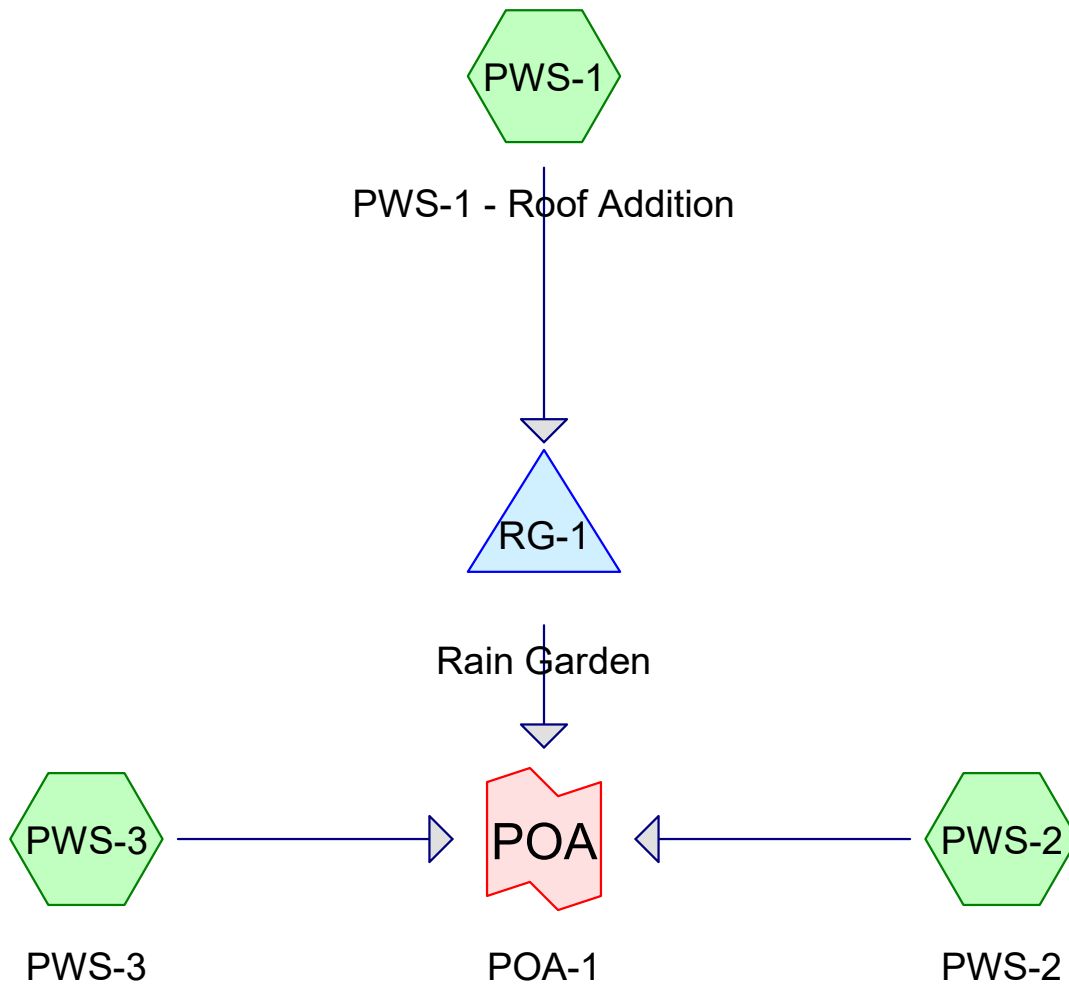
Sketch No.
PR-WS
Reference Drawing
-

Job #:	19109.00
Drawn by:	DTB
Scale:	1" = 80'
Date:	4-1-20

Project:	OAK HILL SCHOOL
Title:	PROPOSED WATERSHEDS

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Oak Hill Proposed Watershed
Type III 24-hr 2 yr Rainfall=3.20"

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Page 2

Summary for Subcatchment PWS-1: PWS-1 - Roof Addition

Runoff = 0.46 cfs @ 12.07 hrs, Volume= 0.032 af, Depth= 2.26"

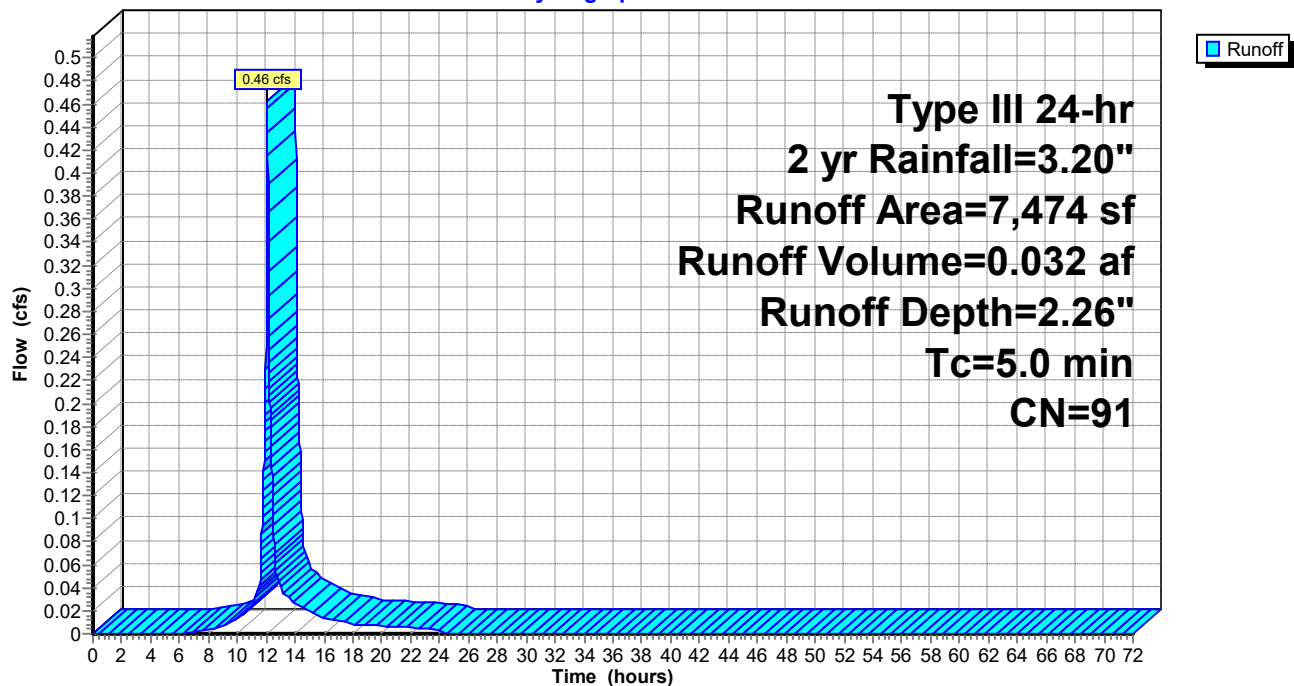
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.20"

Area (sf)	CN	Description
5,000	98	Roofs, HSG C
2,155	74	>75% Grass cover, Good, HSG C
319	98	Paved parking, HSG C
7,474	91	Weighted Average
2,155		28.83% Pervious Area
5,319		71.17% Impervious Area

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

Subcatchment PWS-1: PWS-1 - Roof Addition

Hydrograph



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Type III 24-hr 2 yr Rainfall=3.20"

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Summary for Subcatchment PWS-2: PWS-2

Runoff = 7.95 cfs @ 12.12 hrs, Volume= 0.637 af, Depth= 2.45"

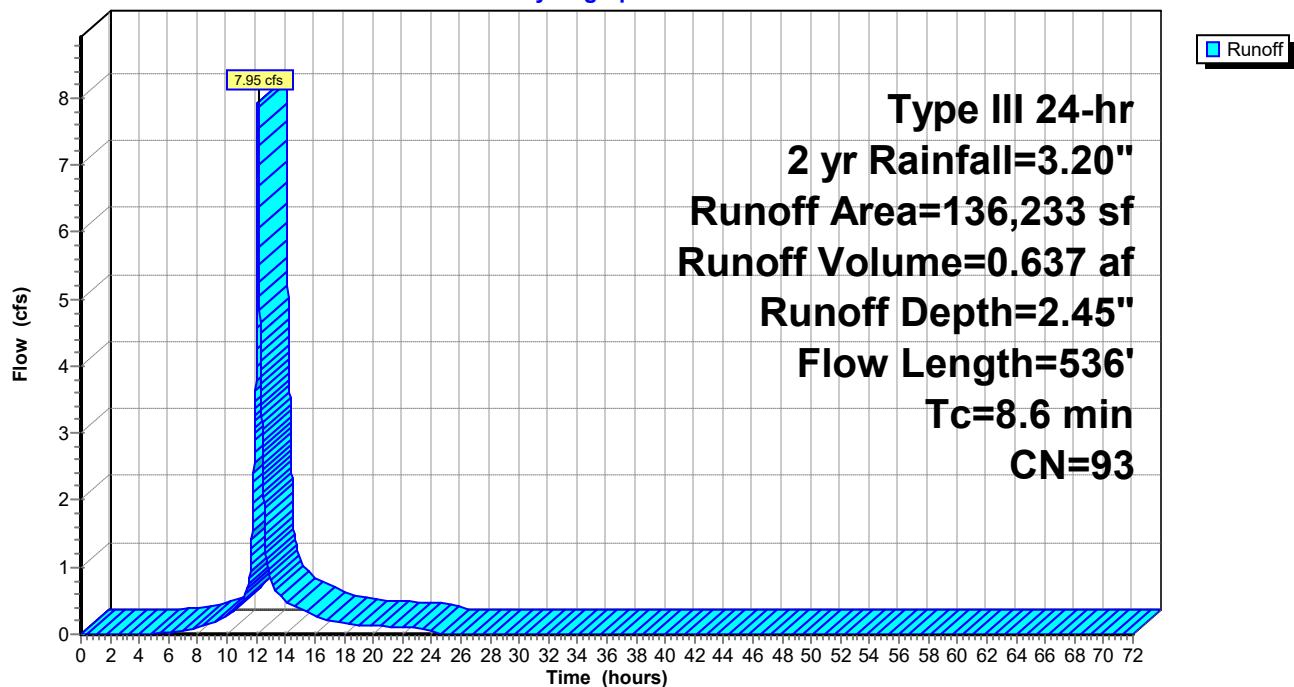
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.20"

Area (sf)	CN	Description
54,962	98	Roofs, HSG C
232	98	Paved parking, HSG C
49,986	98	Paved parking, HSG C
31,053	74	>75% Grass cover, Good, HSG C
136,233	93	Weighted Average
31,053		22.79% Pervious Area
105,180		77.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
1.7	19	0.0543	0.18		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.2	486	0.0107	1.55		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
8.6	536	Total			

Subcatchment PWS-2: PWS-2

Hydrograph



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Type III 24-hr 2 yr Rainfall=3.20"

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Summary for Subcatchment PWS-3: PWS-3

Runoff = 5.28 cfs @ 12.13 hrs, Volume= 0.430 af, Depth= 1.09"

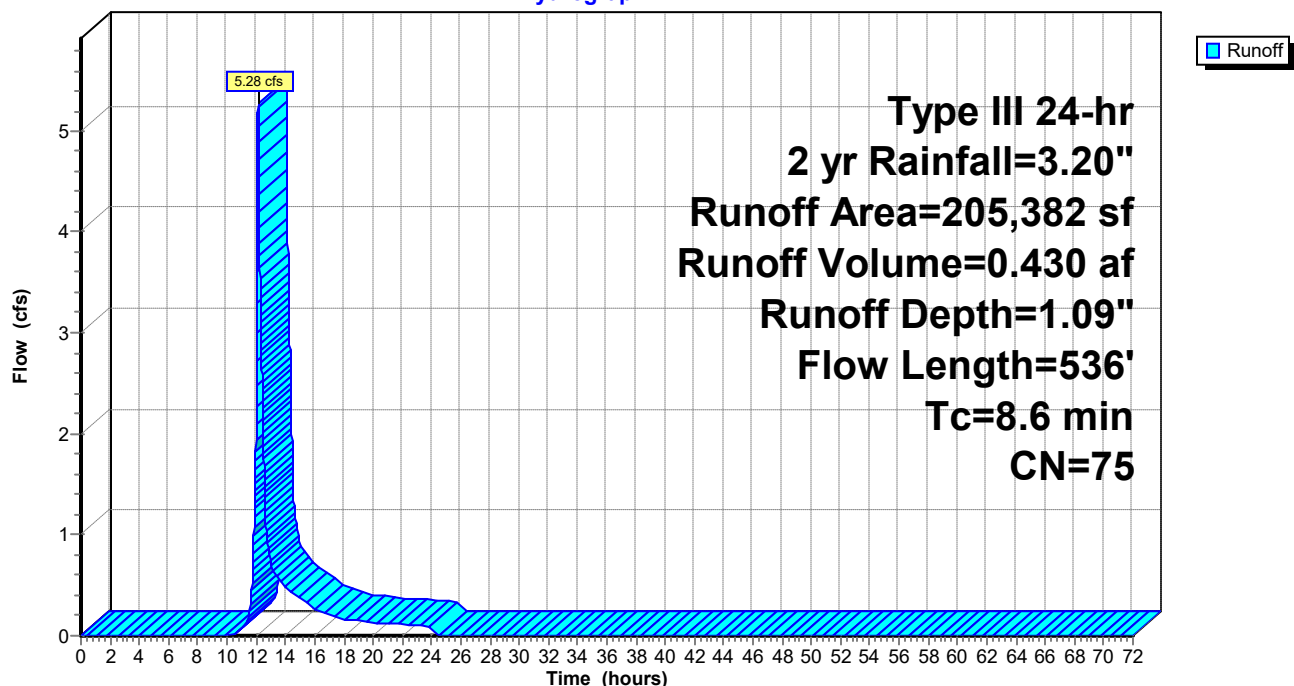
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 yr Rainfall=3.20"

Area (sf)	CN	Description
6,009	98	Paved parking, HSG C
75	98	Paved parking, HSG C
199,298	74	>75% Grass cover, Good, HSG C
205,382	75	Weighted Average
199,298		97.04% Pervious Area
6,084		2.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
1.7	19	0.0543	0.18		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.2	486	0.0107	1.55		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
8.6	536	Total			

Subcatchment PWS-3: PWS-3

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr 2 yr Rainfall=3.20"

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Summary for Pond RG-1: Rain Garden

Inflow Area = 0.172 ac, 71.17% Impervious, Inflow Depth = 2.26" for 2 yr event
 Inflow = 0.46 cfs @ 12.07 hrs, Volume= 0.032 af
 Outflow = 0.31 cfs @ 12.15 hrs, Volume= 0.031 af, Atten= 33%, Lag= 4.9 min
 Primary = 0.31 cfs @ 12.15 hrs, Volume= 0.031 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 118.88' @ 12.15 hrs Surf.Area= 592 sf Storage= 520 cf

Plug-Flow detention time= 677.1 min calculated for 0.031 af (97% of inflow)

Center-of-Mass det. time= 659.5 min (1,461.1 - 801.5)

Volume	Invert	Avail.Storage	Storage Description
#1	118.00'	2,513 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
118.00	595	0	0
119.00	592	594	594
120.00	946	769	1,363
121.00	1,355	1,151	2,513

Device	Routing	Invert	Outlet Devices
#1	Primary	118.00'	0.170 in/hr Exfiltration over Surface area
#2	Primary	118.75'	8.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.31 cfs @ 12.15 hrs HW=118.88' (Free Discharge)

1=Exfiltration (Exfiltration Controls 0.00 cfs)

2=Orifice/Grate (Weir Controls 0.30 cfs @ 1.16 fps)

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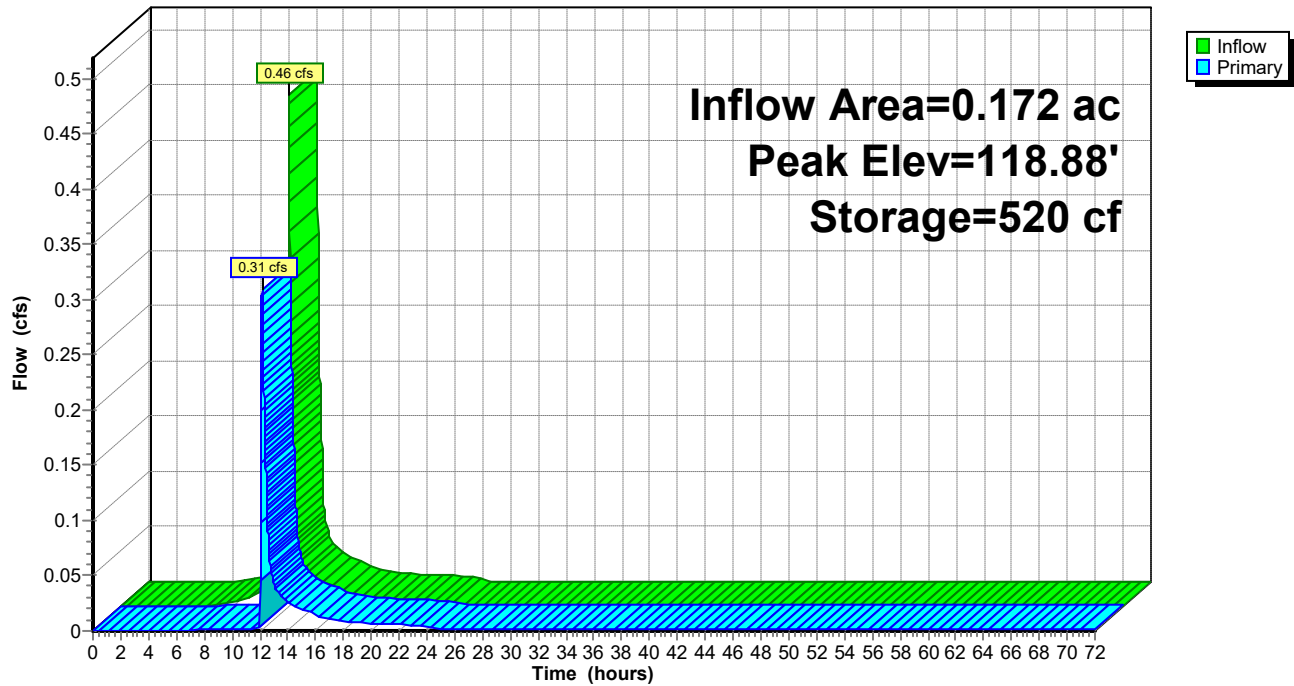
Oak Hill Proposed Watershed
Type III 24-hr 2 yr Rainfall=3.20"

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Pond RG-1: Rain Garden

Hydrograph



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Oak Hill Proposed Watershed
Type III 24-hr 2 yr Rainfall=3.20"

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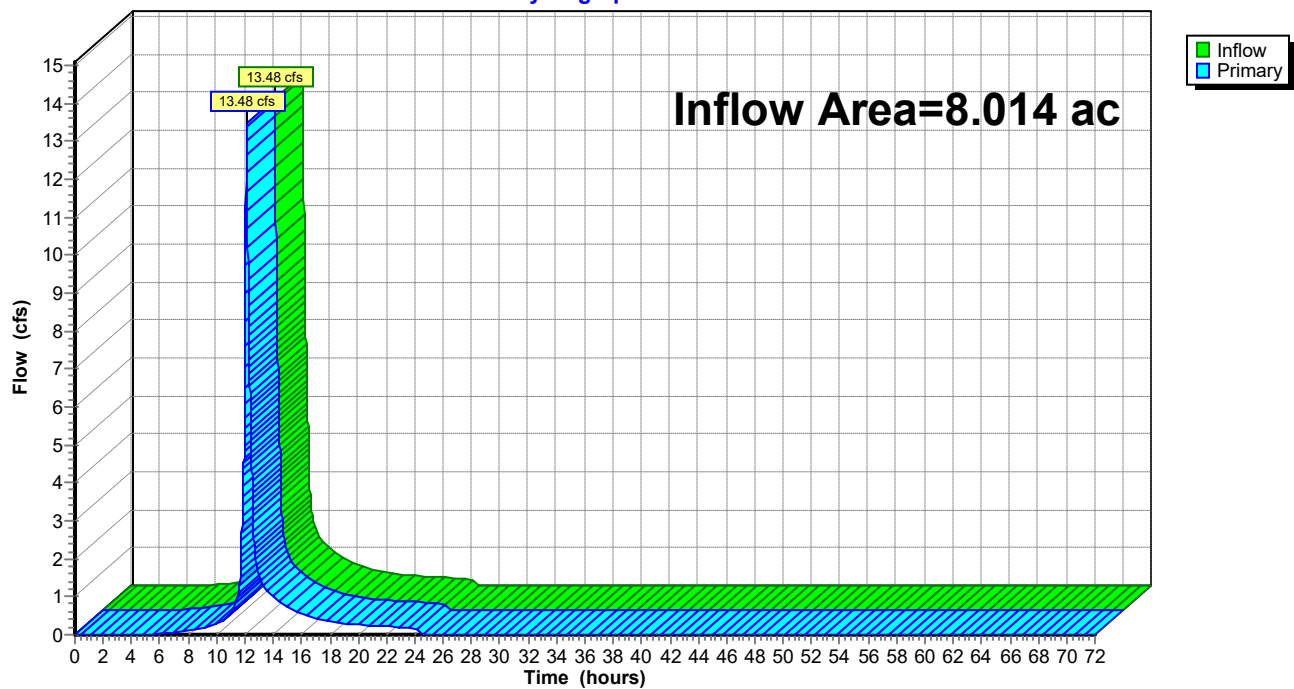
Summary for Link POA: POA-1

Inflow Area = 8.014 ac, 33.40% Impervious, Inflow Depth > 1.64" for 2 yr event
 Inflow = 13.48 cfs @ 12.12 hrs, Volume= 1.099 af
 Primary = 13.48 cfs @ 12.12 hrs, Volume= 1.099 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link POA: POA-1

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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Summary for Subcatchment PWS-1: PWS-1 - Roof Addition

Runoff = 0.70 cfs @ 12.07 hrs, Volume= 0.050 af, Depth= 3.50"

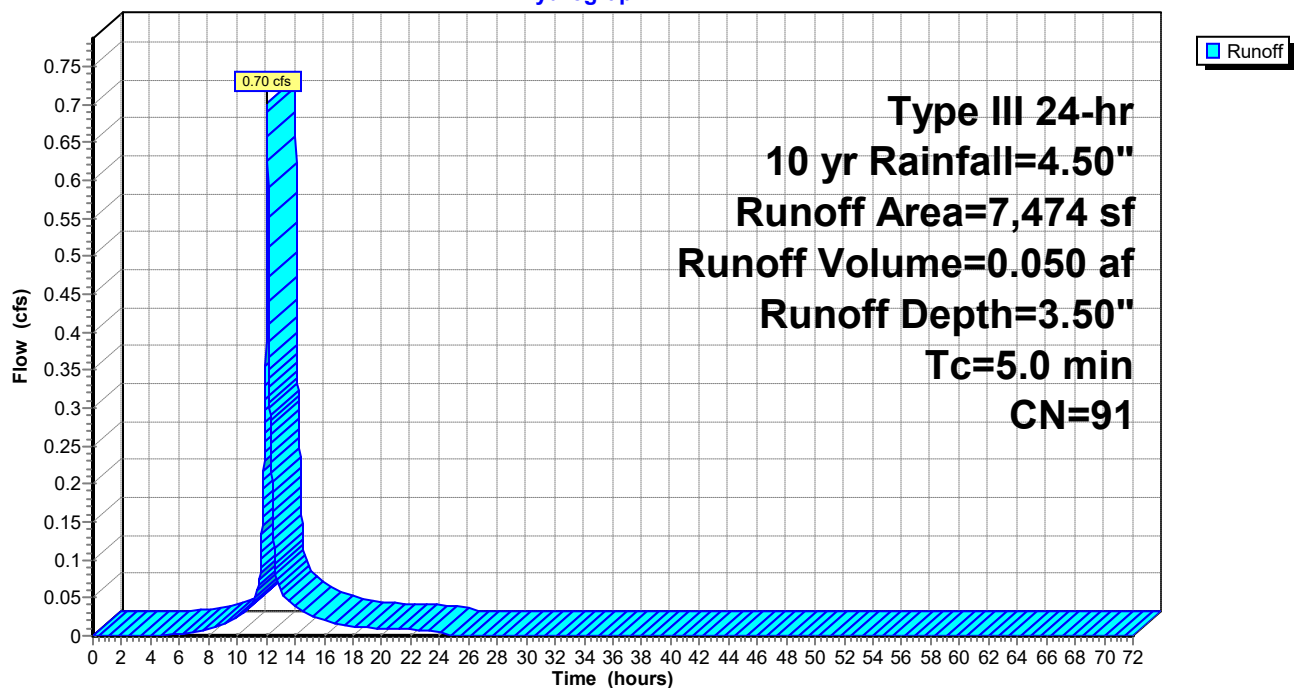
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=4.50"

Area (sf)	CN	Description
5,000	98	Roofs, HSG C
2,155	74	>75% Grass cover, Good, HSG C
319	98	Paved parking, HSG C
7,474	91	Weighted Average
2,155		28.83% Pervious Area
5,319		71.17% Impervious Area

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

Subcatchment PWS-1: PWS-1 - Roof Addition

Hydrograph



19109.00 Oak Hill Proposed DTB

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Oak Hill Proposed Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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Summary for Subcatchment PWS-2: PWS-2

Runoff = 11.79 cfs @ 12.12 hrs, Volume= 0.966 af, Depth= 3.71"

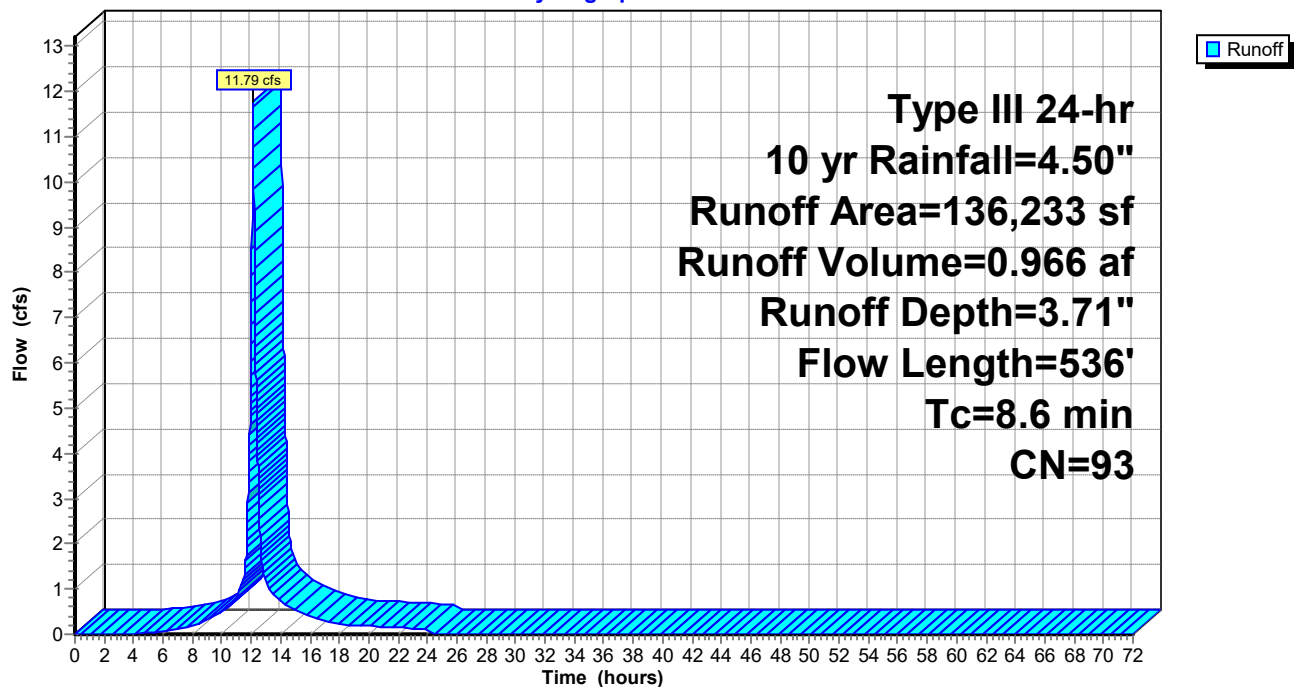
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=4.50"

Area (sf)	CN	Description
54,962	98	Roofs, HSG C
232	98	Paved parking, HSG C
49,986	98	Paved parking, HSG C
31,053	74	>75% Grass cover, Good, HSG C
136,233	93	Weighted Average
31,053		22.79% Pervious Area
105,180		77.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
1.7	19	0.0543	0.18		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.2	486	0.0107	1.55		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
8.6	536	Total			

Subcatchment PWS-2: PWS-2

Hydrograph



19109.00 Oak Hill Proposed DTB

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Oak Hill Proposed Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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Summary for Subcatchment PWS-3: PWS-3

Runoff = 10.28 cfs @ 12.13 hrs, Volume= 0.806 af, Depth= 2.05"

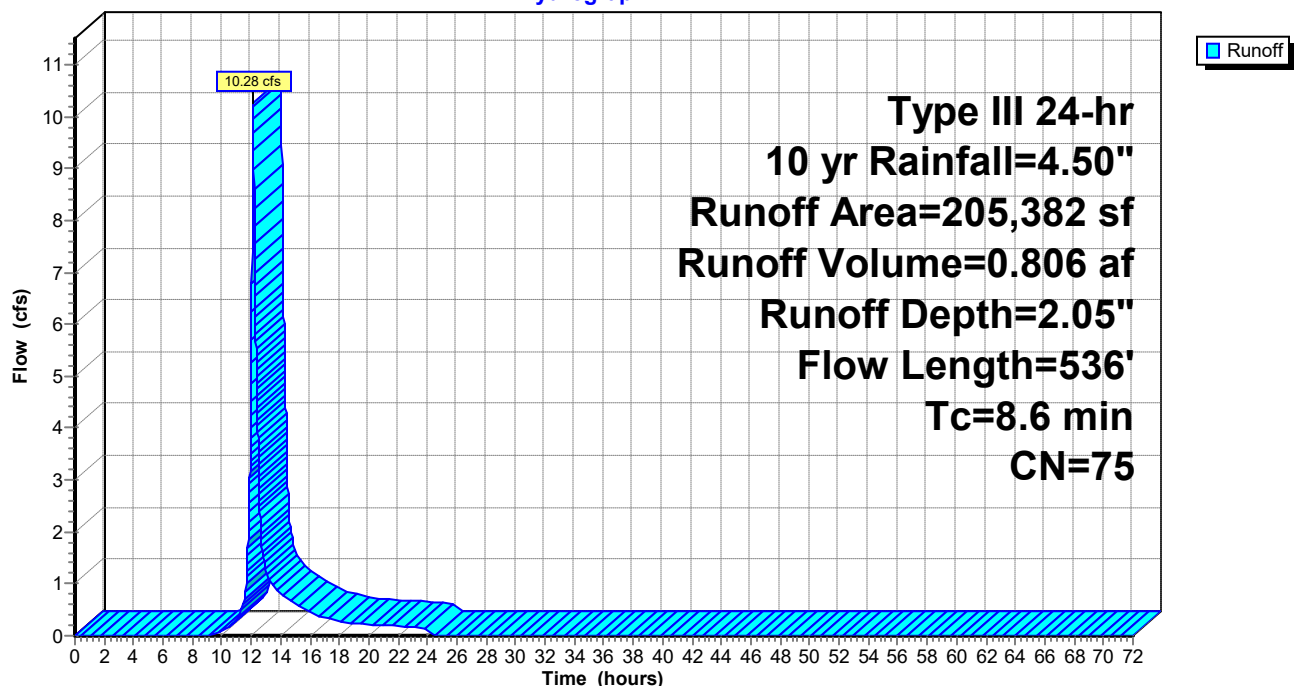
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 yr Rainfall=4.50"

Area (sf)	CN	Description
6,009	98	Paved parking, HSG C
75	98	Paved parking, HSG C
199,298	74	>75% Grass cover, Good, HSG C
205,382	75	Weighted Average
199,298		97.04% Pervious Area
6,084		2.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
1.7	19	0.0543	0.18		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.2	486	0.0107	1.55		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
8.6	536	Total			

Subcatchment PWS-3: PWS-3

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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Summary for Pond RG-1: Rain Garden

Inflow Area = 0.172 ac, 71.17% Impervious, Inflow Depth = 3.50" for 10 yr event
 Inflow = 0.70 cfs @ 12.07 hrs, Volume= 0.050 af
 Outflow = 0.65 cfs @ 12.10 hrs, Volume= 0.049 af, Atten= 8%, Lag= 2.0 min
 Primary = 0.65 cfs @ 12.10 hrs, Volume= 0.049 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 118.96' @ 12.10 hrs Surf.Area= 592 sf Storage= 568 cf

Plug-Flow detention time= 444.8 min calculated for 0.049 af (98% of inflow)

Center-of-Mass det. time= 432.6 min (1,222.0 - 789.4)

Volume	Invert	Avail.Storage	Storage Description
#1	118.00'	2,513 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
118.00	595	0	0
119.00	592	594	594
120.00	946	769	1,363
121.00	1,355	1,151	2,513

Device	Routing	Invert	Outlet Devices
#1	Primary	118.00'	0.170 in/hr Exfiltration over Surface area
#2	Primary	118.75'	8.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.64 cfs @ 12.10 hrs HW=118.96' (Free Discharge)

1=Exfiltration (Exfiltration Controls 0.00 cfs)

2=Orifice/Grate (Weir Controls 0.64 cfs @ 1.49 fps)

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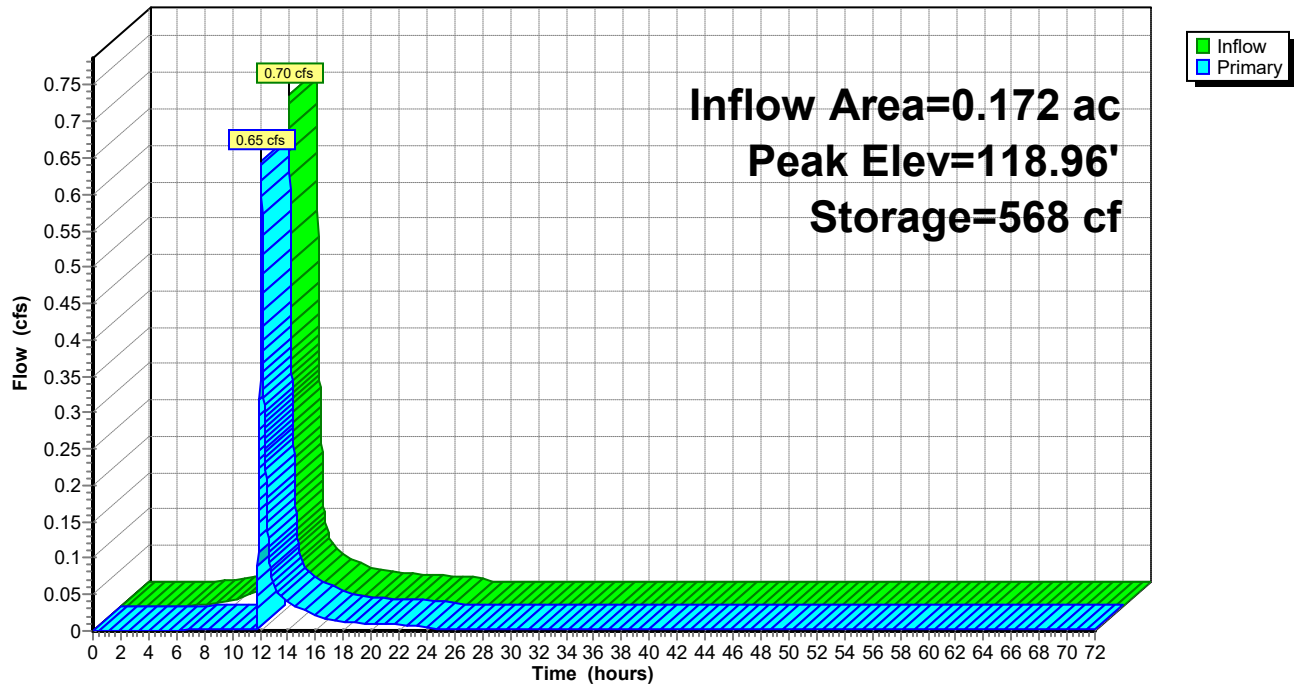
Oak Hill Proposed Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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Pond RG-1: Rain Garden

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr 10 yr Rainfall=4.50"

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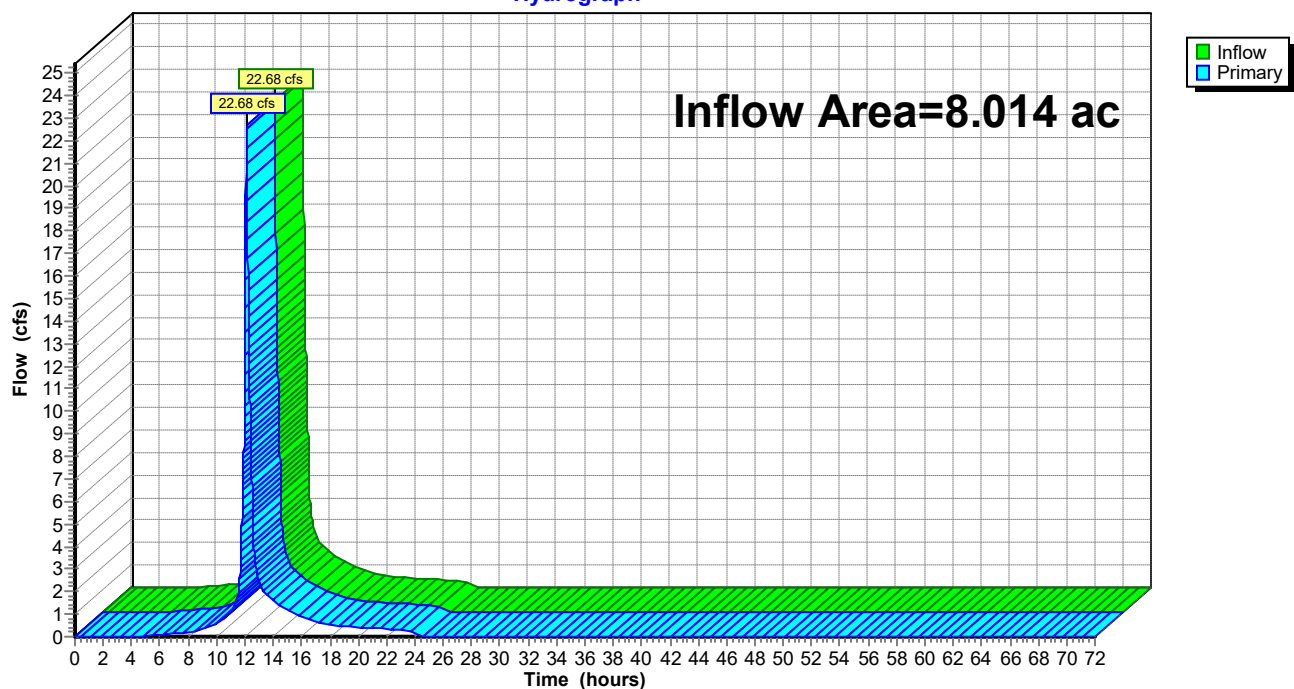
Summary for Link POA: POA-1

Inflow Area = 8.014 ac, 33.40% Impervious, Inflow Depth > 2.73" for 10 yr event
 Inflow = 22.68 cfs @ 12.12 hrs, Volume= 1.821 af
 Primary = 22.68 cfs @ 12.12 hrs, Volume= 1.821 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link POA: POA-1

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr 100 yr Rainfall=7.00"

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Summary for Subcatchment PWS-1: PWS-1 - Roof Addition

Runoff = 1.16 cfs @ 12.07 hrs, Volume= 0.085 af, Depth= 5.94"

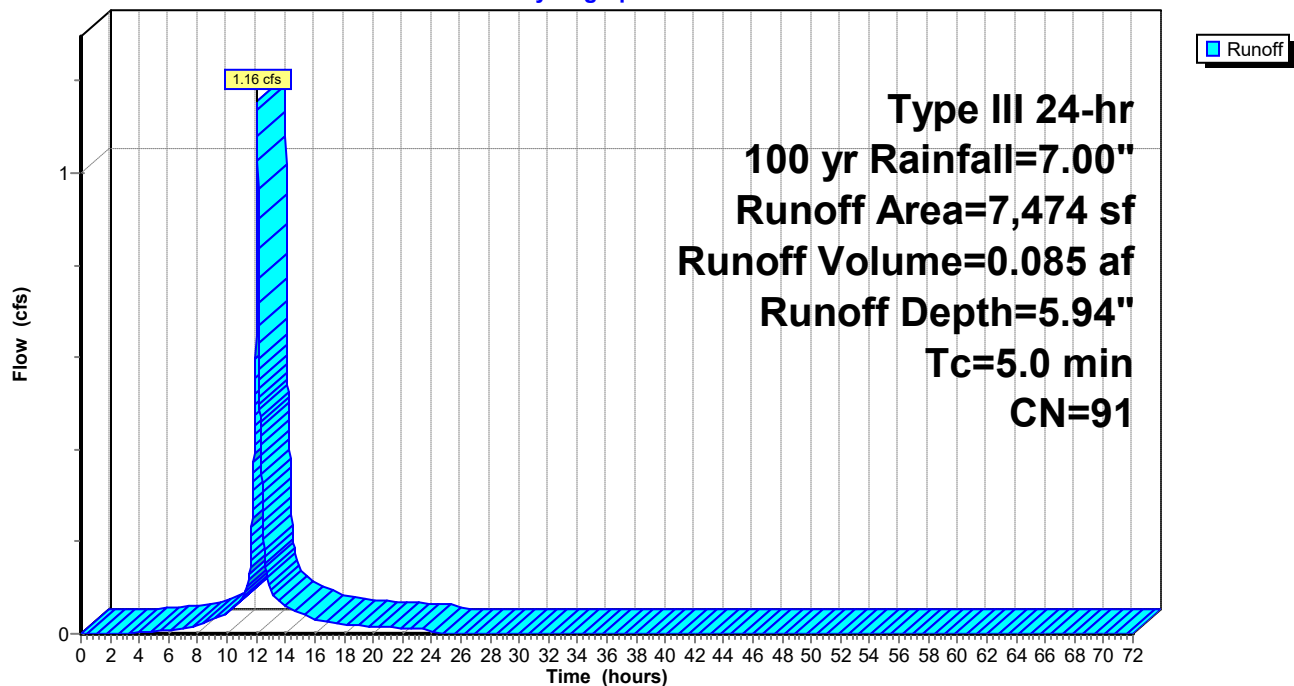
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 yr Rainfall=7.00"

Area (sf)	CN	Description
5,000	98	Roofs, HSG C
2,155	74	>75% Grass cover, Good, HSG C
319	98	Paved parking, HSG C
7,474	91	Weighted Average
2,155		28.83% Pervious Area
5,319		71.17% Impervious Area

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

Subcatchment PWS-1: PWS-1 - Roof Addition

Hydrograph



19109.00 Oak Hill Proposed DTB

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Oak Hill Proposed Watershed
Type III 24-hr 100 yr Rainfall=7.00"

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Summary for Subcatchment PWS-2: PWS-2

Runoff = 19.07 cfs @ 12.12 hrs, Volume= 1.608 af, Depth= 6.17"

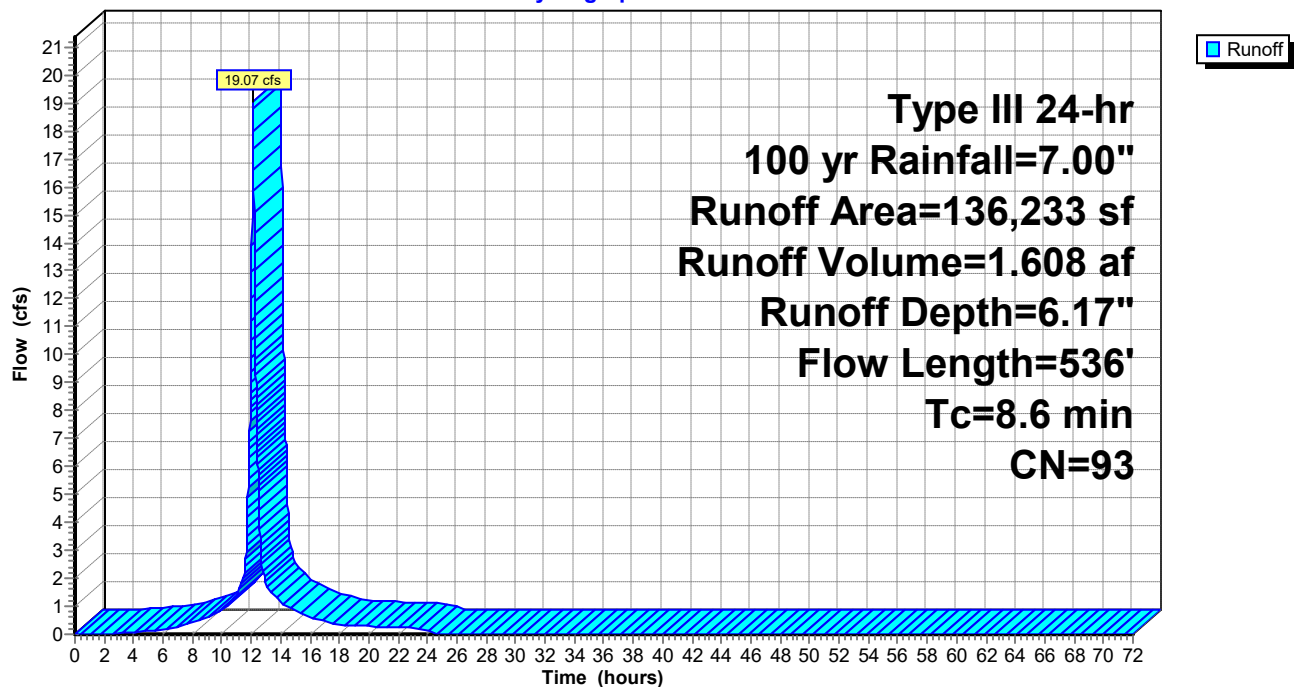
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 yr Rainfall=7.00"

Area (sf)	CN	Description
54,962	98	Roofs, HSG C
232	98	Paved parking, HSG C
49,986	98	Paved parking, HSG C
31,053	74	>75% Grass cover, Good, HSG C
136,233	93	Weighted Average
31,053		22.79% Pervious Area
105,180		77.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
1.7	19	0.0543	0.18		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.2	486	0.0107	1.55		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
8.6	536	Total			

Subcatchment PWS-2: PWS-2

Hydrograph



19109.00 Oak Hill Proposed DTB

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Oak Hill Proposed Watershed
Type III 24-hr 100 yr Rainfall=7.00"

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Summary for Subcatchment PWS-3: PWS-3

Runoff = 20.96 cfs @ 12.12 hrs, Volume= 1.630 af, Depth= 4.15"

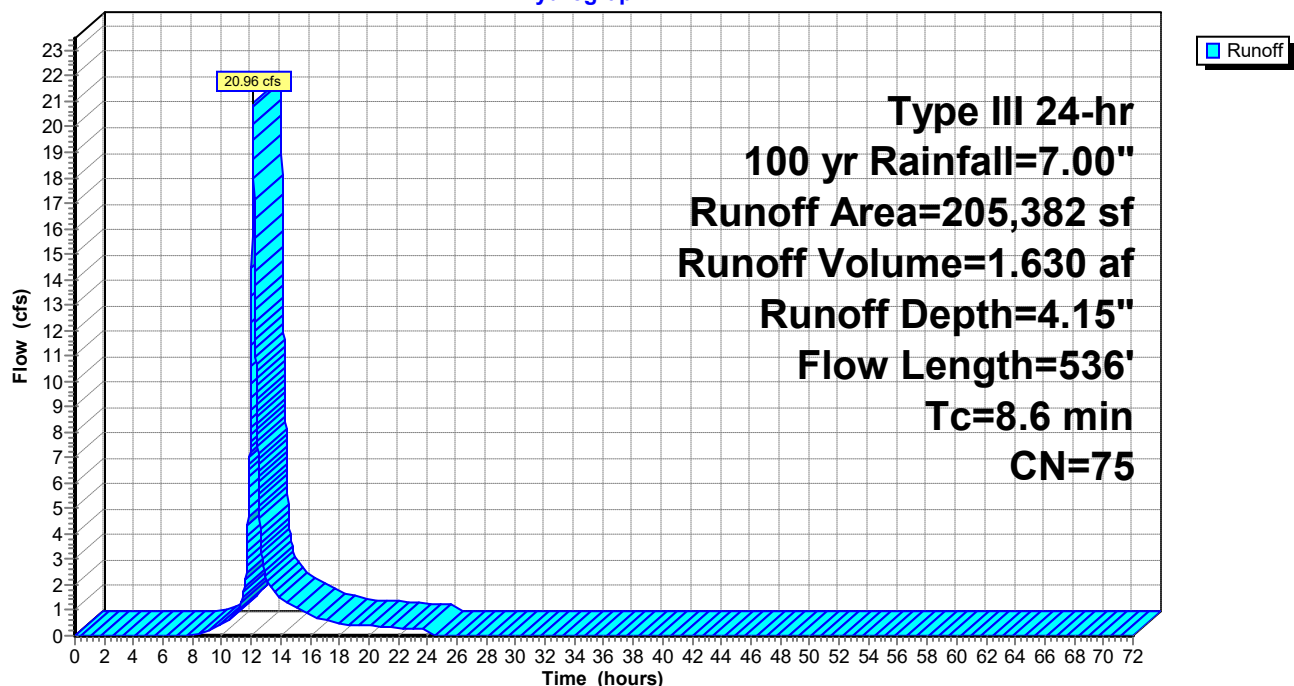
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 yr Rainfall=7.00"

Area (sf)	CN	Description
6,009	98	Paved parking, HSG C
75	98	Paved parking, HSG C
199,298	74	>75% Grass cover, Good, HSG C
205,382	75	Weighted Average
199,298		97.04% Pervious Area
6,084		2.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
1.7	19	0.0543	0.18		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.2	486	0.0107	1.55		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
8.6	536	Total			

Subcatchment PWS-3: PWS-3

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr 100 yr Rainfall=7.00"

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Summary for Pond RG-1: Rain Garden

Inflow Area = 0.172 ac, 71.17% Impervious, Inflow Depth = 5.94" for 100 yr event
 Inflow = 1.16 cfs @ 12.07 hrs, Volume= 0.085 af
 Outflow = 0.95 cfs @ 12.12 hrs, Volume= 0.084 af, Atten= 18%, Lag= 3.1 min
 Primary = 0.95 cfs @ 12.12 hrs, Volume= 0.084 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 119.07' @ 12.12 hrs Surf.Area= 617 sf Storage= 647 cf

Plug-Flow detention time= 273.3 min calculated for 0.084 af (99% of inflow)

Center-of-Mass det. time= 266.0 min (1,041.5 - 775.5)

Volume	Invert	Avail.Storage	Storage Description
#1	118.00'	2,513 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
118.00	595	0	0
119.00	592	594	594
120.00	946	769	1,363
121.00	1,355	1,151	2,513

Device	Routing	Invert	Outlet Devices
#1	Primary	118.00'	0.170 in/hr Exfiltration over Surface area
#2	Primary	118.75'	8.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.95 cfs @ 12.12 hrs HW=119.07' (Free Discharge)

1=Exfiltration (Exfiltration Controls 0.00 cfs)

2=Orifice/Grate (Orifice Controls 0.95 cfs @ 2.72 fps)

19109.00 Oak Hill Proposed DTB

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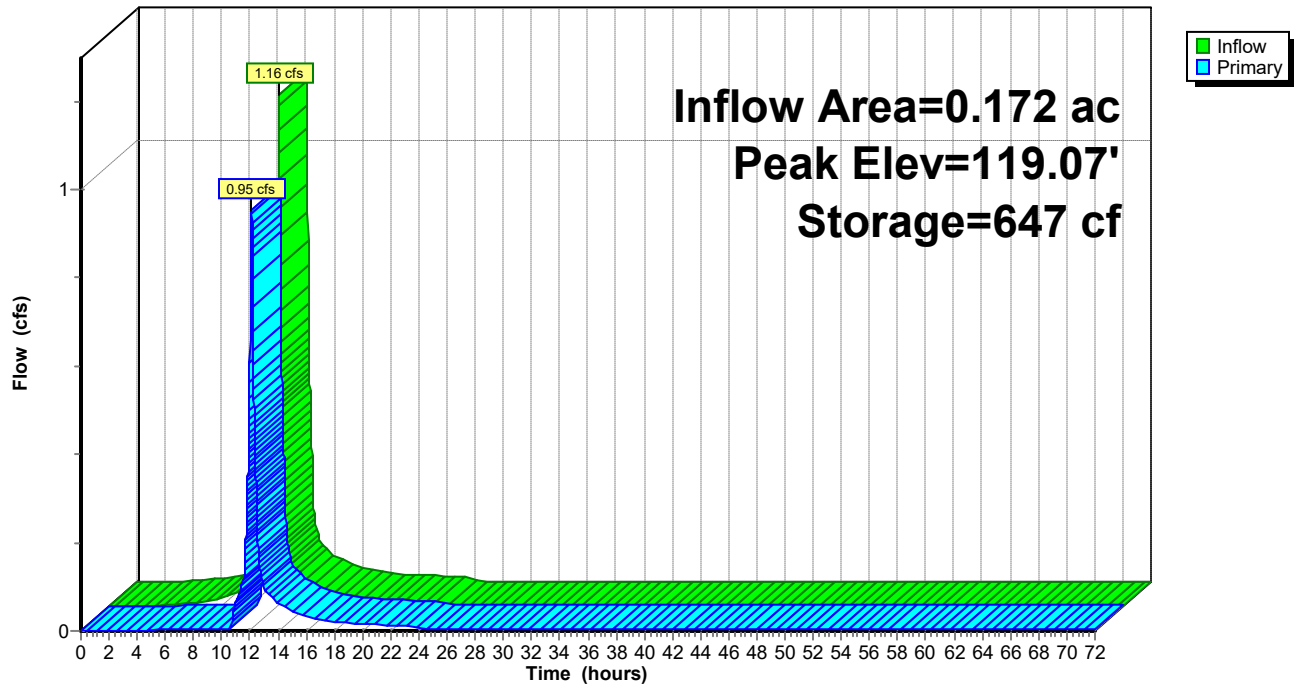
Oak Hill Proposed Watershed
Type III 24-hr 100 yr Rainfall=7.00"

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Pond RG-1: Rain Garden

Hydrograph



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Oak Hill Proposed Watershed
Type III 24-hr 100 yr Rainfall=7.00"

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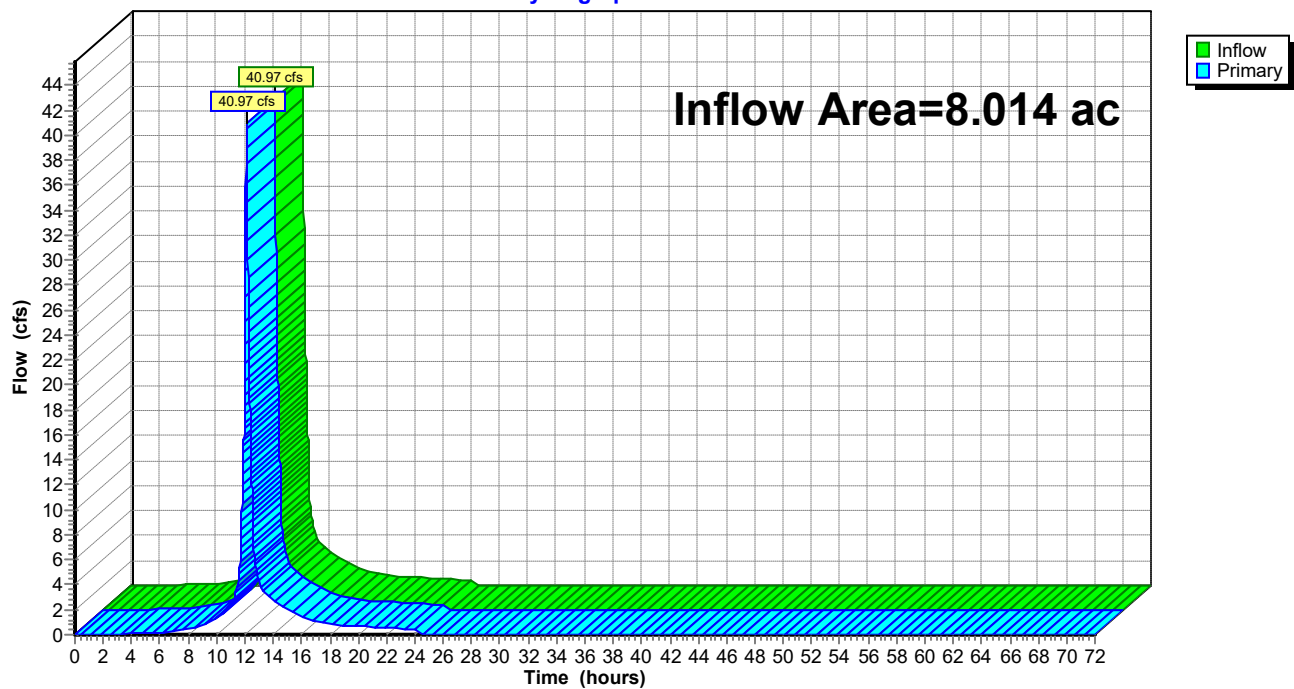
Summary for Link POA: POA-1

Inflow Area = 8.014 ac, 33.40% Impervious, Inflow Depth = 4.98" for 100 yr event
 Inflow = 40.97 cfs @ 12.12 hrs, Volume= 3.323 af
 Primary = 40.97 cfs @ 12.12 hrs, Volume= 3.323 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link POA: POA-1

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr Newton-8.78" Rainfall=8.78"

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Summary for Subcatchment PWS-1: PWS-1 - Roof Addition

Runoff = 1.48 cfs @ 12.07 hrs, Volume= 0.110 af, Depth= 7.70"

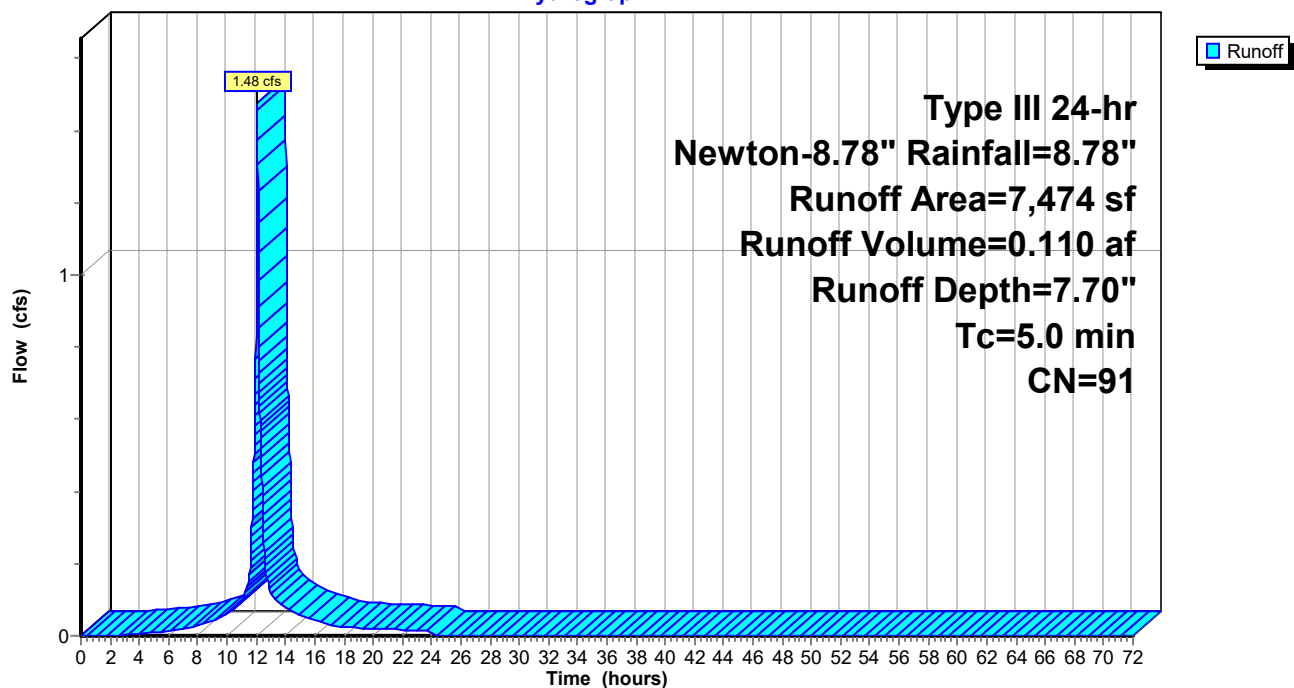
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr Newton-8.78" Rainfall=8.78"

Area (sf)	CN	Description
5,000	98	Roofs, HSG C
2,155	74	>75% Grass cover, Good, HSG C
319	98	Paved parking, HSG C
7,474	91	Weighted Average
2,155		28.83% Pervious Area
5,319		71.17% Impervious Area

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

Subcatchment PWS-1: PWS-1 - Roof Addition

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr Newton-8.78" Rainfall=8.78"

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Summary for Subcatchment PWS-2: PWS-2

Runoff = 24.20 cfs @ 12.12 hrs, Volume= 2.069 af, Depth= 7.94"

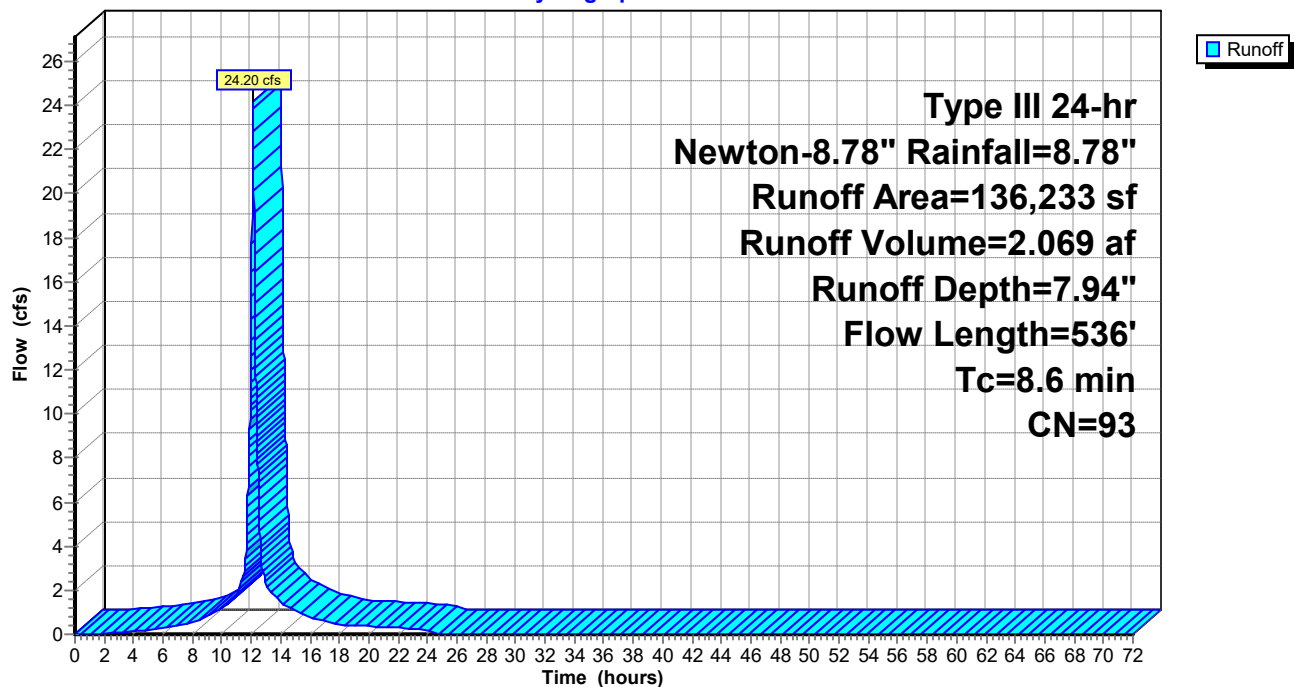
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr Newton-8.78" Rainfall=8.78"

Area (sf)	CN	Description
54,962	98	Roofs, HSG C
232	98	Paved parking, HSG C
49,986	98	Paved parking, HSG C
31,053	74	>75% Grass cover, Good, HSG C
136,233	93	Weighted Average
31,053		22.79% Pervious Area
105,180		77.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
1.7	19	0.0543	0.18		Sheet Flow, Grass Short Sheet Grass: Short n= 0.150 P2= 3.20"
5.2	486	0.0107	1.55		Shallow Concentrated Flow, Field Grassed Waterway Kv= 15.0 fps
8.6	536	Total			

Subcatchment PWS-2: PWS-2

Hydrograph



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Oak Hill Proposed Watershed

Type III 24-hr Newton-8.78" Rainfall=8.78"

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Summary for Subcatchment PWS-3: PWS-3

Runoff = 28.88 cfs @ 12.12 hrs, Volume= 2.260 af, Depth= 5.75"

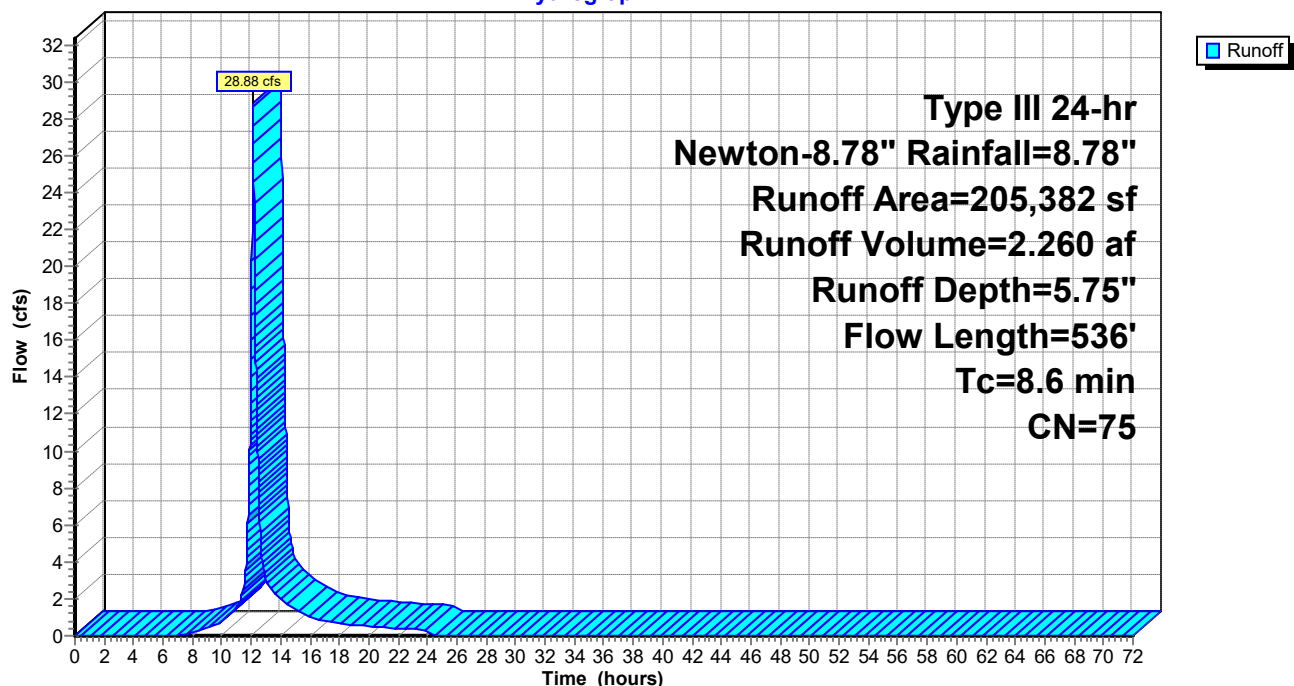
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr Newton-8.78" Rainfall=8.78"

Area (sf)	CN	Description
6,009	98	Paved parking, HSG C
75	98	Paved parking, HSG C
199,298	74	>75% Grass cover, Good, HSG C
205,382	75	Weighted Average
199,298		97.04% Pervious Area
6,084		2.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	31	0.1490	0.30		Sheet Flow, Sheet
					Grass: Short n= 0.150 P2= 3.20"
1.7	19	0.0543	0.18		Sheet Flow, Grass Short Sheet
					Grass: Short n= 0.150 P2= 3.20"
5.2	486	0.0107	1.55		Shallow Concentrated Flow, Field
					Grassed Waterway Kv= 15.0 fps
8.6	536	Total			

Subcatchment PWS-3: PWS-3

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr Newton-8.78" Rainfall=8.78"

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Summary for Pond RG-1: Rain Garden

Inflow Area = 0.172 ac, 71.17% Impervious, Inflow Depth = 7.70" for Newton-8.78" event
 Inflow = 1.48 cfs @ 12.07 hrs, Volume= 0.110 af
 Outflow = 1.12 cfs @ 12.13 hrs, Volume= 0.109 af, Atten= 24%, Lag= 3.8 min
 Primary = 1.12 cfs @ 12.13 hrs, Volume= 0.109 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 119.19' @ 12.13 hrs Surf.Area= 660 sf Storage= 740 cf

Plug-Flow detention time= 217.0 min calculated for 0.109 af (99% of inflow)

Center-of-Mass det. time= 211.0 min (980.1 - 769.1)

Volume	Invert	Avail.Storage	Storage Description
#1	118.00'	2,513 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
118.00	595	0	0
119.00	592	594	594
120.00	946	769	1,363
121.00	1,355	1,151	2,513

Device	Routing	Invert	Outlet Devices
#1	Primary	118.00'	0.170 in/hr Exfiltration over Surface area
#2	Primary	118.75'	8.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.12 cfs @ 12.13 hrs HW=119.19' (Free Discharge)

1=Exfiltration (Exfiltration Controls 0.00 cfs)

2=Orifice/Grate (Orifice Controls 1.12 cfs @ 3.20 fps)

19109.00 Oak Hill Proposed DTB

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Oak Hill Proposed Watershed

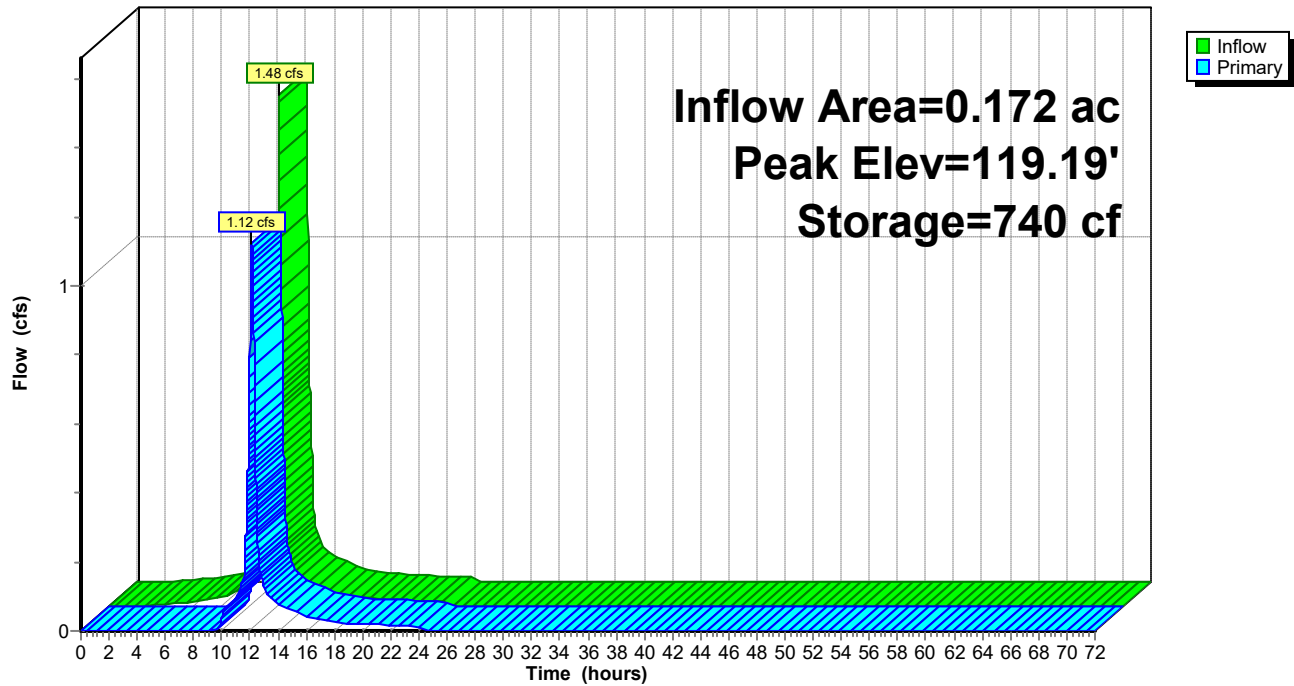
Type III 24-hr Newton-8.78" Rainfall=8.78"

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Pond RG-1: Rain Garden

Hydrograph



19109.00 Oak Hill Proposed DTBOak Hill Proposed Watershed
Type III 24-hr Newton-8.78" Rainfall=8.78"

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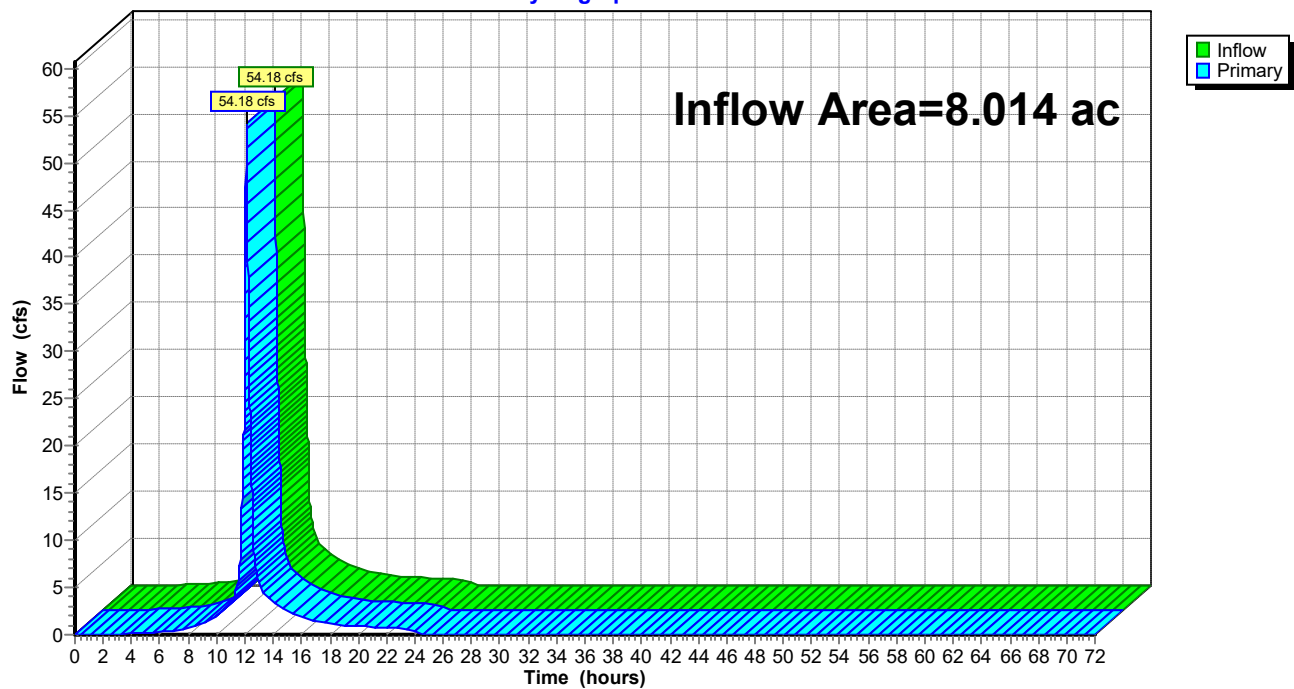
Summary for Link POA: POA-1

Inflow Area = 8.014 ac, 33.40% Impervious, Inflow Depth = 6.64" for Newton-8.78" event
 Inflow = 54.18 cfs @ 12.12 hrs, Volume= 4.437 af
 Primary = 54.18 cfs @ 12.12 hrs, Volume= 4.437 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link POA: POA-1

Hydrograph



**Oak Hill Middle School
Newton, MA**

MA DEP Standard 3: Recharge Volume Calculations

Required Recharge Volume - A Soils (0.6 in.)	
Existing Site Impervious Area (acres)	0
Proposed Site Impervious Area (Acres)	0.00
Proposed Increase in Site Impervious Area (Acres)	0.00
Proposed Increase in Site Impervious Area (SF)	0
Recharge Volume Required (CF)	0

Required Recharge Volume - B Soils (0.35 in.)	
Existing Site Impervious Area (acres)	0.00
Proposed Site Impervious Area (Acres)	0.00
Proposed Increase in Site Impervious Area (Acres)	0.00
Proposed Increase in Site Impervious Area (SF)	0
Recharge Volume Required (CF)	0

Required Recharge Volume - C Soils (0.25 in.)	
Existing Site Impervious Area (acres)	2.58
Proposed Site Impervious Area (Acres)	2.677
Proposed Increase in Site Impervious Area (Acres)	0.097
Proposed Increase in Site Impervious Area (SF)	4,225
Recharge Volume Required (CF)	88

Required Recharge Volume - D Soils (0.10 in.)	
Existing Site Impervious Area (acres)	0
Proposed Site Impervious Area (Acres)	0
Proposed Increase in Site Impervious Area (Acres)	0
Proposed Increase in Site Impervious Area (SF)	0
Recharge Volume Required (CF)	0

Total Recharge Volume Required (CF)	88
--	-----------

Recharge Volume Adjustment Factor	
Impervious Area Directed to Infiltration BMP (Acres)	2.667
%Impervious Directed to Infiltration BMP	100%
Adjustment Factor	1.0
Adjusted Total Recharge Volume Required (CF)	88

Provided Recharge Volume*	
Rain Garden -1 (CF)	445

Oak Hill Middle School
Newton, MA

MA DEP Standard 3: Drawdown Time Calculations

Drawdown Time - Rain Garden -1	
Volume below outlet pipe (Rv) (CF)	445
Soil Type	C - Sandy Loam/Fill
Infiltration rate (K)	0.17
Bottom Area (SF)	595
Drawdown time (Hours)	52.8

Drawdown time = $R_v / (K \times \text{bottom area})$

Infiltration Rates taken from Rawls Table

**Oak Hill Middle School
Newton, MA**

MA DEP Standard 4: Water Quality Volume Calculations

Water Quality Volume Required	Rain Garden -1 (Node RG-1)
Water Quality Volume (in.)	1.0
Total Post Development Impervious Area (SF)	5,319
Required Water Quality Volume (CF)	443
Water Quality Volume Provided (CF)*	445

Water Quality Volume Required	0
Water Quality Volume (in.)	0.0
Total Post Development Impervious Area (SF)	0
Required Water Quality Volume (CF)	0
Water Quality Volume Provided (CF)*	0

Water Quality Volume Required	0
Water Quality Volume (in.)	0.0
Total Post Development Impervious Area (SF)	0
Required Water Quality Volume (CF)	0
Water Quality Volume Provided (CF)*	0

Water Quality Volume Required	0
Water Quality Volume (in.)	0.0
Total Post Development Impervious Area (SF)	0
Required Water Quality Volume (CF)	0
Water Quality Volume Provided (CF)*	0

Required Water Quality Volume TOTAL (CF)	443
Water Quality Volume Provided (CF)*	445

Volume at lowest outlet orifice - See Stage Storage Chart in Appendix of Stormwater Report
Includes roof area

**OAK HILL MIDDLE SCHOOL
CONSTRUCTION PERIOD POLLUTION PREVENTION PLAN AND EROSION CONTROL
OPERATION AND MAINTENANCE PLAN
April 2020**

During the Construction Period the General Contractor shall be responsible for the following:

1. Erosion Control

Erosion control barriers will be placed along down-gradient portion of the site & at the limit of work as indicated on the project plans. Additional erosion control barriers will be placed at the limit of work as needed and in any sensitive areas as work progresses.

A stockpile of additional erosion control barriers shall be kept on site at all times

2. Site Access

Site access, for construction equipment will be from Wheeler Road as shown on the Construction Sequencing Plan, and a construction entrance will be installed at the onset of the project.

3. Construction Staging

A construction staging area will be established outside any jurisdictional buffer area, if applicable, per the construction sequencing plan.

4. Site Grading/Site Work

The site activities may only commence when the site is stable from erosion and all required control measures are in place and functional.

5. Slope Stabilization

All surfaces and slopes shall be checked after each major storm event and at *least once every (7 calendar days or within 24 hours of the occurrence of a storm event 0.25 inches or greater)* to see that vegetation is in good condition. Any rills or damage from erosion shall be repaired immediately to avoid further damage. If seeps develop on the slopes, the area will be evaluated to determine if the seep will cause an unstable condition and shall be stabilized immediately if necessary. Problems found during the inspections by the General Contractor shall be repaired promptly. Areas requiring re-vegetation shall be replanted immediately or stabilized in a manner acceptable to the Conservation Commission if it is outside of the growing season. Slopes and other exposed surfaces receiving vegetation will be maintained as necessary to support healthy vegetation. If stabilization is required during the non-growing season, straw mulch, or a commercially manufactured blanket must be employed to prevent erosion.

6. Permanent Stabilization

Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later than 14 days after the last construction activity. The permanent seed mix, fertilizer, and mulch shall be specified on the project plans. Permanent seeding shall occur in the Spring or Fall.

7. Drainage Structures (Area drains)

All structures shall be inspected on a bi-weekly basis and/or after every rain storm and repairs made as necessary. Sediment shall be removed from the sump after the sediment has reached a maximum of one half the depth of the sump. The sediment shall be removed from the site and properly disposed of. Drainage

structures/sumps shall be cleaned completely at the end of construction. See manufacture requirements for infiltration structures and WQU Operation & Maintenance.

8. Dust and Sediment Control

Siltsacks:

Catch basin / area drain filters shall be placed at all inlets to drainage structures as structures are installed and prior to pavement removal. Outlet protection work shall be constructed before runoff is allowed to enter the drainage system. Construction and location of catch basin filters shall be as indicated on the Drawings at a minimum and as needed.

Straw Wattle Filter Socks:

Straw Wattle filter socks shall be installed as indicated on the Drawings.

Straw Wattle filter socks shall be placed in a row with ends tightly abutting the adjacent filter sock. Each filter sock shall be securely anchored in place by 2 stakes or re-bars driven through the filter sock. The first stake in each filter sock shall be angled toward the previously laid filter sock to force the compost filter socks together.

Construction Entrance:

The area of the construction entrance should be cleared of all vegetation, roots, and other objectionable material. The filter fabric should be placed on the subgrade prior to the gravel placement. The gravel shall be placed to the specified dimensions depicted on the plans.

The Construction entrance shall be a minimum of 50-feet in length and 24-feet wide.

Dust Control:

A mechanical street sweeper shall be utilized to clean the existing paved areas on an as-needed basis.

For emergency control of dust apply water to affected areas. The source of supply and the method of application for water are the responsibility of the contractor.

9. Allowable Non-Stormwater Discharges

No illicit discharge allowed per stormwater management policy requirement #10.

Type of Allowable Non-Stormwater Discharge:

- Discharges from emergency fire-fighting activities
- Fire hydrant flushing's
- Landscape irrigation
- Waters used to wash vehicles and equipment
- Water used to control dust
- Potable water including uncontaminated water line flushing's
- Routine external building wash down
- Pavement wash waters
- Uncontaminated air conditioning or compressor condensate
- Uncontaminated, non-turbid discharges of ground water or spring water
- Foundation or footing drains
- Construction dewatering water

Pollution Prevention Measures

1. Before, during, and after construction, functional erosion and sedimentation controls shall be implemented to prevent the silting of the wetland areas down-gradient of the site. Straw wattles, crushed stone, temporary stabilization and other controls shall be properly maintained and are not to be removed until the site is permanently stabilized. Other controls shall be added as warranted during construction to protect environmentally-sensitive areas. Sufficient extra materials (e.g. straw wattles and other control materials) shall be stored on site for emergencies.
2. Silt sacks and straw wattle check dams shall be installed at all existing and proposed infiltration areas to protect from soils and sediment.
2. Casting of excavated materials shall be stored away from wetland areas and sensitive land areas.
3. Any stockpiling of loose materials shall be properly stabilized to prevent erosion and siltation. Preventative controls such as straw wattles, temporary seeding/mulching and jute covering shall be implemented to prevent such an occurrence.
4. There shall be no flooding, ponding, or flood related damage caused by the project or surface run-off emanating from the project on lands of an abutter, nearby or down-gradient of the site.
5. There shall be no contaminant migration caused by the project to nearby and down-gradient properties, nearby aquifers, and nearby resource areas.
6. The contractor shall make sufficient provisions to control any unexpected drainage and erosion conditions that may arise during construction that may create damage on abutting properties. Said control measures are to be implemented at once.
7. During construction flood prevention, erosion, and sedimentation controls shall be in place before the natural ground cover is disturbed. Said controls shall be in place prior to other construction work and shall be monitored and approved by the Contractor. They shall be properly maintained and are not to be removed until the site is stabilized.
8. The Contractor shall designate a person or persons to inspect and supervise the erosion controls for the project. The Conservation Commission shall be notified as to the means to contact said individual or individuals on a 24-hour basis on all working and non-working days of the project. Said means of contact shall include at least 2 separate telephone number of said designated person or persons.
9. There shall be periodic inspections (All soil erosion controls shall be checked after each major storm event and *at least once every (7 calendar days or within 24 hours of the occurrence of a storm event 0.25 inches or greater)* of straw wattles, and other erosion controls by the Contractor's Designee to assure their continued effectiveness.
10. The Contractor shall make adequate provisions for controlling erosion and sediment from activities that might yield water at high volumes with high suspended solid contents, such as dewatering excavations.
11. Street sweeping shall be used to keep public ways free and clear of sediment and dirt from the site activities.
12. Throughout the construction period the Contractor shall carry on an active program for the control of fugitive dust within all site construction zones, or areas disturbed as a result of construction with the use of water truck and/or fire hose to apply water to the construction area.

Other Control Measures

Waste Materials. All trash and construction debris from the site will be hauled to an approved landfill or recycling facility. No construction waste material will be buried on the site. All personnel will receive instructions regarding the correct procedure for waste disposal. Notices describing these practices will be posted in the construction office. The site superintendent will be responsible for seeing that these procedures are followed. Employee waste and other loose materials will be collected so as to prevent the release of floatables during rainfall events.

Hazardous Waste. No Hazardous materials are expected to be encountered. The mandated State and Local permits for removal of such materials, if located, will be implemented when such materials are encountered.

After Construction Minuteman (the Owner) shall be responsible for the following:

General Land Grading and Slopes Stabilization

All surfaces and slopes shall be checked bi-annually to see that vegetation is in good condition. Any rills or damage from erosion shall be repaired immediately to avoid further damage. If seeps develop on the slopes, the area will be evaluated to determine if the seep will cause an unstable condition and shall be stabilized immediately if necessary. Problems found during the inspections by the Owner shall be repaired promptly. Areas requiring re-vegetation shall be replanted immediately. Slopes and other exposed surfaces receiving vegetation will be maintained as necessary to support healthy vegetation.

Areas of steep slopes (2.5:1 or greater) shall be stabilized using jute mesh or a similar approved erosion blanket.

Erosion Controls

Erosion controls shall not be removed or dismantled without approval from the Engineer. Sediment deposits that are removed or left in place after the barriers have been dismantled shall be graded manually to conform to the existing topography and vegetated using seeding or other long-term cover as approved in the Landscape Plan. Bare ground that cannot be permanently stabilized within 30 days shall be stabilized by temporary measures.

Street Sweeping

It is proposed that the parking and drive areas be swept with a wet brush street sweeper on a semi-annual basis, with at least two sweepings per year. One sweep shall be done at the end of the winter season (prior to the heavy rains), and the other sweep at the end of autumn (prior to snowfall).

Stormwater Management System

Catch Basins, Drain Manholes:

The catch basins, drain manholes, and drywells shall be inspected annually, and cleaned out when sumps are approximately one foot full. The use of "clam shells" for sediment removal shall not be allowed; a vacuum truck shall be the approved method of cleaning. Integrity and functionality of oil hoods shall also be checked at the time of the inspection.

Trash/Debris Removal: Remove accumulated trash and debris prior to mowing.

Sediment Removal: Check on a yearly basis and clean as needed. Use hand methods (i.e., a person with a shovel) when cleaning to minimize disturbance to vegetation and underlying soils. Sediment build-up in the grass channel reduces its capacity to treat and convey the water quality event, 2-year, and 10-year 24-hour storm.

Rain Garden:

For the first year inspect soil and repair eroded areas monthly. Re-mulch void areas as needed. Remove litter and debris monthly. Treat diseased vegetation as needed. Remove and replace dead vegetation twice per year (spring and fall).

Proper selection of plant species and support during establishment of vegetation should minimize—if not eliminate—the need for fertilizers and pesticides. Remove invasive species as needed to prevent these species from spreading into the rain garden area. Upon failure, excavate rain garden area, scarify bottom and sides, replace filter fabric and soil, replant, and mulch. **Never store snow in Rain Garden areas.**

Because the soil media filters contaminants from runoff, the cation exchange capacity of the soil media will eventually be exhausted. When the cation exchange capacity of the soil media decreases, change the soil media to prevent contaminants from migrating to the groundwater, or from being discharged via an underdrain outlet. The cation exchange capacity governs the ability of the soil to hold nutrients that are crucial to plant health. It is recommended the soil media should be replaced every 10 years or when the plants are showing signs of stress and nutrient deficiency. Using small shrubs and plants instead of larger trees will make it easier to replace the media with clean material when needed. Plant maintenance is critical. Concentrated salts in roadway runoff may kill plants, necessitating removal of dead vegetation each spring and replanting.

Rain Garden Maintenance Schedule:

Activity	Time of Year	Frequency
Inspect and remove trash	Year round	Monthly
Mulch	Spring	Annually
Remove dead vegetation	Fall or spring	Annually
Replace dead vegetation	Spring	Annually
Prune	Spring or fall	Annually

Annual Records Requirements

For a minimum of the first three (3) years the responsible parties (Minuteman) must retain records of annual maintenance and inspection reports of the inspection and maintenance of the BMPs for which they are responsible.

The report must include:

- A.) Descriptions of the condition of the BMPs.
- B.) Descriptions of maintenance performed.
- C.) Receipts showing payment for the maintenance performed.

INSPECTION REPORT FORM FOR STORM WATER SYSTEM

Project: Oak Hill Middle School

INSPECTOR: _____ DATE: _____

Regular Inspection: ☐

Inspection after Rainfall: ☐ Amount of Rainfall: _____ inches

BMP	Functioning Correctly	Notes/Action Taken
	Y/N	
	Y/N	
	Y/N	
	Y/N	
	Y/N	
	Y/N	
	Y/N	

Additional Observations: _____

Action Required: _____

To be performed by: _____ On or Before: _____

Final Label Report

#234-20

SBL	Owner	Number	Street	Unit
81006 0009	NATANEL URI & INNA	263	ARNOLD RD	
81050 0020	JIH GUOR-CHIN & YIN-CHU	4	BRANDEIS CIR	
81050 0019	HOFFMAN ANDREW & MARLA	10	BRANDEIS CIR	
81050 0014	MEDOFF DAVID & DONNA B	11	BRANDEIS CIR	
81050 0018	RESNICK MICHAEL M	16	BRANDEIS CIR	
81050 0015	GREEN ERIC & RHONDA J	19	BRANDEIS CIR	
81050 0017	LI ZHI	22	BRANDEIS CIR	
81050 0016	FINKELSTEIN EVAN	23	BRANDEIS CIR	
81051 0054	GLAZIER ARNOLD & MARYANN GASH	9	BRANDEIS RD	
81006 0004	TORDEV LLC	15	FOX HILL RD	
81006 0005	LEWIS CRAIG A	23	FOX HILL RD	
81006 0006	WORTH ROBERT J & AMY K TRS	31	FOX HILL RD	
81006 0007	LI YE	37	FOX HILL RD	
81006 0008	WESTVIEW PARTNERS LLC	45	FOX HILL RD	
81011A0027	MALINSKY YUVAL & DAPHNA	18	JANE RD	
81051 0044	RAMADURAI MURALI & SUJATHA M	83	LITTLEFIELD RD	
81005 0008	LEE CHAO-MIN	84	LITTLEFIELD RD	
81051 0045	HOFFMAN STEVEN L & SALLY L TR	91	LITTLEFIELD RD	
81005 0009	MOSYAK ALEXANDER & LIDIA	92	LITTLEFIELD RD	
81051 0045A	LOCHEN ERLEND	99	LITTLEFIELD RD	
81005 0010	ALLEN SUSAN D	100	LITTLEFIELD RD	
81006 0003	YAO NA	118	MEADOWBROOK RD	
81050 0014A	WANG CHAO	51	PARKER TER	
81051 0053	WANG ZHENRONG	60	PARKER TER	
81011A0011	BARATZ MICHAEL	5	SHARPE RD	
81006 0012	8 SHARPE RD LLC	8	SHARPE RD	
81011A0010	RABADJIJA MIRJANA	15	SHARPE RD	
81006 0011	RHEE EDDIE & KATHERINE	16	SHARPE RD	
81006 0010	WEN BO	22	SHARPE RD	
81050 0010	RAKHIT NILANJANA	5	SHUMAN CIR	
81050 0009	ROAZEN DIANE	15	SHUMAN CIR	
81050 0008	KOVTUN STANISLAV	25	SHUMAN CIR	
81011A0025	SHI GUO-PING	5	VOSS TER	
81011A0013	HOLLOWELL ROBERT P III	10	VOSS TER	
81011A0024	LEVINE IGOR & ALLA	15	VOSS TER	
81011A0014	NANDA ASHISH	16	VOSS TER	
81011A0023	ZHANG XU	21	VOSS TER	
81011A0015	ZHANG JIANWEI	22	VOSS TER	
81050 0011	VOLDMAN GUERCH & NORA	44	WHEELER RD	
81050 0012	BULIS ALEX & NILI	50	WHEELER RD	
81011A0026	BIRNSTENGEL JOHN S	55	WHEELER RD	
81050 0013	SHUHAIBER JEFFREY	58	WHEELER RD	
81011A0012	REGELMAN YAKOV & LYUBOV	79	WHEELER RD	

(f) No voting member of the design review committee shall hold an elected or salaried position with the city.

(g) All members shall serve without compensation and all voting members shall be residents of the city. All members shall serve until their successors take office.

(h) The two (2) voting members who are community representatives shall vote only on those matters concerning facilities for which they are appointed. (Rev. Ords. 1973, § 2-363; Ord. No. 8, 8-12-74; Ord. No. 190, 12-20-76; Ord. No. S-301, 2-1-88)

Sec. 5-57. Other provisions.

Any public corporation, agency, authority, commission or body of any such private organization which is empowered to construct a public or quasi-public facility within the city and which desires to submit itself to the jurisdiction of the design review committee, may enter into an agreement, in writing, with the city for this purpose, and thereafter the design review committee shall perform all of its functions and duties with respect to such facility. (Rev. Ords. 1973, § 2-364; Ord. No. 8, 8-12-74)

Sec. 5-58. Site plan approval for construction or modification of municipal buildings and facilities.

It shall be the policy of the city to apply similar standards of planning and control of density and environmental impact, when the city's public buildings and facilities are constructed or modified, as the city applies under chapter 30, Zoning, of the Revised Ordinances when petitions for changes in land use are initiated by its citizens or property owners. In implementing this policy for land in the public use district or otherwise classified city land, the prior establishment of a zoning classification or district (in accordance with section 30-4 of these Revised Ordinances) shall not be required.

(a) Whenever construction or modification of a municipal building or facility is undertaken which involves new construction or substantial change in usage, and which involves a change in: vehicular access; off-street parking requirements; site grading; drainage; landscape features; or service areas, the following procedures shall apply:

- (1) The executive department shall include in the architect's contract the requirement for preparation and submission of site plans suitable for review and approval in accordance with the procedure outlined in section 30-23 of these Revised Ordinances.
- (2) The department of planning and development shall maintain cognizance over the development of specifications, conceptual designs and site plans to determine the consistency and compatibility of such designs and plans with the city's comprehensive plan and other pertinent planning and analytical studies. The director of planning and development shall make written notification of this finding to the mayor, to the clerk of the board of aldermen, to the design review committee, and (in the case of school buildings) to the secretary of the school committee.
- (3) The design review committee shall consider the project plans, designs, and specifications not only in terms of the details of layout and construction of the building or facility, but also in terms of the site and its surrounding area. Consultations shall be made with such city departments and neighborhood groups as are considered necessary and appropriate.
- (4) Upon its approval of the initial design concept and prior to recommending that the project proceed to the detailed design phase and to the preparation of construction drawings, the design review committee shall file with the clerk of the board of aldermen its approved site plan including building floor plans and architectural schematics, along with a formal petition for site plan approval in accordance with the procedure outlined in

section 30-23 of these Revised Ordinances. The design review committee shall not be required to pay a filing fee for purposes of this section.

(5) At the earliest opportunity, the board of aldermen shall for the purposes of this section assign that petition for public hearing before its committee dealing with matters of public buildings and this committee shall hold a public hearing. Due notice of such public hearing shall be given to the abutters of the proposed building or facility and to the abutters of such abutters. The committee shall deliberate and negotiate such changes to the site plan and affix such restrictions and conditions as are in the public interest, and it shall make its report to the board of aldermen within forty-five (45) days following the public hearing.

(6) The site plan, including building floor plans and architectural schematics, as formally approved by the board of aldermen and the mayor (and in the case of school buildings, by the school committee) shall become part of the final set of project plans and construction drawings, and they shall not be changed or altered in any manner without first being resubmitted to the design review committee and to the board of aldermen in accordance with steps (3), (4) and (5) above. The board of aldermen may waive a public hearing on a previously approved site plan if in its judgment the changes proposed are not of sufficient scope as to warrant a public hearing.

(b) The board of aldermen shall not approve an appropriation of any funds for preparation of detailed construction drawings for a project applicable under this section until the requirements of (a)(1) through (a)(6) above have been satisfied.

(c) The executive department shall not formally submit a project applicable under this section to competitive construction bid unless the requirements of (a)(1) through (a)(6) have been satisfied.

(d) The requirements of this section that are not otherwise required by law or by the charter may be waived in whole or in part by a two-thirds (2/3) vote of those members of the board of aldermen present and voting. (Rev. Ords. 1973, § 2-365; Ord. No. 8, 8-12-74; Ord. No. 102, § 4, 12-15-75; Ord. No. V-195, 9-22-98)



Ruthanne Fuller, Mayor
Josh Morse
Building Commissioner

CITY OF NEWTON, MASSACHUSETTS

PUBLIC BUILDINGS DEPARTMENT

52 ELLIOT STREET, NEWTON HIGHLANDS, MA 02461

Telephone (617) 796-1600
Facsimile (617) 796-1601
TDD/tty # (617) 796-1608

5/18/20

Re: Oak Hill Middle School Classroom Addition Project

The Oak Hill Middle School Classroom Addition Project started in the spring of 2019. Over the past year, Newton Public Schools, the School Committee, and the Public Buildings Department have presented this project as a 3-classroom addition multiple times to the City Council as follows:

6/13/19: Newton Public Schools and School Committee present their long-range facilities report and school enrollment report to the City Council. The Oak Hill project was discussed and described as a “3 classroom permanent exterior addition.”

10/7/19: Newton School Committee votes to approve the Oak Hill Classroom Addition Project as a “3 classroom permanent exterior addition.”

11/4/19: Newton School Committee votes to approve the CIP with specific discussion regarding the Oak Hill Project, confirming a “3 classroom permanent exterior addition.”

11/20/19: Newton Public Schools and the Public Buildings Department provided an update on the Oak Hill Middle School Classroom Addition Project to the Public Facilities Committee. This discussion included enrollment forecasting, discussion of development impacts, and confirmation of the project approach being appropriate based on the projected and future enrollment.

1/15/20: Newton Public Schools and School Committee present their long-range facilities report and school enrollment report to the City Council. The Oak Hill project was discussed and described as a “3 classroom permanent exterior addition.”

1/22/20: The Public Buildings Department presented an update on the Oak Hill Classroom Addition Project to the Public Facilities Committee as a “3 classroom permanent exterior addition.” This presentation included the site plan and schematic drawings.

At the request of the Design Review Committee, the Public Buildings Department evaluated the cost implications of making the single-story addition ready and capable of handling a second story in the future should the need arise. The estimated cost increase to make the structure capable of supporting a second-floor future addition was professionally estimated at \$251,340.

Ultimately, the School Committee, School Department, Public Buildings Department, and Administration did not, and do not, recommend making this additional investment for the following reasons:

1. Enrollment projections do not show a need for this investment.
2. Even if future Oak Hill enrollment increased beyond the capacity of the 3-classroom addition, Brown, Bigelow, and Day project a total enrollment decline of 215 students, or

- 9.14%, over the next 4 years. Therefore, future Oak Hill enrollment increases beyond current projections, would not be solved by adding more classrooms to Oak Hill, but rather through use of buffer zones and redistricting.
3. Oak Hill was designed as an elementary school. The gym, cafeteria, auditorium, library, and all support spaces are not large enough to support further increases in enrollment, nor the addition of future classrooms.
 4. Adding a second floor above the 3-classroom addition in the future would not be possible with staff or students in the classrooms below.
 5. The 4 modular classrooms were designed and constructed of materials designed to last much longer than the other modulares in Newton. These were constructed in 2010, and have at least 10 years left, but the manufacturer projects these units to last 30 years or more.
 6. Our goal for Oak Hill would be to take the modular classrooms offline in the future to alleviate the pressure that the enrollment will have on the rest of the support spaces in the school. Although enrollment is expected to remain stable around 700 students for the next 10 years, it is forecasted that a slow decline will occur at or around the end of that time period. This would allow for a slow withdrawal from the modular classroom use at Oak Hill.
 7. We do not have the \$251,340 available for this investment.
 8. If we had the \$251,340 available, this would not be the highest and best use of those funds.
 9. It is not clear that this would be the least costly way to add future classrooms to Oak Hill, even if they were needed. We would need to modify the heating, cooling, ventilation, plumbing, roof membrane, insulation, stormwater, lighting protection, and many other systems prior to erecting the second story in the future. Then there is the cost to construct a second story as opposed to working at grade. We have not performed a full cost analysis, as there is no projected demand for a second story, but even if there was, another single-story addition in the future may very well be less costly than building on top of a then occupied first floor. In short, there's a real good chance that if we were to spend this money, we may never build on top of the 3-classroom addition regardless of whether a future addition occurs or not.
 - 10. To change course this late in the design, we would not be able to meet the already aggressive project schedule, and the classrooms would not be ready for the students set to arrive in 15 months.**

Sincerely,



Josh Morse
Public Buildings Commissioner



Business, Finance and Planning

TO: Public Facilities Committee

FROM: Liam Hurley, Assistant Superintendent/Chief Financial & Administrative Officer
 Stephanie Gilman, Director of Planning and Sustainability
 Josh Morse, Public Building Commissioner
 John Harutunian, Principal, Oak Hill
 Katy Hogue, Director of Data Analysis and Enrollment Planning

DATE: May 27, 2020

RE: Oak Hill Three Classroom Addition

Oak Hill Background and Context

This memo provides context, background and clarification on the recommendation to proceed with a single-story three classroom addition at Oak Hill. Similar to all projects, the school and city worked in close collaboration in analyzing enrollment, timing, project funding/budget, as well as school and community impact before recommendations were made. Through the city's rigorous process and feasibility study, we analyzed numerous design options and made modifications as appropriate. We understand the commitment from the Design Review Committee (DRC) and City Council to take a long-term view of the Oak Hill addition and the request to consider making the project "second floor ready." This option has been thoroughly explored, and we continue to believe that our current proposal is the most optimal one. We look forward to more discussion this Wednesday night and will be ready to answer further questions.

The Oak Hill discussion began internally with enrollment projections in fall/winter 2018 and a spring 2019 presentation to the Mayor and her team about the need for additional classrooms at Oak Hill. Enrollment projections show an increase in students in the coming years that would significantly challenge the building given its current size and limitations. This is primarily due to the large enrollment growth at Zervas. Zervas is currently enrolled at 434 students and is projected to grow to 523 students by FY25. Although the other two feeder schools to Oak Hill (Memorial-Spaulding and Bowen) have projected enrollment declines, this is offset by Zervas' projected growth.

Oak Hill is currently enrolled at 632 students; it is projected to enroll around 700 students beginning in FY22 and then start to decline in FY26. The table below displays the current 10 year projection for Oak Hill:

<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>	<u>FY24</u>	<u>FY25</u>	<u>FY26</u>	<u>FY27</u>	<u>FY28</u>	<u>FY29</u>	<u>FY30</u>
632	674	695	705	711	710	692	687	685	677	667

Please note that we typically do not publish 10 year projections, given the larger variability associated with projections further in the future, due to the possibility of shifts in birth rates, enrollment decisions, and mobility patterns, among other factors that may occur in future years and are not yet captured in our enrollment projection methodology.

Oak Hill Progress to Date

Project design began in December of 2019 when Raymond Design Associates, Newton Public Schools and the Public Buildings Department started with the feasibility phase. We evaluated the program, challenged assumptions, asked about long-term needs, and ultimately settled on a 3-classroom single story permanent addition as the most appropriate and cost-effective means to meet the short-term and long-term needs of Oak Hill. From January to April 2020, several members of the working group presented to the Public Facilities Committee, Design Review Committee, mailed out 200 letters to abutters, and presented to the Oak Hill neighborhood, staff, and parent community via a Zoom meeting.

In March 2020, the Design Review Committee had questions regarding enrollment projections and potential future needs, and asked that we determine the cost implications of making the proposed addition capable of handling a future second floor addition. On April 6, the DRC approved the proposed site plan as part of the 5-58 process, but also recommended that consideration be given to making the project ready to accept a future second floor addition, in case the space was needed in the future to replace the existing 10 year old modular classrooms with permanent construction.

At the May 14th Public Facilities Committee 5-58 Site Plan Public hearing, Newton Public Schools and the Project Team presented the site plan and explained the rationale for the project approach and why we felt the added investment to make the addition capable of supporting a future second floor addition was not appropriate. The committee expressed overall support for the current plan but also recommended consideration of making the project second floor ready. The item passed 4-0-4 and was sent to the full City Council. On May 19, the City Council voted to send the project back to the Public Facilities Committee to get more information and to clarify and confirm the best path forward.

To summarize, after careful review of enrollment projections, site options, school programmatic needs, project timing and estimated costs, the determination was made to recommend proceeding with the one-story 3 classroom addition as the best path forward to meet the program and long term needs for the following reasons:

1. Oak Hill enrollment projections show an increase in enrollment at or slightly over 700 students for 6-7 years before beginning to decline.
2. The existing 4 modular classrooms are in very good condition and are likely to last 15-20 years, which coincides with the anticipated decline in enrollment at the school.
3. Permanent construction is preferable to modular construction and the proposed addition ties in and flows well from the existing building.
4. It does not make sense to spend more money to build more space than what is currently needed or known to be needed in the future.

Implications of Making the Project “Second Floor Ready”

The School and City analyzed these implications as described below.

Cost Impact

First, the costs to make the Oak Hill addition “second floor ready” are considerable and estimated to be an additional \$250,000 - \$500,000. The project team can speak in further detail on these estimates, but they can be broken down into the following areas: earth work, foundation, concrete, drainage, roof, structural steel, mechanical, electrical, plumbing, and fire protection, as well as additional soft costs for the architect and

engineer for the additional design and engineering work. This increase would put the project over the current budget. The project team has worked incredibly hard to stay within budget and to build the most cost effective and appropriate addition as possible, especially now, given the City's current uncertain financial situation.

Second, the current project envisions a few programmatic improvements, interior moves and renovations as "add/alternates" to create a flexible multipurpose room off of the existing cafeteria, to provide a larger fitness room off of the existing gym, and to create improved PE storage and office space. In summary, the currently designed project is already pushing the project budget to the limit. Given the current financial situation, we are incredibly mindful of the city budget.

Lastly, Josh and Alex have done some analysis and confirmed that if additional classrooms are required in the future, it would likely be more cost effective and less disruptive to build elsewhere on the site rather than adding a second floor. The attached documents from the Public Buildings Department provide additional detail and cost comparisons related to potential future construction.

Timing Impact

The timing of the project would also be delayed to make the space "second floor ready." The project is planned for a September 2021 completion, which is already an aggressive timeline. Making a substantial change to the plans now will undoubtedly delay the project by several months causing a significant challenge to the school to manage enrollment/class size in fall 2021. This delay would be due to the time required to make changes to the design documents and to go through the necessary City approval process for design, planning and funding approvals for the revised project design.

School Impact

Perhaps the single biggest concern for the Principal and School Department is the practical impact of building a second floor above three occupied classrooms. We would anticipate construction to be 15 to 18 months. It would not be feasible or safe to keep the staff and students in the three classrooms below during this construction window. Simply put, we would need to find an alternative solution or suitable location for these staff and students, which could mean additional modular or other temporary measures and the associated costs.

Long Range Enrollment Projection and District Plans:

As shown above, the long range enrollment projections show quick growth at Oak Hill followed by a decline. Although projections after the 5 year mark are more variable, as described previously, current demographic trends including birth rates and enrollment in public and private schools continue to show overall declines compared to prior years. Future projections at the middle and high school levels also tend to be more accurate than at the elementary levels, as they are based on students currently enrolled in our schools. The largest variability in our projections is in kindergarten, although the use of demographic trends helps stabilize this projection where available (for example, birth rate data for future years is not yet available but can be projected based on current trends).

Collectively, the School Department annually reviews our enrollment trends and updates our projections, and has used buffer zones to help balance enrollment and minimize overcrowding. We have used this process successfully and are committed to this process. We actively expanded Zervas' buffer zones this year (with the goal of balancing incoming Zervas students) and will look at other possible solutions in the future to balance enrollment at all of our schools. The use of the buffer zones for the feeder schools to Oak Hill is a strategy to slowly reduce the Oak Hill population and shift students to other middle schools as appropriate. Note that buffer zones are only utilized when students first enroll in the Newton Public Schools. Once enrolled, students follow the feeder pattern for their school; therefore, the use of buffer zones at the elementary level can result in changes in enrollment in future years at middle schools, but is not an immediate shift.

Summary:

The Design Review Committee and the City Council are spot on when it comes to questioning the long-range plan at Oak Hill. We have analyzed the option of making the addition “second floor ready” and do not believe it is needed or the best approach given the implications stated above. In closing, we don’t have a current or projected need for the second floor, but even if our projections are not correct and someday we do need to either replace the modular classrooms or add more capacity, placing these classrooms above the proposed addition will not be the optimal solution financially or logistically.

We look forward to the discussion.

	Option 1 - 5,000 sf over exist Single Story	Option 2 - NW 4,870 sf Single Story	Option 3 - NE 5,050 SF Single Story
Base Construction	\$1,846,800.00	\$1,834,553.00	\$2,142,713.00
Demolition	\$15,000.00	\$15,000.00	\$15,000.00
Special Construction	\$50,000.00	\$0.00	\$0.00
Sitework	\$70,000.00	\$84,250.00	\$90,750.00
Design and Pricing Contingency	\$198,180.00	\$193,380.00	\$224,846.00
General Requirements	\$600,000.00	\$600,000.00	\$600,000.00
Bonds/Insurance	\$54,500.00	\$53,180.00	\$61,833.00
OH+P	\$141,724.00	\$139,018.00	\$156,757.00
Escalation	\$1,645,750.00	\$1,614,328.00	\$1,820,319.00
Phasing Premium	\$75,000.00	\$75,000.00	\$75,000.00
Subtotal in 2030	\$4,696,954.00	\$4,608,709.00	\$5,187,218.00
	Additional Costs to be Considered:	Additional Costs to be Considered:	Additional Costs to be Considered:
	Temp swing space (2030\$) \$698,836.00	Paved access from parking (2030\$) \$77,650.00	Removal of empty modulars (2030\$) \$30,000.00
		Unsuitable Replacement (2030\$) \$252,350.00	Temp swing space (\$2030) \$931,782.00
			Unsuitable Replacement (\$2030) \$252,350.00
Total Comparative Costs	\$5,395,790.00	\$4,938,709.00	\$6,401,350.00

Additional 2020 Costs to make the proposes addition ready
to receive a future second floor addition:

Cost to prep single story (2020\$)	\$301,340.00	To install an oversized RTU to handle 8 CR's (+ \$50K)
Design fee cost to redesign (2020\$)	\$200,000.00	
Unsuitable Replacement (2020\$)	\$162,500.00	

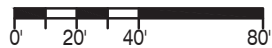
Total Additional 2020 Costs **\$663,840.00**

Potential temp swing space if
redesign is needed \$225,000.00



SECOND FLOOR PLAN

SCALE: 1" = 40'-0"



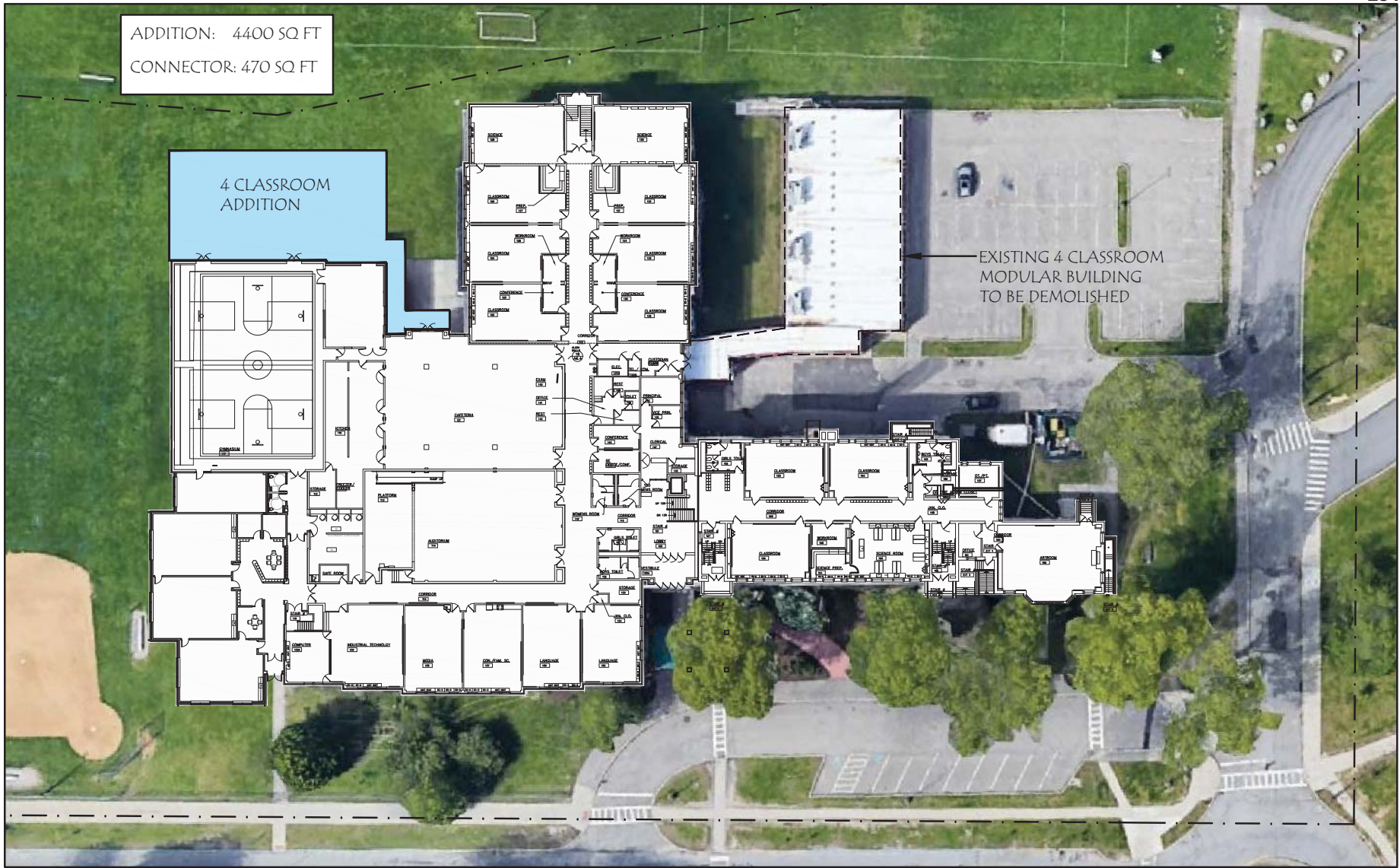
**4 CLASSROOM ADDITION
2ND FLOOR OVER NEW ADDITION**

**OAK HILL MIDDLE SCHOOL
MODULAR REPLACEMENT OPTIONS**

May 20, 2020



**Raymond Design
Associates, Inc.**
Architects & Planners
60 Ledgewood Place
Rockland, MA 02370



FIRST FLOOR PLAN
SCALE: 1" = 40'-0"

0 20' 40' 80'



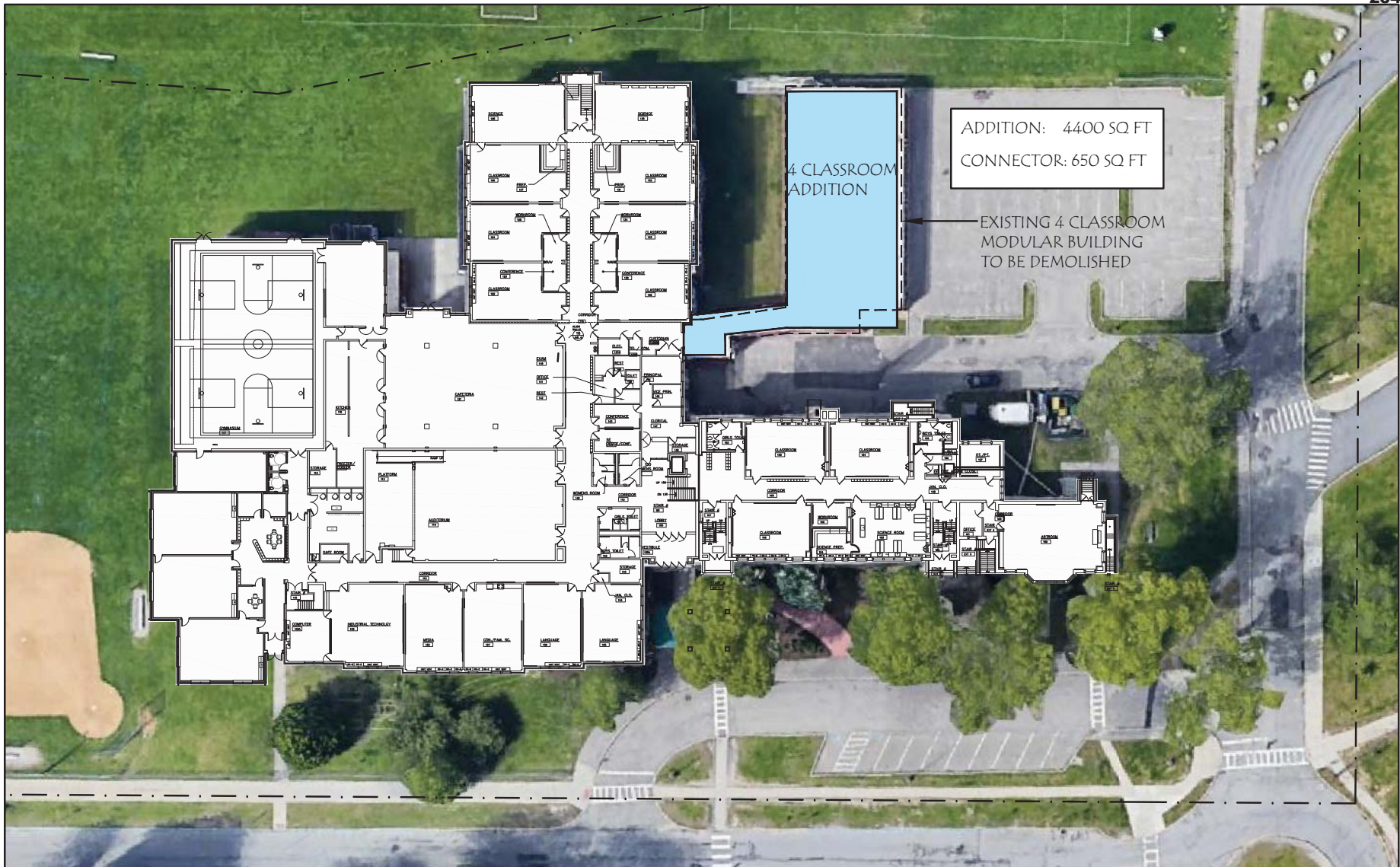
1 or 2 STORY
4 CLASSROOM ADDITION

OAK HILL MIDDLE SCHOOL
MODULAR REPLACEMENT OPTIONS

May 20, 2020



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FIRST FLOOR PLAN

SCALE: 1" = 40'-0"

0' 20' 40' 80'



1 OR 2 STORY
4 CLASSROOM ADDITION

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