AGENDA

Lexington Planning Board

Wednesday, August 3, 2022
This meeting will be held in person in the Select Board meeting room and virtually through https://www.lexingtonma.gov/377/Access-Virtual-Meetings
7:00 PM

Draft Comprehensive Plan Public Work Session to review the following sections:

1. **Goal 1: Diversity & Inclusion, Introduction, Executive Summary**

Development Administration

1. **69 Pleasant Street – Public Hearing for a Site Sensitive Special Permit Residential Definitive Subdivision Public Hearing (continued from June 29)**
2. **65 Paul Revere Road – Public Hearing to Modify 2008 Special Permit with Site Plan Review**
3. **Open Space Residential Development Zoning Regulations Public Meeting**
4. **420-430 Bedford Street – Acceptance of performance guarantee and plan endorsement for Lexington Office Park Definitive Subdivision Plan approved on May 18, 2022**

Board Administration

1. **Staff Updates**
2. **Board Member Updates**
3. **Upcoming Meetings**
4. **Review of Meeting Minutes July 13, 2022**

Adjourn

Meeting broadcast by LexMedia

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Goal 1: Diversity & Inclusion, Introduction, Executive Summary

PRESENTER:

ITEM NUMBER:

SUMMARY:

The Board will review draft Goal 1 relative to Diversity & Inclusion, the Plan's Introduction and Executive Summary. These drafts have been compiled with the help of the Comprehensive Plan Advisory Committee (CPAC) and the consultant revised through July 19. A review guide to help in the Board's review is enclosed. These draft sections should be carefully reviewed and comments provided at this time. This is a call for final comments and suggested changes to be incorporated into the next final draft of the Plan.

Public comments are welcome and encouraged and will be taken by the Board at each meeting for each section. The Board welcomes written comments which may be submitted to planning staff to forward to the board members. Written comments will help make sure comments are incorporated into the next draft. Please send to planning@lexingtonma.gov preferably by Monday, August 1 to be compiled in the Board's packet.

The Board is reviewing the Draft Plan Volume I over a series of meetings during the course of the summer. A more complete inventory and assessment of existing conditions can be found in Volume II available on the webpage here (scroll down).

SUGGESTED MOTION:

No formal action is required but the Board should come prepared to provide feedback and recommend any suggested changes. The Board members should discuss any new actions or strategies to include in the next draft. The next final draft will be prepared after the meeting and is expected to be published in full in mid-September.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022

ATTACHMENTS:

Description	Type
Executive Summary	Cover Memo
Implementation Diversity dated July 19, 2022	Cover Memo
Introduction dated July 19, 2022	Cover Memo
Review Guide	Cover Memo
Summary of Comments	Cover Memo

July 19, 2022

EXECUTIVE SUMMARY

LexingtonNext serves as a policy document and foundation for local government direction on land use and physical development and related areas, including impacts and consequences for climate change, diversity and equity. It provides a primary tool for planners and local officials to address community priorities in long-rang planning and investment. A Comprehensive Plan is a long-range plan typically updated every 10-15 years.

The Comprehensive Plan (The Plan) process provides an opportunity to:

- take stock
- reflect on past accomplishments
- identify changes in community demographics, the environment, expectations and/or attitudes
- identify shared values
- articulate a vision for the future
- define new goals for achieving that vision

LexingtonNext is based on significant public outreach and reflects the towns shared community values and goals. It conveys to existing and potential future residents, business owners and others, the type of community Lexington is and wants to be and helps the Town prepare for change, bounce back from unforeseen challenges, and cherish what we treasure. It is a clear roadmap for anyone who would like to join in making improvements, and it bolsters the confidence of grant funders and investors by increasing certainty and predictability.

Goals and objectives are focused around the following topic areas:

- Diversity and Inclusion
- Housing
- Economic Vitality
- Sustainability & Resiliency
- Open Space and Natural Resources
- Historic Resources
- Recreation & Community Gathering
- Transportation & Circulation
- Public Facilities & Services

Although contemporary planning practice for developing Comprehensive Plans has expanded over time to include areas such as Public Health/Wellness, Governance, Arts & Culture, and Technology & Innovation, the Comprehensive Plan Advisory Committee (CPAC) has deliberately focused LexingtonNext on the physical environment. This decision is in keeping with the Committee's charge, in response to the community input received, and reflective of the strength of Lexington's municipal bodies and community organizations and institutions in addressing Town needs.

LexingtonNext is organized in three volumes:

- Vol I: The Plan
- Vol II: Inventory & Assessment of Existing Resources

- Vol III: Documentation of Public Input

Outreach and Participation

LexingtonNext is the result of extensive public engagement. In addition to an active Comprehensive Plan Advisory Committee and a Project Website, multiple engagement techniques were used to educate and engage the community and to identify issues and opportunities. Information was gathered through more than seventeen events, surveys, social pinpoint, and forums and over 60 interviews with community leaders and staff.

Input from other relevant forums in Lexington was reviewed as were other planning documents, the 2003 Comprehensive Plan, and resources from other organizations in town.

Public Events to gather input on priorities

2018
- Kick-off event
- 3 World Cafes

2019
- Discovery Day
- Workshop
- Historic Resources & Preservation and Existing Conditions Trend Presentation
- Economic Development Existing Conditions Trend Presentation
- Transportation Existing Conditions Trends Presentation
- Housing Existing Conditions Trends Presentation
- Demographics Existing Conditions Trends Presentation

2020
- February Open Space, Recreation, Natural Resources Public Forum

2021
- Re-Discovery Day
- June Public Forum (virtual)
- September Housing Public Forum (virtual)
- October Economic Vitality Forum(virtual)
- Social Pinpoint Survey
- Stakeholder Interviews

2022
- Planning Board & Public Review of Draft

Key Issues and Priorities

Based on data gathered, residents clearly identified the following priorities for inclusion in the Comprehensive Plan:

- Maintaining and respecting Lexington's sense of "place" as a community with significant historical and natural resources, excellent public schools, and robust town services.
- Supporting the vitality of the Town Center and Lexington's smaller commercial areas through a vibrant mix of businesses
- Increasing transportation options
- Evaluating opportunities for mixed use (residences/business) in commercial areas
- Diversifying housing options in terms of both cost and type of housing

In addition to the above-mentioned key priorities there is a strong emphasis in all of these elements and goals with a desire to integrate and advance racial and social equity and promoting environmental sustainability in all areas.

Context

Shifts in Lexington

Notable Changes since the 2003 Comprehensive Plan

- Significant investment in Town-owned facilities
- Major redevelopment of existing housing stock
- Significant demographic changes/increase in:
  - Asian population
  - Aging population
  - Young children
  - Median income
- Addressed topical issues
  - Public Information Officer
  - Sustainability Director
  - Chief Equity Officer
  - Human Rights and Disability Commission
  - Stepped up to meet sustainability goals
- Town Meeting commitment to view all plans through equity lens

Housing

Lexington has seen home prices rise by an astronomical amount, with median home prices increasing 237% between 2009 and 2019. Median income is the sixth highest in Massachusetts. The community expressed increasing concern that the lack of socio-economic diversity among residents' stifles diversity on other fronts.

Transportation

The input received was initially weighted toward transportation concerns. (June 25, 2018 Summary memo, SWOT analysis from Kick-off event input). This shifted based on the input collected from over 120 people at three events held in autumn of 2018 using the World Café method for community conversations. Transportation, including bicycling and walking, was still of significant concern, but concerns about housing affordability and availability had edged well ahead. (Fall 2018 Public Outreach Events; 2018 World Cafe Input Frequency Analysis)

Since the last Lexington Comprehensive Plan (2003) the community's top concerns have not significantly shifted, only grown more acute. This urgency is in large part arising from significant national crisis that occurred during the course of planning for LexingtonNext.

- The global COVID 19 pandemic
- The national racial awakening of the summer of 2020
- The undeniable climate crisis of global warming

Each of these events have impacted what we heard and have become cross cutting themes throughout the Plan.

COVID 19 Pandemic:

The COVID-19 pandemic influenced community priorities in many ways and highlighted

- An increased appreciation for open spaces, recreational facilities, trails, parks, and the Bikeway.
- A need to address increased demand for non-traditional working spaces including in-home offices and shared co-workspaces.
- The need for emergency preparedness, specifically for town facilities and services.
- Concerns for the health of local businesses and dining establishments, and the need to find creative ways for attracting patrons back to in-person shopping and dining.

The Summer of Racial Awakening

At the midpoint of the long arc of the development of this plan, while in the throes of the COVID pandemic, another phenomenon eclipsed the pandemic's influence on LexingtonNext: the murders of George Floyd, Breonna Taylor, and other Black Americans at the hands of police officers in major US cities, as well as by civilians. Many reacted with prolonged protests and outrage, in what has now been called a summer of racial awakening. This racial awakening resonated in Lexington, where residents' began speaking about Lexington's lack of diversity, high housing cost, and exclusivity.

Climate Crisis

The reality of a climate crisis continues to come more into focus and in 2021 Lexington took bold action to address the climate crisis:

- Annual Town Meeting adopted innovative articles regulating fossil fuel infrastructure.
- Special Town Meeting amended zoning adopted earlier in the year by down-zoning to create an incentive for additional density in exchange for reduced onsite fossil fuel combustion for HVAC.

From the June 15, 2021 LexingtonNext virtual forum poll and chat comments:

"We need to develop tools to understand why some diverse communities such as the black community are not choosing Lexington and work on addressing those issues."

"The national racial reckoning has been interesting. Conversations have been front and center and prompted me to read and listen much more. I hope organizations like towns like ours take this movement forward with bold policies."

"The diversity is quite wide by ethnicity, other than perhaps black/ Latinx, but the big problem is economic inequality."

"Encourage people to get to know their neighbors, and to actively meet and get to know people of different backgrounds/skin color."

"Understand that we all do better when we all do better and its corollaries: I do better when you do better."

"Concerned about the lack of discussion on DEI for future Lexington."

"The Town may want to look at its budget through a DEI lens."

"…everything we do needs to be looked at with an equity and climate change impact lens!"

"I suggest broadening what we mean by "racial reckoning" and being inclusive of all kinds of social justice."

"…we need to figure out how to equalize things a bit better."

Vision & Goals

Vision Statement

The Town of Lexington prides itself on being a vibrant community where residents place a high value on learning at all ages. Lexington's historic buildings and landscapes, many open spaces and trails, excellent schools, high quality public facilities and services, and proximity to Boston make it an attractive place to live, work and play. Lexington is committed to maintaining and expanding social and civic connections for current residents, people that work in Lexington, future residents and people visiting.

This Comprehensive Plan Update envisions a town that fosters a sense of belonging for all. By actively engaging in dialogue to balance issues related to housing, access and transportation, climate change, economic vitality, open space, natural resources, and more, we strive to create a community that:

- provides an environment that enables a diverse population of people to live, work, and thrive;
- encourages a flourishing business community that contributes to the town's financial;
- stability and offers excellent local employment opportunities;
- cultivates a wide range of exceptional recreational, cultural, educational, and social opportunities that support creativity and innovation;
- sustains our natural resources and fosters an ecologically balanced community;
- offers a variety of safe, accessible, and sustainable mobility options; and
- models stewardship and sustainability of the town's financial, human, information, and physical assets.

Goals and Objectives

The substance of the plan seeks to realize this Vision through the following goals and objectives. As with any Comprehensive Plan, the goals and recommendations for LexingtonNext are synthesized from 1) Lexington's public and stakeholder input, 2) consideration of the inventory and assessment of existing conditions and data collected for Lexington, and 3) professional best practices, methods and solutions from other jurisdictions and from within the planning profession and other relevant disciplines (e.g., community development corporations).

GOAL 1.0: To increase the DIVERSITY and promote the INCLUSION of people visiting, living and working in Lexington

+ Objective 1.1. Remove barriers to living in Lexington.
+ Objective 1.2. Foster a sense of belonging and promote interaction amongst all.
+ Objective 1.3. Support people of all ages and abilities.
+ Objective 1.4. Attract people of diverse backgrounds to work in Lexington.
+ Objective 1.5 Improve town-wide communication and to encourage broader participation in decision-making

GOAL 2.0: To enable and encourage a wide range of HOUSING OPTIONS that are inclusive for all life stages, incomes, and needs

- Objective 2.1. Expand opportunities for producing a range of housing in a variety of locations throughout town
- Objective 2.2. Increase the supply of affordable housing eligible for Lexington's subsidized housing inventory for low and moderate-income households
- Objective 2.3. Develop housing that is accessible to older persons
- Objective 2.4. Protect existing historically and/or architecturally significant homes and preserve homes that contribute to the diversity of housing options
- Objective 2.5. Increase the efficiency and effectiveness of housing policy
- Objective 2.6. Enable more flexible use of residences to adapt to changing working and living arrangements
- Objective 2.7. Achieve environmental sustainability of the town's new and existing housing stock
- Objective 2.8. Support fair housing goals

GOAL 3.0: To promote a **VITAL ECONOMIC SYSTEM** that is self-sustaining, supports a variety of small and large businesses, contributes to the tax base that support the town, and improves the balance of services to meet the needs of residents, employees, and visitors

- Objective 3.1. Develop and advance policies to encourage private redevelopment to realize the vision for a more exciting Commercial Manufacturing District.
- Objective 3.2. Continue to make improvements to Lexington Center so that it becomes more of a "destination."
- Objective 3.3. Create a more walkable, bikeable, and aesthetically pleasing East Lexington commercial district.
- Objective 3.4. Retain and support existing businesses and evaluate opportunities for commercial growth in strategic locations.
- Objective 3.5. Develop sustainable long-range tourism practices to support the independent businesses, arts, cultural and historic organizations, and characteristics of the town's commercial centers.
- Objective 3.6. Support "talent driven economic development.

GOAL 4.0: To protect the **ENVIRONMENT** and enhance long-term **SUSTAINABILITY** and RESILIENCE

- Objective 4.1. Become a net-zero community by 2050
- Objective 4.2. Improve the resilience of town-owned assets and infrastructure
- Objective 4.3. Reduce transportation emissions and make Lexington a more livable community by improving sustainable transportation options and reducing single occupancy trips

GOAL 5.0: To protect **OPEN SPACES** and **NATURAL RESOURCES** and enhance connections among these assets

- Objective 5.1. Conserve natural resources
- Objective 5.2. Protect existing and acquire new open spaces in balance with the need for land for affordable housing
- Objective 5.3. Connect open spaces
- Objective 5.4. Incorporate natural resource and open space protection measures into the town's sustainability and resiliency goals.

GOAL 6.0: To protect, preserve, and promote awareness and appreciation of Lexington's **HISTORIC RESOURCES** from throughout its history

- Objective 6.1. Protect historic buildings and structures from demolition and decay
- Objective 6.2. Plan and prioritize historic preservation policies and funding
- Objective 6.3. Increase public awareness of Lexington's important historic resources

GOAL 7.0: To make **TRAVELING** into, out of, and within Lexington safe, pleasant, and efficient with sustainable and equitable mobility options for all ages and abilities

- Objective 7.1. Improve traffic management policies to reduce traffic, increase safety, and enhance quality of life.
- Objective 7.2. Improve and expand options for walking, biking, and micromobility throughout Lexington.
- Objective 7.3. Improve parking strategies to help achieve transportation and economic development goals at specific locations in town.
- Objective 7.4. Expand transit options.
- Objective 7.5. Investigate land use policies that align with or can help advance our transportation goals.
- Objective 7.6. Encourage and support a shift away from automobile dependency by increasing public awareness and community pride in use of alternative modes of travel.

GOAL 8.0 To improve and expand facilities for **RECREATION AND COMMUNITY GATHERING** to support holistic wellbeing, a sense of belonging, enhanced social connections, and opportunities for fun

- Objective 8.1. Improve and expand recreational land and facilities to meet the programmatic needs of the town.
- Objective 8.2. Maintain, expand, and promote opportunities for both formal and informal community gathering spaces.
- Objective 8.3. Consider all residents when planning improvements to, and/or additions to, public and community spaces.

GOAL 9.0: To provide well maintained, updated, inclusive, and sustainable **PUBLIC FACILITIES** to serve and meet community needs.

- Objective 9.1. Support effective maintenance and improvement of educational facilities to create up to date environments for students, faculty, and staff.
- Objective 9.2. Ensure that town-owned buildings support programmatic needs and effectively meet the changing needs of the town.
- Objective 9.3. Continue to maintain and replace town infrastructure and upgrade systems to meet demand.
- Objective 9.4. Continue to address sustainability and climatic impacts in renovation of existing and new facilities.

The Plan Structure

The chapters in Vol. I outline each of the goals in more detail. They include:

- A brief summary of existing conditions highlighting key issues (for a full inventory of existing conditions see Vol. II)
- A summary of community input and an overview
- An overview related Town of Lexington Goals and Objectives from other Municipal Organizations and Committees
- An implementation table that identifies Action Steps, Responsible Parties, potential partners and other factors to support the implementation of each of the objectives and help to achieve the goal.

The Plan is not a legal document and is aspirational. Under each goal, recommendations, and action items for achieving the goal are listed in the order of the time frame in which they might be implemented, based on complexity of implementation and requirements for coordination with other recommendations and actions. The order does not imply priority.

Implementation

Implementing a plan means focusing on the vision and goals expressed herein and following through on its objectives and strategies. It is an on-going, long-term process requiring significant effort and the cooperation of multiple parties. The Plan, together with the implementation tables, identifies recommendations and action steps, along with the responsible party, support parties, the timeframe for implementation, and other master plan elements with which the action should be coordinated.

Critical to achieving the goals of The Plan is engagement and buy in from the Town regarding the goals and objectives, continued reference to the Plan, and regular evaluation of progress.

The Plan is intended to be a “living” document and opportunities will always arise that align with the LexingtonNext’s goals but were not foreseen when LexingtonNext was completed. Still, the Implementation section of the plan expresses the steps we agree to pursue to help realize the goals from today’s vantage point.

GOAL 1: DIVERSITY AND INCLUSION

To increase diversity, equity, and to promote the inclusion of people visiting, living and working in Lexington.



Chinese Dragons at the Patriot's Day Parade, 2019, Lexington, MA. PC: Lexington Minuteman

只蜂酿不成蜜一颗米熬不成粥 [一只蜂釀不成蜜一顆米熬不成粥] - Chinese Proverb:

"One bee cannot produce honey; one grain of rice cannot produce a meal (It needs joint effort to achieve anything worthwhile)."

INTRODUCTION

Throughout the comprehensive planning process residents have emphasized their desire for a diverse community, one that invites and celebrates a variety of backgrounds and is supportive of different needs based on age, ability, and income level.

This section identifies and describes who lives in Lexington and what needs people of different ages, races, ethnicities, religions, sexual orientation, income level, genders, ability, immigration status, etc. may have so that the Comprehensive Plan addresses these.

The town has undergone significant demographic changes over the last 20 years; the most significant changes include a large segment of the population over 65 years old and a large and increasing number of residents of Asian descent. Additionally, the average income has increased significantly as has the cost of housing. The demand, supply, and cost of housing as well as taxes play a major role in determining who can live in a town.

SUMMARY OF KEY POINTS

- From 2000 through 2016, approximately sixty percent (60%) of the current town's residents moved to Lexington.
- Approximately 30% of residents will be older adults (60+) by 2030.
- Average household income is higher than in adjacent communities and is expected to continue to rise. This results in a significant lack of socio-economic diversity.
- Lexington's residents are highly educated; over three-quarters (85%) of the population have a college degree, contributing to the homogeneity of the town's population.
- the town's percentage of what the U.S. Census Bureau identifies as the "white" population has decreased.
    - Black and Latino/a/x residents are notably underrepresented
    - The number of residents of Asian descent (primarily Chinese and South Asian ancestry) has significantly increased
    - The number of residents for whom English is not a first language has recently increased
    - There are 43 languages spoken in the homes of Lexington's school-aged children

To strive to be more welcoming and unbiased, in 2020, the Town Manager began a formal process of examining the town's policies, procedures and practices as they relate to municipal operations. This includes engaging professionals and outside consultants to ensure comprehensive and unbiased evaluation, as well as hiring a fulltime Chief Equity Officer. The Select Board, Town Meeting, and Town Management formally and publicly stated their commitment to ensuring that Lexington is free from racism, discrimination, and hate and have undertaken a number of activities to implement this commitment; these include:

- **Engaging** All Aces, Inc.[1]to serve as the town's Diversity, Inclusion, and Equity Transformation (DIET) partner. During this engagement, the town will develop a comprehensive race equity plan to ensure that Lexington is an equitable community, employer, and place for business.
- **Working with a Core Team** made up of municipal staff and a **Citizen Advisory Council**, made up of members from community organizations and committees representing the diversity of Lexington's municipal workforce and population.
- **Providing Racial Equity training** for staff and the community.
- **Creating a new staff position** in the Town Manager's Office responsible for Diversity, Equity, and Inclusion efforts.
- **Joining** both the Government Alliance on Race and Equity (GARE)[2] and the National League of Cities (NLC)[3] in order to take advantage of their collective Racial Equity resources.
- **Ongoing Racial and Social Equity update** at every regular Select Board meeting.
- **Engaging the services of Town Counsel** to begin the work of reviewing all town policies. The starting point of this work was a review of the Police Department policies to ensure there is no unintended bias or discriminatory language and to make recommendations to the Select Board.

Lexington's Systemic Racism Resolution,

Town Meeting 2020 (Article 8)

"A system of advantages which gives privilege and power to one racialized group over another, intentional or not. (Article 8)

That the town:

1. consider racial and other equity impacts in all decisions and planning processes in order to work toward dismantling systemic racism and white privilege;
2. take action to integrate racial equity tools and concepts into routine operations and policy-making;
3. build capacity to collect, interpret and act on data related to inequities, particularly those related to health, housing, education, policing, representation, and economic and environmental justice; and
4. develop and implement a comprehensive racial equity plan with public input, to include staff training, hiring practices, and public education; all with the goal of making Lexington a truly equitable community."

- **Introducing the staff of the Police Department** through short video clips that explain their work with the community, and the services and functions of the Department.

Also adopted unanimously by the Select Board is the **Full Inclusion Resolution (adopted under Article 30 of the 2021 Annual Town Meeting).** "The article requests the Town to adopt a non-binding resolution designed to heighten sensitivity around inclusion and to ensure that all voices in the community are heard, represented and celebrated. This resolution is intended to ensure that all town policies, procedures, programming and community engagement activities are developed with universal access in mind, allowing people with disabilities to participate seamlessly without any barriers."

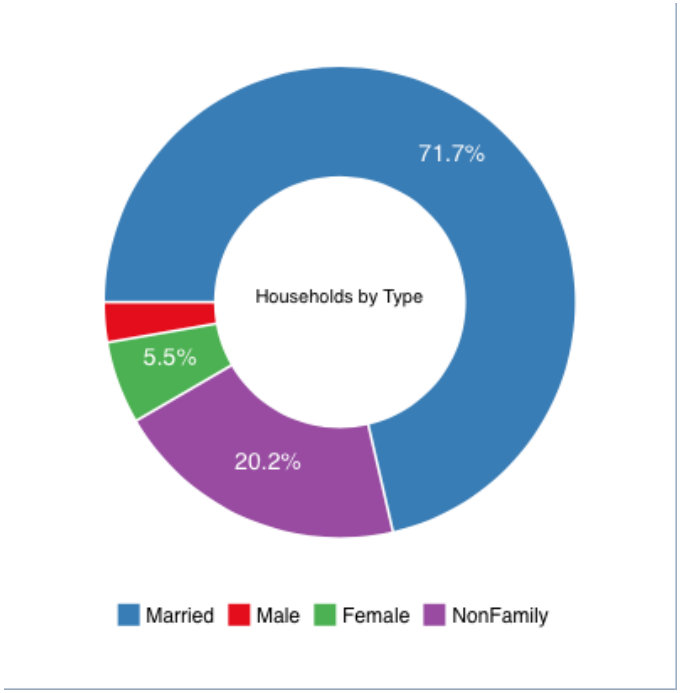
[1] https://allacesinc.com/?gclid=Cj0KCQjw-JyUBhCuARIsANUqQ_IyZyZoEvzcLGiZ5unJh0uyJigm358GN0ktuHEO_ir41-q07lTiRGIaAqEuEALw_wcB#intro

[2] https://www.racialequityalliance.org

[3] https://www.nlc.org

OVERVIEW OF LEXINGTON'S POPULATION

As of 2019 Lexington has 34,454 total residents and the Median Age is 45.7 years old. The overall population is projected to increase by 2% by 2025 with the median age increasing to 48.9 years old.



Source: U.S. Census 2019 ACS 5-Year Survey



Dancers at 2019 Lexington High School's Diwali celebration
PC: Wicked Lexington

"**It is not our differences that divide us. It is our inability to recognize, accept, and celebrate those differences.**
- Audre Lorde (an American writer, feminist, womanist, librarian, and civil rights activist)

HOUSEHOLD SIZE AND INCOME

The following characterize the household size and incomes of current residents:

- Lexington's average household income is higher than in adjacent communities and is expected to continue to rise. In 2017, Lexington's household median income was 54% greater than that of the State median.

- Lexington's residents are highly educated; the majority (85%) of the population have a college degree (compared to 25% of the State); of these individuals, more than half hold a graduate degree.

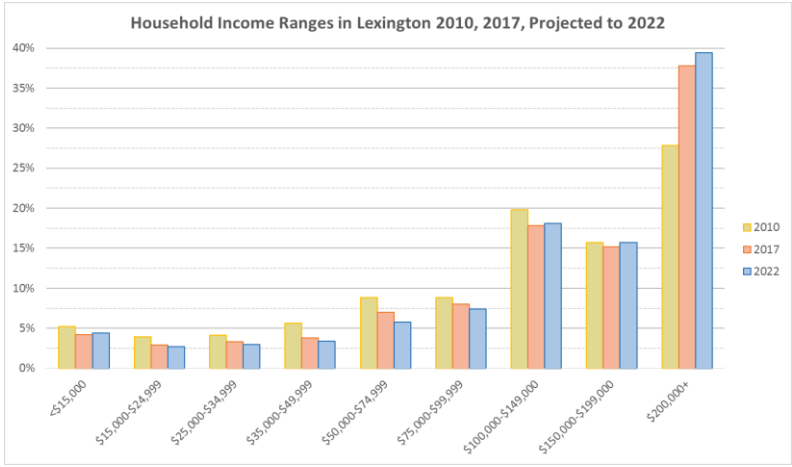
- Household size, the number of people living in a housing unit in Lexington (2.73 persons) is somewhat higher than that of the State (2.5 persons) according to the U.S. Census.

Number of Households and Persons per Household

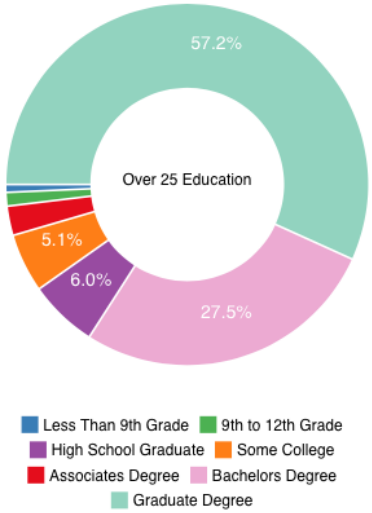
Year	2010	2019
# of households	11,392	11,757
# of persons/household	2.65	2.73

Source: U.S. Census

Household Income Ranges 2010-2022



Source: U.S. Census 2019 ACS 5-Year Survey



WHAT DOES IT MEAN?

The majority of Lexington's residents are relative newcomers. This may imply a need for more deliberate outreach and intentional community building.

Most households are married-couple family households, many of these with children. Not many younger adults without children live in town.

The demand for housing continues to rise, as does the average income of residents, resulting in higher than ever housing prices. The cost of housing, as well as that of taxes, plays a major role in determining who can live in town.

The two largest racial groups in Lexington are white and Asian, with a large majority of Asian residents being of Chinese or South Asian descent. Notably underrepresented are Black and Latino/a/x residents.

The increasing diversity of residents' backgrounds may increase the need for cultural and linguistic relevance of Town's messaging.

Town Meeting has acknowledged commitment to consider systemic racism in all decisions and planning processes.

LEXINGTON VOICES

"*There should be more diversity at higher levels of Town government.*" (June 15 Public Forum participant)

"*There should be signage in more languages.*" (June 15 Public Forum participant)

"Hold job fairs for Lexington businesses that focus on recruiting a diverse workforce." (June 15 Public Forum participant)

"Increase cultural education and cultural exchange events. Promote sharing of cultural heritage." (June 15 Public Forum participant)

"Maintain small housing stock, discourage small home teardowns and encourage co-housing developments." (June 15 Public Forum participant)

"Seek input from teens regarding their needs and create more spaces for them to perform and gather and be heard. Increase bike infrastructure and encourage teens to deliver with cargo bike to elderly residents." (June 15 Public Forum participant)

"Test sidewalks with wheelchairs to measure accessibility." (June 15 Public Forum participant)

"*Messaging and forms and applications from the town are often gendered and do not invite non-binary responses."* (Stakeholder Interview)

ETHNIC, RACIAL, AND LINGUISTIC DIVERSITY

- Greater Boston Housing Report Card 2019 identified Lexington as a community with higher proportions of non-white population than the region
- There has been a recent increase in the number of residents for whom English is not a first language

Although Lexington is becoming more racially diverse, people identifying as Black and Latino/a/x populations remain significantly under-represented.

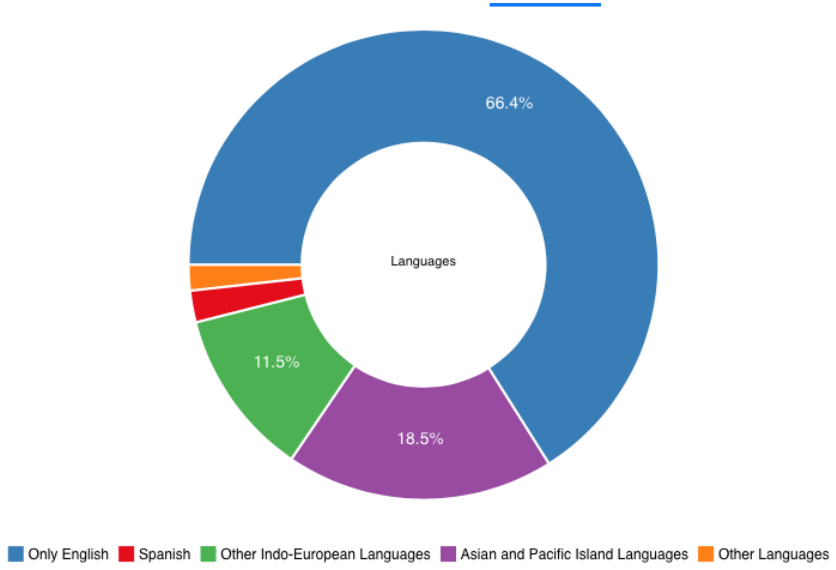
As previously mentioned, the share of Lexington's population of Asian descent has been steadily increasing. The 1970 Census counted 2% of Lexington's residents as being Asian. By 1990, Lexington's Asian population had increased to 6.5%. According to the 2019 U.S. Census Asians – Chinese, Indian, Japanese and Korean residents currently make up approximately one-third (30.1%) of Lexington's population.

The number of foreign-born residents has increased from 16.5% in the year 2000 to 27.3% in the year 2017 (the majority of Lexington's foreign-born residents were born in China or India). Along with the increasing racial diversity of the town's population, there has been an increase in the number of residents who speak a language other than English at home. According to the School Department, there are 43 languages spoken in the homes of school-aged children.

- 63.8% **White residents**
- 30.1% **Asian Residents**
- 2.1**% Latino/a/x**
- 1.3% **Black or African American**

Source: 2019 ACS 5-Year Tables

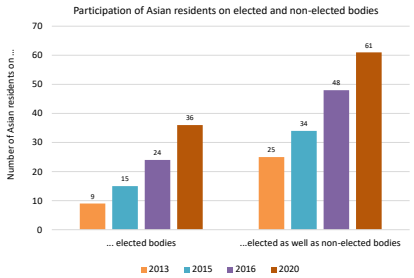
According to the U.S. Census (2018), the most predominant Non-English languages spoken at home were Asian (primarily Mandarin). Indo-European languages increased from less than a tenth (6.5%) in the year 2000 to almost a fifth (19.5%) in 2017, and Asian/Pacific Islander increased from less than a tenth (7.4%) to a little less than a fifth (16.6%) during that same time period.[4] The majority of persons speaking languages other than English at home are ages 65 and over.



Source: U.S. Census 2019 ACS 5-Year Survey

[4] ACS and World Population review

Participation on Town Boards and Committees. In 2010 a Subcommittee to the Vision for Lexington on Demographic Change conducted a study that found that while residents of Asian ancestry were estimated to represent about 20% of the Lexington's population at the time (2010), they only filled about 2% of the positions on the town's boards and committees. By 2013, this had slightly increased to 3% and for PTA/PTO Boards, the participation rate was more than 13%, substantially higher than for town boards and committees. However, about half of those serving on PTAs and PTOs reported that only English is spoken at home, indicating that perhaps cultural and linguistic barriers to participation persist. The town has since made a significant effort to increase representation and some progress has been made. See Vision for Lexington chart below regarding increase in participation of Asian residents. Similar information about the participation of other demographics was not available.



Black and Latino/a/x Residents. There has also been a slight increase in the number of Black and Latino/a/x residents over the last two decades although these groups are conspicuously underrepresented. According to some, Lexington has developed a reputation of not being welcoming to Black families.

As a result of the town's participation in the METCO Program, there is a higher percentage of Black and Latino/a/x individuals in Lexington's schools than in the overall population, but these students do not live in Lexington.

METCO Program

The METCO Program (Metropolitan Council for Educational Opportunities) was founded in 1966 and "is a voluntary integration program that provides a suburban public-school education for African-American, Hispanic and Asian students from Boston." The Lexington Public Schools have participated in the program since 1968. The program has as its stated goal to "provide Lexington students and staff an opportunity to interact with many minority students and to benefit from a culturally diverse learning environment." It also gives urban students an opportunity to benefit from Lexington's schools.

For the 2021-2022 academic year Lexington has a total of 230 enrolled METCO students (98 elementary school students, 70 middle school students and 62 high school students).[5]

> The town could be more intentional about expanding housing opportunities to families participating in the METCO program.

SEXUAL ORIENTATION

LGBTQIA+[6] Residents. LexPride was established in 1996 in order to foster and promote a welcoming and safe community for all.

[5] https://sites.google.com/lexingtonma.org/lexingtonmetco/home

[6] LGBTQIA+ stands for **Lesbian, gay, bisexual, transgender, queer/questioning, intersex, asexual** and other gender and sexual identities.

LexPride's mission is "to develop community and advance full equality for LGBTQIA+ people and their families and allies in Lexington.[7] "The organization works with the town's staff, schools and business community organizing programs in various locations.
It is not possible to know how many persons identifying as LGBTQIA+ live in Lexington. However, reportedly the most recent Youth Risk Behavior Survey administered at Lexington's schools indicate that 20%-30% of middle and high school students identify as non-binary[8].

According to a representative of LexPride, Lexington has been working towards recognizing intersectionality and being a fully inclusive community. There is still room for improvement such as providing gender-neutral facilities in all town-owned buildings and gender-neutral language in town-wide communication.

AGE OF RESIDENTS

LEXINGTON'S POPULATION IS AGING

The median age of those living in Lexington has increased by 11.4 % from age 43.7 in 2000 to a projected median age of 48.9 by 2025.

By 2030, Lexington is projected to have 9,726 residents 65-85 years old (UMASS Donahue Institute).

Approximately one-third (30%) of the Lexington population will be older adults (over 60 years of age) by 2030.



Senior Services organize events for Lexington's older adults.

Stakeholders participating in the Community Conversation regarding the Comprehensive Plan identified a number of needs specific to this older demographic. These include:

- The financial limitations encountered by older adults on a fixed income in terms of paying property taxes, maintenance and utility costs

For further discussion, see: https://www.nytimes.com/2018/06/21/style/lgbtq-gender-language.html

[7] https://www.lexpridema.org/about

[8] Non-binary or genderqueer is an umbrella term for **gender identities that are not solely male or female**—identities that are outside the gender binary.

- Transparency of information regarding existing resources especially to those for whom English is not a first language and/or with limited computer literacy
- Senior isolation and limited opportunities and places for socializing and recreating, specifically places and events that foster inter-generational interaction
- Access to affordable housing appropriately sized, located and designed for downsizing.

SCHOOL-AGED CHILDREN ARE EXPECTED TO INCREASE SLIGHTLY

By 2030, Lexington is projected to have 5,196 residents 5-19 years old (UMASS Donahue Institute), representing 14.6%% of the town's overall projected population (35,670 in 2030). Many residents report moving to Lexington for the public schools, which enjoy an excellent reputation. Because the majority (90%) of school-aged children attend Lexington's public schools, using enrollment projections is a useful proxy that results in fairly accurate estimates of this age group. Current student enrollment projections suggest that both elementary and middle school enrollments will remain stable, at least in the short term. High school enrollments are projected to peak in 2024-2025 at around 2,500 students.

WHAT DOES IT MEAN?

Older Adults. Consistent with nationwide trends, Lexington's population is aging. This may necessitate that the town assess the specific needs of this demographic (these include programming, socializing, health and wellness, transportation and appropriately designed and located housing, including assisted living).

School-aged children. Facilities and services oriented to children and youth will continue to be a priority for the town. This includes keeping the schools well maintained, offering relevant programming at the Community Center, providing a range of recreational facilities and opportunities for teens to gather, etc.



Learning English at School

INCOME DIVERSITY

Housing Costs. It is considered to be a rule of thumb that a household should not spend more than 30% of their income on housing costs if they are to comfortably afford the rest of life's expenses. Given that the median single-family home value in Lexington is $889,700 (nearly double that of the region which is $497,965)[9], it would follow that those with low or moderate incomes cannot afford to live in Lexington. This poses an obstacle to meeting the town's stated goal to increase the diversity of its residents, at least in terms of socio-economic diversity.

The median single-family home value in Lexington increased to $1.5 million as of September of 2021 (average over the previous 12 months). There is very little housing attainable to people of low- or moderate- incomes.



POTENTIAL SHORT-TERM AND/OR LONG-TERM IMPACTS OF COVID-19

As a result of the constraints of the pandemic, suburbs have become increasingly more attractive to people due to the ease of access to outdoor space, larger housing size to accommodate home offices, and additional space(s) for families. As a result, real estate prices have increased significantly in suburbs across the country. Lexington, with its good schools, open spaces, bike path and well-connected trail system has become more desirable than ever and people offer significantly above asking price in order to obtain a Lexington address. This limits the ability of people with lower incomes to live in Lexington.

COVID-19 impacted schooling in Lexington as it did around the world. In response to the challenges of virtual learning, some parents preferred to enroll their children in parochial or private schools, some homeschooling instead[10]. The long-term impact(s) of these choices on public school enrollments, and therefore, on space and programming needs at the schools, is yet unknown.

Every year approximately 100 moderately sized houses are torn down and replaced with much larger and more expensive houses; this results in significantly pricing out people with low- and moderate-income.

[9] Source: ACS 5-Year Table (2019)

[10] Lexington Public School Annual Enrollment Report: 2020-21

RELEVANT "VISION FOR LEXINGTON" PROJECT:

Exploring Issues of Social Diversity

Primary objective: To look at status and trends in Lexington demographics relating to age, race, ethnicity, income, ability, educational background, length of residency, and other characteristics.

Methods:

- Identify and integrate existing data from different sources to make some realistic projections about Lexington's future demographics.
- Conduct community survey to gather supplemental information.

Findings: Working group created to scope out issues and develop a potential agenda for future focus.



Lexington Public Schools' Strategic Plan has as its first core value: "*We all belong*."

QUESTIONS TO CONSIDER:

- How do we support the increasing number of older adults to age in community?
- How can we preserve existing and create new housing that is affordable to low- and moderate-income households?
- How can Town communication be more inclusive?
- How can the Town be more supportive to LGBTQIA+ individuals?
- How can we broaden the participation of residents of all backgrounds and ages in Town governance and decision making?
- What can the town do to support teenagers?
- Is the Town as accessible to individuals of all abilities as it can be?
- How can we ensure a more diverse employee and Town staff workforce?
- How do we attract and support more diverse visitors/patrons?
- How do we support minority and women-owned businesses?

LEXINGTON VOICES

A large number of participants at **World Café forums** expressed a desire for more ethnic, racial, cultural, and religious diversity. Additionally participants expressed concern regarding the lack of economic diversity.

A majority of participants at the World Café forums mentioned "cross cultural exchange" as being valued**.**

"Racial tension is increasing in the Town schools; drug use and other stress-related issues are crossing all cultural groups." (World Café participant)

"How do we keep people in Town?" (World Café participant)

"Concerned about the stress level at Lexington High School and the fact that seniors are getting priced out of Town." (World Café participant)

"Lexington is an aging community with no retirement community and nowhere to downsize." **(CPAC member)**

From **SWOT Analysis @ LexingtonNEXT "Kick off Event":**

"We need more information regarding how long people stay in town. Are they just getting kids through school and leaving?"

Participants at the forum identified a number of needs including:

- *"Need smaller, more affordable housing if we are to promote socio-economic diversity"*
- *"Utter lack of African-Americans makes Lexington a less desirable place"*
- *"Lexington used to have economic diversity; today it has racial and ethnic diversity that lacks economic diversity"*

from **Vision 20/20***:*

- *"Inclusion of the growing group of residents with diverse backgrounds is critical to the future stability and cohesion of the Lexington community."*
- *"Participation in Town Meeting and PTA/PTOs among Asians has increased significantly in recent years."*
- *"Do you have Indian or Chinese friends that you socialize with? This is a new phase of the diversity project – cultural inclusion."*
- *The question has to do with the nature of the exchanges, and the nature of the social intercourse. And to that extent, groups do still stick very much to themselves."*
- *"We need to focus on building shared community value and identity, anticipating challenges, and evolving to meet the needs of the residents."*

RELEVANT TOWN OF LEXINGTON GOALS & OBJECTIVES:

Select Board Goals (2020-2021):

- Review residential zoning for ways to create new housing opportunities and protect the diversity of the existing housing stock
  - Research what zoning alternatives other communities have used to broaden housing diversity
- Work with the Planning Office, Community Preservation Committee, Housing Partnership, LexHAB, Housing Authority and others to review existing affordable housing stock, identify needed improvements and develop a plan to fund these.
  - Develop a Working Group of these Committees to identify opportunities
- Create expanded opportunities for resident participation.
  - Attract 15% new participation on Town Committees
  - Information regarding all vacancies on Town Committees should be widely advertised including emailed to all who attended the Citizen's Academy
- Create and communicate a plan for broadening diversity of town staff.
  - Continue to measure and evaluate degree of diversity of staff demographics
  - Information regarding employment opportunities will be widely advertised including in media oriented to people of color
- Explore ways in which LexHAB could be transformed in the future

RELEVANT TOWN OF LEXINGTON GOALS & OBJECTIVES:

Planning Board Work Plan Items (2021-2022)

- 1.H. Zoning Bylaw and Map: Review and update the Zoning Bylaw and Map to comply with Housing Choice Bill requirements
- I.Z. Zoning Bylaw: Diversity, Equity, Inclusion and Permitting- amend the zoning bylaw to address any equity and permitting issues



GOAL 1: TO PROMOTE DIVERSITY, EQUITY, AND INCLUSION

To increase diversity and equity, and to promote the inclusion of people visiting, living and working in Lexington.



Objective 1.1. Remove barriers to living in Lexington.

Objective 1.2. Foster a sense of belonging and promote interaction amongst all.

Objective 1.3. Support people of all ages and abilities.

Objective 1.4. Attract people of diverse backgrounds to work in town.

Objective 1.5 Improve town-wide communication and to encourage broader participation in decision-making

The following Implementation Table identifies Action Steps, Responsible Parties, Potential Partners and other factors to support the implementation of each of the objectives and to help attain the goal.

GOAL 1: TO PROMOTE DIVERSITY, EQUITY, AND INCLUSION

OBJECTIVE 1.1. Remove barriers to living in Lexington.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.1.1. Review zoning and all other town rules, regulations and practices, and revise to remove any potential barriers to inclusion	Work with DEI Officer to develop a process to use a DEI lens to evaluate existing and new regulations and policies. Conduct a Policy Audit to ensure equity in all policies[11] Work with the Strategic Equity Advisory Team to review all regulations and practices to identify any unintended consequences and remove these Work with legislature to eliminate statutory preference for large single-family subdivisions. Amend zoning to limit large houses on non-conforming lots. Review local preference for affordable housing policy and revise to be more inclusive **SEE END NOTE #2**	***Diversity, Equity and Inclusion Article 30*** **SEE END NOTE #3** ***MA Department of Housing and Community Development Equity Tool Kit***[13] **SEE END NOTE #4**		**LEADS**: All Departments **PARTNERS:** Planning Board Chief Equity Officer (CEO) Strategic Equity Advisory Team Human Rights Committee	**ON-GOING:** **Continue to Support**
1.1.2. Increase awareness of barriers to	Provide education and training in Fair Housing **SEE END NOTE #5** • Conduct outreach to increase awareness amongst the public Promote Lexington housing options	Fair Housing Act		**LEADS**: Planning Office **PARTNERS:**	**SUSTAINED EFFORT:** **Initiate new action step and sustain over time.**

[11] Continue to advocate for an "Equity-In-All-Policies Approach:" https://planning-org-uploaded media.s3.amazonaws.com/publication/download_pdf/Planning-for-Equity-Policy-Guide-rev.pdf

[13] https://www.mass.gov/doc/equity-toolkit/download

OBJECTIVE 1.1. Remove barriers to living in Lexington.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
providing opportunities for a greater diversity of people to live in town	• Conduct outreach to realtors and provide them with ready to use information regarding housing options in Lexington • Work with the Planning Office, Community Preservation Committee, Housing Partnership, LexHAB, Housing Authority and others to, identify needed improvements in the Lexington Housing Authority units and develop a plan to fund these • Include METOC families in local preference for the affordable housing lotteries Increase awareness regarding the connection between affordable housing and increased diversity of the population • Collect research on connection between affordable housing and diversity of population and create an on-line resource on the town's web page[15] • Collect stories from persons looking for affordable housing in Lexington and post videos to increase awareness, promote understanding of the issue and support for address it [16]	***Missing Middle Housing***[18]		School Department Chief Equity Officer Realtors LexHAB Community Preservation Committee Housing Authority Working Group to focus on Affordable Housing (proposed new) Human Rights Committee MetroWest Fair Housing	

[15] Example of discussion of connection between affordable housing and diversity of population: https://www.governing.com/community/a-recipe-for-achieving-real-housing-affordability

[16] Example: See "Stories of the Can't Wait List: A collection of powerful stories by real people experiencing hardships and dwindling hopes from years spent on Cambridge Housing Authority waiting lists to secure a home in one of the most in-demand and expensive real estate markets in the country." Cambridge, MA: https://cambridge-housing.org/cantwait/
Also see: "A New Way of Listening": https://portal.realtalkforchange.org

[18] **Missing Middle Housing** "is a range of house-scale buildings with multiple units - compatible in scale and form with detached single-family homes – located in a walkable neighborhood": https://missingmiddlehousing.com

OBJECTIVE 1.1. Remove barriers to living in Lexington.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
	Consider removing the term "family" from use designation (e.g. "single family, two-family) replacing them with more inclusive terminology[17]			RHSO Council on Aging Commission on Disability Public Information Officer	

OBJECTIVE 1.2. Foster a **sense of belonging and promote interaction** amongst residents, visitors and people working in town.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.2.1. Attract and support the development of amenities that	Hold focus groups/survey residents regarding what they feel would make Lexington a more diverse and inclusive community Re-visit developing a crematorium at Westview Cemetery to meet the preferences of some cultural/religious	Affinity groups in town **SEE END NOTE #18**		**LEADS**: Town Manager Select Board **PARTNERS:** Chief Equity Officer	**ON-GOING:** **Continue to support**

[17] Example: In Belchertown, MA these have been replaced with "single-unit," "multi-unit," "dwelling unit," etc.
Also for additional discussion see: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3518664

OBJECTIVE 1.2. Foster a **sense of belonging and promote interaction** amongst residents, visitors and people working in town.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
serve more diverse populations	groups living in Lexington that favor cremation over burial Recruit and support ethnic groceries and restaurants and ethnically-oriented retail and personal services (e.g. traditional Indian clothing shop, etc.) to locate in Lexington's commercial districts Allocate space in a public facility for use by the different cultural/religious communities for worship or other community gathering and meeting space creating a multi-cultural place for cultural exchange Encourage local businesses to undertake training for DEI and cultural competency Consider the specific needs of women in the built environment, public services, and the provision of amenities **SEE END NOTE #6**			Facilities/IT Westgate Cemetery Administration Economic Development Office Council on Aging Commission on Disabilities Chamber of Commerce Retailers Assoc. Affinity groups	

OBJECTIVE 1.2. Foster a **sense of belonging and promote interaction** amongst residents, visitors and people working in town.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.2.2. Consider adding multi-lingual signage in public places	Develop a system of multi-lingual signage to install in town-owned facilities including the schools, the Library, Community Center and recreational facilities, the Town Center, the Minuteman Bikeway and other frequently visited locations **SEE END NOTE #7** Work with businesses in commercial districts and encourage them to provide multi-lingual signage Engage all residents in branding and naming the various commercial districts in town and invite diverse symbols and toponyms (place-names)			**LEADS**: Select Board Town Manager **PARTNERS:** Chief Equity Officer Strategic Equity Advisory Team Public Works town-owned facilities Economic Development Office Chamber of Commerce Retailers Assoc.	**#2: INTERMEDIATE (Years 5-10)**

OBJECTIVE 1.2. Foster a **sense of belonging and promote interaction** amongst residents, visitors and people working in town.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.2.3. Make town communication and messaging more inclusive	Consider multi-lingual messaging Consider translating summaries of key town documents into majority languages spoken in Lexington homes Ensure that all town applications and forms include non-binary gender options and that town staff use gender-neutral language when addressing the public Provide a stipend to multi-lingual residents and/or staff for translation and/or interpretation services Ensure that town communication is accessible to persons with disabilities including sight and hearing impairments	Multi-lingual residents and staff of Lexington		**LEADS**: Select Board Town Manager Chief Equity Officer **PARTNERS:** Public Information Officer Language Access Coordinator (*new position)* Commission on Disabilities	**SUSTAINED EFFORT: Initiate new action and sustain over time**

OBJECTIVE 1.2. Foster a **sense of belonging and promote interaction** amongst residents, visitors and people working in town.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.2.4. Develop opportunities for people to connect	Encourage and promote cultural exchange events and activities Invite and encourage installations that represent the various cultures, races, religions, etc. of people currently living in Lexington. Install these in prominent locations. Specifically reach out to more recently arrived communities. Could include temporary or permanent installations such as: • Public art, including murals • Banners • Monuments Consider developing a "***Human Library***" based on the Danish model where people of different incomes, cultural, races, religions, etc. can "borrow a person instead of a book" and have a conversation to promote a better understanding of commonalities and appreciation of differences **SEE END NOTE #9**	Affinity Groups **SEE END NOTE #18**		**LEADS**: Select Board Town Manager **PARTNERS:** Land Use, Health & Dev. Chief Equity Officer All affinity/cultural groups in Lexington Community Center Cary Memorial Library Community Center Commission on Disability Monuments & Memorials Committee	**SUSTAINED EFFORT:** **Initiate new action and sustain over time** 

OBJECTIVE 1.2. Foster a **sense of belonging and promote interaction** amongst residents, visitors and people working in town.					
Strategies	**Potential Actions**	**Existing Resources**	**Funding**	**Lead & Partner(s)**	**Phasing**
1.2.5. Require Diversity, Inclusion and Equity training of all town staff on a regular basis	Develop a schedule for repeated DEI training of all town staff. Allocate funding in the budget (line item?) Increase cultural competence in town staff through regular training workshops **SEE END NOTE #10** Conduct staff training to ensure that community engagement is conducted in ways that are welcoming to all residents. Encourage town Staff to reach out to resident volunteer translators and interpreters. Consider providing stipends to volunteer translators and interpreters	Chief Equity Officer		**LEADS**: Select Board Town Manager **PARTNERS:** Chief Equity Officer Language Access Coordinator *(new position)* Human Resources All town Departments	**ON-GOING:** **Continue to support**

OBJECTIVE 1.2. Foster a **sense of belonging and promote interaction** amongst residents, visitors and people working in town.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.2.6. Invest in signage and monuments that record and promote the role of diverse peoples in the town's history.	Drawing on the LexSeeHer model organize events and design sculpture, monuments and other types of public art, including both temporary and permanent markers to honor the participation of people of diverse backgrounds in the history of Lexington. • Work with Historical Society to conduct research that focuses on identifying the contributions of diverse peoples in the town's history • Hold design competitions to create installations. Involve the town's youth Support LexSeeHer[19] efforts to honor the efforts and perspectives of women in Lexington's history **SEE END NOTE #11** Honor the Black and Native American Minutemen who fought in the Revolutionary War [20] **SEE END NOTE #12** • Consider central location such as the Battle Green or Grain Mill Alley for a monument	LexSeeHer[21] Historical Society		**LEADS**: Select Board Town Manager **PARTNERS:** LexSeeHer Historical Society Chief Equity Officer All affinity/cultural groups Association of Black Citizens of Lexington Monuments & Memorials Committee	**SUSTAINED EFFORT: Initiate new action and sustain over time**

[19] **LexSeeHer** is an effort to honor women's contributions throughout Lexington's history through sculpture: https://www.lexseeher.com

[20] "Black Soldiers Were Essential to the Battles of Lexington in 1775:"afri https://newsone.com/2003439/black-soldiers-like-lemuel-haynes-were-essential-to-battles-of-lexington-and-concord-in-1775/

[21] **LexSeeHer** is an effort to honor women's contributions throughout Lexington's history through sculpture: https://www.lexseeher.com

OBJECTIVE 1.2. Foster a **sense of belonging and promote interaction** amongst residents, visitors and people working in town.

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
	Consider making Land Acknowledgements when opening public events and meetings as a way of respecting the first peoples of the land. Develop consistent language to use across all forums **SEE END NOTE #13** Support the Historical Society in its research about slavery and enslaved peoples who lived in Lexington Celebrate the role the Ellen Stone Building played in the anti-slavery movement				
1.2.7. Ensure that all residents have equitable access to public facilities and services	Provide information regarding existing resources on-line, but also in non-computer-based ways as well as in languages spoken in Lexington homes Ensure that all public facilities have gender-neutral restrooms, locker rooms and other such facilities Continue to install and update as technologies evolve, signage and signals accessible to people with hearing and/or sight impairments	Town website Community bulletin boards Lexington affinity groups **SEE END NOTE #18** MA Architectural Board American with Disabilities Act		**LEADS**: Town Manager **PARTNERS:** Public Information Officer Chief Equity Officer Commission on Disabilities Language Access Coordinator *(new position)* Public Works Public Facilities	**ON-GOING:** **Continue to support**

OBJECTIVE 1.3. Support **all ages and abilities.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.3.1. Develop options and incentives for the production and adaptation of housing accessible and attainable to all persons	Provide zoning incentives for small-scale, housing developments Require some amount of housing to be produced using universal design principles or to meet Architectural Access Board standards • Provide developers and home-owners with a guidebook to create accessible dwelling units Evaluate and potentially revise current zoning and regulations to allow new age-sensitive options, such as cooperative housing for multiple generations and other inter-generational living options Review responses of seniors participating in a survey as reported in ***Lexington For All Ages: A Community Needs Assessment Report, 2019*** **SEE END NOTE #14** Explore additional and or expanded property relief programs Consider grant programs that support older adults in making home modifications Consider ways (financial and practical) of providing support to older adults for the maintenance of their property	***Lexington For All Ages: A Community Needs Assessment Report, 2019***		**LEADS**: Human Services Planning Board **PARTNERS:** Council on Aging Chief Equity Officer Land Use, Health & Dev. Commission on Disability	**#1: IMMEDIATE (Years 1 – 5)**

OBJECTIVE 1.3. Support **all ages and abilities.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.3.2. Review and update resources currently provided to Lexington's older adults	Identify the strengths and challenges of aging in Lexington Continue to conduct outreach to older adults with some strategies directed at those who do not have internet at home and/or do not speak English at home Review the findings from the ***Lexington For All Ages: A Community Needs Assessment Report, 2019***[22] ***SEE END NOTE #14*** Add any desirable features from the **Beacon Hill Village concept** to existing partnership with community-based organizations, local businesses and residents to help to stabilize neighborhoods for all residents, and to specifically support older adults to age in place **SEE END NOTE #15**	***Lexington For All Ages: A Community Needs Assessment Report, 2019*** Meals on Wheels Nutritional Counseling ***Center for Social and Demographic Research on Aging***[24] ***American Association of Retired Persons (AARP) Network of Age-friendly communities***		**LEADS**: Human Services **PARTNERS:** Council on Aging Recreation and Community Programs Cary Memorial Library Chief Equity Officer	**ON-GOING:** **Continue to support**

[22] https://www.lexingtonma.gov/sites/g/files/vyhlif7101/f/uploads/lexington_age_friendly_report_summary_0.pdf

[24] https://www.umb.edu/demographyofaging

OBJECTIVE 1.3. Support **all ages and abilities.**					
Strategies	**Potential Actions**	**Existing Resources**	**Funding**	**Lead & Partner(s)**	**Phasing**
	Consider seek AARP designation of Age-friendly Community[23] **SEE END NOTE #16**				

[23] https://www.aarp.org/livable-communities/network-age-friendly-communities/info-2014/an-introduction.html

OBJECTIVE 1.3. Support **all ages and abilities.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.3.3. Increase opportunities for socializing and reduce isolation of older adults	Review and implement the findings from the ***Lexington For All Ages: A Community Needs Assessment Report, 2019***[25] Continue to explore opportunities for co-programming oriented to older adults. • Survey older adults to align programming with desires • Continue to work with cultural and affinity groups to ensure that programming is culturally and linguistically relevant to residents of diverse backgrounds Support the Council on Aging to continue to explore opportunities for collaboration with students at Lexington Public Schools for multi-generational activities Consider creating a rating system for the town's trail system indicating level of difficulty, proximity to benches, rest rooms, etc. to increase comfort level of older adults Consider offering multi-lingual historical tours.	***Lexington For All Ages: A Community Needs Assessment Report, 2019*** ***Older Wiser Lifelong Learners***[26] ***Senior-Friendly Businesses***[27] ***Minuteman Cane Award***		**LEADS**: Human Services **PARTNERS:** Council on Aging Recreation and Community Programs School Department Cary Memorial Library Chief Equity Officer Language Access Coordinator *(new position)* Commission on Disabilities	**ON-GOING: Continue to support; some new action steps**

[25] https://www.lexingtonma.gov/sites/g/files/vyhlif7101/f/uploads/lexington_age_friendly_report_summary_0.pdf
[26] https://friendsofthecoa.org/current-courses.asp
[27] https://www.lexingtonma.gov/human-services/senior-services/pages/senior-friendly-businesses

OBJECTIVE 1.3. Support **all ages and abilities.**					
Strategies	**Potential Actions**	**Existing Resources**	**Funding**	**Lead & Partner(s)**	**Phasing**
		Lex Café Senior Meals at Community Center[28]			

[28] https://www.lexingtonma.gov/human-services/senior-services/pages/lex-cafe-senior-meals

OBJECTIVE 1.3. Support **all ages and abilities.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.3.4. Reduce teens dependence on travel by automobile	Provide and expand public transit options Make walking and biking safer and more pleasant Continue and expand incentives to students at Lexington's public schools to take the bus, carpool, walk and bike to school Develop a teen targeted "Getting Around Lexington without a Car" campaign. Encourage the Lexington Youth Council to brand and lead it • Make non-car travel "cool" • Focus on increasing youth ridership on Lexpress	Minuteman Bikeway Safe Routes to School program Lexpress School buses ACROSS Lexington trail system	Safe Routes to School grants	**LEADS**: School Department **PARTNERS:** Human Services Chief Equity Officer Lexington Youth Council Student DEI	**#1: IMMEDIATE: (Years 1-5)**

OBJECTIVE 1.3. Support **all ages and abilities.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.3.5. Consider developing a Teen or Youth Center	Survey middle and high school students and hold brainstorming sessions to discuss the desirability of creating a Youth Center • Identify potential location(s) • Identify desired activities • Develop preliminary space program • Consider the possibility of cultural, religious and other different preferences • Take into account gender differences in preferences (for example a Teen Playground designed with teenage girls in mind)[29] • Accommodate non-binary teens Consider expanding existing programs geared to teens at Hayden Recreation Center, Lexington Community Center and/or at the Cary Memorial Library	***Forum for Youth Network Listing, 2015***[30] Hayden Recreation Center private Community Center		**LEADS**: Land Use, Health & Dev. **PARTNERS:** Department of Public Facilities Human Services School Department Youth Council Dept. of Recreation Cary Memorial Library Community Center Chief Equity Officer	**#2: INTERMEDIATE (5-10 years)**

[29] https://www.bloomberg.com/news/features/2021-05-28/we-need-more-public-space-for-teen-girls

[30] https://www.lexingtonma.gov/sites/g/files/vyhlif7101/f/uploads/forum_for_youth_network_listing_oct_2015_update_4.16.pdf

OBJECTIVE 1.3. Support **all ages and abilities.**					
Strategies	**Potential Actions**	**Existing Resources**	**Funding**	**Lead & Partner(s)**	**Phasing**
1.3.6. Involve youth in planning for their spaces, programs, and activities	Work with Youth Council and Cary Memorial's Youth Advisory Board to solicit the Teen Voice for the purpose of providing input when making decisions that affect spaces, programs and events oriented to youth Review results of youth surveys (including YRBS)[31] project and incorporate as relevant to promote health and wellness amongst Lexington's youth. Include both middle and high school students	***Forum for Youth Network Listing, 2015*** Lexington Youth Council Youth Advisory Board (Cary Memorial Library)		**LEADS**: Human Services **PARTNERS:** Lexington Youth Council Cary Memorial Library Youth Advisory Board School Dept. Land Use, Health & Dev. Dept. of Recreation Youth and Family Services/ Mental Health Task Force Chief Equity Officer	**ON-GOING:** **Continue to support**

[31] Lexington High School Youth Risk Behavior Survey (YRBS). The survey focuses on the major risk behaviors that threaten the health and safety of young people and are anonymous.

OBJECTIVE 1.3. Support **all ages and abilities.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.3.7. Support persons of all abilities	Ensure that all public facilities are compliant with the Americans with Disabilities Act (ADA) Continue to implement ADA improvements outlined in Recreation Facilities and ADA Compliance Study (2017) of all municipal facilities including recreational facilities and playgrounds and address any deficiencies Consider adapting some of the town's trails to allow motorized handicap access Provide information to those with disabilities regarding access Create a directory of public facilities and ways in which persons with disabilities can access these (including which features and which disabilities are supported) • Build on ***Senior-friendly Business Directory*** and more widely promote accessibility features Pursue optioning a chair car service system for those who need to travel by wheelchair[32] we might already do this Continue installing and updating signage and signals accessible to persons with hearing and sight impairments	Recreation Facilities and ADA Compliance Study (2017) Capital Improvement Plan / Prioritization of ADA improvements (2018) ***Senior-Friendly Businesses***[33]		**LEADS**: Dept. of Public Works Department of Public Facilities **PARTNERS:** Recreation Commission on Disability Chief Equity Officer Council on Aging Land Use, Health & Dev. Area businesses	**ON-GOING:** **Continue to support**

[32] See Town of Arlington, MA for an example

[33] https://www.lexingtonma.gov/human-services/senior-services/pages/senior-friendly-businesses

OBJECTIVE 1.4. Attract people of **diverse backgrounds to work in town.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.4.1. Recruit individuals from a variety of backgrounds to work in Town Departments	Develop deliberate recruitment and hiring practices that are intentional about diversifying staff and employees (set goals and identify methods) • Attend job fairs and use alternative recruitment software and practices to identify diverse candidates • Publish job opportunities in a variety of locations that are oriented to Asian-Americans, Black Americans, etc. Review recommendations from Forum on Reimagining Public Safety • Create a Task Force to Reimagine Public Safety in Lexington[34] • Recruit Public Safety staff that is multi-lingual and multi-racial • Review how other communities have approached this issue Understand how union regulations may influence hiring practices and contract negotiations Map out different hiring processes and ensure that DEI Officer reviews job descriptions before they are published Support the Working Group for recruiting & hiring and the DEI officer in their efforts to implement	Forum on Reimagining Public Safety (May 6, 2021) Together We Rise ***"Reimagining Public Safety Resources"*** Amplify Latinx (MA) Black Economic Council of MA (BECMA) MA Asian American Commission (AAC) National Association of Asian American Professionals (Boston) Lexington Working Group for Recruiting & Hiring		**LEADS**: Town Manager Assistant Town Manager Select Board **PARTNERS:** Chief Equity Officer Town Department Heads Lexington Working Group for Recruiting & Hiring Lexington affinity/cultural groups Strategic Equity Advisory Team	**#1: IMMEDIATE (Years 1 – 5)**

[34] See similar efforts in other towns such as Brookline: https://www.brooklinema.gov/DocumentCenter/View/23619/Task-Force-Final-Report-22621_1P

OBJECTIVE 1.4. Attract people of **diverse backgrounds to work in town.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
	the town's Diversity Hiring Policy[35] Explore using "local preference" housing policy[36] to support potential new hires to live in town				
1.4.2 Create a culture of inclusion	Survey residents and town staff as to their experiences and ideas regarding making Lexington a more inclusive workplace Train those in positions to hire and promote the value of a diverse workforce Conduct a Management Analysis and assess workplace benefits and adjust to create a more flexible and inclusive workplace including flexible schedules and work from home policies Assess workplace facilities to ensure that all employees are supported. Some examples include: • Private and comfortable breastfeeding spaces (consider providing modular breastfeeding pods)			**LEADS**: Town Manager Assistant Town Manager Select Board Public Information Officer **PARTNERS:** Chief Equity Officer Cultural/affinity groups Strategic Equity Advisory Team	**#1: IMMEDIATE (Years 1 – 5)**

[35] Town-sponsored DEI staff training has included Hiring for Diversity training (overview of best practices in hiring for Senior Managers), Layers of Belonging, Stories of Intersectionality (training for managers on intersectionality and belonging), and Best Practices for Developing and Retaining a Neurodiverse Workforce (based on expertise pulled from recruitment and management experience at a technology company where over 75% of the employees report being on the autism spectrum).

[36] The State of MA allows cities and towns to set aside up to 70 percent of affordable units in a housing development for members of local preference groups; this can include persons working for the town. The remaining units are available to any income-eligible applicants. It should be noted that municipalities are reviewing their local preference policies and reducing the percentage because in many instances it has resulted in limiting housing opportunities for people of color.

OBJECTIVE 1.4. Attract people of **diverse backgrounds to work in town.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
	• Gender-neutral restroom and other facilities in all municipal buildings				
1.4.3. Expand equitable procurement practices	Set goals for procurement of goods and services from minority and women-owned businesses Set/increase goals in Requests for Proposals (RFPs) for percentage of fee in contract set aside for minority- and women-owned businesses and have it count in the selection process by including it in the rating of bids (See Massport Model)	Amplify Latinx (MA) Black Economic Council of MA (BECMA) MA Asian American Commission (AAC) National Association of Asian American Professionals (Boston) Massport procurement model Massachusetts Supplier Diversity Office		**LEADS**: Town Manager Assistant Town Manager Select Board **PARTNERS:** Procurement Chief Equity Officer Dept. of Public Works Department of Public Facilities	**#1: IMMEDIATE (Years 1 – 5)**

OBJECTIVE 1.4. Attract people of **diverse backgrounds to work in town.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.4.4. Encourage minority-owned enterprises to set up shop in Lexington	Recruit minority-owned business owners by using alternative recruitment software and practices to identify diverse candidates. Allocate funding Look for opportunities to invite businesses that provide food and other products and services that are oriented to cultural, racial and ethnic groups represented in town Provide "incubator space" such as a retail pop up for small businesses owned by women and people of color[37]	Existing vacant commercial space that could be used for Incubator pop up Approximately 23% of existing Lexington businesses are minority-owned[38] Amplify Latinx (MA) Black Economic Council of MA (BECMA) MA Asian American Commission (AAC) National Association of Asian American Professionals (Boston)		**LEADS**: Land Use, Health & Dev. **PARTNERS:** Landlords Chief Equity Officer Chamber of Commerce Retailers Assoc. Strategic Equity Advisory Team	**SUSTAINED EFFORT:** **Initiate new action steps and sustain over time**

[37] My People's Market, Portland, OR.: https://www.mypeoplesmarket.com
[38] U.S. Census (2012)

OBJECTIVE 1.4. Attract people of **diverse backgrounds to work in town.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Phasing
1.4.5. Encourage existing businesses to cater to needs and preferences of various cultural, racial, ethnic and religious groups living in Lexington	Conduct a survey of organized affinity groups asking them what they would like to see in local businesses that is currently missing • Share findings with local businesses and encourage them to provide relevant goods and services • Promote the benefits of broadening businesses offerings to appeal to diverse residents **SEE END NOTE #17** • Support businesses to develop relevant marketing strategies including providing multi-lingual signage that announces these offerings	Affinity groups **SEE END NOTE #18** Area businesses		**LEADS**: Economic Development Office **PARTNERS:** Cultural/ affinity groups Area businesses Chief Equity Officer Public Information Officer Chamber of Commerce Retailers Assoc. Strategic Equity Advisory Team	**SUSTAINED EFFORT: Initiate new action steps and sustain over time** 

OBJECTIVE 1.5. Continue to support on-going efforts to **improve town-wide communication** and to **encourage broader participation in decision-making.**

Strategies	Potential Actions	Existing Resources	Funding	Lead & Partner(s)	Priority
1.5.1. Review the processes for decision-making to ensure meaningful public engagement	Review the design process for all town-owned public facilities to broaden public input • Encourage and recruit a broad range of residents for appointment to the Permanent Building Committee Review process regarding the allocation of Community Preservation Act (CPA) funds • Improve the process that includes stakeholders advocating for Open Space, Recreation, Affordable Housing and Historic Preservation Continue to improve cultural and linguistic competent outreach to include residents of varied backgrounds in decision-making			**LEADS**: Select Board **PARTNERS:** Permanent Building Committee Community Preservation Committee Chief Equity Officer Language Access Coordinator (new position)	**#1: IMMEDIATE (Years 1 – 5)** 

OBJECTIVE 1.5. Continue to support on-going efforts to **improve town-wide communication** and to **encourage broader participation in decision-making.**					
Strategies	**Potential Actions**	**Existing Resources**	**Funding**	**Lead & Partner(s)**	**Priority**
1.5.2. Recruit and encourage a broad range of residents to volunteer to be on town Boards, Committees and Commissions	Increase awareness of Citizens Academy Make specific recruitment efforts to members of cultural, ethnic, racial and religious affinity groups to better reflect demographic of town's residents Work to define potential roles and time commitments in order to recruit younger volunteers Clearly define role of volunteers in town government and clearly explain rules and regulations so as to increase comfort level of potential volunteers Provide regular and repeated training to volunteers Upgrade all public meeting facilities to improve and facilitate equitable in-person and	***Citizens Academy***[39] Lexington's various cultural and affinity groups Citizen Training Planning Collaborative (CTPC) training programs		**LEADS**: Select Board **PARTNERS:** Communications Director Affinity groups Chief Equity Officer Youth Council	**SUSTAINED EFFORT: Initiate new action step(s) and sustain over time**

[39] Lexington's **Citizen Academy program** is designed to expose residents to the various town departments so they can gain a better understanding of how municipal government works. Through presentations, discussions, and visits to town departments, participants have the opportunity to hear from various Directors and Managers and learn about the operations of town programs and services: https://www.lexingtonma.gov/town-manager/citizens-academy

OBJECTIVE 1.5. Continue to support on-going efforts to **improve town-wide communication** and to **encourage broader participation in decision-making.**					
Strategies	**Potential Actions**	**Existing Resources**	**Funding**	**Lead & Partner(s)**	**Priority**
	remote/virtual participation by board members and the public				
1.5.3. Support on-going efforts to improve communication and engagement of town residents	Implement the recommendations of the Enhancing Communication in Lexington (ECiL) subcommittee of the Lexington 20/20 Vision Committee including[40]: • Develop a town-wide Communication Plan and update the plan regularly as town priorities change • Implement a shared communication structure for town and school communications • Implement actions to increase enrollment on electronic communications platforms maintained by the town • Identify and incorporate non-Internet centered communication platforms for residents who choose not to use social media of Listservs • The town website should serve as the launching point through which residents can	***Best Practices for Municipal Communication,*** *Enhancing Communication in Lexington (ECiL)*		**LEADS**: Communications Director Select Board **PARTNERS:** CPAC Communications Advisory Committee Office of Diversity, Equity and Inclusion	**ON-GOING: Continue to support**

[40] Best Practices for Municipal Communications, A Report to the Town of Lexington MA Select Board, by the Enhancing Communication in Lexington (ECiL) subcommittee of The Lexington 20/20 Vision Committee, 4 August 2020

OBJECTIVE 1.5. Continue to support on-going efforts to **improve town-wide communication** and to **encourage broader participation in decision-making.**					
Strategies	**Potential Actions**	**Existing Resources**	**Funding**	**Lead & Partner(s)**	**Priority**
	find information they are seeking about the town related issues Update/upgrade town website, including increasing the usefulness of the search capability Consider multi-lingual messaging Consider translating the Executive Summary of the Comprehensive Plan into the priority languages spoken in Lexington homes Set up town government booths at town events to provide information and solicit feedback Continue to provide opportunities for virtual participation post-pandemic			Vision for Lexington Committee	

ENDNOTES:



Figure 1. The three essential planning questions

END NOTE #1. Equitable planning in the most basic and fundamental way defines why a particular policy, program, practice, or project exists and/or is being proposed and as the American Planning Association suggests, to ask the "Three Essential Questions[41]:"

- Asking who is helped — identifying the readily apparent users or beneficiaries of a planning proposal — commences the essential question-asking process.
- Purposefully asking who is harmed by a planning idea — directly or indirectly, intentionally or unintentionally — forces a proactive assessment of its potential negative impacts on real people.
    - **Financially harmed**. Will someone's livelihood be affected by an incompatible land-use decision, or will an infrastructure proposal negatively impact someone's property?
    - **Physically harmed.** Will someone suffer from unsafe or unhealthy physical or environmental conditions caused by the outcomes of a planning proposal?
    - **Culturally harmed**. Will someone's ties to the built environment such as important buildings, sites, or landmarks, be negatively impacted?
    - **Psychologically harmed.** Will someone's state of mind be impacted, such as having one's home demolished against one's will? Or will someone be subjected to potentially overwhelming new sensory inputs (e.g., blinking lights, loud noises) caused by changes in land uses?
    - **Harmed by neglect**. Will groups containing many loud voices be harmed by being ignored? Will people with quieter voices suffer by not being loud enough?
- Use a framework to help identify who is missing from the table. People who:
    - Are interested in the subject matter
    - Live in the greater area
    - Have different abilities and needs

[41] https://www.planning.org/pas/memo/110/three-essential-questions-for-better-planning/

- Are diverse in a variety of ways
- Live in communities that are underrepresented or are otherwise disproportionately left out of the conversation

Health Impact Assessment (HIA) An increasing number of municipalities are using HIA tools to evaluate their policies and programs. There are many examples from Europe and Canada and some in the U.S. A Health Impact Assessment tool provides a framework to assess the health impacts of a proposed project, program or policy through the social determinants of health that include DEI considerations.

According to the World Health Organization, health is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. A healthy community[42] is one that continuously creates and improves both its physical and social environments. Such communities help people to support one another in aspects of daily life and to develop to their fullest potential. Healthy places are those designed and built to improve the quality of life for all people who live, work, worship, learn, and play within their borders. They also provide easy access and connectivity to other communities – places where every person is free to make choices amid a variety of healthy, available, accessible, and affordable options." (Centers for Disease Control and Prevention)[43]

END NOTE 2. Local Preference Eligibility for Affordable Housing. Municipalities set aside a certain percentage of affordable housing for people already living and/or working in town. Some municipalities are reviewing their set aside numbers and revising them to be more inclusive. The City of Newton which has a 70% of affordable units for residents, people who work for the city and public schools, employees of local businesses, and families with children in the city's schools recently conducted a study and found that the rules benefitted white people more than people of color. The Town of Brookline recently reduced its local preference to 25% for the same reason.

END NOTE 3. DRAFT Diversity Equity, and Inclusion (Article 30: DEI): Town Meeting, Fall of 2021

Amend Zoning ByLaw
"To see if the Town will vote to amend the Zoning Bylaw of the Town of Lexington to explicitly forbid illegal discrimination; permit structures enabling access for disabled persons anywhere on a lot; in decision-making, add consideration of racial, disability, and other equity impacts and remove consideration of factors which encourage discrimination; add a definition of household replacing the definition of family; permit more than one individual in rooming units; or act in any other manner in relation thereto. "

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[42] *As described by the U.S. Department of Health and Human Services' Healthy People 2010 report*

[43] National Center for Environmental Health, Department of Health and Human Services
http://www.cdc.gov/healthyplaces/

DESCRIPTION:
This article would update the Zoning Bylaw to incorporate a variety of changes in response to the Systemic Racism Resolution adopted under Article 8 of Special Town Meeting 2020-2 and the Full Inclusion Resolution adopted under Article 30 of the 2021 Annual Town Meeting. Specifically, it would:

- Require that the Zoning Bylaw be interpreted and applied to forbid discriminatory effects;
- Permit structures enabling access for disabled persons anywhere on a lot;
- In permitting decisions, require consideration of racial, disability, and other equity impacts and remove consideration of criteria which encourage discrimination; and
- Replace the definition of "family" with a definition of "household" that does not exclude groups of unrelated disabled persons.
- Permit more than one resident (such as a couple) in a rooming unit.

PROPOSED MOTION: That the Zoning Bylaw, Chapter 135 of the Code of the Town of Lexington, be amended as follows (struck-though text is to be removed and underlined text is to be added), and further that non-substantive changes to the numbering of this bylaw be permitted to comply with the numbering format of the Code of the Town of Lexington.

END NOTE 4. MA Department of Housing and Community Development Equity Tool Kit[44] suggests that a set of operating principles are adopted to ensure that all in this case, Town Departments center all relevant or critical stakeholder groups rather than their own interests. "Borrowing from our friends at Forward Cities and the People's Institute for Survival and Beyond, users are expected to "A.B.I.D.E. by Anti-Racist Principles." These unifying concepts will be briefly explained. The acronym A.B.I.D.E. is an abbreviation of Access, Belonging, Inclusion, Diversity, and Equity. It expands upon the popular D.E.I. acronym to recognize the importance of creating a culture of access in consideration of individuals with disabilities and others with lower socioeconomic statuses. It also acknowledges the need for inspiring a sense of belonging for all internal and external stakeholders."

The equity toolkit is organized into a series of actions and steps that are separated into four phases: Define, clarify, engage, and measure. Together they reflect a process for embedding equity and inclusion into transformational community-based economic development work. Each action is suggestive and provides an overview before introducing high-level steps and resources for consideration for practice. These provide a framework for collaborative action-planning.

[44] https://www.mass.gov/doc/equity-toolkit/download

END NOTE 5. Fair Housing Act. The Fair Housing Act, also known as the Civil Rights Act of 1968, was passed in order to address housing discrimination, including the attempted segregation of neighborhoods. While the Act has resulted in protecting many individuals and families from housing discrimination, discrimination based on race, religion, sex, color, familial status, national origin, disability and other factors still occurs. In fact. According to the National Fair Housing Alliance (NFHA), over 25,000 housing discrimination complaints were filed with the federal government and local and national fair housing agencies in 2017. Over half of the complaints were based on disability, followed by race at 20 percent. But these numbers reflect only REPORTED incidents. The NFHA estimates that over 4 million instances of housing discrimination occur annually, but many people don't realize they've been discriminated against — or know what steps to take when it happens[45]

Fair Housing Act violations can occur in all phases of buying and renting, including in advertising, throughout the application process, in financing or credit checks, and during eviction proceedings. Here are a few examples of discrimination people in protected classes have encountered:[46]

- A real estate agent tries to "steer" a buyer away from a certain neighborhood
- A landlord tries to avoid renting to someone by saying the unit advertised has been rented when it hasn't
- A property management company refuses to rent to a family with children or requires a higher deposit
- A landlord evicts a person of color for a reason they wouldn't evict a white tenant for
- A mortgage broker asks questions or requests excessive documentation from an immigrant couple that they wouldn't request from another buyer
- A lender charges a single woman a higher interest rate than what her credit score should dictate
- A landlord refuses to make reasonable accommodations for a tenant who is disabled

More on the Fair Housing Act: https://www.justice.gov/crt/fair-housing-act-1

[45] https://www.zillow.com/blog/what-you-need-to-know-about-the-fair-housing-act-227310/?msclkid=6b65dfe0b11d179ada17be0650406eb5&semQue=Fair%20Housing&1299623001623956kwd-81226588754007:loc-19081226500240765

[46] Ibid.

END NOTE 6. Gender Mainstreaming[47] Increasingly, evidence suggests that men and women have different wants and needs when it comes to built environments, public services, and amenities, and that planning interventions may not meet all those differing needs, especially those of women. Many European countries have begun to pay attention to these differences and to develop ways of addressing them, as this historically excluded group comprises half of the population. "When women are not well supported, communities are not well supported."

END NOTE 7. Multi-lingual signage. There are many considerations for creating multi-lingual signage to ensure that it doesn't contribute to signage clutter and is accessible and user-friendly. Some of these include:

- Use color coding or national flag or other way of distinguishing between languages for ease of reading (with consideration given to color blind individuals)
- Multi-lingual signage can also be used on gateway signage welcoming people into Lexington as well as on wayfinding signage.
- Make use of icons or pictographs where relevant using internationally recognized symbols (use ISO Catalogue[48])

END NOTE 8. Language Access Coordinator: A Language Access Coordinator is responsible for collaborating with all Town Departments to ensure that individuals of Limited English Proficiency (LEP) or who require accessibility services are provided meaningful opportunities to be informed of and participate in town business, services and decision-making. An example Job Description (from City of Malden) can be found here: https://www.cityofmalden.org/Jobs.aspx?UniqueId=100&From=All&CommunityJobs=False&JobID=Executive-Office-Language-Access-Coordin-155

END NOTE 9. **Human Library**[49]**:** In Copenhagen, Demark there is a library where one can "borrow a human for an hour" to explore various topics, get to know someone who is seemingly different from you and to help to promote an understanding of the commonality of the human condition as well as an appreciation of the differences. People register as with a title, one they are willing to share, such as "unemployed," "refugee," "Greek," "transgender," etc. The idea is that through increased exposure and face-to-face interaction, people start to come closer to not "judging a book by its cover."

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[47] https://planning-org-uploaded-media.s3.amazonaws.com/publication/download_pdf/PASMEMO-2019-11-12-rev.pdf

[48] **International Organization for Standards:**
https://webstore.ansi.org/Standards/PCC/ISOCatalog?msclkid=25f0ed6dc41d15cbbc118c8b298e9d32&utm_source=bing&utm_medium=cpc&utm_campaign=Campaign%20%231&utm_term=ISO%20Catalog&utm_content=ISO-20K

[49] https://wonderfulengineering.com/check-out-this-library-in-denmark-where-you-borrow-people-instead-of-books/

"It is basically a safe place where people can read a person and not judge it just like any book we read. Sixteen years after the first event, the human library has now spread in over 70 countries with South Africa, Sudan and Chile coming up in next years. It is a great way to make communities and reclusive groups of people communicate with each other and try to live in harmony.[50]"

END NOTE 10. Cultural Competence: Cultural competence is about our will and actions to **build understanding between people, to be respectful and open to different cultural perspectives, strengthen cultural security and work towards equality in opportunity**. Relationship building is fundamental to cultural competence and is based on the foundations of understanding each other's expectations and attitudes, and subsequently building on the strength of each other's knowledge, using a wide range of community members and resources to build on their understandings.

END NOTE 11. LexSeeHer[51]: LexSeeHer is a dedicated group of volunteers in Lexington, MA, who seek to establish the first monument that will depict real women in the Birthplace of American Liberty. The monument will convey the important economic, social, and political impact women have had over more than three centuries. It will also raise questions about what "liberty" and "freedom" have meant to women from the 18th century to the present.

LexSeeHer advisor and public school educator Celeste Freeman summed up her reaction to Meredith Bergmann's concept [for a sculpture to honor women] this way*: "'This musical line from Lin Manuel's Hamilton has been reverberating in my mind when I think of how gates and gatekeepers are often used to keep people out both physically from spaces as well as the pages of what we think of as of known history. One of the exciting aspects of this project is that this gate is actually an invitation—an opening to everyone to visually see a more expansive view of what we think of as settled history. When I think of the role of generations of unsung women like my grandmothers who serve as both guardians and gatekeepers of history, I can't think of a more meaningful and symbolic way to capture how our founding mothers have shaped our nation. I see it as a portal to the past, present, and future."*

END NOTE 12.Black and Native American Soldiers in Revolutionary War: A significant number of African American and Native Americans participated in the Revolutionary War. They are not currently honored in a public way the way the white men are.

[50] Ibid.

[51] https://www.lexseeher.com

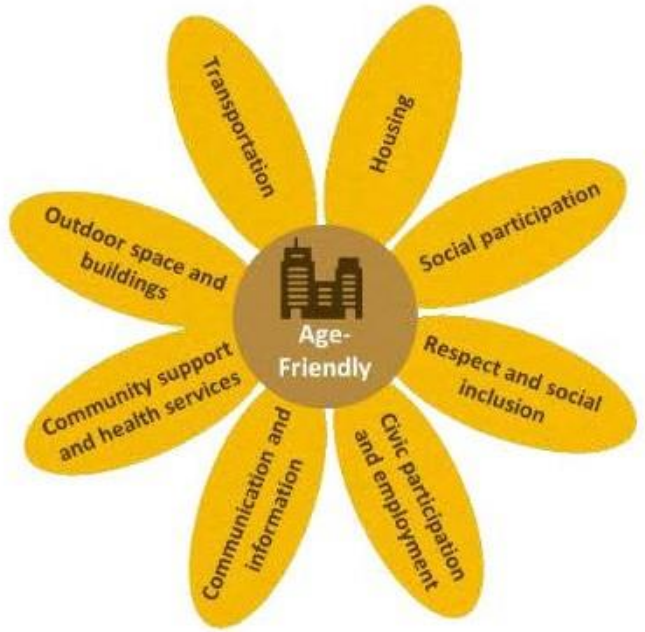
"*About 1,700 African American and American Indian men have been identified in this study as being among the nearly 68,000 soldiers Massachusetts supplied to the army during the Revolution.[1] General Artemus Ward, George Washington's predecessor as Commander-in-Chief, issued the first general order of the Continental Army in the spring of 1775. That order required that a descriptive return, including "complexion," be made of all men in the army.[2] Although it was not always followed to the letter, the order has made the task of identifying minority participants in the Revolution less difficult. The Massachusetts Minutemen who were organized as a result of the Committee of Safety's October action responded quickly to the Lexington Alarm on April 19, 1775.[3] Among them was Prince Estabrook, an African American from Lexington, who was wounded in that first battle of the Revolution[52]."*

END NOTE 13. **Land Acknowledgements.** Land Acknowledgements, that is, acknowledging that the land we stand on belonged to Native Americans are increasingly being made in order to "un-erase" history. In some instances they are very concise, for example: I want to acknowledge that we are on the traditional territory of [nation names]." In other instances they may include more intention and detail. In crafting a Land Acknowledgement it may be helpful to consider the following questions[53]:

- Why are we doing this Land Acknowledgement?
- How does this Land Acknowledgement relate to the event or meeting?
- ·What is the history of this territory? How has the history affected the health and well-being of the native people today?
- ·What can we do in our own work to help people heal from that past — and to learn how not to inflict new wounds today?

Additionally, it is desirable to include Native people in the crafting of the Land Acknowledgment, if possible.

Resource map: This tool allows you to look up the tribes whose land your meeting or event is held. Borders were more fluid and based on seasonal uses and historical understandings: https://native-land.ca/



Graphics Source: Adapted from WHO by S. Harris (Design for Aging Committee, BSA)

END NOTE 14. Needs Assessment of Lexington's Older Adults

[52] https://www.massar.org/2013/06/30/african-americans-of-massachusetts-in-the-revolution/

[53] https://medium.com/wa-health-care-authority-connect/land-acknowledgements-a-way-to-respect-the-first-peoples-of-the-land-6c0285da3b0c

Housing Preferences of Lexington's older adults. The responses to survey as reported in ***Lexington For All Ages: A Community Needs Assessment Report, 2019***[54]

Housing preferences in Lexington if need to move:

- **Age 50-59**: 53% marked single-family home
- **Age 60-79**: About 30% chose each of these—senior independent living, single-family, or apartment/ condominium/townhouse
- **Age 80+**: 54% marked senior independent living community

Additionally, respondents mentioned that the cost of living is a concern, especially with respect to housing and property taxes.

Home maintenance and home modifications were also cited as concerns.

Lexington For All Ages: A Community Needs Assessment Report, 2019[55] ***The report identifies eight domains of an age-friendly community:***

- Housing
- Outdoor Spaces and Buildings
- Social Participation
- Communication and Information
- Transportation
- Community and Health Services
- Civic Participation and Employment
- Respect and Social Inclusion

[54] https://www.lexingtonma.gov/sites/g/files/vyhlif7101/f/uploads/lexington_age_friendly_report_summary_0.pdf

[55] https://www.lexingtonma.gov/sites/g/files/vyhlif7101/f/uploads/lexington_age_friendly_report_summary_0.pdf

Some relevant responses to the Needs Assessment survey include concerns with:

Transportation

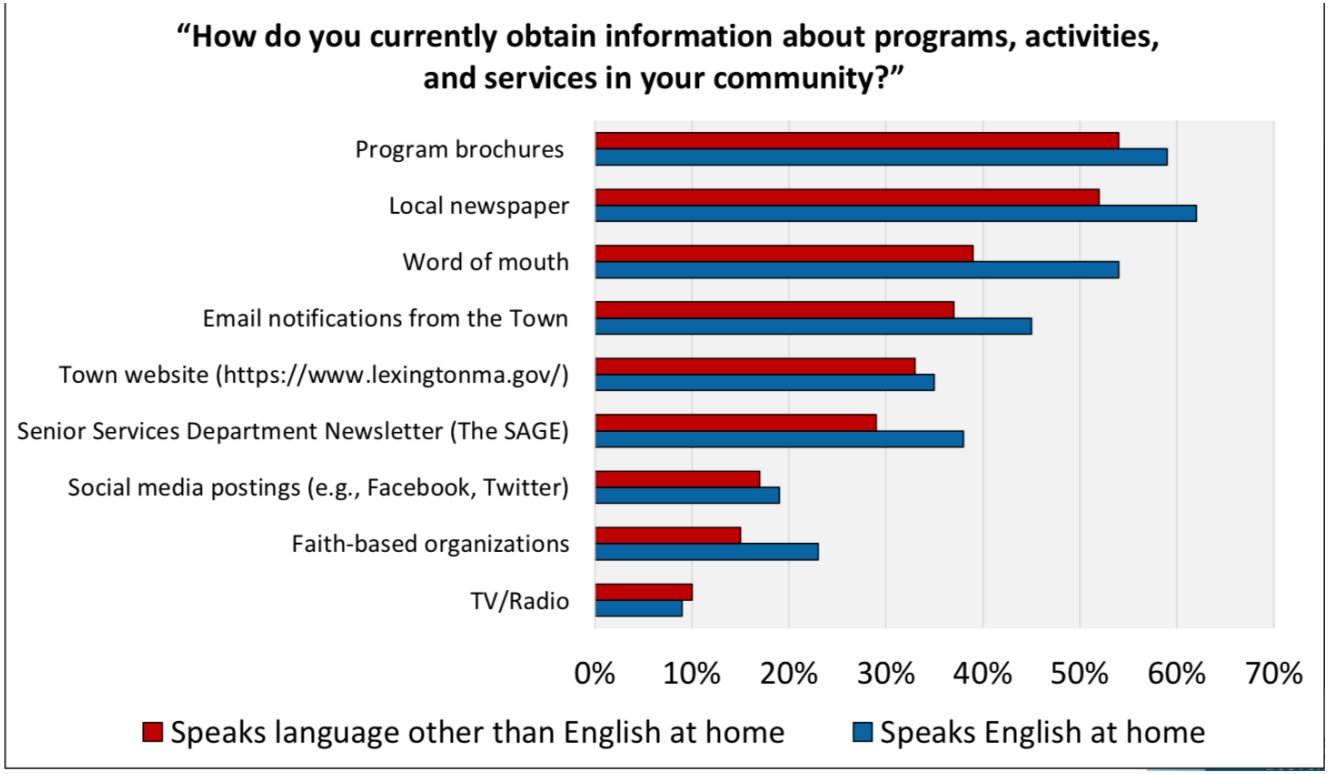
- Limited evening / weekend transportation and limited public transportation options
- Challenge of fixed routes (can't walk to Lexpress)
- Too much cross town traffic
- Difficult to live in Lexington if can't drive
- Parking availability/accessibility
- Sidewalk maintenance/lighting on trails / crosswalks timing

Outdoor spaces and Buildings

- Lack of dedicated space for seniors
- Convenience of public rest rooms

Communication

- 11% of those 80+ do not have Internet access at home.
- Important to consider are the number of older adults for whom English is not a first language. When asked if they or someone in their family need help accessing social services, health services or other municipal **services 50% of those who don't speak English at home said they do not.**
- When asked "How do you currently obtain information about programs, activities and services in your community?" they responded as indicated in the chart to above[56]:



For some guidance for planning communities for healthy aging see American Association of Retired Persons (AARP) (multiple documents) and Healthy Community Design Toolkit by Pioneer Valley Planning Commission and the Massachusetts Partnership for Health Promotion and Chronic Disease

[56] ***Lexington For All Ages: A Community Needs Assessment Report, 2019:***
https://www.lexingtonma.gov/sites/g/files/vyhlif7101/f/uploads/lexington_age_friendly_report_summary_0.pdf

Prevention.[57]

AARP Walk Audit Tool Kit[58]

END NOTE 15. Beacon Hill Village[59] is a member-driven organization in downtown Boston created to support aging in place by providing support, information and stimulation to age well and safely. It is one of the first of its kind in the country, and the first in the State, and provides essential services such as transportation and grocery delivery, referrals to service providers, and educational, cultural and social activities. The concept has been adapted by more than 300 other communities across the U.S. and seven overseas. The organization has the following goals:

- Live Healthy (Exercise / Wellness)
- Connect and Engage (Social Events /Affinity Groups)
- Stay Independent (Resources/ Information /Support)
- Expand Your Knowledge (Lectures / Discussion)
- Experience Culture (Art/ Music/ Theater)
- Explore Your World (Excursions / Outings)

END NOTE 16. American Association of Retired Persons (AARP) designation as an Age-Friendly Community.[60] An Age-Friendly Community is livable for people of all ages with "walkable streets, housing and transportation options, access to key services and opportunities for residents at all life stages to participate in community activities." Membership in the AARP Network of Age-Friendly Communities means that "a community's elected leadership has made a commitment to actively work with residents and local advocates to make their town, city, county or state an age-friendly place to live…"

> "The common thread among the enrolled communities and states is the belief that the places where we live are more livable, and better able to support people of all ages, when local leaders commit to improving the quality of life for the very young, the very old, and everyone in between.
>
> AARP engages with elected officials, partner organizations and local leaders to guide communities through the age-friendly network's assessment, planning, implementation and evaluation processes.
>
> People of all ages benefit from the adoption of policies and programs that make neighborhoods walkable, feature transportation options, enable access to key services, provide opportunities to participate in community activities, and support housing that's affordable and adaptable.
>
> Well-designed, age-friendly communities foster economic growth and make for happier, healthier residents of all ages."
>
> - AARP Age-Friendly Designation

[57] https://www.mass.gov/doc/the-healthy-community-design-toolkit-leveraging-positive-change-0/download

[58] https://www.aarp.org/livable-communities/getting-around/aarp-walk-audit-tool-kit-download/

[59] https://www.beaconhillvillage.org

[60] https://www.aarp.org/livable-communities/network-age-friendly-communities/

END NOTE 17. The Benefits of Inclusion and diversity in marketing campaigns[61]:

- You reach more people: Ensuring you display diversity and include different demographics in your marketing campaigns helps your brand reach more types of people. This increases your potential customer pool.

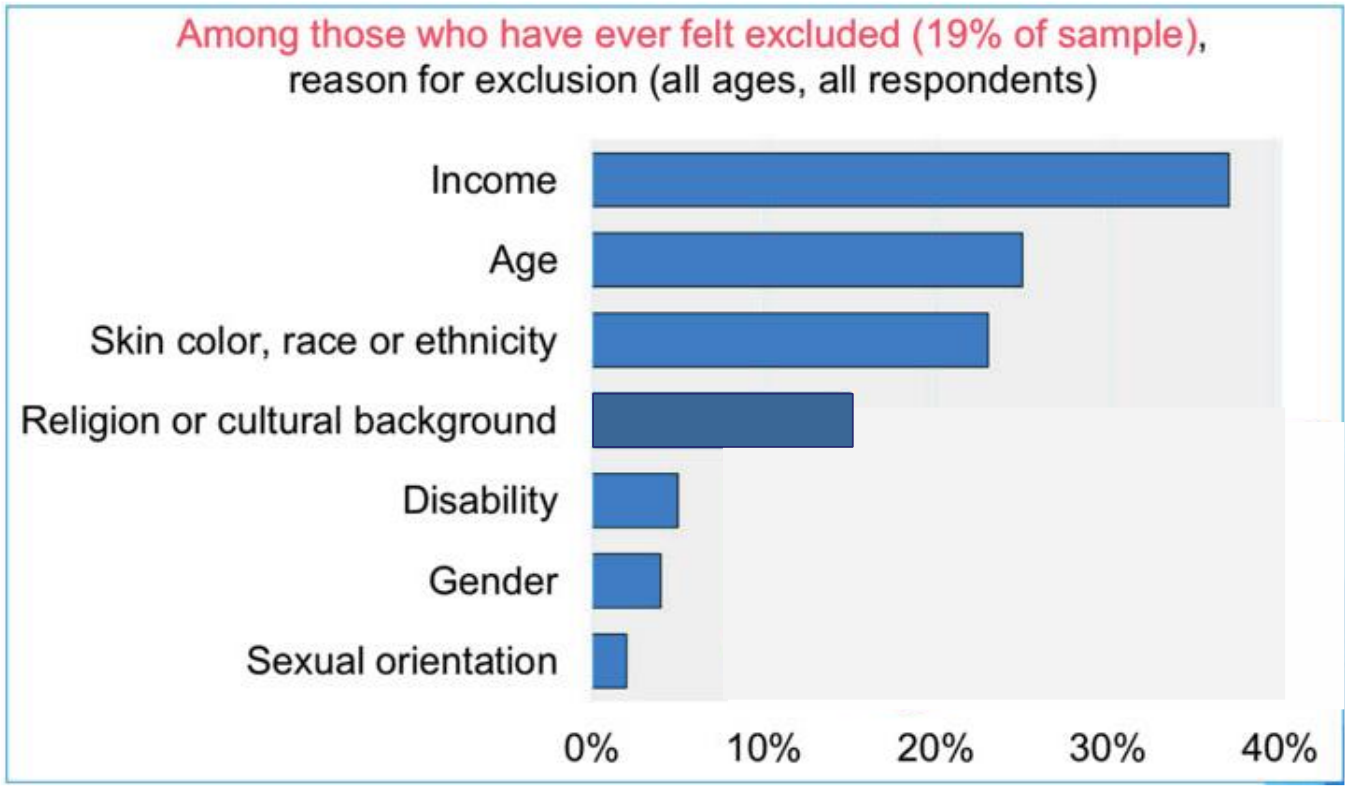
- You get closer to your audience: These days it's all about those engagement numbers and fostering a community within your brand. By conducting market research and communicating directly with customers, you can form a deeper relationship with your audience and build better brand trust and loyalty.

- Grows respect and brand recognition: People will respect a brand that offers diverse and inclusive marketing and genuinely reflects their audience. When you as a marketer understand and speak the language of your customer, you earn their trust and even their respect.

- Boosts your bottom line: Reaching a wider audience + having brand respect + understanding your customer = a better bottom line. People are more likely to want to purchase from a brand when they see diversity in their campaigns.

[61] https://stackla.com/resources/blog/diversity-and-inclusion-in-marketing/

According to a survey conducted of Lexington residents in 2019, respondents said they felt they had been excluded for the following reasons:[62]



[62] ***Lexington For All Ages: A Community Needs Assessment Report, 2019:***
https://www.lexingtonma.gov/sites/g/files/vyhlif7101/f/uploads/lexington_age_friendly_report_summary_0.pdf

END NOTE 18. Some of Lexington's Affinity Groups

The town's residents have created a large number of organizations based on affinity group; these include:

- Chinese Americans of Lexington (CALex)
- Chinese American Association of Lexington (CAAL)
- Indian Americans of Lexington
- Indian Family Activities Association
- Korean-American Organization of Lexington (KOLEx)
- Japanese Support Group of Lexington (JPLLex)
- Association of Black Citizens of Lexington (ABCL)
- Brazilian American Cultural Association
- Bangladeshi Americans of Lexington
- LexSeeHer
- Commission on Disability
- Lextinas
- LexPride

Additionally, there are organizations both within the town government and outside it that promote cultural diversity and support residents of all ages and abilities; these include:

- New Legacy Cultural Center
- Lexington English Learner Parent Advisory Council
- Lexington Neighbors and Newcomers Club
- LexRAP (non-profit refugee assistance)
- Citizen's Academy
- Lexington Interfaith Clergy Association
- Lexington Youth Counseling Connection
- Lexington Council on Aging
- Community Center
- Cary Memorial Library

SECTION 1:

PLAN FOUNDATION-

SETTING THE STAGE

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OVERVIEW

The following introductory section includes:

- Comprehensive Plan Purpose and Planning Process
- Lexington Voices (Public Process)
- Vision, Goals and Objectives
- Key Cross-cutting Themes
- Guiding Principles
- Key Findings from Inventory of Existing Conditions
- Potential COVID Impacts (short and long term)

The Lexington's Comprehensive Plan is presented in three volumes:

Volume I: The Plan

Volume II: Inventory and Assessment of Existing Conditions

Volume III: Documentation of Lexington Voices

This section is the Introduction to Volume I.

COMPREHENSIVE PLAN PURPOSE

The purpose of a municipal comprehensive plan is multi-pronged. A Comprehensive Plan provides opportunity for the community to take stock of existing resources, their condition, and the degree to which they are meeting the community's needs. It also presents an opportunity to identify common values, to articulate a shared vision of a desired future, and to create a roadmap for fulfilling the vision. This in turn, helps to build community. Having a plan also communicates to residents and business owners, and future residents and potential investors, the town's priorities, and what it considers to be desirable. In short, it defines what kind of a town it would like to be. Having a completed and updated comprehensive plan also makes a municipality eligible for a number of grant programs.

Lexington's previous comprehensive plan was completed in 2003. It is recommended by the state that an update be undertaken every ten years, that is to say that this plan was long overdue.

This comprehensive plan is intended to guide decisions and actions over the next twenty years. In effect, it is the town's "To Do List" for the next generation. While recommended actions are to be led by town government, local businesses, non-profits and other potential partners interested in improving the town are enthusiastically invited to join the effort.

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COMPREHENSIVE PLAN ADVISORY COMMITTEE

At the start of the effort, the town appointed a Comprehensive Plan Advisory Committee (CPAC), a twelve-person, citizen-based entity to oversee the planning process. Members represented each of the nine voting precincts; several members also held seats on other Town boards and committees and/or served as members of Lexington's Town Meeting.

The Comprehensive Plan Advisory Committee (CPAC) met approximately 34 times over a five-year period.

PLANNING PROCESS

The planning process that began in 2018 spanned approximately five years. During this time several interruptions occurred, including changes in leadership, the involvement of several consultants, the COVID-19 pandemic, all of which delayed its completion.

The planning process is comprised of three main components:

- A **public engagement process** designed to engage the community in a conversation to identify shared values, desires and concerns. This process is used to generate a vision and related set of goals and objectives to form the foundation of the plan.

- An **inventory and assessment of the town's resources** in order to understand existing conditions and future needs



- An **implementation plan,** organized around the goals and objectives, identifies strategies and action steps to help achieve the goals, objectives, and ultimately, the shared vision.

DEVELOP VISION AND GOALS BASED ON PUBLIC PROCESS

A wide range of stakeholders took part in the public process: residents, business owners, town staff and others. Opportunities for input included three World Café forums[1], three additional forums: including housingand economic vitality ;a social media platform and on-line survey. Flyers, e-mail blasts, social media, newspaper and newsletter announcements, and postings on the town website, all affixed with a specially designed "LexingtonNEXT" logo, alerted the public to these opportunities. The values, desires and concerns collected from these events and activities helped shape a vision and set of goals and objectives, forming the basis upon which the comprehensive plan is built.

Outreach was conducted through flyer distribution, email blasts, social media, newspaper and newsletter announcements, and posting materials and videos of Committee meetings and public forums on the Town's website.

A logo and tagline were developed and used to brand all comprehensive plan documents.

CONDUCT INVENTORY AND ASSESSMENT OF EXISTING RESOURCES

An inventory and assessment of the town's existing resources was compiled, organized in chapters reflecting the eight plan elements:

- Historic and Cultural Resources
- Natural, Open Space and Recreation Resources
- Housing
- Transportation
- Economy
- Public Facilities and Services
- Demographics
- Land Use

Information for the inventory chapters was drawn from "trend reports," prepared early in the process by town staff, as well as from existing reports and plans, census data, and interviews with key stakeholders. These included a wide range of reports focusing on specific aspects of the Town, such as the 2015 Open Space and Recreation Plan, school enrollment projections, Sustainable Lexington Plan, and many others. For a complete list of the documents used to prepare this Comprehensive Plan see **APPENDIX B.** The conclusion of each chapter identified key issues, opportunities and challenges and priorities to be considered in the Plan recommendations. Volume II of the Plan contains the eight inventory chapters in full as well as two-page summaries of each of the comprehensive plan elements.

In addition to these documents, the previous Comprehensive Plan (2003) was reviewed to identify what had been implemented since its completion, and what had changed. This review observed that a number of initiatives had been explored, and several recommendations had been implemented.

[1] World Café forums are designed to support small group discussions among participants with the intention of identifying values, desires, concerns, potential disagreements, etc.

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DEVELOP IMPLEMENTATION PLAN

An implementation plan is a compilation of the recommended steps needed to successfully complete implementation activities, in other words, "HOW" to achieve the goals and objectives that describe the desired future. The implementation plan is built around the comprehensive plan goals and objectives, with strategies and action steps defined as recommended as ways to achieve the goals and objectives. Additional information, such as existing resources, lead party responsible and partners, are provided to further assist with implementation.

LEXINGTON VOICES (PUBLIC PROCESS)

The process began with a series of public forums in a format referred to as World Café.[2] Three such forums, held in the fall of 2018, solicited input from the more than 120 participants. Detailed notes recorded the conversations; these were analyzed according to topics and summarized in the pages that follow.

Key concerns included the need for affordable and less expensive housing, and housing appropriate and affordable to older adults; a desire for increasing alternative modes of transportation, specifically walking and biking infrastructure; a need to diversify commercial activity and the importance of Lexington Center; a concern regarding the lack of racial, ethnic and socio-economic diversity; strong support for the schools; support for open space, recreational and natural resources; support for Town efforts to address climate change and sustainability.

Changes since the last Comprehensive Plan (2003)

- Significant investment in town-owned facilities
- Major redevelopment of existing housing stock
- Significant demographic changes/increase in:
  - Asian population
  - Aging population
  - Young children
  - Median income
- Topical issues addressed by adding new positions
  - Public Information Officer
  - Sustainability Director
  - Chief Equity Officer
  - Human Rights and Commission on Disability
- Stepped up to meet sustainability goals
- Town Meeting commitment to view all plans through equity lens
- An increased interest and sense of urgency on the part of participants in the comprehensive planning process to address issues regarding diversity, equity and inclusion; sustainability and climate change adaptation; health and wellness; affordable housing; and economic vitality

The community conversation started in 2018 and then was resumed in 2021. Several major events resulted in an increase in awareness and subsequent prioritization of specific issues. These include the COVID-19 pandemic, the murder of George Floyd, and a greater awareness of the need for sustainability and climate change adaptation.

LEXINGTON NEXT

FALL 2018 PUBLIC OUTREACH EVENTS

Lexington Next is our Comprehensive Plan update. It will lay out a vision for the town's future by codifying the goals for land use and guiding the work of town bodies. In all areas of the plan, we will be guided by these principles:

- Livable Community
- Accessible and Connected Community
- Harmony with Nature
- Healthy and Socially Responsible Community
- Vital and Resilient Economy
- Good Governance



WHAT IS A WORLD CAFE?

Fun, interactive meetings designed build connections between participants and facilitate productive conversations in small groups. In rotating groups of 4-3, we asked people to discuss a series of questions about values, wants, needs, concerns, and tensions. Three meetings were held:

- September 25th at Cary Memorial Hall
- October 23rd at Estabrook Elementary
- November 27th at the Lexington Community Center

WHAT DID WE HEAR?

We talked with more than 120 people between three World Cafés about roughly 60 topics facing Lexington. To help digest these conversations, we've organized categories and picked out some highlights. The graphic recordings and detailed notes from these meetings can be found on the plan website.

LAND USE (50 COMMENTS)

- **50%** mentioned zoning regulations, with most identifying them as a concern and a priority.

HOUSING (169 COMMENTS)

- **56%** referenced creating and maintaining affordable housing options, including **22%** specifically about affordability for seniors.

TRANSPORTATION (203 COMMENTS)

- Across a wide variety of issues, **20%** talked about bike infrastructure, **17%** about traffic, and **14%** about walkability.

ECONOMIC DEVELOPMENT AND VITALITY (137 COMMENTS)

- Across a wide variety of comments, **31%** referenced the importance of the Town Center and **26%** on the need for diversity in commercial development.

DEMOGRAPHICS (105 COMMENTS)

- Most conversations centered around ethnic (**45%**) and economic diversity (**33%**), both as areas of concern, with some positive progress identified regarding ethnic diversity.

PUBLIC FACILITIES AND SCHOOLS (163 COMMENTS)

- **45%** mentioned public schools, focusing on value and the need to plan for the future. Town facilities of all types are highly valued.

CULTURAL & NATURAL RESOURCES (112 COMMENTS)

- **70%** of comments dealt with 'traditional' resources—open space, conservation areas, parks, and recreation facilities. Residents also consider climate change resilience and sustainability a core component of the Town's work.

TOWN IDENTITY & COMMUNITY (128 COMMENTS)

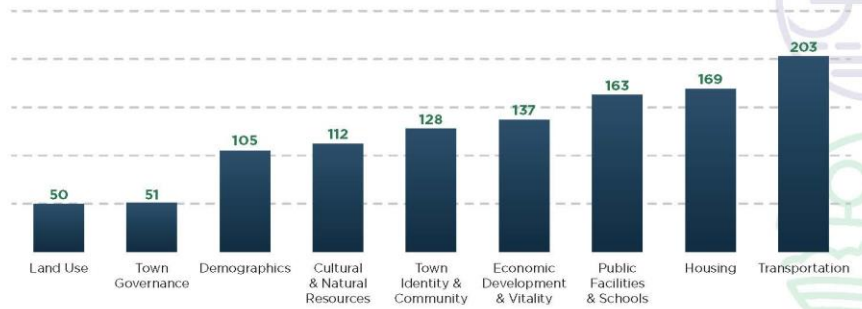
- Residents highly value the sense of community, history, and civic participation in Lexington, with **75%** of comments valuing, seeing progress in, and prioritizing these items.

LEARN MORE, TAKE A SURVEY, AND FIND OUT ABOUT UPCOMING EVENTS AT LEXINGTONMA.GOV/LEXINGTONNEXT

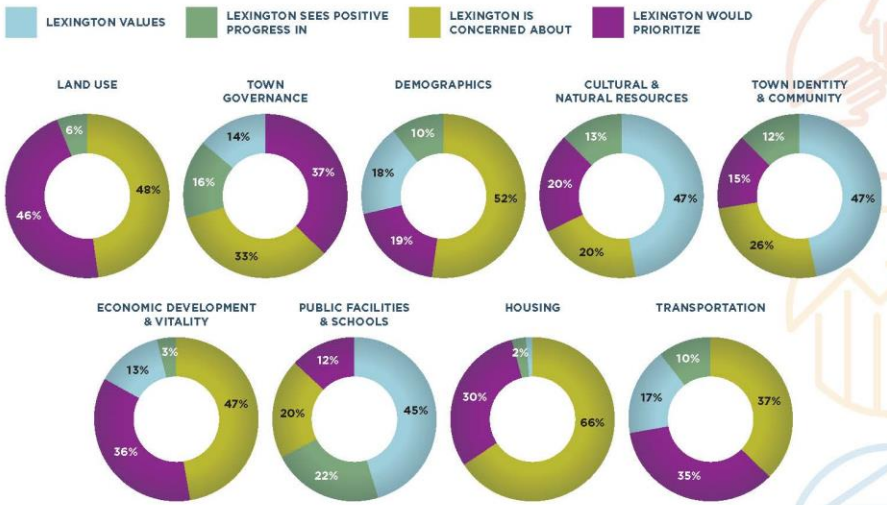
LEXINGTON NEXT

FALL 2018 PUBLIC OUTREACH EVENTS

NUMBER OF COMMENTS PER CATEGORY



TOPICS BY THE NUMBERS



Since the World Café community conversations, several additional public forums were held to dig deeper into desires and concerns as well as to create a more updated vision and set of goals to help articulate the town's vision for the future. These forums served to confirm that residents continue to hold the same values and concerns with a stronger sense of urgency or priority; these include a greater interest in:

- increased diversity, equity and inclusion
- need for more housing options, including more affordable and less expensive housing
- sustainability and climate change adaptation
- economic vitality of commercial corridors/districts

The comprehensive plan reflects these focus areas in a number of ways including using guiding principles to formulate and evaluate recommendations as well as being deliberate in articulating the community's priorities through intentionally worded goal statements. Additional public forums were organized around the themes of housing and economic vitality in order to gather input on these specific issues and concerns.

"Everything we do needs to be looked at with an equity lens." *(public forum participant)*

The murder of George Floyd in 2020 resulted in a national outcry, heard loudly throughout Lexington with vigils, demonstrations and Black Lives Matter signs on many lawns. In subsequent community conversations there was a strong call to action for more racial equity, diversity and inclusion (DEI) in how the town operates as well as who lives, works and visits Lexington. Participants in the public forums repeatedly identified DEI as a priority.

"Sustainability and net zero are urgent goals for our survival." *(public forum participant)*

Climate change has increasingly made its presence through more frequent and more severe weather events. As a result, it has become more prevalent on people's minds and this was reflected in the increased prominence demonstrated in discussions held at public forums. Residents expect the town to responsibly take actions to become a more a sustainable town.

"We need to be nimble in addressing future emergencies in the future including other public health crises and climate change." *(public forum participant)*

The experience of the COVID-19 pandemic has been transformative in a number of ways, emphasizing racial inequities as well as ways in which the environment plays a role in an individual's and community's health and wellbeing. Participants in comprehensive plan forums reported an increase in their appreciation of the town's natural resources, open spaces, parks and trails as they provided a respite to the pandemic's limitations. They also called for making permanent the outdoor dining provisions they experienced during the pandemic. Additionally, they discussed the importance of public health and using lessons learned from addressing the pandemic, applying these to climate change adaptation.

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"There can be no socio-economic diversity when there are fewer and fewer homes affordable to low- and moderate- income levels." *(public forum participant)*

Concerns regarding housing continued to be expressed throughout the process. The median price of a home continues to rise and is significantly above that of the State average. Residents are aware of this and also observe the approximately 100 houses torn down every year replaced with much larger homes and express concern regarding the lack of housing for low- and moderate-income persons as well as to older adults wishing to down-size.

"What is missing are business options (need for clothing stores, bakeries, high end restaurants, gyms, pubs, beer gardens, food trucks, breakfast options, etc.); more diverse restaurants, shops, artistic spaces, green space, outdoor activities like ice skating for farmers markets; additional seating areas with tables for people of all ages to gather (benches, tables, parklets, outdoor restaurant seating with later hours); cohesive storefronts, and a lack of historic markers and activities; a LexShe statue, and; upstairs residences…" *(public forum participant)*

A forum on economic vitality was held to focus the conversation on the various commercial corridors in Lexington. Participants were particularly focused on Lexington Center and East Lexington and were very engaged in brainstorming ways in which the various commercial districts can be made more vibrant; these included improving the pedestrian and biking experience, ensuring that small businesses can be retained, improving aesthetics including signage and façade improvements, adding more outdoor dining, improving connections to the bike path, promoting more cultural activities and public art, etc. Many participants enthusiastically supported the idea of mixed-use

PUBLIC PROCESS

Input from the following public forums organized for the purpose of developing the Comprehensive Plan were used to form the basis of the Plan's foundation:

- Comprehensive Plan **Kick-off Event** (June 4, 2018)
  - SWOT Analysis
- Lexington **World Café (**September – November 2018)
  - September 25, 2018
  - October 23, 2018
  - November 27, 2018
- **Stakeholder Interviews**: Spring 2021
- Comprehensive Plan **Public Forum**: June 2021
- **C**omprehensive Plan **Housing Forum**: September 21, 2021
- **Re-discovery Day**: October 18, 2021
- Comprehensive Plan Attractive and Vibrant **Commercial Districts Forum**: October 26, 2021
- **Social Pinpoint**: on-going on-line platform
- Comprehensive Plan **Public Forum**: March 2022

Input was also reviewed from the following forums:

- Q&A from **League of Women Voters** presentation (3/5/2021)
- Lexington **20/20 Vision**
  - Themes, Goals, and Recommended Actions (January 2008 Version)
  - Atwater, Laurie, Vision 2020, "How's Your Vision," Lexington Colonial Times, May/June 2020

development, that is, housing on upper stories above retail in the town's commercial districts.

COMMUNITY PRIORITIES

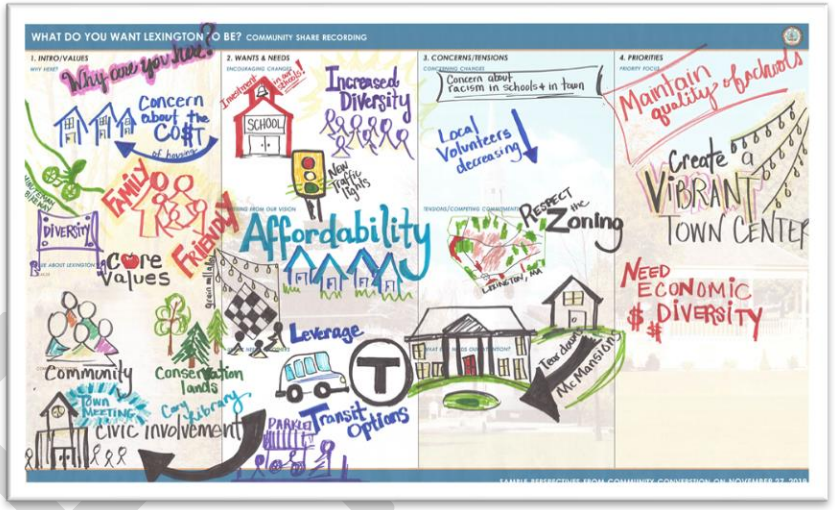
Public engagement activities, held in a variety of forums over the course of five years identified the community's shared values. These remained constant over this time period with some issues becoming more urgent as previously mentioned. A June 2021 forum confirmed the community's key priorities; these included the following:

- Commitment to sustainability
- Desire to increase diversity of people living, working and visiting Lexington
- Need for affordable housing
- Desire for more vibrant commercial districts
- Desire to reduce dependence on the automobile
- Desire to protect and connect open spaces
- Call to maintain and expand recreational facilities and increase opportunities for community gathering
- Call to maintain and update public facilities

Representative Responses at Housing Forum

A town-wide forum was held in September 2021 with a focus on housing. Participants responded by expressing support for:

- additional affordable housing
- affordable housing designed with sensitivity to visual character
- mixed use development: housing units located in upper stories above retail in commercial districts
- accessory dwelling units



Lexington residents' comments on the future of Lexington, World Cafe, Fall, 2018

- a desire to explore co-housing
- housing that is more affordable to town staff
- increased density along bus routes
- slowing the demolition of existing small and moderately- sized housing units

Representative Responses at Vibrant Commercial Districts Forum

A town-wide forum was held in October 2021 with a focus on economic vitality. Participants responded by expressing support for:

- mixed use development: housing units located in upper stories above retail in commercial districts
- more diverse retail and restaurant offerings

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- improved aesthetics and amenities
- more public art and cultural activities
- pedestrian and bicycle access, community gathering spaces, seating areas, outdoor dining
- more user-friendly experience with access to information kiosks, signage for public restrooms, water fountains, etc.
- an active nightlife
- culturally, ethnically and linguistically relevant spaces and places
- establishing a cultural district
- more welcoming commercial districts through gateway and multi-lingual signage
- public art, street performers, pop up shops, festivals and events
- more photo opportunities for tourists
- tax incentives for small local businesses
- green space, parklets, and attractive landscaping

If you could do one thing to improve Lexington, what would it be?

Participants in the June 15, 2021 forum said:

- *More support for our most vulnerable; more education for each other about our vulnerabilities*
- *The town may want to look at its budget through a Diversity, Equity, and Inclusion lens.*
- *I hope organizations in towns like ours take this racial reckoning movement forward with bold policies.*
- *Everything we do needs to be looked at with an equity and climate change impact lens!*
- *I don't see Lexington (municipal side) doing much on LGBTQIA+ issues, with a couple of exceptions.*
- *Sustainability and net zero are urgent goals for our survival.*

WHAT DO RESIDENTS VALUE ABOUT LEXINGTON?

Comments collected from participants in public forums

Features

Schools, Library, Community Center, Cary Memorial Building
Diversity of houses of worship
Bike path
Local farms
Conservation land
Community Pool, Hayden Skating Facility
Pine Meadow Golf Course
Farmers' Market, Lexington Farm/CSA
Center Playground
Neighborhood Pools
Town Reservoir
ACROSS Lexington trails
Movie Theater, Lexington Symphony
New Visitor Center

Culture

Common values, commitment to sustainability and diversity
Progressive attitude/liberal community
Small town feel, friendly community
Growing diversity (especially with regard to Asian population)
Education focus
General trust of government, professional town staff
Culture of volunteerism, civic engagement
Cultural diversity
Appreciation of history, colonial look
Discovery Day
Summer music concerts
Access to MBTA

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- *Being more inclusive of all kinds of social justice .*
- *Better biking infrastructure*
- *More multi-family housing*
- *Public space for music festivals*
- *Ensure accessibility to long Comprehensive Plan documents (language translations).*
- *Option to limit seniors' property tax to 10% of income.*
- *Increase opportunities for community building.*
- *Lexington has always been a town with upper middle-class population, but there seems to be an increasing driving divide between those with wealth and those without the ability to live and work here. It was mentioned earlier, fire fighters, teachers, cooks, mail carriers, grocery store baggers, how do they feel like part of this community, rather than solely here to serve the wealthy?*
- *We should lead in sustainability and reaching net zero.*

How were the goals and recommendations developed?

The recommendations were developed with input from residents, Town officials, and the Comprehensive Plan Advisory Committee (CPAC), with assistance from professional planning consultants. They consider the assessment of existing conditions, and present best practices. Additionally, relevant Lexington Select Board goals[3] and Lexington Planning Board Work Plan[4] items have been incorporated into at times broader goals and objectives. The recommendations represent suggested ways of achieving goals and objectives that were developed based on stakeholder input. The plan invites a broad range of stakeholders to help implement the strategies so that the community's values can be actualized.

Some of the 2003 recommendations are still relevant and are recommended yet again in this plan. Conditions may be riper for taking them forward at this time. Due to some significant changes since 2003, a number of new initiatives are proposed to address these changes to the town's demographics, environment, and attitudes. A shift in the community's priorities are also reflected in the Plan's recommendations.

For a complete accounting of what has been implemented from the 2003 Comprehensive Plan, please see **APPENDIX A.**

VISION

A vision statement describes the kind of community stakeholders would like to live, work and play in. It is a broad-brush image of what a community values and sees as a desirable future and is used to guide decision-making in the future. The following description of a shared desirable future for Lexington is based on significant public input throughout the five-year planning process.

The following vision statement is based on significant public input:

The Town of Lexington prides itself on being a vibrant community where residents place a high value on learning at all ages. Lexington's historic buildings and landscapes, many open spaces and trails, excellent schools, high quality public facilities and services, and proximity to Boston make it an attractive place to live, work and play. Lexington is committed to maintaining and expanding social and civic

[3] Select Board Goals: January 2020- December 2021 (Approved February 3, 2020)
[4] Planning Board Work Plan, 2021-2022

connections for all.

This Comprehensive Plan Update envisions a town that fosters a sense of belonging for all. By actively engaging in dialogue to balance issues related to housing, access and transportation, climate change, economic vitality, open space, natural resources, and more, we strive to create a community that:

- provides an environment that enables a diverse population of people to live, work, and thrive;
- encourages a flourishing business community that contributes to the town's financial;
- stability and offers excellent local employment opportunities;
- cultivates a wide range of exceptional recreational, cultural, educational, and social opportunities that support creativity and innovation;
- sustains our natural resources and fosters an ecologically balanced community;
- offers a variety of safe, accessible, and sustainable mobility options; and
- models stewardship and sustainability of the town's financial, human, information, and physical assets

IMAGINE a Lexington that….

… is community where all people living, working and visiting feel they belong. A Lexington that is mutually open to learning and **engaging all people** and that makes a concerted effort to be **inclusive** and to better reflect and communicate with cultural competence. Lexington is a town where all policies, projects and plans are evaluated as to their impact on structural racism.

… **mitigates the impacts of climate change** and plans for a sustainable future by taking such actions as reaching Net Zero, encouraging building with green materials, increasing recycling, fuel efficiency, non-automobile travel options, greening the housing stock, increasing its resilience to heat and storm water, and standing out as a leader in constructing environmentally-friendly public facilities, among other efforts. All plans and projects are evaluated as to their impact on the environment and climate change.

… offers a wide range of housing options, including affordable and more housing options available to individuals with a wide range of incomes, supporting the ability of families of diverse backgrounds to enjoy the town's assets while increasing the **socio-economic, racial and ethnic diversity** of the town's population. A range of housing types is preserved and created, including those appropriately designed and located for **older adults** wishing to **downsize** in community as well as for younger adults wishing to settle in town.

… continues to live up to its **reputation for educational excellence,** placing a high value on learning for all ages. There is a **new High School**, expanded programming at **Cary Memorial Library** and the **Community Center** and many **opportunities for lifelong learning**. All of the town's schools are well maintained and support state-of-the-art learning modalities and pedagogy including for Special Needs and English Language Learning.

… acknowledges and respects the **town's history,** the interwoven fabric of historic and natural resources and other features that contribute to Lexington's uniqueness. Historic resources, including buildings of note from a variety of epochs and other aspects of the built environment are preserved and promoted.

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… Protects and connects its **open spaces and conservation areas** and whose residents enjoy a number of passive recreation activities. A well-maintained **Minuteman Bike Path** and an **extensive ACROSS Lexington trail network** offers connections to historic and natural resources as well as other places in Town.

… adopts streamlined permitting processes so that **economic development** continues to bolster the tax base, provide opportunities for local employment, as well as more retail and restaurants for residents and visitors to enjoy. The tax burden is shared with **commercial development** helping to pay for desired improvements and services. The Town provides opportunities for local employment and enterprise to foster new businesses, large and small. The Hartwell Innovation Park provides employment and amenities and easily competes with surrounding municipalities for biotech and other companies.

…increases the vibrancy of commercial clusters and corridors that create a **continuum of centers of economic activity** and provide more **neighborhood-oriented goods and services** and are located in various places in Town**. East Lexington** is redeveloped, is aesthetically pleasing, pleasant and safe for pedestrians and bicyclists, and meets the needs of nearby residents. **Small businesses** are supported by requiring lower tax rates of them and the Town's history is leveraged creating a **booming tourist economy** that helps to support local businesses. .

… offers residents and visitors a **vibrant Town Center** with diverse shops for goods and services meeting the needs of both residents and tourists and a variety of eating establishments that cater to a range of tastes. The Center pulses with activity; a large number of people live in the Center and has become a "foodie" **destination** that capitalizes on its multi-cultural population. **Cultural events** are coordinated with restaurants so that residents may enjoy a full and satisfying **night out**. All this in a safe and pleasant environment oriented to **walkers** and those on **bicycles**. Parking is managed well and parking fees help pay for maintenance, improvements and beautification.

…provides extensive, safe and pleasant **walking and biking connections and robust transportation options** to all areas of town and beyond**.** There are increasingly **fewer trips made by single occupancy vehicles** reflecting an increased interest in caring for the environment and the health and wellness of residents. **Traffic congestion is reduced** and safety is increased by enforcing speed limits.

… provides **municipal facilities and services** that fulfill the needs of **all age groups**. **Older adults** are able to access a wide range of services including food, transportation, socializing and health and wellness for a range of ability levels. **Teens** are supported in their need to feel independent by providing them with a dedicated space to socialize and ways of getting around Town that do not require driving a car.

… provides residents with a variety of opportunities for organized as well as spontaneous **community gathering** and interaction in **both indoor and outdoor spaces.** These include a **Town Center** that is a destination for both residents and visitors, made vibrant with diverse retail and restaurants and well-maintained walking and biking infrastructure; a **Community Center** with a wide range of offerings; and **Cary Memorial Building** providing numerous venues for

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entertainment. Intercultural and intergenerational activities provide opportunities for interaction and enrichment.

… continually evaluates and improves the **town's governance and improves**, **increases and enhances communication** with residents by using virtual platforms to support civic engagement, an improved website, multi-lingual communication, and actively recruits volunteers of diverse backgrounds.

COMPREHENSIVE PLAN GOALS

This Comprehensive Plan is organized around the following nine goals:

GOAL 1: To increase the DIVERSITY, EQUITY, and to promote the INCLUSION of people living and working in Lexington

GOAL 2: To promote a wide range of HOUSING OPTIONS that appeal to the needs of all residents, regardless of income and life stage

GOAL 3: To promote a VITAL ECONOMY, including a variety of small and large businesses that contribute to the tax base and improve the balance of services to meet the needs of residents, employees, and visitors

GOAL 4: To protect the environment and enhance long-term SUSTAINABILITY and RESILIENCY.

GOAL 5: To protect OPEN SPACES and NATURAL RESOURCES and to enhance the connections among these assets

GOAL 6: To protect, preserve, and promote awareness and appreciation of Lexington's HISTORIC and CULTURAL RESOURCES from throughout its history

GOAL 7: To make TRAVELING into, out of, and within Lexington safe, pleasant, and efficient with sustainable and equitable mobility options for all ages and abilities

GOAL 8: To improve and expand facilities for RECREATION AND COMMUNITY GATHERING to support holistic wellbeing, a sense of belonging, enhanced community connections, and fun, and to build community through social engagement

GOAL 9: To provide well-maintained, updated, inclusive, and sustainable PUBLIC FACILITIES to serve and meet community needs

KEY CROSS-CUTTING UNDERLYING THEMES:

Important to the plan's foundation are three cross-cutting underlying themes. These are themes that emerged as priorities in the community conversation and that came up in discussions of multiple goals and objectives. They are applied to each of the plan's goals. Two of these -- Diversity, Equity and Inclusion; and Sustainability --are each contemplated as a separate goal for which implementation steps are identified and proposed. The three-key cross-cutting themes are: Diversity, Equity and Inclusion; Sustainability; and Health and Wellness.

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DIVERSITY, EQUITY, AND INCLUSION (DEI)

The video documented murder of George Floyd has led to a nation-wide outcry denouncing racial inequalities and spurring a call to action to address these on a local, state, national, even international level. While the lack of racial and socio-economic diversity in Lexington was a part of the community conversation in 2018 when the planning process for this plan began, following George Floyd's murder it gained an increased sense of urgency.

The town's existing diversity was discussed in public forums as being highly valued, but many attendees also voiced a desire to better express and celebrate it. The comprehensive plan's recommendation to increase the diversity of those living and working in Lexington, as well as of those visiting, is consistent with a commitment resolution made at Town Meeting. The town has made significant efforts to become more diverse, equitable, and inclusive and has created a DEI Officer as well as making several commitments to social justice and racial equity, including conducting DEI training for town staff. To make inclusion meaningful people must be given voice and power to make decisions that affect their lives. Also, communication and messaging need to be inclusive (e.g. multi-lingual, accessible to person with disabilities, etc.) This comprehensive plan calls for the town to continue to increase these efforts and to review all projects, plans, regulations and practices through a DEI lens.

SUSTAINABILITY

"Diversity refers to the fact that there are many different kinds of people with different life experiences. It is the range of human differences, including but not limited to race, ethnicity, gender, gender identity, sexual orientation, age, social class, physical ability or attributes, religious or ethical value systems, national origin, political or other ideological beliefs and immigration status; also, where one grew up, where they went to school, and what their parents did for a living. The term diversity does not just acknowledge the existence of differences, but implies a respect and appreciation of these differences." (Lexington Comprehensive Plan Advisory Committee)

"**Equity**" refers to fairness and justice and is distinguished from equality: Whereas equality means providing the same to all, equity means recognizing that we do not all start from the same place and must acknowledge and adjust imbalances. The process is ongoing, requiring us to identify and overcome intentional and unintentional barriers arising from bias or systemic structures ." (National Association of Colleges and Employers)

"**Inclusion** is an organizational effort and practice in which different groups or individuals having different backgrounds are culturally and socially accepted and welcomed, and equally treated. These differences could be self-evident, such as national origin, age, race and ethnicity, religion/belief, gender, marital status and socioeconomic status or they could be more inherent, such as educational background, training, sector experience, organizational tenure, even personality, such as introverts and extroverts. Inclusion is a sense of belonging. Inclusive cultures make people feel respected and valued for who they are as an individual or group." (Global Diversity Practice)

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The 2003 Comprehensive Plan made frequent reference to the desire to be more sustainable. Since then, the devastating impacts of climate change have become increasingly evident. In response residents have increased awareness and expressed desire for the town to take additional actions to mitigate these. As a result, the town has hired a Sustainability & Resilience Officer; has developed several plans to outline steps and define sustainability goals; and has been diligently working towards using renewable energy for Lexington's municipal buildings. This comprehensive plan calls for a continuation of these efforts. However, in recognition of more frequent and more severe storms becoming a reality, the plan also sets forth a more urgent set of actions to help achieve sustainability and climate change adaptation in a timely manner.

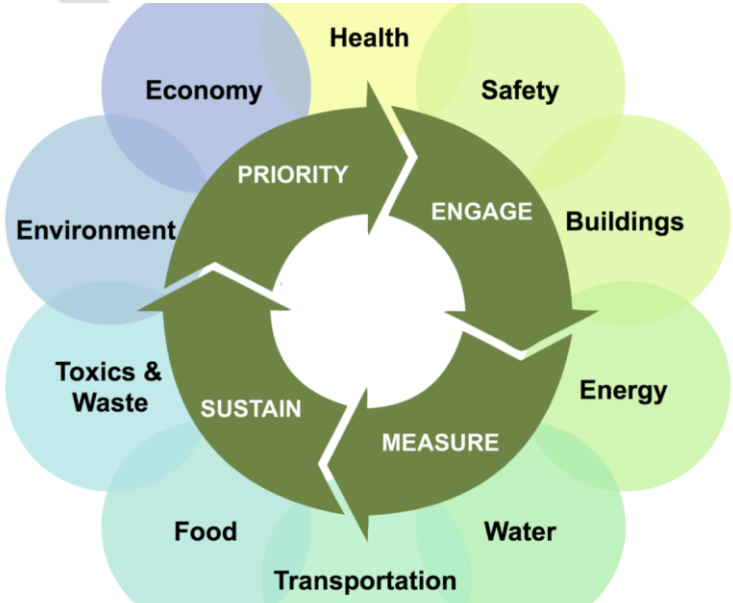
In March 2013, the town of Lexington adopted Warrant Article 33 that states that the Town will "(a) consider climate change in all appropriate decisions and planning processes; (b) take action to prepare for the impacts of a changing climate; (c) reduce greenhouse gas emissions; (d) develop and implement a comprehensive climate action plan; all with the goal of making Lexington a truly sustainable community."

To address the challenges of climate change, this plan considers the two major dimensions of the challenge: **mitigation** (reducing Greenhouse Gas (GHG) emissions that cause climate change) and **adaptation** (ensuring the resilience of the town to the effects of climate change, including plans and infrastructure needed to secure the property, health and safety of its residents). The Town's performance in these two areas will be based on the achievement of goals and objectives associated with multiple sectors of Lexington activities.

The Sustainable Lexington Committee developed a Sustainability Action Plan. "*The goal of the Sustainable Action Plan is to improve the ongoing quality of life and desirability of living and working in Lexington by addressing long-term sustainability and economic viability while responding to the impacts of climate change. Sustainable initiatives to date have demonstrated the ability to deliver millions of dollars in savings, revenue and other benefits to the Town while substantially reducing Lexington's greenhouse gas emissions. This plan provides a structured approach to identify, prioritize, and implement future opportunities for similar actions.*"

From ***Sustainable Lexington Action Plan***, 2018

The town also developed a ***Renewable Future Plan*** in 2018 and has



From Sustainable Lexington Action Plan, 2018

set an aspirational goal of making Lexington a Net Zero community in 25 years, one that

has greatly reduced energy needs by increasing its reliance on renewable energy sources for energy for vehicles, thermal, and electricity. This comprehensive plan supports efforts taken thus far, recommends implementing the recommendations made by existing plans and calls for additional measures moving forward.

HEALTH AND WELLNESS

The Center for Disease Control has long recognized the relationship between planning and health and wellness, especially when defining health as a state that goes way beyond the mere absence of disease. The comprehensive plan supports the health and wellness of those living, working and visiting Lexington in a number of ways including by promoting active living, that is, by providing opportunities for incorporating physical activity into the routines of daily life as well as for sport and recreation.

Regular physical activity has been found to reduce the risk for developing a number of diseases (e.g. heart disease, diabetes, high blood pressure), to prevent mental illness (e.g. depression, anxiety), and reduce the risk of dying prematurely. The overall aesthetics, perceived safety and convenience of the pedestrian environment, may play a role in encouraging and supporting walking on a regular basis.[5]

This comprehensive plan also promotes the health and wellness of those living, working and visiting Lexington by promoting opportunities for community gathering, access to nature and recreation, affordable housing, climate change adaptation, and equitable community engagement practices.

Connections between planning, the environment and health and wellness include:

- Providing safe and pleasant walking and biking and options for public transit
- Healthy buildings (e.g. air quality, etc.)
- Access to healthy food (e.g. farmers market, etc.)
- Opportunities for community gathering, promoting feelings of belonging, and building social capital (e.g. reduce feelings of anxiety, depression and isolation)
- Access to nature and recreational facilities
- Planting green to off-set impacts of greenhouse gases
- Affordable housing that allows people money in their budget to pay for other living expenses to live a balanced life
- Measures to protect against the impacts of climate change
- Health equity (including equitable access to health care and healthy environments)
- Equitable community engagement (including language access)

COVID-19 emphasized the impact that living conditions have on the spread of infectious disease, that is the ability to isolate sick individuals depends in part on the size of the home; and access to the outdoors meant that the disease can be better contained as compared to higher density, urban settings. This has resulted in making Lexington an even more desirable community in which to live as it offers both of these amenities. However, Lexington's home prices and lack of affordable and more moderate housing options have made it increasingly difficult for low- and moderate-income individuals to live in town.

GUIDING PRINCIPLES

[5] CDC, Healthy Places

In addition to the key cross-cutting themes, a series of guiding principles were used to both develop and evaluate the plan's recommendations. *The following guiding principles are based on the American Planning Association's Sustainable Places Initiative and were adapted and adopted by the Comprehensive Plan Advisory Committee.*

An Accessible & Connected community …

- Offers and encourages a variety of safe, accessible, and sustainable mobility options
- Plans, designs, and maintains effective transportation networks.
- Supports strong regional multimodal connections. Provides open access to information, encourages innovation, enhances communication, and promotes community engagement.

A Livable Community…

- Promotes and sustains a safe, clean and attractive place to live, work and play.
- Facilitates housing options to accommodate a diverse community.
- Provides a safe and well-maintained public infrastructure, and provides adequate and appropriate regulation of public/private development resources.
- Encourages sustainable development supported by reliable and affordable town services.
- Supports and enhances neighborhood livability for all members of the community.

A Healthy & Socially Responsible community…

- Cultivates a wide-range of recreational, cultural, educational, and social opportunities.
- Supports the physical and mental well-being of its community members and actively partners with others to improve the welfare of those in need.
- Fosters inclusion and embraces diversity.
- Enhances multi-generational community enrichment and community engagement.

A Community with a Vital & Resilient Economy…

- Supports an environment for creativity and innovation.
- Promotes a qualified and diverse workforce that meets employers' needs and supports broad-based economic diversity.
- Fosters regional and public and private collaboration with institutions that contribute to the town's economic sustainability.
- Invests in infrastructure and amenities that attract, sustain, and retain diverse businesses.

A Community in Harmony with Nature…

- Supports and sustains natural resource and energy conservation.
- Promotes and regulates an ecologically balanced community.

A Community with Good Governance…

- Models stewardship and sustainability of the town's financial, human, information, and physical assets.
- Supports strategic decision-making with timely, reliable and accurate data and analysis.
- Enhances and facilitates transparency, accuracy, efficiency, effectiveness and quality customer service in all business.
- Supports, develops and enhances relationships between the town and community/regional partners.
- Provides assurance of regulatory and policy compliance.

A Community Committed to Equity… Provides support to all to participate, prosper, and reach their full potential.

KEY FINDINGS FROM THE INVENTORY AND ASSESSMENT OF EXISTING RESOURCES

As previously mentioned, the foundation of the comprehensive plan was developed based on the vision and goals that articulated the shared values, concerns and desires as expressed by community participants in the public process. Additionally, key findings from the inventory and assessment of existing resources conducted by reviewing relevant documents as well as by interviewing town staff and other stakeholders helped to inform the recommendations. The plan recommendations take the findings into account by proposing strategies to address them, including:

- More than half (60%) of residents moved to Lexington since the year 2000. Many of these relative newcomers have contributed to a large increase in the **diversity** of those residing in town, mainly the number of residents of Chinese and South Asian descent has significantly increased. There is notable underrepresentation of Black and Latino/a/x residents.

- There has also been an increase in the number of **older adults**; this trend is expected to continue, however, there are few affordable and moderately priced housing units suitable for this population.

- **Student enrollment projections** continue to fluctuate and should be carefully monitored as housing is turned over from older adults to young families with school-owned children. Plans for a new high school are already underway.

- Lexington has one of the highest **median household incomes** in Massachusetts, estimated in 2019 to be $186,201 per year.

- **Housing types** lack variety; and a significant loss of moderately-priced housing; there is also a need for housing for: older adults/empty nesters, starter homes, disabled individuals, lower income families, and town staff.

    - In 2019, the median price of a home was nearly $900,000 and median gross monthly rent was $2,475. The average home price in Lexington tripled in the two-decade period between 1997 and 2016, and by the end of 2021, the average home price had reached $1.5 million.

    - Approximately 100 houses are torn down every year in Lexington. These homes are being replaced with homes that are approximately 258% larger than those they are replacing.

- The town is almost built out as currently zoned for housing. However, appropriate areas could be redeveloped and/or to rezoned to increase density and height limits, to allow more housing. The state's recent MBTA Communities Initiative[6]

[6] The **MBTA Communities Initiative** enacted in Jan. 2021 requires that an MBTA community shall have at least one zoning district of reasonable size in which multi-family housing is permitted as of right and meets other criteria set forth in the statute: https://www.mass.gov/orgs/housing-choice-initiative

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provides an opportunity for Lexington to provide more multi-family units located along bus routes.

- There has been a 20% increase in the number of **businesses** in Lexington since 2007.
    - Lexington has over 30 **biotech companies** and continues to attract more, making it a hub for such activity primarily located in the Hayden and Hartwell Avenue locations. Office and laboratory space in Lexington is significantly less expensive than in Cambridge, making the town competitive and a desirable location for life science entities.
    - There are a number of **commercial districts** of various sizes located throughout the town; in some cases, they are underutilized, outdated and/or reaching the end of their life cycle. Many are auto-oriented and not visually appealing.
    - Lexington has **a split tax rate;** charging commercial property at a higher rate than residential[7]. The **relatively high tax rate** has been identified both by local businesses and the Economic Development Office as being an obstacle to Lexington's economic vitality. Providing tax relief would help to promote opportunity and equity especially to small businesses.
    - **Lexington's Town Center** is valued by many, however, lacks vitality due to a number of factors including the existence of some vacant storefronts; ground floor uses that do not generate much foot traffic; a lack of nightlife; lack of variety of retail and restaurants, perhaps not well matched for the town's demographic; constraints posed by signage and other regulations; high rents; competition from nearby Burlington Mall; and on-line shopping.
    - The McKinsey report for Massachusetts[8] estimates that one-third of the workforce will not be returning post-pandemic to work in downtown Boston[9]. They will likely work three days per week remotely depending on the company. Lexington residents that commuted to downtown Boston will presumably be amongst the "**working from home**" population and will therefore, likely change travel patterns coming into, out of and around town. These individuals may also increase the demand for local goods and services.
- While the town has many **historic resources** that are both a source of price as well as of revenue (because they attract tourists),[10] not all these structures and landscapes are adequately protected.

[7] Commercial properties in Lexington account for 9% of the total assessed value but contribute 17% towards the total tax revenue generated due to this split tax rate.

[8] https://www.mckinsey.com/featured-insights/themes/the-future-of-ma-and-postpandemic-business-priorities

[9] https://nerej.com/the-retail-landscape-ever-adapting-by-carol-todreas

[10] Numerous **tourist** attractions draw 120,000 visitors per year resulting in $1.3 million generated by hotel/meal tax annually.

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- Existing town regulations, notably the Demolition Delay Bylaw, do not adequately address the threat of loss of historic buildings. Regulations also do not adequately limit the scale of replacement buildings.

- Lexington's location makes it easily accessible by car and the most frequently used mode of travel is the single occupancy vehicle. There are a number of ways to travel in and around the town, including transit options, however first mile/last mile connections[11] are lacking, reducing ridership. Walking and biking have become increasingly popular and infrastructure is continually improved and expanded.

  - The **Minuteman Bikeway** is a significant element in the town's identity and is enjoyed by commuters, visitors and those just going for a stroll or bike ride. Users of the bikeway represent a potential market to commercial establishments located along its length.

- The town owns and maintains hundreds of acres devoted to **recreation** uses, with the two largest sites, the Center Recreation Complex and Pine Grove Golf Club together comprising over 140 acres. Privately-owned sites account for another 200 acres.

  - Competition for these facilities and programs is high, and limited funding and staff levels place additional constraints on limited resources.

  - Demand for use of outdoor spaces surged during the COVID-19 pandemic, placing greater strain onto the town's conservation and recreation areas, and increasing the need for greater trail maintenance, forest clean-up and other stewardship measures.

- Since the last comprehensive plan (2003), many capital investments have been made to update **public facilities** and to use more sustainable energy sources. Remaining significant investments include (all are underway and are at different phases in the process):
  - New or renovated High School
  - New Police Station
  - East Lexington Fire Station
  - Retrofitting remaining facilities with renewable energy sources and ensuring full ADA access

- The mid- to long-term factors that are likely to drive demand for services and facilities in Lexington include:
  - Climate change (flooding, drought, snow/ice)
  - Energy (reducing reliance on natural gas; pursuing renewable energy sources)
  - Increasing population density and traffic congestion
  - Local public transportation

[11] **First Mile/Last Mile** refers to the distance to and from transit, that is, the distance a transit user needs to travel from a transit stop to their destination and/or vise versa. Transit stops are most often located in high traffic locations, leaving many people to walk or drive the first or last leg of their trip. Improving access to and from transit for a larger number of people has as its goal to lead to higher transit ridership. See: https://www.remix.com/blog/solving-the-first-and-last-mile-problem

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- Parking (electric vehicle charging stations, etc.)
- Increased commercial development and mixed-use development (housing on upper stories above retail)

POTENTIAL COVID IMPACTS (SHORT AND LONG TERM)

The COVID-19 pandemic upended lives and plans around the globe. It devastated individuals, families, communities, the planet as a whole. It also presented Lexington with an opportunity to review and revise our priorities as well as to try out new ways of doing things as residents had to adapt to the conditions required to ensure public safety. This in turn encouraged us to reimagine town centers, reallocating paved space from the automobile to pedestrians, bicyclists and outdoor diners, and redefining of work by employing "Work From Home" and hybrid policies. Some of these new experiences have become very popular and there is significant support for incorporating them into a post-pandemic world, including by changing regulations to allow and encourage these environmental changes and activities.

The COVID-19 pandemic interrupted this Comprehensive Planning process. It also affected some of its recommendations.
Some of the impacts of the pandemic that were considered in making the Comprehensive Plan recommendations include the following:

- an increased interest in and use of open spaces, trails and recreational facilities
- adding heat to an already hot housing market, excluding even more people from being able to afford housing in Lexington
- significant support for virtual and remote public meetings
- new habits of on-line shopping and food delivery making attracting patrons to retail and dining a significant challenge
- some hesitancy to use public transportation for fear of being infected
- significant support for outdoor dining
- increased need to support "Work From Home" population

The following are responses to questions posed to participants at the Public Forum on June 15, 2021.

What changed in terms of your priorities for the Town as a result of COVID-19?

- *One positive change of priorities of COVID has been that people recognize the need to move away from peak time only transit to more all-day transit to better serve an array of needs, including essential workers who do not necessarily work 9-5. Seeing more people outdoors has also been a positive trend.*
- *COVID laid bare the social injustices. What we do here impacts others, for example in terms of sustainability and waste management: How we consume and dispose of things, e.g. we need to increase awareness regarding the fact that we use the incinerator in North Andover for our waste and this is located to the adjacent environmental justice community[12] of Lawrence.*

What can/should Lexington do to be more nimble in addressing emergencies and thus be more prepared in the future?

- *I think we need to find ways to do more community building. With some people driving into their garages and entering homes, some folks can go long stretches without ever seeing*

[12] https://www.mass.gov/environmental-justice

their neighbors. We also have many busy people in this community. But finding ways to build community, from getting more people out walking and biking (so they can see and be seen by neighbors), having block parties, and encouraging people to get to know their neighbors, will build networks so people can better look after each other, especially our most vulnerable.

- *More support for our most vulnerable; more education for each other about our vulnerabilities*
- *We need to make sure that our seniors and people of lower income have access to insulation and air conditioning*
- *We need to consider local emissions and public health effects.*
- *Examine the needs of all of our vulnerable populations and the impacts on the mental health of LGBT+, disabled, special needs.*
- *Climate change doesn't have an end point; we need to be prepared to deal with technology needs and obtain funding to address issues related to climate change.*

IMPLEMENTATION PLAN

The implementation plan that follows is the heart of the comprehensive plan and provides suggested action strategies to help achieve the goals and objective, which again were developed based on public input as well as an assessment of existing conditions. The implementation plan provides a roadmap for future actions and decision-making.

The goals are the organizing structure for the implementation plan and provide guideposts for the recommendations. The objectives further articulate and make specific the intention of each goal in order to help identify strategies to achieve these. The actions then provide some guidance as to potential steps to take as a way of fulfilling the strategy's intent. The overall vision should continually be kept in mind as it is the overall direction in which the community has declared it desires to move towards.

An introduction to the Implementation Plan provides a frame for the material that follows. Each goal is presented by way of introducing the goal, how it relates to the town's existing resources and what stakeholders said they were concerned about, appreciated, felt was missing, and/or what they would like to see in a desired future. At first it may seem like the Plan is many pages long, but a quick peak will reveal that it is mostly comprised of Implementation Tables populated with Goals, Objectives, Strategies and Action Steps.

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May 18, 2022:
Planning Board Review of Comprehensive Plan DRAFT

Is anything important missing?

Is there anything inaccurate or inaccurately stated?

Is there a strategy or action step you feel the Planning Board should lead or be a partner in that doesn't currently list the Planning Board as having a role?

Is there anything you feel needs further explanation?

Is there anything you disagree with? If so, please explain.

Is the phasing assigned to each strategy right as far as you are concerned?

Are you aware of any existing resources and/or funding opportunities that are not currently listed?

Are there any additional action steps associated with a particular strategy that you would like to include?

Town of Lexington
PLANNING BOARD
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Lexington, MA 02420
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www.lexingtonma.gov/planning

Robert D. Peters, Chair
Michael Schanbacher, Vice Chair
Melanie Thompson, Clerk
Robert Creech, Member
Charles Hornig, Member
Michael Leon, Associate Member

Memorandum

To: Planning Board Members

From: Abby McCabe, Planning Director

Date: August 2, 2022

Re: Comprehensive Plan Comments through August 1

The following are comments received through 4:00 pm on August 2 on the Comprehensive Plan drafts to be reviewed on August 3: Goal 1: Diversity & Inclusion, Introduction, and the Executive Summary.

General:

- Numbering potential actions would make them easier to reference.

1.1.1: Review zoning and all other town rules, regulations and practices, and revise to remove any potential barriers to inclusion

- Merge first two actions.
- Remove first portion of second action related to statutory preference for single-family homes.
- Second half of action 3 is covered better by 2.1.6 (zoning on non-conforming lots)
- Amend zoning to update definition for "household" instead of "family", remove any zoning impediments for accessibility upgrades, consideration of equity impacts during permit reviews (see End Notes 3 & 4)
- Action 4 about revising local preference policy can be removed because it is in Strategy 2.8.2 in the Housing Section.

1.1.2 Increase awareness of barriers to providing opportunities for a greater diversity of people to live in town

- Move action 1 to 2.8.1 (Support fair housing goals in Housing Section Goal 2)

Strategy 1.3.1 Develop options and incentives for the production and adaptation of housing accessible and attainable to all persons: Move this to Housing Objective 2.3 (Develop housing that is accessible to and attainable by older persons).

Remove Strategy 1.3.5: to Consider developing a Teen or Youth Center. A new teen space was created in library and teen service programs have increased over the last few years. The 2020 Community Needs Assessment found a desire to focus on expanding teen programs and activities rather than a dedicated physical space.

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

69 Pleasant Street – Public Hearing for a Site Sensitive Special Permit Residential Definitive Subdivision Public Hearing (continued from June 29)

PRESENTER:

ITEM NUMBER:

SUMMARY:

The Planning Board will re-open the public hearing for the application of Sheldon Corporation for a definitive special permit residential development subdivision plan under §135-6.9 of the Zoning Bylaw and §175-6.0 of the Planning Board's Subdivision Regulations. The property is located at 69 Pleasant Street - Map 14 Lot 57 in the RS Zoning District. The Applicant is proposing to subdivide the property into 10 lots, preserve the existing two-story home, and add 9 additional single-family dwellings. The public hearing was first opened on June 29 and was continued to August 3.

Applicant has submitted revised plans in response to comments.

View all submitted material online here: https://lexingtonma.viewpointcloud.com/records/61249

SUGGESTED MOTION:

After Applicant presentation, board and staff discussion, and after public comments and public questions, the Board should discuss any further requests for changes. At the end of the discussion/hearing, the Board should vote to continue the public hearing to a future meeting and announce the new date, time, and location of the continued hearing. Upcoming meetings are scheduled for August 17 and September 7. Staff recommends continuing the public hearing to Wednesday, September 7 at 6:00 pm on Zoom to allow more time for a revised submittal.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022

ATTACHMENTS:

Description	Type
Revision Cover Letter	Cover Memo
Revised Plan Set	Exhibit
Revised Stormwater Report	Exhibit
Engineering Memo 07.29.2022	Cover Memo
Sample House Style	Exhibit

PATRIOT Engineering

July 21, 2022

Mr. Robert Peters, Chairman
Town of Lexington Planning Board
Lexington Town Hall
1625 Massachusetts Avenue
Lexington, MA 02420

Re: Site Sensitive Definitive Plan revisions summary
69 Pleasant Street Lexington, MA

Dear Mr. Peters and Members of the Board:

Patriot Engineering LLC on behalf of the applicant Sheldon Corporation would like to submit this letter with the accompanying revised plans set for the review of a Definitive Site Sensitive Subdivision Plan located at 69 Pleasant Street in Lexington per section 135-6.9 of the Lexington Zoning Bylaws. Below is a list of the notable revisions to the Subdivision plans:

- The proof plan and gross floor area calculations have been updated to reflect the loss of area to the abutter as noted on sheet 5.
- The landscaping plan has been revised to reflect changes in the planting scheduled to move away from white pines
- Notes have been added to plans stating the foundations will be used as retaining wall replacement wherever feasible
- The tree removal for the site has been reviewed and coordinated across the plan set
- Information has been provided to show the access to the Moon Hill area over Milken Way
- A sidewalk has been added to the proposed layout along the common drive
- The Engineering Department has said that abutters should reach out directly to the department to discuss traffic impacts
- Additional catch basins have been added to the design along with an additional subsurface stormwater infiltration system to capture additional impervious area
    - There will be an additional 11,400 SF of impervious captured and infiltrated onsite that was previously leaving the project site
- The placement of tree protection measures has been revised to increase the effort to save the 48-inch tree at the ROW of Pleasant. Also, the construction parking area has been moved further away from the existing tree.

- The sidewalk across to common drive entrance along Pleasant Street will be repaved to meet the required maximum 2% cross pitch

Patriot Engineering thanks you for your time in reviewing this matter. Please contact the office with any questions you may have at 978-726-2654 or mnovak@patriot-eng.com

Sincerely,



Michael J Novak, P.E.
PATRIOT ENGINEERING LLC
35 Bedford Street, Suite 4
Lexington, MA 02420

LINC COLE LANE
(69 PLEASANT STREET-ASSESSORS MAP 14 LOT 57)
SITE SENSITIVE DEVELOPMENT DEFINITIVE PLAN SET

LOCATED IN LEXINGTON, MA
MARCH 30, 2022
REVISED MAY 23, 2022; JULY 21, 2022
(IN ACCORDANCE WITH SECTION 135-6.9-3 OF THE LEXINGTON ZONING BYLAW)

NOTES:

1. THE INFORMATION DEPICTED ON THIS PLAN HAS BEEN COMPILED FROM THE TOWN OF LEXINGTON GIS SYSTEM
2. LAND USE WITHIN 500 FEET OF THE SUBJECT PROPERTY IS PRIMARILY SINGLE FAMILY DWELLINGS WITH THE EXCEPTIONS OF BOWMAN PARK, MOON HILL POOL AND WILSON FARM

ABUTTERS

MAP-LOT	ADDRESS	OWNER NAME
14-87	MOON HILL RD	SIX MOON HILL INC
14-82	MOON HILL RD	SIX MOON HILL INC
8-31B	PLEASANT ST	TOWN OF LEXINGTON
14-83	10 MOON HILL RD	CHAUDHRY RAJIVE &
8-161	10 WHITE PINE LN	VAN DUINEN NIELS &
14-59C	10 LUONGO FARM LN	LUONGO EUGENE R &
14-94	11 MOON HILL RD	WARREN PETER G &
8-73	10 WATERTOWN ST	CHARLANTINI ROBERT &
14-59D	12 LUONGO FARM LN	RAMNATHAN VIJAY & VINITHA C
8-75	14 WATERTOWN ST	ANDRONACO FRANK J &
8-164	12 WHITE PINE LN	PARISH OF THE CHURCH OF OUR REDEEMER
8-74	12 WATERTOWN ST	DEVINENI RAGHU RAM &
14-84	12 MOON HILL RD	HAMILTON GEORGE C &
8-163B	13 WHITE PINE LN	PETERSON SARA BETH
8-165	14 WHITE PINE LN	LIAO ELIZABETH &
14-93	15 MOON HILL RD	TING SAMUEL CC & TING SUSAN C M TRUSTEES
14-91	21 MOON HILL RD	KEAVENY RICHARD I &
8-70	2 WATERTOWN ST	FINLAY JAMES R &
14-86A	16 MOON HILL RD	BHOWMIK NEELANJANA &
14-92	17 MOON HILL RD	BLUMENTHAL STEVEN &
14-149	23 MASON ST	SCARBROUGH WILL &
14-136	22 MASON ST	HEUCHLING DONNA A
14-88	24 MOON HILL RD	SIX MOON HILL INC
14-135	24 MASON ST	GUTH GIORA &
8-24	32 MOON HILL RD	BERKOWITZ LAWRENCE & COHN ELLEN TRUSTEES
14-146	29 MASON ST	FRANKEL JAMES LOWELL
14-134B	26 MASON ST	MENZIN,TR, JOSEPH H
8-23	28 MOON HILL RD	WHITNEY PATRICIO ALEXANDER &
8-68B	30 WATERTOWN ST	LONG TERM CENTERS OF LEXINGTON INC
14-89A	29 MOON HILL RD	SLACK JOSIAH & MELTAUS MARY A
14-133B	28 MASON ST	HACOBIAN AREMIN
14-148	25 MASON ST	WEAVER ANDREW T &
14-147	27 MASON ST	MORENO ENRIQUE &
14-52A	48 PLEASANT ST	GREKAS ELIZABETH &
14-60C	5 LUONGO FARM LN	BABCOCK HAZEN P &
14-131	5 WHITE PINE LN	EINSTEIN EILEEN B TRUSTEE
8-159	6 WHITE PINE LN	GILLESPIE KATHLEEN M
14-59A	6 LUONGO FARM LN	CHENG JOANNE T
8-22	81 PLEASANT ST	REYNOLDS SARAH ELIZABETH &
14-151	57 PLEASANT ST	MAJID, TR ATIF & ALI, TR HIFZA
8-72	6 WATERTOWN ST	YILDIZYAN ALEKSAN & JANELLE
14-51	50 PLEASANT ST	RAJARAMAN GANESH & PATEL VIHA TRUSTEES
8-69	66 PLEASANT ST	ASSORTATO FRANK P & ASSORTATO CATHERINE
14-56C	64 PLEASANT ST	WARREN WAYNE DOUGLAS & WARREN AUDREY
14-56B	60 PLEASANT ST	GOUDREAU PAUL JOSEPH TRS/PAUL JOSEPH GOU
14-132A	7 WHITE PINE LN	LINDSLEY JOY
14-100	4 BIRD HILL RD	MATTSON PHILIP ARNOLD TRS/PHILIP ARNOLD
8-71	4 WATERTOWN ST	CHERIAN SIJO P &
14-53	52 PLEASANT ST	PATTERSON ROBERT D &
14-60B	7 LUONGO FARM LN	BRAY WILLIAM J &
14-59B	8 LUONGO FARM LN	CHAUVIN ROBERT F & CHAUVIN DEBRA J TRS
8-21A	83 PLEASANT ST	GRUBER JONATHAN &
14-49A	8 PLEASANT ST	WILSON FARM INC
8-160	8 WHITE PINE LN	SACKTON JOHN T &
8-31A	82 PLEASANT ST	HUANG ALBERT C K & HUANG YUNG SHEN TRS
8-21C	85 PLEASANT ST	ANDRYAUSKAS FRANK W &
14-60A	9 LUONGO FARM LN	HOOLI BASAVARAJ
8-21D	85A PLEASANT ST	SILVERA ISAAC F & LILI J TRUSTEES
8-20	87 PLEASANT ST	SILVERA ISAAC F & SILVERA LILI J TRUSTEE
8-162A	9 WHITE PINE LN	AMORRORTU PEDRO ALVARO &
8-32	94 PLEASANT ST	CARPENTER ALDEN B & CARPENTER
8-67	WATERTOWN ST	TOWN OF LEXINGTON
15-3A	31 MOON HILL RD	FEE MICHALE &
8-163C	11 WHITE PINE LN	DAGGETT MATTHEW P &
14-152	55 PLEASANT ST	KALUS - BYSTRICKY IVA C &
14-85A	14 MOON HILL RD	YALE PHYLLIS R & TAFT TUCKER S
14-90	25 MOON HILL RD	SEGAL MARTHA FOX & GRAY ROLAND III TRS

LEXINGTON PLANNING BOARD

_____

_____

_____

_____

_____

_____

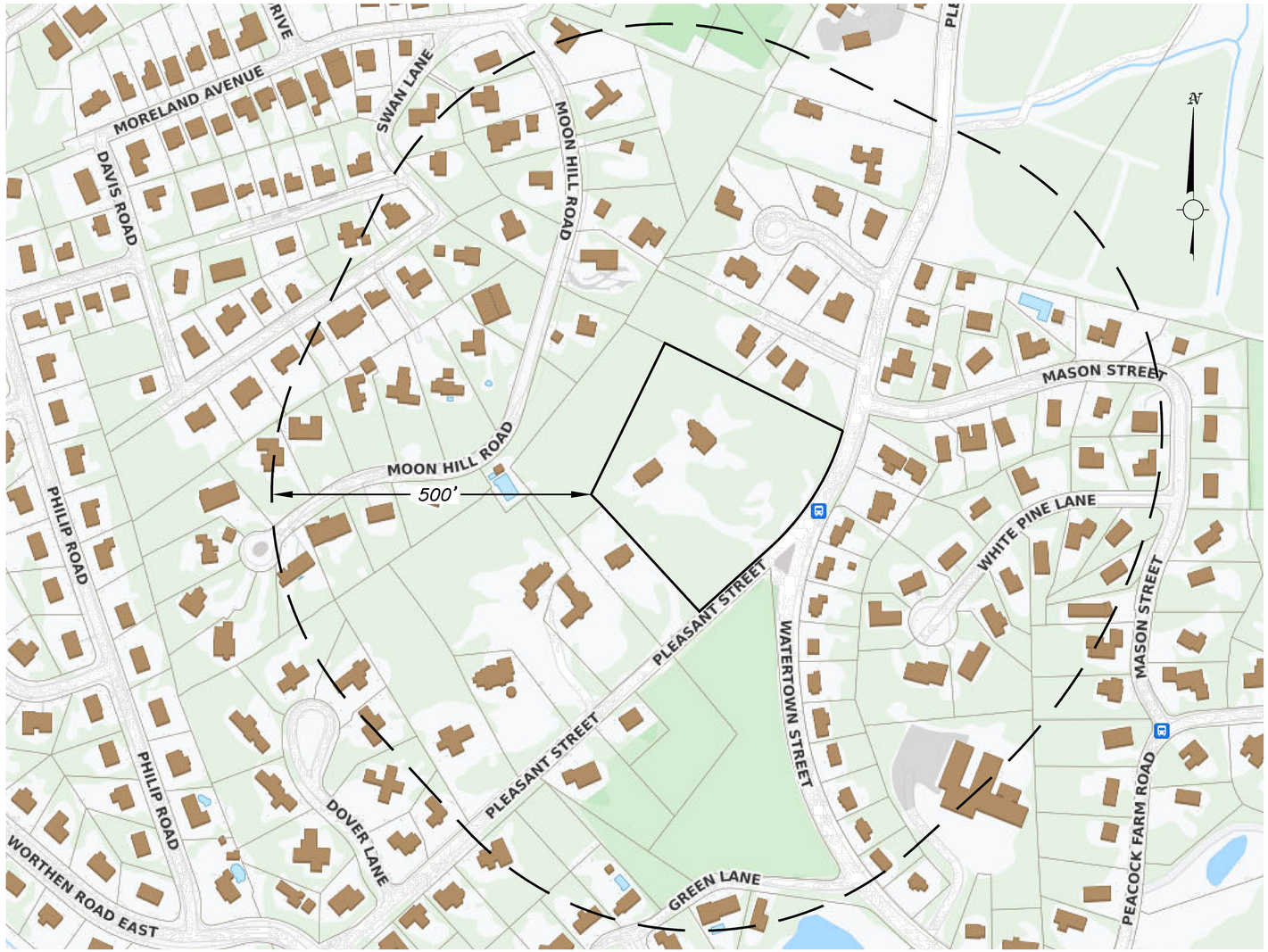
_____

_____

DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

_____ _____
TOWN CLERK DATE



LOCUS CONTEXT MAP
(SCALE 1"=100')

RECORD OWNER:
STORER LEXINGTON LLC
16 CHESTERFORD ROAD
WINCHESTER, MA 01890

- DEED BOOK 72722 PAGE 50

APPLICANT:
SHELDON CORPORATION
121 MARRETT ROAD
LEXINGTON, MASSACHUSETTS 02420

PREPARED BY:

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50696
REGISTERED PROFESSIONAL ENGINEER

J THOMA LAND DESIGN STUDIOS
141 HAGGETTS POND ROAD
ANDOVER, MA 01810

MASSACHUSETTS
JEFFREY A. THOMA
REGISTERED LANDSCAPE ARCHITECT
1977

SHEET INDEX

1. COVER SHEET
2. RECORD CONDITIONS PLAN
3. SITE ANALYSIS PLAN
4. PROPERTY RIGHTS PLAN
5. SITE CONSTRUCTION PLAN
6. SITE UTILITY PLAN
7. UTILITY PROFILE PLAN
8. LANDSCAPE PLANTING PLAN
9. TREE PROTECTION & REMOVAL
10. DETAILS
11. DETAILS
12. DETAILS
13. DETAILS
14. DETAILS
15. DETAILS
16. DETAILS
17. PROOF PLAN

PLAN NO. 1535 OF 1960

EXISTING CONDITIONS PLAN
IN
LEXINGTON, MASS.
(MIDDLESEX COUNTY)

SCALE: 1 IN. = 30 FT. MARCH 21, 2022

KEENAN SURVEY
8 WINCHESTER PLACE
WINCHESTER, MASS.
781-729-4213

LEGEND	
STY. W.F.	STORY WOOD FRAME
BIT.	BITUMINOUS
CONC.	CONCRETE
S.F.	SQUARE FEET
UP	UTILITY POLE
DBL.	DOUBLE
WCR	WHEELCHAIR RAMP
SMH	SEWER MANHOLE
OHW	OVERHEAD WIRES
TEC	COMMUNICATIONS LINE

NOTES: TOPOGRAPHY ON TOWN OF LEXINGTON SEWER DATUM

ZONE: RS

UTILITIES SHOWN ARE FROM FIELD SURVEY AND A PLAN BY MERIDIAN ASSOCIATES DATED JAN. 7, 2020

NOTE:
UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. BEFORE PLANNING FUTURE CONNECTIONS THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL TOLL FREE DIG SAFE CALL CENTER 1-888-344-7233, 72 HOURS PRIOR TO EXCAVATION.

MAP 14 PARCEL 87
N/F PHYLLIS R. YALE & TUCKER TAFT
BK.19064 PG.202

MAP 14 PARCEL 152
N/F IVA C. KALUS-BYSTRICKY & PAVEL BYSTRICKY
BK.42958 PG.382

MAP 8 PARCEL 22
N/F SARAH ELIZABETH REYNOLDS & RYAN DANIEL DAY
BK.73196 PG.217

MAP 14 PARCEL 151
N/F ATIF MAJHID & HIFZA ALI,
TRUSTEES, UNDER THE MAJID - ALI REVOCABLE TRUST
BK.77602 PG.315

PART LOT B
AREA = 5.035± ACRES
(219,349± S.F.)

MAP 14 PARCEL 57
STORER LEXINGTON LLC
BK.72722 PG.51

1 STY. W.F. BARN

2 STY. W.F. NO. 69

1 STORY

WOOD ROOF DECK

CHIMNEY

BIT. CONC. DRIVEWAY

CONC. PATIO

C.BASIN RIM=269.9

BIT. CONC. WALK

BIT. CONC. CURB

GRANITE CURBING

LEDGE

PLEASANT STREET

WATERTOWN STREET

MILLIKEN (PRIVATE) ROAD

MASON STREET

109.99'
N61°19'00"E
69.31'
N28°41'00"W
404.41'
N37°37'10"E
N42°31'10"E
20.00'
N51°50'20"W
110.00'
481.19'
N31°10'20"W
100.17'
143.9'
N 24°02'00" E
204.84'
S 65°58'00" E
50.00'
114.27'
N 24°02'00" E
125.00'
N51°31'40"E
50.05'
N51°31'40"E
602.94'
R=602.94'
38.77'
260.00'
265.20'

(1934 COUNTY LAYOUT)

SHEET 2 OF 17

TEST PIT DATA

TEST PIT DATA AND LOCATIONS OBTAINED FROM A PLAN ENTITLED RECORD CONDITIONS PLAN OF LAND PREPARED BY MERIDIAN ASSOCIATES DATED JANUARY 7, 2020

TEST PIT TP-1
ELEV.=237.2±
ASSUMED E.S.H.G.W. ELEV.=231.2

0"–12"	A HORIZON:	SANDY LOAM
12"–17"	B HORIZON:	LOAMY SAND
17"–24"	LAYER C_1:	LOAMY SAND
24"–36"	LAYER C_2:	GRAVELLY LOAMY SAND
36"–46"	LAYER C_3:	FINE SAND
46"–72"	LAYER C_4:	GRAVELLY LOAMY SAND
72"+	REFUSAL	

NO REDOX OBSERVED
NO WEEPING OBSERVED

TEST PIT TP-2
ELEV.=265.0±
ASSUMED E.S.H.G.W. ELEV.=262.3

0"–8"	A HORIZON:	SANDY LOAM
8"–14"	B HORIZON:	GRAVELLY SANDY LOAM WITH COBBLES
14"–32"	LAYER C:	GRAVELLY SANDY LOAM WITH COBBLES
32"+	REFUSAL	

NO REDOX OBSERVED
NO WEEPING OBSERVED

TEST PIT TP-2
ELEV.=265.0±
ASSUMED E.S.H.G.W. ELEV.=262.3

0"–8"	A HORIZON:	SANDY LOAM
8"–14"	B HORIZON:	GRAVELLY SANDY LOAM WITH COBBLES
14"–32"	LAYER C:	GRAVELLY SANDY LOAM WITH COBBLES
32"+	REFUSAL	

NO REDOX OBSERVED
NO WEEPING OBSERVED

TEST PIT TP-3
ELEV.=274.3±
ASSUMED E.S.H.G.W. ELEV.=269.6

0"–10"	A HORIZON:	SANDY LOAM
10"–14"	B HORIZON:	SANDY LOAM WITH COBBLES AND BOULDERS
14"–31"	LAYER C_X:	GRAVELLY LOAMY SAND WITH COBBLES
31"–56"	LAYER C_X:	GRAVELLY LOAMY SAND
56"+	REFUSAL	

NO REDOX OBSERVED
NO WEEPING OBSERVED

TEST PIT TP-4
ELEV.=254.9±
ASSUMED E.S.H.G.W. ELEV.=253.6

0"–8"	A HORIZON:	SANDY LOAM
8"–16"	B HORIZON:	SANDY LOAM
16"+	REFUSAL	

NO REDOX OBSERVED
NO WEEPING OBSERVED

TEST PIT TP-5
ELEV.=249.5±
ASSUMED E.S.H.G.W. ELEV.=243.2

0"–17"	HTM	
17"–28"	A_B HORIZON:	SANDY LOAM
28"–32"	B HORIZON:	SANDY LOAM
32"–40"	LAYER C_X:	GRAVELLY SANDY LOAM
40"–45"	LAYER C_4/C_X:	GRAVELLY LOAMY SAND WITH COBBLES
45"–76"	LAYER C_X:	GRAVELLY LOAMY SAND WITH COBBLES
76"+	REFUSAL	

NO REDOX OBSERVED
NO WEEPING OBSERVED

TEST PIT TP-6
ELEV.=243.0±
ASSUMED E.S.H.G.W. ELEV.=239.2

0"–8"	A HORIZON:	SANDY LOAM
8"–12"	B HORIZON:	SANDY LOAM
12"–32"	LAYER C_X:	GRAVELLY SANDY LOAM WITH COBBLES
32"–46"	LAYER C_X:	GRAVELLY LOAMY SAND WITH COBBLES
46"+	REFUSAL	

NO REDOX OBSERVED
NO WEEPING OBSERVED

TEST PIT TP-7
ELEV.=258.9±
ASSUMED E.S.H.G.W. ELEV.=255.9

0"–10"	A HORIZON:	SANDY LOAM
10"–14"	B HORIZON:	SANDY LOAM
14"–36"	LAYER C:	SANDY LOAM
36"+	REFUSAL	

NO REDOX OBSERVED
NO WEEPING OBSERVED

LEXINGTON PLANNING BOARD

DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

TOWN CLERK _____ DATE _____



NOTES:

1. THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM A PLAN PREPARED BY KEENAN SURVEY.
2. THE SOLE PURPOSE OF THIS PLAN SET IS TO COMPLY WITH SECTION 135-6.9.3 OF THE TOWN OF LEXINGTON ZONING BYLAW.
3. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS ZONING DISTRICT.
4. THE SUBJECT PROPERTY IS DEPICTED AS LOT 57 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 14
5. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND PLANS OF RECORD. THIS PLAN DOES NOT GUARANTEE THE LOCATION OF UTILITIES DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 1-888-344-7233.
6. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.

SOILS INFORMATION

SOILS INFORMATION DERIVED FROM THE USDA NATURAL RESOURCES CONSERVATION SERVICE SOIL SURVEY OF MIDDLESEX COUNTY, MASSACHUSETTS, URL: http: //websoilsurvey.nrcs.usda.gov.

SOIL TYPE	HYDROLOGIC SOIL GROUP	TYPICAL DEPTH TO ESHGW
104D HOLLIS-ROCK OUTCROP-CHARLTON COMPLEX, 15 TO 25 PERCENT SLOPES	GROUP D	MORE THAN 80"
302D MONTAUK FINE SANDY LOAM, 15 TO 35 PERCENT SLOPES, EXTREMELY STONY	GROUP C	18"-37"
422B CANTON FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES, EXTREMELY STONY	GROUP B	MORE THAN 80"

LEGEND:

631C	SOIL TYPE
L.P	LOW POINT
H.P	HIGH POINT
	15-25% SLOPES
	25-40% SLOPES
	>40% SLOPES
ESHGW	ESTIMATED SEASONAL HIGH GROUNDWATER
TP–1	TEST PIT
	FLOW DIRECTION

RECORD OWNER:
STORER LEXINGTON LLC
16 CHESTERFORD ROAD
WINCHESTER, MA 01890

- DEED BOOK 72722 PAGE 50

APPLICANT:
SHELDON CORPORATION
121 MARRETT ROAD
LEXINGTON, MA 02420

ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION WITHOUT SUBSURFACE VERIFICATION

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
CHECKED BY:
DATE: 3-30-2022
PROJECT No: 21-12

REVISIONS

DATE	BY	DESCRIPTION
5-23-2022		NO REVISIONS TO THIS SHEET
7-21-2022		NO REVISIONS TO THIS SHEET

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

SITE ANALYSIS MAP
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

I DECLARE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

FOR KEENAN SURVEY — DATE

PLAN NO. 1535 OF 1960

FOR REGISTRY OF DEEDS USE ONLY

MAP 14 PARCEL 87
N/F PHYLLIS R. YALE & TUCKER TAFT
BK.19064 PG.202

MAP 14 PARCEL 152
N/F IVA C. KALUS–BYSTRICKY & PAVEL BYSTRICKY
BK.42958 PG.382

MAP 14 PARCEL 151
N/F ATIF MAJHID & HIFZA ALI,
TRUSTEES, UNDER THE MAJID – ALI REVOCABLE TRUST
BK.77602 PG.315

MAP 8 PARCEL 22
N/F SARAH ELIZABETH REYNOLDS & RYAN DANIEL DAY
BK.73196 PG.217

LOT A
AREA = 21,194 S.F.

LOT B
AREA = 21,555 S.F.

LOT C
AREA = 23,232 S.F.

LOT D
AREA = 17,675 S.F.

LOT E
AREA = 21,738 S.F.

LOT F
AREA = 11,335 S.F.

LOT G
AREA = 21,210 S.F.

LOT H
AREA = 25,189 S.F.

LOT I
AREA = 15,244 S.F.

LOT J
AREA = 21,938 S.F.

PARCEL 1
AREA = 19,031 S.F.
AREA = 4,616 S.F.
AREA = 117,437 S.F.

UTILITY EASEMENT

ACCESS & UTILITY EASEMENT
AREA=10,351 S.F.

EXISTING IRON ROD

EXISTING NAIL

EXISTING STONE BOUND

EXISTING DRILL HOLE

PLEASANT STREET

WATERTOWN STREET

(1934 COUNTY LAYOUT)

MASON STREET

MILLIKEN (PRIVATE) ROAD

69 PLEASANT STREET

LEGEND

- IRON ROD TO BE SET
- STONE BOUND TO BE SET

TABLE OF DIMENSIONAL REQUIREMENTS

ZONE: RS

ITEM	REQUIREMENT
MINIMUM LOT AREA	15,500 SF
MINIMUM FRONTAGE	125'
BUILDING SETBACK	
FRONT YARD	30'
SIDE/REAR YARD	15'

REFERENCES:

PLAN NO. 1535 OF 1960

DOCUMENTS ON RECORD AT THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS.

RECORD OWNER/APPLICANT:

APPLICANT:
SHELDON CORP
121 MARRETT ROAD
LEXINGTON, MA 02421

OWNER:
STORER LEXINGTON LLC
DEED BOOK 72722 PAGE 50
LEXINGTON, MA 02421

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO CREATE LOTS A–J AND PARCEL 1 (WITH A COMBINED TOTAL AREA OF 5.035±ACRES) AS SHOWN ON PLAN 1535 OF 1960. LOTS A–J WILL BE ACCESSED THROUGH PARCEL 1.
2. THIS PLAN IS BASED ON AN INSTRUMENT SURVEY PERFORMED ON THE GROUND BY KEENAN SURVEY ON MAY 19, 2021.
3. THE SUBJECT PROPERTY IS LOCATED IN THE ONE FAMILY DWELLING (RS) RESIDENTIAL ZONING DISTRICT.
4. THE SUBJECT PROPERTY IS DEPICTED AS PARCEL 57 ON TOWN OF LEXINGTON ASSESSOR'S MAP 14.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.

LEXINGTON PLANNING BOARD

DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE.

TOWN CLERK — DATE

REVISIONS

DATE	DESCRIPTION	BY

PROPERTY RIGHTS PLAN OF LAND
LOCATED IN
LEXINGTON, MASSACHUSETTS
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP

KEENAN SURVEY
8 WINCHESTER PLACE
WINCHESTER, MASS.
781–729–4213

DESIGNED BY: — CHECKED BY:

DATE: JULY 20, 2022

SCALE: 1"=30'

SHEET NO. 4 OF 17

PROJECT NO.

FOR REGISTRY OF DEEDS USE ONLY

I DECLARE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

FOR PATRIOT ENGINEERING *DATE*

PLAN NO. 1535 OF 1960



30 0 15 30 60

GRAPHIC SCALE IN FEET

LEXINGTON PLANNING BOARD

DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

TOWN CLERK *DATE*

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TABLE OF DEVELOPMENTAL DATA

TOTAL ASSESSED LAND AREA OF DEVELOPMENT	5.04 ±AC (MAP 14, LOT 57)
TOTAL CALCULATED LAND AREA OF DEVELOPMENT	219,349 ±SF (MAP 14, LOT 57)
TOTAL ONSITE DEVELOPABLE SITE AREA	219,349 ±SF
TOTAL AREA WITH PROPOSED ROW	25,492 ±SF
TOTAL AREA OF IMPERVIOUS SURFACES WITHIN PROPOSED ROW	17,951 ± SF

(TOTAL AREA OF LOTS IN PROOF PLAN = TOTAL CALCULATED LAND AREA OF DEVELOPMENT - TOTAL AREA WITHIN PROPOSED ROW = (219,349 - 25,492) = 193,857 ±SF

193,857 SF * 0.20 = 38,771 SF

38,771 SF + (TOTAL IMPERVIOUS AREA WITHIN ROW PROOF PLAN) = (38,771 + 17,951) = 56,722 SF

TOTAL IMPERVIOUS SURFACE AREA ALLOWABLE IN A SITE SENSITIVE DEVELOPMENT (SSD) = 56,722 SF

SPECIAL PERMIT SUBDIVISION CALCULATIONS

TYPE OF SPECIAL PERMIT RESIDENTIAL DEVELOPMENT	MAXIMUM GROSS FLOOR AREA (SF)	NO. OF DWELLINGS	MAXIMUM AMOUNT OF IMPERVIOUS SURFACES (SF)	MAXIMUM SITE COVERAGE (SF)	MINIMUM COMMON OPEN SPACE REQUIRED (SF)
SITE SENSITIVE	76,511	10	56,722	29,078	NOT REQUIRED
PROPOSED	< 76,511	10	54,880	< 29,078	NOT REQUIRED

ADDITIONAL NOTES:

- ALL PATIOS WILL BE POROUS.
- ALL STONES FROM EXISTING STONE WALLS TO BE REUSED ON SITE
- CONSTRUCTION FENCING TO BE INSTALLED AROUND PERIMETER OF PROPERTY
- PROPOSED FOUNDATIONS WILL BE USED FOR GRADING PURPOSES TO MINIMIZE RETAINING WALLS WHERE FEASIBLE

TABLE OF DIMENSIONAL REQUIREMENTS

ZONE: RS

ITEM	REQUIREMENT
MIN LOT AREA	15,500 SF
MIN FRONTAGE	125'
BUILDING SETBACKS	
FRONT YARD	30'
SIDE/REAR YARD	15'

LEGEND	DESCRIPTION
PEOP	PROPOSED EDGE OF PAVEMENT
PBB	PROPOSED BIT. BERM
●	PROPOSED AREA DRAIN (PAD)
■	PROPOSED CATCH BASIN (PCB)
244	PROPOSED CONTOUR
Ⓓ	PROPOSED DRAIN MANHOLE (PDMH)
	PROPOSED FIRE HYDRANT
	PROPOSED FILTERMITT
	PROPOSED LIMIT OF WORK LINE
	RETAINING WALL
Ⓢ	PROPOSED SEWER MANHOLE (PSMH)
x271	PROPOSED SPOT GRADE
	TREES TO BE REMOVED
	TREES TO BE PROTECTED
D	PROPOSED LOT
	PROPOSED TEMPORARY CONSTRUCTION PARKING

ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION.

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
DATE: 3-30-2022
CHECKED BY:
PROJECT No: 21-12

REVISIONS

DATE	BY	DESCRIPTION
5-23-2022	MJN	REVISIONS PER TOWN COMMENTS
7-21-2022	MJN	REVISIONS PER TOWN COMMENTS

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. NOVAK CIVIL No. 49586 REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

SITE CONSTRUCTION PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

FOR REGISTRY OF DEEDS USE ONLY

I DECLARE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

FOR PATRIOT ENGINEERING ____ DATE ____



NOTES:

1. THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM A PLAN PREPARED BY KEENAN SURVEY.
2. THE SOLE PURPOSE OF THIS PLAN SET IS TO COMPLY WITH SECTION 135-6.9.3 OF THE TOWN OF LEXINGTON ZONING BYLAW.
3. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS ZONING DISTRICT.
4. THE SUBJECT PROPERTY IS DEPICTED AS LOT 57 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 14
5. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND PLANS OF RECORD. THIS PLAN DOES NOT GUARANTEE THE LOCATION OF UTILITIES DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 1-888-344-7233.
6. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.

UTILITY NOTES:

1. ALL SEWER MAINS SHALL BE 8" SCH 40 PVC, UNLESS OTHERWISE NOTED.
2. ALL PROPOSED SEWER SERVICES SHALL BE 6" SCH 40 PVC AND AT A MINIMUM 2% SLOPE, UNLESS OTHERWISE NOTED.
3. ALL WATER MAINS SHALL BE 8" DI, UNLESS OTHERWISE NOTED.
4. ALL PROPOSED WATER SERVICES SHALL BE 1.5" COPPER, UNLESS OTHERWISE NOTED.
5. SEPARATION OF SEWER SERVICE BELOW WATER LINE SHALL BE 18 INCHES, IF THIS CANNOT BE ARCHIVED THE SEWER SHALL BE INCASED IN CONCRETE.
6. ALL STORM DRAIN MAINS AND LATERALS SHALL BE 12" PVC.

FINAL SIZE AND LOCATION OF EACH INDIVIDUAL LOT'S PSIS TO BE DETERMINED AT TIME OF BUILDING PERMIT SUBMITTAL.

LEGEND	DESCRIPTION
PEOP	PROPOSED EDGE OF PAVEMENT
PBB	PROPOSED BIT. BERM
●	PROPOSED AREA DRAIN (PAD)
▣	PROPOSED CATCH BASIN (PCB)
Ⓓ	PROPOSED DRAIN MANHOLE (PDMH)
—PD—	PROPOSED DRAIN LINE
	PROPOSED FIRE HYDRANT
	PROPOSED FILTERMITT
—PG—	PROPOSED GAS LINE
- - -	PROPOSED LIMIT OF WORK LINE
	PLUG
	PROPOSED RETAINING WALL
—PS—	PROPOSED SEWER LINE
Ⓢ	PROPOSED SEWER MANHOLE (PSMH)
—PTEC—	TELEPHONE CONDUIT
—PW—	PROPOSED WATER LINE

30 0 15 30 60

GRAPHIC SCALE IN FEET

ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION.

LEXINGTON PLANNING BOARD

DATE:

I, ______________________ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

TOWN CLERK ____ DATE ____

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DATE: 3-30-2022
PROJECT No: 21-12
DRAWN BY:
CHECKED BY:

REVISIONS

DATE	BY	DESCRIPTION
5-23-2022	MJN	REVISIONS PER TOWN COMMENTS
7-21-2022	MJN	REVISIONS PER TOWN COMMENTS

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. NOVAK CIVIL No. 50696 REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

SITE UTILITY PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

FOR REGISTRY OF DEEDS USE ONLY

I DECLARE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

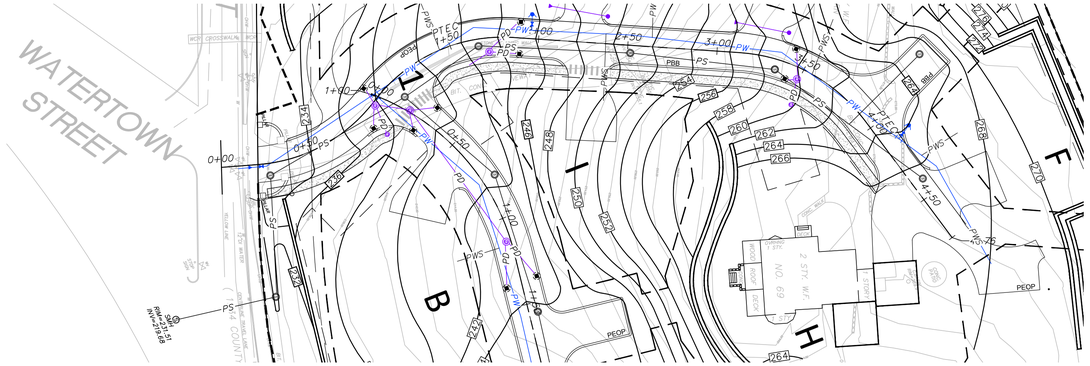
FOR PATRIOT ENGINEERING — DATE

LEXINGTON PLANNING BOARD

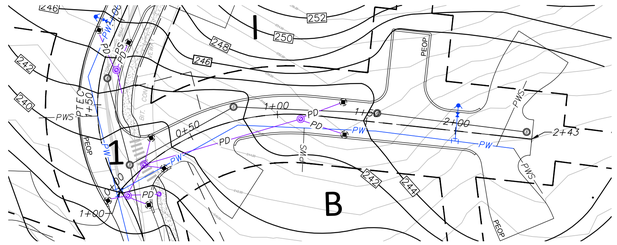
DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

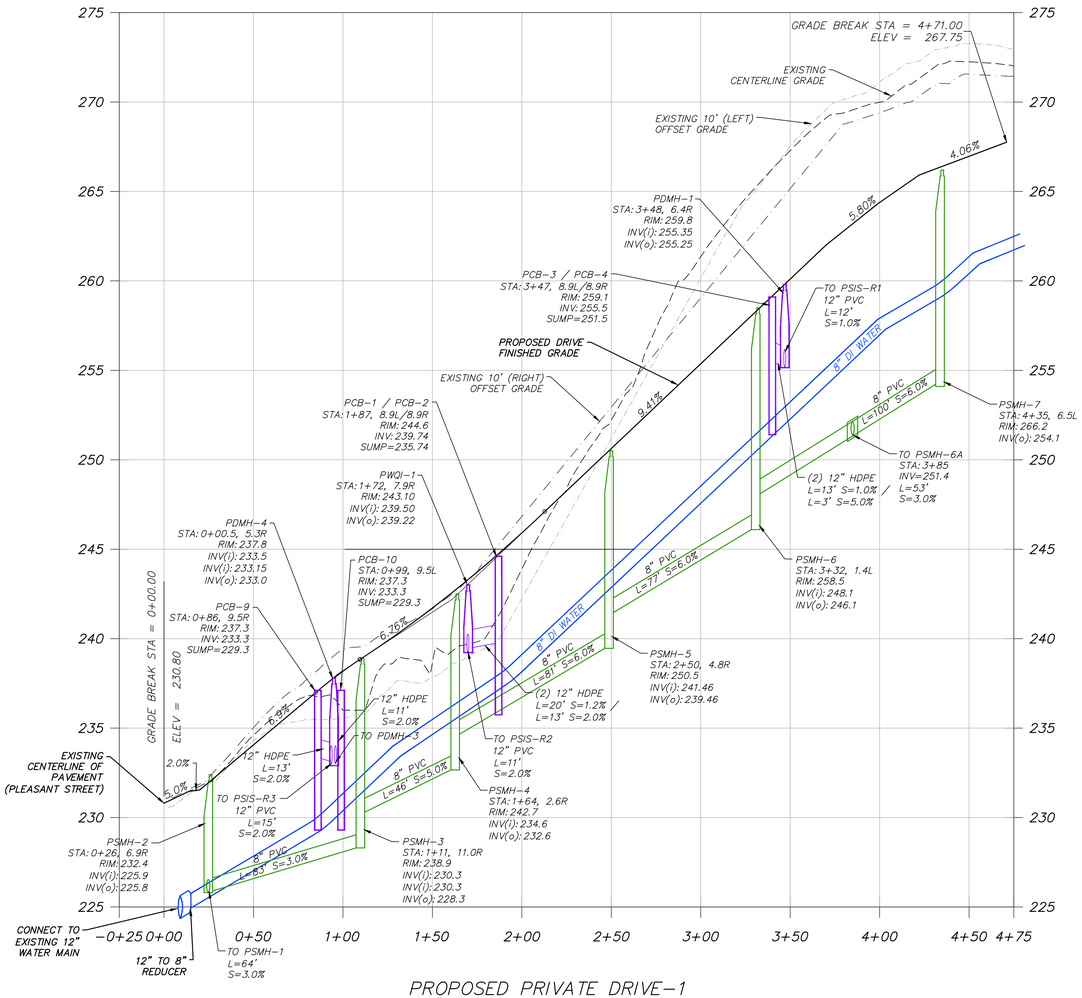
TOWN CLERK — DATE



PLAN VIEW DRIVE-1
SCALE: 1"=40'



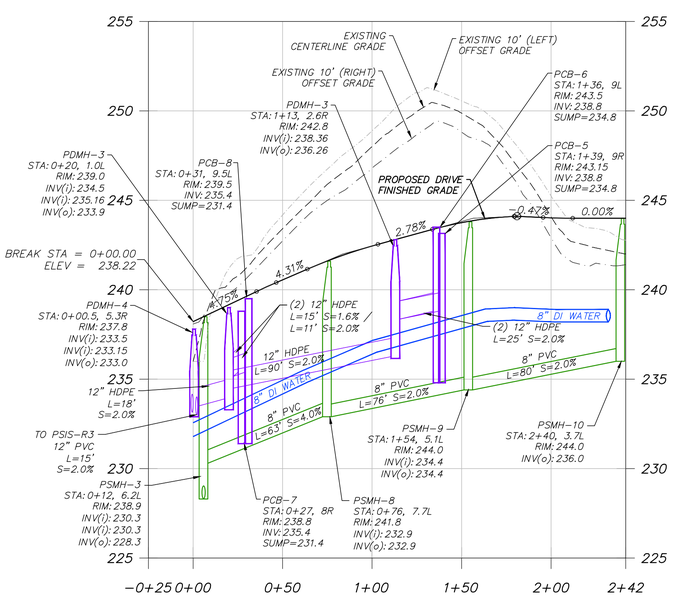
PLAN VIEW DRIVE-2
SCALE: 1"=40'



PROPOSED PRIVATE DRIVE-1

PROFILE VIEW
SCALE: 1"=4' VERT.
1"=40' HOR.

PROFILE NOTE:
ALL PIPE LENGTHS LISTED ABOVE ARE CENTER OF STRUCTURE TO CENTER OF STRUCTURE MEASUREMENTS.



PROPOSED PRIVATE DRIVE-2

PROFILE VIEW
SCALE: 1"=4' VERT.
1"=40' HOR.

ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION.

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

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REVISIONS

DATE	BY	DESCRIPTION
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7-21-2022	MJN	REVISIONS PER TOWN COMMENTS

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 40598
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
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www.patriot-eng.com

UTILITY PROFILE PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

FOR REGISTRY OF DEEDS USE ONLY

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FOR PATRIOT ENGINEERING — DATE



PLANT LIST

	BOTANICAL NAME	COMMON NAME	QTY	SIZE	NOTES
DECIDUOUS TREES					
LS	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	9	3"–3.5" CAL.	B&B
QR	QUERCUS RUBRA	RED OAK	8	3"–3.5" CAL.	B&B
ORNAMENTAL TREES					
CF	CORNUS FLORIDA	FLOWERING DOGWOOD	14	12', 3"C	B&B
EVERGREEN TREES					
TC	TSUGA CANADENSIS	CANADIAN HEMLOCK	27	8'–10', 3"C	B&B
SHRUBS					
PERENNIALS					
HH	HEMEROCALLIS 'HAP. RETURNS'	H. RETURNS DAYLILLY	115	#2 POT	C.G.
CS	CHRYSANTHEMUM X SUPERBUM	SHASTA DAISY 'ALASKA'	115	#2 POT	C.G.

NOTE: THE ABOVE PLANT LIST WAS DEVELOPED USING THE LEXINGTON PREFERRED PLANT LIST AS ADOPTED ON OCTOBER 6, 2021. THE LARGE SHADE TREES WERE SELECTED FROM THE RECOMMENDED LARGE SHADE TREES LIST OF THE LEXINGTON TREE MANUAL SECTION V.B.5 AS REFERENCED IN CHAPTER 120 OF THE LEXINGTON GENERAL BYLAWS, ENTITLED "TREES". 100% OF THE TOTAL DBHs OF ALL PROPOSED TREES ARE NATIVE TREES FROM THE LEXINGTON PREFERRED PLANT LIST. 100% OF THE SHRUBS ARE NATIVE SPECIES FROM THE LEXINGTON PREFERRED PLANT LIST. RED OAK, KENTUCKY COFFEE TREE AND WHITE PINE ARE TREE SPECIES SELECTED FROM THE RECOMMENDED LARGE SHADE TREES LIST IN THE LEXINGTON TREE MANUAL REFERENCED ABOVE.

**PLANTS WITHOUT QUANTITIES IN THE LIST ARE PROPOSED FOR USE ON FUTURE FOUNDATION PLANTINGS WITHIN THE INDIVIDUAL LOTS SHOWN ON THE PLAN.

LANDSCAPE NOTES:

1. SEE SHEET 4 FOR GENERAL NOTES AND LEGEND
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES.
3. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND WILL CONTINUE UNTIL FINAL WRITTEN ACCEPTANCE OF PLANT MATERIAL.
4. ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
5. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS TO ORIGINAL GRADES BEFORE DIGGING.
6. ALL PLANTS TO BE BALLED IN BURLAP OR CONTAINERIZED.
7. ALL PLANTED AREAS TO BE EDGED AND MULCHED WITH AGED PINE BARK: PARTIALLY DECOMPOSED,DARK BROWN IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH.
8. PLANTING SOIL MIX: UTILIZE EXISTING SITE LOAM FROM STOCKPILES. THOROUGHLY INCORPORATE WITH COMPOST AS NEEDED PER SOILS ANALYSIS. FERTILIZE PER RECOMMENDED RATES IN SOIL ANALYSIS.
9. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF ACCEPTANCE.
10. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT, AT THE NURSERY, AND AT THE SITE.
11. ALL AREAS OF THE SITE WHICH HAVE BEEN DISTURBED AND NOT OTHERWISE DEVELOPED SHALL BE LOAMED AND SEEDED WITH A MINIMUM DEPTH OF 6" DEPTH TOPSOIL UNLESS OTHERWISE NOTED.

LEGEND

PROP. SHADE TREE
PROP. EVERGREEN TREE
PROP. ORNAMENTAL TREE
PROPOSED SHRUB PLANTING
EX.TREE T.B.R
EX.TREE T.B. PROTECTED

PLAN NO. 1535 OF 1960

GRAPHIC SCALE
SCALE: 1"=30'
15 0 15 30 60 120

LEXINGTON PLANNING BOARD

DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

TOWN CLERK — DATE

69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY: JAT
CHECKED BY: JAT
DATE: 03.30.2022
PROJECT No:21-12

REVISIONS

DATE	BY	DESCRIPTION
07.22.2022	JAT	PLANNING BOARD COMMENTS

COMMONWEALTH OF MASSACHUSETTS JEFFREY A. THOMA No. 1371 REGISTERED LANDSCAPE ARCHITECT

J T HOMA
Land Design Studios
141 Haggetts Pond Rd
Andover, MA 01810
978.409.9815 - www.jthomalds.com

J:\jeffreythoma\JTLA Projects\Woodland Rd\Dra

LANDSCAPE PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

SHEET
8 OF 15



FOR REGISTRY OF DEEDS USE ONLY

I DECLARE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

FOR PATRIOT ENGINEERING _____ DATE _____

LEXINGTON PLANNING BOARD

_____

_____

_____

_____

_____

_____

_____

_____

DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

_____ _____

TOWN CLERK DATE

GRAPHIC SCALE
SCALE: 1"=30'
15 0 15 30 60 120

List of Protected Trees To Be Removed (Trees 6" DBH or greater within setback area)

Tree #		Tree Size - DBH (in inches)	Description		Reqd. Replacement Inches
	1	7	Hemlock		7
	2	28	Oak		112
	3	15	Maple		15
	4	17	Pine		17
	5	26	Pine		104
	6	19	Pine (7" + 12")		19
	7	17	Pine		17
	8	18	Pine		18
	9	16	Hemlock (8" +8")		16
	10	10	Maple		10
	11	9	Pine		9
	12	6	Maple		6
	13	21	Oak		21
	14	6	Oak		6
	15	15	Oak		15
	16	17	Oak		17
	17	12	Oak		12
	18	17	Oak		17
	19	8	Oak		8
	20	15	Oak		15
	21	11	Oak		11
	22	9	Hemlock		9
	23	11	Oak		11
	24	15	Oak		15
Total No.	24	Total Caliper Inches	Total Reqd. Replacement Inches		507

Additional Tree Removal & Mitigation Information (Trees 6" DBH or greater on entire site)

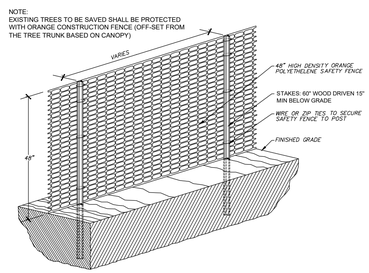
	Quantity	DBH (In Inches)	Replacement Rate	Proposed Replacement Inches
TOTAL NUMBER OF TREES REMOVED	**190**	**2228**		
TOTAL NUMBER OF TREES SAVED	**104**	**1018**		
PROPOSED 3" CALIPER SHADE TREES (FROM RECOMMENDED LARGE SHADE TREE LIST)	**44**	**132**	**1:4**	**528**
PROPOSED 3" CALIPER TREES	**14**	**42**	**1:1**	**42**
		Total Proposed. Replacement Inches		**570**

PROTECTION REQUIREMENTS FOR EXISTING TREES

1. **Barrier Protection -** Protect all trees to be saved before demolition and land clearing begins. Install barrier at locations shown on plan. To the extent possible install tree protection barrier/fencing at the drip line of the tree. This may be modified to a location agreed to during an on-site visit by the Tree Warden. Construct barriers of 60" wood stakes and 4' orange snow fence (highly visible plastic mesh). This protection will prohibit heavy equipment from compacting soil, damaging roots, breaking branches and scarring the tree trunk. **See Detail #1 - Tree Protection Fencing this sheet.**
2. **Weights under Tree** - Park vehicles, equipment, or stockpile earth, fill and other materials ONLY OUTSIDE the tree root zone.
3. **Chemical Damage -** Dispose of all debris properly (rubble, cement, asphalt, petroleum products, herbicides, all chemicals) away from the tree root zone.
4. **Leaf Mulch -** Allow fallen leaves from the trees within the root zone to remain on the ground as mulch. If leaves are on the lawn, they can be raked up or mowed.
5. **Flooding** - Provide proper drainage so that roots of trees are free of standing water.
6. **Fasteners -** Use separate posts instead of trees for fastening signs, fences, electrical wires and pulley stays.
7. **Utility Lines -** Locate all new underground utility lines outside the critical root zone of trees to be saved. If not possible, tunnel under roots as an alternative.
8. **Watering -** During dry spells in the growing season, water trees once a week so that the water penetrates 12 to 18 inches into the soil.

LEGEND

- EX.TREE T.B.R — 10" DBH
- EX.TREE T.B. PROTECTED — 10" DBH
- EX.TREE TO REMAIN OUTSIDE L.O.W. — 10" DBH
- TREE PROTECTION FENCE



1 TREE PROTECTION FENCING
SCALE: N.T.S.

REVISIONS

DATE	BY	DESCRIPTION
07.22.2022	JAT	PLANNING BOARD COMMENTS

69 PLEASANT STREET
LEXINGTON, MA

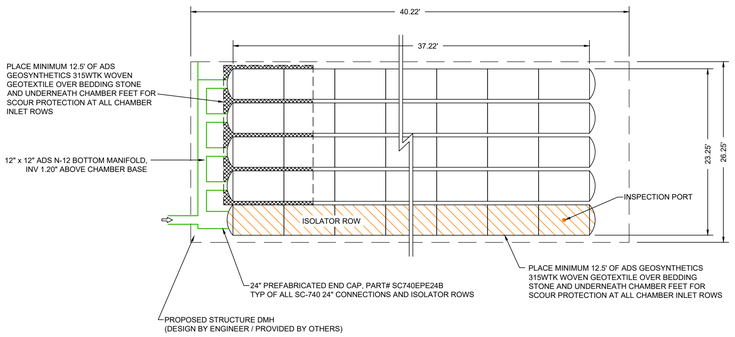
DRAWN BY: JAT
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Andover, MA 01810
978.409.9815 - www.jthomalds.com

/Jeffreythoma/JTLA /Projects/Woodland Rd/Dwg

TREE PROTECTION AND REMOVAL PLAN
LOCATED IN: LEXINGTON, MA (MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

SHEET
9 OF 15



PROPOSED SUBSURFACE INFILTRATION SYSTEM R-1 AND R-2

PROPOSED R-1 LAYOUT

(25) STORMTECH SC-740 CHAMBERS (5X5)
INSTALLED WITH
6" COVER STONE
6" BASE STONE
18" SIDE STONE
40% STONE VOID
INSTALLED SYSTEM VOLUME: 2,172 CF

PROPOSED ELEVATIONS

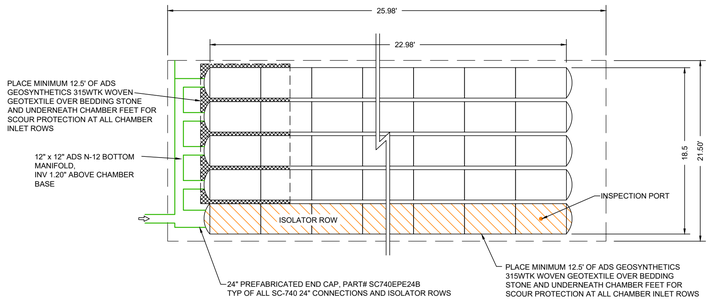
MINIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	259.00
TOP OF STONE:	258.00
TOP OF CHAMBER:	257.50
12" TOP CONNECTION INVERT:	255.10
BOTTOM OF CHAMBER:	254.00
BOTTOM OF STONE:	253.50

PROPOSED R-2 LAYOUT

(25) STORMTECH SC-740 CHAMBERS (5X5)
INSTALLED WITH
6" COVER STONE
6" BASE STONE
18" SIDE STONE
40% STONE VOID
INSTALLED SYSTEM VOLUME: 2,172 CF

PROPOSED ELEVATIONS

MINIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	241.80
TOP OF STONE:	240.80
TOP OF CHAMBER:	240.30
12" TOP CONNECTION INVERT:	239.00
BOTTOM OF CHAMBER:	237.80
BOTTOM OF STONE:	237.30

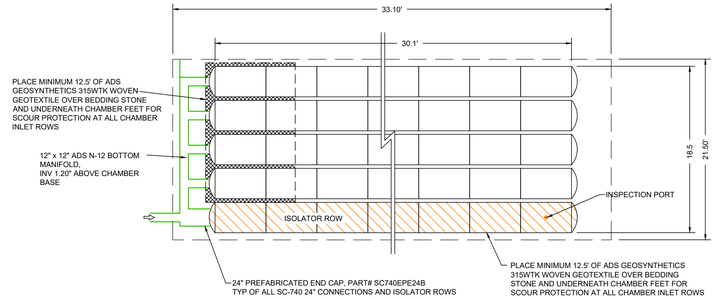


PROPOSED SUBSURFACE INFILTRATION SYSTEM (PROPOSED ROOF-TYPICAL)

PROPOSED PR-1 LAYOUT

(12) STORMTECH SC-740 CHAMBERS
INSTALLED WITH
6" COVER STONE
6" BASE STONE
18" SIDE STONE
40% STONE VOID
INSTALLED SYSTEM VOLUME: 1,115 CF

FINAL SIZE AND LOCATION OF EACH SYSTEM TO BE DETERMINED AT TIME OF BUILDING PERMIT SUBMITTAL.



PROPOSED SUBSURFACE INFILTRATION SYSTEM (EXISTING ROOF)

PROPOSED ER-1 LAYOUT

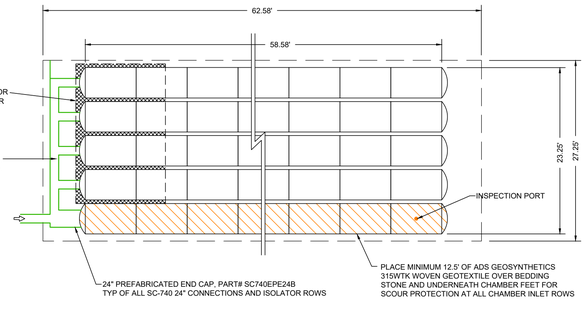
(16) STORMTECH SC-740 CHAMBERS (4X4)
INSTALLED WITH
6" COVER STONE
6" BASE STONE
18" SIDE STONE
40% STONE VOID
INSTALLED SYSTEM VOLUME: 1,115 CF

LEXINGTON PLANNING BOARD

DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

TOWN CLERK *DATE*



PROPOSED SUBSURFACE INFILTRATION SYSTEM R-3

PROPOSED R-3 LAYOUT

(40) STORMTECH SC-740 CHAMBERS (8X5)
INSTALLED WITH
6" COVER STONE
6" BASE STONE
24" SIDE STONE
40% STONE VOID
INSTALLED SYSTEM VOLUME: 3,489 CF

PROPOSED ELEVATIONS

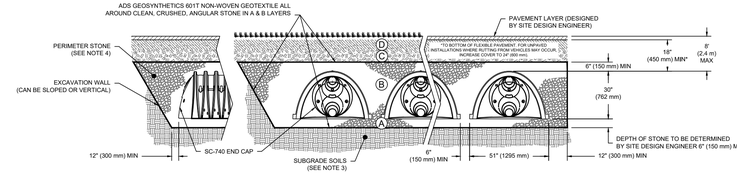
MINIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	236.50
TOP OF STONE:	235.50
TOP OF CHAMBER:	235.00
12" TOP CONNECTION INVERT:	239.00
BOTTOM OF CHAMBER:	232.50
BOTTOM OF STONE:	232.00

ALL DETAILS ARE NOT TO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

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

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



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

PROPOSED SUBSURFACE INFILTRATION SYSTEM CROSS SECTION (TYPICAL)

MHT CARGO FACILITY
LONDONDERRY, NH
DATE: 03/11/2022 | DRAWN: AC | CHECKED: --
PROJECT # --

REVISIONS

REV'D	DRWN	CHK'D	DESCRIPTION

StormTech
INNOVATIVE STORMWATER SOLUTIONS
20 BEACON WAY, SUITE 1 | HOOKSETT, NH 03106

DS
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

SHEET
3 OF 5

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LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
CHECKED BY:
DATE: 3-30-2022
PROJECT No: 21-12

REVISIONS

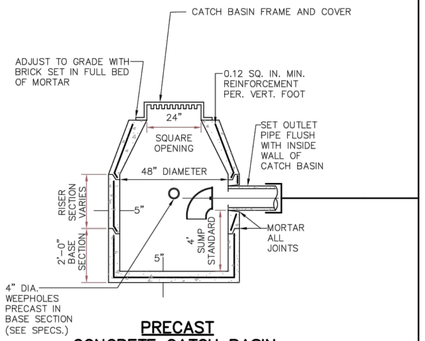
DATE	BY	DESCRIPTION
5-23-2022	MJN	REVISIONS PER TOWN COMMENTS
7-21-2022	MJN	REVISIONS PER TOWN COMMENTS

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 39566
REGISTERED PROFESSIONAL ENGINEER

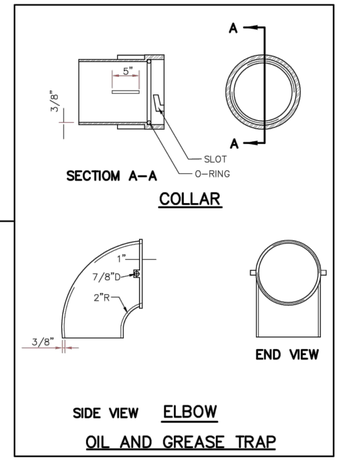
PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

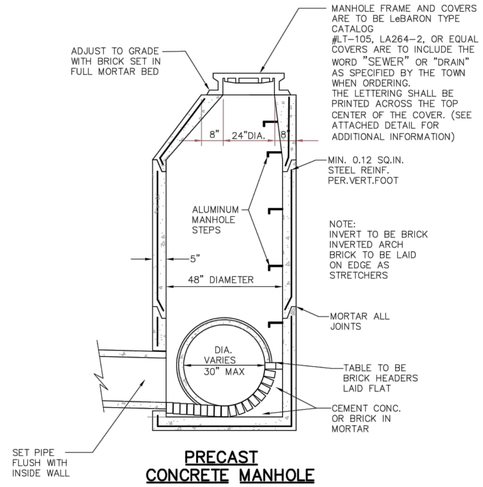
SITE DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

SHEET
10 OF 17

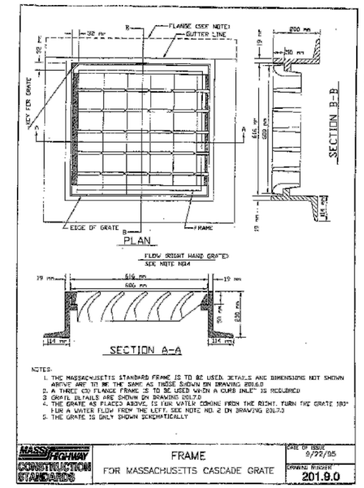


PRECAST CONCRETE CATCH BASIN
(WITH 4 FLANGE CATCH BASIN FRAME)

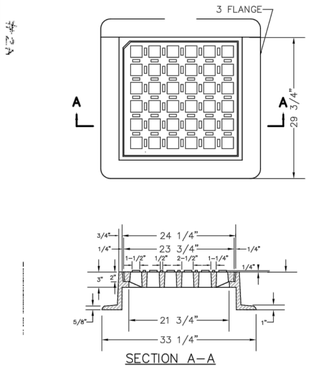




PRECAST CONCRETE MANHOLE



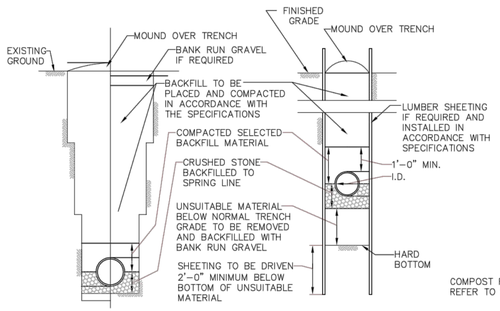
CATCH BASIN FRAME AND GRATE
N.T.S.



NOTE: FRAME AND GRATE SHALL BE HEAVY DUTY CLASS 30 GRAY IRON.

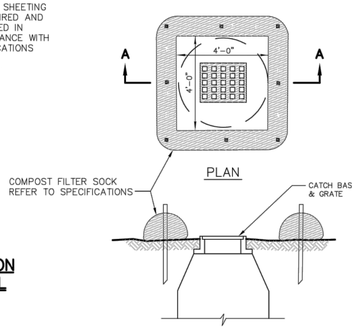
CATCH BASIN FRAME AND GRATE
N.T.S.

NOTE: CATCH BASIN FRAME AND COVERS ARE TO BE LeBARON TYPE CATALOG #LF248-3 OR EQUAL

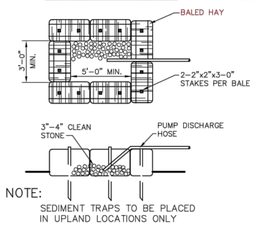


TYPICAL TRENCH SECTION STABLE GROUND

TYPICAL TRENCH SECTION UNSUITABLE MATERIAL

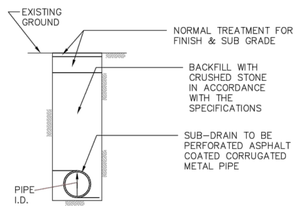


BALED HAY SILT BARRIER AROUND CATCH BASIN
N.T.S.

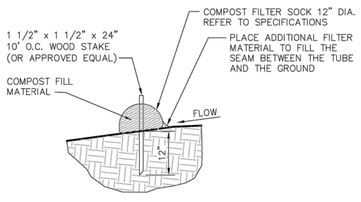


NOTE:
SEDIMENT TRAPS TO BE PLACED IN UPLAND LOCATIONS ONLY

SEDIMENT CONTROL TRAP
N.T.S.

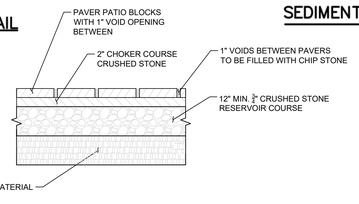


SUB-DRAIN DETAIL

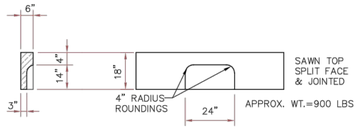


NOTE: EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH ORDER OF CONDITIONS.

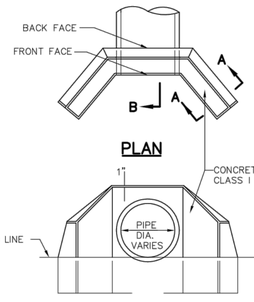
SEDIMENTATION BARRIER



PROPOSED POROUS PAVER PATIO DETAIL
(NOT TO SCALE)



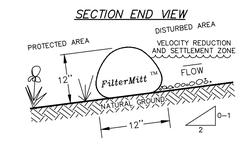
GRANITE CURB INLET DETAILS

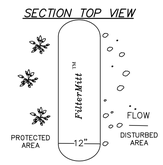


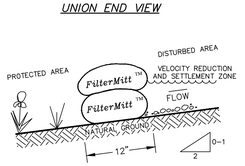
CONCRETE HEADWALL DETAILS FOR 30" TO 84" PIPE CULVERTS

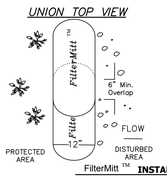
PIPE DIA.	1 1/2:1 & 2:1 SLOPES E	G	H	J	L	N	P	1 1/2 SLOPES F	CU. YDS.	LBS.	2:1 SLOPES F	CU. YDS.	LBS.
30"	4'-0"	4'-0"	5'-6"	3'-6"	1'-6"	2'-0"	5'-3"	3'-0"	2.60	45	4'-3"	3.16	54
36"	4'-6"	4'-3"	6'-0"	4'-0"	1'-8"	2'-3"	5'-11"	3'-6"	3.35	54	5'-0"	4.15	64
42"	5'-0"	4'-6"	6'-6"	4'-6"	1'-10"	2'-6"	6'-6"	4'-0"	4.20	59	5'-9"	5.25	70
48"	5'-6"	4'-9"	7'-0"	5'-0"	2'-0"	2'-9"	7'-2"	4'-6"	5.19	65	6'-6"	6.50	83
54"	6'-0"	5'-0"	7'-6"	5'-6"	2'-2"	3'-0"	7'-10"	5'-0"	6.26	73	7'-3"	7.88	93
60"	6'-6"	5'-3"	8'-0"	6'-0"	2'-4"	3'-3"	8'-5"	5'-6"	7.43	85	8'-0"	9.37	106
72"	7'-6"	5'-9"	9'-0"	7'-0"	2'-8"	3'-9"	9'-9"	6'-6"	10.25	98	9'-6"	12.99	128
84"	8'-6"	6'-3"	10'-0"	8'-0"	3'-0"	4'-3"	11'-0"	7'-6"	13.49	120	11'-0"	17.32	154

NOTES:
1. ALL CONCRETE CORNERS SHALL BE CHAMFERED
2. ALL CONCRETE SHALL BE 3000 PSI









***FilterMitt*™ COMPONENTS:**
OUTSIDE CASING: 100% organic hessian.
FILLER INGREDIENT: *FiberRoot Mulch*™
- A blend of coarse and fine compost and shredded wood. Particle sizes: 100% passing a 3" screen; 90-100% passing a 1" screen;
- 70-100% passing a 0.75" screen; 30-75% passing a 0.25" screen.
Weight: Approx. 310 lbs./cu.yd. (Ave. 11.5 lbs./l.f.)
-

For more information visit: www.groundscapesexpress.com or contact us at:
Groundscapes Express, Inc.
P.O. Box 737
Wrentham, MA 02093 (508) 384-7140

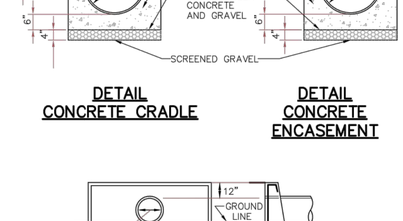
FILTERMITT 2:1 SLOPES OR LESS

FilterMitt ™ INSTALLATION:
With the newest technology and equipment, sections can be constructed on site in lengths from 1' to 100'.

Sections can also be delivered to the site in lengths from 1' to 8'.

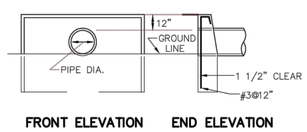
The flexibility of allows it to conform to any contour or terrain while holding a slightly round shape at 8" high by 8" wide.

Where section ends meet, there shall be an overlap of 6" or greater.



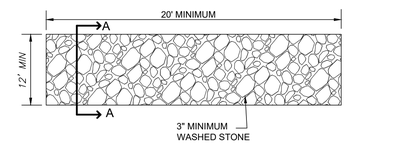
DETAIL CONCRETE CRADLE

DETAIL CONCRETE ENCASEMENT

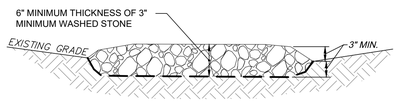


CONCRETE HEADWALL DETAILS FOR 8" TO 30" PIPE CULVERTS

PIPE DIA.	1 1/2:1 SLOPE L	CU.YDS.	LBS	2:1 SLOPE L	CU.YDS.	LBS.
8"	4'-2"	0.77	15	5'-10"	1.08	21
10"	4'-10"	0.92	20	6'-8"	1.28	23
12"	5'-6"	1.08	21	7'-6"	1.49	29
15"	6'-6"	1.34	24	8'-9"	1.82	32
18"	7'-6"	1.61	30	10'-0"	2.18	39
21"	8'-8"	1.95	34	11'-6"	2.62	43
24"	9'-3"	2.16	35	12'-6"	2.97	50
30"	10'-6"	2.63	44	15'-6"	3.86	62
	Q=4 INCHES			Q=6 INCHES		



PLAN VIEW



SECTION A-A
CONSTRUCTION ENTRANCE

NOT TO SCALE

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
DATE: 3-30-2022
CHECKED BY:
PROJECT No: 21-12

REVISIONS

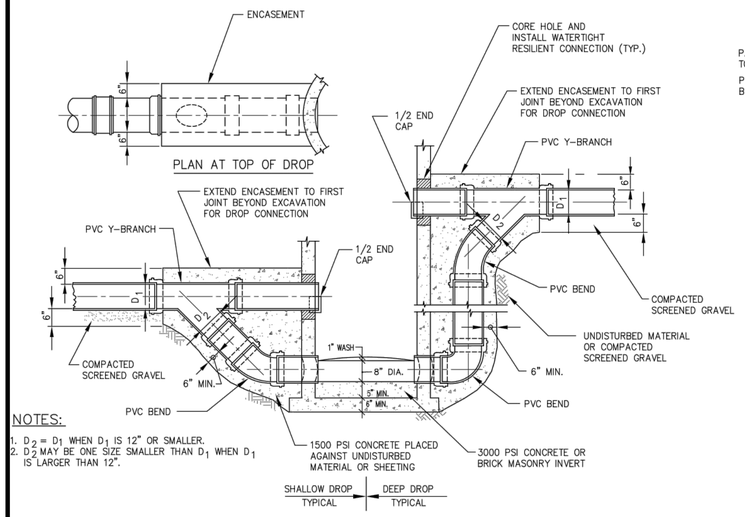
DATE	BY	DESCRIPTION
5-23-2022		NO REVISIONS TO THIS SHEET
7-21-2022		NO REVISIONS TO THIS SHEET

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. NOVAK No. 50696 REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

SITE DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

SHEET
11 OF 17

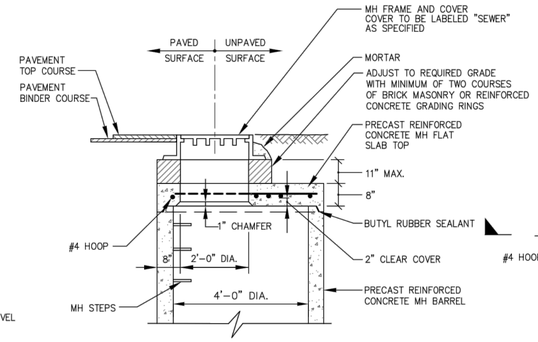


NOTES:

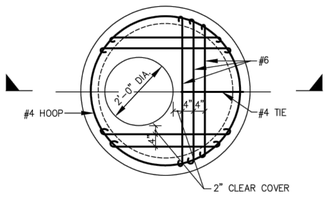
1. $D_2 = D_1$ WHEN D_1 IS 12" OR SMALLER.
2. D_2 MAY BE ONE SIZE SMALLER THAN D_1 WHEN D_1 IS LARGER THAN 12".

DROP INLETS FOR PVC PIPE SEWERS

NOT TO SCALE
2-1.4.1 (REV. 03-15-95)



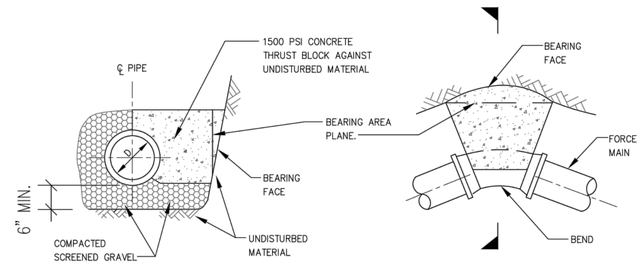
SECTION



PLAN OF PRECAST SLAB

PRECAST FLAT SLAB TOP FOR SHALLOW MANHOLE

NOT TO SCALE
2-1.5.43 (REV. 03-15-95)

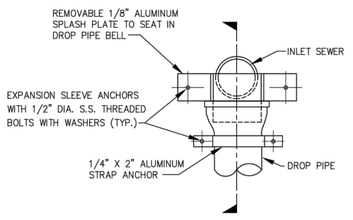


SECTION PLAN

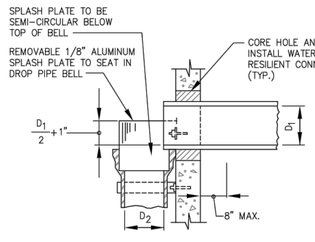
NOTES:

1. WHERE SO INDICATED ON PLANS, THE FORCE MAIN BENDS SHALL BE BACKED UP WITH A CONCRETE THRUST BLOCK BETWEEN THE PIPE AND UNDISTURBED MATERIAL.
2. REQUIRED BEARING AREA TO BE CALCULATED ON VERTICAL PLANE 90 DEG. TO RADIAL PLANE PASSING THROUGH MIDPOINT OF BEND.
3. MINIMUM BEARING AREA: 2.0 SQ.FT.
4. SEE PLANS FOR REQUIRED BEARING AREAS GREATER THAN MINIMUM.

FORCE MAIN THRUST BLOCK

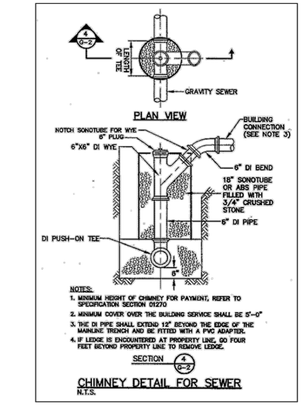


ELEVATION



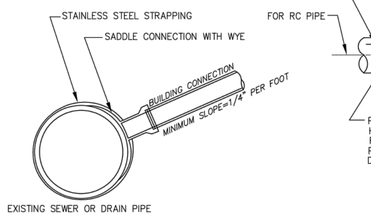
SECTION

ALUMINUM SPLASH PLATE DETAIL



TYPICAL CHIMNEY DETAIL

NO SCALE

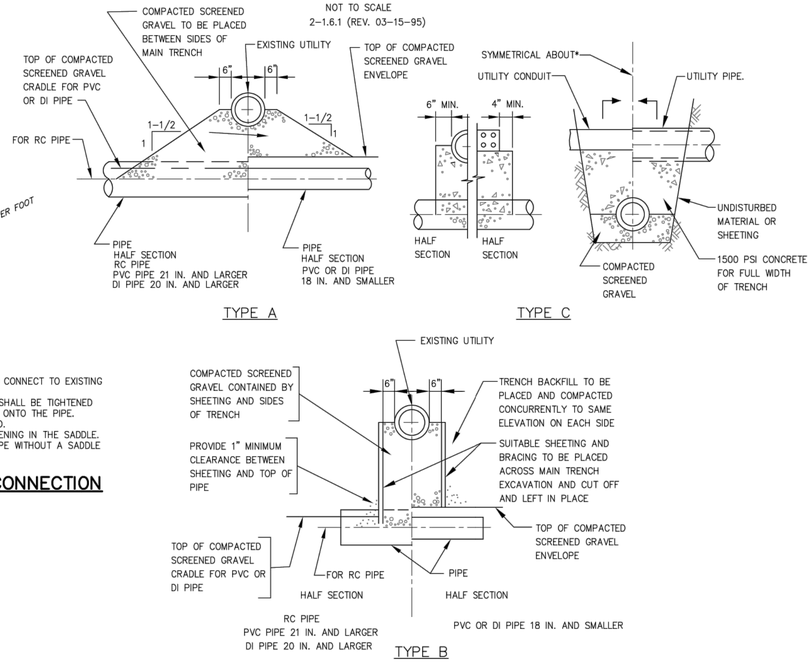


NOTES:

1. FULL PVC OR IRON SADDLE MAY BE USED TO CONNECT TO EXISTING PVC, CLAY, CONCRETE OR IRON PIPE.
2. SADDLES MUST HAVE RUBBER GASKETS AND SHALL BE TIGHTENED WITH STRAPS. SADDLES WILL NOT BE CEMENT ONTO THE PIPE.
3. FULL WYE CONNECTION FITTINGS MAY BE USED.
4. PIPE SHALL BE CUT TO CONFORM TO THE OPENING IN THE SADDLE.
5. CONNECTIONS DIRECTLY INTO THE EXISTING PIPE WITHOUT A SADDLE OR A FULL WYE FITTING ARE NOT ALLOWED.

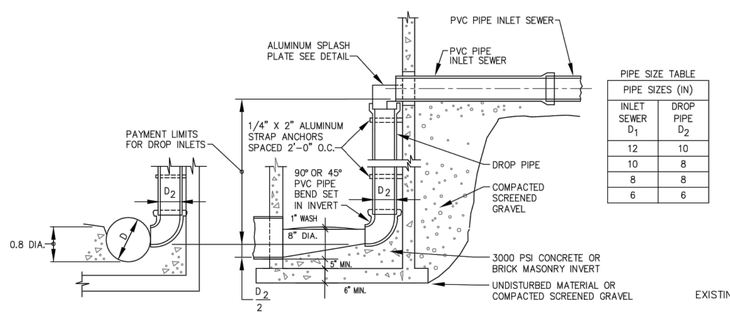
SEWER SERVICE SADDLE CONNECTION

NO SCALE



TYPICAL SUPPORTS FOR UTILITIES

NOT TO SCALE
2-1.8 (REV. 03-15-95)



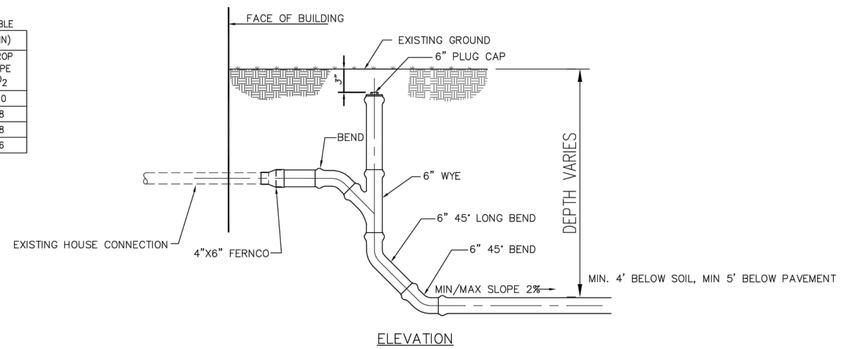
PIPE SIZE TABLE	
PIPE SIZES (IN)	
INLET SEWER D_1	DROP PIPE D_2
12	10
10	8
8	8
6	6

INVERT DETAIL AT SIDE DROPS

INVERT DETAIL AT MAIN RUN DROPS

INSIDE DROP INLETS FOR PVC PIPE SEWERS 12 INCH DIAMETER AND SMALLER

NOT TO SCALE
2-1.4.3 (REV. 03-15-95)



ELEVATION

CLEAN OUT RISER FOR SHALLOW BUILDING CONNECTIONS

NO SCALE

NOT TO SCALE

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
CHECKED BY:
DATE: 3-30-2022
PROJECT No: 21-12

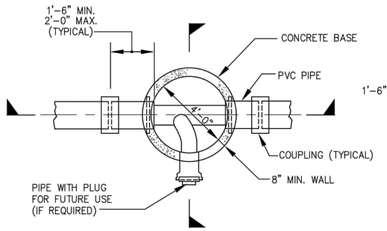
REVISIONS

DATE	BY	DESCRIPTION
5-23-2022		NO REVISIONS TO THIS SHEET
7-21-2022		NO REVISIONS TO THIS SHEET

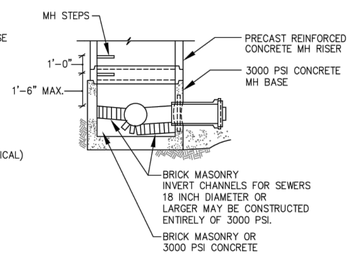
COMMONWEALTH OF MASSACHUSETTS MICHAEL J. NOVAK No. 50696 REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T.: (978) 726-2654
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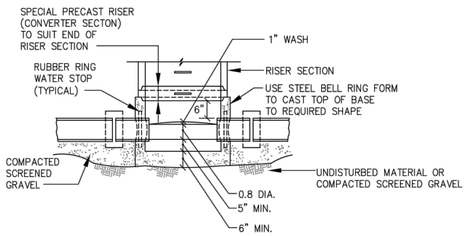
SITE DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.



PLAN



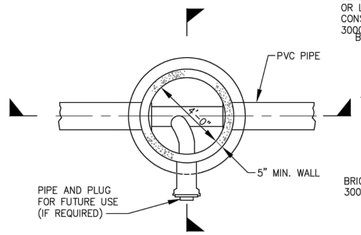
SECTION



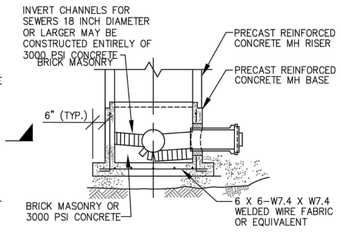
SECTION

CAST-IN-PLACE CONCRETE BASE FOR PVC SEWERS

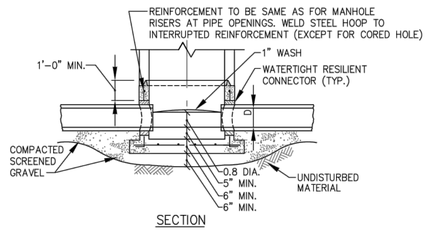
NOT TO SCALE
2-1.5.4 (REV. 03-15-95)



PLAN



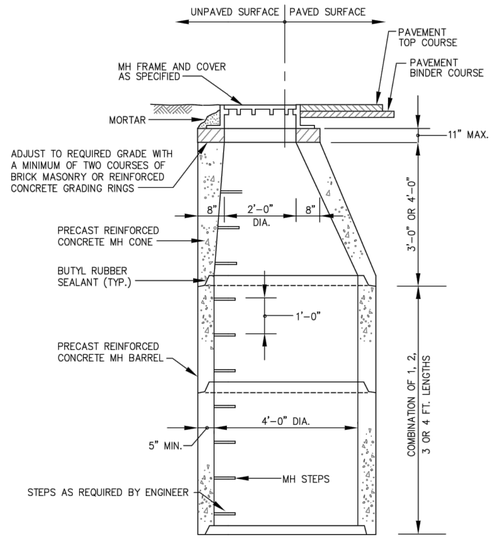
SECTION



SECTION

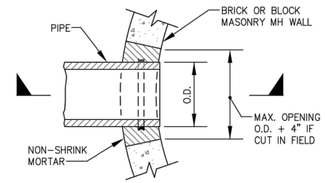
4'-0" PRECAST REINFORCED CONCRETE MANHOLE BASE FOR PVC SEWERS AND DRAINS

NOT TO SCALE
2-1.5.14 (REV. 03-15-95)

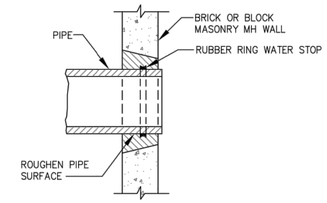


MANHOLE RISER WITH ECCENTRIC CONE TOP

NOT TO SCALE
2-1.5.41 (REV. 03-15-95)



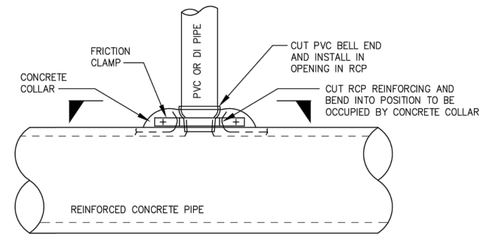
PLAN

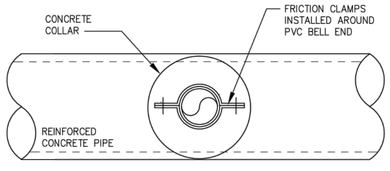


SECTION

NON-SHRINK MORTAR JOINTS FOR CONNECTING PIPES TO BRICK OR BLOCK MASONRY MANHOLES

NOT TO SCALE
2-1.5.62 (REV. 4-5-96)

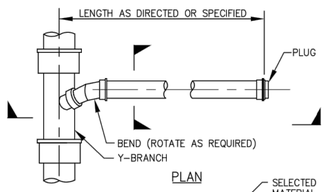




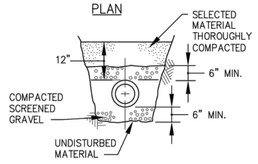
SECTION

T-BRANCH FOR BUILDING OR CHIMNEY CONNECTION IN RC PIPE (PVC OR DI PIPE BRANCH)

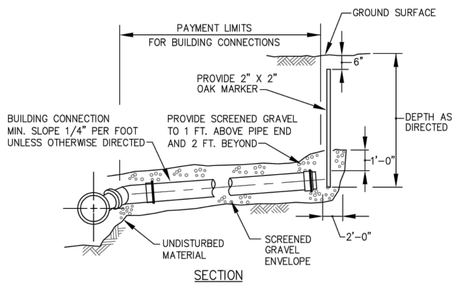
NTS
2-1.2.15 (REV. 08-17-95)



PLAN



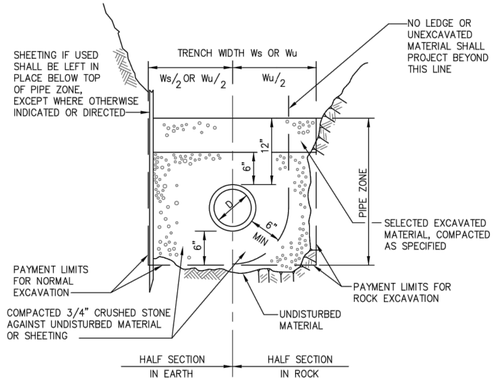
SECTION



SECTION

BUILDING CONNECTION FOR DI OR PVC PIPE

NOT TO SCALE
2-1.2.1 (REV. 03-15-95)

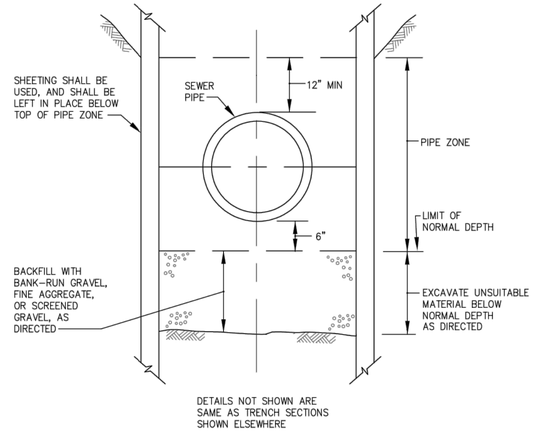


1. PIPE TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH Ws (SHEETED) OR Wu (UNSHEETED) ABOVE THE TOP OF PIPE ZONE.
2. TRENCHES SHALL NOT BE EXCAVATED BEYOND THE TRENCH WIDTH Wu BELOW THE TOP OF PIPE ZONE.
3. SHEETING MUST BE USED IF EXCAVATION AND BACKFILL, BELOW NORMAL DEPTH, IS REQUIRED. SHEETING SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF PIPE.
4. ALL ROCK WITHIN 3'-0" HORIZONTALLY OF THE ENDS OF BUILDING CONNECTIONS, BRANCHES OR STUBS AND DOWN TO A HORIZONTAL PLANE 6" BELOW THE BOTTOMS OF SUCH CONNECTIONS, BRANCHES OR STUBS, SHALL BE EXCAVATED.

TRENCH WIDTH Ws OR Wu

NOMINAL PIPE DIAMETER D	DEPTH OF PIPE INVERT BELOW GROUND SURFACE	
	0 TO 12'	12' TO 20'
24" AND SMALLER	5'-0"	7'-0"
OVER 24"	D + 3'-0"	D + 5'-0"

TRENCH SECTION FOR PVC PIPE



DETAILS NOT SHOWN ARE SAME AS TRENCH SECTIONS SHOWN ELSEWHERE

TRENCH SECTION IN UNSUITABLE MATERIAL

NOT TO SCALE
2-1.1.21 (REV. 03-15-95)

NOT TO SCALE

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
CHECKED BY:
DATE: 3-30-2022
PROJECT No: 21-12

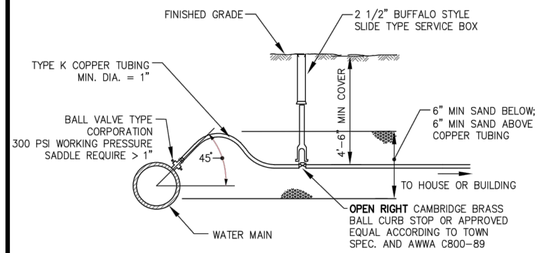
REVISIONS

DATE	BY	DESCRIPTION
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7-21-2022		NO REVISIONS TO THIS SHEET

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
No. 50696
REGISTERED CIVIL ENGINEER

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SITE DETAILS
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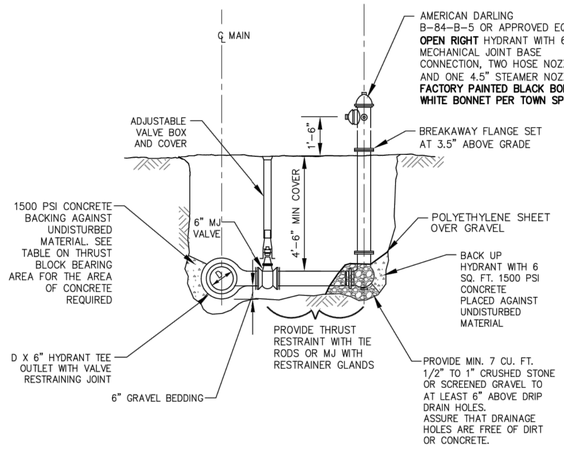


NOTES:

1. A 10' HORIZONTAL SEPARATION MUST BE MAINTAINED FROM THE SEWER SERVICE UNLESS OTHERWISE AUTHORIZED BY THE ENGINEERING DIVISION.
2. FOR SERVICE RENEWALS, TUBING SHALL BE REPLACED TO THE PROPERTY LINE UNLESS OTHERWISE AUTHORIZED BY THE ENGINEERING DIVISION.
3. WHERE AN EXISTING SERVICE IS BEING REPLACED TO THE MAIN, THE OLD SERVICE SHALL BE CAPPED AT THE CORPORATION.
4. THE WATER AND SEWER DIVISION MUST BE NOTIFIED IF LEAD OR STEEL SERVICES ARE ENCOUNTERED.
5. SERVICE TAPS SHALL BE PERFORMED BY CONTRACTOR OR SUBCONTRACTOR AND ARE SUBJECT TO APPROVAL BY THE WATER DIVISION.
6. SERVICE TAPS GREATER THAN 1" REQUIRE A SADDLE AND ARE SUBJECT TO THE APPROVAL OF THE ENGINEERING DIVISION.
7. USE QUICK STYLE COMPRESSION CONNECTIONS FOR ALL SERVICE BRASS.
8. FOR 1" CONNECTIONS TO EXIST. 3/4" CURB STOP CONNECT ADAPTER DIRECTLY TO CURB STOP. MOST EXISTING CURB STOPS REQUIRE 3/4" X 1" FEMALE ADAPTERS FOR NEW ENGLAND STYLE THREADS.
9. ALL CONNECTIONS TO EXIST. CURB STOPS SHALL REPLACE SERVICE BOXES IF NOT BUFFALO STYLE.
10. WATER SERVICE SHALL INCLUDE A BALL VALVE WITH COMPRESSION FITTING JUST BEFORE METER.

WATER SERVICE CONNECTION (1" MIN TO 2" MAX)

NTS

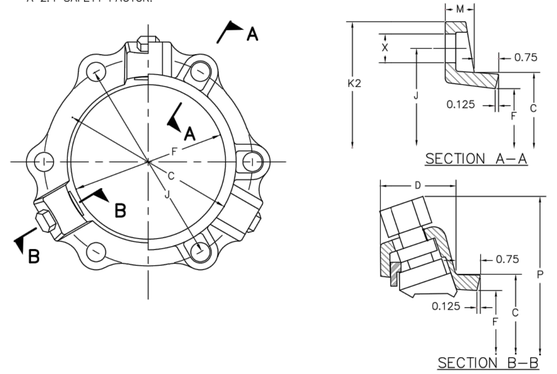


TYPICAL HYDRANT ASSEMBLY WITH DRAIN

NTS

NOTES:

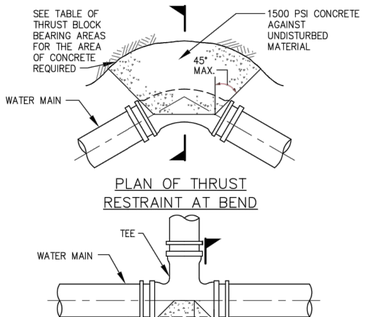
1. SIZES 3" THROUGH 24" ARE LISTED BY UNDERWRITER'S LABORATORIES, INC. CATEGORY HJKF FOR USE ON DUCTILE IRON PIPE. THE LISTING FILE NUMBER IS EX2836. SIZES 3" THROUGH 12" ARE FACTORY MUTUAL APPROVED.
2. GLAND AND COLLAR BOLTS ARE MADE OF DUCTILE IRON CONFORMING TO ASTM A536-80. WEDGES ARE MADE OF DUCTILE IRON HEAT TREATED TO A MINIMUM BRINELL HARDNESS OF 370.
3. GLAND CONFORMS TO THE APPLICABLE REQUIREMENTS OF ANSI/AWWA A21.11/C111 AND ANSI\AWWA C153/A21.53 OF THE LATEST REVISION.
4. FOR TEST PRESSURES ABOVE THE RATED PRESSURES SHOWN, CONSULT THE ENGINEERING DEPARTMENT OF EBAA IRON INC. FOR RECOMMENDATIONS. EBAA-SEAL GASKETS ARE PROVIDED WITH THE 30" THROUGH 48" MEGALUGS. ALSO PROVIDED WITH THE 42" AND 48" SIZES ARE EXTRA LENGTH T-BOLTS. THE GASKETS AND BOLTS ARE PROVIDED TO FACILITATE EASIER ASSEMBLY OF THE MECHANICAL JOINT AND ARE REQUIRED ON THE ABOVE REFERENCED SIZES TO OBTAIN THE LISTED PRESSURE RATINGS WITH A 2:1 SAFETY FACTOR.



SERIES	PRESSURE RATING	C	D	F	J	M	X	NO. OF WEDGES	NO. OF BOLTS	P	P (W/ NUTS TWISTED OFF)	K2
1103	350	4.84	2.27	4.06	6.19	0.62	3/4	2	4	9.36	9.06	7.69
1104	350	5.92	2.27	4.90	7.50	0.75	7/8	2	4	10.20	9.90	9.12
1106	350	8.02	2.27	7.00	9.50	0.88	7/8	3	6	12.30	12.00	11.12
1108	350	10.17	2.31	9.15	11.75	1.00	7/8	4	6	14.45	14.15	13.37
1110	350	12.22	2.37	11.20	14.00	1.00	7/8	6	8	16.50	16.20	15.62
1112	350	14.32	2.37	13.30	16.25	1.25	7/8	8	8	18.60	18.30	17.88
1114	350	16.40	2.69	15.44	18.75	1.50	7/8	10	10	20.64	20.94	20.25
1116	350	18.50	2.69	17.54	21.00	1.56	7/8	12	12	22.60	22.90	22.50
1118	250	20.60	2.69	19.64	23.25	1.63	7/8	12	12	24.70	25.00	24.75
1120	250	22.70	2.69	21.74	25.50	1.69	7/8	14	14	26.80	27.10	27.00
1124	250	26.90	3.20	25.94	30.00	1.81	7/8	16	16	32.94	32.64	31.50
1130	250	33.29	3.20	32.17	36.88	2.25	1 1/8	20	20	39.17	38.87	39.12
1136	250	39.59	3.20	38.47	43.75	2.25	1 1/8	24	24	45.47	45.17	46.00
1142	250	45.79	4.56	44.67	50.62	3.88	1 3/8	28	28	55.87	55.57	53.48
1148	250	52.09	4.56	50.97	57.50	3.88	1 3/8	32	32	62.17	61.87	60.36

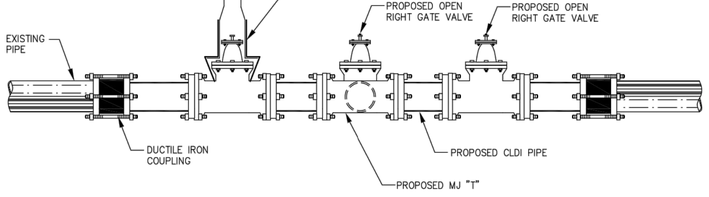
MEGALUG DETAIL

N.T.S.

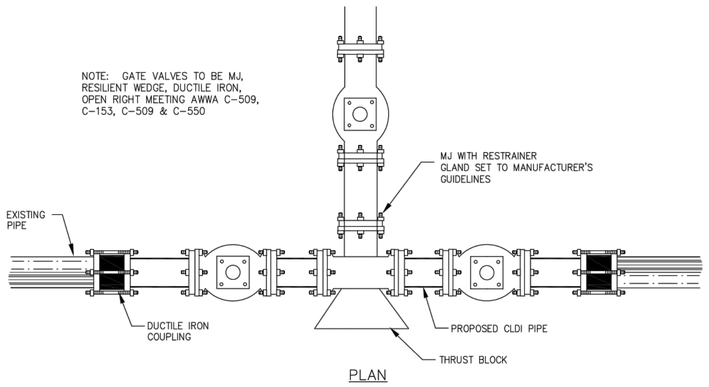


THRUST RESTRAINT AT FITTINGS

NTS



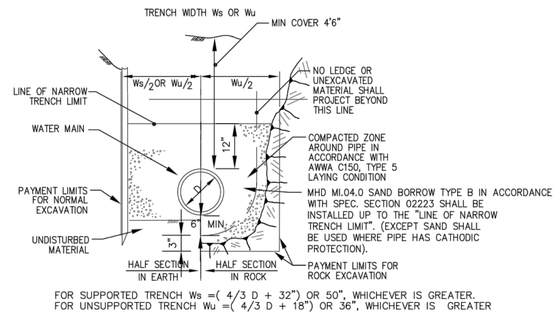
ELEVATION



PLAN

TRIPLE GATE CUT IN WATER MAIN CONNECTION

NTS



FOR SUPPORTED TRENCH Ws =(4/3 D + 32") OR 50", WHICHEVER IS GREATER.
FOR UNSUPPORTED TRENCH Wu =(4/3 D + 18") OR 36", WHICHEVER IS GREATER

NOTES:

1. TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH Ws ABOVE THE "LINE OF NARROW TRENCH LIMIT".
2. BELOW THE "LINE OF NARROW TRENCH LIMIT" THE TRENCH SHALL NOT BE EXCAVATED BEYOND THE TRENCH WIDTH Ws.
3. SHEETING, IF USED, IN ALL CASES SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF THE PIPE, UNLESS OTHERWISE INDICATED OR DIRECTED.
4. "COVER" AT ANY POINT SHALL BE DEFINED AS THE VERTICAL DISTANCE FROM THE UPPERMOST POINT OF THE PIPE TO A LINE WHICH CONNECTS THE SURFACE OF UNDISTURBED GROUND AT EITHER SIDE OF THE TRENCH AND IS AT RIGHT ANGLES TO THE DIRECTION OF THE PIPE.
5. WHERE FUTURE EXTENSION OF A PLUGGED PIPE OR A PLUGGED BRANCH WILL ENTAIL ROCK EXCAVATION, TRENCH EXCAVATION IN ROCK SHALL BE EXTENDED FOR A DISTANCE OF 3'-0" BEYOND THE PLUG.
6. BANK RUN GRAVEL OR EXCAVATED MATERIAL THAT MEETS SPEC. SECTION 02224 SHALL BE INSTALLED ABOVE THE LINE OF NARROW TRENCH LIMIT.
7. WHERE SPECIFIED, CONTROLLED DENSITY FILL WILL BE USED FROM TOP OF SCREENED GRAVEL TO BOTTOM OF BITUMINOUS PAVEMENT.

WATER MAIN TRENCH SECTION

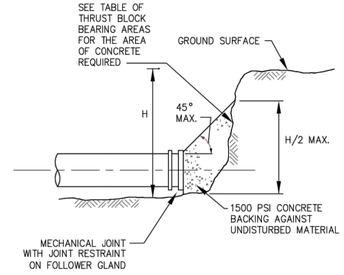
NTS

BEARING AREA FOR VARIOUS DIAMETERS

FITTING	4"	6"	8"	10"	12"	16"
1/32 BEND (11 1/4°)	2 S.F.	2 S.F.	2 S.F.	2 S.F.	3 S.F.	5 S.F.
1/16 BEND (22 1/2°)	2 S.F.	2 S.F.	3 S.F.	3 S.F.	4 S.F.	5 S.F.
1/8 BEND (45°)	2 S.F.	2 S.F.	3 S.F.	5 S.F.	7 S.F.	12 S.F.
1/4 BEND (90°)	3 S.F.	3 S.F.	6 S.F.	9 S.F.	12 S.F.	21 S.F.
TEE/PLUG	2 S.F.	3 S.F.	4 S.F.	6 S.F.	9 S.F.	16 S.F.

NOTES:

1. ALL ELBOWS, BENDS, AND CAPS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS. JOINTS SHALL NOT BE ENCASED IN CONCRETE.
2. BEARING AREA IS AREA OF CONCRETE IN CONTACT WITH WALL OF TRENCH (H X L).
3. HEIGHT AND LENGTH AS REQUIRED TO OBTAIN BEARING AREA SHOWN IN THE TABLE W/ H APPROX. 1/2 L.
4. THRUST BLOCK SIZING BASED ON 150 PSI WATER PRESSURE AND 2000 PSI SOIL BEARING CAPACITY.



THRUST RESTRAINT AT PLUG

NTS

NOT TO SCALE

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
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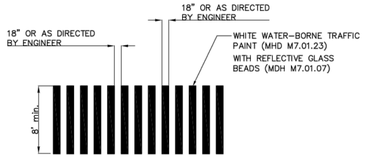
REVISIONS

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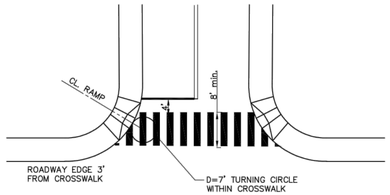
COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
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REGISTERED PROFESSIONAL ENGINEER

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SHELDON CORP.



CROSSWALK ALL LOCATIONS

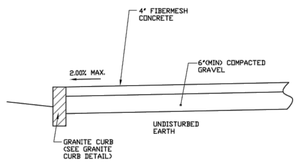


DETAIL~FOR CROSSWALK ALL LOCATIONS

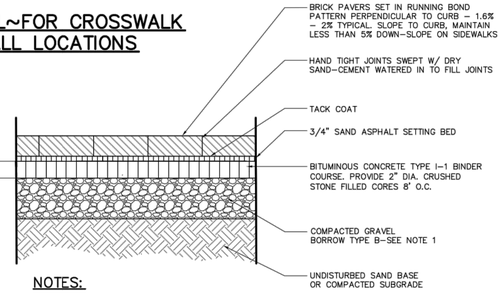
NOTES:

1. WHERE PROVIDED, STOP LINES SHOULD BE PLACED NO LESS THAN 4 FEET BEHIND AN ADJACENT CROSSWALK LINE.
2. MID-BLOCK CROSSWALKS SHALL NOT BE INSTALLED IN AREAS WITH THE SIGHT DISTANCE LESS THAN THAT SHOWN IN THE TABLE BELOW.

DESIGN SPEED	SIGHT DISTANCE
30	200
40	275
50	375
60	525
70	625



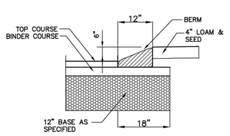
CONCRETE SIDEWALK



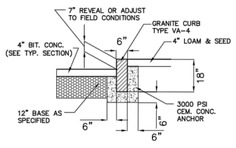
NOTES:

1. DETAIL AS SHOWN SHALL BE USED ON TYPICAL BRICK SIDEWALKS. WHERE SHOWN ON PLANS AT LOCATIONS FOR "TREEWAY", GRAVEL BORROW SHALL BE SUBSTITUTED WITH COMPACTED DENSE GRADED CRUSHED STONE AND 2' DEPTH OF SAND BASED.

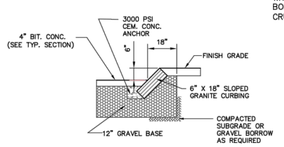
BRICK SIDEWALK PAVING



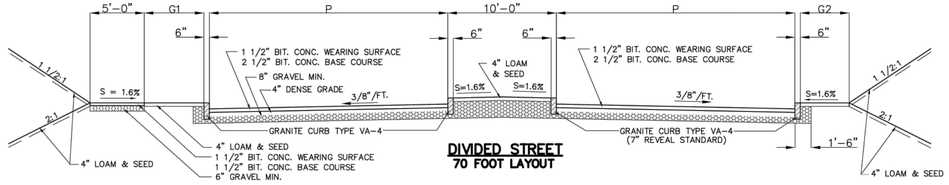
BIT. CONC. BERM



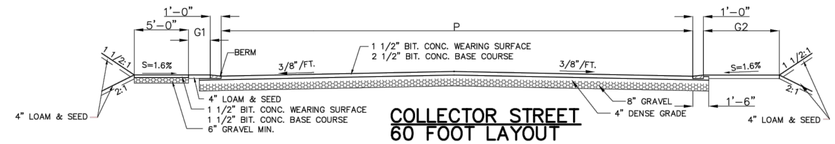
GRANITE CURB TYPE VA-4



SLOPED GRANITE CURB DETAIL

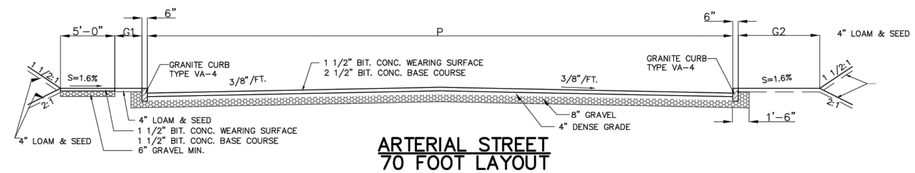


DIVIDED STREET 70 FOOT LAYOUT

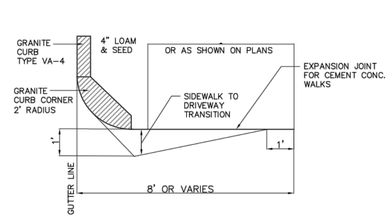


COLLECTOR STREET 60 FOOT LAYOUT

NOTE: GRANITE CURB 6"X18" MAY BE REQUIRED ON COLLECTOR STREETS

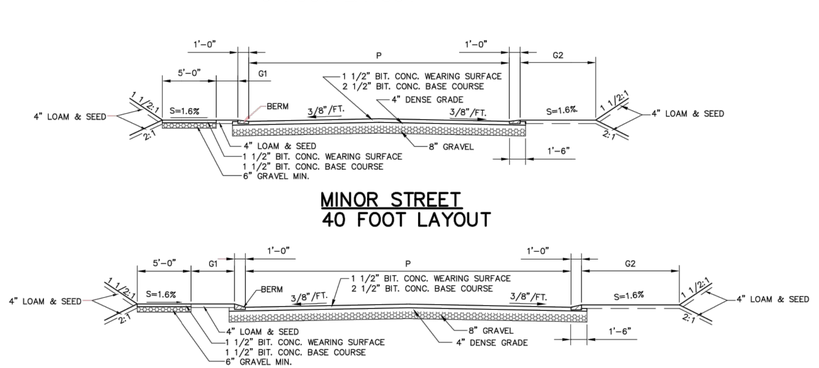


ARTERIAL STREET 70 FOOT LAYOUT



PLAN VIEW

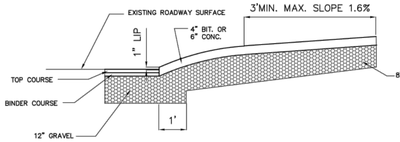
TYPICAL CURB RETURN DETAIL



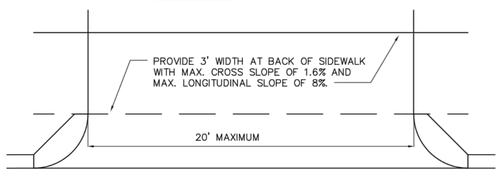
MINOR STREET 40 FOOT LAYOUT

LOCAL STREET 50 FOOT LAYOUT

LAYOUT WIDTH "L"	PAVEMENT WIDTH "P"	SHOULDER WIDTH G1	SHOULDER WIDTH G2
40'	24'-0"	2'-0"	7'-0"
50'	30'-0"	4'-0"	9'-0"
60'	44'-0"	2'-0"	7'-0"
70'	54'-0"	2'-6"	7'-6"
70' (DIVIDED)	22'-0"	5'-6"	4'-6"



DRIVEWAY SECTION



ZONING OFFSETS

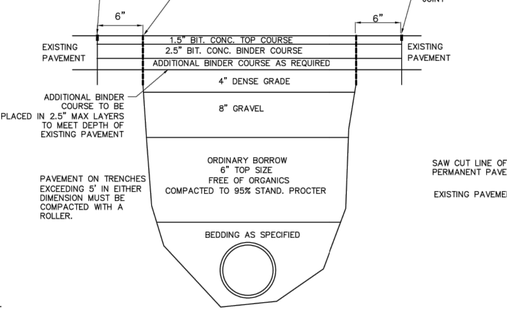
ZONING DISTRICT	DISTANCE FROM STREET INTERSECTION	DISTANCE FROM LOT LINE	WALL OF PRINCIPAL BUILDING
RS,RO,RT	25	5	5
RD,RM	25	8	5
CRO,CLO,CM	50	10	5
CRS,CS,CB,CN	10	NO REQUIREMENT	5

MAXIMUM DRIVEWAY GRADE = 12%

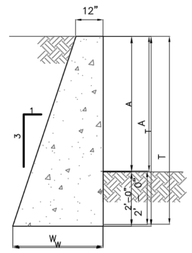
DRIVEWAY PLAN-RESIDENTIAL

NOTE:

NUMBER OF DRIVEWAYS PER LOT LINE IS LIMITED TO TWO. ZONING BY LAW SECTION 5.1.10.2



TRENCH RESTORATION

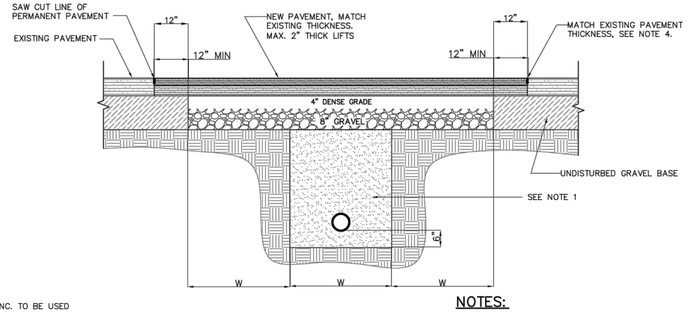


LOW RETAINING WALL

NOTES

1. CLASS I CEMENT CONC. TO BE USED
2. EXPANSION JOINTS TO BE PLACED 90' O.C. MAX. WITH INTERMIDIATE CONSTRUCTION JOINTS 30' O.C.
3. ALL CONC. DIMENSIONS SHOWN ARE MINIMUM

HEIGHT A	HEIGHT T	WIDTH W	AREA SQ. FT.	CU. YDS. PER. LIN. FT.
2'-0"	4'-0"	2'-4"	6.667	0.247
2'-6"	4'-6"	2'-6"	7.875	0.292
3'-0"	5'-0"	2'-8"	9.165	0.339
3'-6"	5'-6"	2'-10"	10.541	0.390
4'-0"	6'-0"	3'-0"	12.000	0.444
4'-6"	6'-6"	3'-2"	13.541	0.502
5'-0"	7'-0"	3'-4"	15.162	0.562



TYPICAL DETAIL TRENCH RESTORATION FOR MORATORIUM STREETS

NOTES:

1. THE TRENCH EXCAVATION AROUND THE UTILITY WILL BE BACK FILLED WITH FLOWABLE FILL OR, IN CASE OF NATURAL GAS SERVICE, WITH GRAVEL COMPACTED TO 95% DENSITY.
2. NEW GRAVEL SUB BASE WILL BE INSTALLED AND COMPACTED TO 95% DENSITY.
3. THE FINAL TRENCH PATCH WILL BE FROM CURB TO CURB, OR AS APPROVED BY THE ENGINEER.
4. PAVEMENT THICKNESS AND MATERIAL IN ACCORDANCE WITH THE TOWN OF LEXINGTON SPECIFICATIONS. APPLY HEAT BY APPROVED INFRARED METHOD TO SEAL ALL JOINTS.
5. JOINT BETWEEN EXISTING PAVEMENT AND PATCH MUST BE INFRARED.

NOT TO SCALE

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
CHECKED BY:
DATE: 3-30-2022
PROJECT No: 21-12

REVISIONS

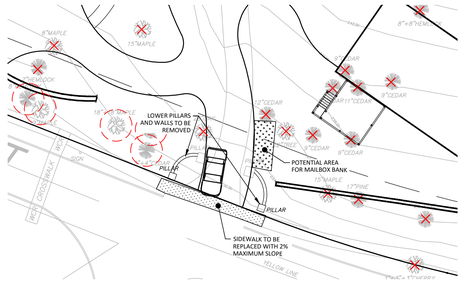
DATE	BY	DESCRIPTION
5-23-2022	MJN	REVISIONS PER TOWN COMMENTS
7-21-2022		NO REVISIONS TO THIS SHEET

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. NOVAK No. 50696 REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

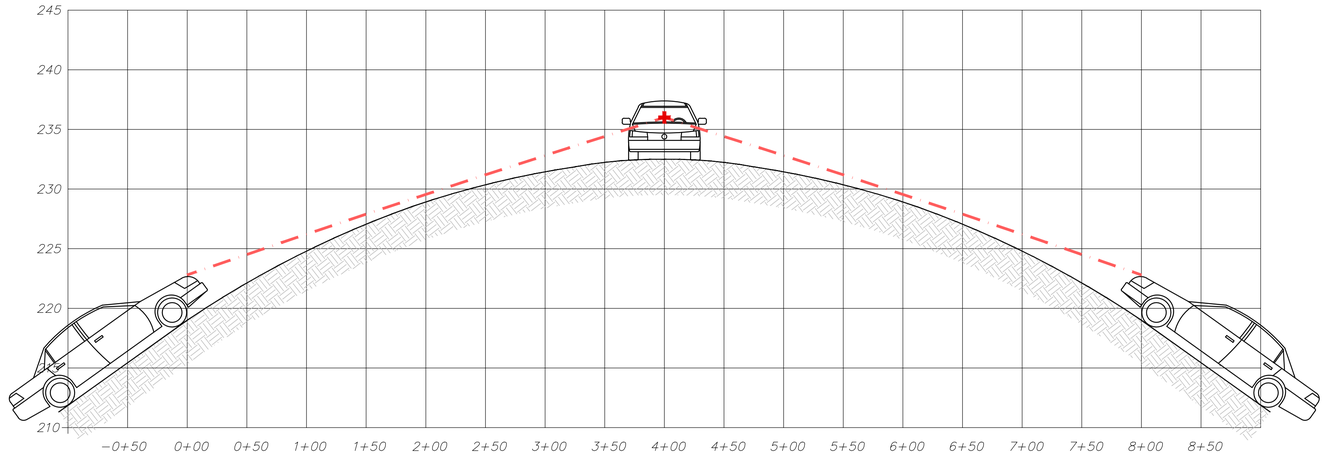
SITE DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

ENTRANCE DETAIL



30 0 15 30 60

GRAPHIC SCALE IN FEET



PROFILE VIEW

SCALE: 1"=6' VERT.
1"=60' HOR.

VEHICLES ABOVE ARE NOT TO HORIZONTAL SCALE



PLAN NO. 1535 OF 1960

SIGHT LINES

30 0 15 30 60

GRAPHIC SCALE IN FEET

LEXINGTON PLANNING BOARD

DATE:

I, _____ CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDED OF SAID NOTICE.

TOWN CLERK *DATE*

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
CHECKED BY:
DATE: 3-30-2022
PROJECT No: 21-12

REVISIONS

DATE	BY	DESCRIPTION
5-23-2022	MJN	REVISIONS PER TOWN COMMENTS
7-21-2022	MJN	REVISIONS PER TOWN COMMENTS

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 34966
REGISTERED PROFESSIONAL ENGINEER

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35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
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SITE DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
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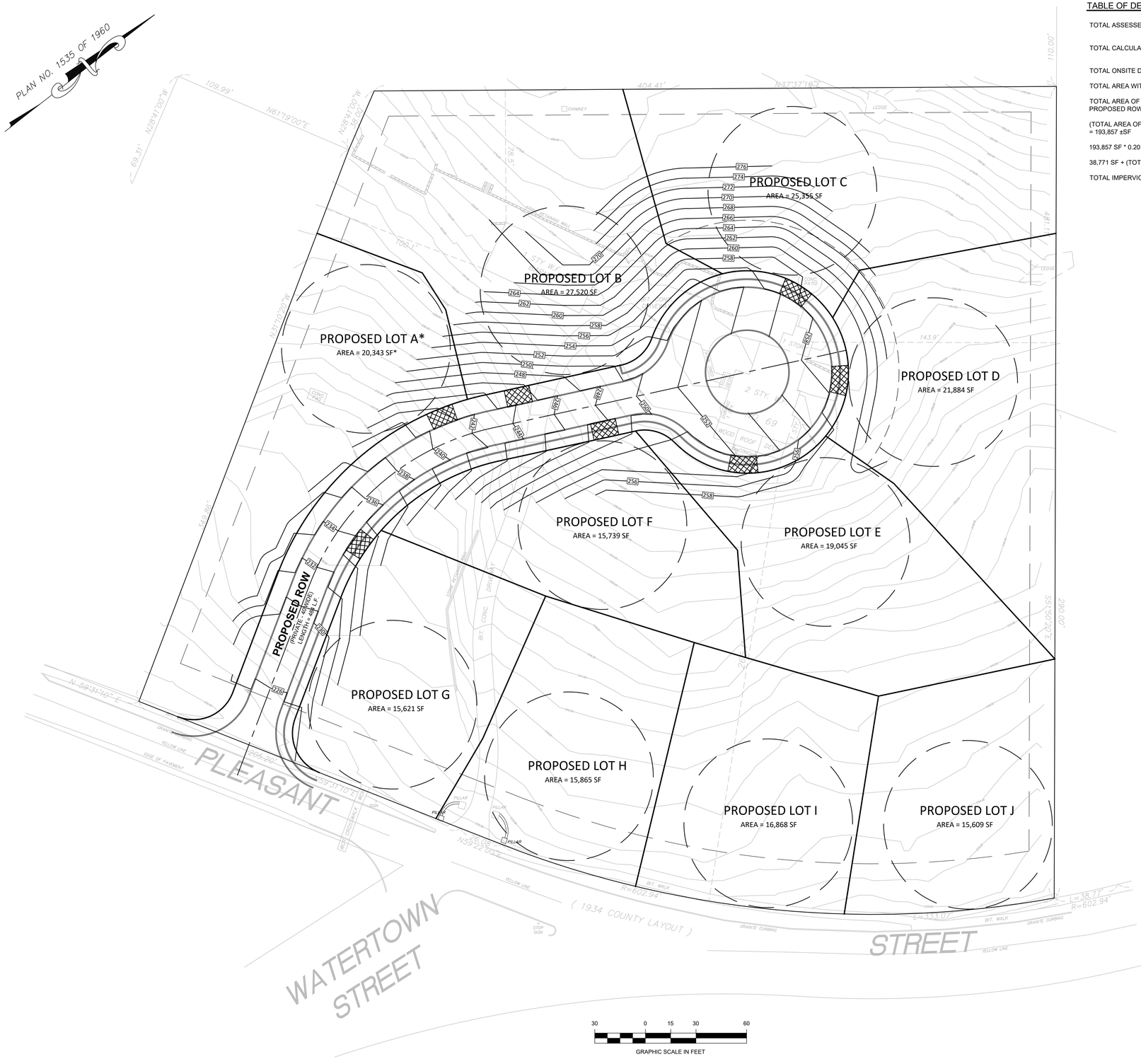


TABLE OF DEVELOPMENTAL DATA

TOTAL ASSESSED LAND AREA OF DEVELOPMENT	5.04 ±AC (MAP 14, LOT 57)
TOTAL CALCULATED LAND AREA OF DEVELOPMENT	219,349 ±SF (MAP 14, LOT 57)
TOTAL ONSITE DEVELOPABLE SITE AREA	219,349 ±SF
TOTAL AREA WITH PROPOSED ROW	25,492 ±SF
TOTAL AREA OF IMPERVIOUS SURFACES WITHIN PROPOSED ROW	17,951 ± SF

(TOTAL AREA OF LOTS IN PROOF PLAN = TOTAL CALCULATED LAND AREA OF DEVELOPMENT - TOTAL AREA WITHIN PROPOSED ROW = (219,349 - 25,492) = 193,857 ±SF

193,857 SF * 0.20 = 38,771 SF

38,771 SF + (TOTAL IMPERVIOUS AREA WITHIN ROW PROOF PLAN) = (38,771 + 17,951) = 56,722 SF

TOTAL IMPERVIOUS SURFACE AREA ALLOWABLE IN A SITE SENSITIVE DEVELOPMENT (SSD) = 56,722 SF

MINOR RESIDENTIAL STREET:

NUMBER OF DWELLING UNITS SERVED: 10 PROPOSED
WIDTH OF PROPOSED RIGHT-OF-WAY: 40' (40' MIN. REQUIRED)
MINIMUM PAVEMENT WIDTH: 20' (20' PROPOSED)
MAXIMUM GRADE: 8.0% (8.0% PROPOSED)
MAXIMUM GRADE WITHIN 75' OF INTERSECTIONS: 2.0% (2.0% PROPOSED)
PROPOSED CENTERLINE RADIUS: 150'
PROPOSED RADIUS OF RIGHT-OF-WAY ROUNDING: 25'
LENGTH OF RIGHT-OF-WAY: 484'±

SPECIAL PERMIT SUBDIVISION CALCULATIONS

TYPE OF SPECIAL PERMIT RESIDENTIAL DEVELOPMENT	MAXIMUM GROSS FLOOR AREA (SF)	NO. OF DWELLINGS	MAXIMUM AMOUNT OF IMPERVIOUS SURFACES (SF)	MAXIMUM SITE COVERAGE (SF)	MINIMUM COMMON OPEN SPACE REQUIRED (SF)
SITE SENSITIVE	76,511	10	56,722	29,078	NOT REQUIRED
PROPOSED	< 76,511	10	<56,722	< 29,078	NOT REQUIRED

GROSS FLOOR AREA (GFA) CHART SITE SENSITIVE DEVELOPMENT (SSD)

LOT #	MAX. GFA ALLOWED
LOT A*	7,500 SF
LOT B	8,953 SF
LOT C	8,606 SF
LOT D	8,051 SF
LOT E	7,597 SF
LOT F	7,068 SF
LOT G	7,049 SF
LOT H	7,088 SF
LOT I	7,248 SF
LOT J	7,047 SF
TOTAL	76,207 SF

* THE MAX AREA TO BE COMBINED WITH ABUTTER AS NOTED ON SHEET 5 OF THIS PLAN SET IS NOT TO EXCEED 1,900 SF. THE CALCULATED MAX ALLOWED GFA FOR LOT A REFLECTS THE REMOVAL OF 1,900 SF OF LOT AREA FROM LOT A

TABLE OF DIMENSIONAL REQUIREMENTS

ZONE: RS

ITEM	REQUIREMENT
MIN LOT AREA	15,500 SF
MIN FRONTAGE	125'
BUILDING SETBACKS	
FRONT YARD	30'
SIDE/REAR YARD	15'

LEGEND:

	APPROXIMATE EXISTING PROPERTY LINES
296	PROPOSED CONTOUR
	PROPOSED CENTERLINE
R=	RADIUS
TYP	TYPICAL
PEOP	PROPOSED EDGE OF PAVEMENT
SF	SQUARE FEET
ROW	RIGHT OF WAY
DIA	DIAMETER
	PROPOSED DRIVEWAY APRON

NOT FOR CONSTRUCTION

LINC COLE LANE
69 PLEASANT STREET
LEXINGTON, MA

DRAWN BY:
CHECKED BY:
DATE: 3-30-2022
PROJECT No: 21-12

REVISIONS

DATE	BY	DESCRIPTION
5-23-2022		NO REVISION TO THIS SHEET
7-21-2022		NO REVISION TO THIS SHEET

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
No. 39696
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
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LEXINGTON, MASSACHUSETTS 02420
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www.patriot-eng.com

PROOF PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
SHELDON CORP.

SHEET
17 OF 17

STORMWATER MANAGEMENT

for

69 PLEASANT STREET
SITE SENSITIVE DEVELOPMENT-
DEFINITIVE SUBDIVISION
LEXINGTON, MASSACHUSETTS

Prepared for:

Sheldon Corportation
121 Marrett Road
Lexington, Massachusetts 02420

Prepared by:

Patriot Engineering
35 Bedford Street, Suite 4
Lexington, Massachusetts 02420
(978) 726-2654

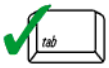
DATE: March 30, 2022
Revised July 21, 2022

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

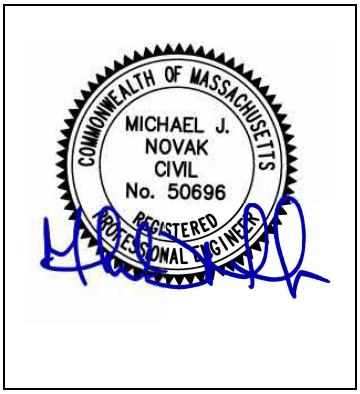
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



03/30/2022

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☒ New development

☐ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☐ Use of “country drainage” versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☒ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☒ Soil Analysis provided.

☒ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☒ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☒ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☒ The BMP is sized (and calculations provided) based on:

- ☒ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☒ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☐ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

☒ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

STORMWATER ANALYSIS & CALCULATIONS

for

69 PLEASANT STREET
SITE SENSITIVE
DEFINITIVE SUBDIVISION
LEXINGTON, MASSACHUSETTS

Prepared for:

Sheldon Corporation
121 Marrett Road
Lexington, Massachusetts 02420

Prepared by:

Patriot Engineering
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Lexington, Massachusetts 02420
(978) 726-2654

Date: March 30, 2022

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- TR 20 SCS Unit Hydrograph Procedure
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SOURCE OF DATA

- Technical Report No. 20
- Technical Report No. 55
- Extreme Precipitation Tables for the Northeast Regional Climate Center
- Massachusetts Stormwater Handbook February 2008

Stormwater Management Standards

Project Narrative:

The project site is comprised of a single-family lot located within the Residential (RS) District. The parcel is identified on the Town of Lexington Assessor's Map 14 as Lot 57. The subject property has an area of 5.04 AC (219,542 s.f.), and site features currently existing include a single-family dwelling, a detached barn, a bituminous concrete driveway, walkways, patios, grassed/landscaped areas and wooded areas.

The applicant is proposing to subdivide the above-mentioned lot into a Site Sensitive Special Permit Residential Subdivision as constructed per Town of Lexington Zoning Bylaw.

This proposal utilizes conventional stormwater management techniques including isolator rows within subsurface infiltration systems along with deep sump catchbasins for the treatment and mitigation of stormwater.

The following is a summary of how the proposed project meets the DEP Stormwater Standards:

Standard 1: No new stormwater conveyances may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

There are no untreated stormwater conveyances proposed to discharge to wetlands or waters of the Commonwealth from the project.

Standard 2: Peak Rate Attenuation - Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.

For the purpose of analyzing pre and post development stormwater peak rates of runoff, one (1) design point has been selected based on existing topographic conditions which were used for both the pre and the post peak rate calculations. The design point of the property line at Pleasant Street to the east was chosen.

The storm event rainfall frequencies used for this analysis have been selected based upon the Extreme Precipitation Tables for the Northeast Regional Climate Center. A full detail of peak rate attenuation along with supplemental stormwater calculations utilizing HydroCAD as well as pre and post drainage site plans have been submitted with the Definitive Subdivision Application. The details of this report will show that the peak rates of runoff for the 2-year, 10-year and 100-year events have been either maintained or reduced from pre to post conditions through the use of area/trench drains (with sumps), an isolator row and subsurface infiltration systems.

The hydrologic calculations from the HydroCAD® have been included in this report and are located in section tab entitled "Hydrologic Calculations".

Proposed Design Points and Subcatchment Areas

Design Point #1 (DP#1) is Pleasant Street to the East.

Design Point #1:

Storm Event	Existing Conditions (Pre) Peak Flow (CFS)	Proposed Conditions (Post) Peak Flow (CFS)
2-Year (3.2 in./hr.)	4.4	3.9
10-Year (4.8 in./hr.)	10.4	8.7
100-Year (8.8 in./hr.)	27.8	22.5

Standard 3: Recharge - Loss of annual recharge to groundwater shall be eliminated or minimized…at a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This standard is met when the stormwater management system is designed to infiltrate the required recharge volume in accordance with the Mass Stormwater Handbook.

Loss of annual recharge to groundwater has been minimized through the use of stormwater Best Management Practices (BMP's), subsurface infiltration systems, and a proposed operation and maintenance program are proposed for this project. The subsurface infiltration systems have been designed for recharging groundwater.

Based on soil maps provided by U.S. Department of Agriculture Soil Conservation Service (map located in the Appendix to the narrative) the site consists of one soil type with a hydrologic group of A. Onsite soil testing was conducted by a Licensed Soil Evaluator on November 28, 2019 in the areas depicted on the attached plan. This testing revealed both a loamy sand and sandy loam parent material with cobbles. Groundwater was not observed in the test pit locations.

Utilizing the current regulations, the proposed design will meet this standard as per the following calculation:

Rv = Fx
Rv = Required Recharge Volume
F = Target Depth Factor associated with hydrologic soil groups located in table 2.3.2 in Volume 3 of the Stormwater Management Handbook
x = Total impervious area proposed

Impervious area within project area (HSG B): 60,128 square feet (sf).
Required recharge volume depth factor for A type soils: 0.35 inches

Therefore Rv =

(60,128)(0.35inches/12 inches per foot)

Rv = 1,753 cubic feet (cf)

The proposed subsurface infiltration systems provide a total recharge storage volume of 15,819 cf.

In accordance with the Stormwater Handbook, a capture area adjustment calculation has been provided in the appendix of this report to ensure a minimum of 65% of the site impervious areas are directed into recharge facilities. The calculation demonstrates the proposed project directs 71% of the site's proposed impervious surface areas will be directed toward the recharge facilities.

Standard 4: Water Quality – Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). The standard is met with pollution prevention plans, stormwater BMP's sized to capture required water quality volume, and pretreatment measures.

The stormwater management system has been designed to remove a minimum of 80% of the average annual post-construction load of Total Suspended Solids (TSS). TSS Removal Calculation Worksheets are included in the Stormwater Analysis and Calculations Report noted herein. These percentages have been achieved by the use of a deep sump catch basin, a trench drain (with sediment basin), an isolator row and a subsurface infiltration system.

The Stormwater Management Handbook assigns TSS removal percentages to each treatment BMP. Each treatment BMP is sized to capture the required water quality volume as calculated in accordance with the Handbook in order to achieve the assigned TSS removal rates.

<u>General Equation from Stormwater Management Handbook</u>

Vwq = (Dwq)(A)
Vwq = required water quality volume
Dwq = water quality depth (1" for critical areas, 0.5" for non-critical areas)
A = impervious area

The following are treatment sizing calculations for portions of the treatment trains based on the 0.5'' for non-critical areas:

<u>Train 1</u> (Deep Sump Catch Basin to Isolator Row to PSIS-R1)

Vwq = (6,515)(0.5"/12) = 271 cf

The proposed subsurface infiltration systems provide a total recharge storage volume of 2,172 cf.

Train 2 (Deep Sump Catch Basin to Isolator Row to PSIS-R2)

Vwq = (6,415)(0.5"/12) = 267 cf

The proposed subsurface infiltration systems provide a total recharge storage volume of 2,172 cf.

A separate document entitled "Operation and Maintenance & Erosion and Sedimentation Control Program for a Proposed Stormwater Management System" is included as part of this report. Suitable practices for source control and long-term pollution prevention have been identified and shall be implemented as discussed.

The utilization of pretreatment and treatment BMP's combined with the operation and maintenance plan provides compliance with this standard.

Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs) – Source control and pollution prevention shall be implemented in accordance with the Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable.

Stormwater Standard 5 is not applicable to this project. The proposed development will not subject the site to higher potential pollutant loads as defined in the Massachusetts Department of Environmental protection Wetlands and Water Quality Regulations.

LUHPPLs are identified in 310 CMR 22.20B(2) and C(2)(a)-(k) and (m) and CMR 22.21(2)(a)(1)-(8) and (b)(1)-(6), areas within a site that are the location of activities that are subject to an individual National Pollutant Discharge Elimination System (NPDES) permit or the NPDES Multi-sector General Permit; auto fueling facilities, exterior fleet storage areas, exterior vehicle service and equipment cleaning areas; marinas and boatyards; parking lots with high-intensity-use; confined disposal facilities and disposal sites.

Standard 6: Critical Areas – Stormwater discharges to critical areas require the use of specific source control and pollution prevention measures and specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas.

Stormwater Standard 6 is not applicable to this project given that proposed stormwater does not discharge near a critical area. Critical areas being Outstanding Resource Waters and Special Resource Waters as designated in 314 CMR 4.0, recharge areas for public water supplies as defined in 310 CMR 22.02, bathing beaches as defined in 105 CMR 445.000, cold-water fisheries and shellfish growing areas as defined in 314 CMR 9.02 and 310 CMR 10.04. The design points are not considered a critical area therefore Standard #6 does not applies to this project.

Standard 7: Redevelopments – A redevelopment project is required to meet Standards 1-6 only to the maximum extent practicable. Remaining standards shall be met as well as the project shall improve the existing conditions.

Stormwater Standard 7 is not applicable to this project. Within the Stormwater Management Handbook (volume 1 chapter 1 page 20), the definition of a redevelopment

project includes, “development, rehabilitation, expansion and phased projects on previously developed sites, provided the redevelopment results in no net increase in impervious area”.

This project will not result in a reduction of impervious area in the proposed conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan shall be implemented.

An *Operation and Maintenance & Erosion and Sediment Control Program for a Proposed Stormwater Management System* is included with this report. The program details the construction period operation and maintenance plan and sequencing for pollution prevention measures and erosion and sedimentation controls. Locations of erosion control measures for the project are depicted on the site plan set accompanying this report.

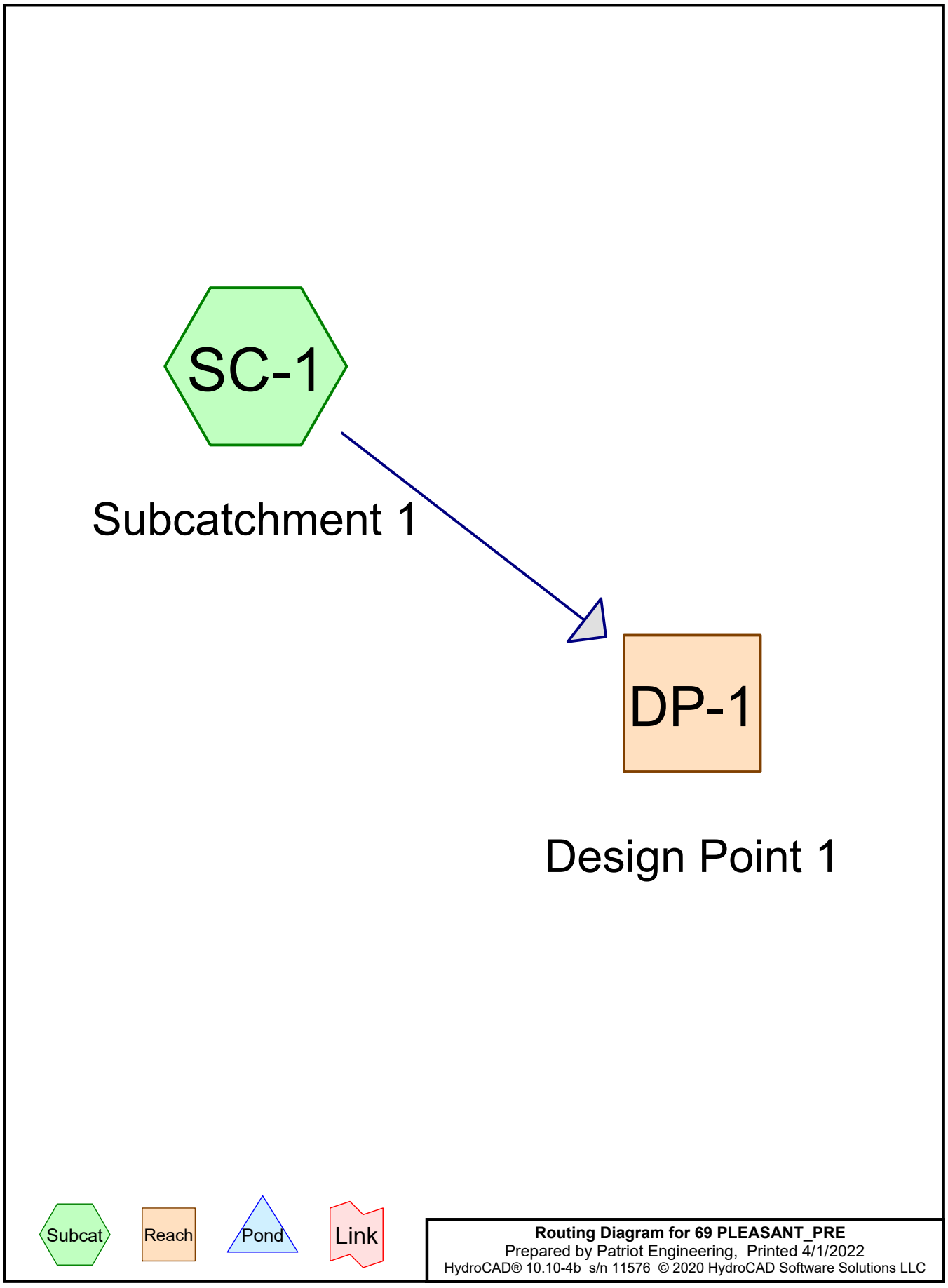
Standard 9: A long term Operation and Maintenance Plan shall be implemented.

An *Operation and Maintenance & Erosion and Sediment Control Program for a Proposed Stormwater Management System* is included with this report. The long term operation and maintenance section of the program provides details and the schedule for routine and non-routine maintenance tasks to be implemented at the completion of the project.

Standard 10: Prohibition of Illicit Discharges – Illicit discharges to the stormwater management system are prohibited.

Illicit discharges to the stormwater management system are discharges that are not entirely comprised of stormwater. Discharges to the stormwater management system from the following activities or facilities are permissible: Firefighting, water line flushing, landscape irrigation, uncontaminated groundwater, potable water sources, foundation drains, air conditioning condensation, footing drains, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated water from swimming pools, water used for street washing and water used to clean residential buildings without detergents. All other illicit discharges are prohibited.

There are no known illicit discharges anticipated through the completion of this project. During construction and post construction procedures are provided to dissipate the potential for illicit discharges to the drainage system. Post construction preventions of illicit discharges are described in the Operation and Maintenance Program under the Good Housekeeping Practices section of the report.



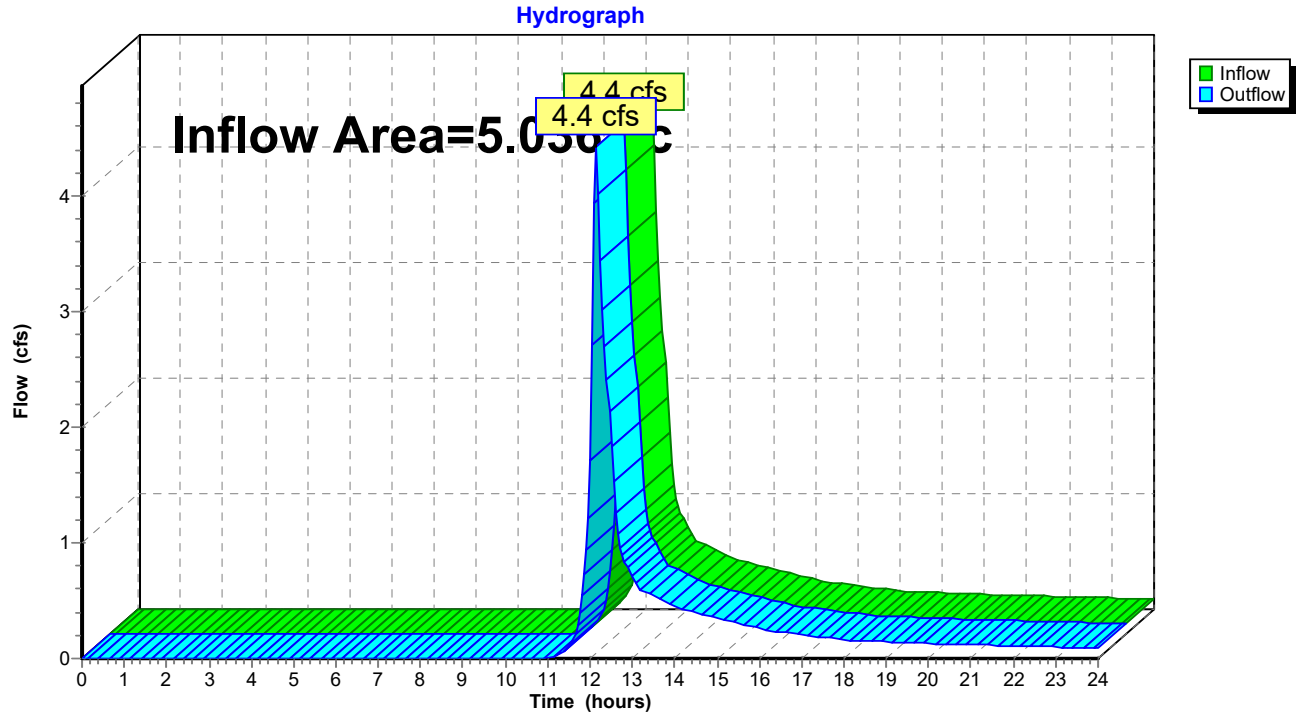
Routing Diagram for 69 PLEASANT_PRE
Prepared by Patriot Engineering, Printed 4/1/2022
HydroCAD® 10.10-4b s/n 11576 © 2020 HydroCAD Software Solutions LLC

Summary for Reach DP-1: Design Point 1

Inflow Area = 5.036 ac, 5.25% Impervious, Inflow Depth > 0.93" for 2-Yr 24 Hr event
Inflow = 4.4 cfs @ 12.15 hrs, Volume= 0.39 af
Outflow = 4.4 cfs @ 12.15 hrs, Volume= 0.39 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1



Summary for Subcatchment SC-1: Subcatchment 1

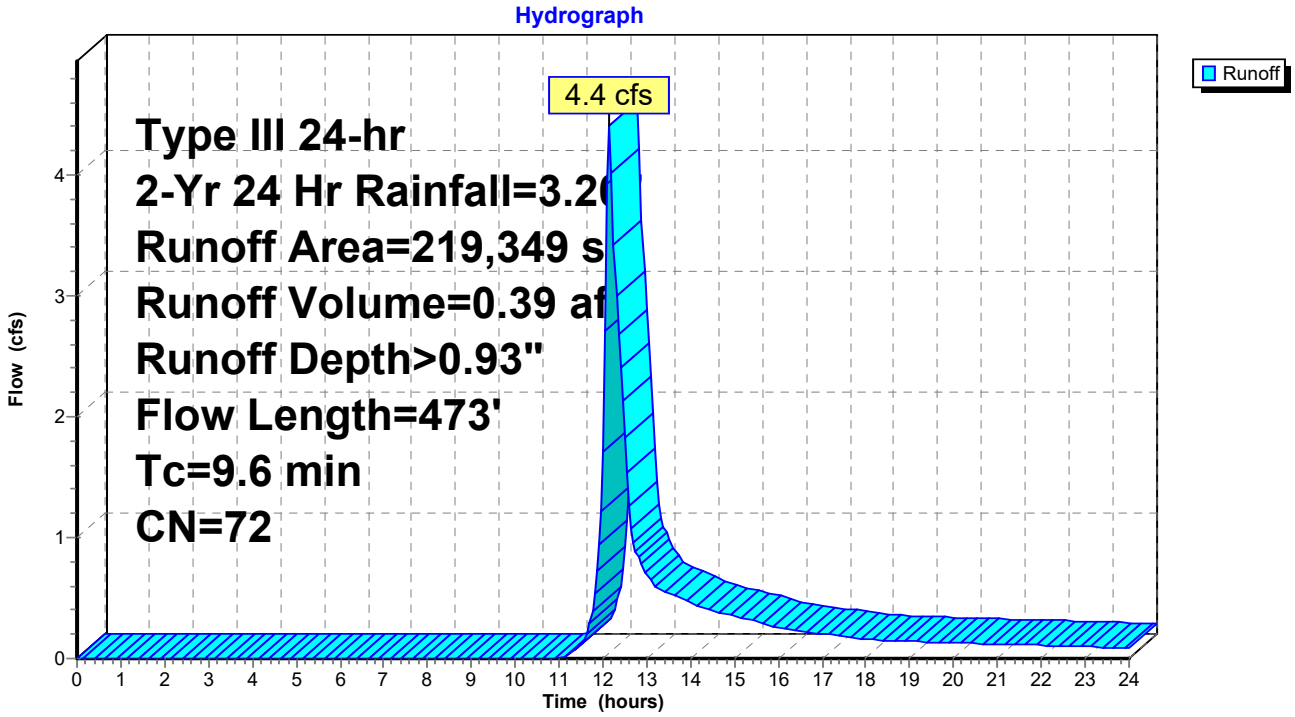
Runoff = 4.4 cfs @ 12.15 hrs, Volume= 0.39 af, Depth> 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

	Area (sf)	CN	Description
	4,597	61	>75% Grass cover, Good, HSG B
	40,300	55	Woods, Good, HSG B
*	7,240	98	Driveway/Walkways/Patios
*	4,284	98	Roof
	9,807	74	>75% Grass cover, Good, HSG C
	68,024	70	Woods, Good, HSG C
	51,030	77	Woods, Good, HSG D
	34,067	80	>75% Grass cover, Good, HSG D
	219,349	72	Weighted Average
	207,825		94.75% Pervious Area
	11,524		5.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	50	0.0495	0.1		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.1	55	0.1450	6.1		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	45	0.0770	5.6		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	323	0.1150	6.9		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.6	473	Total			

Subcatchment SC-1: Subcatchment 1

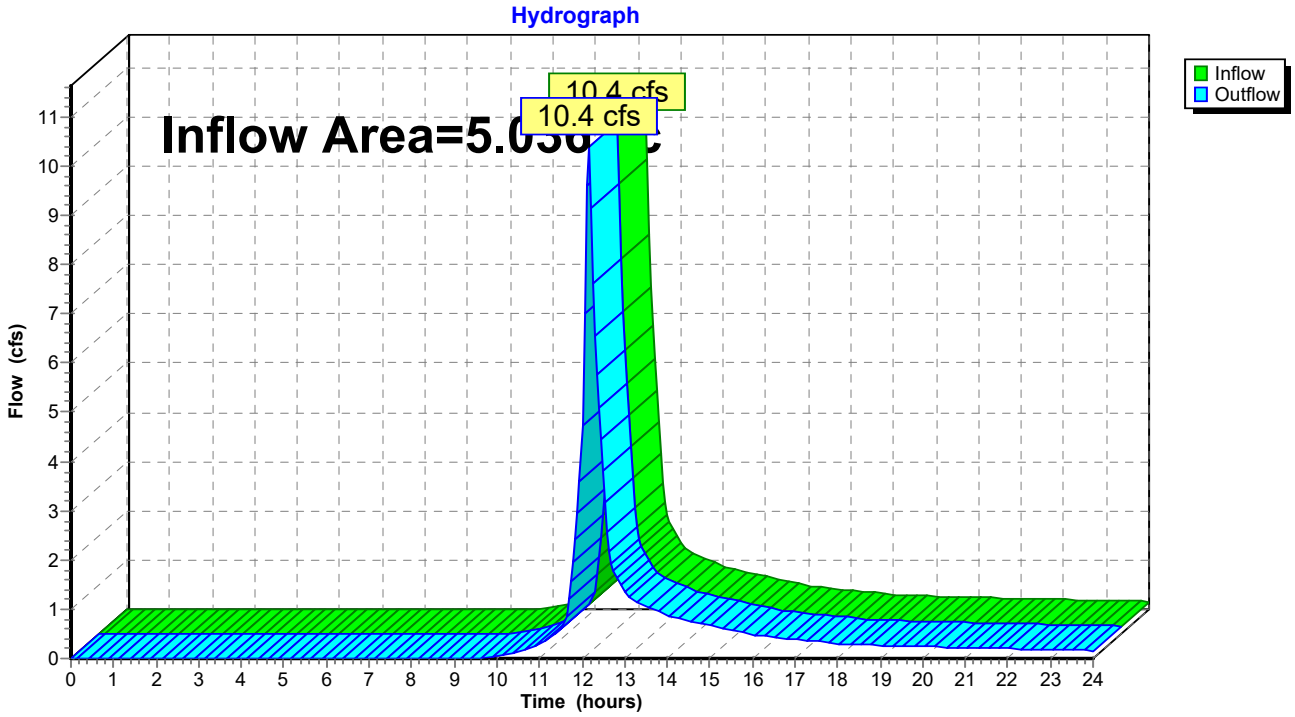


Summary for Reach DP-1: Design Point 1

Inflow Area = 5.036 ac, 5.25% Impervious, Inflow Depth > 2.04" for 10-Yr 24 Hr event
Inflow = 10.4 cfs @ 12.14 hrs, Volume= 0.86 af
Outflow = 10.4 cfs @ 12.14 hrs, Volume= 0.86 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1



Summary for Subcatchment SC-1: Subcatchment 1

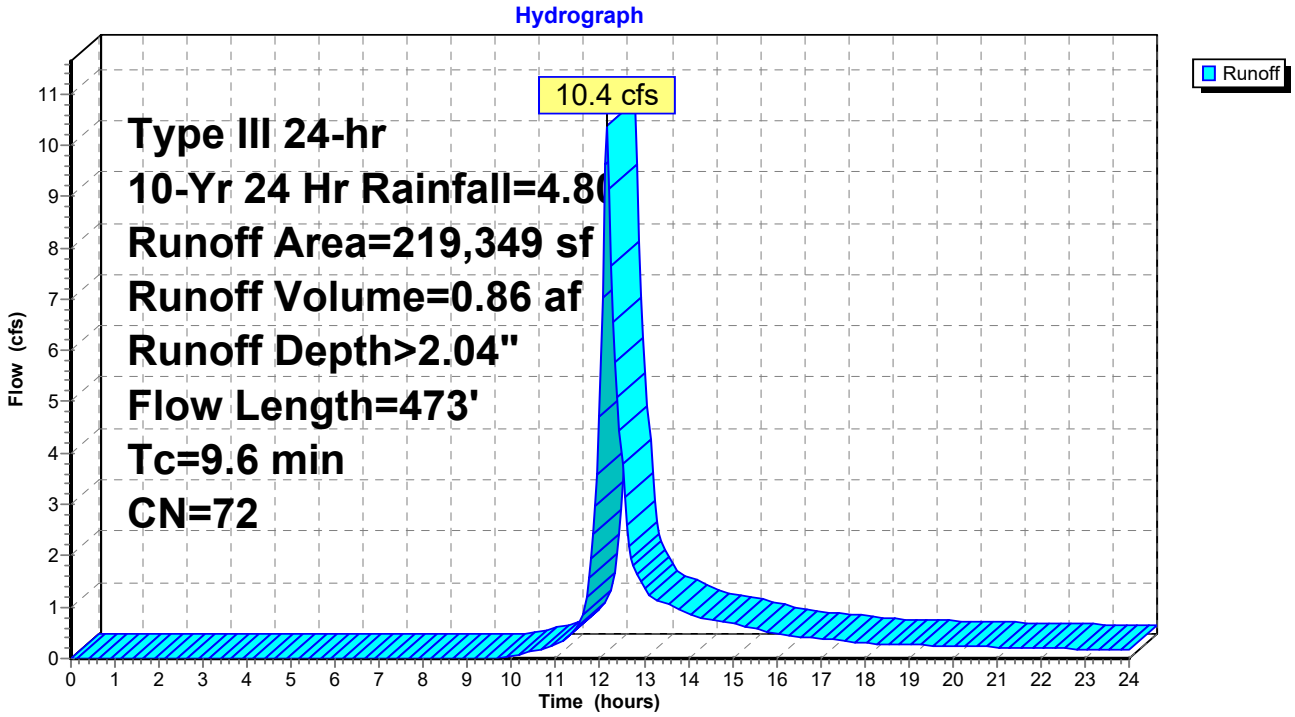
Runoff = 10.4 cfs @ 12.14 hrs, Volume= 0.86 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

	Area (sf)	CN	Description
	4,597	61	>75% Grass cover, Good, HSG B
	40,300	55	Woods, Good, HSG B
*	7,240	98	Driveway/Walkways/Patios
*	4,284	98	Roof
	9,807	74	>75% Grass cover, Good, HSG C
	68,024	70	Woods, Good, HSG C
	51,030	77	Woods, Good, HSG D
	34,067	80	>75% Grass cover, Good, HSG D
	219,349	72	Weighted Average
	207,825		94.75% Pervious Area
	11,524		5.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	50	0.0495	0.1		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.1	55	0.1450	6.1		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	45	0.0770	5.6		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	323	0.1150	6.9		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.6	473	Total			

Subcatchment SC-1: Subcatchment 1

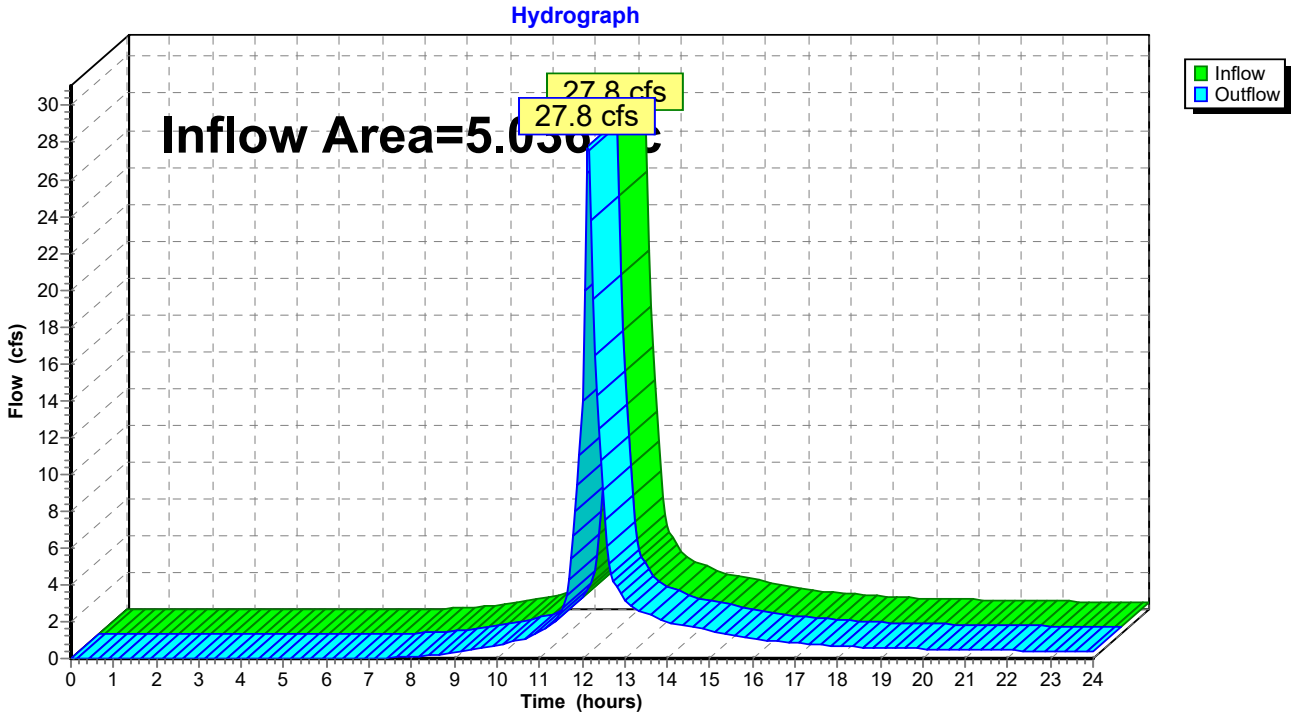


Summary for Reach DP-1: Design Point 1

Inflow Area = 5.036 ac, 5.25% Impervious, Inflow Depth > 5.39" for 100-Yr 24 Hr event
Inflow = 27.8 cfs @ 12.14 hrs, Volume= 2.26 af
Outflow = 27.8 cfs @ 12.14 hrs, Volume= 2.26 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1



Summary for Subcatchment SC-1: Subcatchment 1

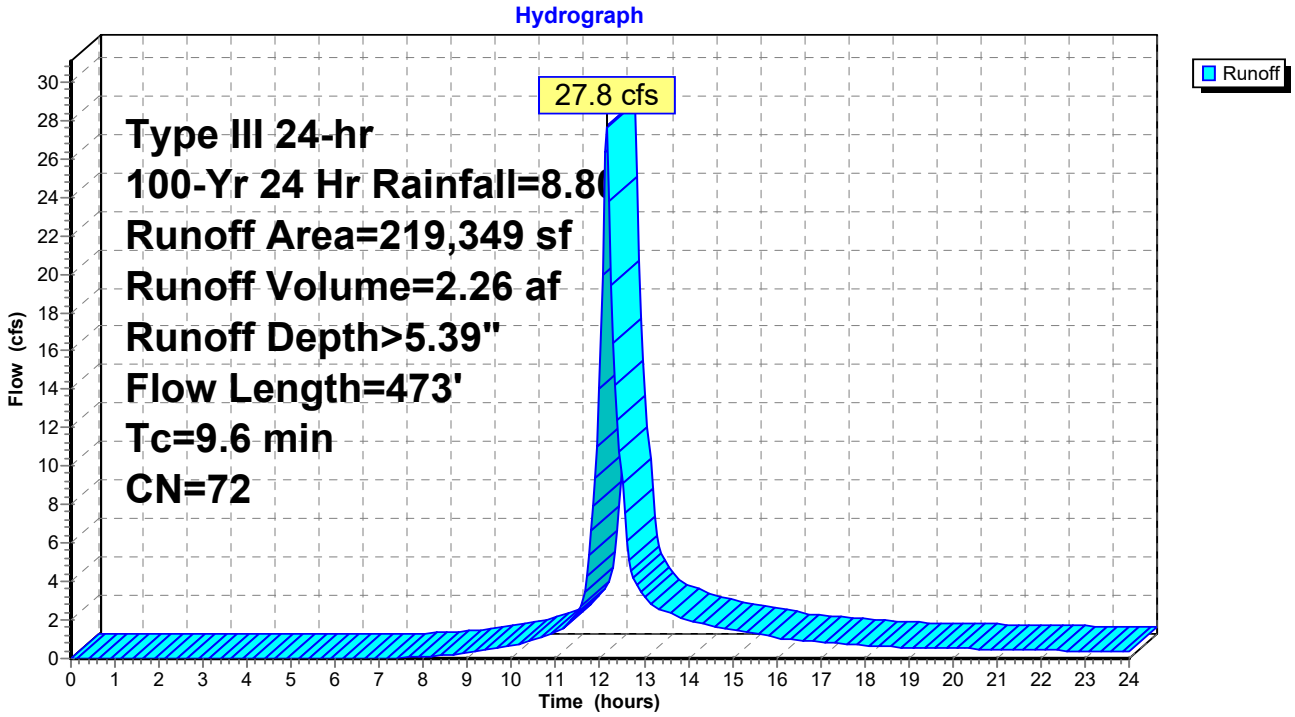
Runoff = 27.8 cfs @ 12.14 hrs, Volume= 2.26 af, Depth> 5.39"

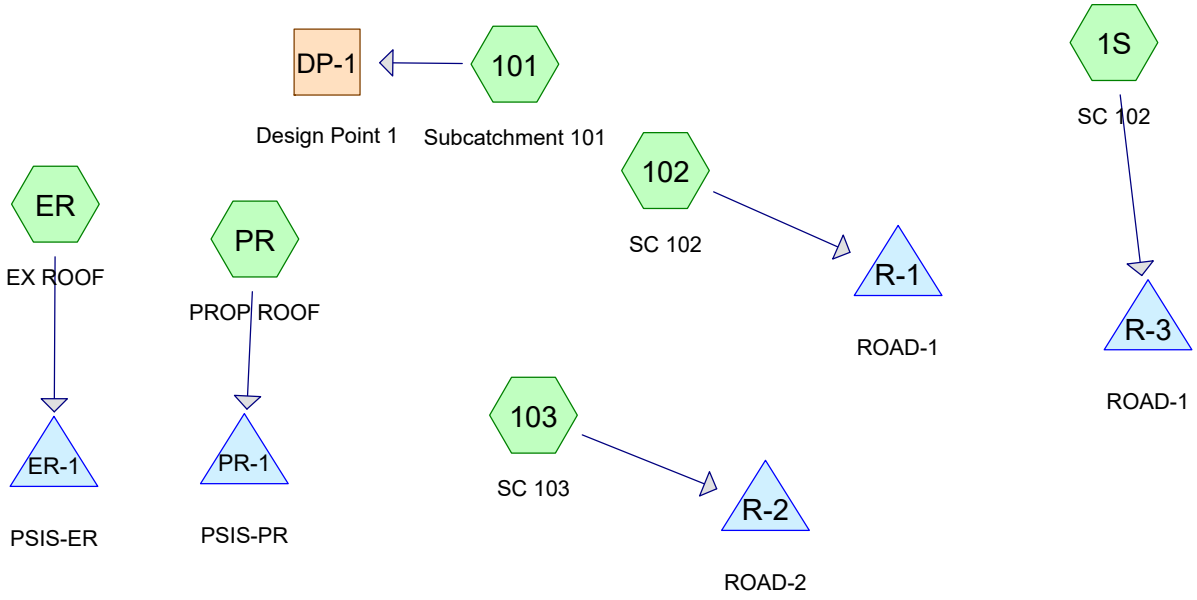
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

	Area (sf)	CN	Description
	4,597	61	>75% Grass cover, Good, HSG B
	40,300	55	Woods, Good, HSG B
*	7,240	98	Driveway/Walkways/Patios
*	4,284	98	Roof
	9,807	74	>75% Grass cover, Good, HSG C
	68,024	70	Woods, Good, HSG C
	51,030	77	Woods, Good, HSG D
	34,067	80	>75% Grass cover, Good, HSG D
	219,349	72	Weighted Average
	207,825		94.75% Pervious Area
	11,524		5.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	50	0.0495	0.1		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.1	55	0.1450	6.1		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	45	0.0770	5.6		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	323	0.1150	6.9		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.6	473	Total			

Subcatchment SC-1: Subcatchment 1





Subcat Reach Pond Link

Routing Diagram for 69 PLEASANT_POST_DEF_REV-2
Prepared by Patriot Engineering, Printed 7/20/2022
HydroCAD® 10.10-4b s/n 11576 © 2020 HydroCAD Software Solutions LLC

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Yr 24 Hr	Type III 24-hr		Default	24.00	1	3.20	2
2	10-Yr 24 Hr	Type III 24-hr		Default	24.00	1	4.80	2
3	100-Yr 24 Hr	Type III 24-hr		Default	24.00	1	8.80	2

Summary for Subcatchment 1S: SC 102

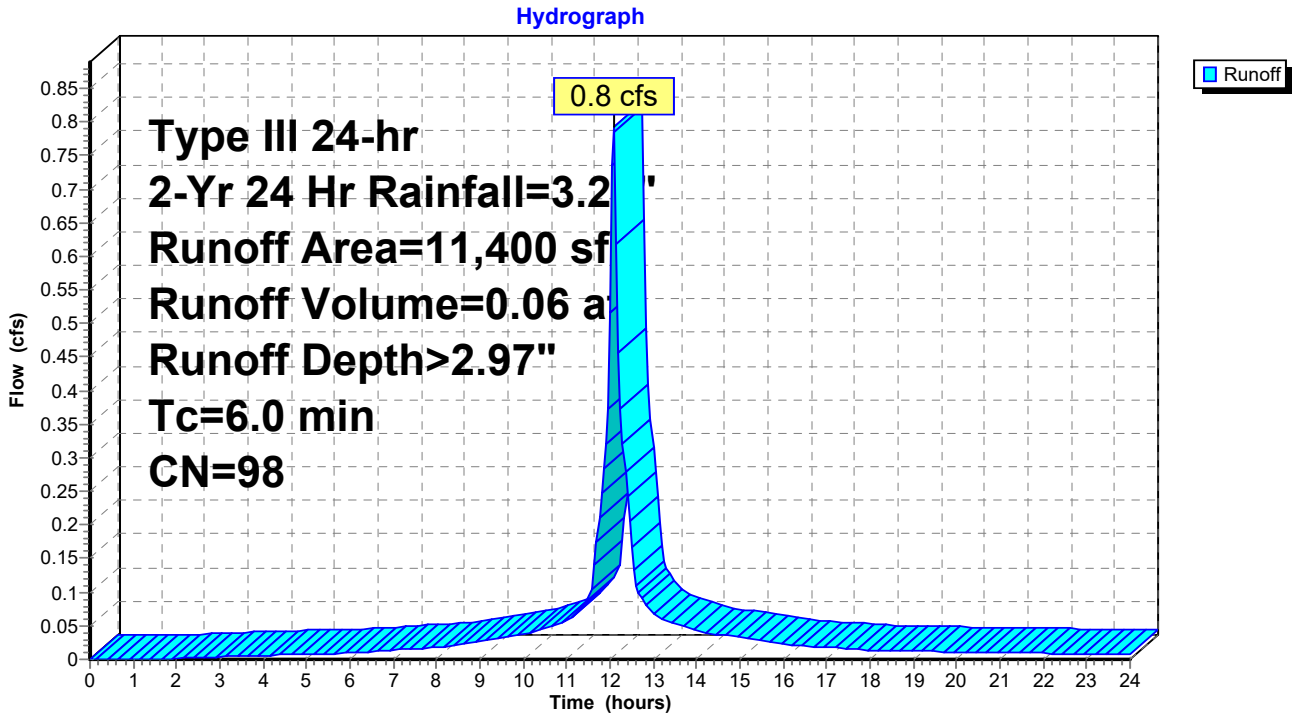
Runoff = 0.8 cfs @ 12.09 hrs, Volume= 0.06 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

Area (sf)	CN	Description
11,400	98	Paved parking, HSG B
11,400		100.00% Impervious Area

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

Subcatchment 1S: SC 102



Summary for Subcatchment 101: Subcatchment 101

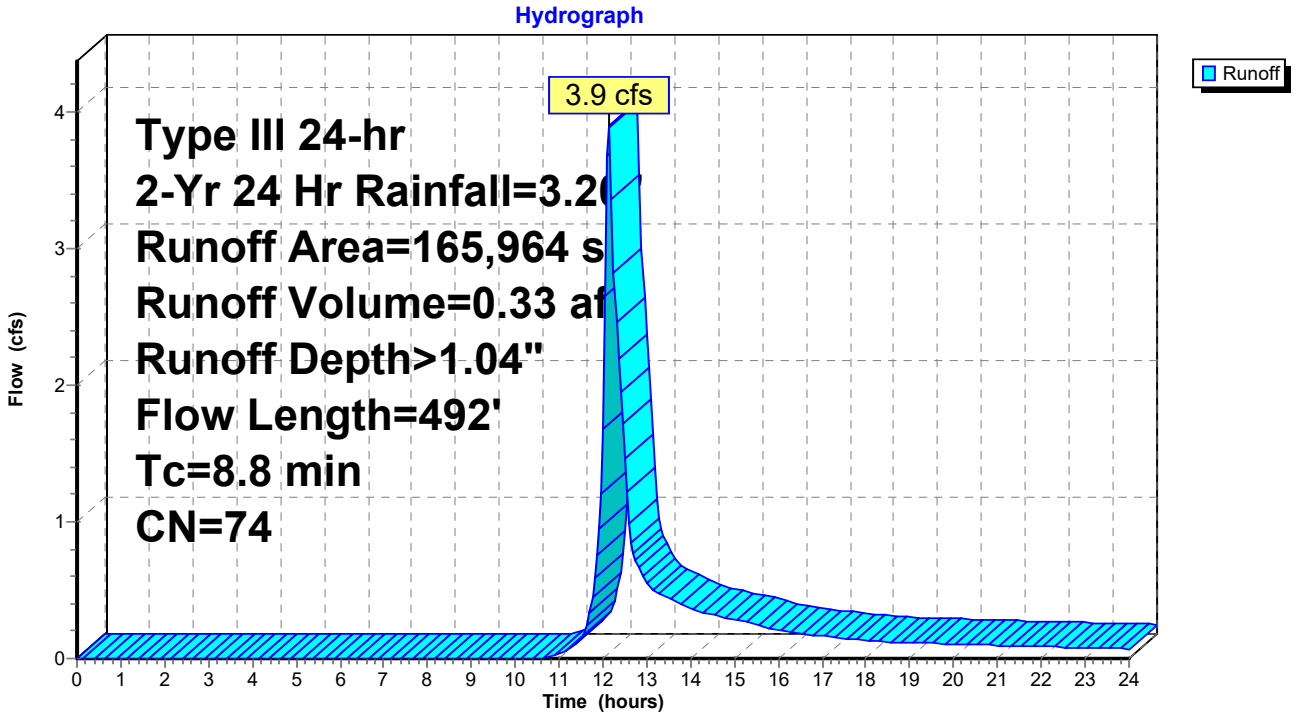
Runoff = 3.9 cfs @ 12.14 hrs, Volume= 0.33 af, Depth> 1.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

	Area (sf)	CN	Description
	24,907	61	>75% Grass cover, Good, HSG B
	7,233	55	Woods, Good, HSG B
*	3,150	98	Proposed Driveway/Walkways/Patios
	43,673	74	>75% Grass cover, Good, HSG C
	11,762	70	Woods, Good, HSG C
	22,189	77	Woods, Good, HSG D
	53,050	80	>75% Grass cover, Good, HSG D
	165,964	74	Weighted Average
	162,814		98.10% Pervious Area
	3,150		1.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	42	0.0480	0.1		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.1	55	0.3000	8.8		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	45	0.0450	4.3		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	350	0.1000	6.4		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.8	492	Total			

Subcatchment 101: Subcatchment 101



Summary for Subcatchment 102: SC 102

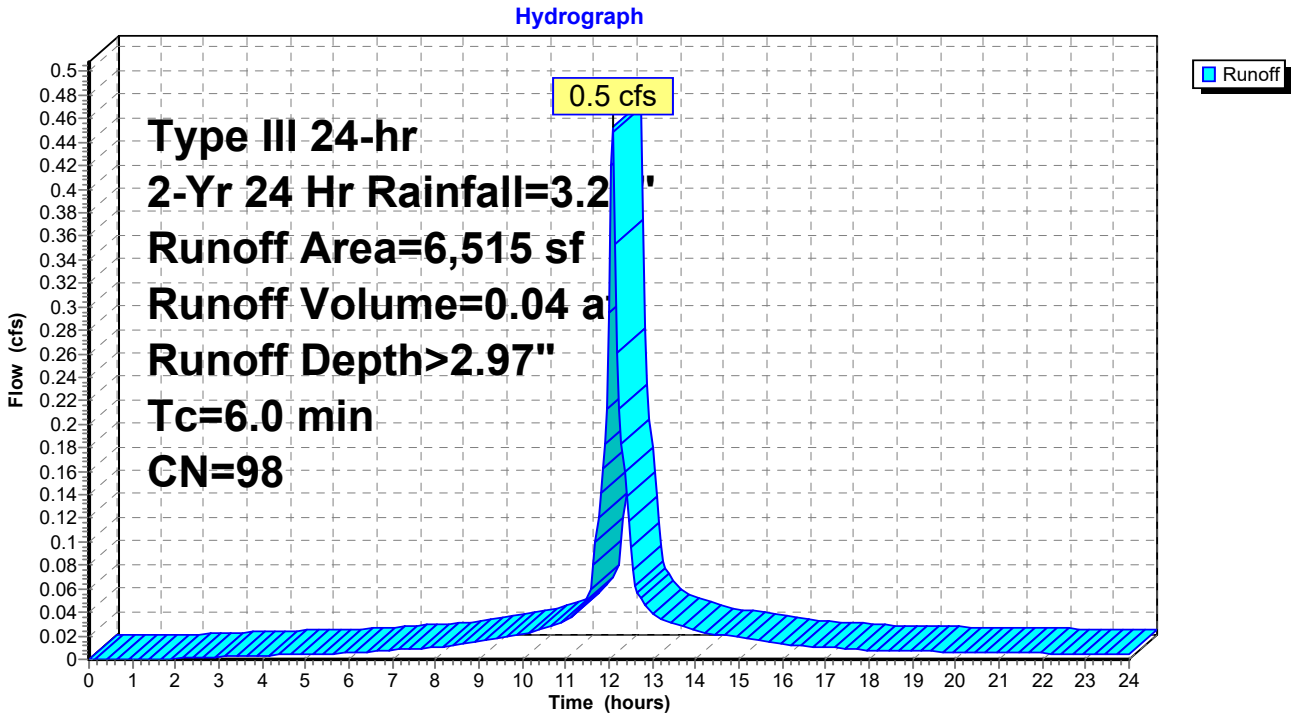
Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.04 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

Area (sf)	CN	Description
6,515	98	Paved parking, HSG B
6,515		100.00% Impervious Area

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

Subcatchment 102: SC 102



Summary for Subcatchment 103: SC 103

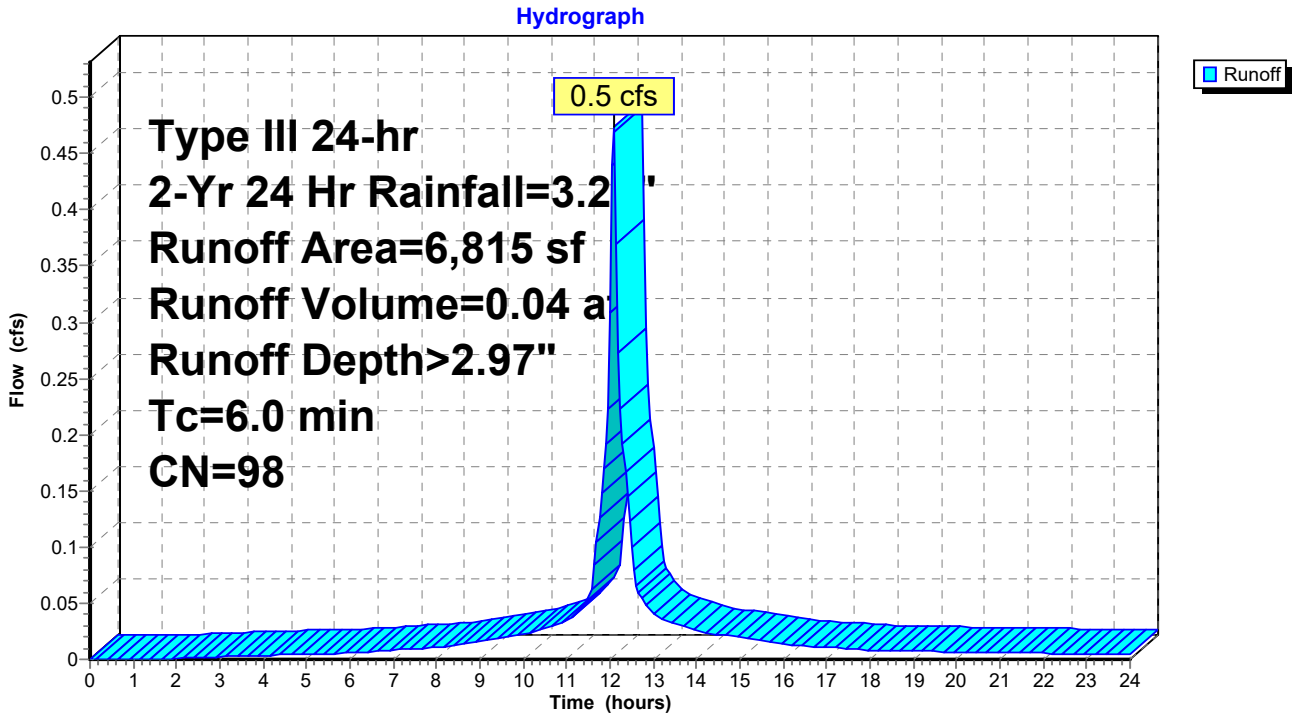
Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.04 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

Area (sf)	CN	Description
6,815	98	Paved parking, HSG B
6,815		100.00% Impervious Area

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

Subcatchment 103: SC 103



Summary for Subcatchment ER: EX ROOF

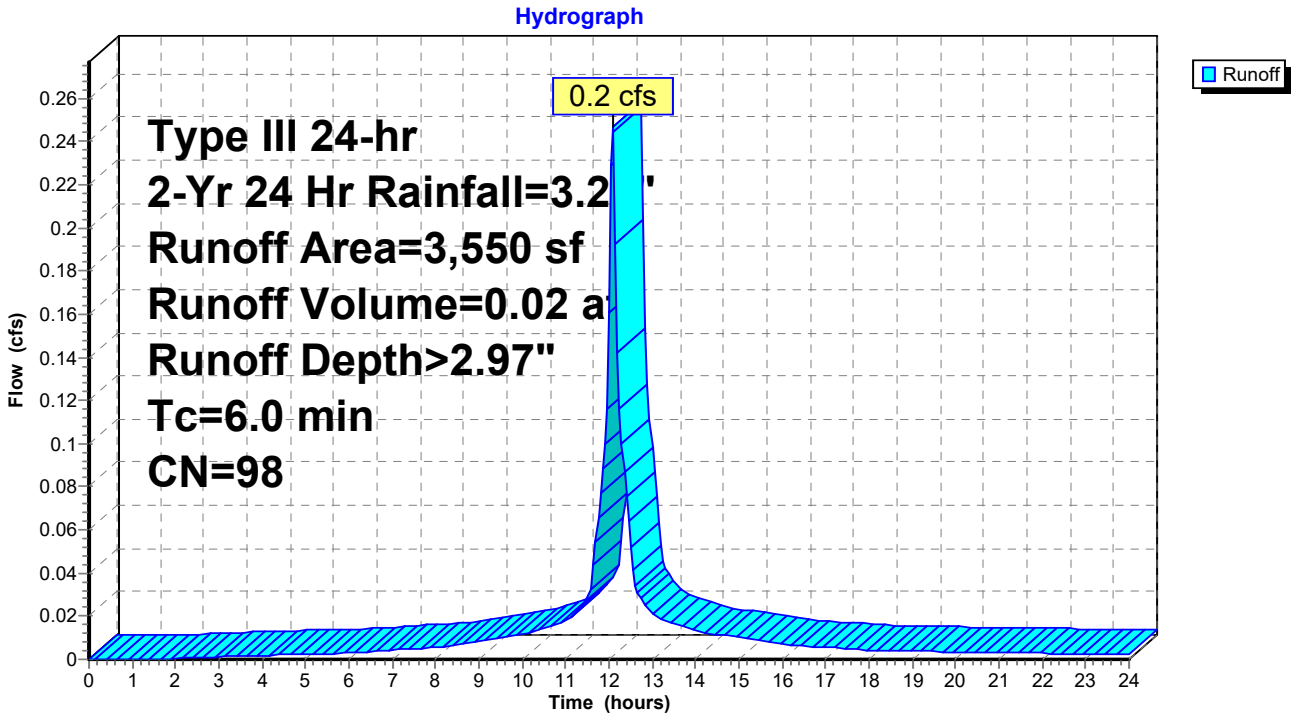
Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.02 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

Area (sf)	CN	Description
3,550	98	Roofs, HSG A
3,550		100.00% Impervious Area

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

Subcatchment ER: EX ROOF



Summary for Subcatchment PR: PROP ROOF

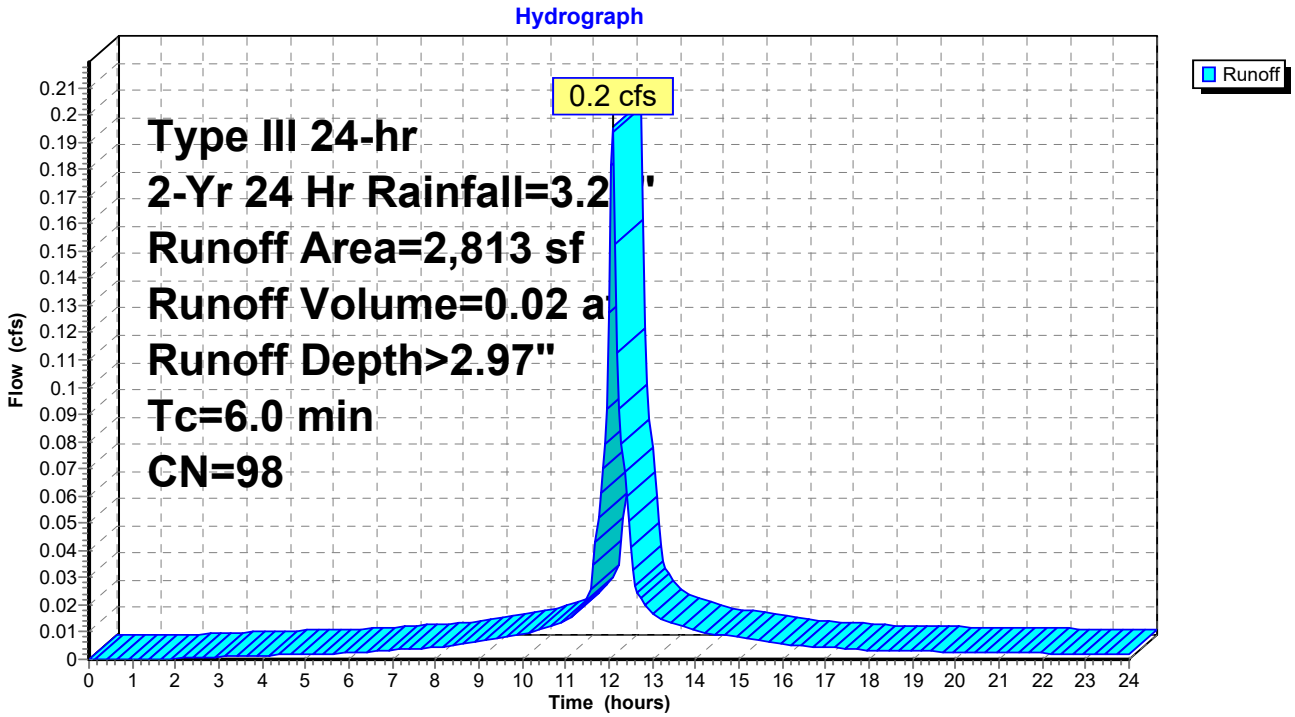
Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.02 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

Area (sf)	CN	Description
2,813	98	Roofs, HSG A
2,813		100.00% Impervious Area

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

Subcatchment PR: PROP ROOF



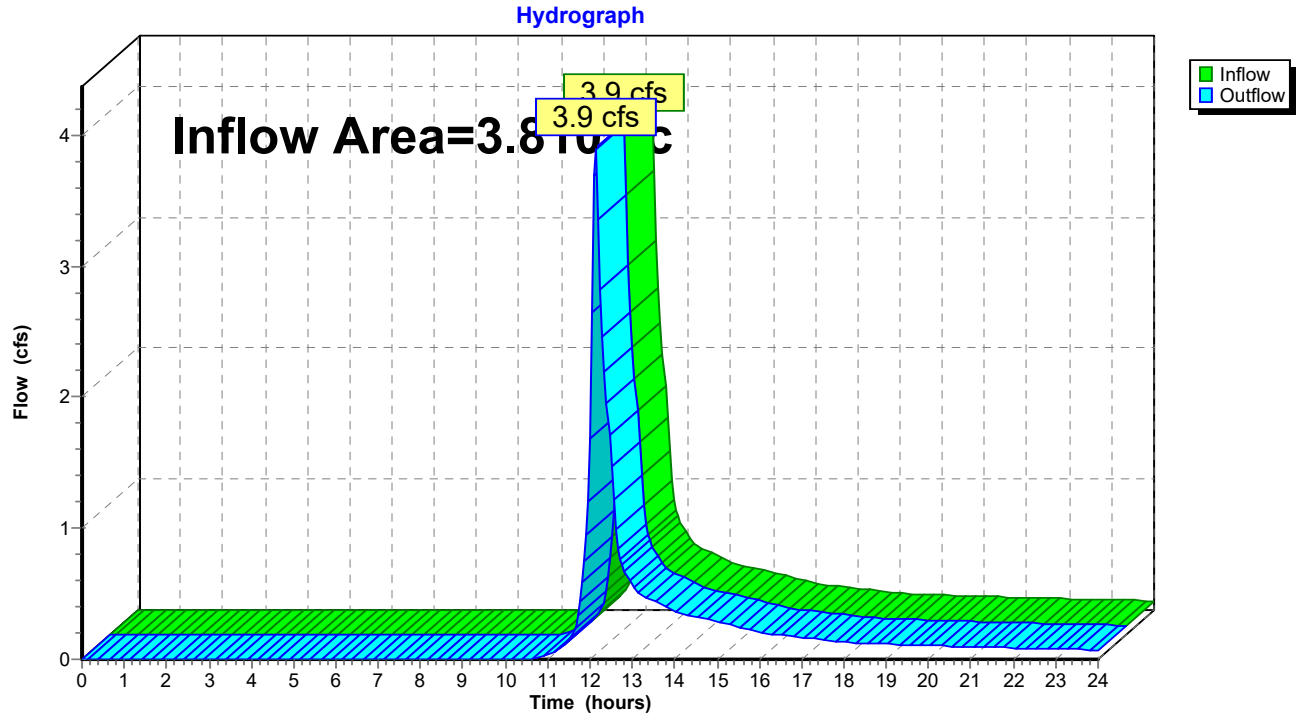
Summary for Reach DP-1: Design Point 1

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

Inflow Area = 3.810 ac, 1.90% Impervious, Inflow Depth > 1.04" for 2-Yr 24 Hr event
Inflow = 3.9 cfs @ 12.14 hrs, Volume= 0.33 af
Outflow = 3.9 cfs @ 12.14 hrs, Volume= 0.33 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1



Summary for Pond ER-1: PSIS-ER

Inflow Area = 0.081 ac,100.00% Impervious, Inflow Depth > 2.97" for 2-Yr 24 Hr event
Inflow = 0.2 cfs @ 12.09 hrs, Volume= 0.02 af
Outflow = 0.0 cfs @ 11.70 hrs, Volume= 0.02 af, Atten= 84%, Lag= 0.0 min
Discarded = 0.0 cfs @ 11.70 hrs, Volume= 0.02 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 254.18' @ 12.56 hrs Surf.Area= 712 sf Storage= 242 cf

Plug-Flow detention time= 35.9 min calculated for 0.02 af (100% of inflow)
Center-of-Mass det. time= 35.4 min (791.4 - 756.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	700 cf	**21.50'W x 33.10'L x 3.50'H Field A** 2,491 cf Overall - 740 cf Embedded = 1,751 cf x 40.0% Voids
#2A	254.00'	740 cf	**ADS_StormTech RC-750 +Cap** x 16 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 16 Chambers in 4 Rows
		1,440 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.70 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Pond ER-1: PSIS-ER - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

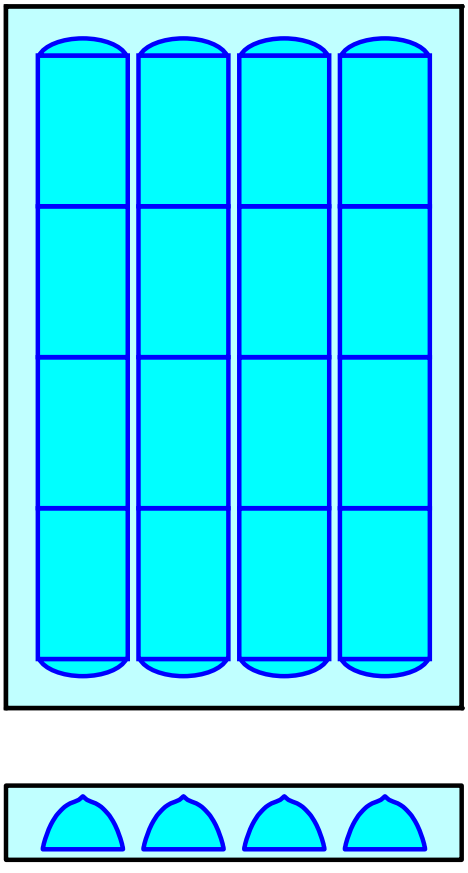
4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +18.0" End Stone x 2 = 33.10' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 18.0" Side Stone x 2 = 21.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

16 Chambers x 46.2 cf = 739.8 cf Chamber Storage

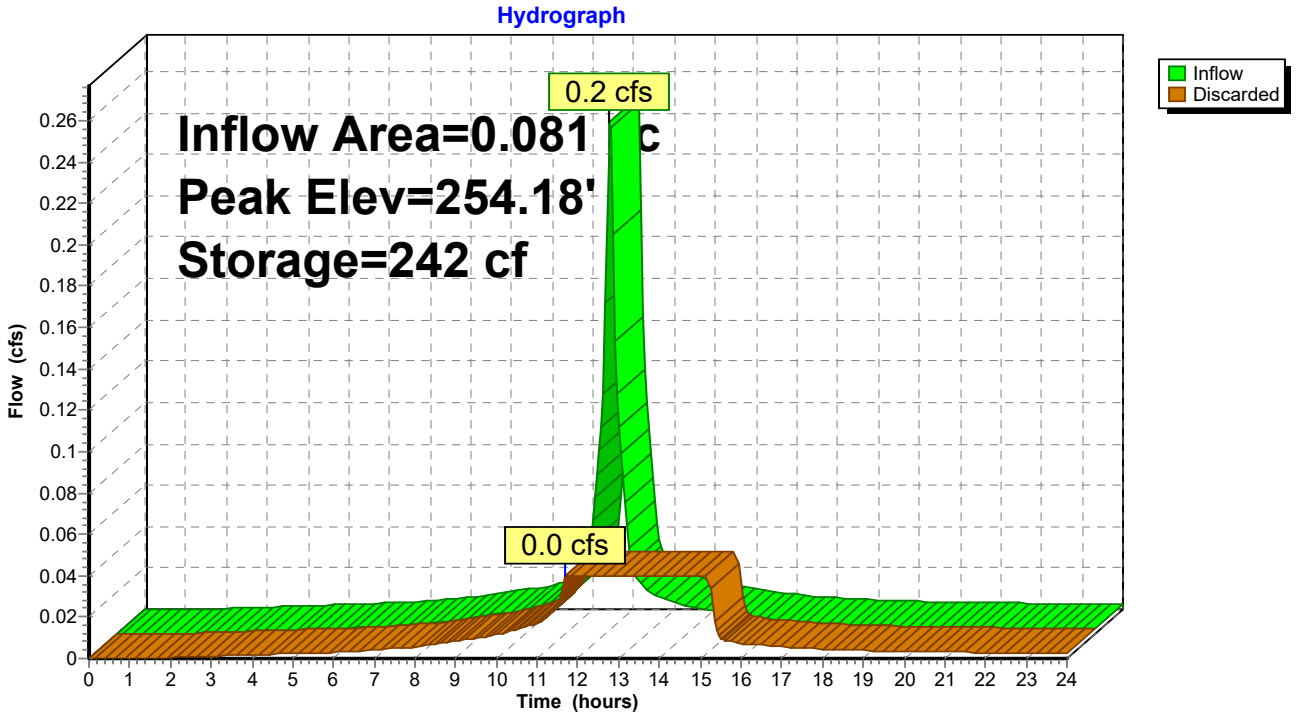
2,490.5 cf Field - 739.8 cf Chambers = 1,750.7 cf Stone x 40.0% Voids = 700.3 cf Stone Storage

Chamber Storage + Stone Storage = 1,440.1 cf = 0.03 af
Overall Storage Efficiency = 57.8%
Overall System Size = 33.10' x 21.50' x 3.50'

16 Chambers
92.2 cy Field
64.8 cy Stone



Pond ER-1: PSIS-ER



Summary for Pond PR-1: PSIS-PR

Inflow Area = 0.065 ac,100.00% Impervious, Inflow Depth > 2.97" for 2-Yr 24 Hr event
Inflow = 0.2 cfs @ 12.09 hrs, Volume= 0.02 af
Outflow = 0.0 cfs @ 11.70 hrs, Volume= 0.02 af, Atten= 84%, Lag= 0.0 min
Discarded = 0.0 cfs @ 11.70 hrs, Volume= 0.02 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 254.20' @ 12.57 hrs Surf.Area= 558 sf Storage= 193 cf

Plug-Flow detention time= 36.6 min calculated for 0.02 af (100% of inflow)
Center-of-Mass det. time= 36.1 min (792.0 - 756.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	560 cf	**21.50'W x 25.98'L x 3.50'H Field A** 1,955 cf Overall - 555 cf Embedded = 1,400 cf x 40.0% Voids
#2A	254.00'	555 cf	**ADS_StormTech RC-750 +Cap** x 12 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 12 Chambers in 4 Rows
		1,115 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.70 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Pond PR-1: PSIS-PR - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

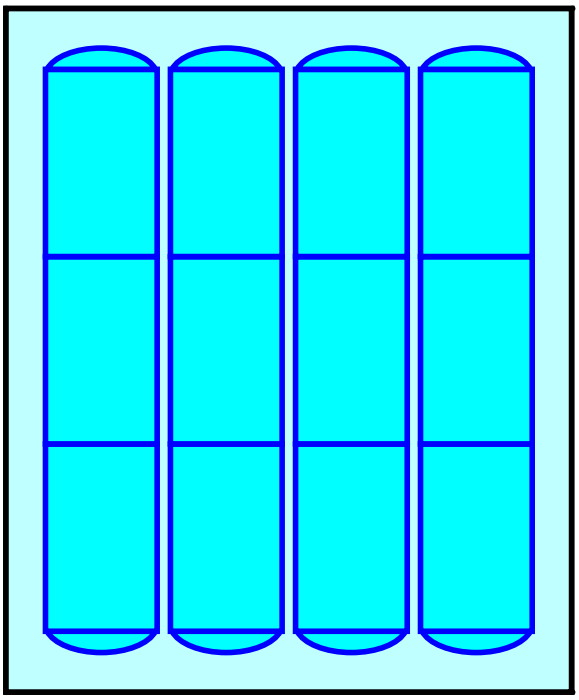
3 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 22.98' Row Length +18.0" End Stone x 2 = 25.98' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 18.0" Side Stone x 2 = 21.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

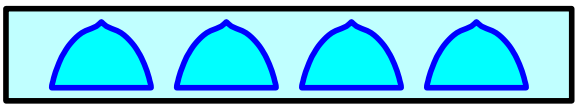
12 Chambers x 46.2 cf = 554.9 cf Chamber Storage

1,954.7 cf Field - 554.9 cf Chambers = 1,399.9 cf Stone x 40.0% Voids = 560.0 cf Stone Storage

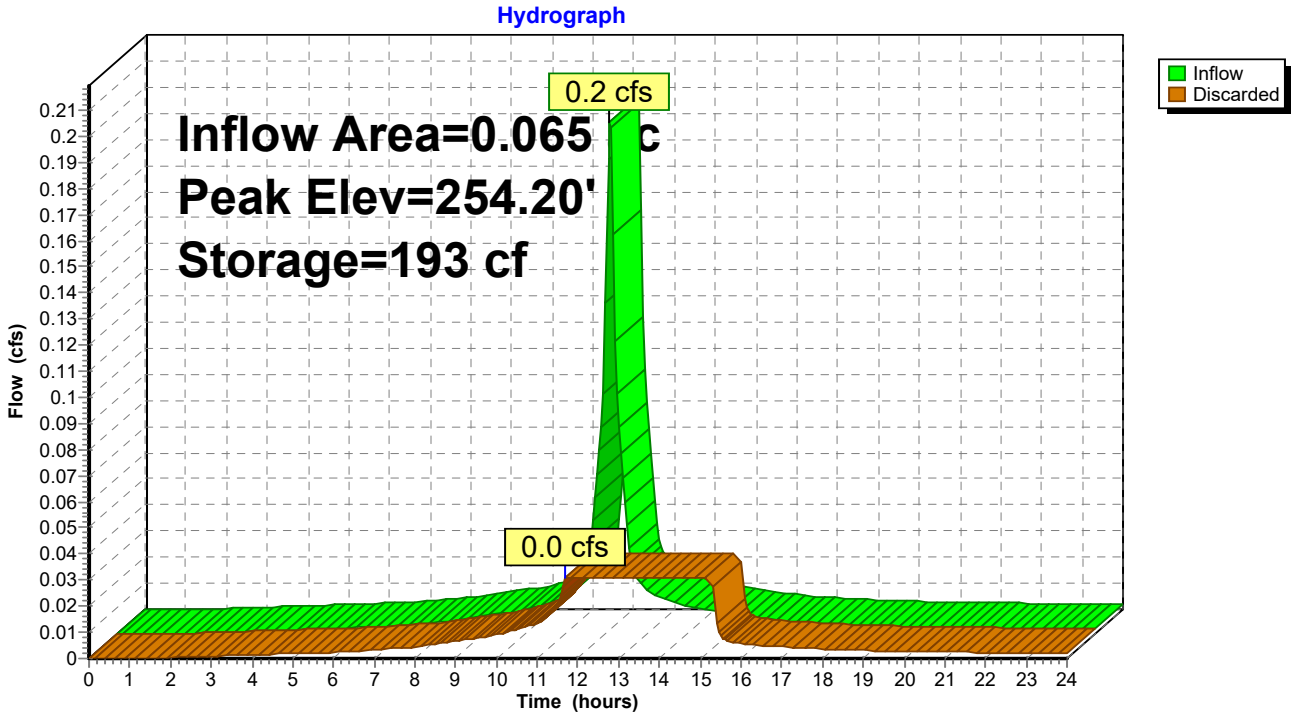
Chamber Storage + Stone Storage = 1,114.8 cf = 0.03 af
Overall Storage Efficiency = 57.0%
Overall System Size = 25.98' x 21.50' x 3.50'

12 Chambers
72.4 cy Field
51.8 cy Stone





Pond PR-1: PSIS-PR



Summary for Pond R-1: ROAD-1

Inflow Area = 0.150 ac,100.00% Impervious, Inflow Depth > 2.97" for 2-Yr 24 Hr event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 0.04 af
Outflow = 0.1 cfs @ 11.65 hrs, Volume= 0.04 af, Atten= 87%, Lag= 0.0 min
Discarded = 0.1 cfs @ 11.65 hrs, Volume= 0.04 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 254.34' @ 12.63 hrs Surf.Area= 1,056 sf Storage= 491 cf

Plug-Flow detention time= 52.6 min calculated for 0.04 af (100% of inflow)
Center-of-Mass det. time= 52.1 min (808.1 - 756.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	1,016 cf	**26.25'W x 40.22'L x 3.50'H Field A** 3,695 cf Overall - 1,156 cf Embedded = 2,539 cf x 40.0% Voids
#2A	254.00'	1,156 cf	**ADS_StormTech RC-750 +Cap** x 25 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 25 Chambers in 5 Rows
		2,172 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.1 cfs @ 11.65 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Pond R-1: ROAD-1 - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

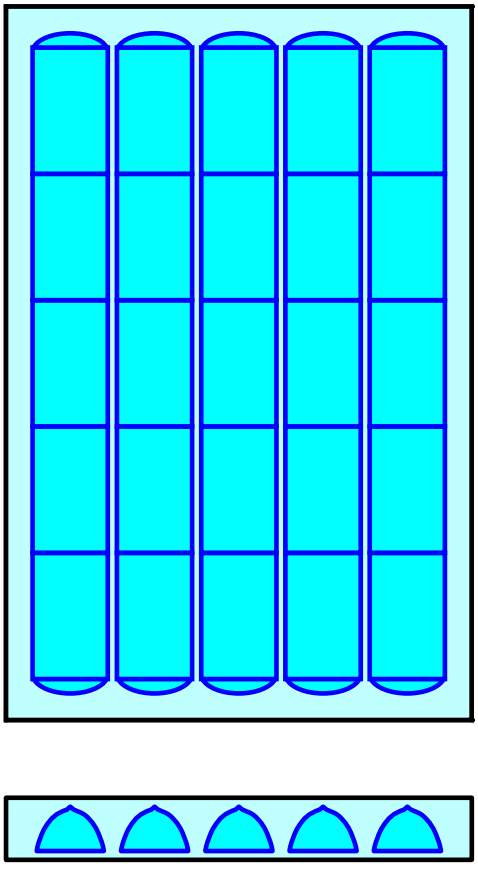
5 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 37.22' Row Length +18.0" End Stone x 2 = 40.22' Base Length
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 18.0" Side Stone x 2 = 26.25' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

25 Chambers x 46.2 cf = 1,156.0 cf Chamber Storage

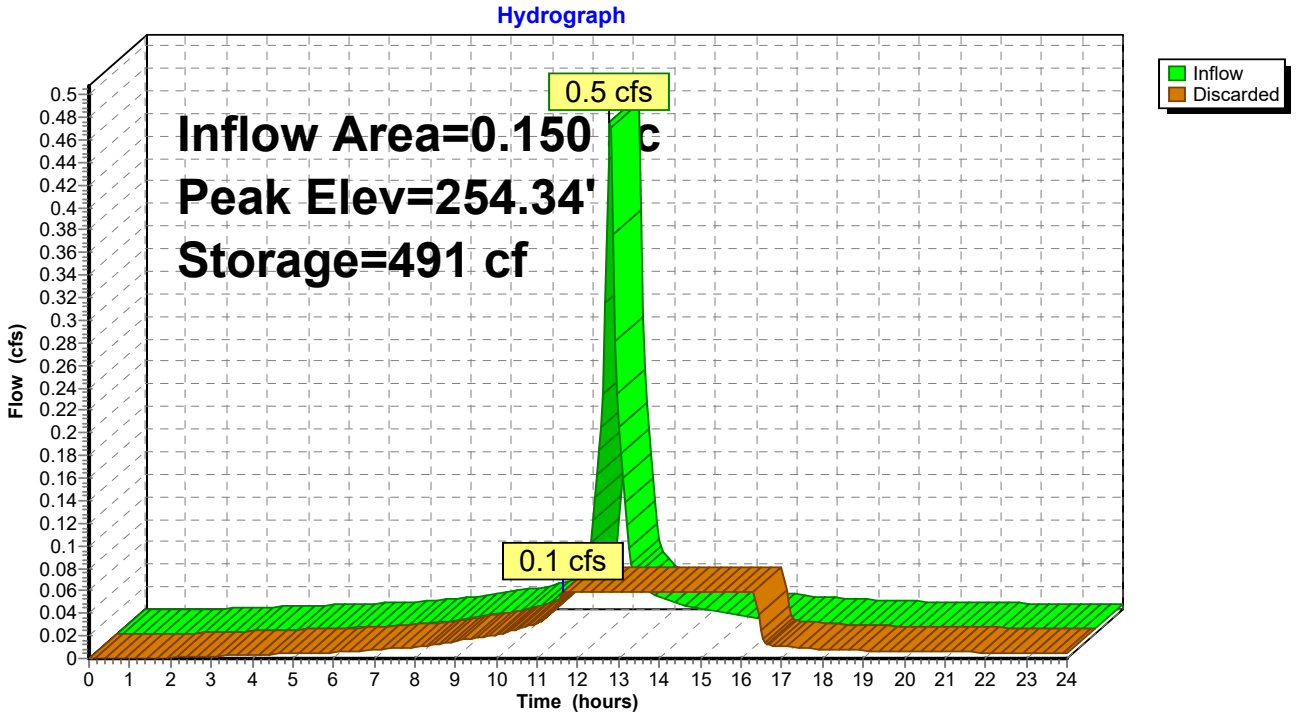
3,694.9 cf Field - 1,156.0 cf Chambers = 2,538.9 cf Stone x 40.0% Voids = 1,015.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,171.5 cf = 0.05 af
Overall Storage Efficiency = 58.8%
Overall System Size = 40.22' x 26.25' x 3.50'

25 Chambers
136.8 cy Field
94.0 cy Stone



Pond R-1: ROAD-1



Summary for Pond R-2: ROAD-2

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth > 2.97" for 2-Yr 24 Hr event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 0.04 af
Outflow = 0.1 cfs @ 11.65 hrs, Volume= 0.04 af, Atten= 87%, Lag= 0.0 min
Discarded = 0.1 cfs @ 11.65 hrs, Volume= 0.04 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 234.04' @ 12.63 hrs Surf.Area= 1,096 sf Storage= 515 cf

Plug-Flow detention time= 53.4 min calculated for 0.04 af (100% of inflow)
Center-of-Mass det. time= 52.9 min (808.8 - 756.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	233.20'	1,016 cf	**20.50'W x 53.46'L x 3.50'H Field A** 3,836 cf Overall - 1,295 cf Embedded = 2,541 cf x 40.0% Voids
#2A	233.70'	1,295 cf	**ADS_StormTech RC-750 +Cap** x 28 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 28 Chambers in 4 Rows
		2,311 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	233.20'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.1 cfs @ 11.65 hrs HW=233.24' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Pond R-2: ROAD-2 - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

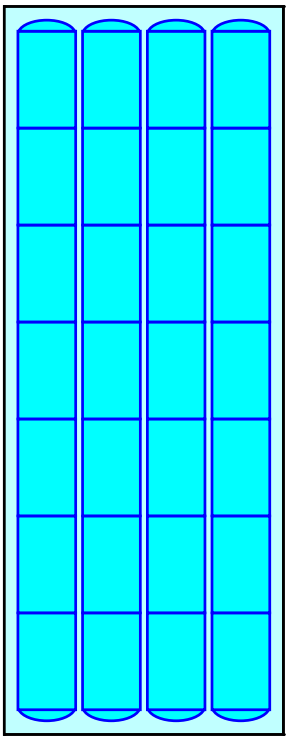
7 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 51.46' Row Length +12.0" End Stone x 2 = 53.46' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

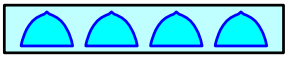
28 Chambers x 46.2 cf = 1,294.7 cf Chamber Storage

3,835.5 cf Field - 1,294.7 cf Chambers = 2,540.8 cf Stone x 40.0% Voids = 1,016.3 cf Stone Storage

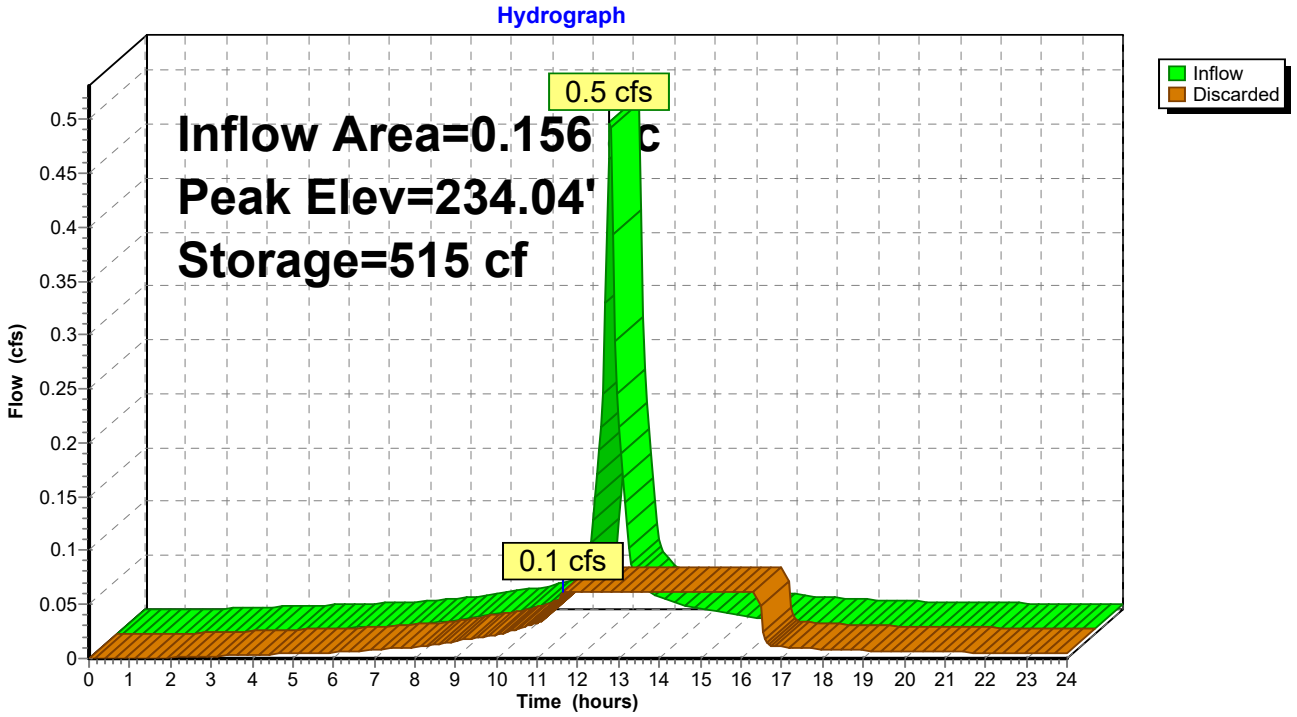
Chamber Storage + Stone Storage = 2,311.0 cf = 0.05 af
Overall Storage Efficiency = 60.3%
Overall System Size = 53.46' x 20.50' x 3.50'

28 Chambers
142.1 cy Field
94.1 cy Stone





Pond R-2: ROAD-2



Summary for Pond R-3: ROAD-1

Inflow Area = 0.262 ac,100.00% Impervious, Inflow Depth > 2.97" for 2-Yr 24 Hr event
Inflow = 0.8 cfs @ 12.09 hrs, Volume= 0.06 af
Outflow = 0.1 cfs @ 11.60 hrs, Volume= 0.06 af, Atten= 88%, Lag= 0.0 min
Discarded = 0.1 cfs @ 11.60 hrs, Volume= 0.06 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.00 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 232.92' @ 12.68 hrs Surf.Area= 1,705 sf Storage= 889 cf

Plug-Flow detention time= 60.6 min calculated for 0.06 af (100% of inflow)
Center-of-Mass det. time= 60.1 min (816.1 - 756.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	232.00'	1,652 cf	**27.25'W x 62.58'L x 3.50'H Field A** 5,968 cf Overall - 1,838 cf Embedded = 4,131 cf x 40.0% Voids
#2A	232.50'	1,838 cf	**ADS_StormTech SC-740 +Cap** x 40 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 40 Chambers in 5 Rows
		3,490 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	232.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	234.90'	**6.0" Vert. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.1 cfs @ 11.60 hrs HW=232.04' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=232.00' (Free Discharge)
└**2=Orifice/Grate** (Controls 0.0 cfs)

Pond R-3: ROAD-1 - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

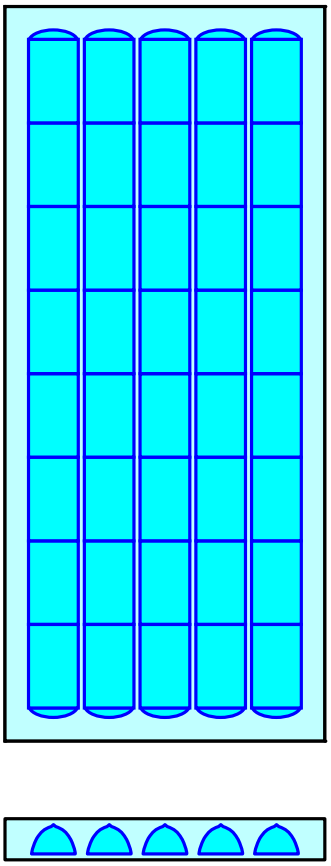
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +24.0" End Stone x 2 = 62.58' Base Length
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 24.0" Side Stone x 2 = 27.25' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

40 Chambers x 45.9 cf = 1,837.6 cf Chamber Storage

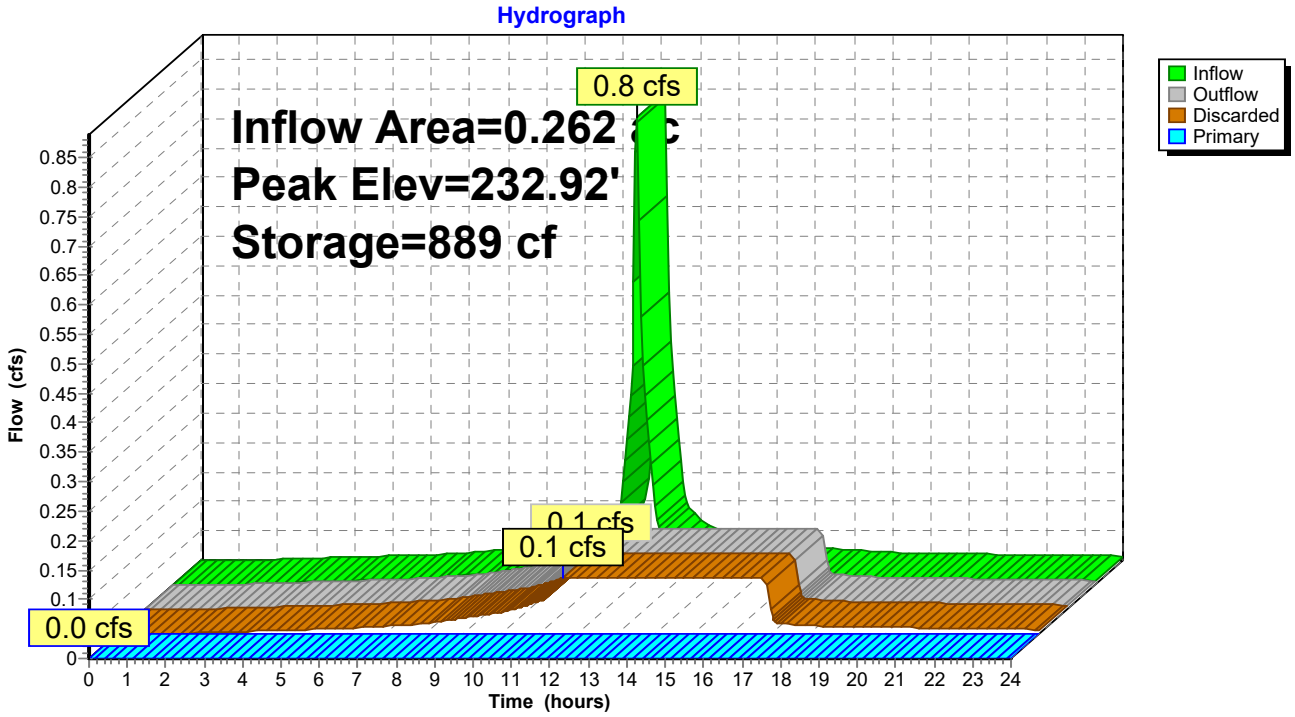
5,968.2 cf Field - 1,837.6 cf Chambers = 4,130.6 cf Stone x 40.0% Voids = 1,652.3 cf Stone Storage

Chamber Storage + Stone Storage = 3,489.9 cf = 0.08 af
Overall Storage Efficiency = 58.5%
Overall System Size = 62.58' x 27.25' x 3.50'

40 Chambers
221.0 cy Field
153.0 cy Stone



Pond R-3: ROAD-1



Summary for Subcatchment 1S: SC 102

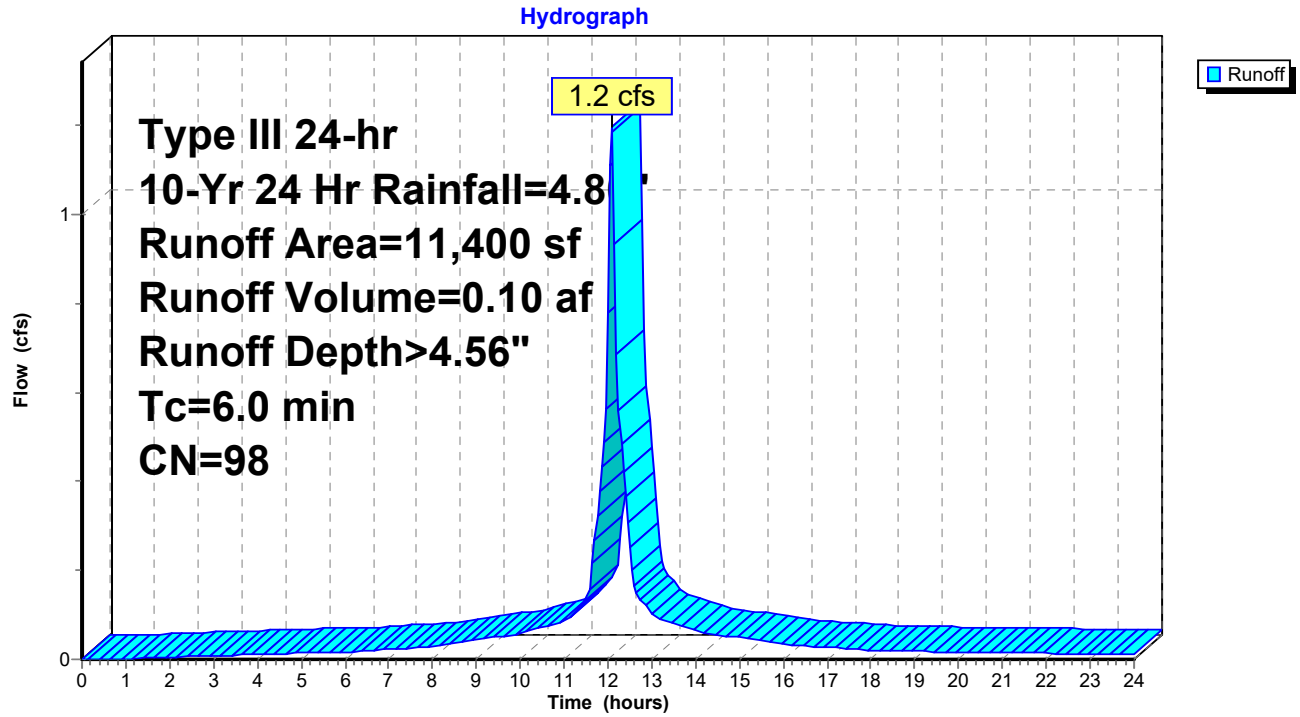
Runoff = 1.2 cfs @ 12.09 hrs, Volume= 0.10 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
11,400	98	Paved parking, HSG B
11,400		100.00% Impervious Area

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

Subcatchment 1S: SC 102



Summary for Subcatchment 101: Subcatchment 101

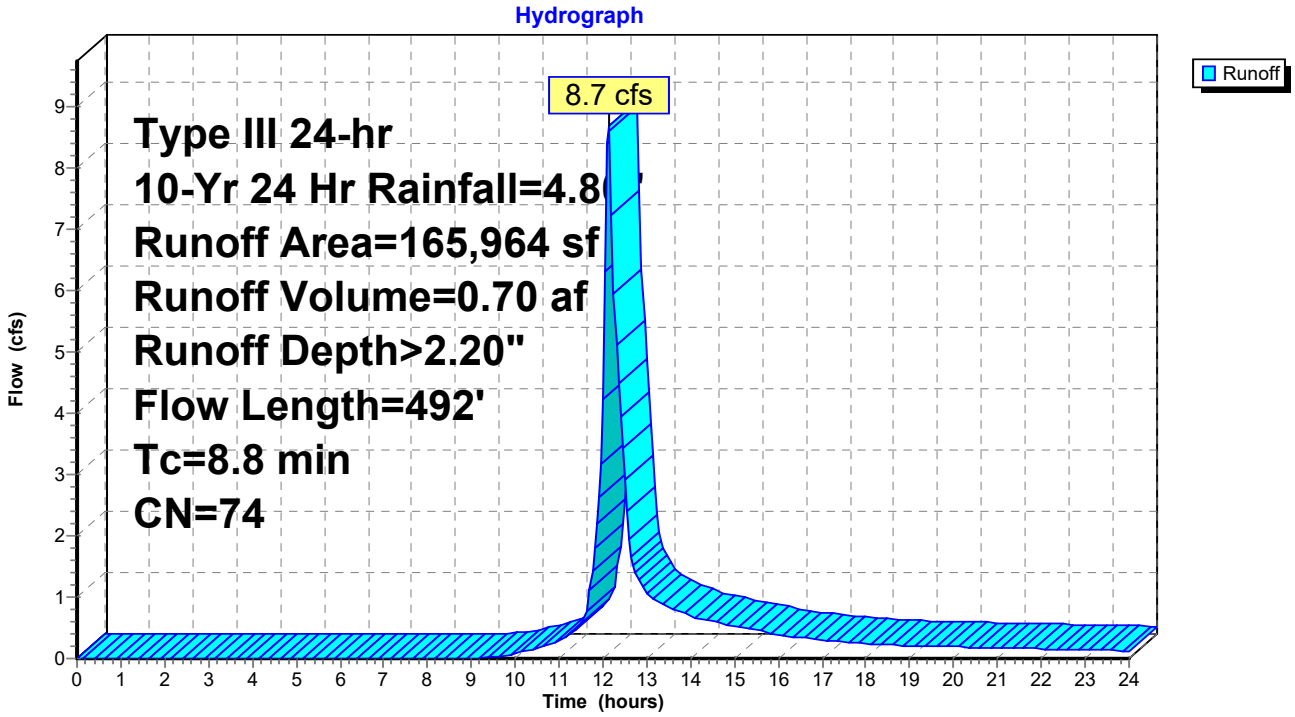
Runoff = 8.7 cfs @ 12.13 hrs, Volume= 0.70 af, Depth> 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

	Area (sf)	CN	Description
	24,907	61	>75% Grass cover, Good, HSG B
	7,233	55	Woods, Good, HSG B
*	3,150	98	Proposed Driveway/Walkways/Patios
	43,673	74	>75% Grass cover, Good, HSG C
	11,762	70	Woods, Good, HSG C
	22,189	77	Woods, Good, HSG D
	53,050	80	>75% Grass cover, Good, HSG D
	165,964	74	Weighted Average
	162,814		98.10% Pervious Area
	3,150		1.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	42	0.0480	0.1		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.1	55	0.3000	8.8		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	45	0.0450	4.3		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	350	0.1000	6.4		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.8	492	Total			

Subcatchment 101: Subcatchment 101



Summary for Subcatchment 102: SC 102

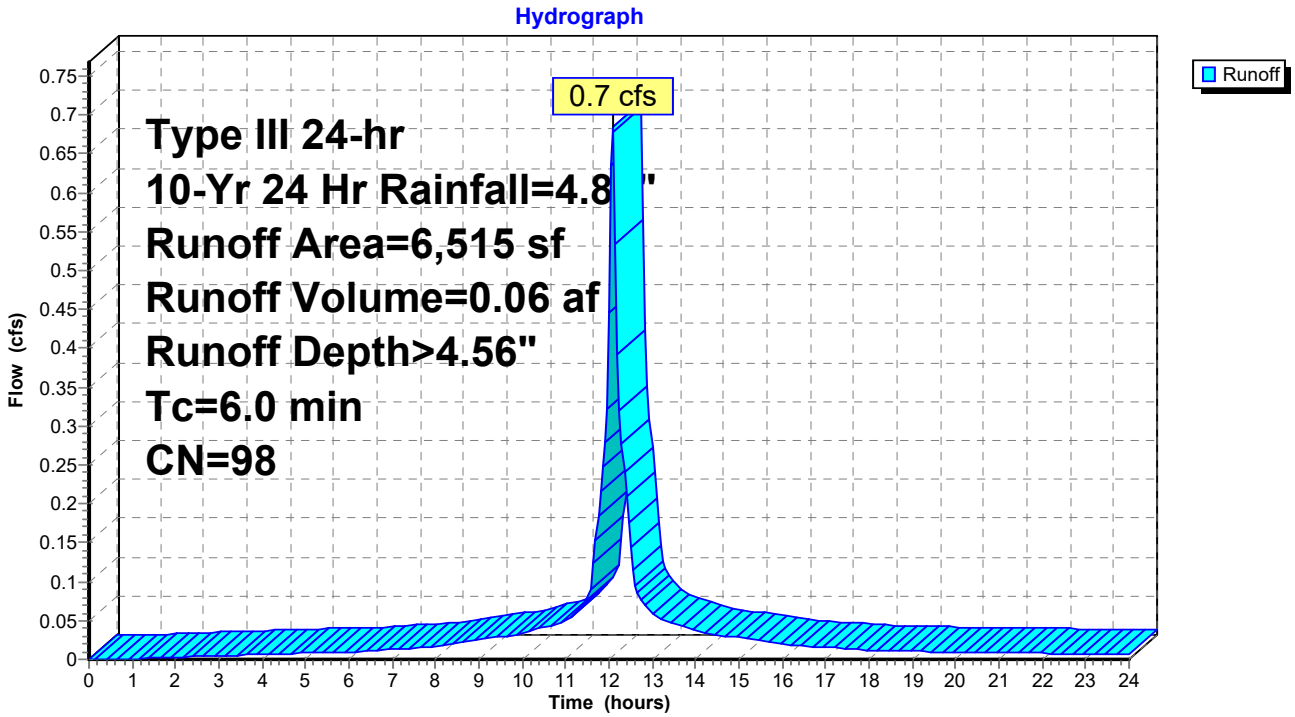
Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.06 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
6,515	98	Paved parking, HSG B
6,515		100.00% Impervious Area

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

Subcatchment 102: SC 102



Summary for Subcatchment 103: SC 103

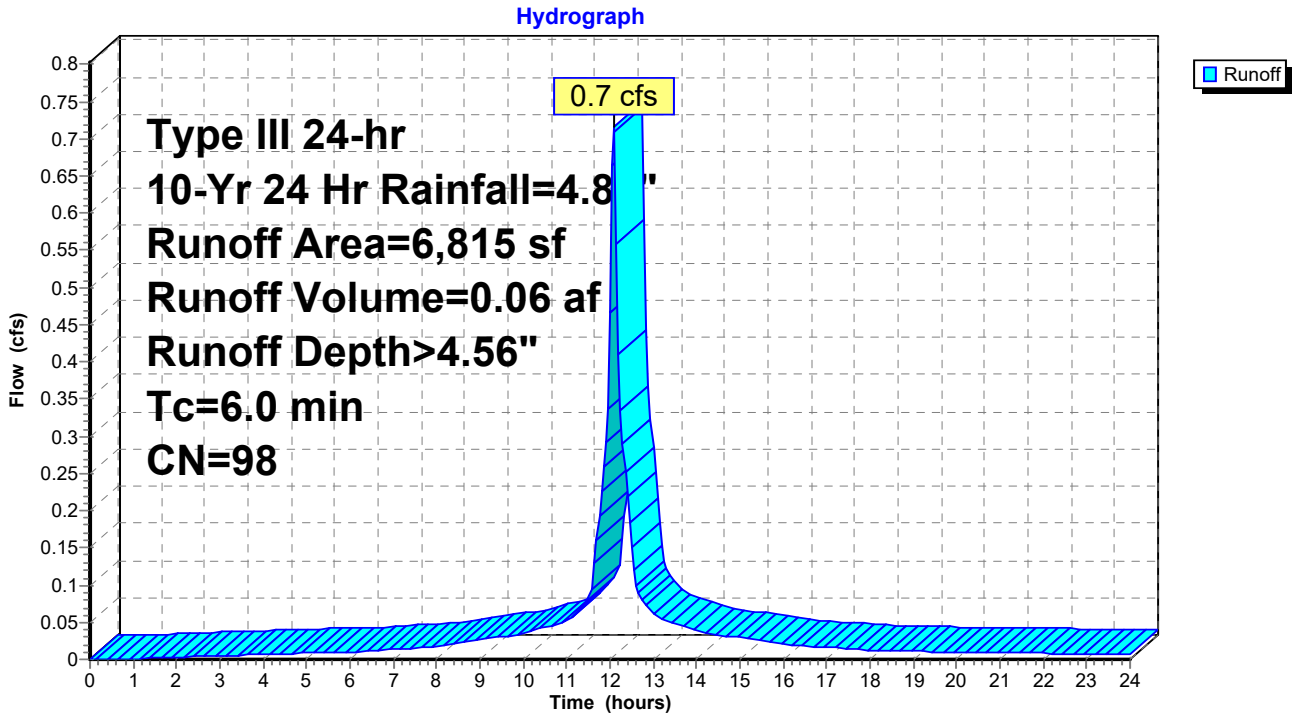
Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.06 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
6,815	98	Paved parking, HSG B
6,815		100.00% Impervious Area

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

Subcatchment 103: SC 103



Summary for Subcatchment ER: EX ROOF

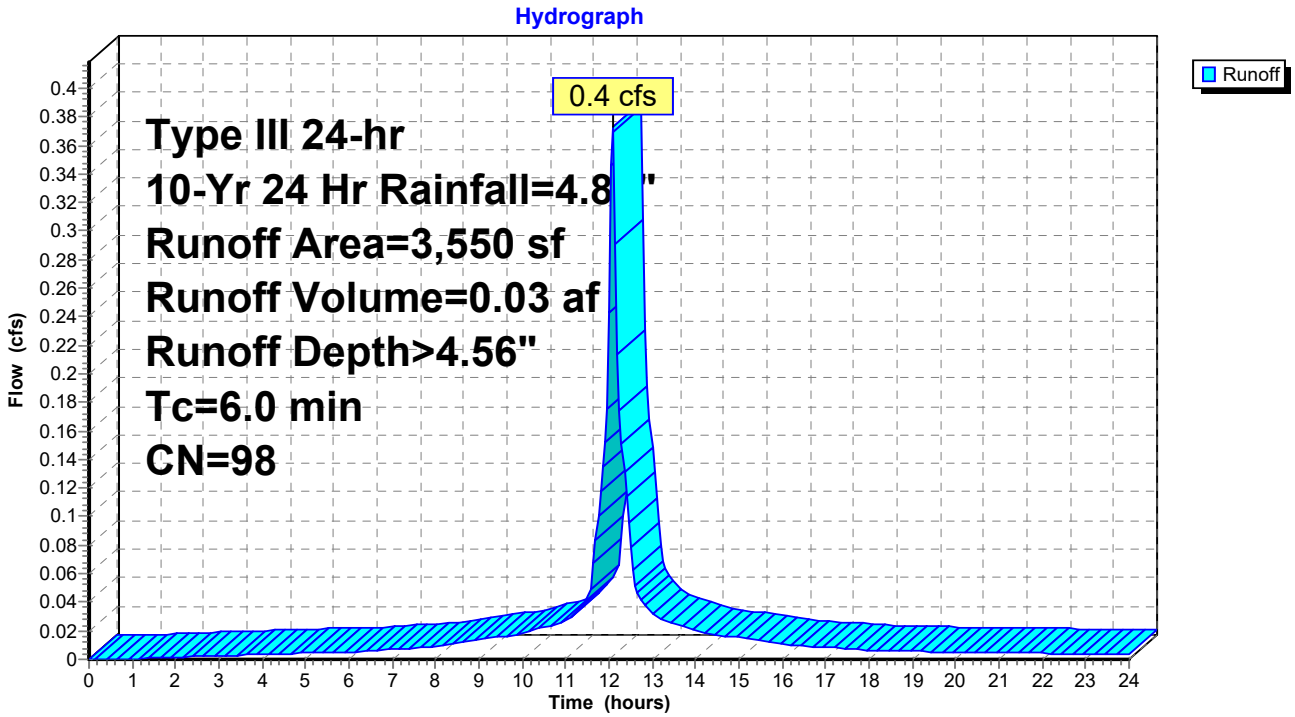
Runoff = 0.4 cfs @ 12.09 hrs, Volume= 0.03 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
3,550	98	Roofs, HSG A
3,550		100.00% Impervious Area

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

Subcatchment ER: EX ROOF



Summary for Subcatchment PR: PROP ROOF

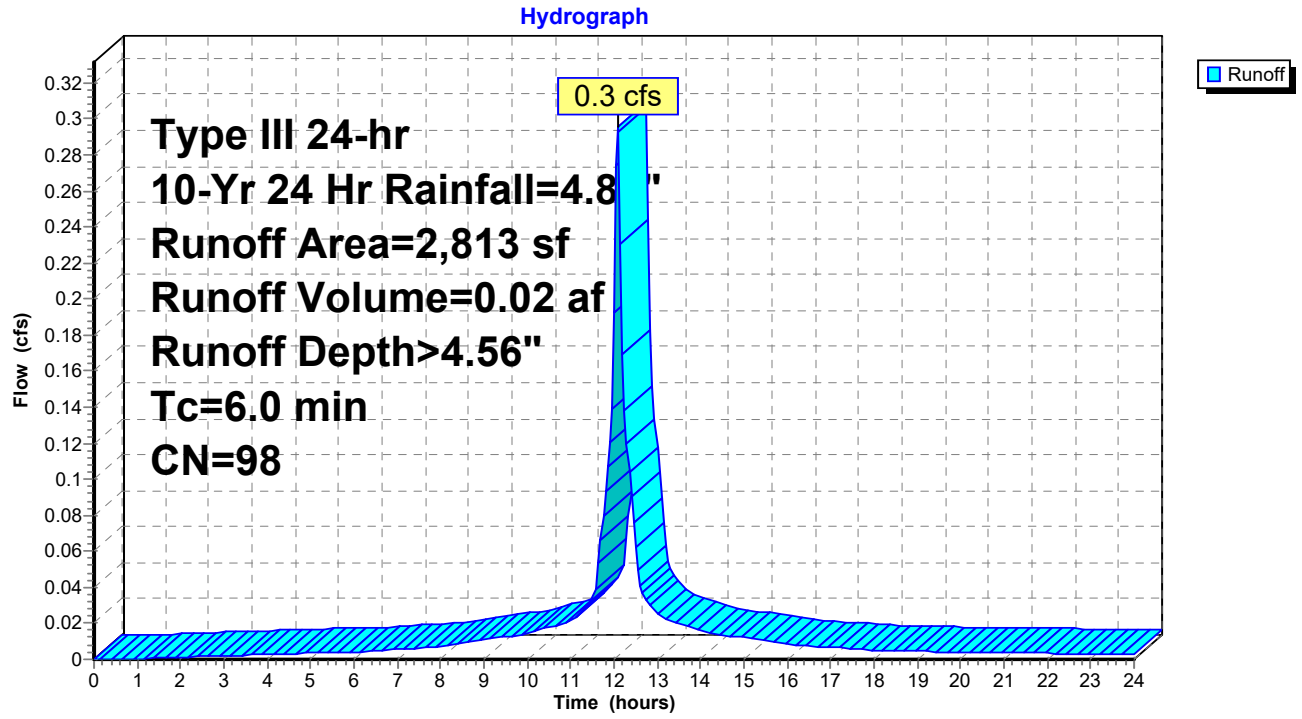
Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.02 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
2,813	98	Roofs, HSG A
2,813		100.00% Impervious Area

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

Subcatchment PR: PROP ROOF



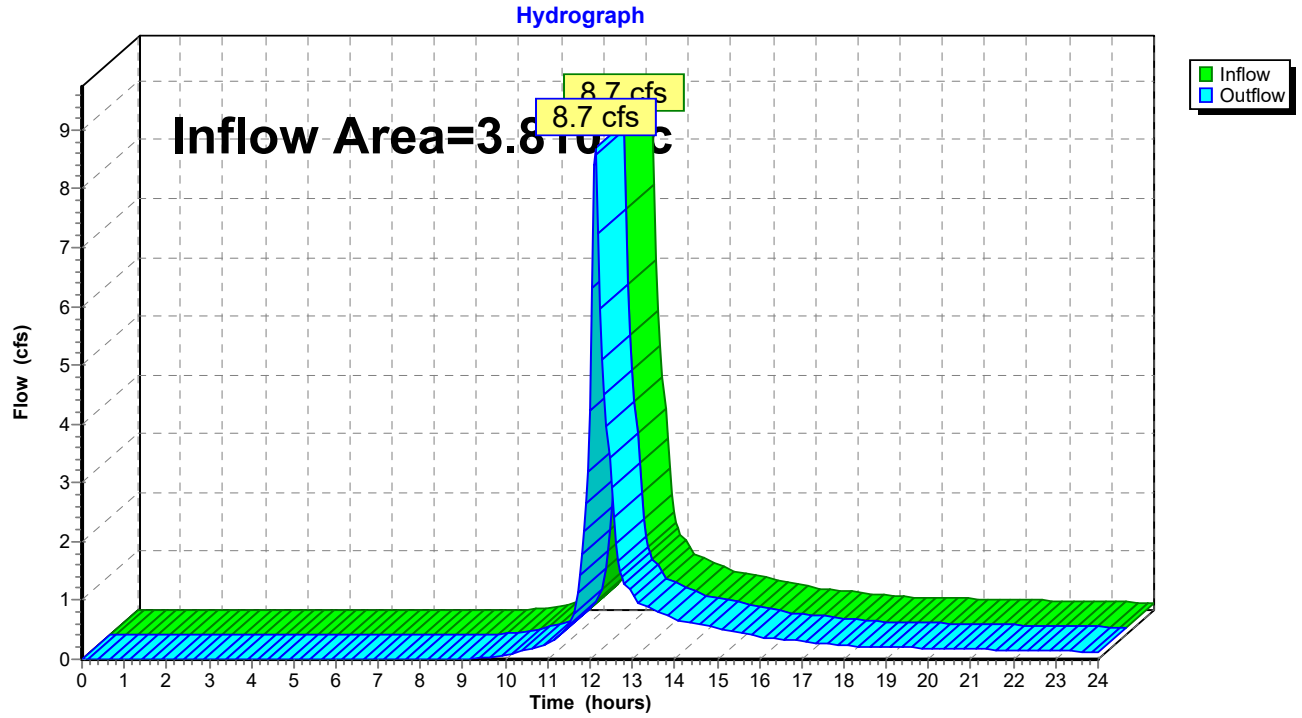
Summary for Reach DP-1: Design Point 1

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

Inflow Area = 3.810 ac, 1.90% Impervious, Inflow Depth > 2.20" for 10-Yr 24 Hr event
Inflow = 8.7 cfs @ 12.13 hrs, Volume= 0.70 af
Outflow = 8.7 cfs @ 12.13 hrs, Volume= 0.70 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1



Summary for Pond ER-1: PSIS-ER

Inflow Area = 0.081 ac,100.00% Impervious, Inflow Depth > 4.56" for 10-Yr 24 Hr event
Inflow = 0.4 cfs @ 12.09 hrs, Volume= 0.03 af
Outflow = 0.0 cfs @ 11.50 hrs, Volume= 0.03 af, Atten= 89%, Lag= 0.0 min
Discarded = 0.0 cfs @ 11.50 hrs, Volume= 0.03 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 254.56' @ 12.79 hrs Surf.Area= 712 sf Storage= 440 cf

Plug-Flow detention time= 73.6 min calculated for 0.03 af (100% of inflow)
Center-of-Mass det. time= 73.0 min (821.3 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	700 cf	**21.50'W x 33.10'L x 3.50'H Field A** 2,491 cf Overall - 740 cf Embedded = 1,751 cf x 40.0% Voids
#2A	254.00'	740 cf	**ADS_StormTech RC-750 +Cap** x 16 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 16 Chambers in 4 Rows
		1,440 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.50 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Pond ER-1: PSIS-ER - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

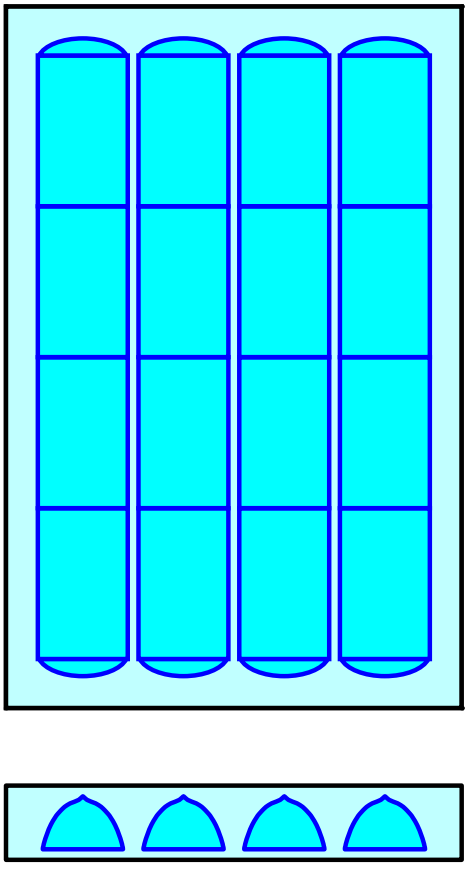
4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +18.0" End Stone x 2 = 33.10' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 18.0" Side Stone x 2 = 21.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

16 Chambers x 46.2 cf = 739.8 cf Chamber Storage

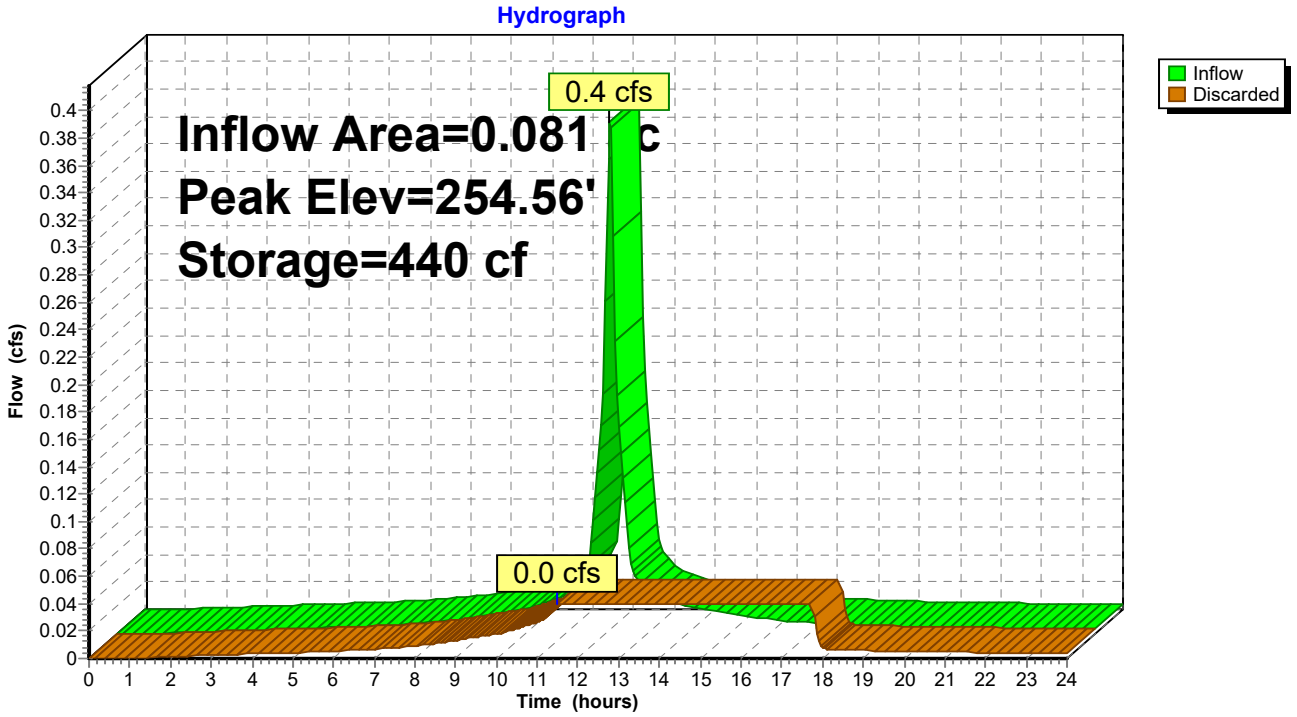
2,490.5 cf Field - 739.8 cf Chambers = 1,750.7 cf Stone x 40.0% Voids = 700.3 cf Stone Storage

Chamber Storage + Stone Storage = 1,440.1 cf = 0.03 af
Overall Storage Efficiency = 57.8%
Overall System Size = 33.10' x 21.50' x 3.50'

16 Chambers
92.2 cy Field
64.8 cy Stone



Pond ER-1: PSIS-ER



Summary for Pond PR-1: PSIS-PR

Inflow Area = 0.065 ac,100.00% Impervious, Inflow Depth > 4.56" for 10-Yr 24 Hr event
Inflow = 0.3 cfs @ 12.09 hrs, Volume= 0.02 af
Outflow = 0.0 cfs @ 11.50 hrs, Volume= 0.02 af, Atten= 89%, Lag= 0.0 min
Discarded = 0.0 cfs @ 11.50 hrs, Volume= 0.02 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 254.58' @ 12.80 hrs Surf.Area= 558 sf Storage= 350 cf

Plug-Flow detention time= 74.9 min calculated for 0.02 af (100% of inflow)
Center-of-Mass det. time= 74.3 min (822.6 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	560 cf	**21.50'W x 25.98'L x 3.50'H Field A** 1,955 cf Overall - 555 cf Embedded = 1,400 cf x 40.0% Voids
#2A	254.00'	555 cf	**ADS_StormTech RC-750 +Cap** x 12 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 12 Chambers in 4 Rows
		1,115 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.50 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Pond PR-1: PSIS-PR - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

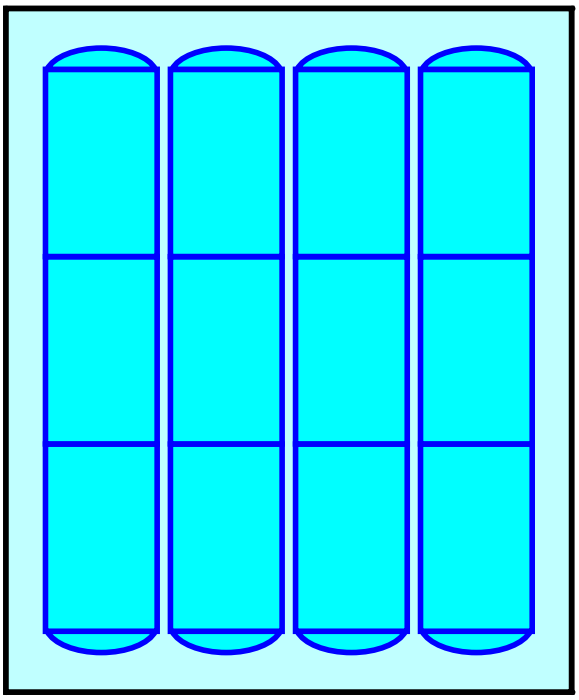
3 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 22.98' Row Length +18.0" End Stone x 2 = 25.98' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 18.0" Side Stone x 2 = 21.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

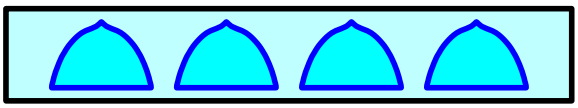
12 Chambers x 46.2 cf = 554.9 cf Chamber Storage

1,954.7 cf Field - 554.9 cf Chambers = 1,399.9 cf Stone x 40.0% Voids = 560.0 cf Stone Storage

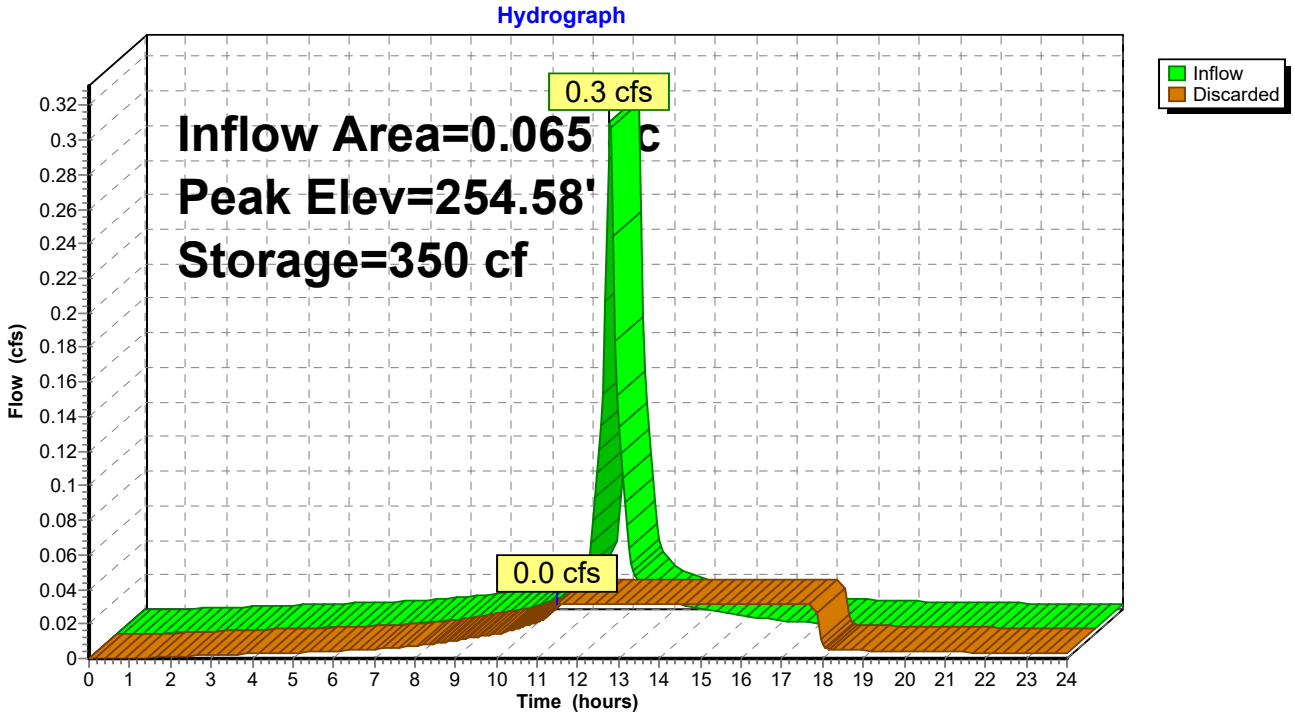
Chamber Storage + Stone Storage = 1,114.8 cf = 0.03 af
Overall Storage Efficiency = 57.0%
Overall System Size = 25.98' x 21.50' x 3.50'

12 Chambers
72.4 cy Field
51.8 cy Stone





Pond PR-1: PSIS-PR



Summary for Pond R-1: ROAD-1

Inflow Area = 0.150 ac,100.00% Impervious, Inflow Depth > 4.56" for 10-Yr 24 Hr event
Inflow = 0.7 cfs @ 12.09 hrs, Volume= 0.06 af
Outflow = 0.1 cfs @ 11.30 hrs, Volume= 0.06 af, Atten= 91%, Lag= 0.0 min
Discarded = 0.1 cfs @ 11.30 hrs, Volume= 0.06 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 254.84' @ 13.00 hrs Surf.Area= 1,056 sf Storage= 885 cf

Plug-Flow detention time= 106.7 min calculated for 0.06 af (100% of inflow)
Center-of-Mass det. time= 106.0 min (854.3 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	1,016 cf	**26.25'W x 40.22'L x 3.50'H Field A** 3,695 cf Overall - 1,156 cf Embedded = 2,539 cf x 40.0% Voids
#2A	254.00'	1,156 cf	**ADS_StormTech RC-750 +Cap** x 25 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 25 Chambers in 5 Rows
		2,172 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.1 cfs @ 11.30 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Pond R-1: ROAD-1 - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

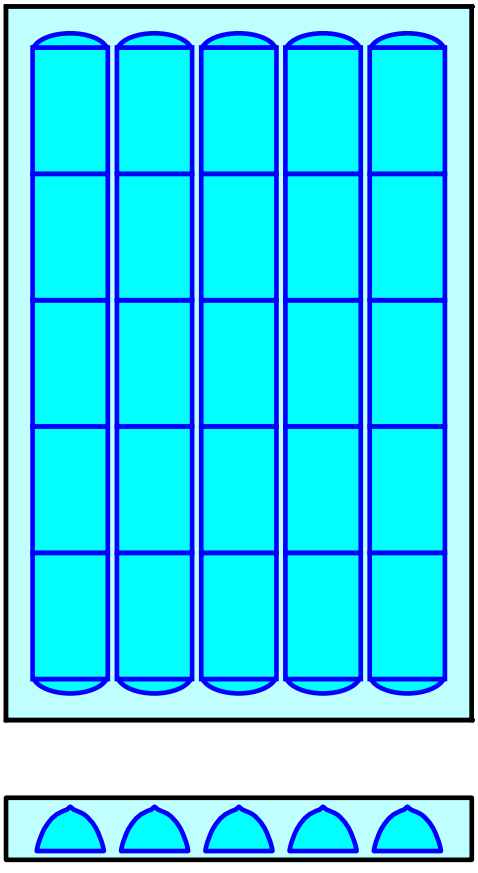
5 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 37.22' Row Length +18.0" End Stone x 2 = 40.22' Base Length
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 18.0" Side Stone x 2 = 26.25' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

25 Chambers x 46.2 cf = 1,156.0 cf Chamber Storage

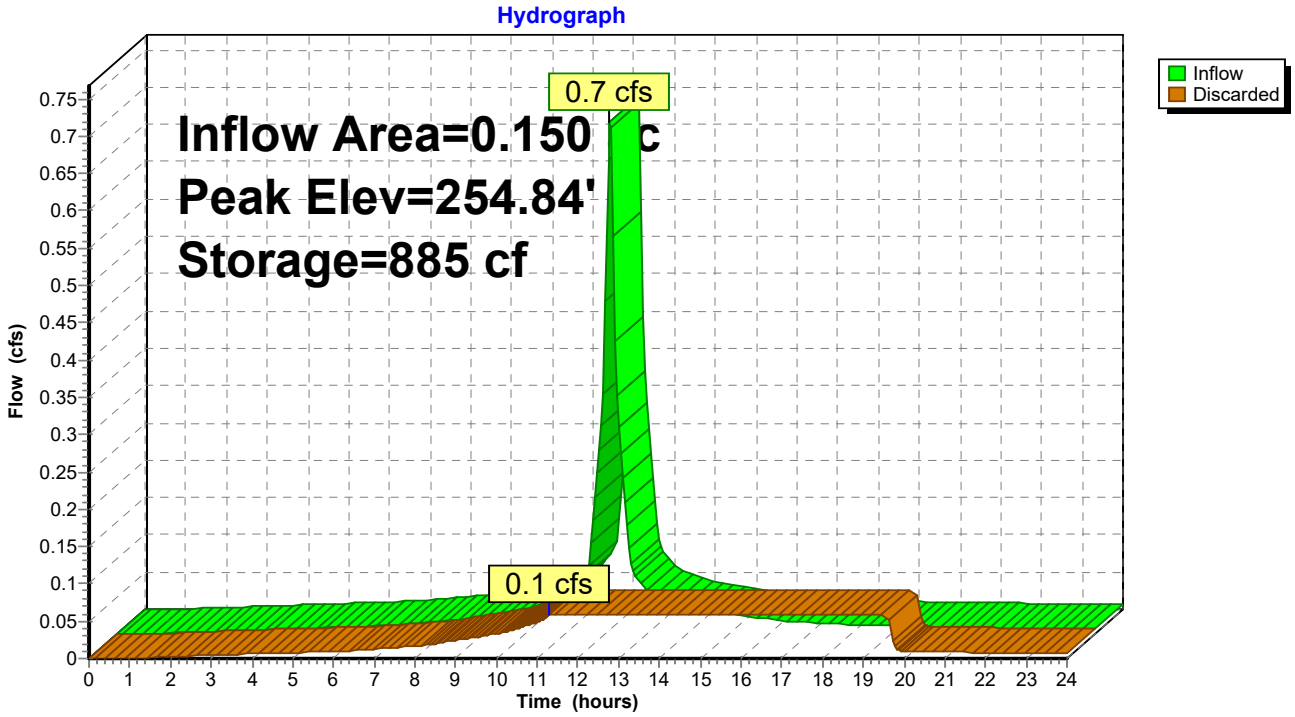
3,694.9 cf Field - 1,156.0 cf Chambers = 2,538.9 cf Stone x 40.0% Voids = 1,015.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,171.5 cf = 0.05 af
Overall Storage Efficiency = 58.8%
Overall System Size = 40.22' x 26.25' x 3.50'

25 Chambers
136.8 cy Field
94.0 cy Stone



Pond R-1: ROAD-1



Summary for Pond R-2: ROAD-2

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth > 4.56" for 10-Yr 24 Hr event
Inflow = 0.7 cfs @ 12.09 hrs, Volume= 0.06 af
Outflow = 0.1 cfs @ 11.30 hrs, Volume= 0.06 af, Atten= 91%, Lag= 0.0 min
Discarded = 0.1 cfs @ 11.30 hrs, Volume= 0.06 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 234.52' @ 13.01 hrs Surf.Area= 1,096 sf Storage= 928 cf

Plug-Flow detention time= 107.9 min calculated for 0.06 af (100% of inflow)
Center-of-Mass det. time= 107.4 min (855.7 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	233.20'	1,016 cf	**20.50'W x 53.46'L x 3.50'H Field A** 3,836 cf Overall - 1,295 cf Embedded = 2,541 cf x 40.0% Voids
#2A	233.70'	1,295 cf	**ADS_StormTech RC-750 +Cap** x 28 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 28 Chambers in 4 Rows
		2,311 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	233.20'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.1 cfs @ 11.30 hrs HW=233.24' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Pond R-2: ROAD-2 - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

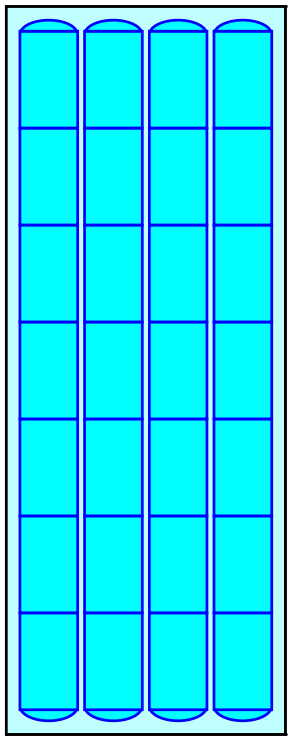
7 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 51.46' Row Length +12.0" End Stone x 2 = 53.46' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

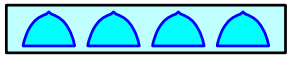
28 Chambers x 46.2 cf = 1,294.7 cf Chamber Storage

3,835.5 cf Field - 1,294.7 cf Chambers = 2,540.8 cf Stone x 40.0% Voids = 1,016.3 cf Stone Storage

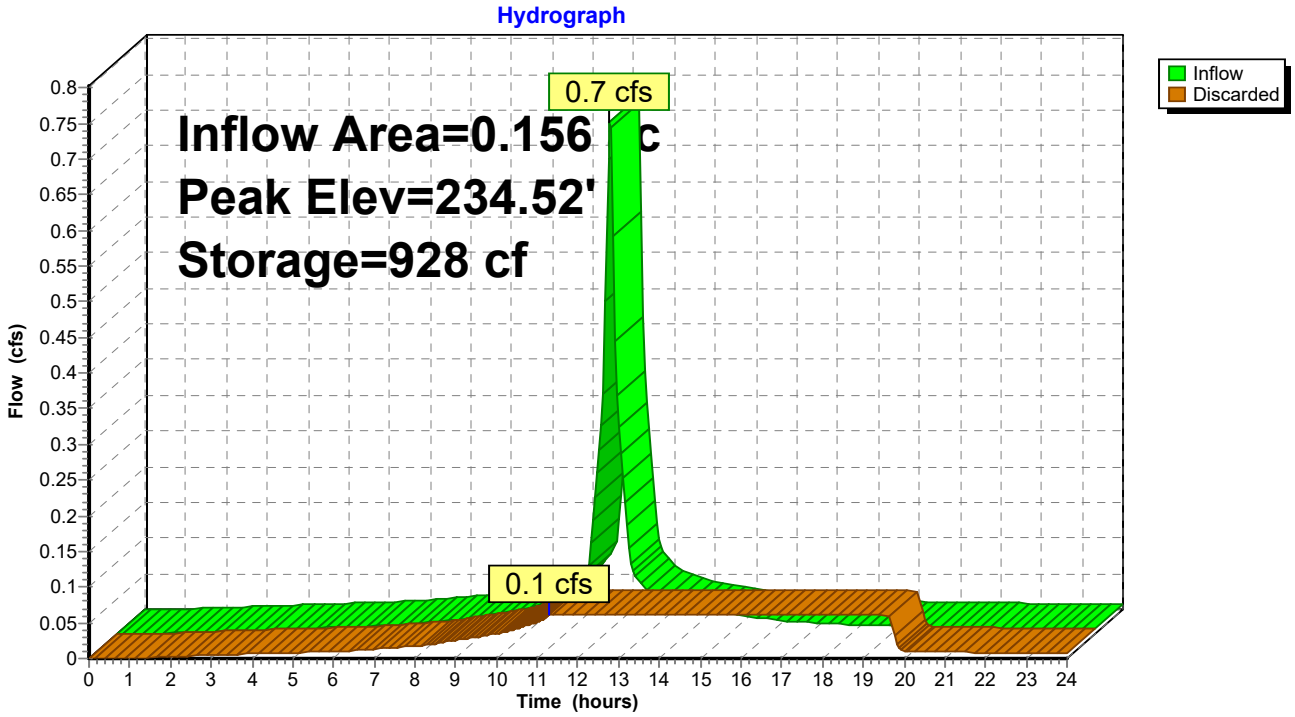
Chamber Storage + Stone Storage = 2,311.0 cf = 0.05 af
Overall Storage Efficiency = 60.3%
Overall System Size = 53.46' x 20.50' x 3.50'

28 Chambers
142.1 cy Field
94.1 cy Stone





Pond R-2: ROAD-2



Summary for Pond R-3: ROAD-1

Inflow Area = 0.262 ac,100.00% Impervious, Inflow Depth > 4.56" for 10-Yr 24 Hr event
Inflow = 1.2 cfs @ 12.09 hrs, Volume= 0.10 af
Outflow = 0.1 cfs @ 11.20 hrs, Volume= 0.10 af, Atten= 92%, Lag= 0.0 min
Discarded = 0.1 cfs @ 11.20 hrs, Volume= 0.10 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.00 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 233.48' @ 13.08 hrs Surf.Area= 1,705 sf Storage= 1,599 cf

Plug-Flow detention time= 122.4 min calculated for 0.10 af (100% of inflow)
Center-of-Mass det. time= 121.7 min (870.0 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	232.00'	1,652 cf	**27.25'W x 62.58'L x 3.50'H Field A** 5,968 cf Overall - 1,838 cf Embedded = 4,131 cf x 40.0% Voids
#2A	232.50'	1,838 cf	**ADS_StormTech SC-740 +Cap** x 40 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 40 Chambers in 5 Rows
		3,490 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	232.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	234.90'	**6.0" Vert. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.1 cfs @ 11.20 hrs HW=232.04' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=232.00' (Free Discharge)
└**2=Orifice/Grate** (Controls 0.0 cfs)

Pond R-3: ROAD-1 - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

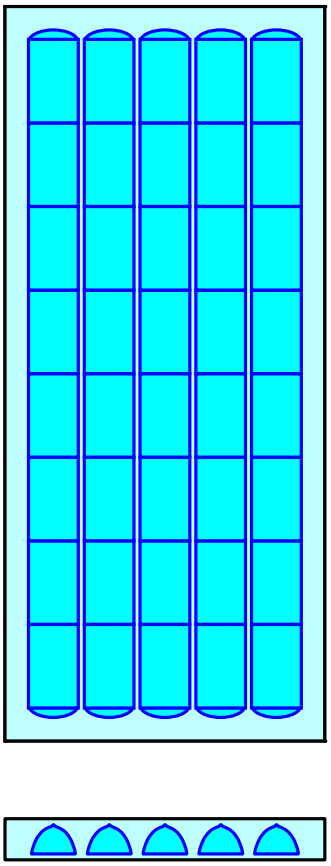
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +24.0" End Stone x 2 = 62.58' Base Length
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 24.0" Side Stone x 2 = 27.25' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

40 Chambers x 45.9 cf = 1,837.6 cf Chamber Storage

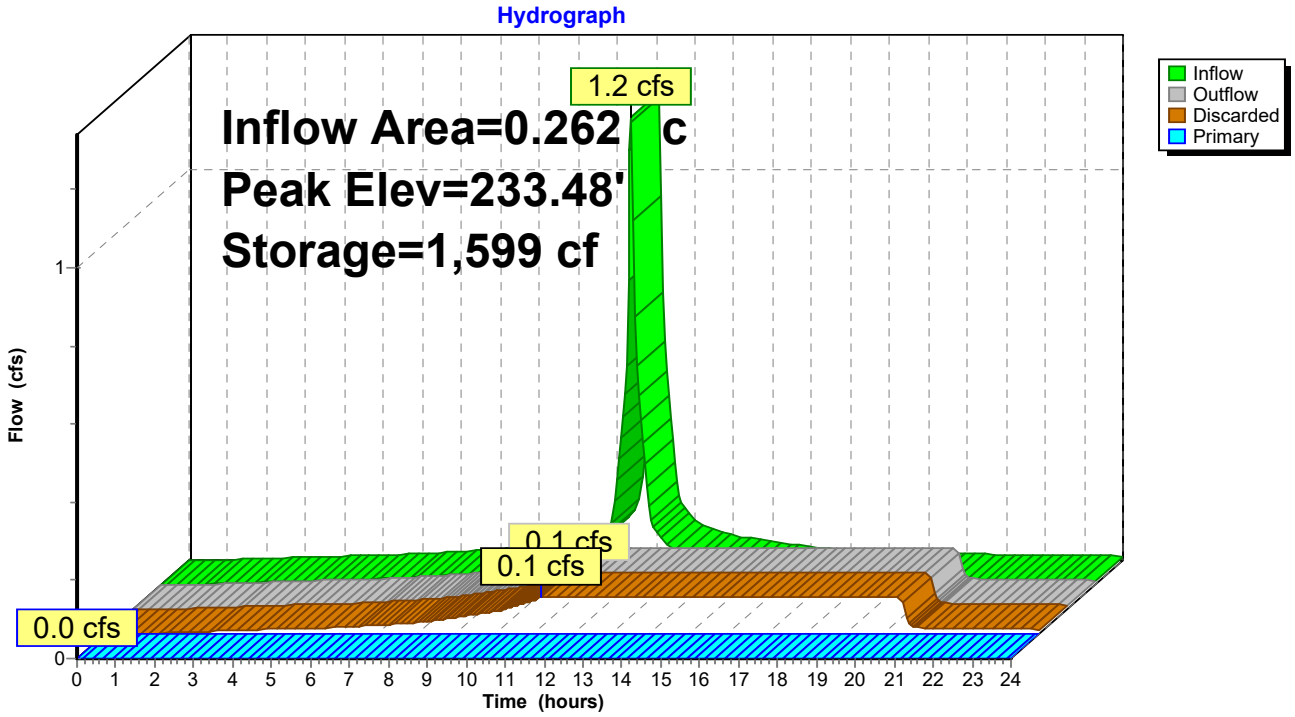
5,968.2 cf Field - 1,837.6 cf Chambers = 4,130.6 cf Stone x 40.0% Voids = 1,652.3 cf Stone Storage

Chamber Storage + Stone Storage = 3,489.9 cf = 0.08 af
Overall Storage Efficiency = 58.5%
Overall System Size = 62.58' x 27.25' x 3.50'

40 Chambers
221.0 cy Field
153.0 cy Stone



Pond R-3: ROAD-1



Summary for Subcatchment 1S: SC 102

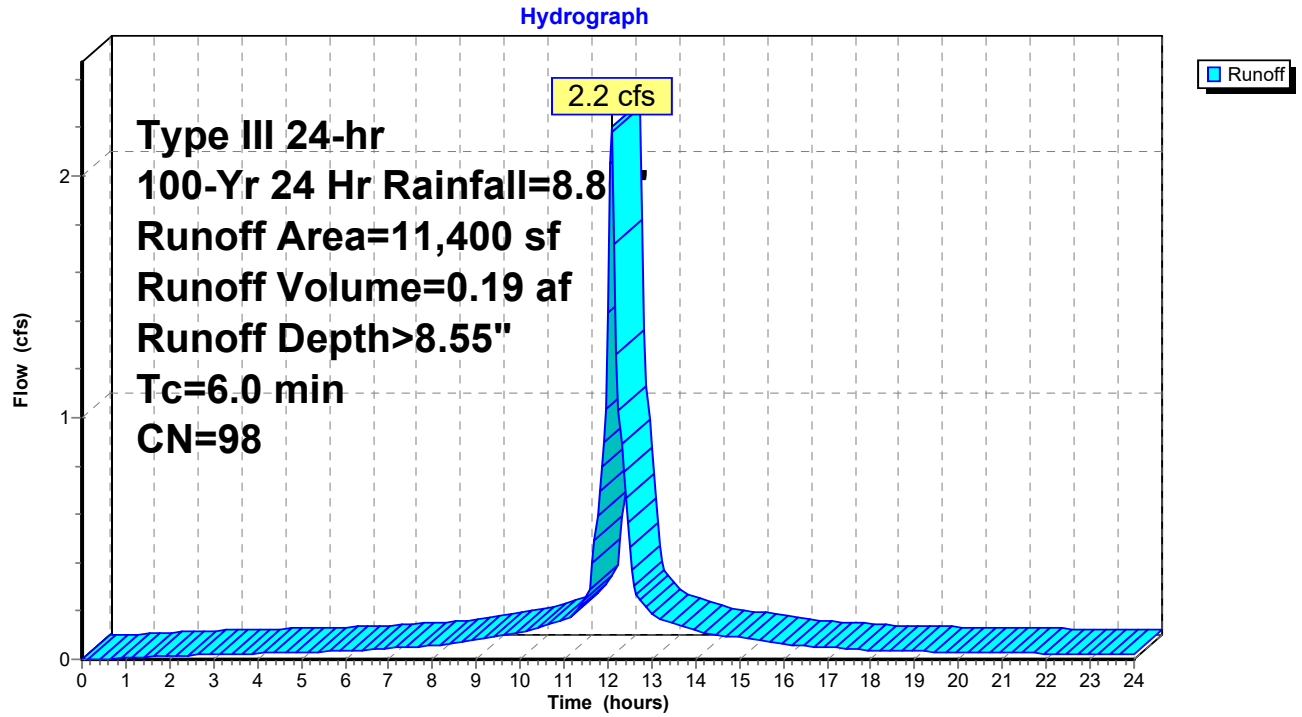
Runoff = 2.2 cfs @ 12.09 hrs, Volume= 0.19 af, Depth> 8.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
11,400	98	Paved parking, HSG B
11,400		100.00% Impervious Area

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

Subcatchment 1S: SC 102



Summary for Subcatchment 101: Subcatchment 101

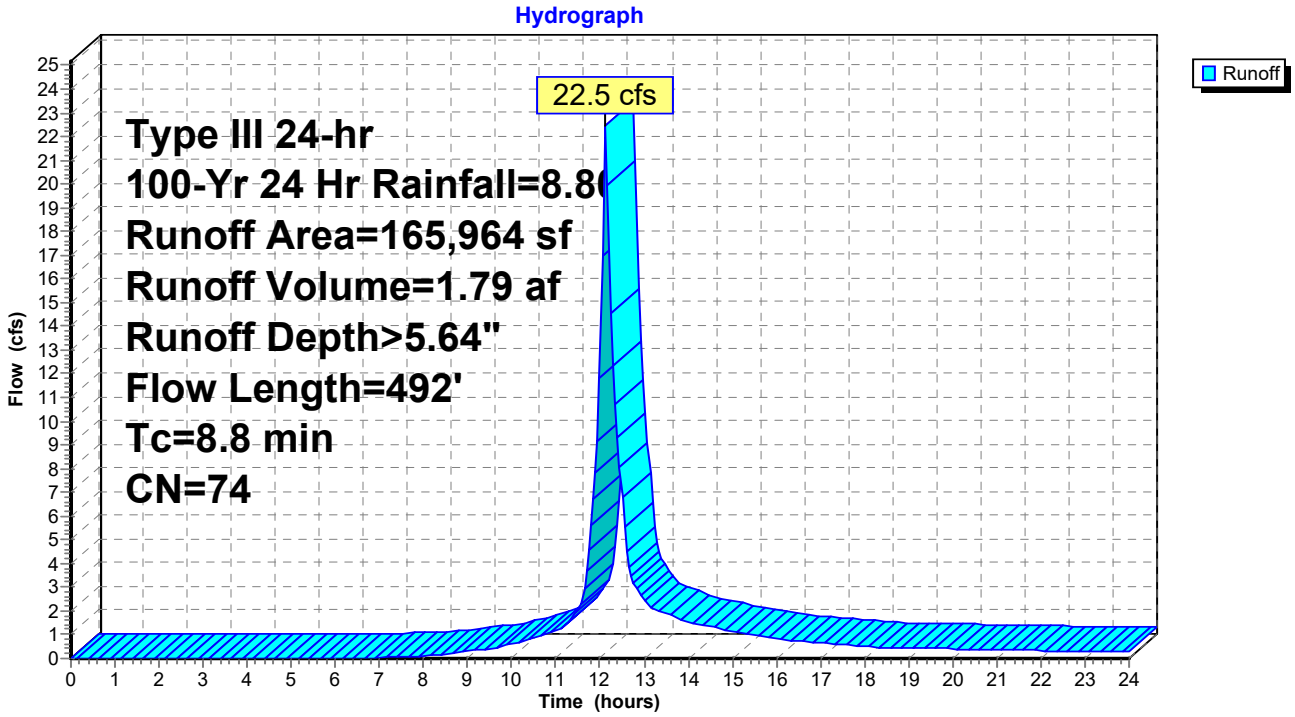
Runoff = 22.5 cfs @ 12.12 hrs, Volume= 1.79 af, Depth> 5.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

	Area (sf)	CN	Description
	24,907	61	>75% Grass cover, Good, HSG B
	7,233	55	Woods, Good, HSG B
*	3,150	98	Proposed Driveway/Walkways/Patios
	43,673	74	>75% Grass cover, Good, HSG C
	11,762	70	Woods, Good, HSG C
	22,189	77	Woods, Good, HSG D
	53,050	80	>75% Grass cover, Good, HSG D
	165,964	74	Weighted Average
	162,814		98.10% Pervious Area
	3,150		1.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	42	0.0480	0.1		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.1	55	0.3000	8.8		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	45	0.0450	4.3		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	350	0.1000	6.4		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.8	492	Total			

Subcatchment 101: Subcatchment 101



Summary for Subcatchment 102: SC 102

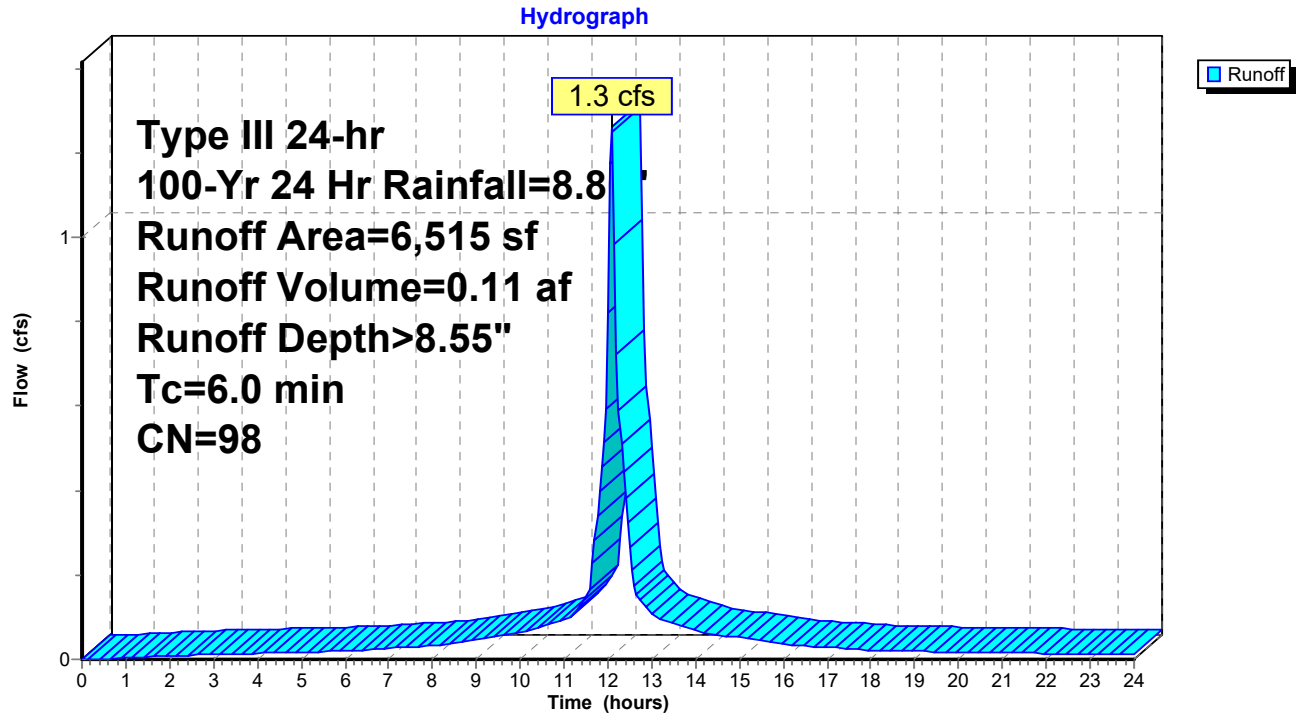
Runoff = 1.3 cfs @ 12.09 hrs, Volume= 0.11 af, Depth> 8.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
6,515	98	Paved parking, HSG B
6,515		100.00% Impervious Area

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

Subcatchment 102: SC 102



Summary for Subcatchment 103: SC 103

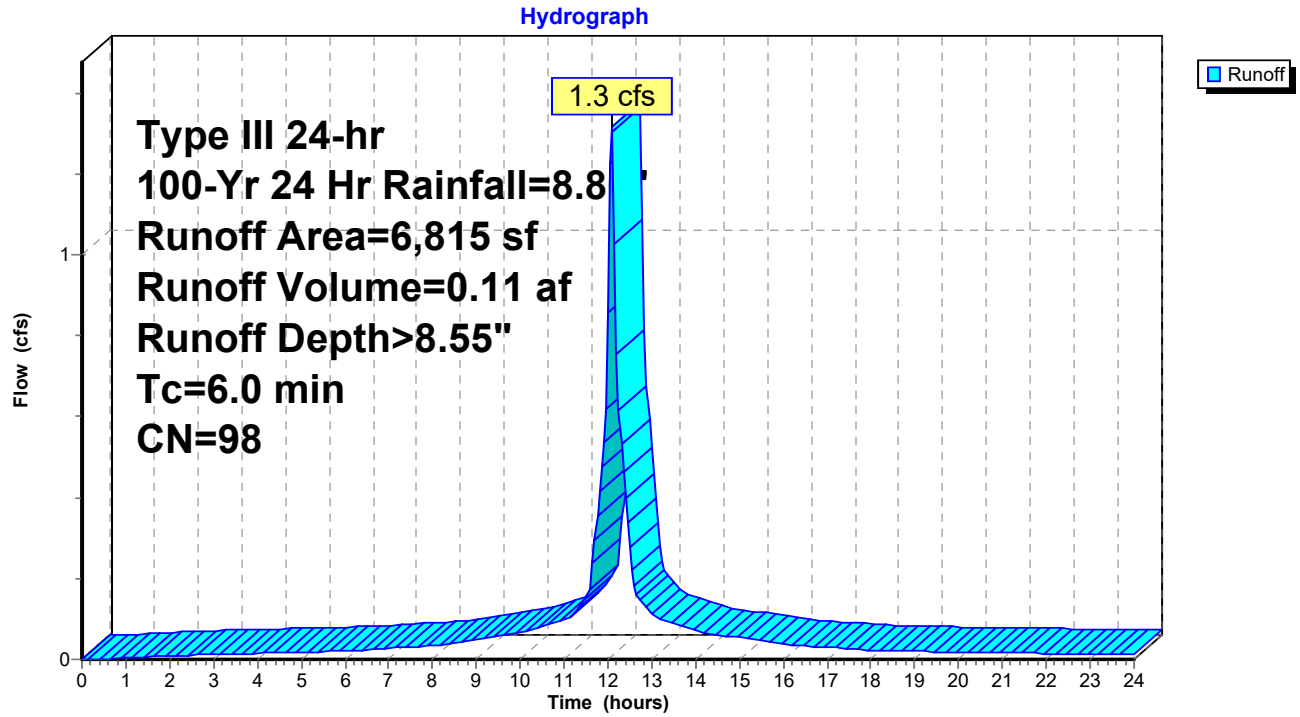
Runoff = 1.3 cfs @ 12.09 hrs, Volume= 0.11 af, Depth> 8.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
6,815	98	Paved parking, HSG B
6,815		100.00% Impervious Area

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

Subcatchment 103: SC 103



Summary for Subcatchment ER: EX ROOF

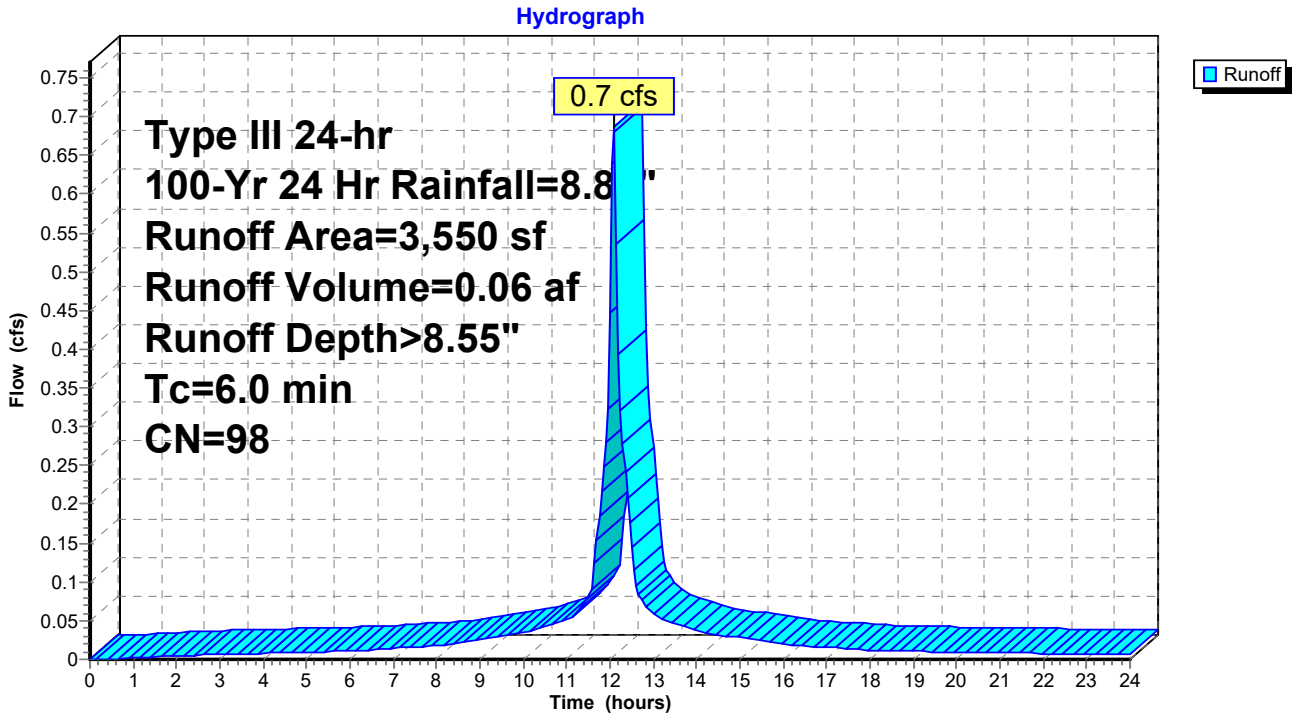
Runoff = 0.7 cfs @ 12.09 hrs, Volume= 0.06 af, Depth> 8.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
3,550	98	Roofs, HSG A
3,550		100.00% Impervious Area

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

Subcatchment ER: EX ROOF



Summary for Subcatchment PR: PROP ROOF

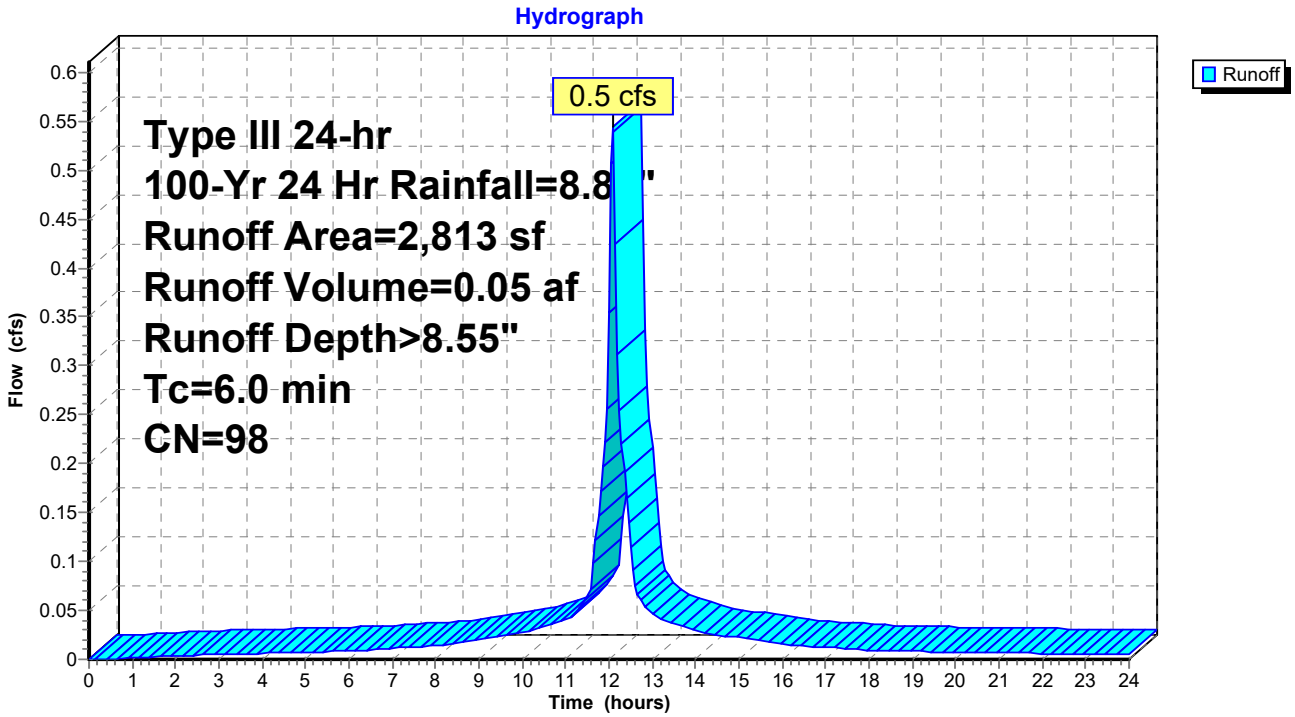
Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.05 af, Depth> 8.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
2,813	98	Roofs, HSG A
2,813		100.00% Impervious Area

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

Subcatchment PR: PROP ROOF



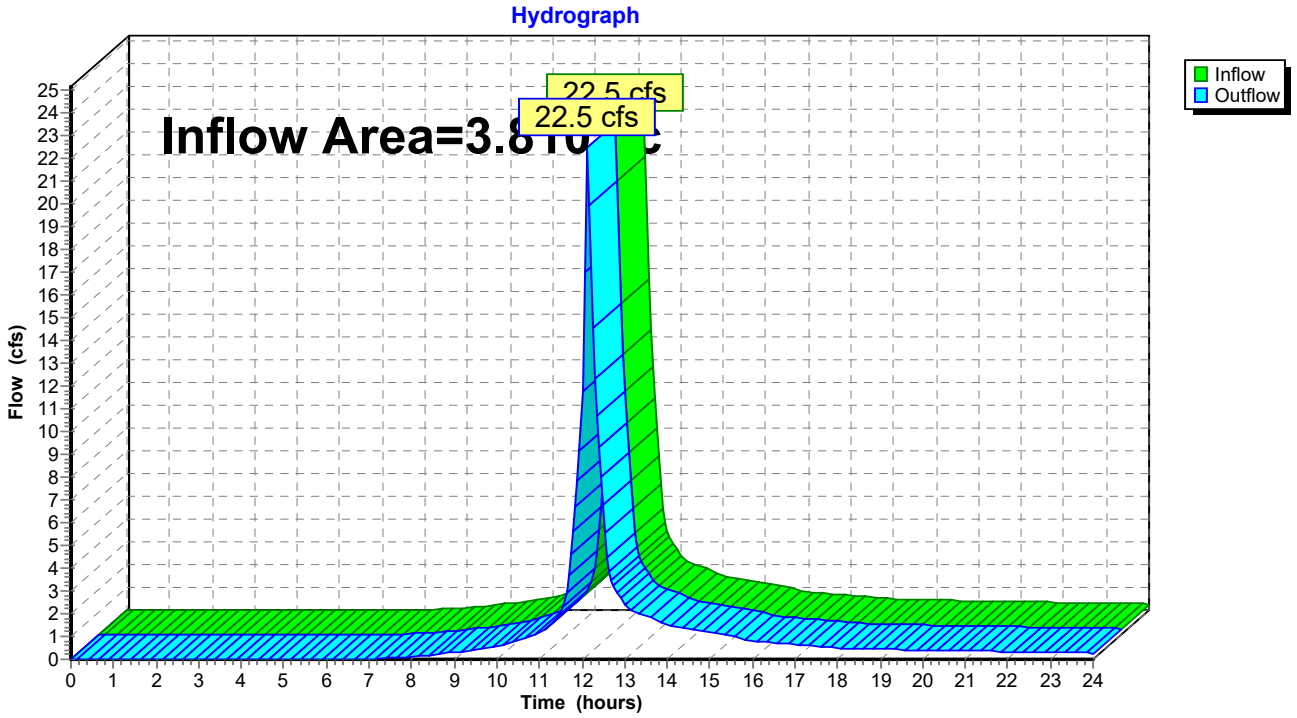
Summary for Reach DP-1: Design Point 1

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

Inflow Area = 3.810 ac, 1.90% Impervious, Inflow Depth > 5.64" for 100-Yr 24 Hr event
Inflow = 22.5 cfs @ 12.12 hrs, Volume= 1.79 af
Outflow = 22.5 cfs @ 12.12 hrs, Volume= 1.79 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1



Summary for Pond ER-1: PSIS-ER

Inflow Area = 0.081 ac,100.00% Impervious, Inflow Depth > 8.55" for 100-Yr 24 Hr event
Inflow = 0.7 cfs @ 12.09 hrs, Volume= 0.06 af
Outflow = 0.0 cfs @ 10.45 hrs, Volume= 0.06 af, Atten= 94%, Lag= 0.0 min
Discarded = 0.0 cfs @ 10.45 hrs, Volume= 0.06 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 255.83' @ 13.85 hrs Surf.Area= 712 sf Storage= 1,056 cf

Plug-Flow detention time= 210.1 min calculated for 0.06 af (95% of inflow)
Center-of-Mass det. time= 180.9 min (920.6 - 739.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	700 cf	**21.50'W x 33.10'L x 3.50'H Field A** 2,491 cf Overall - 740 cf Embedded = 1,751 cf x 40.0% Voids
#2A	254.00'	740 cf	**ADS_StormTech RC-750 +Cap** x 16 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 16 Chambers in 4 Rows
		1,440 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 10.45 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Pond ER-1: PSIS-ER - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

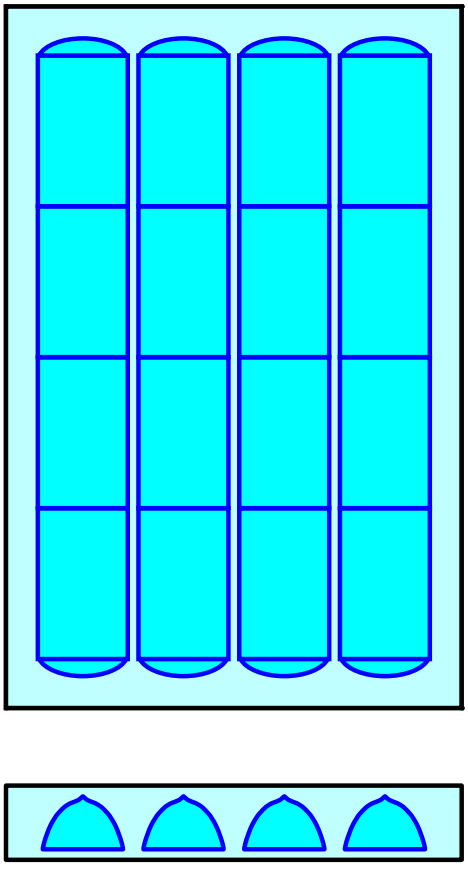
4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +18.0" End Stone x 2 = 33.10' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 18.0" Side Stone x 2 = 21.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

16 Chambers x 46.2 cf = 739.8 cf Chamber Storage

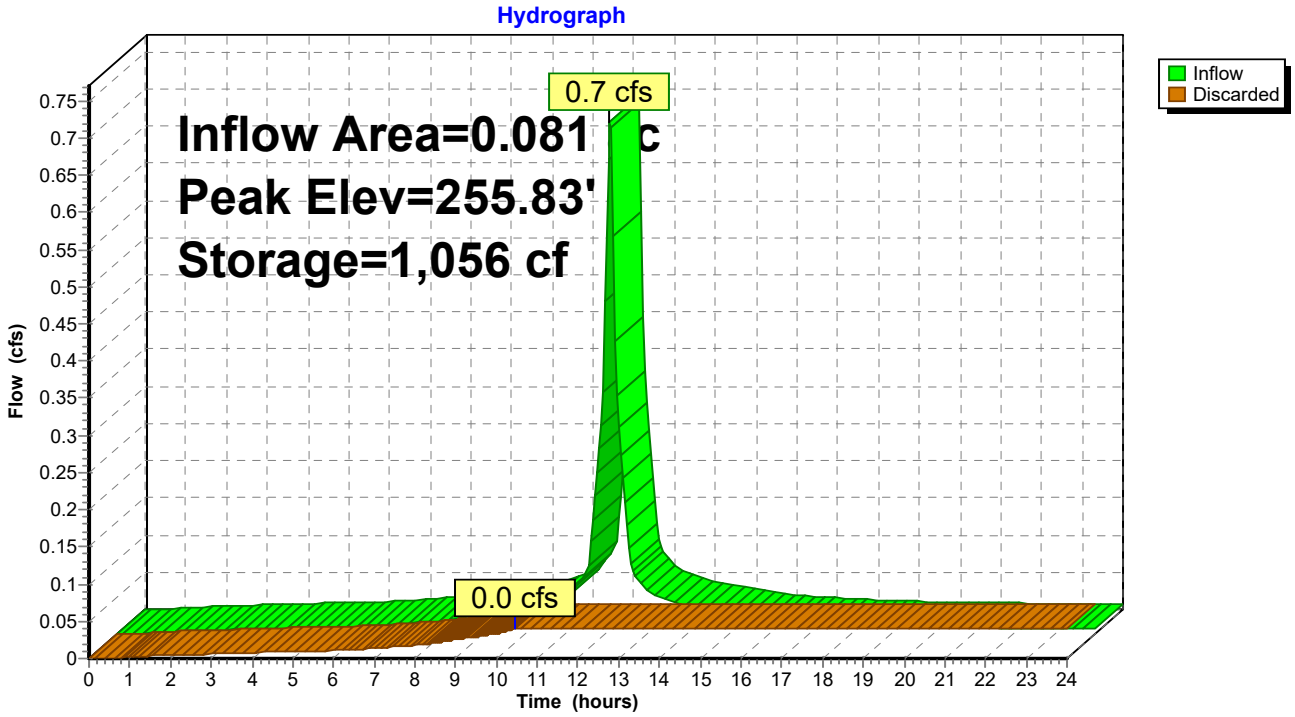
2,490.5 cf Field - 739.8 cf Chambers = 1,750.7 cf Stone x 40.0% Voids = 700.3 cf Stone Storage

Chamber Storage + Stone Storage = 1,440.1 cf = 0.03 af
Overall Storage Efficiency = 57.8%
Overall System Size = 33.10' x 21.50' x 3.50'

16 Chambers
92.2 cy Field
64.8 cy Stone



Pond ER-1: PSIS-ER



Summary for Pond PR-1: PSIS-PR

Inflow Area = 0.065 ac,100.00% Impervious, Inflow Depth > 8.55" for 100-Yr 24 Hr event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 0.05 af
Outflow = 0.0 cfs @ 10.45 hrs, Volume= 0.04 af, Atten= 94%, Lag= 0.0 min
Discarded = 0.0 cfs @ 10.45 hrs, Volume= 0.04 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 255.91' @ 13.87 hrs Surf.Area= 558 sf Storage= 841 cf

Plug-Flow detention time= 212.6 min calculated for 0.04 af (94% of inflow)
Center-of-Mass det. time= 180.1 min (919.7 - 739.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	560 cf	**21.50'W x 25.98'L x 3.50'H Field A** 1,955 cf Overall - 555 cf Embedded = 1,400 cf x 40.0% Voids
#2A	254.00'	555 cf	**ADS_StormTech RC-750 +Cap** x 12 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 12 Chambers in 4 Rows
		1,115 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 10.45 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Pond PR-1: PSIS-PR - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

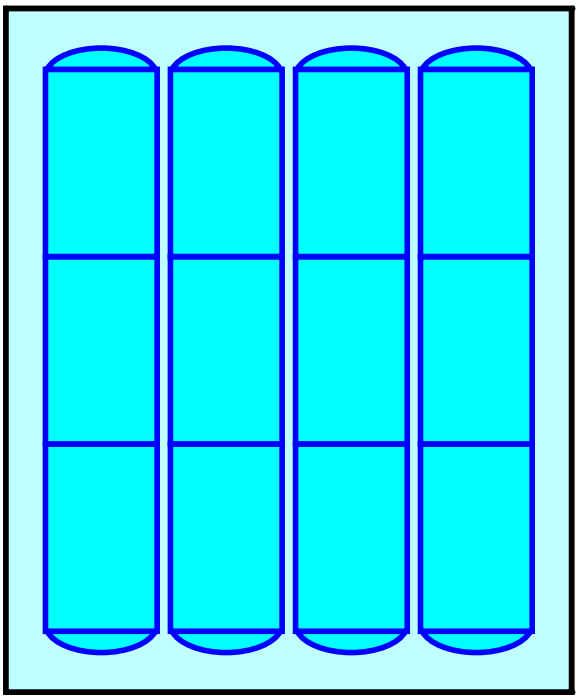
3 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 22.98' Row Length +18.0" End Stone x 2 = 25.98' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 18.0" Side Stone x 2 = 21.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

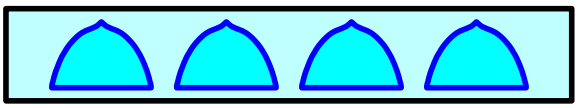
12 Chambers x 46.2 cf = 554.9 cf Chamber Storage

1,954.7 cf Field - 554.9 cf Chambers = 1,399.9 cf Stone x 40.0% Voids = 560.0 cf Stone Storage

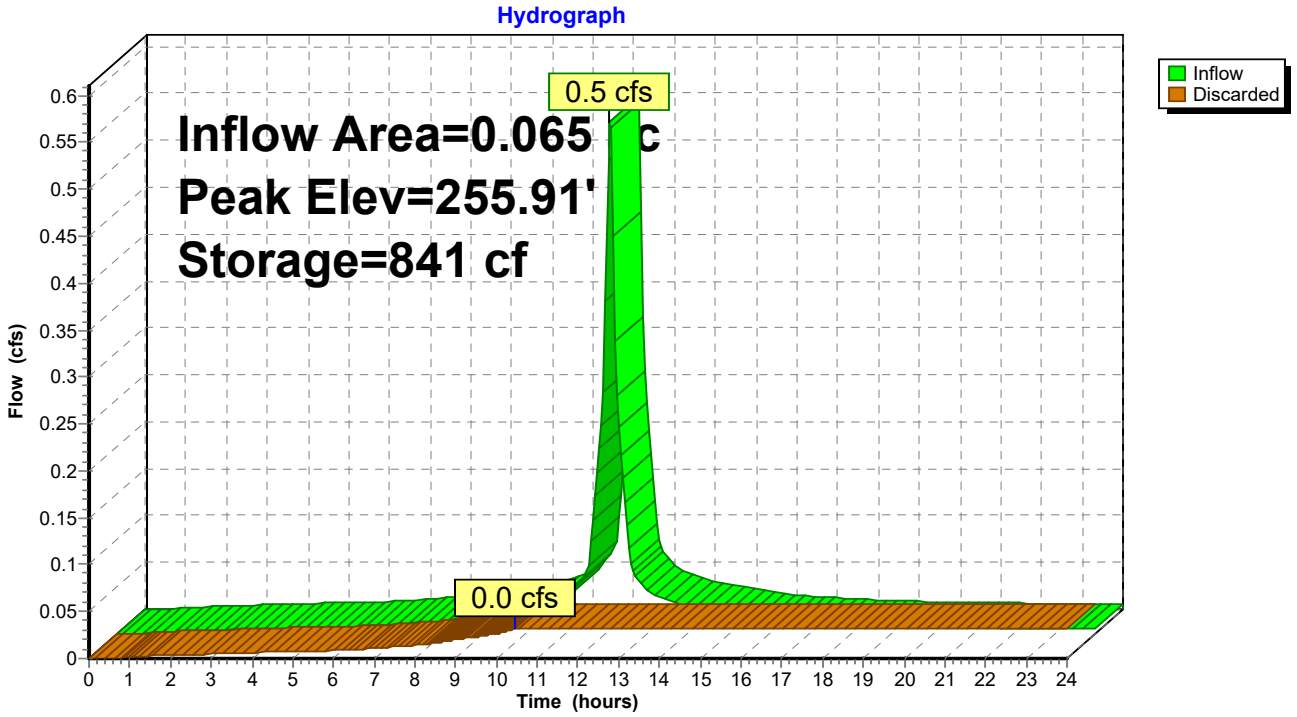
Chamber Storage + Stone Storage = 1,114.8 cf = 0.03 af
Overall Storage Efficiency = 57.0%
Overall System Size = 25.98' x 21.50' x 3.50'

12 Chambers
72.4 cy Field
51.8 cy Stone





Pond PR-1: PSIS-PR



Summary for Pond R-1: ROAD-1

Inflow Area = 0.150 ac,100.00% Impervious, Inflow Depth > 8.55" for 100-Yr 24 Hr event
Inflow = 1.3 cfs @ 12.09 hrs, Volume= 0.11 af
Outflow = 0.1 cfs @ 9.85 hrs, Volume= 0.09 af, Atten= 95%, Lag= 0.0 min
Discarded = 0.1 cfs @ 9.85 hrs, Volume= 0.09 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 256.92' @ 14.49 hrs Surf.Area= 1,056 sf Storage= 2,137 cf

Plug-Flow detention time= 238.9 min calculated for 0.09 af (80% of inflow)
Center-of-Mass det. time= 161.2 min (900.8 - 739.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	253.50'	1,016 cf	**26.25'W x 40.22'L x 3.50'H Field A** 3,695 cf Overall - 1,156 cf Embedded = 2,539 cf x 40.0% Voids
#2A	254.00'	1,156 cf	**ADS_StormTech RC-750 +Cap** x 25 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 25 Chambers in 5 Rows
		2,172 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	253.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.1 cfs @ 9.85 hrs HW=253.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Pond R-1: ROAD-1 - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

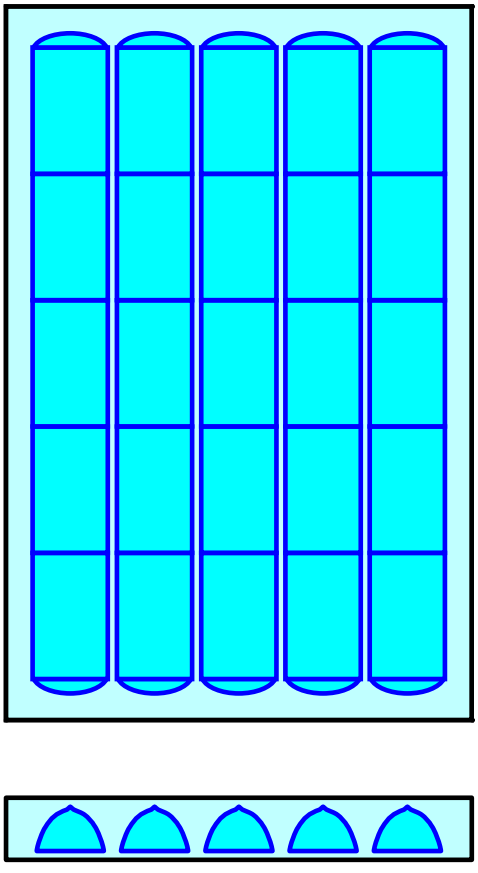
5 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 37.22' Row Length +18.0" End Stone x 2 = 40.22' Base Length
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 18.0" Side Stone x 2 = 26.25' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

25 Chambers x 46.2 cf = 1,156.0 cf Chamber Storage

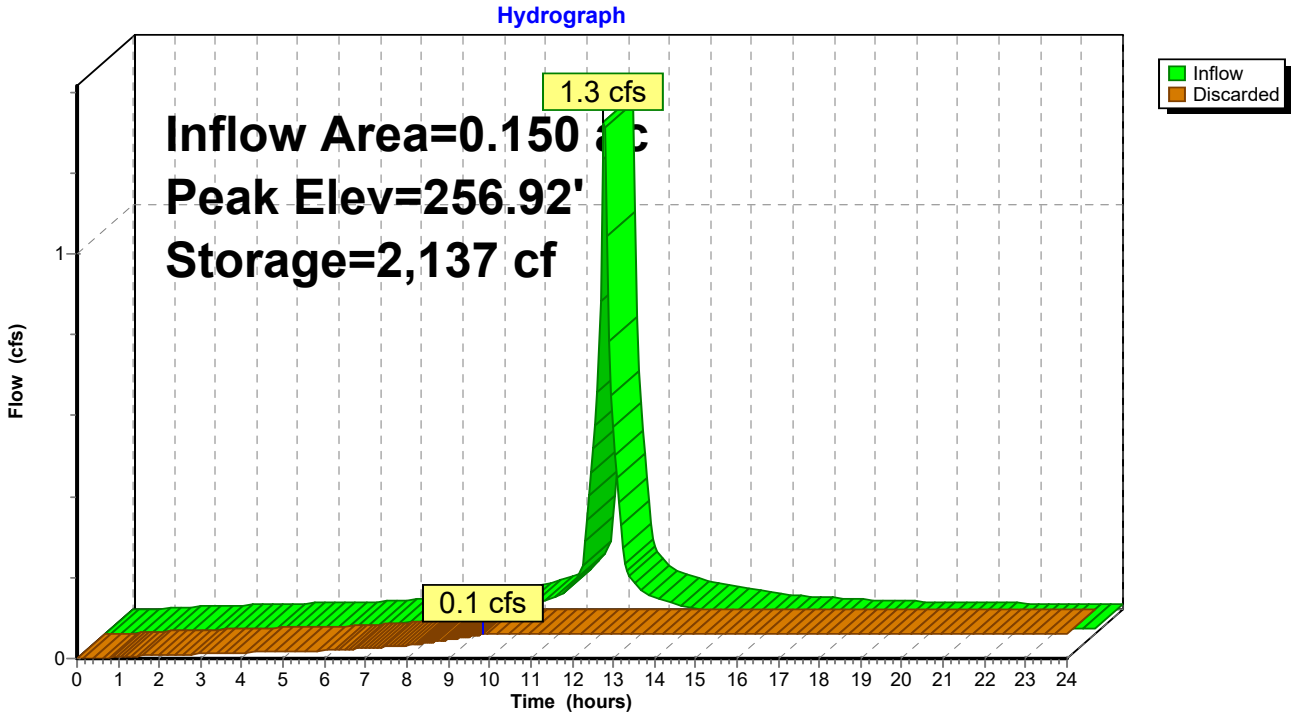
3,694.9 cf Field - 1,156.0 cf Chambers = 2,538.9 cf Stone x 40.0% Voids = 1,015.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,171.5 cf = 0.05 af
Overall Storage Efficiency = 58.8%
Overall System Size = 40.22' x 26.25' x 3.50'

25 Chambers
136.8 cy Field
94.0 cy Stone



Pond R-1: ROAD-1



Summary for Pond R-2: ROAD-2

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth > 8.55" for 100-Yr 24 Hr event
Inflow = 1.3 cfs @ 12.09 hrs, Volume= 0.11 af
Outflow = 0.1 cfs @ 9.80 hrs, Volume= 0.09 af, Atten= 95%, Lag= 0.0 min
Discarded = 0.1 cfs @ 9.80 hrs, Volume= 0.09 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 236.54' @ 14.52 hrs Surf.Area= 1,096 sf Storage= 2,243 cf

Plug-Flow detention time= 239.3 min calculated for 0.09 af (80% of inflow)
Center-of-Mass det. time= 160.5 min (900.1 - 739.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	233.20'	1,016 cf	**20.50'W x 53.46'L x 3.50'H Field A** 3,836 cf Overall - 1,295 cf Embedded = 2,541 cf x 40.0% Voids
#2A	233.70'	1,295 cf	**ADS_StormTech RC-750 +Cap** x 28 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 28 Chambers in 4 Rows
		2,311 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	233.20'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.1 cfs @ 9.80 hrs HW=233.24' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Pond R-2: ROAD-2 - Chamber Wizard Field A

Chamber Model = ADS_StormTech RC-750 +Cap (ADS StormTech® RC-750 with cap length)
Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

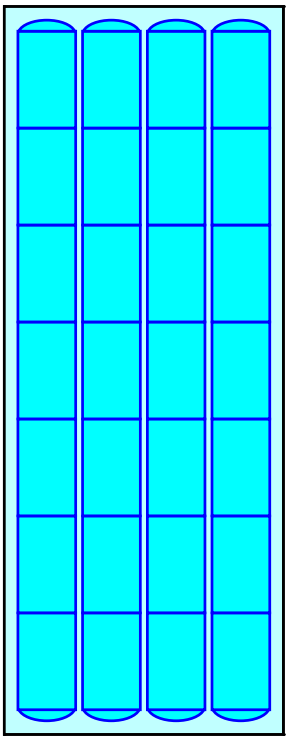
7 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 51.46' Row Length +12.0" End Stone x 2 = 53.46' Base Length
4 Rows x 51.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.50' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

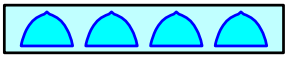
28 Chambers x 46.2 cf = 1,294.7 cf Chamber Storage

3,835.5 cf Field - 1,294.7 cf Chambers = 2,540.8 cf Stone x 40.0% Voids = 1,016.3 cf Stone Storage

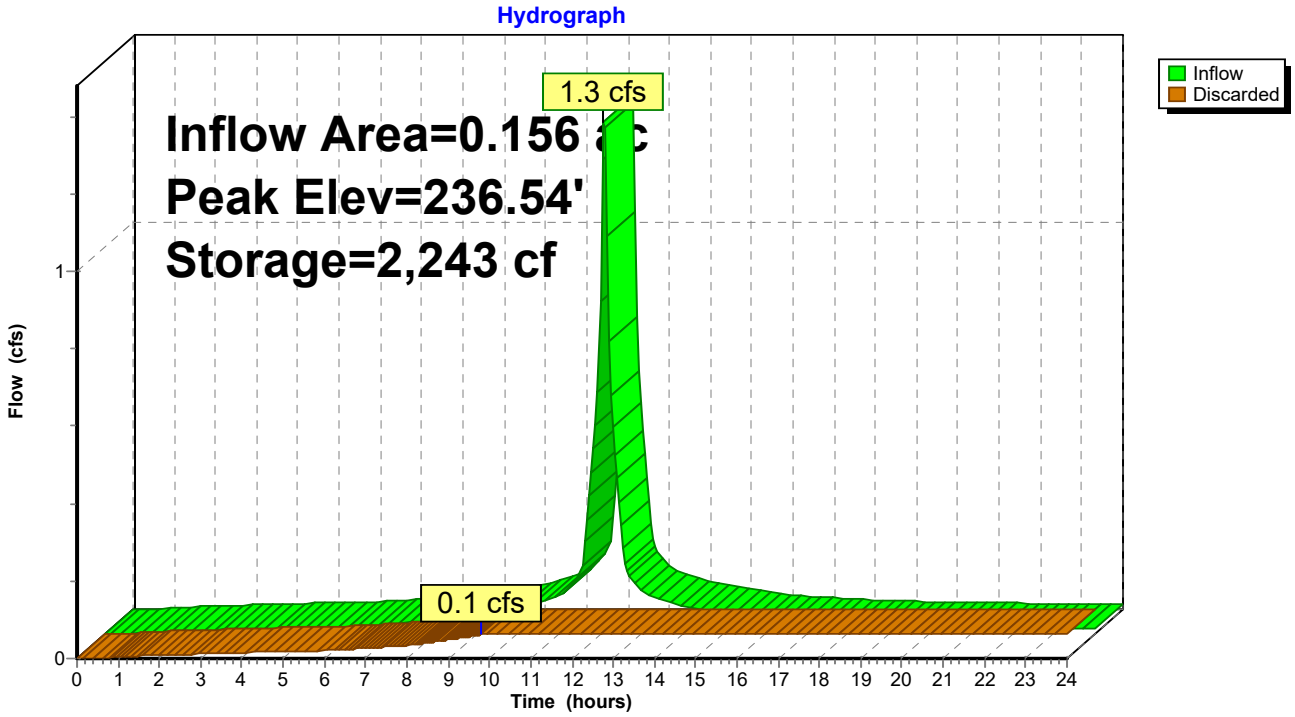
Chamber Storage + Stone Storage = 2,311.0 cf = 0.05 af
Overall Storage Efficiency = 60.3%
Overall System Size = 53.46' x 20.50' x 3.50'

28 Chambers
142.1 cy Field
94.1 cy Stone





Pond R-2: ROAD-2



Summary for Pond R-3: ROAD-1

Inflow Area = 0.262 ac,100.00% Impervious, Inflow Depth > 8.55" for 100-Yr 24 Hr event
Inflow = 2.2 cfs @ 12.09 hrs, Volume= 0.19 af
Outflow = 0.4 cfs @ 12.52 hrs, Volume= 0.16 af, Atten= 80%, Lag= 25.8 min
Discarded = 0.1 cfs @ 9.55 hrs, Volume= 0.14 af
Primary = 0.4 cfs @ 12.52 hrs, Volume= 0.02 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 235.16' @ 12.52 hrs Surf.Area= 1,705 sf Storage= 3,256 cf

Plug-Flow detention time= 206.8 min calculated for 0.16 af (84% of inflow)
Center-of-Mass det. time= 141.0 min (880.7 - 739.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	232.00'	1,652 cf	**27.25'W x 62.58'L x 3.50'H Field A** 5,968 cf Overall - 1,838 cf Embedded = 4,131 cf x 40.0% Voids
#2A	232.50'	1,838 cf	**ADS_StormTech SC-740 +Cap** x 40 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 40 Chambers in 5 Rows
		3,490 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	232.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	234.90'	**6.0" Vert. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.1 cfs @ 9.55 hrs HW=232.04' (Free Discharge)
↑└**1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Primary OutFlow Max=0.3 cfs @ 12.52 hrs HW=235.15' (Free Discharge)
↑└**2=Orifice/Grate** (Orifice Controls 0.3 cfs @ 1.7 fps)

Pond R-3: ROAD-1 - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

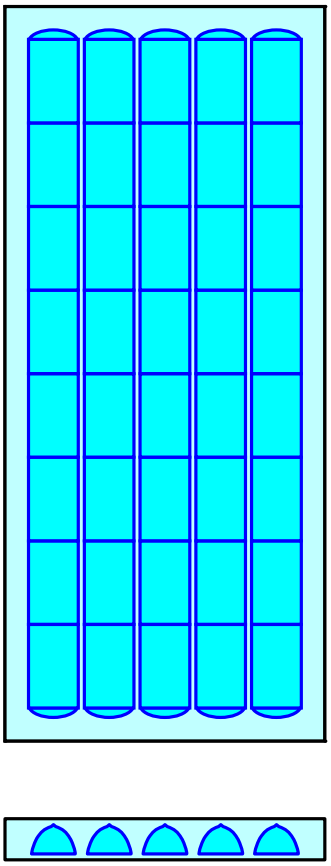
8 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 58.58' Row Length +24.0" End Stone x 2 = 62.58' Base Length
5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 24.0" Side Stone x 2 = 27.25' Base Width
6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

40 Chambers x 45.9 cf = 1,837.6 cf Chamber Storage

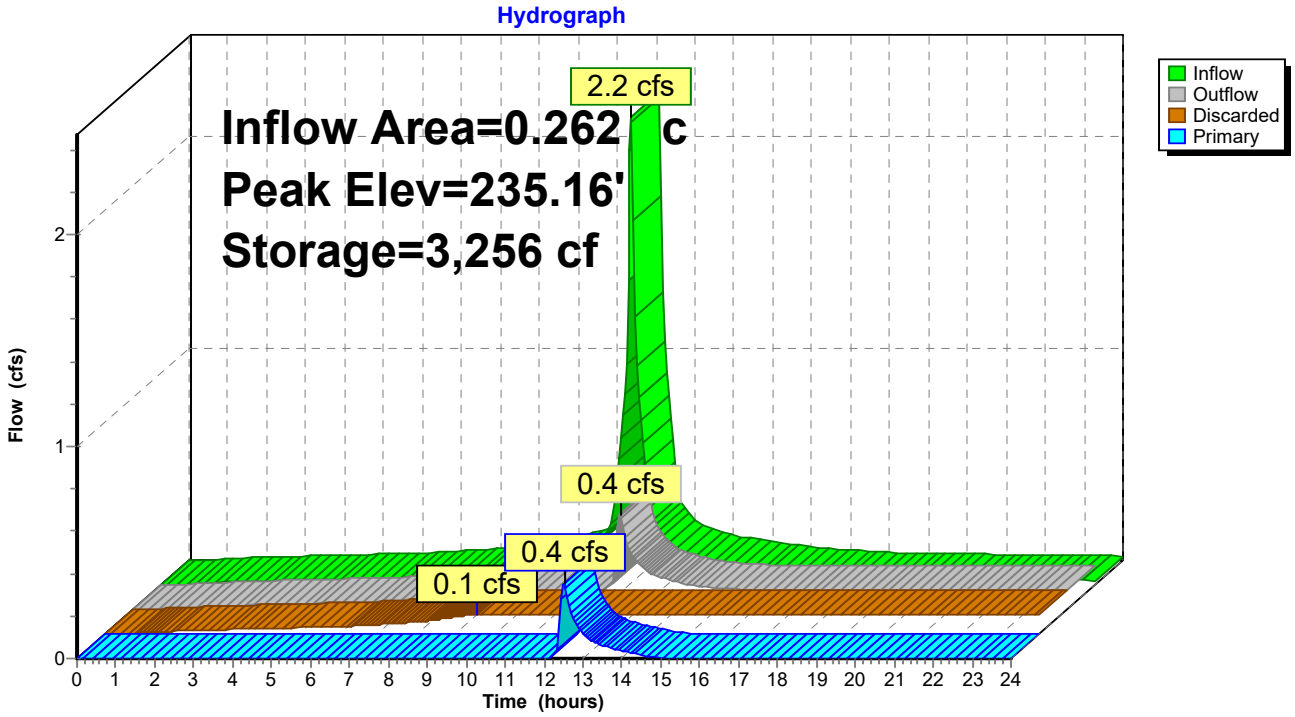
5,968.2 cf Field - 1,837.6 cf Chambers = 4,130.6 cf Stone x 40.0% Voids = 1,652.3 cf Stone Storage

Chamber Storage + Stone Storage = 3,489.9 cf = 0.08 af
Overall Storage Efficiency = 58.5%
Overall System Size = 62.58' x 27.25' x 3.50'

40 Chambers
221.0 cy Field
153.0 cy Stone



Pond R-3: ROAD-1



CAPTURE AREA ADJUSTMENT

Due to a limitation of grading adjustments that can be made for this project the amount of runoff that can be directed to the infiltration facility. Therefor the storage capacity of the infiltration facilities has been increased to allow for so it may capture more of the runoff from the impervious surface within the drainage area.

The following calculation in accordance with MA Stormwater Handbook demonstrates at the storage capacity of the infiltration BMP's is sufficient to meet Standard #3.

Steps:

1. Required recharge volume for total site impervious area.

   From Standard #3 recharge calculations page, summation of required recharge volume = 1,753 CF

2. Site impervious area draining to recharge facilities (from previous). Roof runoff captured completely within infiltration systems on each lot.

   Area = 42,630 SF

3. Divide total site impervious area by impervious area draining to recharge facilities. Roof runoff captured completely within infiltration systems.

   Total Site Impervious =60,128 SF

   60,128 SF / 42,630 SF = 1.41

4. Multiply result of #3 by original recharge volume in #1.

   1.41 x 1,753 = 2,472 CF

5. Ensure minimum 65% impervious area draining to recharge facilities.

   42,630 SF / 60,128 SF = 0.71 = 71%

6. Recharge facilities provide total recharge volume of 15,819 CF. Recharge volume 15,819 CF > 2,472 CF adjusted total recharge volume.

All Recharge Volumes have been achieved as required by the Massachusetts Stormwater Management Standards

72-HOUR DRAW DOWN CALCULATIONS

$$\text{Time} = \frac{Rv}{(K)(BottomArea)(n)}$$

R_v = Storage Volume
K = Saturated Hydraulic Conductivity for Loamy Sand = 2.41 in/hour
Bottom Area = Bottom Area of Recharge Structure
n = Porosity (1)

PSIS R-1 AND R-2

R_v = 2,172 cf
Bottom Area = 1,040 sf

Time = 2,172 cf / (2.41 in/hr)(1'/12")(1,040 sf)(1)

Time = 10.4 hours
10.4 hours < 72 hours

PSIS-PR

R_v = 1,115 cf
Bottom Area = 546 sf

Time = 1,115 cf / (2.41in/hr)(1'/12")(546 sf)(1)

Time = 10.17 hours
10.17 hours < 72 hours

PSIS-ER

R_v = 1,440 cf
Bottom Area = 693 sf

Time = 1,440 cf / (2.41in/hr)(1'/12")(639 sf)(1)

Time = 10.35 hours
10.35 hours < 72 hours

OPERATION AND MAINTENANCE &
EROSION AND SEDIMENTATION CONTROL PROGRAM
for
A PROPOSED STORMWATER MANAGEMENT SYSTEM
located at
69 PLEASANT STREET
SITE SENSITIVE DELVELOPMENT SUBDIVISION
LEXINGTON, MASSACHUSETTS

Applicant:

Sheldon Corporation
121 Marrett Road
Lexington, Massachusetts 02420

Prepared by:

Patriot Engineering
35 Bedford Street, Suite 4
Lexington, Massachusetts 02420
(978) 726-2654

March 30, 2022

Project Name: 69 Pleasant Street Subdivision

Owner Name: Sheldon Corporation

Party Responsible for Maintenance During Construction: Contractor

Party Responsible for Maintenance After Construction: Homeowner's Association

Erosion and Sedimentation Control Measures during Construction Activities

Filtermitt (or approved equal)

Filtermitt (or approved equal) will be installed along the down gradient limit of work as depicted on the Site Plan. The filtermitt shall be installed prior to the commencement of any work on-site and in accordance with the design plans. An additional supply of filtermitt shall be on-site to replace and/or repair any filtermitt that have been disturbed or are in poor condition. The line of filtermitt shall be inspected and maintained on a weekly basis and after every major storm event (2-year) during construction. No construction activities are to occur beyond the filtermitt at any time. Deposited sediments shall be removed when the volume of the deposition reaches approximately one-half the height of the filtermitt.

Stockpiles

All unused debris, soil, and other material shall be stockpiled in locations of relatively flat grades, away from any trees identified to be saved and upgradient of the filtermitt. Stockpile side slopes shall not be greater than 2:1. All stockpiles shall be surrounded by a row of filtermitt. Surrounding filtermitt shall be inspected and maintained on a daily basis.

Surface Stabilization

The surface of all disturbed areas shall be stabilized during and after construction. Disturbed areas remaining idle for more than 14 days shall be stabilized. Temporary measures shall be taken during construction to prevent erosion and siltation. No construction sediment shall be allowed to enter any infiltration system or formal drainage system. All disturbed slopes will be stabilized with a permanent vegetative cover. Some or all of the following measures will be utilized on this project as conditions may warrant.

a. Temporary Seeding
b. Temporary Mulching
c. Permanent Seeding
d. Placement of Sod
e. Hydroseeding
f. Placement of Hay
g. Placement of Jute Netting

Dust shall be controlled at the site.

Tree Protection

Existing trees to be saved shall be protected with orange construction fence (offset from the tree trunk by professional standard based on canopy).

Construction Tracking Pad

A construction tracking pad shall be installed at the designated entrances/exits, as shown on the Site plans, to the site to reduce the amount of sediment transported off site. The construction tracking pad shall be inspected weekly.

Inspection and Maintenance of Area Drain

The performance of the area drain shall be checked after every major storm event during construction.

Catch Basins

Silt Sacks shall be installed within the basins. The performance of the basins shall be checked after every major storm event during construction, in the event of clogging within the Silt Sack, it shall be removed and replaced with a clean Silt Sack. Stormwater quality unit shall be checked bi-weekly.

Subsurface Infiltration Facilities

Construction activity above and around the proposed location of the subsurface infiltration facility shall be limited to prevent compaction of the existing soil. Care shall be taken to redirect stormwater runoff from this area to prevent ponding. Installation of this system shall occur under dry weather conditions and system shall be backfilled immediately to prohibit the introduction of fines or other material that would compromise the functionality of this system.

Removal of Sediment and Erosion Controls

At the completion of construction activities and after receiving approval from the Town of Lexington, all physical sediment and erosion controls shall be removed from the site per Town of Lexington. The areas where the controls have been removed shall be seeded and stabilized immediately upon removal.

Long-Term Inspection and Maintenance Measures after Construction

Erosion Control

Eroded sediments can adversely affect the performance of the stormwater management system. Eroding or barren areas should be immediately re-vegetated.

Inspection and Maintenance of Trench/Area Drain

The area drain shall be inspected six (6) times per year including the end of the foliage and snow removal seasons, and if necessary, any maintenance shall be performed so that it

functions as designed. The yard drain shall be cleaned six times per year, or when sediment in the bottom of the sump reaches ½ the depth from the bottom of the invert of the lowest pipe in the basin. Inlet and outlet pipes should be checked for clogging.

Deep Sump Catch Basins

The catch basins shall be inspected four (4) times per year (two of which being the end of the foliage and snow removal seasons), and if necessary, any maintenance shall be performed so that it functions as designed. The basins shall be cleaned four (4) times per year, or when sediment in the bottom of the sump reaches ½ the depth from the bottom of the invert of the lowest pipe in the basin. Inlet and outlet pipes should be checked for clogging.

Isolator Row

The Isolator Rows should be inspected at regular intervals and maintained when necessary to ensure optimum performance. At minimum, inspections shall be performed twice per year (e.g. spring and fall) and after every major storm. The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet row or filters. The inspection shall also quantity the accumulation of sediment and high water observation. The isolator rows shall be cleaned annually and when the inspections show that maintenance is necessary. Cleaning of an Isolator Rows shall be down during dry weather when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method. The following steps shall occur:

- Remove/Open lid on inline drain manhole
- Remove and clean flexstorm filter
- Using a flashlight and stadia rod, measure depth of sediment and record on maintenance log
- If sediment is at or above 3” than maintenance is necessary
- A fixed culvert cleaning nozzle with rear facing spread shall be used
- Apply multiple passes of jetvac until backflush is clean
- Vacuum structure sump as required
- Replace all covers, grates, filters and lids
- Record observations and actions in log
- Inspect and clean catchbasins upstream from the subsurface infiltration facility.

Subsurface Infiltration Facility

The infiltration system inspections should include inspections following the first several rainfall events or first few months after construction, after all major storms (3.2” inches of rain over a 24-hour period or greater), and on regular bi-annual scheduled dates, to ascertain whether captured runoff drains within 72 hours following the event. Ponded water inside the system (as visible from the observation well) after several dry days often indicates that the bottom of the system is clogged. If the water does not drain, then a qualified professional should be retained to determine the cause of apparent infiltration failure and recommend corrective action. Such corrective action should be immediately implemented by the homeowner. If depth of sediment is observed to be greater than 3” then the system should be cleaned. The homeowner shall contact a sewer and drain cleaning company to

flood the system via pump truck so the water is forced back to the upstream cleanout where sediment can be vacuumed out.

Debris and Litter Removal

Trash may collect in the BMP's, potentially causing clogging of the facilities. All debris and litter shall be removed when necessary, and after each storm event. Sediment and debris collected from vacuuming and/or sweeping should be disposed of at a permitted waste disposal facility. Avoid disposing of this material on site, where it could be washed into the proposed subsurface infiltration systems.

Lawn Mowing

All lawn mowing to take place will be done with a mulch mower so grass clippings will not be an issue.

<u>Good Housekeeping Practices</u> (in accordance with Standard 10 of the Stormwater Management Handbook to prevent illicit discharges)

Provisions for storing paints, cleaners, automotive waste and other potentially hazardous household waste products inside or under cover

- All materials on site will be stored inside in a neat, orderly, manner in their appropriate containers with the original manufacturer's label.
- Only store enough material necessary. Whenever possible, all of a product shall be used up before disposing of container.
- Manufacturer, local, and State recommendations for proper use and disposal shall be followed.

Vehicle washing controls

- A commercial car wash shall be used when possible. Car washes treat and/or recycle water.
- Cars shall be washed on gravel, grass, or other permeable surfaces to allow filtration to occur.
- Use biodegradable soaps.
- A water hose with a nozzle that automatically turns off when left unattended.

Requirements for routine inspection and maintenance of stormwater BMPs

- See Inspection and Maintenance Measures after Construction.

Spill prevention and response plans

- Spill Control Practices shall be in conformance with the guidelines set forth in the National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan (SWPPP)

Provisions for maintenance of lawns, gardens, and other landscaped areas

- Grass shall not be cut shorter than 2 to 3 inches and mulch clipping should be left on lawn as a natural fertilizer.
- Use low volume water approaches such as drip-type or sprinkler systems. Water plants only when needed to enhance root growth and avoid runoff problems.

- The use of mulch shall be utilized where possible. Mulch helps retain water and prevents erosion.

Requirements for storage and use of fertilizers, herbicides and pesticides

- Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.
- Do not fertilize before a rainstorm.
- Consider using organic fertilizers. They release nutrients more slowly.
- Pesticides shall be applied on lawns and gardens only when necessary and applied only in the minimum amounts recommended by the manufacturer.

Pet waste management

- Scoop up and seal pet wastes in a plastic bag. Dispose of properly, in the garbage.

Provisions for solid waste management

- All solid waste shall be disposed of or recycled in accordance with local town regulations.

Snow disposal and plowing plans relative to Resource Area

- Snow shall be plowed and stored on gravel, grass, or other permeable surfaces to allow filtration to occur.
- Once snow melts all sand salt and debris shall be extracted from surface and properly disposed of.
- Snow shall not be disposed of in any resource area or waterbody.
- Avoid disposing snow on top of storm drain catchbasins or stormwater drainage swale.

Winter Road Salt and/or Sand use and storage restrictions

- Sand storage piles should be located outside the 100-year buffer zone and shall be covered at all times. No salt to be stored or used on site.
- Alternative materials, such as sand or gravel, should be used in especially sensitive areas.

Roadway and Parking Lot sweeping schedule

- Pavement sweeping shall be conducted at a frequency of not less than once per year.
- Removal of any accumulated sand, grit, and debris from driveway after the snow melts shall be completed shortly after snow melts for the season.

Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL

Not Applicable

Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan

To be determined by the owner.

List of Emergency contacts for implementing Long-Term Pollution Prevention Plan

To be determined by the owner.

Applicant's Certification

I certify under penalty of law that I have read, understand and agree to abide by the practices outlined in this document.

Signed:_____ Date:_____

Sheldon Corporation

Contractor's Certification

I certify under penalty of law that I have read, understand and agree to abide by the practices outlined in this document.

Signed:_____ Date:_____

Contractor

STORMWATER MANAGEMENT
CONSTRUCTION PHASE

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

PROJECT LOCATION: 69 Pleasant St, Lexington, MA **WEATHER:** _____

Inspection Date	***Inspector***	***Area Inspected***	***Required Inspection Frequency if BMP***	***Comments***	***Recommendation***	***Follow-up Inspection Required (yes/no)***
		Filtermitt	*Weekly and After Major Storm Events*			
		Construction Tracking Pad	*Weekly and After Major Storm Events*			
		Area Drains	*Weekly and After Major Storm Events*			
		Subsurface Infiltration System	*Weekly and After Major Storm Events*			
		Deep Sump Catch Basin	*Weekly and After Major Storm Events*			

(1) Refer to the Massachusetts Stormwater Handbook, Volume Two: Stormwater Technical Handbook (February 2008) for recommendations regarding frequency for inspection and maintenance of specific BMP's.

(2) Inspections to be conducted by a qualified professional such as an environmental scientist or civil engineer.

Limited or no use of sodium chloride salts, fertilizers or pesticides recommended.

Other notes: (Include deviations from: Con. Comm. Order of Conditions, PB Approval, Construction Sequence and Approved Plan)

Stormwater Control Manager: _____

STORMWATER MANAGEMENT
AFTER CONSTRUCTION

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

PROJECT LOCATION: 69 Pleasant St, Lexington, MA **WEATHER:** _____

Inspection Date	***Inspector***	***Area Inspected***	***Required Inspection Frequency if BMP***	***Comments***	***Recommendation***	***Follow-up Inspection Required (yes/no)***
		Area Drain	*Bi-annually and After Major Storm Events*			
		Isolator Rows	*Bi-annually and After Major Storm Events*			
		Subsurface Infiltration System	*Bi-annually and After Major Storm Events*			
		Deep Sump Catch Basin	*Quarterly and After Major Storm Events*			

(3) Refer to the Massachusetts Stormwater Handbook, Volume Two: Stormwater Technical Handbook (February 2008) for recommendations regarding frequency for inspection and maintenance of specific BMP's.

(4) Inspections to be conducted by a qualified professional such as an environmental scientist or civil engineer.

Limited or no use of sodium chloride salts, fertilizers or pesticides recommended.

Other notes: (Include deviations from: Con. Comm. Order of Conditions, PB Approval, Construction Sequence and Approved Plan)

Stormwater Control Manager: _____

MEMORANDUM

TO: Abigail McCabe, Planning

FROM: Marissa Liggiero, Engineering

DATE: July 29, 2022

SUBJECT: Revised 69 Pleasant Street Comments 3 – Full Stormwater Permit Review

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The stormwater application does not demonstrate compliance with the Lexington Stormwater Management Regulations.

TSS calculations for all BMPs should be shown.

Infiltration system descriptions and size in the stormwater analysis should match detail on plan set. Specifically, R1 and R2.

Exfiltration rates should be consistent with soils information.

Test pits and proposed infiltration systems should be shown on the same plan to determine if groundwater is more than 2' below bottom of infiltration systems.

Please include silt sack with overflow detail on plan set.

Stormwater analysis did not follow standard engineering practice and does not comply with Stormwater Management Regulations.

1-year storm event should be included in the analysis to determine if the pre-development volume shall not be greater than the post-development at all design points.

The pre and post drainage watershed plans with time of concentrations, subcatchments, and design points should be shown to accompany the report.

An O&M plan was submitted and is acceptable.



AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

65 Paul Revere Road – Public Hearing to Modify 2008 Special Permit with Site Plan Review

PRESENTER: **ITEM NUMBER:**

Applicant: Christopher Patzke

SUMMARY:

The Lexington Planning Board will hold a **public hearing** on **Wednesday, August 3, 2022, at 8:00 p.m. virtually AND in the Select Board's Meeting Room, Town Office Building 1625 Massachusetts Avenue** on the application of Christopher Patzke for approval of a Modification to a Special Permit on property formerly known as 63 Paul Revere Road, under §135-6.9 (Special Permit Residential Development) of the Zoning Bylaw. The Applicant requests to modify a 2008 Special Permit for a site sensitive development in order to construct a deck within a setback. Application materials may be viewed online at https://lexingtonma.viewpointcloud.com/records/63688 and a link to access the virtual meeting may be found on the Town's webpage at:
https://ma-lexington.civicplus.com/1294/65-Paul-Revere-Road-Special-Permit-Modif
and on the public meeting calendar on the homepage
https://www.lexingtonma.gov/Calendar.aspx?EID=680

SUGGESTED MOTION:

If the Board is ready to close the public hearing, the Board should vote to close the hearing after taking public comments and after discussion with the Board, staff, and applicant.

If the Board is inclined to approve, staff has prepared a draft decision for approval as submitted attached as an exhibit.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022

ATTACHMENTS:

Description	Type
Planning staff memo	Cover Memo
DRAFT Decision	Exhibit

TOWN OF LEXINGTON
PLANNING OFFICE

1625 Massachusetts Avenue
Lexington, Massachusetts 02420
Tel: 781-698-4560
planning@lexingtonma.gov
www.lexingtonma.gov/planning

Abby McCabe, Planning Director
Sheila Page, Director
Molly Belanger, Planner
Lori Kaufman, Department Assistant

To: Lexington Planning Board

Cc: Christopher Patzke, Zen Associates - Applicant

From: Sheila Page, Assistant Planning Director

Re: Project Review for 65 Paul Revere Road: Modification to Special Permit with Site Plan Review

Date: July 29, 2022

Property Information	
Applicant/Owner	Applicant: Zen Associates Owners: Dan Ostrower & Coreen McCool
Project Address	65 Paul Revere road
Type of Review	Modification of 2008 Special Permit with Site Plan Review for a Site Sensitive Development
Permit Number	25684
Parcel ID	Map 50, Lot 175
Zoning District	RS - One Family Dwelling
Property Size	24,469 sqft

Land Conditions	
Existing Conditions	The property is a “pork chop lot” allowed by special permit in 2008. The lot slopes up toward the southeast. The property was developed according to the 2008 plan.
Environmental Conditions	The property is not associated with any wetlands or conservation areas.

Meeting Information & Deadlines	
Filed with Town Clerk	June 28, 2022
Filed with Health	June 28,2022
Public Hearing Date	August 3, 2022
Action Deadline	90 days after close of hearing
Action Required	Approve with or without conditions and waivers; OR Disapprove with reasons. This is a special permit vote so a supermajority is required
Appeal Period	20 Days from decision filing with Town Clerk

Project Summary

The 2008 Site Sensitive Special Permit with Site Plan Review, which is how we used to do special permit residential developments, divided what was 63 Paul Revere Road into two lots. One lot with the existing house (which was razed and rebuilt) and a new lot behind.

The 2008 special permit limited the side yard setback to 25 feet. When the original house was built the foundation as-built (uploaded to VPC) showed a setback of 26.3 feet. However, the final as-built (uploaded to VPC) dated November 29 2010 shows a final setback of 24.4 feet to the side lot line at the rear of the house. This is likely what precipitated the determination advisory letter dated October 22, 2010 submitted by the applicant. The Building Commissioner and the Planner at the time determined that since the foundation was outside the required yard, the roof overhang encroachment was allowable.

It is important to note that the yard definition back in 2008 and today similarly describes the setback as being measured from the "lot line to the nearest point on a building" And as such both in 2008 and today the setback is measured from the deck or pergola as they are considered projections from the building.

The applicant is requesting relief to allow a setback of 21 feet to allow a deck and pergola to be built. Current zoning in the RS Zoning District requires a 15-foot side yard setback.

The deck is generally located where there is an existing patio. The Applicant should confirm that deck is replacing the patio.

Each house in the development was limited in size: The new house lot Lot 1 aka 65 Paul Revere is allowed a maximum height of 33.5 feet and 5,500 square feet of GFA and the existing house Lot 2 aka 63 Paul Revere Road is allowed 7,000 sqft of GFA excluding the barn. In 2008, the GFA calculation included only basements with a ceiling height or greater. At the time the new house measured 5498 sqft of GFA - just squeaking in under the limit. Then in 2016 GFAs were calculated to include basements with a ceiling height 6'8" or greater. Since some of the basement has a ceiling height of less than 7 feet in was not included in the original GFA calculation. Please see 2010 GFA attachment. Although the height of the ceiling is unknown, more of the basement may be included in the GFA.

The Building Commissioner confirms that the deck and pergola are not included in the GFA calculation.

Staff Comments

- The plans are for a deck and an arbor(pergola) above the deck and is not considered an addition to the main house interior living space and does not increase GFA. The Building Commissioner, considers this similar to a landscaping project and thinks will not have any impact to the abutters if the waiver is granted.
- A deck with a pergola is a structure as per the Zoning Bylaw definition:

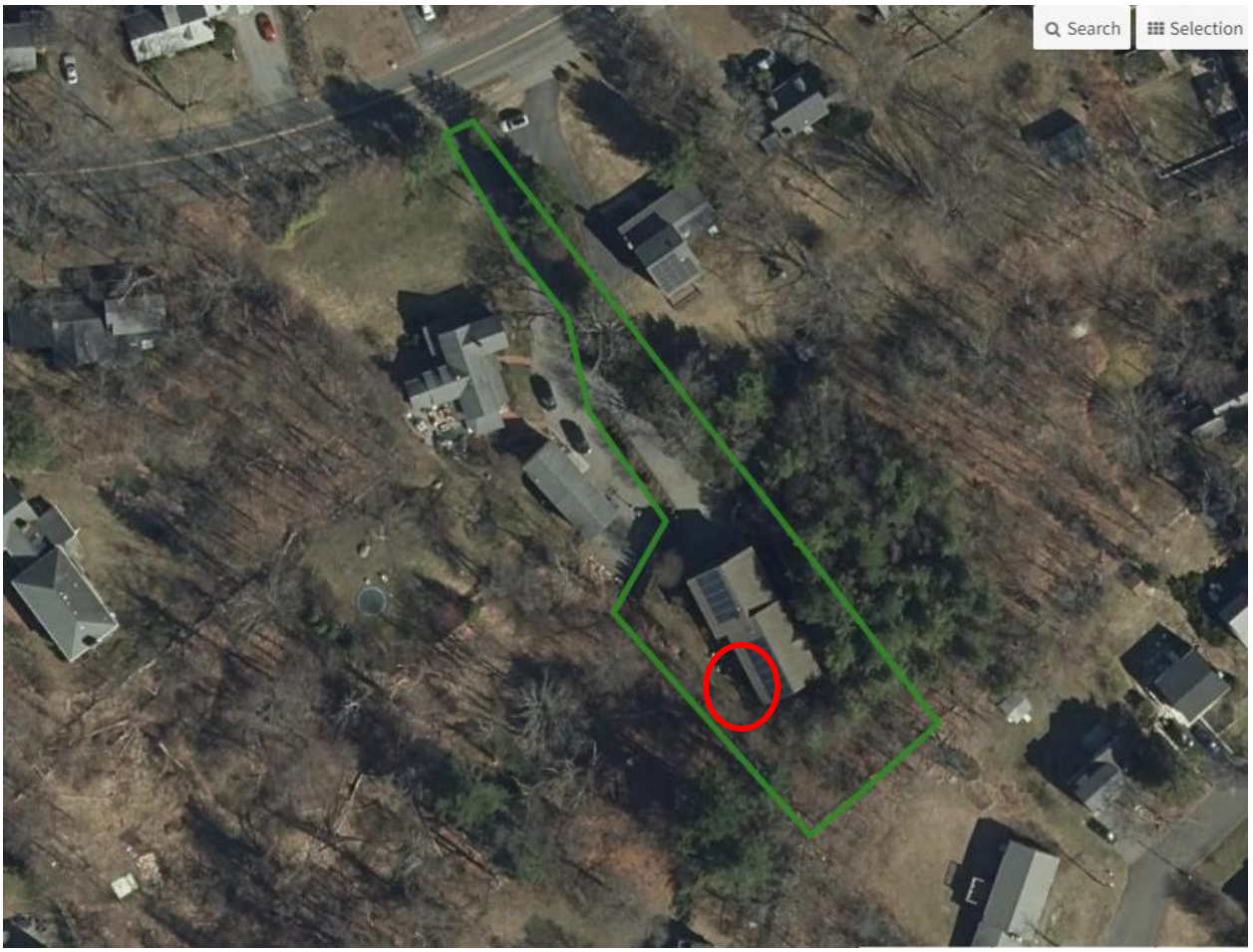
  Anything constructed or erected, the use of which requires a fixed location on the ground, or attachment to something located on the ground, including buildings, mobile homes, billboards, tanks, Solar Energy Systems, or the like, or the parts thereof, and swimming pools, but not including paved surfaces such as a driveway, a walk or a patio. [Amended 3-25-2015 ATM by Art. 52; Amended 11-19-2020-2 STM by Art. 13]

- If approved, the Board may want to consider requiring landscape screening from the abutting property as at the time of granting the Special Permit with Site Plan Review has stated goals of:

    - Minimizing the intrusion of views from other buildings
    - Not increasing the level of illumination

  Photographs submitted by the Applicant show thick vegetation between the property and the neighbors. However it is unclear where the property line is and vegetation may be on the neighboring property.

- Conservation has no comments.



2021 Aerial Image

Town of Lexington
PLANNING BOARD
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Lexington, MA 02420
Tel (781) 698-4560
planning@lexingtonma.gov
www.lexingtonma.gov/planning

Robert D. Peters, Chair
Michael Schanbacher, Vice Chair
Melanie Thompson, Clerk
Robert Creech, Member
Charles Hornig, Member
Michael Leon, Associate Member

DECISION OF THE LEXINGTON PLANNING BOARD
MODIFICATION OF SPECIAL PERMIT WITH SITE PLAN REVIEW

65 Paul Revere Road
(fka 63 Paul Revere Road)
Map 50 & Lot 175B

August 3, 2022 DRAFT

The Lexington Planning Board at a meeting on August 3, 2022 and voted to ***approve*** the Modification of the Special Permit with Site Plan Review and Special Permit Subdivision originally approved on September 24, 2008. The modification changes the minimum setback to any lot line to any structure required in the 2008 Condition of Approval #2 from 25 feet to 21 feet granting relief of four (4) feet to allow the proposed deck and arbor pergola to be 21-feet from the lot line.

APPLICANT:	Christopher Patzke - Zen Associates 10 Micro Drive, Suite 200 Woburn, MA 01801
PROPERTY OWNERS:	Dan Ostrower & Coreen McCool 65 Paul Revere Road Lexington, MA
PROPERTY LOCUS:	65 Paul Revere Road Lexington, MA 02420 Assessor's Map 50 and Lot 175B
PUBLIC HEARING NOTIFICATION:	Advertised in Lexington Minuteman July 14, and July 21, 2022 Posted with the Town Clerk on July 7, 2022

BACKGROUND AND PROJECT SUMMARY

The Applicant submitted a request for a modification to the previously approved Special Permit with Site Plan Review and Special Permit Site Sensitive Subdivision which was originally granted by the Planning Board on September 24, 2008 for a two (2) lot site sensitive subdivision; creating a new rear lot behind an existing house. The purpose of this modification is to permit a decrease in the side yard setback so the homeowners can build a deck and pergola in place of an existing patio. The 2008 Decision contained a condition of approval in Condition #2 requiring a 25-foot minimum setback from any lot line to any structures.

When the house in 2010 was built on the new lot the foundation plan showed a setback of 26.3 feet. However, the final as-built after construction dated November 29, 2010 showed a final setback of 24.4 feet to the side lot line measured from the side rear corner of the house. The Building Commissioner and the Planner at the time determined that since the foundation was outside the required yard, the roof overhang encroachment was allowable.

STATEMENT OF FINDINGS

After having reviewed all the plans and reports filed by the Applicant, the Lexington Planning Board has determined that the Application complies with the requirements of the Zoning Bylaw, the Planning Board makes the following procedural findings and project findings:

FINDINGS:

1. The yard definition in 2008 and today's Zoning Bylaw similarly describes the setback as being measured from the "lot line to the nearest point on a building". As in 2008 and today the setback is measured from the deck or pergola as they are considered projections from the building.
2. The 25-foot yard setback imposed by the 2008 special permit is more than the 15-foot required yard setback in the RS Zoning District in which this house is located.
3. The deck and pergola do not materially increase the use activity as the applicant proposes to replace the existing patio with a deck and pergola.
4. The 2008 Special Permit limited the allowed gross floor area (GFA). There are no changes to the existing GFA proposed with this application. Decks do not count towards GFA.
5. The public hearing was held in-person in the Select Board meeting room at the Town Office Building, 1625 Massachusetts Avenue, Lexington, MA 02420 and held remotely. The public was offered the opportunity to ask questions and comments in-person and virtually. The public hearing was opened and closed on August 3, 2022.
6. Lexington Planning Board members Charles Hornig, Robert Peters, Michael Schanbacher, Melanie Thompson, and Associate Member Michael Leon deliberated on the Application at a duly authorized meeting and public hearing on August 3, 2022. Mr. Leon was called by the Chair to sit as a voting member due to the absence of the fifth member.

DECISION

At a meeting on August 3, 2022, the Planning Board evaluated the request in relation to the above findings, by a vote of five (5) in favor and none (0) opposed, voted to ***approve*** the modification request to modify condition #2 of the 2008 special permit approval to grant relief of four (4) feet and impose a 21-foot setback on the southwest side to permit the construction of a deck and pergola as substantially shown on the plans submitted.

APPLICATION AND PLANS

The Planning Board evaluated the request for the Modification which application was originally filed by or on behalf of the Applicant in the Planning Office through the permitting system and stamped by the Town Clerk on June 28, 2022 and the following related submissions ("Project"):

1. General Application for Approval of a Plan Development, Special Permit Modification, dated June 16, 2022, submitted by Christopher Patzke on behalf of the homeowners.
2. Original Special Permit with Site Plan Review for 63 Paul Revere Road , Recorded in Book 53372 Page 398, granted by the Planning Board on September 28, 2000, Certified Copy from Town Clerk dated November 20, 2008.
3. Memorandum from Aaron Henry, Senior Planner dated October 22, 2010.
4. Project Narrative - revised
5. Existing and Proposed Plot Plan prepared by James R. Keenan RLS #30751dated April 21, 2010 revised with proposed annotations on April 27, 2022 by Zen Associates.
6. Existing Approved Definitive Subdivision Plan prepared by Fredrick Russell RPE # 35713 dated June 12, 2009.
7. Three photographs of the project area.
8. Architectural plans prepared by Zen Associates Architects and Planners, submitted to the Lexington Building Department, dated May 26, 2022 with sheets L3.00, L3.01.
9. Sheet L3.00 with hand drawn dimensions.
10. Foundation Survey prepared by James R. Keenan RLS #30751 dated April 21, 2010
11. Final As-built prepared by James R. Keenan RLS #30751 dated November 29, 2010
12. Letter to Mr. Rhodes, Building Commissioner re: 2010 GFA Calculation dated December 14, 2010
13. Planning Staff Memo from Sheila Page to Planning Board, Re: Project Review for 65 Paul Revere Road: Modification to Special Permit with Site Plan Review, dated July 29, 2022.

RECORD OF VOTE

The following members of the Planning Board voted to approve the Modification of the Special Permit with Site Plan Review: Charles Hornig, Robert Peters, Michael Schanbacher, Melanie Thompson, and Michael Leon, Associate Member.

The following members of the Planning Board voted to deny the Minor Modification Request: None.

_____

Robert D. Peters, Planning Board Chair DATE

DRAFT

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Open Space Residential Development Zoning Regulations Public Meeting

PRESENTER: **ITEM NUMBER:**

Staff and Board Discussion

SUMMARY:

The Lexington Planning Board will hold a **public meeting** on **Wednesday, August 3, 2022, at 8:00 p.m. virtually AND in the Select Board's Meeting Room, Town Office Building 1625 Massachusetts Avenue** to amend Chapter 176 of the Code of the Town of Lexington, Planning Board Zoning Regulations. The amendments to Chapter 176 include adding new Section 176-13 Open Space Residential Developments and amending Section 176-4.0 Fee Schedule. Documents may be viewed online at Town's Planning Board current project webpage here.
a link to access the virtual meeting may be found on the public meeting calendar on the homepage at: https://www.lexingtonma.gov/377/Access-Virtual-Meetings

The Planning Board's current Zoning Regulations Chapter 176 can be found here.

SUGGESTED MOTION:

The Board should review the enclosed Draft OSRD Regulations and provide suggested edits. The Board should ask for any public comments.

At the end of the discussion, staff recommends voting to continue the OSRD Regulations review to a future meeting [next meeting is Wednesday, August 17 at 6:00 pm on Zoom] because the draft has been circulated for comments but more time is needed to seek further input from various groups.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022

ATTACHMENTS:

Description	Type
OSRD Bylaw	Cover Memo
DRAFT OSRD Regulations 7.28.22	Exhibit

Town of Lexington
Motion
2022 Annual Town Meeting

ARTICLE 35 **AMEND ZONING BYLAW**
OPEN SPACE RESIDENTIAL DEVELOPMENTS

MOTION:

That the Zoning Bylaw, Chapter 135 of the Code of the Town of Lexington, be amended as follows, and further that non-substantive changes to the numbering of this bylaw be permitted to comply with the numbering format of the Code of the Town of Lexington:

1. Add a new row to § 135-3.4, Table 1, Permitted Uses and Development Standards, as follows:

		GC	RO	RS	RT	CN	CRS	CS	CB	CLO	CRO	CM	CSX
A.1.06	Open space residential development (OSRD) (see § 6.12)	N	R	R	R	N	N	N	N	N	N	N	N

2. In § 135-10.0, add new definitions as follows:

HISTORIC BUILDING

A building eligible to be listed on the National Register of Historic Places or the Historical Commission's Cultural Resources Inventory for which an historic preservation restriction in a form acceptable to the Historical Commission is in effect.

INCLUSIONARY DWELLING UNIT

A dwelling unit, the sale, lease, or rental of which is permanently restricted with limits on the household income of occupants, sale price, and rent through a deed rider or other restriction acceptable to the Town in conformance to the Lexington Moderate Unit Income Guidelines or as regulated as a Local Action Unit under the DHCD Local Initiative Program.

MULTI-FAMILY HOUSING

As defined in MGL c. 40A, § 1A.

OPEN LAND

As defined in MGL c. 40A, § 1A.

OPEN SPACE RESIDENTIAL DEVELOPMENT (OSRD)

As defined in MGL c. 40A, § 1A.

3. Add a new § 135-6.12 as follows:

6.12 OPEN SPACE RESIDENTIAL DEVELOPMENTS.

6.12.1 Purpose. This section is intended to:

1. Permit the development of open space residential developments (OSRDs);
2. Encourage greater diversity of housing opportunities in Lexington to meet the needs of a population which is diversified with respect to number of persons in a household, stage of life, abilities, and income;
3. Promote development proposals designed with sensitivity to the characteristics of a site that otherwise might limit development options due to the application of uniform, largely geometric standards;
4. Permit different types of structures and residential uses to be combined in a planned interrelationship that promotes a relationship between new buildings, public facilities, and Open Land;
5. Preserve historically or architecturally significant buildings or places, including consideration for siting, sight lines, and landscaping;
6. Encourage the preservation or restoration of aesthetically or environmentally valuable features of Open Land and minimize impacts on environmentally sensitive areas;
7. Encourage residential development that is consistent with the Town's sustainability goals and encourages sustainable development techniques; and

8. Develop housing that is or can be adapted to be accessible and attainable for older persons and persons with disabilities.

6.12.2 General Standards.

1. The degree of development permitted in an OSRD shall be based on the extent to which the OSRD complies with the criteria set forth below and regulations adopted pursuant to § 9.5.5 to further the purposes of this section.
2. An OSRD must be located on a tract of land of at least 70,000 SF.
3. The proof plan for an OSRD shall show two or more lots.

6.12.3 Dimensional Standards. Within an OSRD, the requirements of § 4.0 shall be modified as follows:

1. Lot area. There is no minimum lot area required for individual lots within an OSRD, provided that each lot shall be designed to be a sufficient size to meet the off-street parking requirements of this Bylaw, if applicable, and to permit the installation of any on-site water supply and sewage disposal facilities. The requirements of § 4.2.2 (Lot Regularity) and § 4.2.3 (Developable Site Area) do not apply.
2. Frontage. There is no minimum lot frontage required, provided that there is sufficient frontage to provide for adequate access to the building site. Where shared driveways or other circumstances render frontage on a street unnecessary for such adequate access, no frontage is required.
3. Yard. Yards required by § 4.0 shall apply to the perimeter of an OSRD. No yards are required within an OSRD. Buildings may share a common wall.
4. Height. The height limits of § 4.0 shall apply to all structures in an OSRD except that § 4.3.5 shall apply only along the perimeter of an OSRD.
5. Dwellings and Dwelling Units. There is no limit on the number of dwellings in an OSRD or on a lot. The requirements of § 4.1.4 (One Dwelling per Lot) do not apply. The number of dwelling units other than inclusionary dwelling units in an OSRD shall not exceed five (5) times the number of lots shown on the proof plan. The SPGA may issue a special permit to exceed the limit established by this § 6.12.3.5, which may require the provision of additional Inclusionary Dwelling Units, Open Land, or Common Open Space.
6. Amenity space. At least 180 square feet of unroofed amenity space shall be available for the exclusive use of the residents of each dwelling unit.
7. Floor Area. The requirements of § 4.4 (Residential Gross Floor Area) shall not apply in an OSRD except as provided below.
    a. The total gross floor area of all buildings, excluding inclusionary dwelling units, shall not exceed the total gross floor area permitted under § 4.4 for all lots shown on the proof plan.
    b. The gross floor area of each building shall not exceed 9,350 SF in the RO District and 7,030 SF in the RS and RT Districts.
    c. Historic Buildings shall not be included in the calculation of gross floor area under § 6.12.3.7.a and § 6.12.3.7.b.
    d. Dwelling units within Historic Buildings shall not be included in the calculation of gross floor area under § 6.12.3.7.e and § 6.12.3.7.f.
    e. The gross floor area of any dwelling unit shall not exceed 5,250 square feet.
    f. The average gross floor area of all dwelling units shall not exceed 2,625 square feet.
    g. In multi-family housing the SPGA may issue a special permit to exceed these limits in accordance with § 4.4.3.
    h. The site plan for the OSRD shall specify maximum gross floor areas for the whole OSRD, each dwelling, and each dwelling unit. Any deed for all or a portion of the OSRD shall restrict the gross floor area of that portion in accordance with the site plan.

6.12.4 Parking.

1. Visitor parking. A minimum of 1 additional parking space per every 4 dwelling units shall be provided for visitor parking.

6.12.5 Open Land and Common Open Space.

1. Required Open Land and Common Open Space.
   a. At least 35% of the developable site area within an OSRD shall be set aside as Open Land.
   b. In addition to Open Land set aside under the previous provision, at least 15% of the developable site area within an OSRD shall be set aside as Common Open Space.
   c. The Open Land required shall be decreased by two times the site coverage of any Historic Buildings.
2. Ownership. Open Land shall be conveyed to:
   a. A legal association comprised of the owners of the OSRD, which may include homeowners or owners of condominium or cooperative units;
   b. The Town, subject to acceptance, to ensure its perpetual use as open space or park land; or
   c. A nonprofit organization, the principal purpose of which is the conservation of open space.
3. Restriction. When such Open Land is conveyed to entities other than the Town, a conservation restriction over such land shall be granted to the Town, or a nonprofit organization, the principal mission of which is the conservation of open space, to ensure its perpetual use as open space or park land.
4. Regulation. The Planning Board shall adopt additional regulations concerning the condition, location, ownership, and preservation of Open Land consistent with § 6.12.1 and MGL c. 40A, § 1A.
5. Certificate of occupancy. No certificate of occupancy shall be issued until any conveyances of Open Land or restrictions are executed and recorded.

6.12.6 INCLUSIONARY HOUSING.

1. Required inclusionary dwelling units.
   a. At least 20%, or 25% in developments where the total permitted gross floor area under § 6.12.3.7.a is greater than 60,000 SF, of the gross floor area of all dwelling units shall be incorporated into inclusionary dwelling units.
   b. Inclusionary dwelling units shall be substantially similar in size, layout, construction materials, fixtures, amenities, and interior and exterior finishes to comparable dwelling units in the same dwelling.
   c. Occupants of inclusionary dwelling units shall have similar access to common areas, facilities, and services as enjoyed by other occupants of the development including but not limited to outdoor spaces, amenity spaces, storage, parking, bicycle parking facilities, and resident services.
   d. Inclusionary dwelling units shall be dispersed throughout the development rather than concentrated within particular sections of a dwelling or within particular dwellings.
   e. The Planning Board, in consultation with the Select Board, the Housing Partnership Board, and the Commission on Disability, shall adopt regulations concerning physical characteristics, location, and access to services of inclusionary dwelling units; defining limits on the household income of occupants, sale price, and rent of inclusionary dwelling units; and the form of required legal restrictions.
2. Subsidized housing inventory. At least 10% of the dwelling units in an OSRD shall be eligible for inclusion on the DHCD Subsidized Housing Inventory.
3. Certificate of occupancy. No certificate of occupancy shall be issued until an affordable housing restriction for inclusionary dwelling units is executed, submitted to the Town, and, to the extent required, recorded.

6.12.7 DESIGN STANDARDS.

1. The Planning Board shall adopt design guidelines and regulations to facilitate sustainable site layouts, quality building designs, and purposeful outdoor amenity spaces that create vibrant residential communities that benefit the residents of the development and the town.

(03/25/2022)

Town of Lexington
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Robert D. Peters, Chair
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Melanie Thompson, Clerk
Robert Creech, Member
Charles Hornig, Member
Michael Leon, Associate Member

Memorandum

To: Planning Board Members

From: Abby McCabe, Planning Director

Date: July 28, 2022

Re: Draft of Regulations for Open Space Residential Development (OSRD)

Below are draft Zoning Regulations for the Board to consider relative to Open Space Residential Development zoning bylaw adopted at Annual Town Meeting in the spring. As of writing this memo the zoning is still pending review with the Attorney General but a response is expected in mid-August. Amending your Regulations requires a majority vote of the Planning Board at a regularly scheduled public meeting. A first draft was reviewed at your July 13 meeting. Below are revisions through July 28. We ask for your review and comments and be ready to discuss at your August 3 meeting. Please review what may be missing and what should be added.

Add Article 176-13.0 OPEN SPACE RESIDENTIAL DEVELOPMENT (OSRD) REGULATIONS

13.1. Goals and Purpose.

The goals and purpose of the Open Space Residential Development Regulations are to:

1. Further the purposes of §135-6.12 of the Zoning Bylaw permitting Open Space Residential Developments;
2. Provide guidance to applicants submitting OSRD applications;
3. Provide criteria for the reviewing authority to make a well-informed decision;
4. Establish a list of submission materials from concept through final occupancy;
5. Regulate the condition, location, ownership, and preservation of Open Land consistent with §135-6.12.5.4;
6. Regulate the physical characteristics, location, and access to services of inclusionary dwelling units; define limits on the household income of occupants, sale price, and rent of inclusionary dwelling units; and the form of required legal restrictions consistent with §135-6.12.6.1.e; and
7. Facilitate sustainable site layouts, quality building design, and quality outdoor amenity space consistent with §135-6.12.7.1.

13.2. Authority.

1. These regulations governing OSRD are adopted under § 135-6.12 [OPEN SPACE RESIDENTIAL DEVELOPMENTS] and § 135-9.5 [SITE PLAN REVIEW] of the Zoning Bylaw.

13.3. Definitions.

1. Amenity Space is for the exclusive use for the residents of each residence. Amenity space shall be at least 180 SF and may include areas such as an outdoor gathering space such as a fire pit, seating area, game area, patio, grilling area, pool, playground, yard space, or similar unroofed space.

2. Common Walls. The GFA of two buildings adjoined by a common wall is the sum of the two separate buildings, and must conform to the GFA restrictions in § 135-6.12.3.7b.

13.4. Applications. OSRD applications shall follow the Site Plan Review application process in described in §176-9.0 of these Regulations for Major Site Plan Review under §176-9.3 and the following supplemental submittals.

1. Application. Applications shall include the materials required under §176-9.3.2 other than the parking and transportation demand management (PTDM) plan.

2. Upon receipt of complete application, the Planning Board shall seek comments from the Select Board, Housing Partnership Board, Commission on Disability, Conservation Commission, Historical Commission, and the Regional Housing Services Office Director for comments.

3. Proof Plan. Applications shall include a proof plan as defined in the Zoning Bylaw demonstrating that more than two lots can be created in compliance with the Zoning Bylaw. The proposed OSRD project area shall be at least 70,000 SF. The proof plan shall include a table of allowed gross floor area for each proof plan lot and show on the plan any protected resources areas pursuant to § 130-8 [Wetland Protection Definitions].

4. Amenity Space. Proposed amenity space under §135-6.12.3.6 shall be identified on the plan.

5. Site development plan with existing and proposed conditions identifying and differentiating Open Land from Common Open Space, private amenity space, and wetlands.

6. Open Land. Applications shall include draft legal documents implementing the ownership and restriction requirements of §135-6.12.5.2 and §135-6.12.5.3.

7. If ownership is to be conveyed to the Conservation Commission or another non-profit conservation organization, Applicant shall submit written confirmation of mutual agreement to accept the ownership if the OSRD is approved. The deed shall contain the following:

    a. A legal description of dedicate Open Land and the entity to which it is to be conveyed;
    b. A statement of the purpose of the open space and any restrictions on its use;
    c. If ownership will be retained by the Homeowners Association, the deed shall contain the following:
        i. Language defining the conservation restriction as pursuant to MGL Chapter 184, § 31-33.
        ii. Specific provisions for the management of Open Land that are explicitly tied to Town guidance on the management of conservation land including on the use of pesticides and herbicides.
        iii. Provisions for biannual assessment of Open Land status to be performed by the Conservation Commission or other non-profit conservation organization.

    d. If the property has wetlands or other non-developable land that does not qualify to be included in the 35% Open Land calculation, this land should be considered for protection via either transfer to the Conservation Commission or conservation restriction, particularly if the non-developable land is contiguous with the Open Land or adjoining conservation land.

8. Common Open Space: Specific provisions for the management, maintenance, operation, improvement and repair of any Common Open Space, including levying and collecting from the property owners' common charges to pay for expenses associated with the open space.

9. A copy of the approved Stormwater Permit issued by the Stormwater Agency [Public Works Engineering Division] demonstrating compliance with the stormwater management standards outlined in Chapter 114 of the Lexington General Bylaws and Current Stormwater Management Regulations per § 181. If no stormwater permit has been issued, Applicant shall submit stormwater permit application and stormwater drainage report for preliminary review by the Engineering Division.

10. Architectural plans per §176-9.3 including preliminary floor plans for all dwellings and proposed locations of inclusionary dwelling units.

13.5 General Provisions.

1. Phasing. OSRD projects may include phased development. A preliminary phasing plan shall be submitted to the Planning Board during the public hearing for an initial review. It is expected that the specific timing will vary during permitting and construction. The phasing plan should include

estimated start and construction completion timeframes for installation of utilities, road or driveway, drainage and sidewalks. Phasing should specify if there will be requests for occupancy prior to completion of the full project.

2. The final approved Stormwater Management Permit issued by the Stormwater Agency shall be submitted to the Planning Office prior to the start of construction and prior to any site work associated with any OSRD project.

3. A final As-Built Plan showing final landscaping, walkways, paths, trails, sidewalks, parking, common space, amenity space, utilities, drainage structures, buildings, impervious areas, gross floor area, fencing, shall be submitted to the Planning Department prior to final occupancy of the last residential dwelling.

4. Relationship to Subdivision Control. If the subject property will require the division of land subject to the Subdivision Control Law, M.G.L. Chapter 41, Section 81P, then the Applicant shall submit an Approval Not Required (ANR) Plan after grant of approval but before issuance of the building permit as set forth in the Board's Subdivision Rules and Regulations Chapter 175. If the subject property will require the division of land subject to Subdivision Control Law, M.G.L. Chapter 41, Section 81Q, the Applicant shall submit a Definitive Subdivision Plan for approval to the Planning Board consistent with the Board's Subdivision Regulations. The Definitive Subdivision Plan and review may be consolidated into this OSRD site plan review application and considered at one public hearing at the same meetings/hearings.

5. Legal Documents and Recording. The inclusionary housing restrictions, easements, covenants, and open land and open space documents and any other legal instruments shall be recorded at the South Middlesex Registry of Deeds and proof of recording submitted to the Planning Office.

6. Site Inspections and Issuance of Occupancy Permit. Upon request for occupancy, planning, engineering staff, and conservation staff, where applicable, shall perform a site inspection prior to the first request of occupancy. No certificate of occupancy may be issued until all work associated with the right-of-way or any shared common access drives, and Open Land restoration are complete, except for the final top course of pavement. Fire hydrants, drainage and stormwater management structures, and utilities shall be installed and completed prior to the first occupancy permit, unless specifically approved delay as part of the approved phasing plan. All work shall be completed prior to the final occupancy of the last unit.

13.6 Open Land and Common Open Space.

1. Location. Open Land and Common Open Space shall be land in one or more parcels of a size and shape appropriate for the intended use and available for use by all occupants of an OSRD. Open Land shall include any or all of the following, as appropriate:

    a. Land that separates groups of buildings within the OSRD from other groups and from adjacent property;
    b. Outstanding natural and man-made features of the site, including but not limited to stone walls, that enhance the land form;
    c. Natural habitat area and wildlife corridors, but shall not include wetlands or associated buffers;
    d. Contiguous to the maximum extent possible;
    e. Paths or entry points specifically designed for access purposes; and
    f. Degraded land, or land that has been used for other purposes, that has been restored with native plantings.

2. Open Land.
    1. Open Land areas shall be left in or restored to their naturally vegetated state. Removal of trees or vegetation or disturbance is permitted only when specifically permitted by the Planning Board or the Conservation Commission if the project requires Conservation Commission approval.
    2. Open land shall remain in an undeveloped condition and may not be used for buildings, parking, paved sidewalks, driveways, accessory structures, or any another impervious surface.
    3. Open Land shall be monumented and mark done a recorded survey, so that the Commission or ownership entity can monitor the boundaries as part of its routine oversight.
    4. When Open Land adjoins public conservation or recreation areas, the Open Land shall include public paths to those resources.
    5. Snow storage shall not be permitted in Open Land areas.
    6. The following are uses that may be deemed acceptable in open land areas subject to prior written approval:

    a) Disease control and or control or removal of invasive species as long as it abides by the then current Town guidance on use of pesticides and herbicides in conservation land;
    b) Wildlife habitat restoration or improvement to restore native biotic communities or to enhance wildlife, wildlife habitat, or native tree and plant species;
    c) Paths or trails approved by the Planning Board or Conservation Commission where applicable;
    d) Vegetation management with selective minimal removing of vegetation, including selective cutting of trees and pruning to prevent, control or remove hazards, disease, insect or fire damage, mosquitoes and ticks, poison ivy and other plants potentially harmful to humans;

e) Passive recreation activities such as hiking, walking, bicycling, cross-country skiing, and other non-motorized recreational activities that do not materially alter the landscape or do not degrade the environmental quality.
f) Small signage identifying protected area located with minimal impact to open space area.

3. Common Open Space areas shall be designed for the common use or enjoyment of the residents of a development and may include such complementary structures and improvements as are necessary and appropriate.

13.7 Inclusionary Dwelling Units.

1. Developments shall meet the requirements of s. 135-6.12.6.

2. Inclusionary dwelling units shall be subject to an affordable housing restriction as defined in MGL c. 184 ss. 31-32. Restrictions on inclusionary dwelling units shall meet the following standards:
    a. Inclusionary units shall be in perpetuity;
    b. Restrict occupancy to income eligible households;
    c. Require that residents occupy the units as their principal residence;
    d. Provide for effective administration, monitoring, and enforcement of the restriction with the Town as monitoring agent, or a third party monitor as appointed by the Town;
    e. Contain terms and conditions for the resale of a homeownership unit, including a definition of the maximum permissible resale price, and for the subsequent rental of a rental unit, including a definition of the maximum permissible rent;
    f. Subject the units to an affirmative fair housing marketing and resident selection plan for approval by the Town; and
    g. Be otherwise consistent with the Department of Housing and Community Development (DHCD) Universal Deed Rider and DHCD Guidelines, as may be amended from time to time.
3. Inclusionary dwelling unit features including, but not limited to, finishes, appliances, and outdoor amenity spaces must be comparable to those provided in the development's market-rate units, but may be functionally equivalent rather than identical provided that they are durable, of good quality, and consistent with contemporary standards for new housing.

4. Each inclusionary dwelling unit shall be assigned a maximum household income for its occupants, expressed as a percentage of the area median income (AMI) as annually determined by the U.S. Department of Housing and Urban Development, assuming one more person in the household than the number of bedrooms in the unit.

5. The maximum sale price or rent for an inclusionary dwelling unit shall be affordable to a household with an income 10 percentage points less than that unit's maximum household income.

6. Across all inclusionary dwelling units in a development, the average of the maximum household incomes, expressed as a percentage of AMI, weighted by the gross floor area of each inclusionary dwelling unit, shall not be greater than 100%.

7. The DHCD shall grant approval of the Regulatory Agreement and indication of eligibility for inclusion on the Subsidized Housing Inventory for eligible inclusionary dwelling units prior to occupancy of the first residential unit. Proof of execution of the housing restriction of any inclusionary dwelling units shall be submitted to the Planning Department prior to the first certificate of occupancy for any non-restricted market rate unit in the OSRD development.

13.8 Design Standards.

1. Footpaths and Trails. The Board encourages the creation of footpaths and trails to offer public access to the open land and common open space within the OSRD and to connect to other nearby open space, recreational areas, streets, bicycle paths, or other recreational areas at adjoining land for passive recreation. Proposed paths and trail locations and details shall be shown on the site development plans and shall not be wider than five (5) feet. Paths and trails shall be pervious and shall be stable to support foot traffic and provide proper soil drainage. Paths and trails may be gravel, stone dust, or similar material or boardwalk if the area is wet. Construction details must be submitted at the time of the first building permit and Planning staff shall confirm satisfactory completion after a site inspection before the last certificate of occupancy. The Applicant may be requested to provide a public easement if the trail network can benefit the neighborhood and surrounding area.

2. Housing. Residential structures should be clustered and situated to maximize open space. Dwelling units should have direct access to amenities and Open Land areas to the maximum extent possible. The location and orientation of housing should maintain the topography. Applications shall be designed to fit the existing land patterns by retaining natural topography, vegetation, and natural drainage courses, rather than altering the site to accommodate a predetermined plan.

3. Roadways and interior drives should be designed to maintain existing site features such as existing mature trees and significant landmarks such as stonewalls or historic structures.

4. Visibility of Open Space. Open space should be designed to maximize visibility for persons passing the site from within or nearby properties to attract visual interest.

5. Architectural design. Overall scale, architectural detailing, building massing, height, exterior materials, and roofline articulation should be sensitive to and compatible with surrounding residential areas.

Amend Article 176-4.1 [ADMINISTRATIVE FEES]

Amend 4.1.2 Administrative Fee Schedule as follows: (changes to existing regulations shown in bold underline)

Type of Application	**Administrative Fee**
Site Plan Review, Section 176-9.0 **& 13.0**	
OSRD site plan review	**Projects involving 1-5 dwelling units: $3,000 plus $500 per dwelling** **Projects involving 6-10 dwelling units: $5,000 plus $500 per dwelling** **Projects involved 11-20 dwelling units: $7,000 plus $500 per dwelling unit.** **Projects involving over 20 dwelling units: $9,000 plus $500 per dwelling unit.**

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

420-430 Bedford Street – Acceptance of performance guarantee and plan endorsement for Lexington Office Park Definitive Subdivision Plan approved on May 18, 2022

PRESENTER:

Staff & Applicant

ITEM NUMBER:

SUMMARY:

The definitive subdivision plan for Lexington Office Park at 420-430 Bedford Street was approved by the Planning Board on May 18, 2022. The appeal period has now passed. A copy of the final revised plan set and the Board's written approval is attached.

Prior to Plan endorsement the Planning Board will need to vote to accept the performance guarantee, which Applicant has requested a covenant. A draft covenant will be presented to the Board for consideration.

SUGGESTED MOTION:

The Board should vote to accept the covenant and vote to sign the Plan.

Move to accept the covenant for the Definitive Subdivision for 420-430 Bedford Street and endorse the plan for recording.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022

ATTACHMENTS:

Description	Type
Decision Definitive Subdivision	Exhibit

🗋	Final Revised & Approved Plans	Exhibit
🗋	DRAFT Covenant	Exhibit

Town of Lexington
PLANNING BOARD
1625 Massachusetts Avenue
Lexington, MA 02420
Tel (781) 698-4560
planning@lexingtonma.gov
www.lexingtonma.gov/planning

RECEIVED
2022 MAY 24 PM 1:16
TOWN CLERK
LEXINGTON MA

Robert D. Peters, Chair
Michael Schanbacher, Vice Chair
Melanie Thompson, Clerk
Robert Creech, Member
Charles Hornig, Member
Michael Leon, Associate Member

DECISION OF THE LEXINGTON PLANNING BOARD
DEFINITIVE SUBDIVISION (LEXINGTON OFFICE PARK)

CERTIFICATE OF VOTE
420-430 BEDFORD STREET
(Assessor's Map 84, Lot 40A)

Date of Application: March 4, 2022
Date of Public Hearing: May 18, 2022
Date of Vote: May 18, 2022

DECISION

This is to certify that the Lexington Planning Board, acting within the provisions of M.G.L., Chapter 41, § 81U, at a meeting on May 18, 2022, by a vote of five (5) members in favor and none (0) opposed, voted to conditionally approve the Definitive Subdivision plan for a three (3) lot subdivision named Lexington Office Park at 420-430 Bedford Street as shown on the plans entitled "Definitive Subdivision Plans, Lexington Office Park, 420-430 Bedford Street, Lexington, MA", dated February 25, 2022, prepared by VHB of Watertown, consisting of 11 sheets, filed with the Planning Board and the Town Clerk on March 4, 2022; subject to the terms and conditions of approval and the covenant to be given in said Section 81U and subject to the following terms and conditions imposed by the Lexington Planning Board.

PROJECT SUMMARY AND BACKGROUND

Application proposes three lots on a small subdivision cul-de-sac with a 24-25 ft. wide drive, landscaped center island, sidewalk, street trees, one new fire hydrant, and a subsurface infiltration stormwater management system. Presently the ~21-acre property contains two three-story office buildings, off-street surface parking, wetlands, and land area subject to a conservation restriction.

A preliminary subdivision application was approved by the Planning Board on October 20, 2021.

STATEMENT OF FINDINGS

After having reviewed all the plans and reports filed by the Applicant and its representatives, and having considered the technical analysis, supplemental information provided during the course of the public hearing, correspondence and testimony from representatives from various boards, commissions, departments within Lexington, members of the public, and from all other interested parties, the Lexington Planning Board makes the following procedural findings and project findings:

Procedural Findings:

1. On March 4, 2022, an application was filed by or on behalf of Elandzee Trust c/o Boston Properties, Inc. of 800 Boylston Street Suite 1900 Boston, MA 02199 (hereinafter referred to as the "Applicant") with the Lexington Planning Board and the Lexington Town Clerk (hereinafter "Application") pursuant to M.G.L. Chapter 41, Section 81, and the Rules and Regulations Governing the Subdivision of Land in Lexington, Chapter 175, last revised on August 30, 2017.

2. Pursuant to M.G.L. Chapter 41, Sections 81K through 81GG (hereinafter "Subdivision Control Law"), and the applicable provisions of the Rules and Regulations, the Planning Board caused notice of the public hearing to be published in the Lexington Minuteman, a newspaper of general circulation in Lexington, on April 28, 2022 and again on May 5, 2022. Notice of the public hearing was posted in the Lexington office of the Town Clerk on April 29, 2022 and continuing through the opening of the public hearing on May 18, 2022. Said notice of the public hearing was mailed postage prepaid to the applicant, property owner, and all abutters as prescribed in the Subdivision Control Law on April 27, 2022.

3. The Planning Board provided copies of the Application to other Lexington departments and officials, including, but not limited to, the Health Director/Assistant Director, Building Commissioner, Conservation Director, Assistant Town Engineer, Police Chief, Assistant Fire Chief, and Zoning Administrator.

4. The Board of Health filed their report to approve with no concerns on the Definitive Subdivision on May 10, 2022, pursuant to M.G.L. Chapter 41, Section 81U.

5. After notice and publication was provided pursuant to the applicable provisions of the Subdivision Control Law and the Board's Rules and Regulations, the public hearing on the Application commenced on May 18, 2022, on which date the Planning Board closed the public hearing. All Planning Board meetings and the public hearings were held remotely via Zoom, pursuant to c. 20 of the Acts of 2021 and c. 22 of the Acts of 2022 further extending the remote provisions until July 15, 2022. The Planning Board accepted public comments via Zoom.

6. Lexington Planning Board members Robert Peters, Michael Schanbacher, Melanie Thompson, Robert Creech, and Charles Hornig were present for all public hearings at which testimony was taken.

Project Findings:

1. The subject property consists of one ~21.028-acre parcel of land shown on the Lexington Assessors' Map as 84, Lot 40A and located in the CM (Commercial Manufacturing) zoning district.

2. The Applicant proposes to divide the existing lot into three lots on a small subdivision cul-de-sac with a 24-25 ft. wide drive, landscaped center island, sidewalks, street trees, one new fire hydrant, and a subsurface infiltration stormwater management system. The existing buildings and parking areas are to be removed.

3. On September 27, 2021, the Applicant filed a Preliminary Subdivision application with the Town Clerk. The Lexington Planning Board voted to approve the Preliminary Subdivision with conditions on October 20, 2021, and issued a Preliminary approval on October 21, 2021. The land shown on this

definitive subdivision plan will be governed by the zoning bylaw in effect on September 27, 2021 for eight years from the date of endorsement of the plan.

4. The Development, as modified by the conditions of this decision, will not present a public safety hazard to the town, or the surrounding properties.

WAIVERS

The Planning Board may waive any of its Rules and Regulations if the Board finds the waiver is in the public interest and not inconsistent with the intent and purpose of the Subdivision Control Law. No waivers are needed with the submitted plans and the Board did not grant any waivers with this application

CONDITIONS

After the public hearing, the Lexington Planning Board by a vote of five (5) in favor and none (0) opposed, voted to approve the Definitive Subdivision for Lexington Office Park as described above, subject to the following conditions:

Prior to Plan Endorsement:

1. Prior to request for plan endorsement, Applicant shall revise the plans entitled "Definitive Subdivision Plans, Lexington Office Park, 420-430 Bedford Street, Lexington, MA", dated February 25, 2022, to show the following:

    - Update Plan C2.01 (Site Analysis) Note 6 to correct reference from C-HIP to the CM District;
    - Update Plan C4.01 (Property Rights and Development Standards) to show the front yard setbacks consistent with the CM zone for each of the three lots;
    - Update Plan C5.01 (Key Plan) to modify the Zoning Summary Chart and setbacks to reflect the CM District;
    - Either provide utilities (sewer, water, gas) to lot 2 within the right-of-way or show easements over other lots to provide them;
    - Update the plans to show an easement for the fire hydrant;
    - Update Plan Sheet C2.01 (Site Analysis Map) to add note 12 that reads "No further subdivision allowed without returning to the Planning Board, pursuant to M.G.L. c.41, §81W.

2. Prior to endorsement of the Definitive Plan, the Applicant shall provide a Performance Guarantee, in a manner acceptable to the Planning Board, and prior to the release of any lot or the issuance of any building permits for the construction of any buildings, to insure the required improvements related to the construction of the road and services will be constructed and installed in accordance with the approved Definitive Plan. Said guarantee shall be valid for a period of not less than eight (8) years from the date of the Planning Board's endorsement of the Definitive Plan.

3. After notice from the Town Clerk of "No Appeal", the Applicant shall submit the final revised Definitive Subdivision Plan set including the Property Rights and Dimensional Standards Plan and the Street Layout and Profile Plan sheets, for endorsement by the Planning Board within 180 days of this approval in accordance with this Certificate of Vote. The Applicant shall record with the Registry and

notify the Board in writing of the date, book, and page or document of the recording information. Failure to do so may result in recission of this Decision.

4. Following endorsement and prior to commencing any site work or construction related to this approval, the certificate of vote and any easements (including utility easements) and covenants must be recorded at the Registry with proof of recording the Definitive Subdivision Plan at the South Middlesex Country Registry of Deeds shall be submitted to the Lexington Planning Department.

5. All easement documents shall be provided to the Planning Board, staff, and Town Counsel for review and approval prior to recording at the Registry.

General Provisions Prior to Any Site Work and Construction:

6. Applicant is responsible for compliance with the Conservation Restriction or seeking a formal amendment.

7. If the Project, or any condition imposed by this decision, requires a permit, license, or other approval from any other board, committee or agency of Lexington or other regulatory agency of the Commonwealth or the Federal government, the Applicant is responsible for filing the appropriate application. As proposed, Applicant is responsible for filing a Notice of Intent with the Conservation Commission and Fire Department permits. If any condition of such permit is inconsistent with or modifies the approved Project Plans the Applicant shall make application to the Planning Board for amendment of this Decision, and the Planning Board shall consider such application in accordance with the requirements of M.G.L. Chapter 41, §81T & §81W and all applicable Planning Board Subdivision Regulations.

8. The submitted definitive plan set revised through February 25, 2022, does not show curb cuts and driveways. Once known, and prior to any construction, Applicant shall submit updated plans showing the curb cuts and driveways to the Planning Board for review and approval at a regular public meeting as a minor modification to the approved definitive plan.

During Construction:

9. Project related construction shall comply with the Lexington's General Bylaws Chapter 80 [Noise Control], for construction related activities with hours limited to 7:00 a.m. and 5:00 p.m. Monday through Friday and between 9:00 am and 5:00 pm on Saturdays. Operation is not permitted on Sundays and legal holidays.

10. The Department of Public Works shall be notified at least thirty-six hours in advance of any roadway, municipal service, or utility connections.

11. Applicant shall perform daily clean up of construction debris, including soil on municipal streets within two-hundred yards from the entrance of the site drive caused by construction related to the project.

12. Construction and land disturbance activities, soil erosion and sedimentation to wetlands or resources areas shall be minimized by an active program meeting the requirements of the Lexington

Conservation Commission, Department of Environmental Protection Best Management Practices, and the Stormwater Management Permit.

13. Applicant shall provide appropriate erosion control methods such as silt fences and straw wattles and organic hessian fabric burlap filled with compost and the stockpiles in case of a storm event, in addition to dust control requirements.

14. The Applicant is responsible for promptly repairing any damage caused to street pavement, signs, or other fixtures or features within the public right-of-way, after obtaining permission from the Department of Public Works. Such repairs shall be performed to Lexington Standards.

15. A copy of this Decision and the Project Plans shall be kept on the Project Site in a highly visible location at all times during construction.

Continuing Conditions:

16. Except as modified by the conditions and findings hereof, the Project shall comply with the final revised approved Definitive Plan Set, in all respects, and the Applicant shall pursue completion of the project with reasonable diligence and continuity. The subdivision and its construction shall comply in all respects to the Subdivision Rules and Regulations unless specifically waived by a vote of the Planning Board and recorded in writing.

17. This approval is limited to a total of three (3) lots, regardless of the number of lots which could otherwise be developed and the road may not be extended without returning to the Planning Board for an amendment or modification pursuant to M.G.L. Chapter 41, § 81W. Further division of any lot created hereon, whether by ANR or any other method, is expressly prohibited, except that lots may be reconfigured, such that the total number of lots does not exceed three (3) lots. Any change in roadway or increase in number of lots requires a new subdivision filing, pursuant to §81T & §81W.

18. The Town is not responsible for non-emergency municipal services provided along the new road, including snow removal and recycling/trash service, unless street acceptance by Town Meeting.

19. Planning staff and members of the Planning Board and its agents shall be permitted access to the Project Site during construction with proper notification to the Applicant (and subject to any construction safety requirements), and shall have the right to gather all information, measurements, photographs or other materials needed to ensure compliance with the terms of this Decision, subject to applicable safety requirements.

20. A final as-built plan shall be submitted to the Planning Office, Engineering, and Building Commissioner prior to issuance of the Completion Certificate or release of the Performance Guarantee. The as-built plan shall be prepared and certified by a professional engineer and submitted as a PDF and CAD file. The "As Built" Plan shall indicate the stormwater system, parking, driveways, sidewalks and walkways, utilities, any lighting, storm drains, water mains and their appurtenances, etc. in material compliance with the approved project plans.

21. Any future change, modification or amendment to the final Definitive Plan as may be approved by the Planning Board shall be in accordance with the requirements of M.G.L. Chapter 41, § 81T & §81W and § 6.7 of the Board's Subdivision Regulations. No material alterations, or any changes

shall be made in any plans, proposals or supporting documents, or site work without prior written approval from the Planning Board or their designee. Any request for a modification of this approval shall be made in writing the Planning Department for review and approval by the Planning Board and shall include a description of the proposed modification, reasons the modification is necessary, and any supporting documentation. Upon receipt of a request, the Planning Department may, in the first instance, authorize a minor modification to the site plans, or Planning staff may refer the matter to the Planning Board, which may consider and approve minor modifications at a regularly scheduled Planning Board meeting duly noticed. In the event the Board determines the change is major in nature (resulting in material changes such as newly impacted parcels), the Board shall consider the modification at a properly noticed public hearing.

22. The Applicant must complete construction of all ways and services within two (2) years of the date of Planning Board endorsement of the definitive plan. Failure to do so may result in the rescission of the approval of such plan, unless the Board extends said period, for good cause shown, after the written request of the Applicant not less than 20 days before the expiration of said period.

23. Construct Streets and All Required Utilities. As a condition of approval of a subdivision, the applicant agrees to construct streets and complete all other work specified on the definitive plan or required under these Regulations, meet all relevant provisions of the Zoning Bylaw and other bylaws, including installation of required utilities in such subdivision, and all work incidental to them, such as grading of lots to provide drainage, construction of retaining walls and other details or as specifically required by the Board.

24. Applicant/owner is responsible for maintaining the landscaping, streets, and utilities within the subdivision until formally accepted by the Town. The owner must provide a supplemental covenant agreeing to maintain the streets and utilities, including snow removal, and permitting the Town to maintain them if necessary at the expense of the owners. Any trees and landscaping that does not survive must be replaced in-kind within the first available growing season.

25. Perpetual Rights and Easements.

    a. As a condition of approval of a subdivision, the owner must grant to the Town a right and easement to construct, repair, replace, extend, operate, use and forever maintain all water mains, sewer mains, and all surface and subsurface stormwater drains in, through or under the streets and easements as indicated on the definitive plan.

    b. In consideration of being allowed to connect to the public street system and to enable the Town to protect public health and safety, the owner must grant the Town the perpetual right or easement to pass and repass over the streets and easements in the subdivision, and to use, operate, inspect, repair, renew, replace, and forever maintain the streets, street signs, and all appurtenances or components of them, in all of the subdivision and outside it if installed to serve the subdivision. To accomplish this, the owner must retain and reserve the necessary rights and easements in any conveyances or mortgaging of land or lots and in the recording of plans and easements.

c. The owners must grant the Town the right to enforce on-street parking regulations within the subdivision and on any streets connecting the subdivision to the public street system. For projects that include minor streets, an instrument prohibiting parking and granting the Town enforcement rights will be required.

APPLICATION AND PLANS

The Planning Board evaluated the Application filed by or on behalf of the Applicants in the Planning Department and the Office of the Town Clerk on March 4, 2022 and the following material associated with this application.

1. Application submitted by Attorney Fedrick DeAngelis and Project Engineer Nicholas Skoly of VHB on behalf of Elandzee Trust c/o Boston Properties, Inc. for a non-residential development definitive subdivision for Lexington Office Park at 420-430 Bedford Street, submitted on March 4, 2022.
2. Cover letter submitted by Fredrick J. DeAngelis of Boston Properties for 420-430 Bedford Street.
3. Plan set entitled "Definitive Subdivision Plans, Lexington Office Park, 420-430 Bedford Street, Lexington, MA", dated February 25, 2022, prepared by VHB of Watertown, consisting of 11 sheets.
4. Letter from Nichol Skoly, P.E. of VHB to Charles Hornig, dated February 16, 2022, re: Preliminary Subdivision 420-430 Bedford Street Decision Voted October 20, 2021 response letter (4 pages).
5. Subdivision drainage memo from Nick Skoly to Lexington Planning Board, dated October 13, 2021 (45 pages).
6. Geotechnical Engineering Letter from Langan to Catalina Padilla dated February 10, 2022 (78 pages).
7. Stormwater management System Operation and Maintenance Manual for Lexington Office Park prepared by VHB dated January 2022 (36 pages).
8. Conservation Easement and Restriction book 15547 page 095 approved by the Select Board, signed by the Secretary of Environmental Affairs of Massachusetts on April 26, 1984.
9. Draft Covenant between Elandzee Trust and Lexington Planning Board dated March 4, 2022.
10. Memorandum from Molly Belanger to the Planning Board, Re: 420-430 Bedford Street: Non-residential Definitive Subdivision, dated May 11, 2022.

RECORD OF VOTE

The following members of the Planning Board voted to grant the certificate of action, subject to above stated terms and conditions: Robert Peters, Michael Schanbacher, Melanie Thompson, Robert Creech, and Charles Hornig.

The following members of the Planning Board voted to disapprove the certificate of action: none.

Robert D. Peters — 24 May 2022

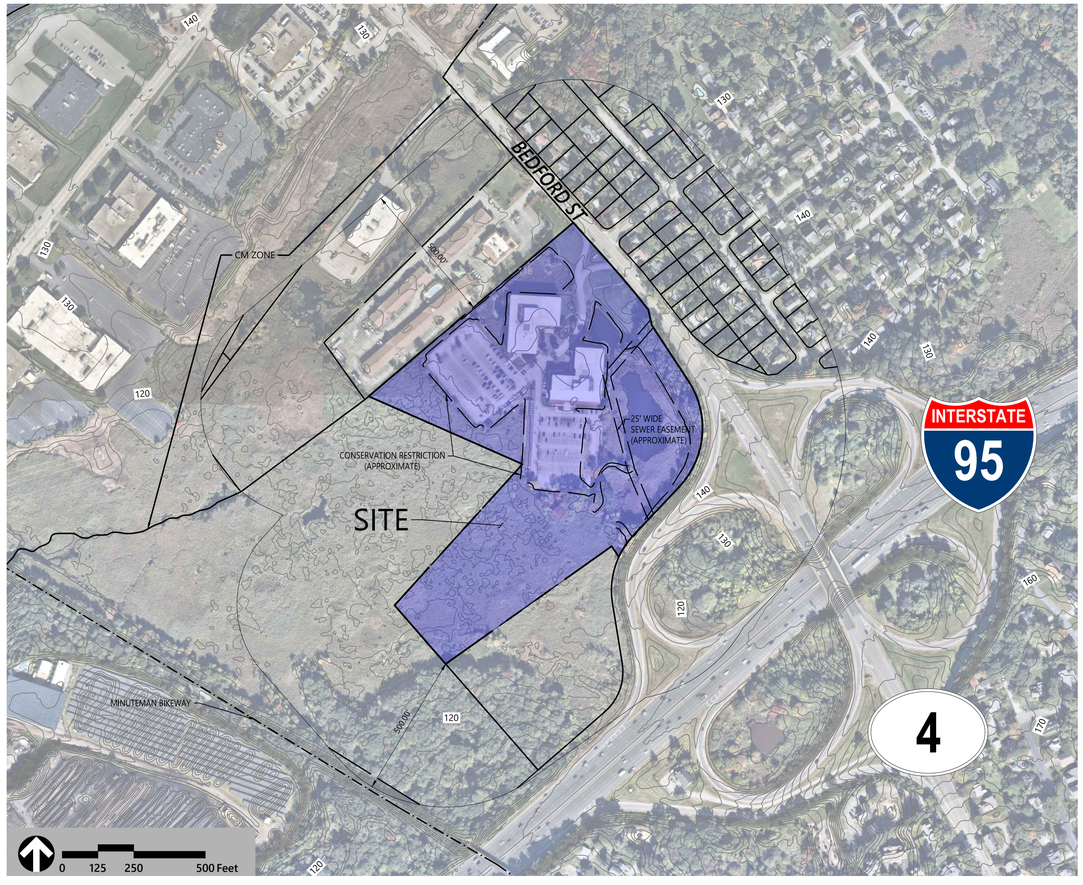
Robert Peters, Chair — Date

Definitive Subdivision Plans

Issued for	**Definitive Subdivision**
Date Issued	**February 25, 2022**
Latest Issue	**July 18, 2022**

Lexington Office Park

420-430 Bedford Street, Lexington, MA



vhb.com

vhb

101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Owner

ELANDZEE TRUST
C/O Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Applicant

Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Assessor's Map: 84
Lot: 40A

Sheet Index

No.	Drawing Title	Latest Issue
C1.01	Legend and General Notes	Feb. 25, 2022
C2.01	Site Analysis Map	July 18, 2022
C3.01	Abutters Plan	Feb. 25, 2022
C3.02	Abutters Plan	Feb. 25, 2022
C4.01	Property Rights and Dimensional Standards	July 18, 2022
C5.01	Key Plan	July 18, 2022
C5.02	Inset Sheet	July 18, 2022
C6.01	Street Layout and Profiles	July 18, 2022
C7.01	Landscape Plan	Feb. 25, 2022
C8.01	Construction Details	Feb. 25, 2022

I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

_____ _____
DATE

I, _____, CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING THE TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE.

_____ _____
TOWN CLERK DATE

APPROVED BY:
LEXINGTON PLANNING BOARD

RESERVED FOR REGISTRY USE ONLY

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677

\\VHB\GBL\PROJ\WAT-LD\15463.00 LEXINGTON SUBDIVISION\S\CAD\LD\PLANSET\DEFINITIVE SUBDIVISION\LOP\15463I00-COV 18 July 2022

VHB Project : 15463.00 420 & 430 Bedford Street
Issued for : Review February 25, 2022

Legend

Exist.	Prop.	
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
		PARKING SETBACK
10+00	10+00	BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
		LIMIT OF DISTURBANCE
		WETLAND LINE WITH FLAG
		FLOODPLAIN
BLSF		BORDERING LAND SUBJECT TO FLOODING
BZ		WETLAND BUFFER ZONE
NDZ		NO DISTURB ZONE
200'RA		200' RIVERFRONT AREA
		GRAVEL ROAD
EOP	EOP	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
CG	CG	CURB AND GUTTER
CC	ECC	EXTRUDED CONCRETE CURB
CC	MCC	MONOLITHIC CONCRETE CURB
CC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		BUILDING
	EN	BUILDING ENTRANCE
	LD	LOADING DOCK
		BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
		SILT FENCE
		SILT SOCK / STRAW WATTLE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
10	10	PARKING COUNT
	C10	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

Exist.	Prop.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		BUILDINGS
		RIPRAP
		CONSTRUCTION EXIT
27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW× 38.5 BW	45.0 TW× 38.5 BW	TOP & BOTTOM OF WALL ELEVATION
		BORING LOCATION
		TEST PIT LOCATION
MW	MW	MONITORING WELL
UD	UD	UNDERDRAIN
12"D	12"D	DRAIN
6"RD	6"RD	ROOF DRAIN
12"S	12"S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
6"W	6"W	WATER
4"FP	4"FP	FIRE PROTECTION
	2"DW	DOMESTIC WATER
3"G	G	GAS
E	E	ELECTRIC
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		CATCH BASIN CONCENTRIC
		CATCH BASIN ECCENTRIC
		DOUBLE CATCH BASIN CONCENTRIC
		DOUBLE CATCH BASIN ECCENTRIC
		GUTTER INLET
		DRAIN MANHOLE CONCENTRIC
		DRAIN MANHOLE ECCENTRIC
		TRENCH DRAIN
E	E	PLUG OR CAP
CO	CO	CLEANOUT
		FLARED END SECTION
		HEADWALL
S		SEWER MANHOLE CONCENTRIC
S		SEWER MANHOLE ECCENTRIC
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		FIRE DEPARTMENT CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
W	W	WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
E	EMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
T	TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	HH	HAND HOLE
PB	PB	PULL BOX
		MATCHLINE

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
RIM=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes

General

1. CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR ITS REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
   A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
   B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   C. LANDSCAPE, LOAM AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
7. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
   A. WATER PIPES SHALL BE CEMENT LINED DUCTILE IRON PIPE (DIP)
   B. SANITARY SEWER PIPES SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE
   C. STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HDPE)
   D. PIPE INSTALLATION AND MATERIALS SHALL COMPLY WITH THE STATE PLUMBING CODE WHERE APPLICABLE. CONTRACTOR SHALL COORDINATE WITH LOCAL PLUMBING INSPECTOR PRIOR TO BEGINNING WORK.
8. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
9. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS. FOR MANHOLES THAT ARE 20 FEET IN DEPTH AND GREATER, THE MINIMUM DIAMETER SHALL BE 5 FEET.

Layout and Materials

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. CURB RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
3. CURBING SHALL BE VERTICAL GRANITE CURB WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS.
4. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR.
6. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.

Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES. FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4 THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1. BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC., AND FROM DEEDS AND PLANS OF RECORD. THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY VHB, INC. IN APRIL, 2020.
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD OF 1988.

Document Use

1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

_____ _____
DATE

I, _____, CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING THE TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE.

_____ _____
TOWN CLERK DATE

APPROVED BY:
LEXINGTON PLANNING BOARD

_____
_____
_____
_____
_____

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vhb

101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Owner

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C/O Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Applicant

Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.

Designed by | Checked by

Issued for | Date

February 25, 2022

Not Approved for Construction

Drawing Title

Legend and General Notes

Drawing Number

C1.01

Sheet 2 of 11

Project Number
15463.00

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677

Saved Tuesday, February 15, 2022 8:41:01 AM SMORTON Plotted Monday, July 18, 2022 2:29:59 PM Sarah Morton

Notes

General

1. THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN APRIL, 2020 AND FROM DEEDS AND PLANS OF RECORD.
2. THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY VHB, INC. IN APRIL, 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 PLAN REFER TO NAVD OF 1988.
5. THE LOT LIES ENTIRELY WITHIN ZONE AE (BASE FLOOD ELEVATION DETERMINED) ZONE X (SHADED) (AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD) AND ZONE X (UNSHADED) (AREAS TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAPS FOR MIDDLESEX COUNTY, MASSACHUSETTS, MAP NUMBERS 25017C0401E, EFFECTIVE DATE JUNE 4, 2010 & 25017C0382F, EFFECTIVE DATE JULY 6, 2016.
6. THE SITE LIES WITHIN THE MANUFACTURING DISTRICT (CM). IT WAS PREVIOUSLY PART OF THE MANUFACTURING DISTRICT (CM) AND REGIONAL OFFICE DISTRICT (CO) AS SHOWN ON THE "2019 ZONING MAP OF THE TOWN OF LEXINGTON", DATED AUGUST 30, 2019. DIMENSIONAL REQUIREMENTS FOR A CM ARE:

	CM
MINIMUM LOT AREA	20,000 SF
MINIMUM FRONTAGE	50 FEET [1]
MINIMUM FRONT YARD SETBACK	NR
MINIMUM SIDE YARD SETBACK	15 FEET [1]
MINIMUM REAR YARD SETBACK	15 FEET [1]
MAXIMUM BUILDING HEIGHT	115 FEET [1]

[1] THIS LIMIT MAY BE WAIVED BY SPECIAL PERMIT.

7. THE TREE SYMBOL OUTLINE SHOWN ON THIS PLAN DOES NOT REPRESENT THE ACTUAL TREE CANOPY.
8. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND MAY BE SUBJECT TO ADDITIONAL INFORMATION DISCLOSED IN SUCH.
9. WITHIN THE LIMITS OF WORK THERE ARE 2 DECIDUOUS TREES WITH A TOTAL DBH OF 22".
10. BORINGS LB-01 THROUGH LB-11 WERE PREFORMED BY GEOLOGIC EARTH EXPLORATION, INC. BETWEEN 13 AND 20 DECEMBER 2021 UNDER THE FULL-TIME OBSERVATION OF A LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC. FIELD ENGINEER. ALL BORING LOCATIONS ARE APPROXIMATE AND BASED ON A "BORING LOCATION PLAN" BY LANGAN DATED JANUARY 17, 2022. INFORMATION FROM THE BORINGS ARE PROVIDED IN THE GEOTECHNICAL ENGINEERING LETTER BY LANGAN DATED FEBRUARY 10, 2022.
11. INFORMATION ON TOPOGRAPHY, SLOPES, AND TREES ARE NOT PROVIDED IN AREAS THAT WILL NOT BE DISTURBED.
12. NO FURTHER SUBDIVISION ALLOWED WITHOUT RETURNING TO THE PLANNING BOARD, PURSUANT TO M.G.L. C.41, §81W

Legend

- 15-25% SLOPES
- 25-40% SLOPES
- >40% SLOPES



I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

_____ _____
DATE

I, _____, CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING THE TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE.

_____ _____
TOWN CLERK DATE

APPROVED BY:
LEXINGTON PLANNING BOARD

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Applicant
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800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

LEGEND
- APPROXIMATE LIMITS OF WETLANDS
- 100'BZ — APPROXIMATE 100' BUFFER OF WETLANDS
- APPROXIMATE CONSERVATION RESTRICTION

0 25 50 100Feet

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.
1	PER PB 5-18-2022 VOTE	07/18/2022	

Designed by | Checked by
Issued for | Date
February 25, 2022

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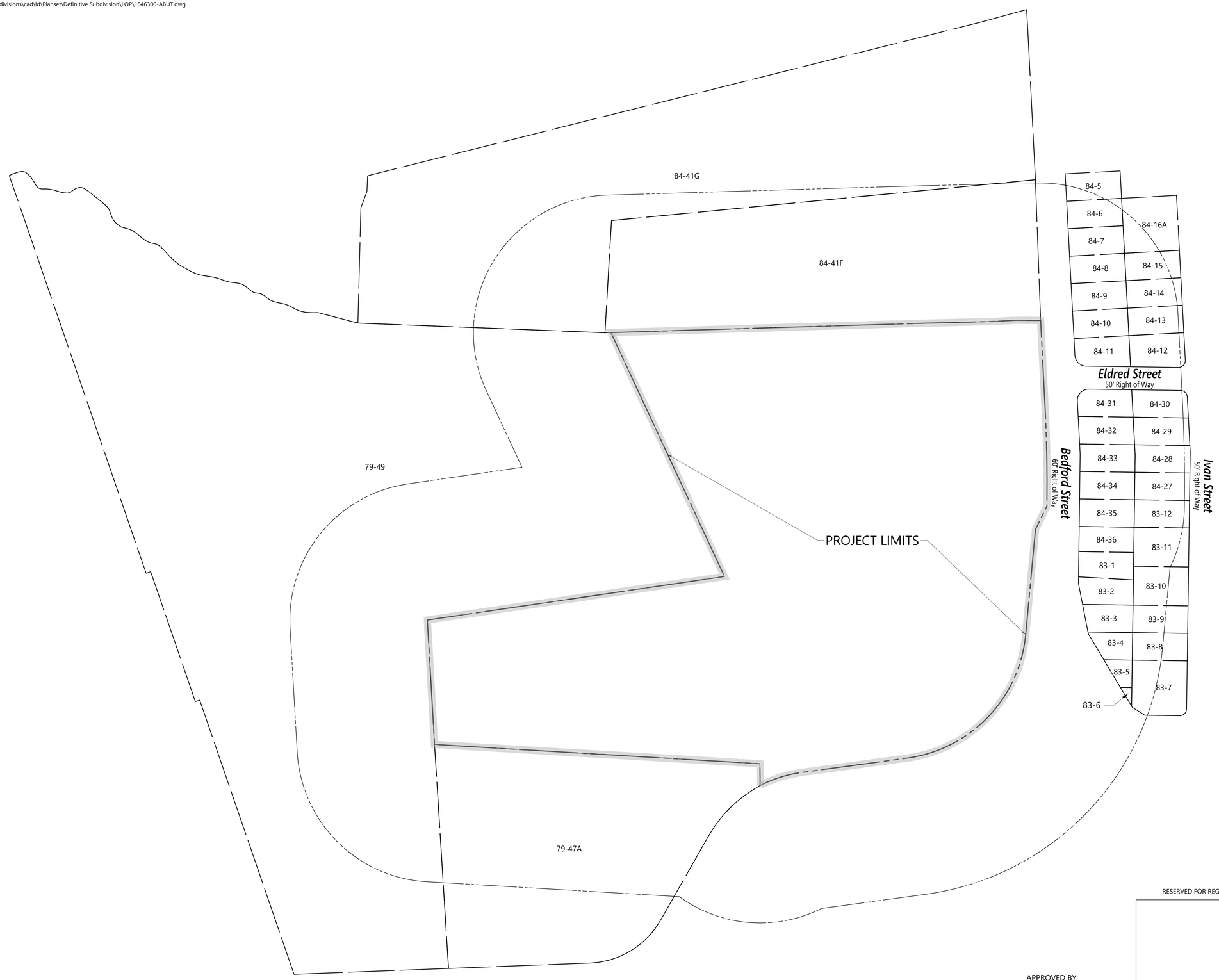
Drawing Title
Site Analysis Map

Drawing Number
C2.01

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677
REGISTERED PROFESSIONAL ENGINEER

Sheet 3 of 11

Project Number
15463.00



0 50 100 200 Feet

I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

DATE

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TOWN CLERK

DATE

APPROVED BY:
LEXINGTON PLANNING BOARD

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Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.

Designed by | Checked by

Issued for | Date

February 25, 2022

Not Approved for Construction

Drawing Title

Abutters Plan

Drawing Number

C3.01

Sheet 4 of 11

Project Number
15463.00

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677
7/18/22

Saved Wednesday, June 1, 2022 11:45:18 AM APERCIC Plotted Monday, July 18, 2022 2:30:34 PM Sarah Morton

79-47A
350 BEDFORD ST
BEDFORD CONSTRUCTION CO INC
97 LYNNWOOD DR
LONGMEADOW, MA 01106

79-49
HARTWELL AVE
TOWN OF LEXINGTON - SANITARY F
1625 MASS AVE
LEXINGTON, MA 02420

83-1
413 BEDFORD ST
CHOW TAK LIANG LIHENG
15 DORCHESTER ST UNIT B
SOUTH BOSTON, MA 02127

83-2
411 BEDFORD ST
SWANN PIA
411 BEDFORD ST
LEXINGTON, MA 02420

83-3
BEDFORD ST
TOWN OF LEXINGTON
1625 MASS AVE
LEXINGTON, MA 02420

83-4
BEDFORD ST
KEATING EDWARD J &
KEATING MAUREEN H
BEDFORD ST
LEXINGTON, MA 02420

83-5
BEDFORD ST
LAYOUS WASEI &
MASSIS MANAHEL
10 BERNARD ST
LEXINGTON, MA 02420

83-6
BEDFORD ST
RINGER LILLIAN E
19 BOTHWELL R
BRIGHTON, MA 02135

83-7
10 BERNARD ST
LAYOUS WASEI &
MASSIS MANAHEL
10 BERNARD ST
LEXINGTON, MA 02420

83-8
28 IVAN ST
ROBERTS MIA WALKER
28 IVAN ST
LEXINGTON, MA 02420

83-9
30 IVAN ST
GANGL MATTHEW R
30 IVAN ST
LEXINGTON, MA 02420

83-10
32 IVAN ST
KARP CAROLYN S TRUSTEE
CAROLYN S KARP REVOCABLE TRUST
32 IVAN ST
LEXINGTON, MA 02420

83-11
36 IVAN ST
TROMBLEY GARY W &
TROMBLEY SUSAN E
36 IVAN ST
LEXINGTON, MA 02420

83-12
38 IVAN ST
COEN JAMES P &
COEN KAREN L
38 IVAN ST
LEXINGTON, MA 02420

84-5
447 BEDFORD ST
CHIN TZUCHIEN &
CHEN PISHA
447 BEDFORD ST
LEXINGTON, MA 02420

84-6
443 BEDFORD ST
MA WEI &
HANG ZHENXIA
443 BEDFORD ST
LEXINGTON, MA 02420

84-7
441 BEDFORD ST
GEE WILLIAM &
GEE EVA W
441 BEDFORD ST
LEXINGTON, MA 02420

84-8
439 BEDFORD ST
NAVATO ALFREDO RENE TRUSTEE
THE PATRIA TRUST
PO BOX 551
BEDFORD, MA 01730

84-9
437 BEDFORD ST
NELLAIAPPAN KALIAPPANADAR &
NELLAIAPPAN UMADEVI
437 BEDFORD ST
LEXINGTON, MA 02420

84-10
435 BEDFORD ST
SOUSA JUDITH M
435 BEDFORD ST
LEXINGTON, MA 02420

84-11
433 BEDFORD ST
SANON JEAN V &
DESROSIERS MARYSE
433 BEDFORD ST
LEXINGTON, MA 02421

84-12
10 ELDRED ST
RAAFAT, AMR
10 ELDRED ST
LEXINGTON, MA 02420

84-13
52 IVAN ST
STROLL SARAH
52 IVAN ST
LEXINGTON, MA 02420

84-14
56 IVAN ST
ZHANG HONG &
XU BO
56 IVAN ST
LEXINGTON, MA 02420

84-15
58 IVAN ST
HUANG YA-HSIN &
SHIH-CHUNG
58 IVAN ST
LEXINGTON, MA 02420

84-16A
60 IVAN ST
YANG MENG &
LIAO SHENGKAI
60 IVAN ST
LEXINGTON, MA 02420

84-27
40 IVAN ST
SUNDARAM BAGAVAN &
VASUDEV EAMALA
40 IVAN ST
LEXINGTON, MA 02420

84-28
42 IVAN ST
CHIN STEVEN &
CHIN SUSIE
42 IVAN ST
LEXINGTON, MA 02420

84-29
44 IVAN ST
GRANT JAMES L &
GRANT CLAIRE P
44 IVAN ST
LEXINGTON, MA 02420

84-30
9 ELDRED ST
CHEN XINYUAN &
HUANG YI
9 ELDRED ST
LEXINGTON, MA 02420

84-31
3 ELDRED ST
GOEL VIKAS &
GOEL SHIVANI
3 ELDRED ST
LEXINGTON, MA 02420

84-32
425 BEDFORD ST
LEXINGTON HOUSING ASSISTANCE BOARD INC
1620 MASSACHUSETTS AVE STE 4
LEXINGTON, MA 02421

84-33
423 BEDFORD ST
FITZMAURICE MARILYN TRUSTEE
FITZMAURICE TRUST
423 BEDFORD ST
LEXINGTON, MA 02420

84-34
421 BEDFORD ST
CORSO AARON S &
BATES MARIA J
421 BEDFORD ST
LEXINGTON, MA 02420

84-35
419 BEDFORD ST
HUA LEI &
NGO JOHN
419 BEDFORD ST
LEXINGTON, MA 02420

84-36
415 BEDFORD ST
CHEN HAI-PING KO &
CHEN MON-CHA
415 BEDFORD ST
LEXINGTON, MA 02420

84-41F
440 BEDFORD ST
AYUSHI LLC
440 BEDFORD ST
LEXINGTON, MA 02420

84-41G
450 BEDFORD ST
BEDFORD STREET LIMITED PARTNERSHIP
116 FLANDERS RD SUITE 2000
WESTBOROUGH, MA 01581

I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

_____ _____
DATE

I, _____, CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING THE TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE.

_____ _____
TOWN CLERK DATE

APPROVED BY:
LEXINGTON PLANNING BOARD

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vhb.com
101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Owner
ELANDZEE TRUST
C/O Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Applicant
Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.

Designed by | Checked by

Issued for | Date

February 25, 2022

Not Approved for Construction

Drawing Title
Abutters Plan

Drawing Number
C3.02

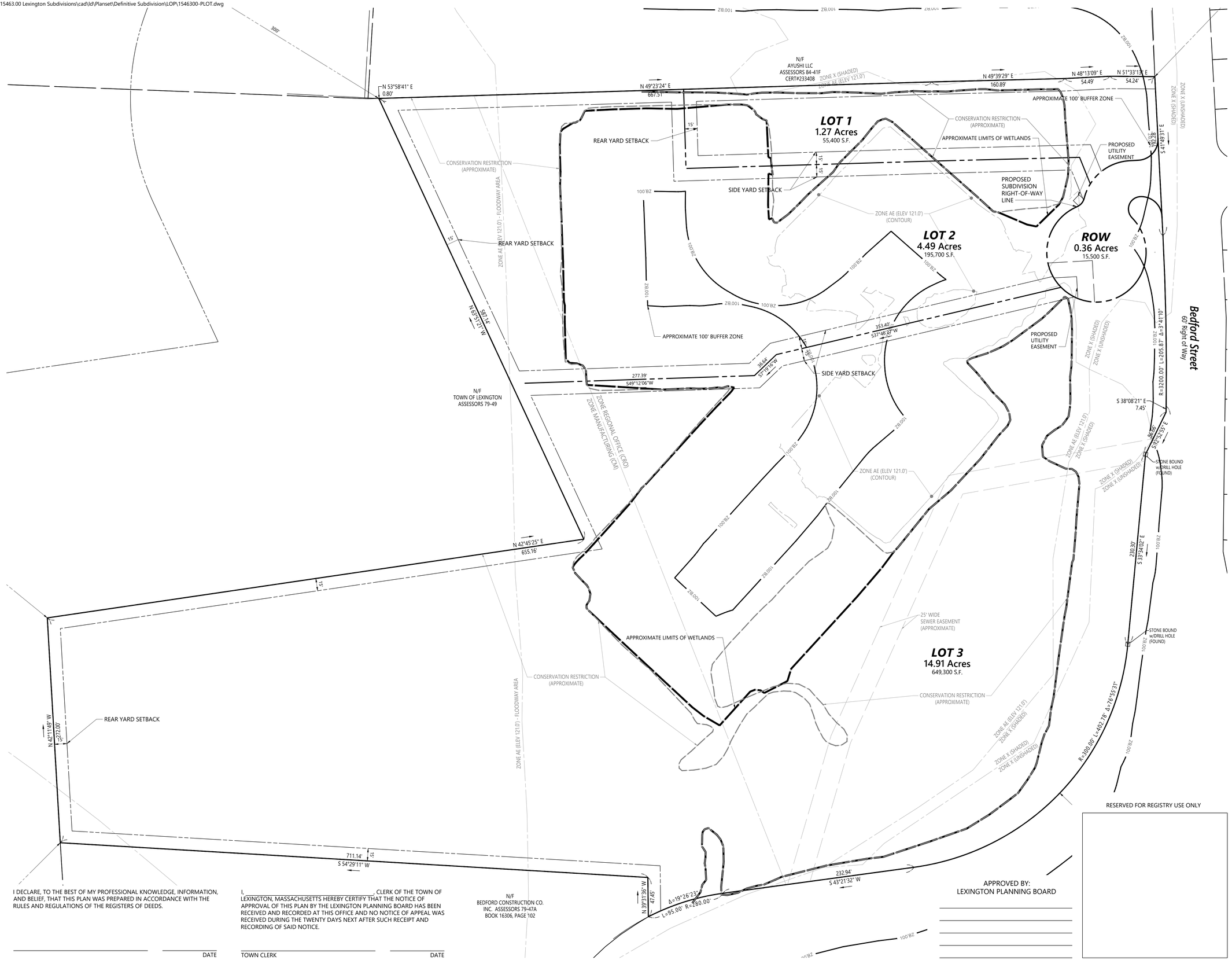
Sheet 5 of 11

Project Number
15463.00

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677
REGISTERED PROFESSIONAL ENGINEER

Saved Wednesday, June 1, 2022 11:45:18 AM APERCIC Plotted Monday, July 18, 2022 2:30:35 PM Sarah Morton

\\vhb\gbl\proj\Wat-LD\15463.00 Lexington Subdivisions\cad\ld\Planset\Definitive Subdivision\LOP\1546300-PLOT.dwg



I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

DATE

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TOWN CLERK

DATE

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Boston, MA, 02199-8103

Applicant

Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

LEGEND

- APPROXIMATE LIMITS OF WETLANDS
- 100'BZ — APPROXIMATE 100' BUFFER OF WETLANDS
- APPROXIMATE CONSERVATION RESTRICTION

0 25 50 100 Feet

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.
1	PER PB 5-18-2022 VOTE	07/18/2022	

Designed by | Checked by

Issued for | Date

February 25, 2022

Not Approved for Construction

Drawing Title

Property Rights and Dimensional Standards

Drawing Number

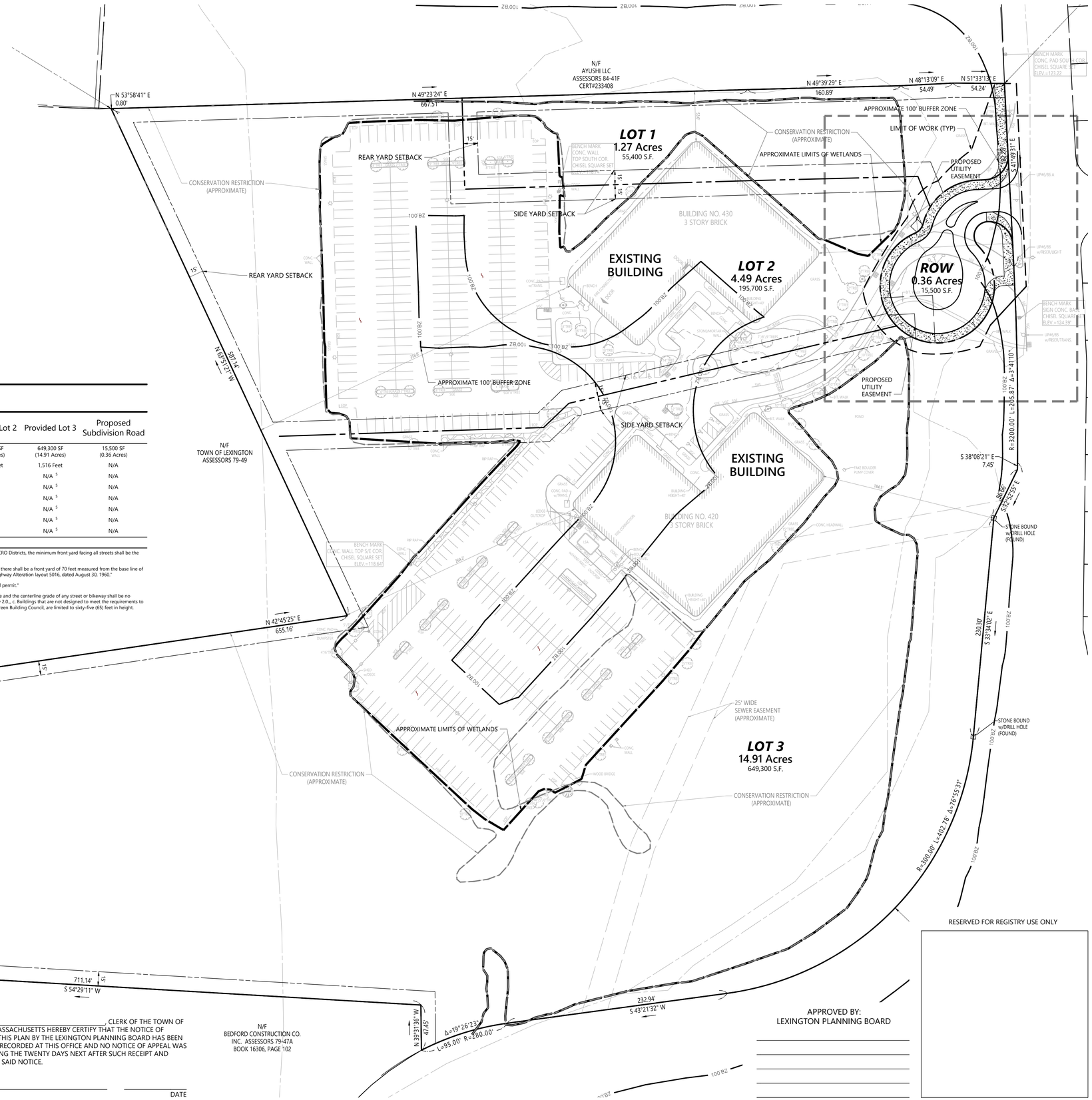
C4.01

Sheet 6 of 11

Project Number
15463.00

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677

Saved Monday, July 18, 2022 2:23:03 PM SMORTON Plotted Monday, July 18, 2022 2:30:51 PM Sarah Morton



Zoning Summary Chart

Zoning District(S):	CM - Manufacturing District
Overlay District(S):	Transportation Management

Zoning Regulation Requirements	Existing	Required*	Provided Lot 1	Provided Lot 2	Provided Lot 3	Proposed Subdivision Road
MINIMUM LOT AREA	916,000 SF (21.03 Acres)	20,000 SF (0.46 Acres)	55,400 SF (1.27 Acres)	195,700 SF (4.49 Acres)	649,300 SF (14.91 Acres)	15,500 SF (0.36 Acres)
FRONTAGE	685.1 Feet	50.0 Feet	182.0 Feet	149.6 Feet	1,516 Feet	N/A
FRONT YARD SETBACK [1] [2]	184 Feet	NR	N/A [5]	N/A [5]	N/A [5]	N/A
SIDE YARD SETBACK [3]	53 Feet	15 Feet	N/A [5]	N/A [5]	N/A [5]	N/A
REAR YARD SETBACK [3]	359 Feet	15 Feet	N/A [5]	N/A [5]	N/A [5]	N/A
MAXIMUM FLOOR AREA RATIO	NR	NR	N/A [5]	N/A [5]	N/A [5]	N/A
MAXIMUM BUILDING HEIGHT [3] [4]	40 Feet	115 Feet	N/A [5]	N/A [5]	N/A [5]	N/A
MAXIMUM BUILDING COVERAGE	6.1 %	NR	N/A [5]	N/A [5]	N/A [5]	N/A

* Zoning regulation requirements as specified in Town of Lexington Zoning Code, Section 4.0 Dimensional Controls

[1] As specified in Town of Lexington Zoning Code, Section 4.1.1, Table 2: Schedule of Dimensional Controls, Note B: "... For uses located in the CM and CRO Districts, the minimum front yard facing all streets shall be the same as that for the frontage street."

[2] As specified in Town of Lexington Zoning Code, Section 7.4.3, CM District/Bedford Street Front Yard: "Along the southwesterly side of Bedford Street there shall be a front yard of 70 feet measured from the base line of Bedford Street as shown on the Commonwealth of Massachusetts layout 4689, dated June 3, 1958, and shown as auxiliary base line "F on the State Highway Alteration layout 5016, dated August 30, 1960."

[3] As specified in Town of Lexington Zoning Code, Section 4.1.1, Table 2: Schedule of Dimensional Controls, Note F: "This limit may be waived by special permit."

[4] As specified in Town of Lexington Zoning Code, Section 5.4.1, "The difference between the upper elevation of each segment of a building or structure and the centerline grade of any street or bikeway shall be no greater than the distance from that segment to the centerline of a street multiplied by 1.0 or to the centerline of the Minuteman Bikeway multiplied by 2.0., c. Buildings that are not designed to meet the requirements to demonstrate certifiability at the Silver level using the LEED v4 for Building Design and Construction: Core and Shell checklist, as outlined by the U. S. Green Building Council, are limited to sixty-five (65) feet in height. d. Buildings utilizing on-site combustion for HVAC system operation are limited to six (6) stories.

[5] Existing buildings and parking to be removed.

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_____ TOWN CLERK

_____ DATE

N/F
BEDFORD CONSTRUCTION CO.
INC. ASSESSORS 79-47A
BOOK 16306, PAGE 102

APPROVED BY:
LEXINGTON PLANNING BOARD

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617.924.1770

Owner

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800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Applicant

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Boston, MA, 02199-8103

LEGEND

- APPROXIMATE LIMITS OF WETLANDS
- 100'BZ — APPROXIMATE 100' BUFFER OF WETLANDS
- APPROXIMATE CONSERVATION RESTRICTION

0 25 50 100 Feet

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.
1	PER PB 5-18-2022 VOTE	07/18/2022	

Designed by | Checked by

Issued for | Date

February 25, 2022

Not Approved for Construction

Drawing Title
Key Plan

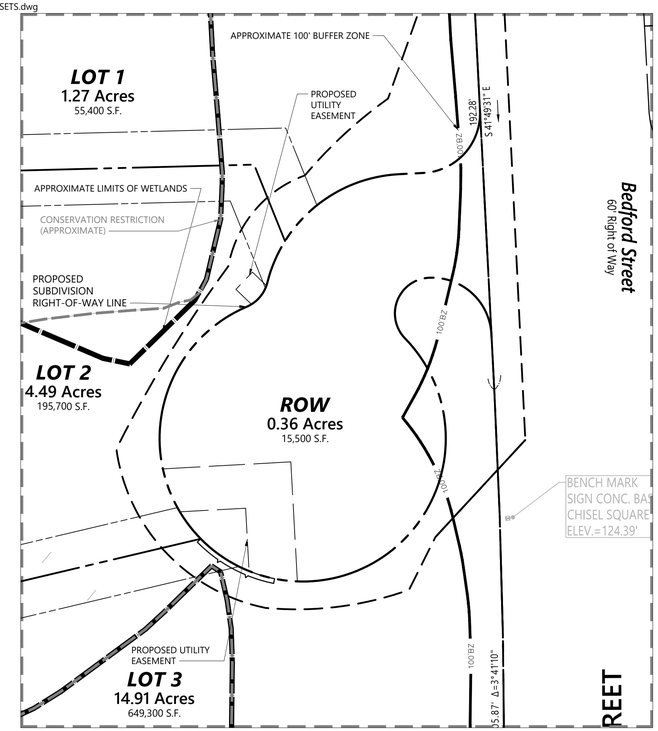
Drawing Number
C5.01

Sheet 7 of 11

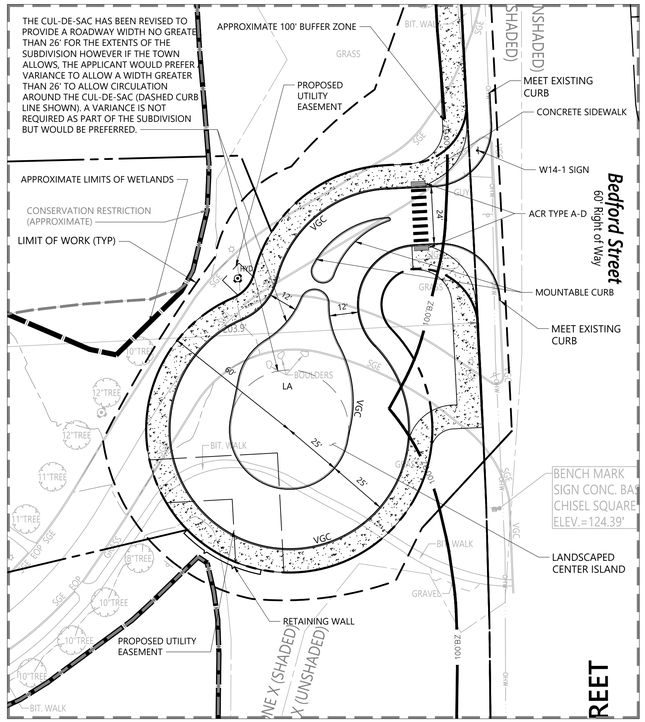
Project Number
15463.00

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677

Saved Monday, July 18, 2022 2:25:43 PM SMORTON Plotted Monday, July 18, 2022 2:31:05 PM Sarah Morton



LOTTING PLAN



LAYOUT AND MATERIALS

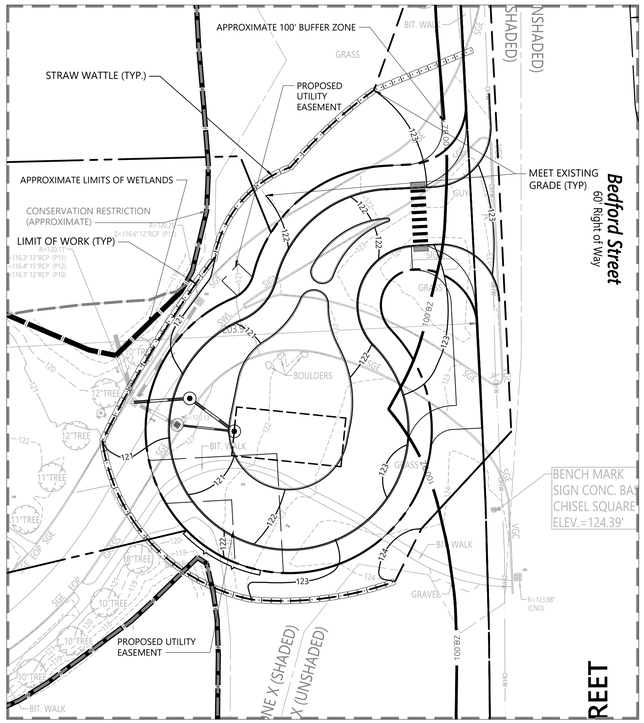
Cut/Fill Calculations

CUT	± 280 CY
FILL	± 80 CY
NET (CUT)	± 200 CY

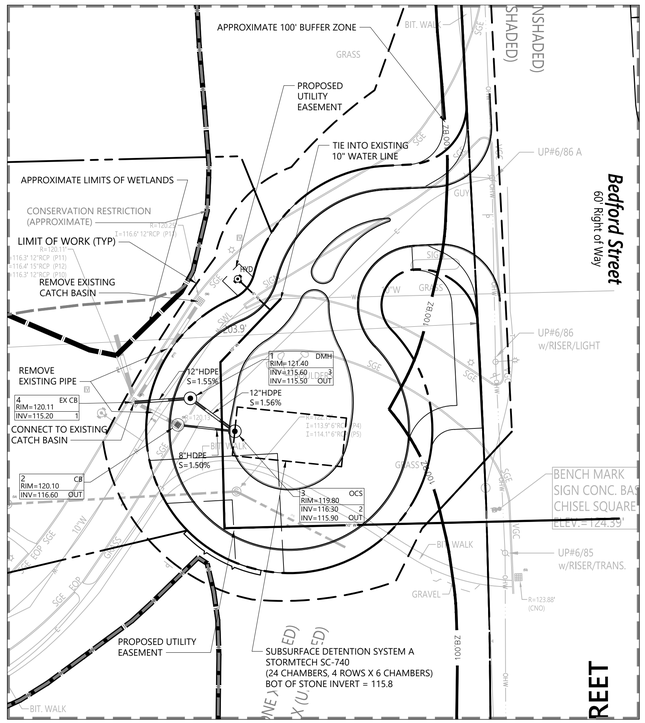
Notes

General

1. REMOVAL OF EXISTING UNDERGROUND UTILITIES OR OBSTRUCTIONS IS NOT INCLUDED IN THE CALCULATIONS, NOR IS THE INSTALLATION OF PROPOSED UTILITIES.
2. NO ASSUMPTIONS ARE MADE REGARDING OVER-EXCAVATION THAT MAY BE REQUIRED DUE TO UNSUITABLE MATERIAL.
3. NO SHRINK/SWELL FACTORS ARE APPLIED.



GRADING AND DRAINAGE



UTILITIES

I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

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TOWN CLERK DATE

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Applicant

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Boston, MA, 02199-8103

Sign Summary

M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
W14-1	30"	30"	DEAD END

LEGEND

- APPROXIMATE LIMITS OF WETLANDS
- 100'BZ — APPROXIMATE 100' BUFFER OF WETLANDS
- APPROXIMATE CONSERVATION RESTRICTION

0 15 30 60 Feet

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.
1	PER PB 5-18-2022 VOTE	07/18/2022	

Designed by | Checked by

Issued for | Date

February 25, 2022

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Drawing Title
Inset Sheet

Drawing Number
C5.02

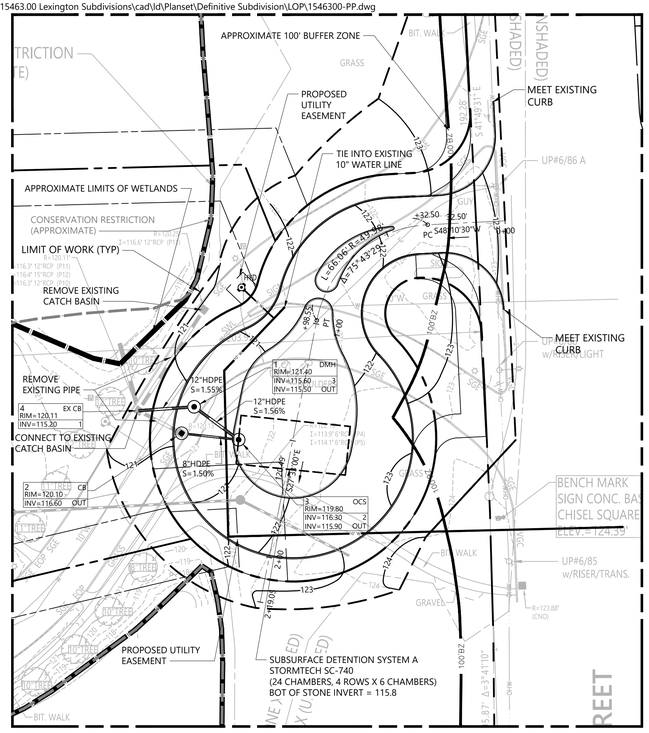
Sheet 8 of 11

Project Number
15463.00

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677

Saved Monday, July 18, 2022 2:27:33 PM SMORTON Plotted Monday, July 18, 2022 2:31:28 PM Sarah Morton

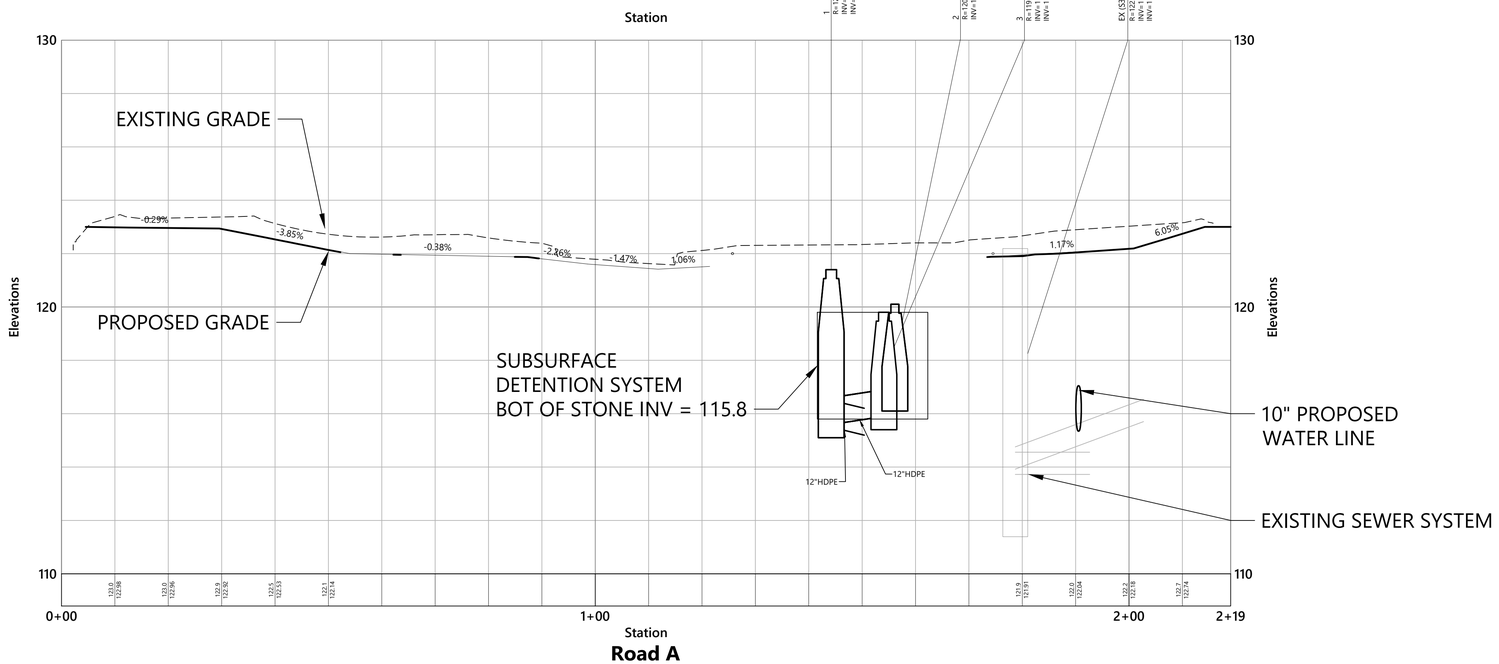
\\vhb\gbl\proj\Wat-LD\15463.00 Lexington Subdivisions\cad\ld\Planset\Definitive Subdivision\LOP\1546300-PP.dwg



Notes

General

1. INFORMATION ON MATERIAL, CLASS/STRENGTH, SIZE, AND GRADE OF SEWERS AND DRAINS PROVIDED ON C1.01 AND C5.02. INFORMATION ON DRAINAGE STRUCTURES PROVIDED ON C8.01.
2. NO VERTICAL CURVES OCCUR ALONG ROAD A.



Road A

I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

_____ _____
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TOWN CLERK DATE

APPROVED BY:
LEXINGTON PLANNING BOARD

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Boston, MA, 02199-8103

Applicant

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800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

LEGEND

- APPROXIMATE LIMITS OF WETLANDS
- 100'BZ — APPROXIMATE 100' BUFFER OF WETLANDS
- APPROXIMATE CONSERVATION RESTRICTION

0 20 40 80 Feet

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.
1	PER PB 5-18-2022 VOTE	07/18/2022	

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Drawing Title
Street Layout and Profiles

Drawing Number
C6.01

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLLY
CIVIL
No. 52677

Sheet 9 of 11

Project Number
15463.00

Saved Monday, July 18, 2022 2:26:56 PM SMORTON Plotted Monday, July 18, 2022 2:31:44 PM Sarah Morton

Planting Notes

1. ALL PROPOSED PLANTING LOCATIONS SHALL BE STAKED AS SHOWN ON THE PLANS FOR FIELD REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL BELOW GRADE AND ABOVE GROUND UTILITIES AND NOTIFY OWNERS REPRESENTATIVE OF CONFLICTS.
3. NO PLANT MATERIALS SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICT.
4. A 3-INCH DEEP MULCH PER SPECIFICATION SHALL BE INSTALLED UNDER ALL TREES AND SHRUBS, AND IN ALL PLANTING BEDS, UNLESS OTHERWISE INDICATED ON THE PLANS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
5. ALL TREES SHALL BE BALLED AND BURLAPPED, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR SPECIFICATION, OR APPROVED BY THE OWNER'S REPRESENTATIVE.
6. FINAL QUANTITY FOR EACH PLANT TYPE SHALL BE AS GRAPHICALLY SHOWN ON THE PLAN. THIS NUMBER SHALL TAKE PRECEDENCE IN CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND ON THE PLAN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLANT LIST AND PLANT LABELS PRIOR TO BIDDING.
7. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE REVIEWED BY LANDSCAPE ARCHITECT AND APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE.
8. ALL PLANT MATERIALS INSTALLED SHALL MEET THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND CONTRACT DOCUMENTS.
9. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.
10. AREAS DESIGNATED "LOAM & SEED" SHALL RECEIVE MINIMUM 6" OF LOAM AND SPECIFIED SEED MIX. LAWNS OVER 2:1 SLOPE SHALL BE PROTECTED WITH EROSION CONTROL FABRIC.
11. ALL DISTURBED AREAS NOT OTHERWISE NOTED ON CONTRACT DOCUMENTS SHALL BE LOAM AND SEEDED OR MULCHED AS DIRECTED BY OWNER'S REPRESENTATIVE.
12. THIS PLAN IS INTENDED FOR PLANTING PURPOSES. REFER TO SITE / CIVIL DRAWINGS FOR ALL OTHER SITE CONSTRUCTION INFORMATION.

Tree Protection

1. EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY CONSTRUCTION FENCE. ERECT FENCE AT EDGE OF THE TREE DRIPLINE PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL NOT OPERATE VEHICLES WITHIN THE TREE PROTECTION AREA. CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS, OR DISPOSE OF ANY WASTE MATERIALS, WITHIN THE TREE PROTECTION AREA.
3. DAMAGE TO EXISTING TREES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY A CERTIFIED ARBORIST AT THE CONTRACTOR'S EXPENSE.

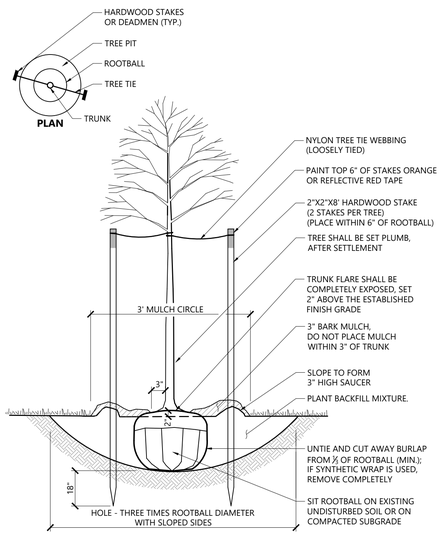
Plant Maintenance Notes

1. CONTRACTOR SHALL PROVIDE COMPLETE MAINTENANCE OF THE LAWNS AND PLANTINGS. NO IRRIGATION IS PROPOSED FOR THIS SITE. THE CONTRACTOR SHALL SUPPLY SUPPLEMENTAL WATERING FOR NEW LAWNS AND PLANTINGS DURING THE ONE YEAR PLANT GUARANTEE PERIOD.
2. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE LANDSCAPE MAINTENANCE WORK. WATER SHALL BE PROVIDED BY THE CONTRACTOR.
3. WATERING SHALL BE REQUIRED DURING THE GROWING SEASON, WHEN NATURAL RAINFALL IS BELOW ONE INCH PER WEEK.
4. WATER SHALL BE APPLIED IN SUFFICIENT QUANTITY TO THOROUGHLY SATURATE THE SOIL IN THE ROOT ZONE OF EACH PLANT.
5. CONTRACTOR SHALL REPLACE DEAD OR DYING PLANTS AT THE END OF THE ONE YEAR GUARANTEE PERIOD. CONTRACTOR SHALL TURN OVER MAINTENANCE TO THE FACILITY MAINTENANCE STAFF AT THAT TIME.

PLANT SCHEDULE

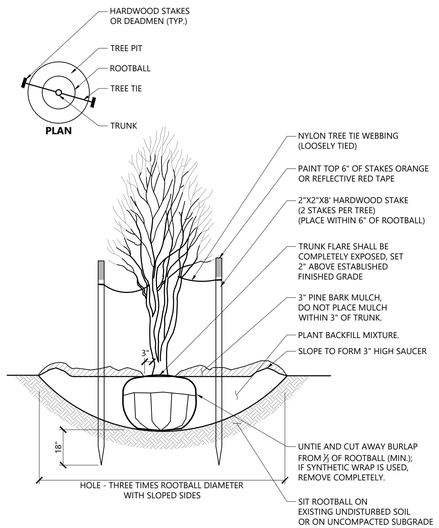
DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	RATE OF GROWTH	MATURE SIZE
CO	4	Celtis occidentalis	Common Hackberry	3 - 3 1/2" CAL.	Fast	40-60'H X 40-60'W
NS	4	Nyssa sylvatica	Black Tupelo	3 - 3 1/2" CAL.	Medium	30-50'H X 20-30'W
TA	5	Tilia americana	American Linden	3 - 3 1/2" CAL.	Medium	50-80'H X 30-50'W

FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	RATE OF GROWTH	MATURE SIZE
ACS	3	Amelanchier canadensis	Shadblow Serviceberry	8 - 10` HT./Multi-Stem	Medium	25-30'H X 15-20'W



Tree Planting (For Trees Under 4" Caliber) 9/21

N.T.S. Source: VHB LD_602



Multistem Tree Planting 9/21

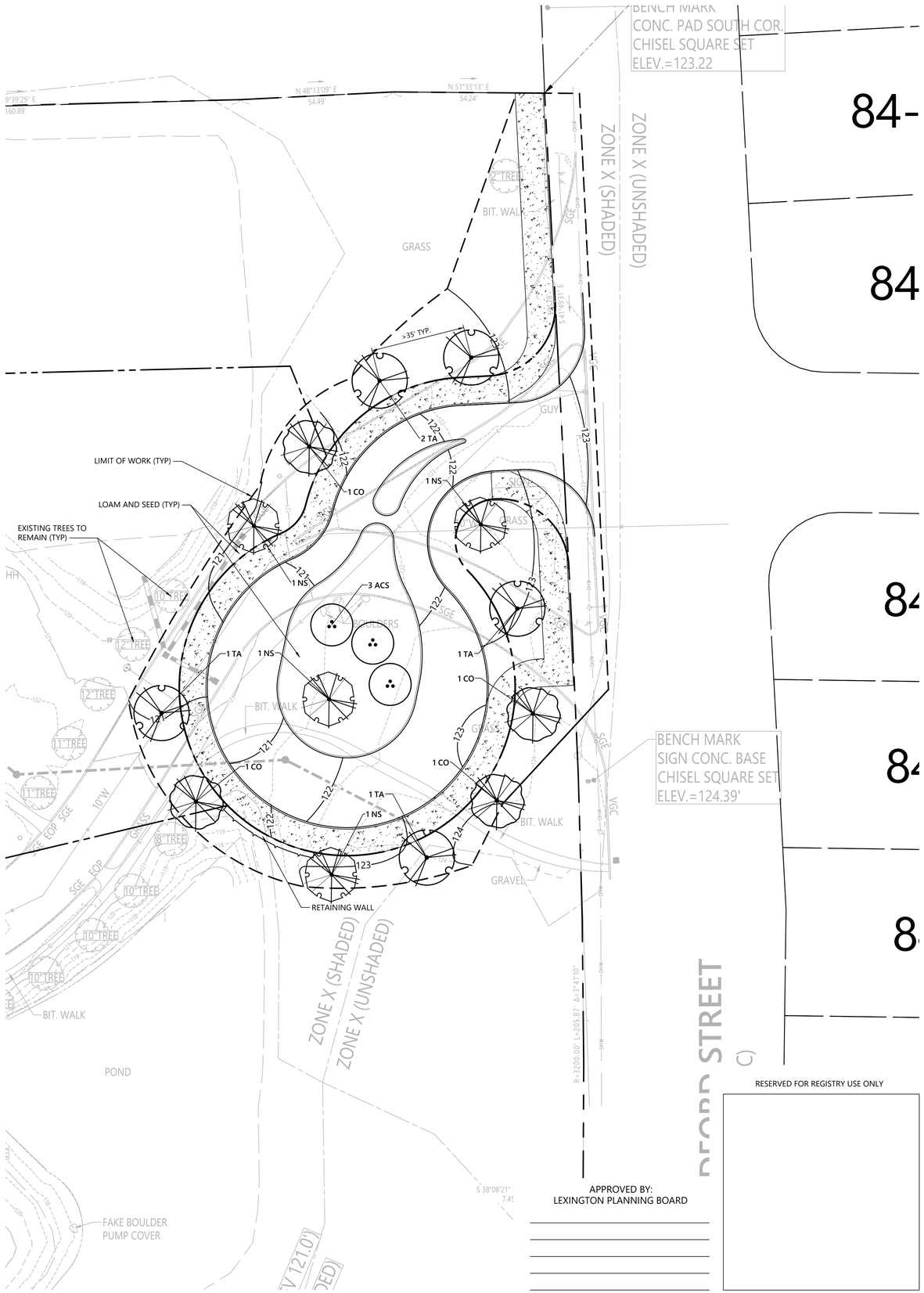
N.T.S. Source: VHB LD_606

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_____ _____
TOWN CLERK DATE



APPROVED BY:
LEXINGTON PLANNING BOARD

_____
_____
_____
_____
_____

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Boston, MA, 02199-8103

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.

Designed by | Checked by

Issued for | Date

February 25, 2022

Not Approved for Construction

Drawing Title
Landscape Plan

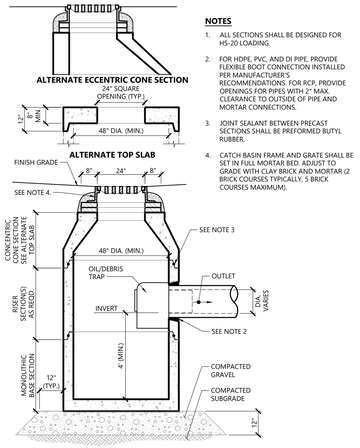
Drawing Number
C7.01

Sheet 10 of 11

Project Number
15463.00

MICHAEL D. KLOCKMAN NO. 1513 REGISTERED LANDSCAPE ARCHITECT 2/25/2022

Saved Wednesday, June 1, 2022 11:45:54 AM APERCIC Plotted Monday, July 18, 2022 2:32:05 PM Sarah Morton



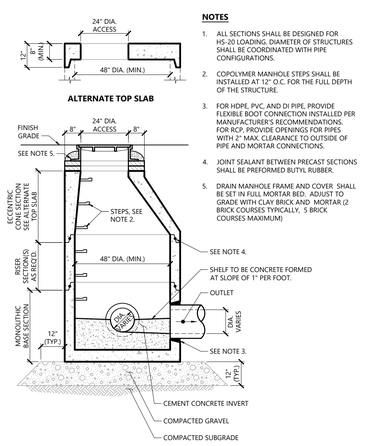
NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. FOR HDPE, PVC, AND DI PIPE, PROVIDE FLEXIBLE BOOT CONNECTION INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. FOR RCP, PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE AND MORTAR CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Catch Basin (CB) With Oil/Debris Trap

3/21

N.T.S. Source: VHB LD_101



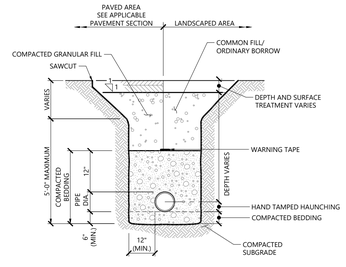
NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING. DIAMETER OF STRUCTURES SHALL BE COORDINATED WITH PIPE CONFIGURATIONS.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. FOR HDPE, PVC, AND DI PIPE, PROVIDE FLEXIBLE BOOT CONNECTION INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. FOR RCP, PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE AND MORTAR CONNECTIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

Drain Manhole (DMH)

11/19

N.T.S. Source: VHB LD_115



NOTES

1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.
3. COMPACTED GRANULAR FILL MAY CONSIST OF GRAVEL, CRUSHED STONE, SAND, OR OTHER MATERIAL AS APPROVED BY ENGINEER.

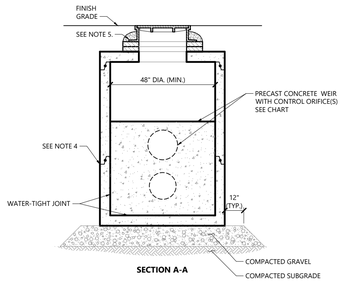
Utility Trench

11/19

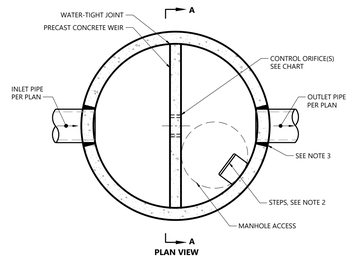
N.T.S. Source: VHB LD_300

OUTLET STRUCTURE CHART

DETENTION BASIN	STRUCTURE NUMBER	TOP OF WEIR ELEVATION	DIMENSIONS ORIFICE A	INVERT ORIFICE A	DIMENSIONS ORIFICE B	INVERT ORIFICE B



SECTION A-A



PLAN VIEW

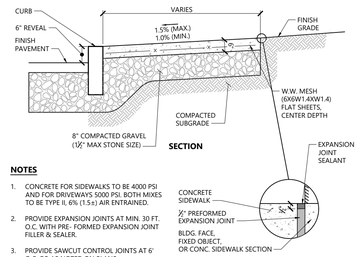
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Outlet Control Structure with Weir (OCS)

3/20

N.T.S. Source: VHB LD_162A



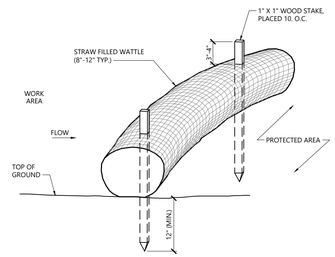
NOTES

1. CONCRETE FOR SIDEWALKS TO BE 4000 PSI AND FOR DRIVEWAYS 5000 PSI. BOTH MIXES TO BE TYPE II, 6% (1.5±) AIR ENTRAINED.
2. PROVIDE EXPANSION JOINTS AT MIN. 30 FT. O.C. WITH PRE- FORMED EXPANSION JOINT FILLER & SEALER.
3. PROVIDE SAWCUT CONTROL JOINTS AT 6' O.C. OR AS NOTED ON PLANS.
4. PROVIDE MEDIUM BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.
5. ALL EXPOSED CONCRETE SURFACES SHALL BE SEALED WITH A SILANE-SILOXANE PRODUCT.

Concrete Sidewalk

3/20

N.T.S. Source: VHB LD_420



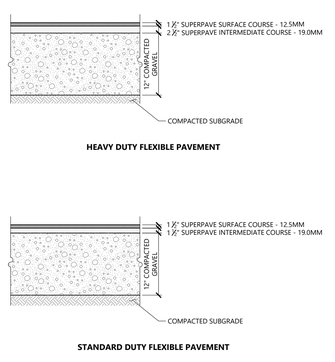
NOTES

1. STRAW WATTLE SHALL BE AS MANUFACTURED BY EARTHSAVER OR APPROVED EQUAL.
2. STRAW WATTLES SHALL OVERLAP A MINIMUM OF 12 INCHES.
3. STRAW WATTLE SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
4. TEMPORARY STRAW WATTLES TO BE REMOVED BY CONTRACTOR. ALL OTHERS TO REMAIN IN PLACE UNLESS DIRECTED OTHERWISE BY ENGINEER.
5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

Straw Wattle - Erosion Control Barrier

1/20

N.T.S. Source: VHB LD_659



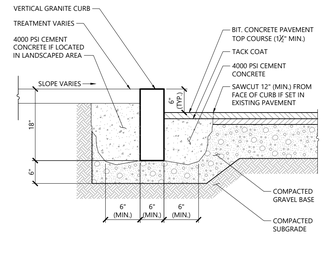
NOTES

PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

Bituminous Concrete Pavement Sections

11/19

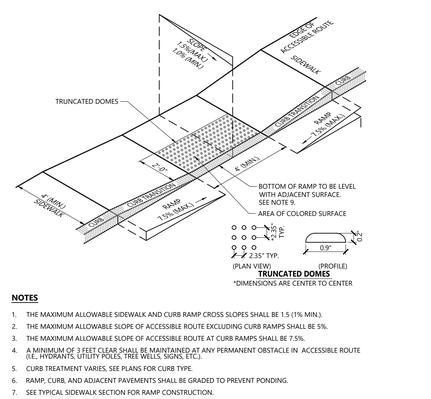
N.T.S. Source: VHB LD_430



Vertical Granite Curb (VGC)

3/20

N.T.S. Source: VHB LD_402



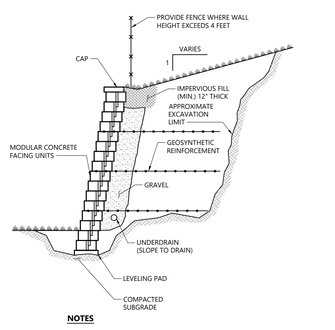
NOTES

1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN.).
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E.; HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
6. RAMP, CURB, AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5' x 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
9. ELIMINATE CURBING AT RAMP (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT ABUTS ROADWAY.
10. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES.
11. DETECTABLE WARNINGS SHALL BE INSTALLED PERPENDICULAR TO ACCESSIBLE ROUTE.

Accessible Curb Ramp (ACR) Type 'A-D'

12/20

N.T.S. Source: VHB LD_500



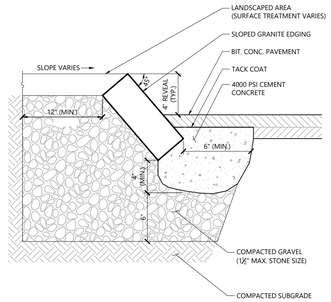
NOTES

DETAIL PROVIDED FOR GENERAL INFORMATION ONLY. STAMPED FINAL DESIGN OF MODULAR WALL SYSTEM TO BE PROVIDED BY CONTRACTOR BASED ON GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

Modular Retaining Wall

10/20

N.T.S. Source: VHB LD_750



Sloped Granite Edging (SGE)

12/20

N.T.S. Source: VHB LD_401

I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

_____ _____
DATE

I, _____, CLERK OF THE TOWN OF LEXINGTON, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LEXINGTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING THE TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE.

_____ _____
TOWN CLERK DATE

APPROVED BY:
LEXINGTON PLANNING BOARD

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vhb.com

vhb

101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

Owner

ELANDZEE TRUST
C/O Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Applicant

Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA, 02199-8103

Lexington Office Park

420 and 430 Bedford Street
Lexington, MA

No.	Revision	Date	Appvd.

Designed by Checked by

Issued for Date

February 25, 2022

Not Approved for Construction

Drawing Title

Construction Details

Drawing Number

C8.01

Sheet 11 of 11

Project Number

15463.00

COMMONWEALTH OF MASSACHUSETTS
NICHOLAS J. SKOLY
CIVIL
No. 52677
REGISTERED PROFESSIONAL ENGINEER

Saved Monday, February 21, 2022 7:56:13 AM SMORTON Plotted Monday, July 18, 2022 2:32:22 PM Sarah Morton

COVENANT

BRYAN J. KOOP and DAVID C. PROVOST, Trustees of ELANDZEE TRUST under Declaration of Trust dated March 27, 1972 recorded with Middlesex South District Registry of Deeds in Book 12237 Page 161, as amended of record (herein called the "Developer" or the "Owner") submitted an application dated March 4, 2022, to the Planning Board of the Town of Lexington, a municipal corporation situated in Middlesex County, Massachusetts (herein called the "Planning Board" or "Town"), for the approval of a definitive plan of a certain subdivision entitled "Lexington Office Park, 420-430 Bedford Street, Lexington, Mass" prepared by VHB dated February 25, 2022 and last revised /issued on July 18, 2022 consisting of eleven sheets ; and

WHEREAS, the Developer has requested the Planning Board to approve such definitive plan without requiring a performance bond or other surety;

NOW THEREFORE, in consideration of the Planning Board approving the definitive plan without requiring a performance bond or other surety, and in consideration of one dollar in hand paid, receipt whereof is hereby acknowledged, the Developer represents, covenants and agrees with the Town pursuant to Massachusetts General Laws, Chapter 81, Section 81U, as amended, as follows:

1. The Developer is the owner in fee simple of all the land included in the aforesaid subdivision and there are no mortgages of record or otherwise on any of said land.

2. This Covenant shall run with the land included in the aforesaid subdivision and shall operate as a restriction upon said land.

3. The ways and municipal services required to serve the lots in said subdivision shall be installed and constructed as shown on the definitive plan and in accordance with the Rules and Regulations of the Planning Board of the Town, with such modifications or conditions, if any, as have been imposed by the Planning Board or Board of Health of the Town, such modifications or conditions being set forth in a Certificate of Vote dated and granted on May 18, 2022, stamped by the Lexington Town Clerk on May 24, 2022 to be recorded herewith, before such lots may be built upon or conveyed other than by a mortgage deed; provided that a mortgagee who acquires title to the mortgaged premises by foreclosure or otherwise and any succeeding owner of such premises or part thereof may sell any such lots subject to the limitation that no lots shall be built upon until such ways and services have been provided to serve such lots; and provided further that nothing herein shall be deemed to prohibit a conveyance by a single deed, subject to this Covenant, of either the entire parcel of land shown on the definitive plan or of all lots shown on the definitive plan not previously released by the Planning Board.

4. Reference to this Covenant shall be entered upon the definitive plan and this Covenant shall be recorded when the definitive plan is recorded.

5. Lots within the subdivision may be released from the foregoing conditions only upon the recording of a written release executed by a majority of the Planning Board and specifically enumerating the lots to be released thereunder.

6. This Covenant shall be binding upon the executors, administrators, devisees, heirs, successors and assigns of the Developer.

Executed as a sealed instrument this ____ day of _____ 2022.

WITNESSES

_____
AS TO BOTH

OWNERS

_____
BRYAN J. KOOP, Trustee of Elandzee Trust

_____
DAVID C. PROVOST, Trustee of Elandzee Trust

COMMONWEALTH OF MASSACHUSETTS

County of _____, SS

On this _____ day of _____ 2022, before me, the undersigned notary public, personally appeared Bryan J. Koop, Trustee of Elandzee Trust, proved to me through personal knowledge to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

_____
Frederick J. DeAngelis,
Notary Public
My commission expires:

DRAFT

COMMONWEALTH OF MASSACHUSETTS

County of _____, SS

On this _____ day of _____ 2022, before me, the undersigned notary public, personally appeared David C. Provost, Trustee of Elandzee Trust, proved to me through personal knowledge to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

_____
Frederick J. DeAngelis,
Notary Public
My commission expires:

DRAFT

COMMONWEALTH OF MASSACHUSETTS

County of _____, SS

On this _____ day of _____ 2022, before me, the undersigned notary public, personally appeared Lexington Planning Board Members Robert Peters, Michael Schanbacher, Charles Horning, and Melanie Thompson, proved to me through personal knowledge to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

_____
Abigail McCabe
Notary Public
My commission expires:

_____

Robert D. Peters, Chair

_____

Michael Schanbacher, Vice Chair

_____

Melanie Thompson, Clerk

_____

Charles Hornig

DRAFT

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Staff Updates

PRESENTER:

ITEM NUMBER:

SUMMARY:

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Board Member Updates

PRESENTER:

ITEM NUMBER:

SUMMARY:

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Upcoming Meetings

PRESENTER:

ITEM NUMBER:

SUMMARY:

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Review of Meeting Minutes July 13, 2022

PRESENTER:

ITEM NUMBER:

SUMMARY:

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

8/3/2022