AGENDA

Lexington Planning Board

Thursday, April 10, 2025
Remote on Zoom: https://www.lexingtonma.gov/377/Access-Virtual-Meetings
6:00 PM

Development Administration

1. **217, 229, 233, 241 Massachusetts Avenue - Continued Public Hearing**

   Public hearing for a major site plan proposal for mixed-use multi-family development in the village overlay district (continued from 9/25, 11/20, 1/30) – ***Applicant request further continuance to May 7***

2. **231 Bedford Street - Continued Public Hearing to be re-opened**

   Continued Public hearing for major site plan review proposal for a multi-family development in the village overlay district (continued from 9/11, 11/6, 11/20, 1/15, 1/30, 3/5).

3. **419, 429, 433 & 439 Marrett Road – Preliminary Subdivision**

   Public meeting for a preliminary subdivision to subdivide 4 lots into 7 lots on a cul-de-sac.

4. **80 Bedford Street - Preliminary Subdivision**

   Public meeting for a preliminary subdivision to subdivide the property into 3 lots on a cul-de-sac

5. **287 & 295 Waltham Street - Special Residential Development**

   Public hearing for a major site plan review for special residential development

Board Administration

1. **Discussion of Annual Town Meeting Article 34: Amendments to §7.4 Village Overlay Districts and Reconsideration of Article 30: Amend the Inclusionary Housing for Special Residential**

   Board discussion of zoning for Annual Town Meeting articles
2. **Board Member & Staff Updates**
3. **Review Summer Meeting Schedule**
4. **Review of Draft Meeting Minutes: March 5**
5. **Upcoming Meetings**

Upcoming Meetings: *Thursday* April 17, Wednesdays May 7, May 28.

Adjourn

1. **Adjourn – The meeting will continue until all items are finished. The estimated adjournment time is 10:00 pm.**

Zoom Details

1. **Zoom Details - https://www.lexingtonma.gov/377/Access-Virtual-Meetings**

   Topic: Planning's Zoom Meeting
   Time: Apr 10, 2025 06:00 PM Eastern Time (US and Canada)
   Join Zoom Meeting
   https://lexingtonma.zoom.us/j/84297134800?pwd=eBw39BD6eWCUiy5dbnPOnMzTgJh75X.1

   Meeting ID: 842 9713 4800
   Passcode: 941920

Meeting broadcast by LexMedia

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

217, 229, 233, 241 Massachusetts Avenue - Continued Public Hearing

PRESENTER:

Board Discussion

ITEM NUMBER:

SUMMARY:

Applicant requested a continuance to May 7 in order to make further progress with the Conservation Commission prior to returning to the Planning Board.
Application is to construct a 44-unit five-story mixed-use building with first floor commercial with 52 parking spaces, landscaping, and stormwater management improvements.
The properties are located at 217, 229, 233, 241 Massachusetts Avenue, Lexington, MA also known as Map 13, Lots 372, 373, 374, & 375 in the CRS (Retail Shopping) and VO (Village Overlay) zoning districts.
Application materials may be viewed here (click Files tab): https://lexingtonma.portal.opengov.com/records/94025

SUGGESTED MOTION:

Move to accept the Applicant's request to continue the public hearing for the site plan review proposal at 217, 229, 233, and 241 Massachusetts Avenue to **Wednesday, May 7, 2025** at or after 6:00 pm on Zoom and to accept the Applicant's request to extend the final action deadline to May 21, 2025.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

ATTACHMENTS:

Description	Type
Continuance Request 4.4.25	Cover Memo

Town of Lexington
PLANNING BOARD
1625 Massachusetts Avenue
Lexington, MA 02420
Tel (781) 698-4560
planning@lexingtonma.gov
www.lexingtonma.gov/planning

Michael Schanbacher, Chair
Robert Creech, Vice Chair
Melanie Thompson, Clerk
Charles Hornig, Member
Tina McBride, Member
Michael Leon, Associate Member

RECEIVED
10:28 am, Apr 04 2025
TOWN CLERK
LEXINGTON MA

Date: April 1, 2025

Lexington Planning Board

Re: Request for Extension of Final Action Date:

Project Address: 217, 229, 233, 241 Massachusetts Avenue (PLAN-24-19)

Major Site Plan Review with special permit and stormwater management permit

To the Lexington Planning Board:

I am hereby requesting that the final action deadline for the site plan review application submitted by Northshore Residential Development for 217-241 Massachusetts Avenue be continued as follows to allow more time to update plans to submit requested material to confirm compliance with the Stormwater Management Regulations and Board's Zoning Regulations.

Hearing date from: April 10, 2025 to May 7, 2025

Decision deadline date: April 24, 2025 to May 21, 2025

Respectfully,

Signature

Print Name: Mark Vogel, attorney for Applicant

Applicant or Applicant's Representative

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

231 Bedford Street - Continued Public Hearing to be re-opened

PRESENTER:

ITEM NUMBER:

Applicant: 231 Bedstreet LLC

SUMMARY:

Board will re-open the continued public hearing, deliberate, and vote on application.

Application is for a three-story residential building with 7 dwelling units with parking underneath, landscaping, and stormwater management improvements. The property is located at 231 Bedford St, Lexington, MA also known as Map 71, Lot 33 in the CN (Neighborhood Business) and VO (Village Overlay) zoning districts.
Application materials may be viewed at (click Files tab): https://lexingtonma.portal.opengov.com/records/88897 Updated civil plans, drainage calculations, and cover letter uploaded on December 5)
A staff memo and latest peer review memo are attached. Staff recommends approval with conditions. Staff will prepare a draft approval with suggested conditions of approval for the Board's review.
The Applicant will present updates since the applicant was last before the Board, staff will provide an update, and board members will discuss before opening the hearing up to public comments. The applicant will have an opportunity to respond. Board members will then deliberate and vote on the application.

SUGGESTED MOTION:

Move to close the public hearing for the site plan review application for 231 Bedford Street.

Move to waive the jurisdiction of the Tree Bylaw to the Planning Board because the submitted landscape plan provides the tree mitigation with 3 replacement trees in the front yard of the project site where 1 tree is removed.

Move to approve the proposal submitted by 231 Bedford Street LLC with the findings and conditions included in the draft approval decision prepared by staff for major site plan review with the 43 conditions of approval, as may be modified this evening.

Move to have the Chair sign the decision and correct any non-substantive changes such as grammar, typos, and for consistency.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

ATTACHMENTS:

Description	Type
Staff Memo 4.3.25	Cover Memo
Peer Review Memo 11.15.24	Cover Memo

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
Meghan McNamara, Assistant Director
Aaron Koepper, Planner
Carolyn Morrison, Planning Coordinator

To: **Lexington Planning Board**

From: **Meghan McNamara, Assistant Planning Director**

Re: **Site Plan Review for 231 Bedford Street; Village and Multi-Family Overlay District (Memo #3)**

Date: **April 3, 2025**

The Applicant submitted the following material since the November 20 public hearing: civil plans (rev. 12/2/24), drainage calculations (rev. 12/4/24), and response to peer review memo (dated 12/4/24).

The Applicant has not provided additional funds for the peer review; therefore, no peer review has been conducted of the latest plans and calculations. The last peer review memo dated November 15, 2025 is based on the material submitted in early November.

The Applicant filed a Notice of Intent (NOI) with the Conservation Commission and public hearings held on October 21 and November 18, 2024. The hearing for the project has been continued since then and the latest request continues the public hearing to April 8, 2025. The project site falls within the 200-foot Riverfront Area of the North Lexington Brook and the 100-foot buffer zone to Bordering Vegetated Wetlands.

The Planning Board's final action deadline, as requested by the Applicant and voted on by the Planning Board on February 27, 2025, has been extended to **April 24, 2025**.

Project Updates in the December submission: Planning staff has reviewed and appear to have revised plans to address outstanding items in the peer review letter from November.

Outstanding Items: (If approved, these items should be included as conditions of any approval on Pg. 3)

The Conservation Commission's regulatory review has requested a flood study to determine the base flood elevation based on the most up to date FEMA flood maps and compliance with MGL c. 131, § 40. FEMA's updated flood plain maps updated in 2023 show the rear portion of the property to be in the undesignated Zone A.

Photometrics – "Exterior Lighting Plan 1" dated 5/10/24 shows light trespass onto the Bedford St ROW and 229 Bedford St. Applicant shall revise plans to eliminate all light trespass onto 229 Bedford Street and the roadway.

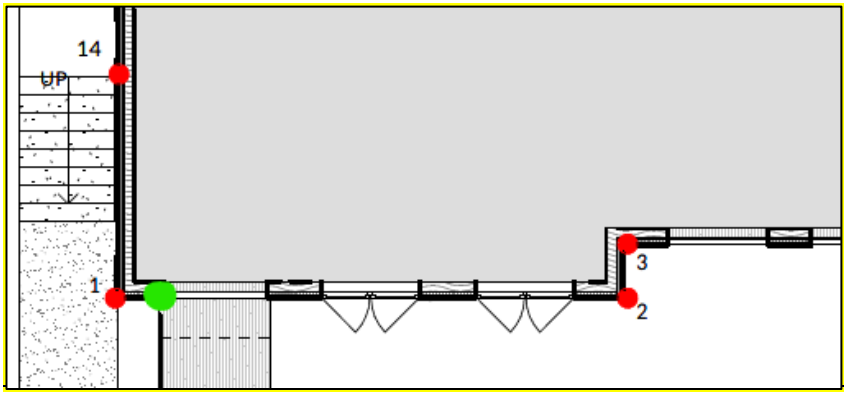
Landscaping – the proposed landscaping plan and mitigation planting plans presented to the Conservation Commission do not match. As a recommended condition of approval, the Applicant shall provide one landscape plan for the entire property which incorporates the final approved planting plan by the Conservation Commission. Staff recommend a staggered mix of evergreens (e.g., from the current list of

eastern red cedar, eastern white cedar and rhododendrons) throughout the back of the property in a more naturalistic way. Applicant shall provide more detail of the proposal and outline maintenance plan of the green roof in HOA/Condo documents.

Building Setbacks - Applicant shall provide a plan stamped by a licensed land surveyor showing setback distances from the property line to the furthest projecting points of the building. It is recommended for building permit phase that an as-built foundation plan be submitted to the Building Department for review prior to framing of the building.

Building Height – 40 feet is allowed in the VO district. The Building Commissioner requests additional information to make a determination on proposed building height.

- Applicant shall include one additional spot elevation on the ANG plan (green spot below) and elevations form. Also, staff ask for rendering views from all sides of the proposed building to conduct the height compliance review.



Waivers Requested:

- Applicant proposes to remove one 12-inch tree in the front setback area, and this is the only tree subject to the Tree Bylaw with regards to removal. The Applicant is exceeding the requirement of replacement inches for new trees on the property, and therefore staff recommends the Planning Board waive jurisdiction of the Tree Bylaw to incorporate the landscape planting plan into the site plan review approval.

Important Dates/Timelines	
Public Meeting	September 11, 2024 and continued to November 6, 2024, November 20, 2024, January 15, 2025, January 30, 2025, March 5, 2025, and April 10, 2025. Presentation and testimony on September 11 & November 20 only.
Filed with Town Clerk	May 14, 2024
Decision Deadline (150 days)	October 11, 2024 and further extended to April 24, 2025

Staff Draft Recommended Conditions of Approval and potential Findings:

1. Applicant shall provide water and sewer flow analysis and comparison to current conditions to the Lexington Engineering Department during the permitting process and be required to provide any mitigation as necessary for proposed utility connections.
2. Applicant is responsible for filing any required ROW permits from the state since Bedford Street is a state highway.
3. The Building will have to be a Passive House Design per code, and be all electric.
4. The Applicant/Contractor must meet the requirements of the Noise Construction Bylaw (Chapter 80 of the Code of Lexington), as amended through 2024.
5. There shall be no trespassing onto abutting properties during construction without express written consent from property owners.
6. Applicant has committed to notifying abutting property owners at least 5 business days prior to the start of construction.
7. Owners should be notified of Lexington's prohibition on overnight parking on any streets prior to purchasing units.
8. The Applicant shall seek approval from the Conservation Commission on the limit of work line and update on final plans. Limit of work and erosion control will be verified in the field by Planning and Conservation staff prior to any site disturbance.
9. If a fence is proposed on the property line, it must comply with the Zoning Bylaw and not exceed 6 feet without a Special Permit.
10. Applicant shall revise photometrics plan to comply with Zoning Bylaw Section 5.4. Revised plans shall eliminate all light trespass onto abutting properties and the Bedford St right of way.
11. A detailed Operation and Maintenance Plan for the vegetative roof garden and the entire site's stormwater management shall be recorded with HOA/condo documents.
12. Applicant shall provide a plan stamped by a licensed land surveyor to confirm setback distances. Prior to framing of the building, an as-built foundation plan stamped by a land surveyor shall be submitted to the Building Department and Planning Office for approval.
13. Prior to issuance of a building permit, the applicant shall submit to the Building Commissioner surveyor's certifications demonstrating the building does not exceed 40 feet in height.
14. The Applicant is responsible for filing any other required permits with other town entities such as the Conservation Commission, Engineering, and any other state or federal agencies such as any necessary permits with state permits for any work within the right of way.
15. The Applicant is responsible for obtaining permits required by Section 7.1 (National Flood Insurance District) of the Zoning Bylaw in the flood plain and determining the base flood elevation for any improvements and development in Zone A. The Applicant shall submit the base flood elevation and any required floodproofing measures. The base flood elevation and any proposed redesign shall be submitted to the Planning Office, Conservation Commission, and Building Commissioner prior to any issuance of any building permits.
16. Any modifications to the approved plans shall be submitted in writing to the Planning Board. The modifications may require a new hearing or public meeting with the Planning Board to amend the initial site plan approval.

ENVIRONMENTAL PARTNERS
— An Apex Company —

November 15, 2024

Ms. Abby McCabe, AICP, Planning Director
Town of Lexington
1625 Massachusetts Avenue
Lexington, MA 02420

RE: Technical Review Letter #3
231 Bedford Street

Dear Abby,

This letter is to advise the Town of Lexington's Planning Board and Conservation Commission that Environmental Partners Group, LLC (Environmental Partners) has reviewed the revised materials submitted for the proposed multi-family residential project at 231 Bedford Street in Lexington. 231 Bedford Street, LLC (Applicant) submitted a Site Plan Review application with the Planning Board in August, and recently filed a Notice of Intent with the Conservation Commission.

The Applicant's submission includes the following documents:

- Plan entitled "ANG Calculation Plan," prepared by Zephyr Architects, dated 5/10//2024.
- Plan entitled "Fire Hose Diagram," prepared by Zephyr Architects, dated 5/10/2024.
- Plans entitled "231 Bedford Street, Lexington, Massachusetts," prepared by Gala Simon Associates, Inc., revised through 10/23/2024.
- Plan entitled "Landscape Plan," prepared by Zephyr Architects, dated 5/10/2024.
- Plans entitled "Planning Board Submission," prepared by Zephyr Architects, dated 5/10/2024.
- Plan entitled "Exterior Lighting Plan 1," prepared by Zephyr Architects, dated 5/10/2024.
- Lighting cut sheets by Bega and Visual Comfort & Co.
- Code Review prepared by Hastings Consulting, dated 11/4/2024.
- Plan entitled "Preliminary Signage," prepared by Zephyr Architects, dated 5/10/2024.
- Traffic Management Plans, revised through 10/29/2024.
- Plan entitled "Mitigation Planting Plan," prepared by LEC Environmental Consultants, Inc., dated 9/27/2024, revised through 11/5/2024.
- Plan entitled "Utilities Plan," prepared by Zephyr Architects, dated 5/10/2024.
- Response to comments letter entitled "231 Bedford Street, Consultant Reviews," prepared by Gala Simon Associates, Inc, dated October 24, 2024.
- Response to comments letter entitled "Response to Comments, Notice of Intent Application," prepared by LEC Environmental Consultants, Inc., dated 11/7/2024.

These documents have been reviewed for conformance with the following Town Bylaws and Regulations:

- Planning Board Zoning Regulations – Chapter 176 of the Code of Lexington (Section 12.9.5 Utilities: Drainage & Stormwater Management)
- Stormwater Management Regulations – Chapter 181 Article VI of the Code of Lexington
- Conservation Wetland Protection Code Chapter 130 Rules, Section 5(2) and 5(6).
- 310 CMR 10.05(6)k State Wetlands Protection Act (MGL c. 131, s. 4), The Massachusetts Stormwater Management Standards

Background

The proposed project at 231 Bedford Street is a multi-family development consisting of seven residential units on a 13,541-square-foot site. The project aims to redevelop the existing commercial structure into multi-family housing. The site is located in the Neighborhood Business ("CN") and the Village Overlay ("VO") Zoning Districts and is adjacent to the Minuteman Bikeway, MBTA public transit, and the Route 95 interchange.

The development will feature an integrated, underbuilding garage for parking, with bicycle parking available in the main floor lobby. The project includes the installation of water, sanitary sewer, and drainage utilities. It is situated within the North Lexington Brook 200-foot Riverfront Area and the 100-foot Buffer Zone to wetland resources.

Comments

Planning Board Zoning Regulations – Chapter 176 of the Code of Lexington (Section 12.9.5 Utilities: Drainage & Stormwater Management)

1. *Projects shall meet the erosion control performance standards of § 181-75C.*

   § 181-75C requires an erosion and sediment control plan be submitted for all project applications, designed to ensure compliance with the stormwater management permit and the Massachusetts Stormwater Management Handbook. § 181-75C also requires the contents of the erosion and sediment control plan to be consistent with Chapter 181 Attachment 6, "Appendix VI-D – Erosion and Sediment Control Plan Contents".

   The project proposes to disturb less than one acre of land and is therefore not subject to the filing of National Pollutant Discharge Elimination System (NPDES) Stormwater Construction General Permit or Stormwater Pollution Prevention Plan (SWPPP). However, per § 181-75C, the Applicant should submit an erosion and sediment control plan consistent with the requirements of the stormwater management permit, the Massachusetts Stormwater Management Handbook, and "Appendix VI-D – Erosion and Sediment Control Plan Contents". Sheet C-0 of the submitted plans includes some proposed erosion control features, however, a standalone erosion control plan consistent with the above requirements was not submitted. Environmental Partners recommends the Applicant provide a standalone erosion control plan consistent with the above requirements.

   GSA Response 9/23/24: A plan entitled "Erosion Control Plan", sheet C-3 of the set, has been added to the set.

   EP Response 10/17/24: The Erosion Control Plan has been submitted as Sheet C-3. We recommend adding a silt fence on the back side of the proposed compost filter tubes on the

eastern side of the perimeter erosion control barrier for added protection of the wetland resource area.

GSA Response 10/24/24: Silt fencing has been added to the back side of the proposed compost filter tubes.

EP Response 11/15/24: The Applicant has updated the label to include the silt fence on the back side of the proposed compost filter tubes, but the construction detail has not been updated. We recommend updating the construction detail to avoid confusion.

2. *Projects disturbing more than 10,000 square feet of land area shall meet the performance standards of § 181-73 for above-threshold projects.*

   See the section "Stormwater Management Regulations – Chapter 181 Article VI of the Code of Lexington" below for the project's conformance to the performance standards of § 181-73.

   GSA Response 9/23/24: The plans are in compliance with the above regulation.

   EP Response 10/17/24: See the section "Stormwater Management Regulations – Chapter 181 Article VI of the Code of Lexington" below for our comments.

   GSA Response 10/24/24: No Response.

   EP Response 11/15/24: Item closed.

3. *All basement floors and slabs shall be at least two feet above the estimated seasonal high groundwater table.*

   Test hole #1 (TH1) on the plans indicates mottles (and therefore estimated seasonal high groundwater) at elevation 171.2'. The finished floor of the proposed garage is at elevation 175.40'. Therefore, there is at least two feet of separation between the slab and the estimated seasonal high groundwater table.

   GSA Response 9/23/24: A vertical distance of two feet from Estimated Seasonal High Groundwater has been provided.

   EP Response 10/17/24: Item closed.

4. *Country drainage is preferred along roadways, sidewalks, pathways, and other compacted surfaces where soils permit.*

   The proposed project complies with this requirement.

   GSA Response 9/23/24: No response requested.

   EP Response 10/17/24: Item closed.

5. *Pocket parks, plazas, terraces, and other civic gathering spaces shall incorporate low-impact development techniques consistent with Appendix VI-B of Chapter 181 that address stormwater on-site quantity and quality.*

   The project proposes several low-impact development techniques, such as pervious pavers, subsurface stormwater infiltration chambers, and a green roof. The project does not include any substantial civic gathering spaces.

   GSA Response 9/23/24: The site plan proposes one gathering area on the northerly side of the property.

   EP Response 10/17/24: Acknowledged. The revised plans have removed the stormwater infiltration chambers. The revised plans have also added a 2,000-gallon cistern to collect runoff from the green roof that can be used for irrigation. See our stormwater comments in the sections that follow. **Item closed.**

6. *Reduce impervious surfaces and consider opportunities for permeable pavement where applicable. Drain impervious surfaces into on-site landscape areas. (Examples include rain gardens and vegetated retention ponds.) Reduce stormwater collection and removal from site. Avoid creating chutes off impervious surfaces that will cause erosion in the landscape areas.*

   The project includes a detail for permeable asphalt. However, through conversations with the Applicant, we understand that this is an errant detail and that no permeable asphalt is proposed on the project. The project includes several low-impact development techniques, such as pervious pavers, subsurface stormwater infiltration chambers, and a green roof.

   GSA Response 9/23/24: The detail for permeable asphalt was unintentionally left on the drawing but has since been eliminated. The top portion of the driveway is proposed to be built of bituminous concrete, the lower portion of the proposed driveway is to be built of permeable pavers.

   EP Response 10/17/24: Acknowledged. The Applicant has removed the subsurface stormwater infiltration system from the original plans. As a result, some stormwater runoff is no longer recharged on-site, but instead is treated and discharged via rip rap aprons on the east side of the property upgradient of the wetland resource area. While this approach addresses certain site constraints, it is not fully aligned with the intent of this applicable stormwater regulation, which emphasizes recharge. However, we understand that the subsurface infiltration system was removed to reduce the project's disturbance footprint and to keep the work area further away from the wetland resource area.

   We also note that the revised plans incorporate a 2,000-gallon cistern to capture runoff from the green roof, which can be repurposed for irrigation. This further supports the project's low-impact development (LID) strategy.

   GSA Response 10/24/24: No Response.

   EP Response 11/15/24: Item closed.

7. *Strive to replicate natural hydrologic conditions and manage precipitation on-site by exceeding the LID and conservation design requirements.*

   As previously stated, the project includes several low-impact development techniques, such as pervious pavers, subsurface stormwater infiltration chambers, and a green roof.

   GSA Response 9/23/24: No response requested.

   EP Response 10/17/24: See previous Comment #6.

   GSA Response 10/24/24: No Response.

   EP Response 11/15/24: Item closed.

8. *Use stormwater harvesting systems, such as cisterns and ponds, for plant irrigation.*

   The project proposes a green roof. The Applicant should confirm if the project includes any irrigation for plants or grass at the surface level.

   GSA Response 9/23/24: The revised site plan proposes a 2000-gallon cistern to collect runoff from the green roof. This water can be used for irrigation of surface plantings.

   EP Response 10/17/24: Acknowledged, item closed.

Stormwater Management Regulations – Chapter 181 Article VI of the Code of Lexington

9. This project is classified as an above-threshold project because it requires site plan review and will disturb more than 10,000 square feet of land area, and therefore is subject to Chapter 181 in its entirety. The project is required to meet the above-threshold performance standards and the stormwater permit is consolidated into the site plan review application, pursuant to § 181-72.A.(4).

   GSA Response 9/23/24: No response requested.

   EP Response 10/17/24: Item closed.

10. *§ 181-73.B.(2)(d) – The minimum time of concentration for street drainage shall be five (5) minutes.*

    The submitted HydroCAD calculations use a minimum time of concentration of 6 minutes. The HydroCAD calculations should be revised to use a minimum time of concentration of 5 minutes.

    GSA Response 9/23/24: The minimum time of concentration is 0.1 hours (6 minutes) per Urban Hydrology for Small Watersheds, TR55, June 1986, Chapter 3.

    EP Response 10/17/24: We acknowledge that a minimum time of concentration of 6 minutes is commonly accepted engineering practice in Massachusetts. We have no objection to the use of a 6-minute minimum time of concentration in this instance. However, we defer

to the Lexington Planning Board and Conservation Commission to determine whether this requirement can be formally waived.

GSA Response 10/24/24: No Response.

EP Response 11/15/24: Item remains open. We defer to the Planning Board and Conservation Commission to determine whether this requirement can be formally waived.

11. *§ 181-73.B.(2)(e) – Water velocities in pipes and gutters shall be between two (2) feet and ten (10) feet per second, not more than five (5) feet per second on paved surfaces, and not more than four (4) feet per second in vegetated areas.*

    The submitted materials do not include pipe sizing calculations with the water velocities in pipes and gutters. Environmental Partners recommends the Applicant submit pipe sizing calculations with the water velocities in pipes and gutters consistent with this requirement.

    GSA Response 9/23/24: The piping velocities and flows were analyzed and the calculations are in the Engineering Drainage Calculations Report.

    EP Response 10/17/24: Pipe sizing calculations have been provided. **Item closed.**

12. *§ 181-73.B.(2)(f) – Impervious cover is measured from the Site plan and includes any material or structure on or above the ground that prevents water from infiltrating through the underlying soil (including compacted gravel).*

    Sheet D-2, "Drainage Delineations Proposed Conditions" inside the "Engineering Drainage Calculations" indicates that the proposed bituminous concrete driveway infiltrates stormwater. However, we understand that the driveway is regular bituminous concrete, as opposed to porous asphalt. Therefore, the driveway should not be modeled to infiltrate stormwater.

    GSA Response 9/23/24: This item has been addressed on the "Drainage Delineation Proposed Conditions" plan. Only the lower portion of the driveway will be infiltrated.

    EP Response 10/17/24: Item closed.

13. *§ 181-73.B.(2)(g) – Off-site areas shall be assessed based on their predeveloped condition for computing the water quality volume (i.e., treatment of only on-site areas is required). However, if an off-site area drains to a proposed stormwater management facility, flow from that area must be accounted for in the sizing of a specific Facility.*

    It appears that there are some off-site areas to the southeast that flow onto the site. The Applicant should update the "Drainage Delineations" to include any off-site area that contributes runoff onto the site.

    GSA Response 9/23/24: With the updated design, there are no off-site areas that drain to a stormwater management facility.

EP Response 10/17/24: Item closed.

14. *§ 181-73.B.(2)(l-n) – Retain the volume of runoff equivalent to, or greater than, 1.0 inch multiplied by the total post-construction impervious surface area on the redeveloped site, including any directly connected impervious area draining onto the redeveloped site;* ***and/or*** *remove 90% of the average annual load of Total Suspended Solids generated from the impervious area on the site; and remove 60% of the average annual load of Total Phosphorus (TP) generated from the total area on the site.*

    The "Engineering Drainage Calculations" submitted (revised through August 9, 2024) do not include a MassDEP Checklist for Stormwater Report, nor a description of the project's compliance with the ten Massachusetts Stormwater Management Standards. Consistent with Comment #19 below, we recommend that the Applicant provide calculations showing compliance with the Massachusetts Stormwater Management Standards, in addition to the more stringent requirements of § 181-73.B.(2)(l) above.

    GSA Response 9/23/24: The Engineering Drainage Calculations report now includes a MassDEP Checklist for Stormwater as well as calculations for the 1.0-inch volume over the post-construction impervious surface area (green roof included).

    EP Response 10/17/24: The calculations submitted under the subheader "Stormwater to be Retained on Site Calculations" include a total area of impervious surface of 2,163 square feet to support the 1-inch calculation pursuant to § 181-73.B.(2)(l). However, Volume 3 Chapter 1 of the MA Stormwater Management Standards states that both porous pavement and green roofs should be considered impervious surfaces for the purpose of calculating required recharge volume. Therefore, the Applicant should use the 7,246 square foot value (which is used under the subheader "Recharge Volume Calculations") for the total impervious area. The calculations for required recharge should be revised accordingly, to compare to the provided recharge volume of 400 cubic feet.

    GSA Response 10/24/24: The project meets both Town of Lexington and MassDEP recharge requirements.

    EP Response 11/15/24: After further discussions with the Applicant, we are providing an updated response to our 10/17/24 comment. In our initial comment, we applied the Massachusetts Stormwater Handbook's definition of impervious surface, which classifies green roofs and porous pavers as impervious for the purpose of calculating the required stormwater recharge volume. However, since the regulation in question is from the Lexington Stormwater Management Regulations, applying the Massachusetts definition was not appropriate. Instead, we should have applied the local definition.

    According to Lexington's regulations, green roofs and pervious pavers are <u>not</u> considered impervious surfaces. As a result, the Applicant's design is consistent with § 181-73.B.(2)(l).

    The primary intent of § 181-73.B.(2)(l) is to enhance phosphorus removal in alignment with MS4 requirements. Both the green roof and porous pavers contribute to phosphorus reduction through infiltration. Therefore, applying the local definition in this context is

consistent with the regulation's objectives, and we have no further concerns regarding the design. **Item closed.**

15. Consistent with Comment #1 above, the Applicant should submit a standalone erosion control plan consistent with the requirements noted in Comment #1, along with the erosion control performance standards of § 181-74. This plan should include, but is not limited to, any soil stockpile areas, construction entrances in accordance with the recommendations of the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas, and inlet protection (i.e. catch basin silt sacks). The plan should include all relevant construction details and the construction related notes from § 181-74.

    GSA Response 9/23/24: An additional plan has been added to the plan set with a stand-alone plan for erosion control. See sheet C-3 of the set.

    EP Response 10/17/24: Acknowledged. Consistent with our response to Comment #1 above, we recommend adding a silt fence on the back side of the proposed compost filter tubes on the eastern side of the perimeter erosion control barrier for added protection of the wetland resource area. Additionally, the project must comply with the construction practices and operation and maintenance requirements outlined in § 181-74. We suggest including these relevant regulations as notes on the plan or within the operation and maintenance plan.

    GSA Response 10/24/24: Silt fencing has been added to the back side of the proposed compost filter tubes. The Erosion Control and Performance Standards were added to sheet C-4.

    EP Response 11/15/24: See Comment #1 above regarding the erosion control detail. **Item closed.**

16. *§ 181-75.D. Operation and Maintenance Plan.*

    a. The Applicant should prepare and submit the O&M plan as a standalone document consistent with the requirements of § 181-75.D.(1).

    GSA Response 9/23/24: The operation and management plan has been separated from the Engineering Drainage Calculations as a stand-alone document.

    EP Response 10/17/24: Received; item closed.

    b. The O&M plan should include the name, address, contact information, and signature of the property owner consistent with § 181-75.D.(2)(a) and § 181-75.D.(2)(b).

    GSA Response 9/23/24: A signature line has been added to the Operation and Management plan.

    EP Response 10/17/24: Item closed.

c. The Applicant should add to the O&M plan a plan or map drawn to scale showing the location of the systems and stormwater management facilities, including existing and proposed easements, catch basins, manholes/access lids, main, and stormwater management facilities along with the discharge point, consistent with § 181-75.D.(2)(d).

GSA Response 9/23/24: The stormwater structures and systems are included in the stand-alone Erosion Control and Operation and Maintenance plan. See sheet 3 of the set.

EP Response 10/17/24: Item closed.

d. Environmental Partners recommends including any applicable proprietary operation and maintenance guides (e.g. subsurface infiltration chamber systems) to the O&M plan.

GSA Response 9/23/24: Stormceptor operation and maintenance guides were added to the Operation and Maintenance plan.

EP Response 10/17/24: Item closed.

e. Environmental Partners recommends including any special provisions for operation & maintenance of porous pavement (i.e., vacuum sweeping) and winter maintenance considerations (e.g., deicing application). See Comment #21 (f) for more additional comments on the pervious pavers.

GSA Response 9/23/24: Special provisions for the permeable paver partial driveway and walkways were added to the Operation and Management plan.

EP Response 10/17/24: Item closed.

Conservation Wetland Protection Code Chapter 130 Rules, Section 5(2) and 5(6)

17. Section 5(2) of Chapter 130 requires the project maintain or decrease the peak rate of surface runoff during the 2-, 10-, and 100-year storm events. It also requires the project maintain or decrease the total volume of surface runoff for the 1-year storm event.

    The submitted materials do not include any calculations pertaining to the 1-year storm event. The Applicant should revise the drainage calculations to ensure that the project does not increase the total volume of surface runoff for the 1-year storm event. Additionally, we cannot confirm compliance with this requirement until our other comments are addressed (specifically Comment #21 under “Standard 2: Peak rate attenuation” below).

    GSA Response 9/23/24: The stormwater calculations were updated to include the 1-year storm event.

EP Response 10/17/24: The updated calculations show that the project decreases the peak rate of runoff and total volume of surface runoff for all design storms including the 1-year storm event. **Item closed.**

18. Section 5(6) of Chapter 130 requires the project to consider any existing impervious ground cover on site that is to be removed as open space in good condition for the purposes of the pre-development stormwater calculations. The pre-development stormwater calculations that were submitted comply with this requirement.

    GSA Response 9/23/24: No response requested.

    EP Response 10/17/24: Item closed.

Massachusetts Stormwater Management Standards

19. The Applicant included a MassDEP Checklist for Stormwater Report with the original "Engineering Drainage Calculations" dated January 31, 2024 revised through March 18, 2024. However, the project scope has since changed. The Applicant should submit a revised MassDEP Checklist for Stormwater Report that reflects the updated project. Additionally, we recommend that the Applicant provide a section in the "Engineering Drainage Calculations" that describes how the project complies with each of the ten Massachusetts Stormwater Management Standards.

    GSA Response 9/23/24: A stormwater compliance section has been added to the Engineering and Drainage Calculations report.

    EP Response 10/17/24: A MassDEP Checklist for Stormwater Report and a description of how the project complies with each of the ten Massachusetts Stormwater Management Standards has been submitted. **Item closed.**

20. ***Standard 1: No new untreated discharges to wetlands***

    Standard 1 requires the no new stormwater conveyances or outfalls may discharge untreated stormwater to wetland resources. The submitted HydroCAD calculations indicate that the proposed stormwater best management practices (the pervious pavers, and the subsurface stormwater infiltration system) retain stormwater runoff up to the 100-year storm event. However, our comments in this letter—specifically under Comment #21 below—should be addressed before we can confirm compliance with Standard 1.

    GSA Response 9/23/24: The proposed construction does not contain untreated discharges to wetlands. The revised plan eliminated the subsurface stormwater infiltration system.

    EP Response 10/17/24: The Applicant has adequately addressed our water quality comments under Comment #24 below. **Item closed.**

21. ***Standard 2: Peak rate attenuation***

Environmental Partners has the following comments that impact the project's compliance with Standard 2:

a. The Applicant should submit a revised Drainage Delineation plan for the proposed conditions analysis. The revised Drainage Delineation plan should clearly delineate and label all subcatchments from the HydroCAD design. The subcatchments should be delineated based on topography, and not just difference in land cover.

GSA Response 9/23/24: The site only contains one watershed. Under existing conditions, all runoff discharges to the rear of the property.

EP Response 10/17/24: Item closed.

b. No test pit was performed within the limits of the proposed subsurface stormwater infiltration chamber system. The Applicant should perform an additional test pit within the limits of the proposed subsurface stormwater infiltration chamber system to confirm soil textures and depth to seasonal high groundwater. Provide a groundwater mounding analysis if test pit reveals that the system will be less than four feet above the seasonal high groundwater elevation.

GSA Response 9/23/24: The plan has been revised to eliminate the subsurface stormwater infiltration chambers.

EP Response 10/17/24: Item closed.

c. The Applicant has modeled the green roof (Subcatchment 5S in HydroCAD) with a curve number of 51. A curve number below 98 typically indicates that a portion of the stormwater is lost or absorbed through infiltration or evapotranspiration. The Applicant should provide further details on how the green roof functions and how it conveys water. Environmental Partners assumes the green roof is connected to the roof drainage system. Therefore, we believe it may not be accurate to model the green roof with such a low curve number, as the majority of stormwater is likely conveyed to the drainage system rather than being lost.

   This concept also applies to the pervious pavers; however, the Applicant has appropriately modeled the pervious pavers with a curve number of 98, avoiding the risk of "double counting" infiltration in both the subcatchment node and the pond node.

GSA Response 9/23/24: The revised plan provides additional details for the construction of the green roof. The green roof calculations were also updated to reflect a curve number of 86, as recommended in DEP Stormwater Manual Volume 2, Chapter 2.

EP Response 10/17/24: Item closed.

d. Consistent with Volume 2 of the Massachusetts Stormwater Management Handbook, we do not recommend proposing porous pavement or porous pavers on slopes steeper than 5%. The proposed driveway is steeper than 5%. The plans indicate that the proposed driveway is porous asphalt, however, in conversations with the Applicant we understand the intent is to change the driveway to normal asphalt pavement. Environmental Partners recommends using typical asphalt pavement on the driveway. All drainage calculations pursuant to the Massachusetts Stormwater Management Standards should be revised accordingly.

GSA Response 9/23/24: The upper portion of the driveway which has a slope greater than 5% has been changed to normal asphalt pavement. The lower and flatter section is proposed to be built of permeable pavers.

EP Response 10/17/24: Item closed.

e. In the permeable paver details on Sheet C-1, the Applicant notes that estimated seasonal high groundwater (ESHGW) is at elevation 171.2'. However, TH #3 shows groundwater at elevation 172.5'. The Applicant should revise the details and stormwater design accordingly, maintaining two foot separation to groundwater.

GSA Response 9/23/24: TH #3 was used to establish the groundwater elevation for the upper section of the project, namely the front walk and upper section stairs and walk.

EP Response 10/17/24: The Applicant has revised the ESHGW elevation associated with each paver detail according to the nearest test hole data. **Item closed.**

f. Environmental Partners has several comments on the design of the pervious pavers. The applicant has taken credit for stormwater storage capacity in the pervious pavers. This is consistent with the Massachusetts Stormwater Handbook; however, this assumes that the pavers are regularly maintained such that stormwater can filter in between the paver seams. Pavers are prone to clogging—therefore, it is essential that the pavers are maintained consistent with the Operations and Maintenance Plan to function and drain properly. Environmental Partners recommends adding to the pervious pavement section of the O&M plan with the relevant information on page 122 of the Massachusetts Stormwater Management Handbook (Volume 2 Chapter 2).

   Additionally, to the greatest extent practicable, we recommend implementing the storage beds used in connection with porous asphalt according to the University of New Hampshire Design Specifications for Porous Asphalt Pavement and Infiltration Beds. This includes several media layers under the pervious pavers, including a choker course, filter course, and filter blanket.

GSA Response 9/23/24: All of the details for permeable pavers were upgraded to the greatest extent practicable according to the New Hampshire Design Specifications for Porous Asphalt and Infiltration Beds.

EP Response 10/17/24: Acknowledged; the Applicant has added a 4" choker course, 4" filter course, and a 4" reservoir course to the pavers. **Item closed.**

22. ***Standard 3: Recharge***

Consistent with Comment #19, the Applicant included recharge calculations with the original "Engineering Drainage Calculations" dated January 31, 2024 revised through March 18, 2024. However, the project scope has since changed. The Applicant should submit revised recharge calculations and drawdown calculations for the updated project.

Per § 181-73.B.(2)(l-n) and Comment #14 above, the project is required to retain the volume of runoff equivalent to, or greater than, 1.0 inch multiplied by the total post-construction impervious surface area on the redeveloped site. It should also be noted that according to Volume 3 of the Massachusetts Stormwater Management Standards, porous pavers and green roofs must be considered an impervious surface for purposes of calculating required recharge volume.

GSA Response 9/23/24: Recharge calculations are provided in the Engineering and Drainage Calculations report.

EP Response 10/17/24: Consistent with Comment #14 above, the recharge requirements for this site are governed by the more stringent requirements of § 181-73.B.(2)(l-n) of Chapter 181 Article VI of the Code of Lexington. This requires the project to retain the volume of runoff equivalent to, or greater than, 1.0 inch multiplied by the total post-construction impervious surface area on the redeveloped site. The calculations submitted under the subheader "Stormwater to be Retained on Site Calculations" include a total area of impervious surface of 2,163 square feet to support the 1-inch calculation pursuant to § 181-73.B.(2)(l). However, Volume 3 Chapter 1 of the MA Stormwater Management Standards states that both porous pavement and green roofs should be considered impervious surfaces for the purpose of calculating required recharge volume. Therefore, the Applicant should use the 7,246 square foot value (which is used under the subheader "Recharge Volume Calculations") for the total impervious area. The calculations of the required recharge volume should be revised accordingly, to compare to the provided recharge volume of 400 cubic feet.

GSA Response 10/24/24: The project meets both Town of Lexington and MassDEP recharge requirements.

EP Response 11/15/24: Please refer to our response to Comment #14 provided on 11/15/24, which addresses the recharge requirements under the Lexington Stormwater Management Regulations. To maintain clarity, this comment (Comment #22) will now specifically address the Massachusetts Stormwater Management recharge requirements, as the state and local regulations apply different definitions of impervious surface.

According to Volume 3, Chapter 1 of the Massachusetts Stormwater Management Standards, both porous pavement and green roofs are to be treated as impervious surfaces when calculating the required recharge volume. In the "Recharge Volume Calculations" section of the Applicant's "Engineering Drainage Calculations" (page 128 of the PDF), the Applicant correctly includes both porous pavement and the green roof in the recharge volume calculations.

Per Standard 3 of the Massachusetts Stormwater Management Standards, the required recharge volume is 151 cubic feet, while the Applicant's design provides 400 cubic feet of recharge. Therefore, the project complies with the state's recharge requirements.

Item closed.

23. ***Standard 4: Water Quality***

a. The "Engineering Drainage Calculations" revised through August 9, 2024 do not appear to include calculations documenting compliance with the total suspended solids (TSS) requirements of the Massachusetts Stormwater Standards. The Applicant should submit calculations showing TSS removal calculations.

GSA Response 9/23/24: Total Suspended Solids calculations are provided in the Engineering and Drainage Calculations report.

EP Response 10/17/24: Item closed.

b. The "Engineering Drainage Calculations" revised through August 9, 2024 do not appear to include calculations documenting compliance with the water quality volume requirements of the Massachusetts Stormwater Standards. The Applicant should submit calculations showing water quality volume calculations. It should also be noted that according to Volume 3 of the Massachusetts Stormwater Management Standards, porous pavers and green roofs must be considered an impervious surface for purposes of calculating water quality volume.

GSA Response 9/23/24: Water quality calculations are provided in the Engineering and Drainage Calculations report.

EP Response 10/17/24: The required water quality volume is 0.5 inches. The submitted calculations consider the entire impervious area (including pavers and green roof) in this calculation, and the provided water quality volume exceeds the required value. **Item closed.**

c. Per Volume 2 of the Massachusetts Stormwater Management Handbook, pervious pavers achieve 80% total suspended solids (TSS) removal if the storage bed is sized to hold the 1-inch water quality volume. The applicant should provide static storage calculations (that do not account for infiltration) that confirm the various pervious

paver best management practices (BMPs) are sized to hold the 1-inch water quality volume. Additionally, pervious pavers should not be located on slopes steeper than 5%.

GSA Response 9/23/24: Static volume calculations are provided adjacent to each detail for the permeable pavers and green roof on the plans.

EP Response 10/17/24: Item closed.

24. ***Standard 5: Land use with higher potential pollutant loads (LUHPPL)***

    The Applicant should submit a stamped MassDEP Checklist for Stormwater Report corresponding to the most recent project stormwater design and clarify if the project is considered a LUHPPL as defined in the Massachusetts Stormwater Handbook.

    GSA Response 9/23/24: The site is not Land use with Higher Potential Pollutant loads as depicted in the MassDEP Checklist for Stormwater Report.

    EP Response 10/17/24: Item closed.

25. ***Standard 6: Critical areas***

    The Applicant should submit a stamped MassDEP Checklist for Stormwater Report corresponding to the most recent project stormwater design and clarify if the project includes any critical areas as defined in the Massachusetts Stormwater Handbook.

    GSA Response 9/23/24: The site does not include any critical areas as depicted in the MassDEP Checklist for Stormwater Report.

    EP Response 10/17/24: Item closed.

26. ***Standard 7: Redevelopment***

    The Applicant should submit a stamped MassDEP Checklist for Stormwater Report corresponding to the most recent project stormwater design and clarify if the project is considered a redevelopment as defined in the Massachusetts Stormwater Handbook.

    GSA Response 9/23/24: The project is considered a redevelopment. Refer to Redevelopment checklist in Engineering and Drainage Calculations report.

    EP Response 10/17/24: Item closed.

27. ***Standard 8: Construction period pollution prevention and erosion and sedimentation control***

a. The proposed project will not disturb greater than one (1) acre of land and is therefore not subject to the filing of a National Pollutant Discharge Elimination System (NPDES) Stormwater Construction General Permit.

GSA Response 9/23/24: No response requested.

EP Response 10/17/24: Item closed.

b. The submitted "Engineering Drainage Calculations" contain a Construction Period Erosion and Sediment Control plan. However, the Applicant should submit a standalone erosion control plan consistent with the requirements noted in Comment #1, along with the erosion control performance standards of § 181-74. This plan should include, but is not limited to, any soil stockpile areas, construction entrances in accordance with the recommendations of the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas, and inlet protection (i.e. catch basin silt sacks). The plan should include all relevant construction details and the relevant construction related notes from § 181-74.

GSA Response 9/23/24: A separate plan for erosion control has been added to the plan set. See sheet C-3 of the set.

EP Response 10/17/24: See Comments #1 and #15 above.

GSA Response 10/24/24: No Response.

EP Response 11/15/24: Item closed.

28. ***Standard 9: Operation and maintenance plan (O&M plan)***

The submitted "Engineering Drainage Calculations" contain an Operations and Maintenance Plan. However, the O&M plan should be revised to be consistent with the requirements of § 181-75.D. per our comments above. Additionally, the O&M plan should be revised to be consistent with the requirements listed in Standard 9, including adding an estimated operations and maintenance budget.

GSA Response 9/23/24: A year maintenance cost budget is included in the Operation and Maintenance plan.

EP Response 10/17/24: Item closed.

29. ***Standard 10: Prohibition of illicit discharges***

No illicit discharge statement was provided. Environmental Partners recommends the applicant submit an illicit discharge statement signed by the Owner consistent with Standard 10 requirements.

GSA Response 9/23/24: A signed statement signed by the owner will be submitted prior to the start of construction.

EP Response 10/17/24: Item closed.

General Comments

30. The Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00) state that redevelopment projects within previously developed Riverfront Areas must improve upon existing conditions. Within the 200-foot Riverfront Area, proposed work shall not be located closer to the river compared to existing conditions. The limits of the proposed retaining wall on the eastern side of the property appear to be closer to the wetland resources than the existing limits of pavement. Environmental Partners recommends revising the proposal to contain all proposed project features and all construction activities within the limits of existing pavement on-site.

    GSA Response 9/23/24: The plans have been revised to keep the proposed work beyond the existing limits of pavement.

    EP Response 10/17/24: Item closed.

31. The proposed subsurface stormwater infiltration chamber system is located on the high side of the proposed retaining wall, and less than 10-feet off the foundation wall. In our experience, there are risks with locating a subsurface stormwater infiltration chamber system near retaining walls and foundation walls. When infiltration systems setback less than 10-feet from foundation walls, Cultec specifies that an impermeable membrane should be added between the foundation wall and the system. Infiltrated stormwater can saturate the soil behind the retaining wall, potentially leading to instability in the retaining wall and the surrounding area. Environmental Partners recommends that the design should incorporate provisions for an overflow of the chamber system. Environmental Partners also recommends that the Applicant provide necessary design drawings and calculations for this retaining wall, preferably prepared and stamped by a Geotechnical Engineer, prior to any approval by the Planning Board.

    GSA Response 9/23/24: The retaining wall and Cultec system have been removed from the current design.

    EP Response 10/17/24: Item closed.

32. There is an existing ridge in the pavement at the site's northwestern property line. Environmental Partners recommends the project blend the pavement and remove the abrupt ridge. The plans show a proposed spot elevation of 175.50' directly adjacent to the existing 175' contour; it is unclear where the start and end of the proposed granite curb is in

this area. The applicant should clearly label the limits of the granite curbing and should provide spot elevations that label top of curb and bottom of curb elevation.

GSA Response 9/23/24: The proposed grades for top and bottom of curbing were added to the plan and the proposed 175 grade was blended into the adjacent grade. The beginning and end of curbing was also added to the plan.

EP Response 10/17/24: Acknowledged. Based on the revised plans, it appears that the granite curb will have a reveal on both sides along the property line. This configuration leaves approximately 10.5 feet of clearance between the granite curb and the existing building on the adjacent property to the north for vehicles to maneuver.

GSA Response 10/24/24: No Response.

EP Response 11/15/24: This item remains open. The proposed granite curb, which starts midway down the existing driveway and has a reveal on both sides between the proposed building and the adjacent property, is an unconventional design approach. Given its location, this curb could pose a visibility challenge during snow conditions, potentially creating a hazard for vehicles accessing either property. We recommend reconsidering this design to improve safety and maneuverability.

Additional Comments 10/17/2024

33. At the northern corner of the building, there is a crossing between the proposed water line and the drainage pipe. We recommend that the Applicant provide calculations to confirm that there is no conflict between these utilities. Additionally, we advise against locating a stormwater discharge directly above a water line, as this could lead to scour and potential exposure of the water line over time.

    GSA Response 10/24/24: The water lines will be 3 feet below the drainage pipe and the outlet to the rip rap apron is proposed past the water line.

    EP Response 11/15/24: The Applicant slightly shifted the stormwater discharge past the water line. **Item closed.**

34. We recommend the Applicant provide sizing calculations for the rip rap aprons and resize the aprons as necessary. The original design did not include any point discharges, whereas the revised designs includes three point discharges/rip rap aprons for all stormwater runoff.

    GSA Response 10/24/24: Rip rap apron sizing calculations are now included in the stormwater report.

    EP Response 11/15/24: We did not receive an updated stormwater report with the submitted materials.

35. We note that the invert elevation of the outlet of the deep sump CB is lower than the invert elevation of the inlet to the Stormceptor unit. The Applicant should confirm if this was the design intent.

    GSA Response 10/24/24: The inverts have been updated so that the Stormceptor inlet is lower than the deep sump CB.

    EP Response 11/15/24: Item closed.

Additional comments 11/15/2024

36. On October 25, 2024, EP met with Karen Mullins, Lexington Conservation Director, to discuss the project's hydrology design and HydroCAD model. Karen raised several questions and concerns on behalf of the Conservation Commission. Based on that discussion, we have the following additional comments regarding the design of the porous pavers and green roof as they pertain to Standard 2 (Peak Rate Attenuation) of the MA Stormwater Management Standards:

    a. Porous Pavers: According to Volume 2, Chapter 2 of the Massachusetts Stormwater Management Handbook, porous pavers (or "unit pavers") are primarily effective at attenuating peak flows for smaller storm events. However, the current HydroCAD model assumes that all proposed porous paver best management practices (BMPs) fully retain and infiltrate design storms up to and including the 24-hour, 100-year storm. We find this assumption overly optimistic and believe the model may not be accurately representing potential runoff.

       While the storage bed beneath the pavers, combined with the soil's infiltration rate, appears to have adequate dynamic capacity to retain the 100-year storm volume in the model, real-world conditions are likely to produce some surface runoff. Even fully pervious subcatchments with well-draining soils typically generate runoff in HydroCAD.

       The setup of the HydroCAD model bypasses several key assumptions that typically result in runoff. By routing the subcatchment directly to the storage bed (modeled as a pond), it overlooks factors that naturally contribute to runoff. For example, the Curve Number (CN) method used in HydroCAD incorporates variables like soil texture, ground cover, and initial abstraction. Even in high-permeability soils, these factors allow for some runoff. Additionally, the short time of concentration in the model (6 minutes for porous paver BMPs) suggests that water moves quickly across the surface, potentially exceeding the rate at which water can infiltrate through paver joints during high-intensity rainfall. However, by routing the subcatchment directly to the pond, the model effectively bypasses this mechanism.

We recommend the applicant refine the HydroCAD model to reflect these design constraints for the purposes of Standard 2. Modeling the pavers with a representative CN that accommodates some runoff would likely provide a more realistic assessment.

b. Green roof: Similar to the porous pavers, Volume 2, Chapter 2 of the Massachusetts Stormwater Management Handbook indicates that green roofs are primarily effective at attenuating peak flows for smaller storm events. However, the current HydroCAD model assumes that the green roof fully attenuates all design storms up to and including the 24-hour, 100-year storm, resulting in no runoff. We find this assumption to be overly optimistic.

   The HydroCAD design uses a pond node to model the green roof, assuming the only primary outlets are the seven 12”x12” grated covers. These grates are set at the same elevation as the top of the green roof soil media. The pond node offers an overly simplified version of the green roof by providing 100% open storage volume that was calculated by multiplying the porosity of the soil media by the overall soil media volume. The way this is modeled, the peak elevation of the 24-hour, 100-year design storm does not even reach the level of the grated covers. Since these grated covers are the only modeled outlets, the model results in zero discharge. We believe this approach is insufficiently representative of likely conditions and does not account for the 2” perforated underdrain pipes, which discharge to the seven 4” roof drains. The underdrain system does not have outlet control so stormwater that infiltrates through the media will discharge through the underdrains during the course of a storm event, however, these outflows are not accounted for in the model, which currently shows zero outflow during the 100-year storm event.

   We recommend that the applicant revise the HydroCAD model to more accurately represent actual runoff behavior for the green roof, including the contribution of the underdrain system and the potential for surface runoff to reach the grated covers and. This revised model should demonstrate compliance with Standard 2 peak rate attenuation requirements.

37. The submitted “Utilities Plan” (Sheet A005) shows the underground water service and fire lines passing under what appears to be an electrical transformer (it is not labelled). This transformer is not shown on the civil plans. We do not recommend conveying water lines under the electrical transformer. The transformer should be designed consistent with the local utility provider’s requirements.

Environmental Partners' review is based on the information that has been provided to date.

Environmental Partners appreciates the opportunity to be able to assist you with this important project. Please feel free to contact me at (617) 657-0278 or djo@envpartners.com with any questions or comments.

Very Truly Yours,

Dylan J. O'Donnell, PE
Project Manager
P: 617.657.0278
E: djo@envpartners.com

Eric A. Kelley, PE, CHMM, LEED GA
Principal
P: 617.657.0282
E: eak@envpartners.com

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

419, 429, 433 & 439 Marrett Road – Preliminary Subdivision

PRESENTER:

Applicant: Michael Novak & DND Homes

ITEM NUMBER:

SUMMARY:

Application proposes subdividing the 4 properties into 7 lots, with 6 of those lots on a cul-de-sac.
The properties are located at 419 Marrett Road, 429 Marrett Road, 433 Marrett Road, and 439 Marrett Road Lexington, MA also known as Map 33, Lots 103, 104A, 104B, 105 in the RS (One Family Dwelling), CN (Neighborhood Business), and VO (Village Overlay) zoning districts.
Application materials may be viewed at https://lexingtonma.portal.opengov.com/records/101990
Proposal is to subdivide four lots totaling 2.45± acres into seven lots with access from a new cul-de-sac off of Marrett Road. The existing properties contain residential buildings and commercial building with parking. The building at 419 Marrett Road is on Lexington's Historical Inventory and is subject to a demolition delay pursuant to §19 of the Town's General Bylaws. On December 18, 2024, the Historical Commission determine the structure is preferably preserved and imposed a 21-month demolition delay expiring on September 19, 2026. Marrett Road is also a state road and the applicant is responsible for any required state permits for changes in the right of way.

SUGGESTED MOTION:

Staff recommends approval with conditions of items to be incorporated into a definitive subdivision plan submission.

Move to approve the preliminary subdivision plan for 419, 429, 433, & 439 Marrett Road as outlined in the draft approval prepared by staff.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

ATTACHMENTS:

Description	Type
Preliminary Subdivision Plan - 419-439 Marrett Road	Cover Memo

NOTES:

1. THE INFORMATION DEPICTED ON THIS PLAN HAS BEEN COMPILED FROM THE TOWN OF LEXINGTON GIS SYSTEM
2. LAND USE WITHIN 300 FEET OF THE SUBJECT PROPERTY CONSISTS OF A MIX OF SINGLE FAMILY DWELLINGS, AN APARTMENT COMPLEX AND COMMERCIAL USE

419, 429, 433, AND 439 MARRETT ROAD
ASSESSORS MAP 33 LOTS 103, 104A, 104B AND 105
PRELIMINARY SUBDIVISION PLAN
LOCATED IN LEXINGTON, MA
FEBRUARY 26, 2025

LOCUS CONTEXT MAP
(SCALE 1"=100')

PREPARED BY:

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

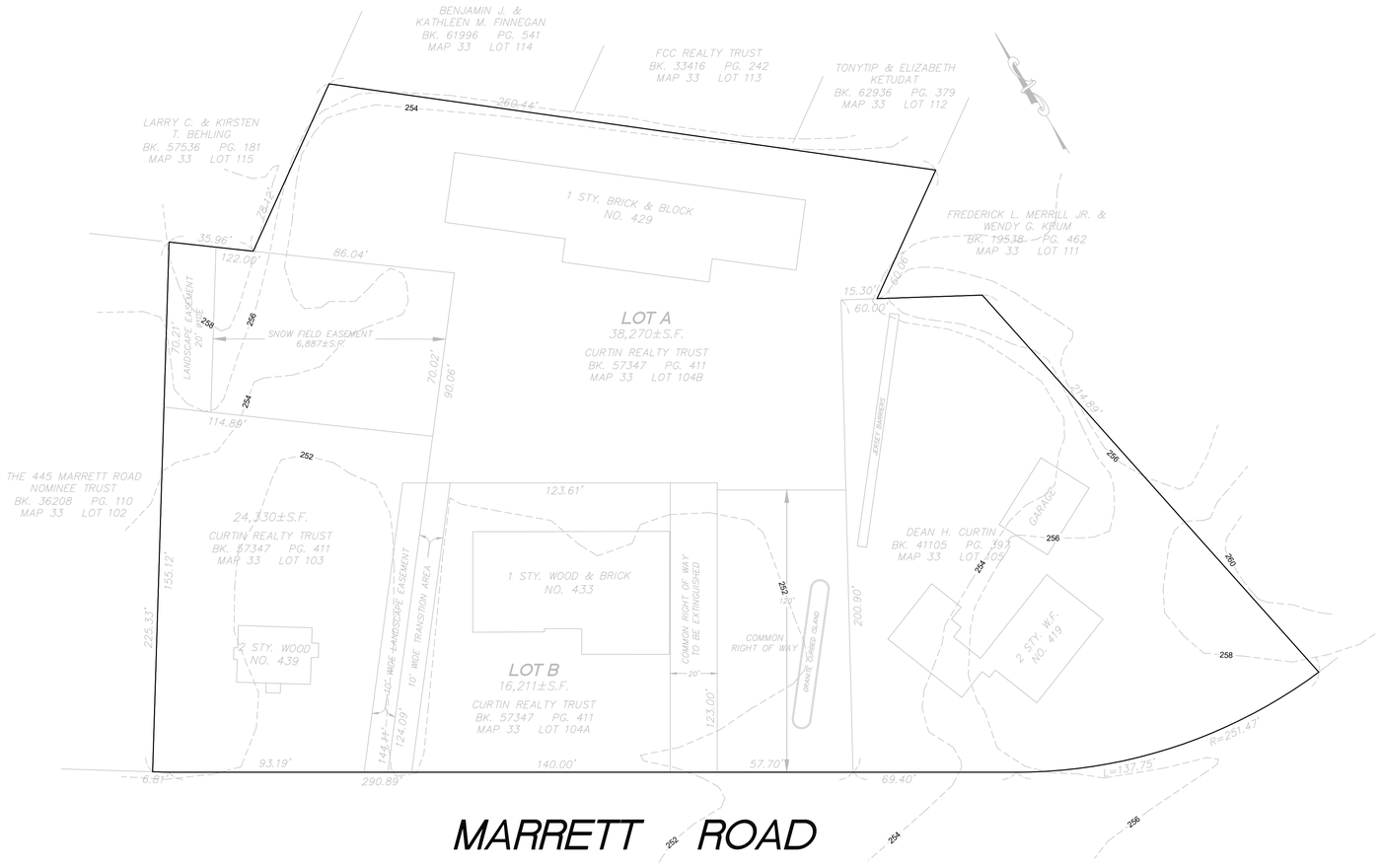
SHEET INDEX

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

RECORD OWNERS:

CURTIN REALTY TRUST
PO BOX 458
LEXINGTON, MA 02420

MARRETT REALTY LLC
107 AUDUBON RD
WAKEFIELD, MA 01880



30 0 15 30 60

GRAPHIC SCALE IN FEET

NOTES:

1. THIS PLAN IS BASED ON A PARTIAL SURVEY PERFORMED ON THE GROUND BY KEENAN SURVEY, LEXINGTON GIS AND RECORD PLANS.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS & CN ZONING DISTRICTS.
3. THE SUBJECT PROPERTY IS DEPICTED AS LOTS 103, 104A, 104B AND 105 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 33.
4. 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.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.

TABLE OF DIMENSIONAL REQUIREMENTS

ITEM	REQUIREMENT	
	ZONE: RS	ZONE: VO (VILLAGE OVERLAY)
MIN LOT AREA	15,500 S.F.	DOES NOT APPLY
MIN FRONTAGE	125'	20'
MIN FRONT YARD	30'	0' or 15'
MIN SIDE YARD	15'	7.5' - 15'
MIN REAR YARD	15'	15'

REFERENCES :

PLAN BOOK 321, PLAN 5
PLAN BOOK 361, PLAN 20
PLAN 337 OF 1944
PLAN 261 OF 1966

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

NOT FOR CONSTRUCTION

419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-25-2025
CHECKED BY: MJN

REVISIONS

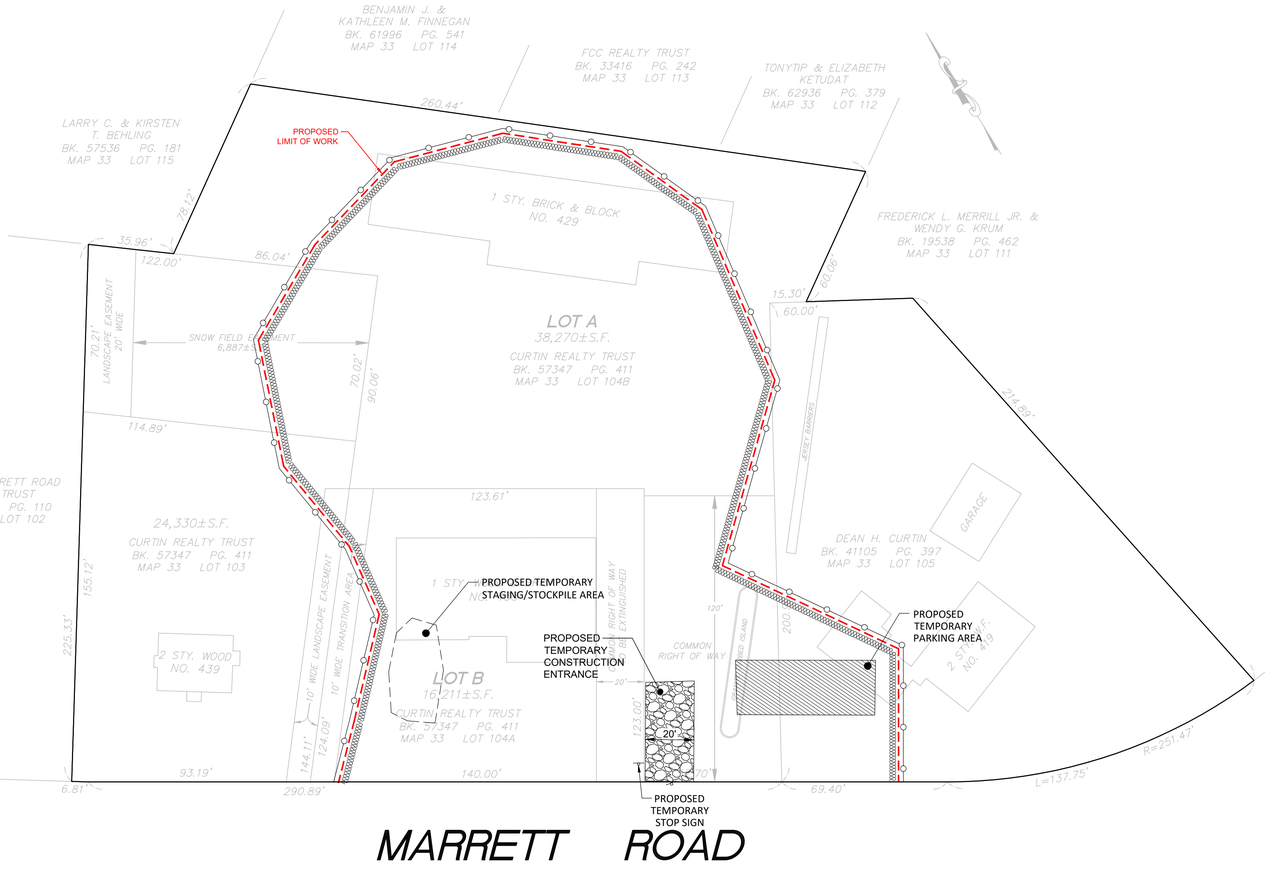
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50596
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

EXISTING CONDITIONS PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

SHEET
C - 1

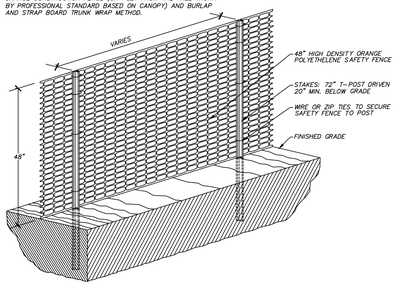


30 0 15 30 60

GRAPHIC SCALE IN FEET

NOTE:

1. EXISTING TREES TO BE SAVED SHALL BE PROTECTED WITH ORANGE CONSTRUCTION FENCE (OFF-SET FROM THE TREE TRUNK BY PROFESSIONAL STANDARD BASED ON CANOPY) AND BURLAP AND STRAP BOARD TRUNK WRAP METHOD.



CONSTRUCTION FENCE/TREE PROTECTION
(NOT TO SCALE)

PHASE I CONSTRUCTION SEQUENCE

1. INSTALL ALL EROSIONS CONTROL MEASURES AS REQUIRED.
2. MEET WITH LEXINGTON PLANNING STAFF, SITE CONTRACTOR, AND EROSION CONTROL MONITOR AT PRE-CONSTRUCTION MEETING TO REVIEW EROSION CONTROL MEASURES AND SITE PLAN REVIEW CONDITIONS.
3. INSTALL TEMPORARY, HIGH VISIBILITY, ORANGE CONSTRUCTION FENCING AROUND ENTIRE PROPERTY TO DELINEATE WORK AREA. TEMPORARY CONSTRUCTION FENCING WILL BE INSTALLED BEHIND EROSION CONTROL MEASURES TO ENSURE ADEQUATE ACCESS TO THE EROSION CONTROLS FOR INSPECTION, MAINTENANCE, AND REPAIR AS NEEDED FOR THE DURATION OF CONSTRUCTION.
4. REMOVE AND DISPOSE OF ALL TRASH AND DEBRIS FROM SITE.
5. REMOVE ALL SPECIFIED TREES AND STUMPS.
6. TEST REMAINING SOIL FOR CONTAMINANTS AND PLANTING SUITABILITY.
7. DRESS THE TEMPORARY STAGING AND PARKING AREAS ON SITE WITH CRUSHED STONE.

PHASE II CONSTRUCTION SEQUENCE

1. EXCAVATE BASEMENT AREAS TO BOTTOM OF FOOTING. STOCKPILE MATERIAL FOR BACKFILL AND HAUL REMAINDER OF MATERIAL OFF SITE.
2. FURNISH AND INSTALL BASEMENT FOOTINGS AND FOUNDATION WALLS.
3. WATERPROOF, INSULATE AND BACKFILL BASEMENT FOOTINGS AND FOUNDATION WALLS
4. EXCAVATE FOR AND INSTALL PERIMETER FOOTINGS AND FOUNDATION FROST WALLS AND INTERIOR FOOTINGS. WATERPROOF, INSULATE AND BACKFILL THESE AREAS.
5. EXCAVATE AND BACKFILL ALL NECESSARY TRENCHES IN ORDER TO FURNISH AND INSTALL ALL UNDERGROUND PLUMBING, SECONDARY ELECTRICAL, ETC.
6. EXCAVATE FOR AND CONSTRUCT INFILTRATION SYSTEM(S).
7. FROM THIS POINT ON, THE VERTICAL CONSTRUCTION CONTINUES IN THE SAME CONVENTIONAL MANNER AS ANY MAJOR URBAN DEVELOPMENT PROJECT.

PHASE III CONSTRUCTION SEQUENCE

1. TILL SUBSOIL OR SCARIFY WITH EXCAVATOR BUCKET TEETH TO ENSURE FRIABLE SOIL PLANTING MEDIUM BENEATH TOPSOIL
2. FURNISH AND SPREAD APPROVED TOPSOIL FROM SUB GRADE TO FINISH GRADE PER TOPSOIL SPECIFICATIONS ON APPROVED LANDSCAPE PLANS. TOPSOIL TO BE TESTED FOR LOAMY SAND TEXTURE AND 5-8% ORGANIC CONTENT
3. FURNISH, DELIVER AND INSTALL ALL PLANT MATERIAL PER APPROVED DESIGN DOCUMENTS. PROJECT WETLAND SCIENTIST AND/OR LANDSCAPE ARCHITECT SHALL INSPECT PLANTS PRIOR TO INSTALLATION, AND OVERSEE SITING AND INSTALLATION OF ALL PLANTS.
4. AT THE TIME OF INSTALLATION, ALL PLANTS TO RECEIVE A DEEP WATERING.
5. CLEANUP AND DEMOBILIZE.
6. UPON SUCCESSFUL SEED GERMINATION AND SOIL STABILIZATION, REMOVE EROSION CONTROLS.

LEGEND	DESCRIPTION
	PROPOSED LIMIT OF WORK LINE
	PROPOSED FILTERMITT
	PROPOSED TEMPORARY CONSTRUCTION ENTRANCE
	PROPOSED TEMPORARY CONSTRUCTION PARKING
	PROPOSED TEMPORARY CONSTRUCTION FENCING

CONSTRUCTION AND TRAFFIC MANAGEMENT LOGISTICS

1. SIDEWALKS ALONG BUILDING FRONTAGE TO BE CLOSED UNTIL VERTICAL CONSTRUCTION IS SUBSTANTIALLY COMPLETED.
2. PEDESTRIAN TRAFFIC WILL BE DIVERTED TO THE SOUTHERN SIDE OF MARRETT RD.
3. FURNISH AND INSTALL ROADWAY MARKINGS DEPICTING THE LIMITS OF THE SIDEWALKS ACROSS MARRETT RD.

ADDITIONAL CONSTRUCTION NOTES:

- TRASH REMOVAL: THE 30 YARD DUMPSTER THAT IS REQUIRED FOR GENERAL CONSTRUCTION WASTE IS APPROXIMATELY 22' X 8'. IT WILL BE SCREENED BY SIX FOOT TALL TEMPORARY FENCING AND SCRIM.
- TEMPORARY RESTROOM FACILITIES: TEMPORARY RESTROOM FACILITIES WILL BE LOCATED BEHIND THE DUMSTER AREA WITHIN THE CONSTRUCTION ZONE SO THAT THEY WILL BE SCREENED FROM THE ROAD, THERE WILL BE A TOTAL OF TWO TO FOUR RESTROOM COMPARTMENTS REQUIRED FOR THE PROJECT DURATION.
- SNOW MANAGEMENT: DURING CONSTRUCTION SNOW WILL BE REMOVED IN ITS ENTIRETY ON THE CONSTRUCTION SIDE OF THE FENCE BY THE GENERAL CONTRACTOR AND HAULED OFF SITE AS REQUIRED. THE TOWN OF LEXINGTON WILL REMOVE SNOW ON THE PUBLIC SIDE OF THE FENCE AS IT NORMALLY WOULD. ANY RESIDUAL SNOW THAT MAY BE IN CONTACT WITH THE PUBLIC SIDE OF THE TEMPORARY FENCING WILL BE REMOVED BY THE GENERAL CONTRACTOR.
- ONCE INFILTRATION SYSTEMS ARE IN PLACE NO PARKING OR MATERIAL STORAGE IS PERMITTED ABOVE THEM.
- NO STORMWATER RUNOFF SHOULD BE DISCHARGED TO THE ON-SITE STORMWATER MANAGEMENT SYSTEM UNTIL THE SITE IF FULLY STABILIZED; WITH THE EXCEPTION OF ROOF LEADERS THAT CAN BE CONNECTED ONCE ABLE TO BE INSTALLED.
- THE ON-SITE INFILTRATION SHOULD BE BLOCKED FROM VEHICLE TRAFFIC DURING CONSTRUCTION UNTIL THE SITE IS FULLY STABILIZED.
- SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORK DAY. SIDE SLOPES NOT TO EXCEED 2:1. 12" DIAMETER (MINIMUM) FILTERMITT SHALL BE INSTALLED AROUND EACH STOCKPILE
- NO ONSITE REFUELING OF CONSTRUCTION VEHICLES OR EQUIPMENT.
- DUST CONTROL LIMITED TO POTABLE WATER. CALCIUM CHLORIDE SHALL NOT BE USED FOR DUST CONTROL.
- SEGMENTS OF MARRETT RD ON WHICH ANY SEDIMENT IS DEPOSITED SHALL BE SWEPT WITHIN 24 HOURS OR MORE FREQUENTLY AS REQUIRED OR DIRECTED BY TOWN STAFF.
- ANY SEDIMENT OR DEBRIS DISCHARGED TO ANY TOWN DRAINAGE STRUCTURE OR DRAINLINE SHALL BE REMOVED WITHIN 24 HOURS.

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

NOT FOR CONSTRUCTION

419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-25-2025
CHECKED BY: MJN

REVISIONS

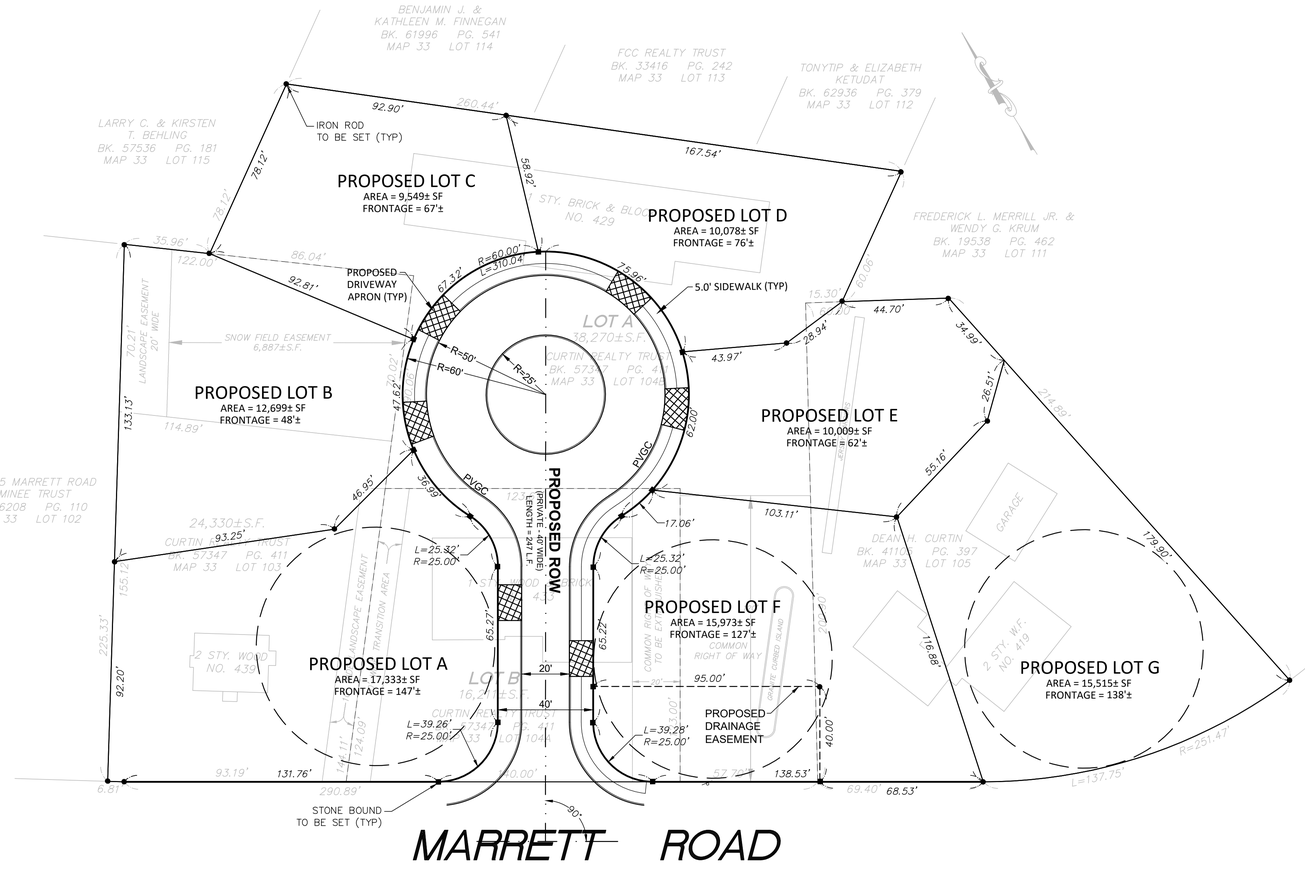
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
No. 50686
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T.: (978) 726-2654
www.patriot-eng.com

CONSTRUCTION MANAGEMENT PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

SHEET
C - 2



NOTES:

1. THIS PLAN IS BASED ON A PARTIAL SURVEY PERFORMED ON THE GROUND BY KEENAN SURVEY, LEXINGTON GIS AND RECORD PLANS.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS & CN ZONING DISTRICTS.
3. THE SUBJECT PROPERTY IS DEPICTED AS LOTS 103, 104A, 104B AND 105 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 33.
4. 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.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.

TABLE OF DIMENSIONAL REQUIREMENTS

ITEM	REQUIREMENT	
	ZONE: RS	ZONE: VO (VILLAGE OVERLAY)
MIN LOT AREA	15,500 S.F.	DOES NOT APPLY
MIN FRONTAGE	125'	20'
MIN FRONT YARD	30'	0' or 15'
MIN SIDE YARD	15'	7.5' - 15'
MIN REAR YARD	15'	15'

REFERENCES :

PLAN BOOK 321, PLAN 5
PLAN BOOK 361, PLAN 20
PLAN 337 OF 1944
PLAN 261 OF 1966

LEGEND:

- APPROXIMATE EXISTING PROPERTY LINES
- PROOF CIRCLE
- PROPOSED CENTERLINE
- R= RADIUS
- TYP TYPICAL
- PEOP PROPOSED EDGE OF PAVEMENT
- SF SQUARE FEET
- ROW RIGHT OF WAY
- PROPOSED PAVEMENT
- PROPOSED DRIVEWAY APRON
- PROPOSED STONE BOUND
- PROPOSED IRON ROD

NOT FOR CONSTRUCTION

419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-25-2025
CHECKED BY: MJN

REVISIONS

DATE	BY	DESCRIPTION

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

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

PRELIMINARY SUBDIVISION PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

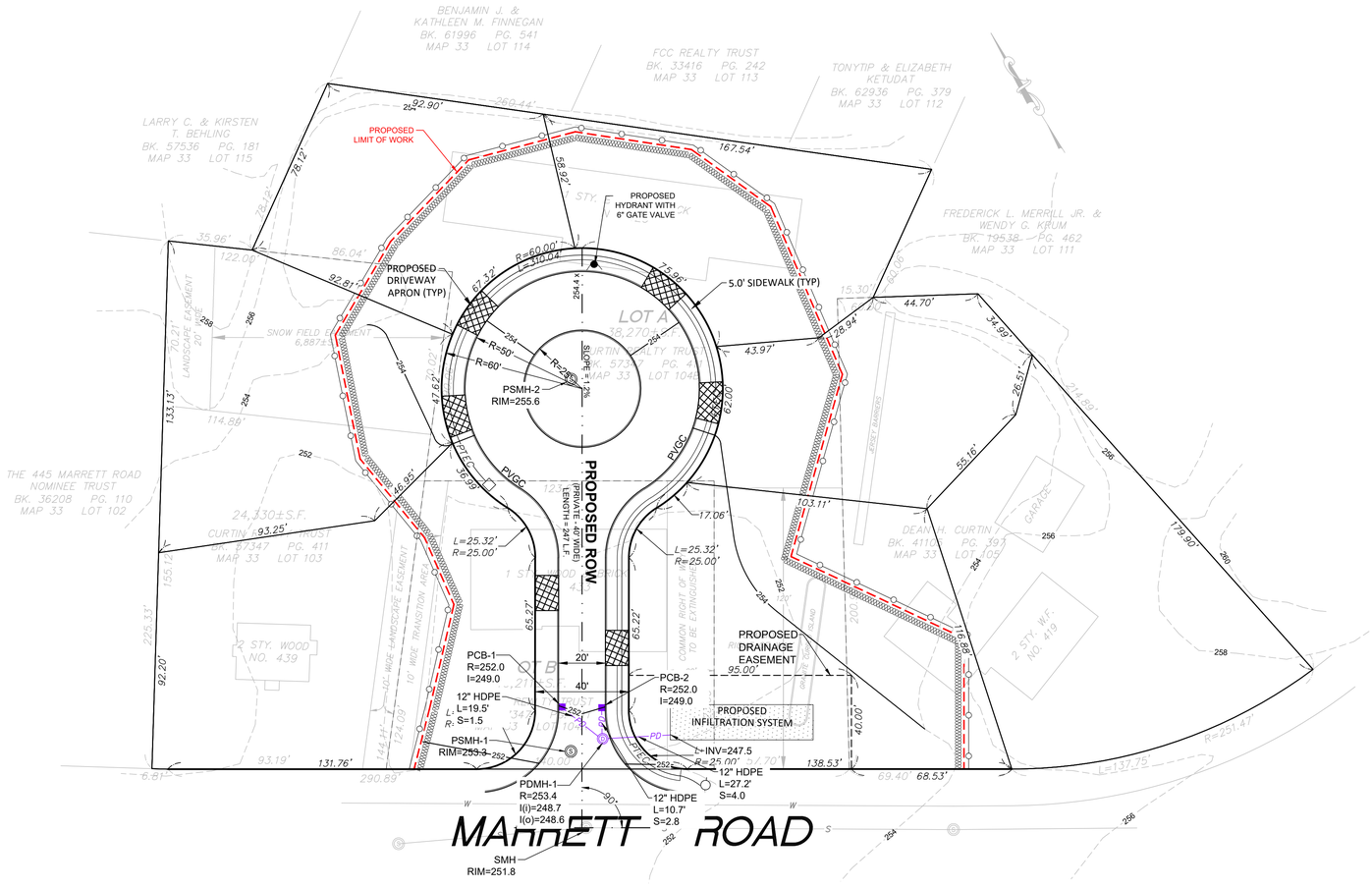
SHEET
C - 3

NOTES:

1. THIS PLAN IS BASED ON A PARTIAL SURVEY PERFORMED ON THE GROUND BY KEENAN SURVEY, LEXINGTON GIS AND RECORD PLANS.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS & CN ZONING DISTRICTS.
3. THE SUBJECT PROPERTY IS DEPICTED AS LOTS 103, 104A, 104B AND 105 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 33.
4. 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.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.

TABLE OF DIMENSIONAL REQUIREMENTS

ITEM	REQUIREMENT	
	ZONE: RS	ZONE: VO (VILLAGE OVERLAY)
MIN LOT AREA	15,500 S.F.	DOES NOT APPLY
MIN FRONTAGE	125'	20'
MIN FRONT YARD	30'	0' or 15'
MIN SIDE YARD	15'	7.5' - 15'
MIN REAR YARD	15'	15'



LEGEND	DESCRIPTION
PEOP	PROPOSED EDGE OF PAVEMENT
PVGC	PROPOSED VERTICAL GRANITE CURB
■	PROPOSED CATCH BASIN (PCB)
254	PROPOSED CONTOUR
Ⓟ	PROPOSED DRAIN MANHOLE (PDMH)
	PROPOSED FIRE HYDRANT
	PROPOSED FILTERMITT
	PROPOSED LIMIT OF WORK LINE
Ⓢ	PROPOSED SEWER MANHOLE (PSMH)

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.

NOT FOR CONSTRUCTION

419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-25-2025
CHECKED BY: MJN

REVISIONS

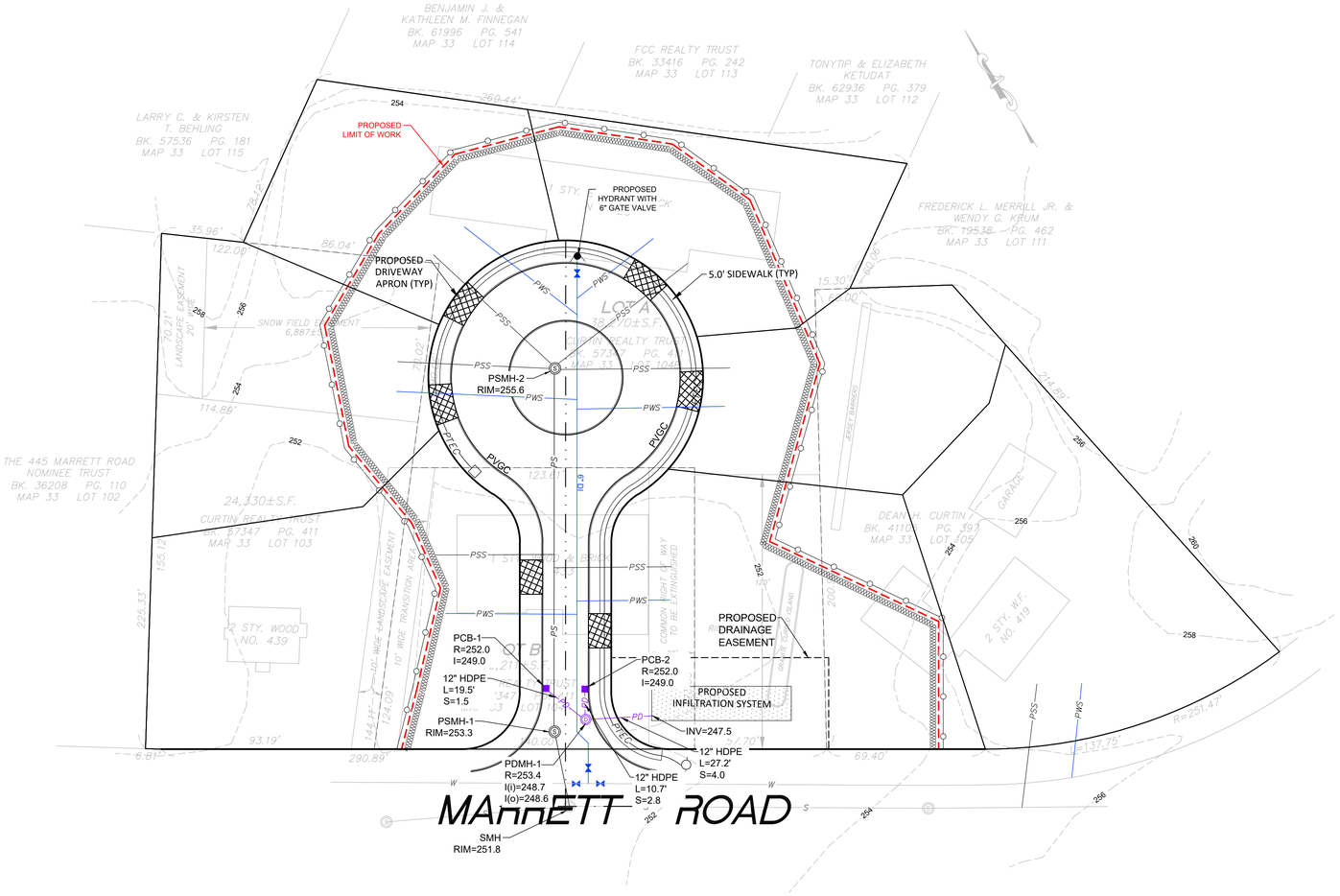
DATE	BY	DESCRIPTION

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

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

SITE PLAN - GRADING & DRAINAGE
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

SHEET
C - 4



30 0 15 30 60

GRAPHIC SCALE IN FEET

NOTES:

1. THIS PLAN IS BASED ON A PARTIAL SURVEY PERFORMED ON THE GROUND BY KEENAN SURVEY, LEXINGTON GIS AND RECORD PLANS.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS & CN ZONING DISTRICTS.
3. THE SUBJECT PROPERTY IS DEPICTED AS LOTS 103, 104A, 104B AND 105 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 33.
4. 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.
5. 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 6" DI, UNLESS OTHERWISE NOTED.
4. ALL PROPOSED WATER SERVICES SHALL BE 1.5" COPPER, UNLESS OTHERWISE NOTED.
5. SEPARATION OF SEWER AND WATER LINES SHALL BE 18 INCHES (18") VERTICALLY OR 10 FEET (10') HORIZONTALLY, IF THIS CANNOT BE ACHIEVED THE SEWER SHALL BE INCASED IN CONCRETE.
6. ALL STORM DRAIN MAINS AND LATERALS SHALL BE 12" SCHEDULE 40 PVC. (EXCEPT ROOF AND YARD DRAIN CONNECTIONS WHICH SHALL BE 6" SCHEDULE 40 PVC OR APPROVED EQUAL)
7. ALL CABLE/POWER UTILITIES TO BE INSTALLED UNDERGROUND ONSITE

LEGEND	DESCRIPTION
PEOP	PROPOSED EDGE OF PAVEMENT
PVGC	PROPOSED VERTICAL GRANITE CURB
■	PROPOSED CATCH BASIN (PCB)
Ⓓ	PROPOSED DRAIN MANHOLE (PDMH)
PD	PROPOSED DRAIN LINE
PS	PROPOSED SEWER LINE
PWS	PROPOSED WATER SERVICE
PSS	PROPOSED SEWER SERVICE
	PROPOSED FIRE HYDRANT
Ⓢ	PROPOSED SEWER MANHOLE (PSMH)
PW	PROPOSED WATER LINE

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

NOT FOR CONSTRUCTION

419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-25-2025
CHECKED BY: MJN

REVISIONS

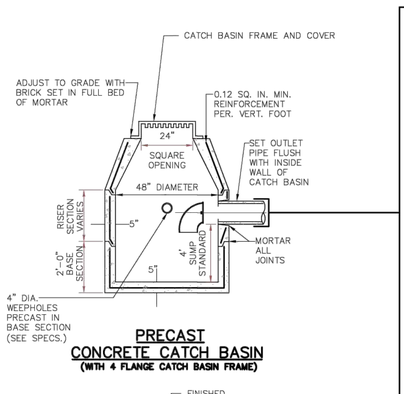
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 39586
REGISTERED PROFESSIONAL ENGINEER

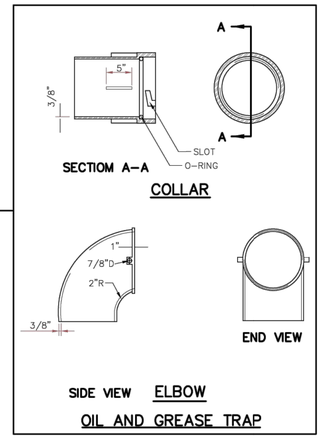
PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

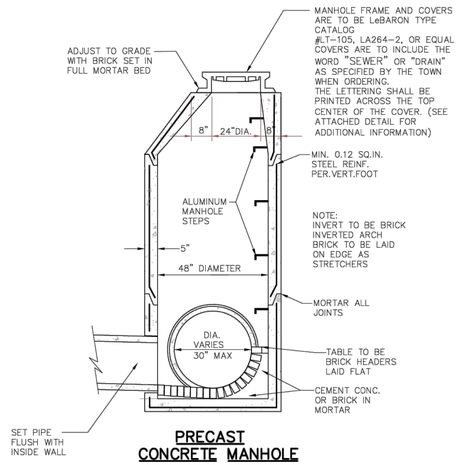
SITE PLAN - UTILITY
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

SHEET
C - 5

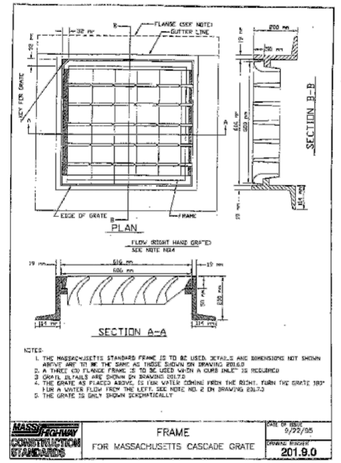


PRECAST CONCRETE CATCH BASIN
(WITH 4 FLANGE CATCH BASIN FRAME)

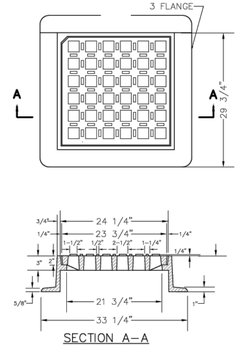




PRECAST CONCRETE MANHOLE



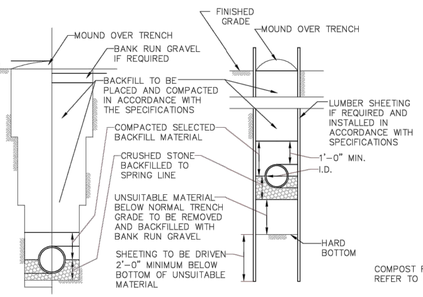
CATCH BASIN FRAME AND GRATE
N.T.S.



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

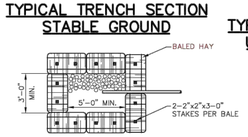
CATCH BASIN FRAME AND GRATE
N.T.S.

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



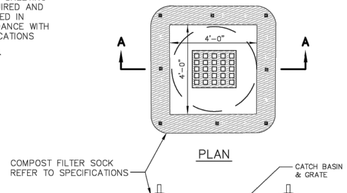
TYPICAL TRENCH SECTION STABLE GROUND

TYPICAL TRENCH SECTION UNSUITABLE MATERIAL

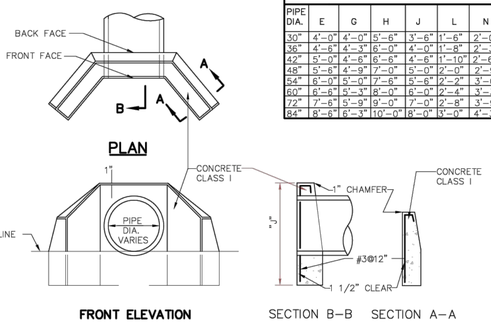


NOTE:
SEDIMENT TRAPS TO BE PLACED IN UPLAND LOCATIONS ONLY

SEDIMENT CONTROL TRAP
N.T.S.

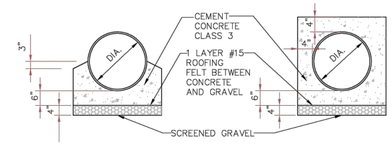


BALED HAY SILT BARRIER AROUND CATCH BASIN
N.T.S.



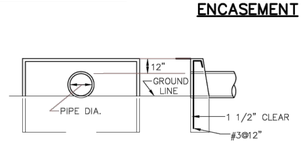
CONCRETE HEADWALL DETAILS FOR 30" TO 84" PIPE CULVERTS

1 1/2:1 & 2:1 SLOPES									1 1/2 SLOPES			2:1 SLOPES		
PIPE DIA.	E	G	H	J	L	N	P		F	CU. YDS.	LBS.	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"	3.39	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"	7.86	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



DETAIL CONCRETE CRADLE

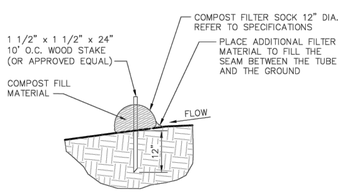
DETAIL CONCRETE ENCASEMENT



CONCRETE HEADWALL DETAILS FOR 8" TO 30" PIPE CULVERTS

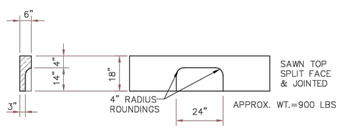
PIPE DIA.	1 1/2:1 SLOPE			2:1 SLOPE		
	L	CU.YDS.	LBS.	L	CU.YDS.	LBS.
8"	4'-2"	0.77	15	5'-10"	1.08	21
10"	4'-10"	0.92	20	6'-8"	1.28	23
12"	5'-6"	1.08	21	7'-6"	1.49	29
15"	6'-6"	1.34	24	8'-9"	1.82	32
18"	7'-6"	1.61	30	10'-0"	2.18	39
21"	8'-8"	1.95	34	11'-6"	2.62	43
24"	9'-3"	2.16	35	12'-6"	2.97	50
30"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

SUB-DRAIN DETAIL



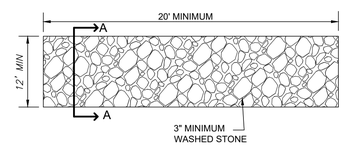
NOTE: EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH ORDER OF CONDITIONS.

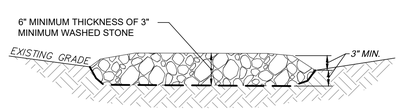
SEDIMENTATION BARRIER

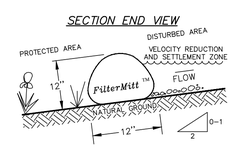


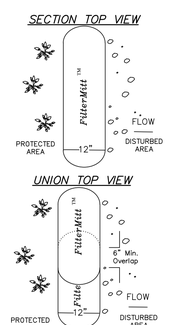
GRANITE CURB INLET DETAILS

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./f.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'.

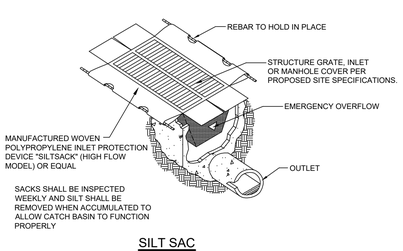
Sections can also be delivered to the site in lengths from 1' to 8'.

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.

ALL DETAILS ARE NOT TO SCALE

NOT FOR CONSTRUCTION



SILT SAC
(NOT TO SCALE)

REVISIONS		
DATE	BY	DESCRIPTION

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

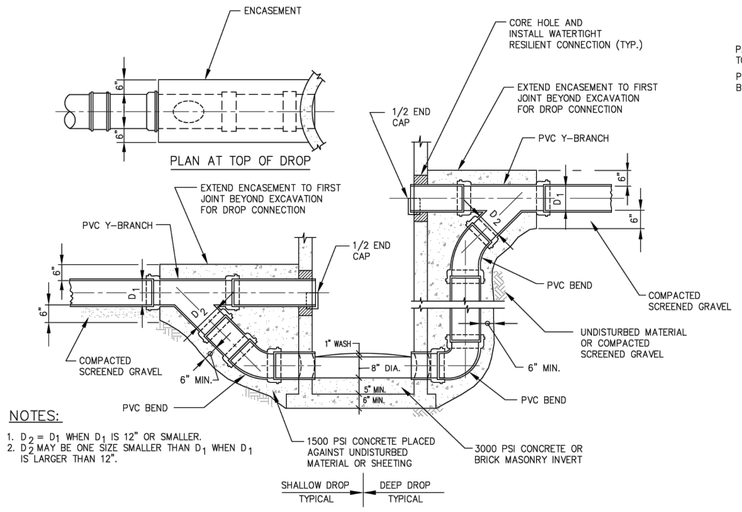
419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-25-2025
CHECKED BY: MJN

PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2854
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

SHEET
C-6.1

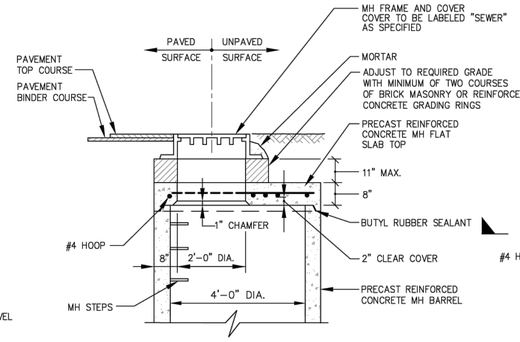


NOTES:

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".

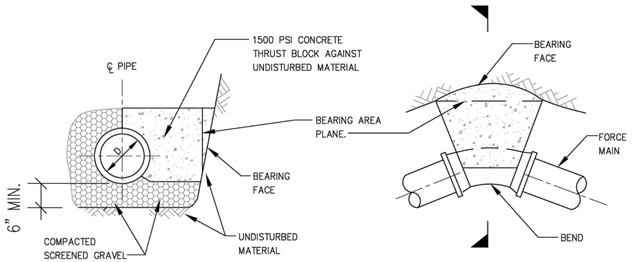
DROP INLETS FOR PVC PIPE SEWERS

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



PRECAST FLAT SLAB TOP FOR SHALLOW MANHOLE

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

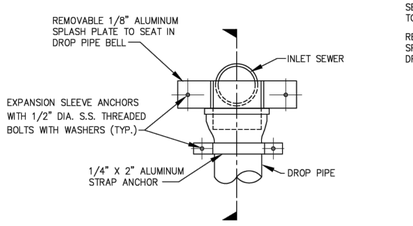


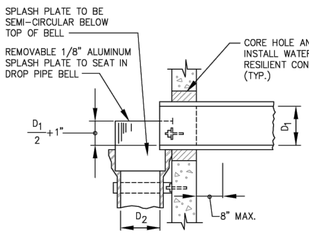
NOTES:

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.

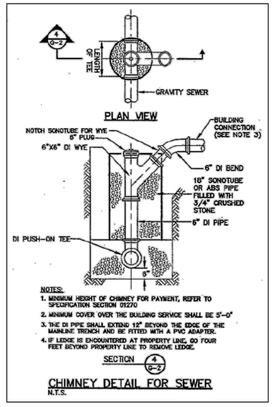
FORCE MAIN THRUST BLOCK

NOT TO SCALE
2-1.6.1 (REV. 03-15-95)



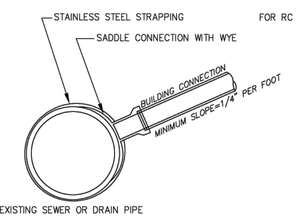


ALUMINUM SPLASH PLATE DETAIL



TYPICAL CHIMNEY DETAIL

NO SCALE

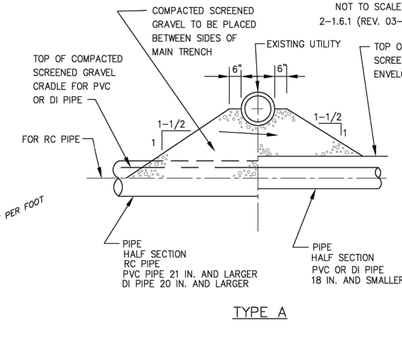


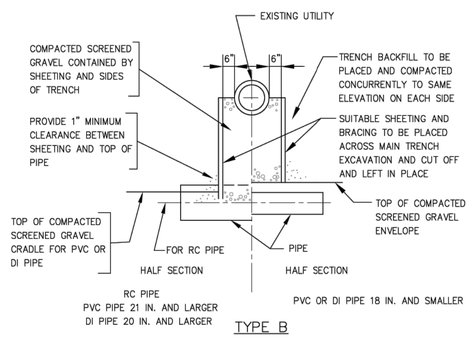
NOTES:

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

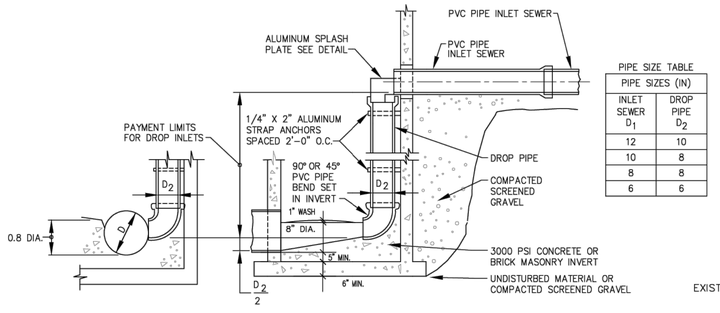
NO SCALE





TYPICAL SUPPORTS FOR UTILITIES

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



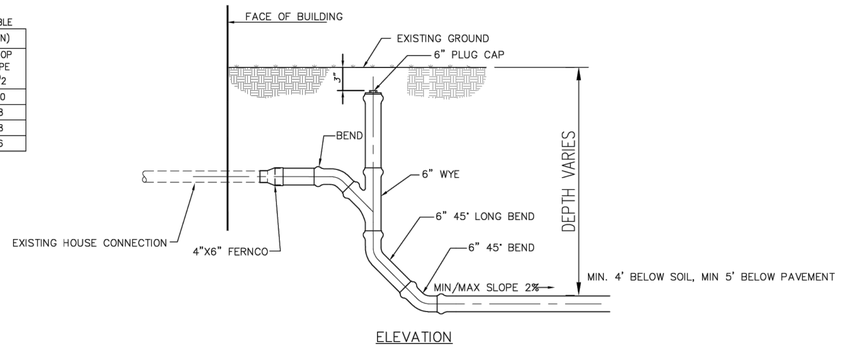
PIPE SIZE TABLE	
PIPE SIZES (IN)	
INLET SEWER D_1	DROP PIPE D_2
12	10
10	8
8	8
6	6

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)



CLEAN OUT RISER FOR SHALLOW BUILDING CONNECTIONS

NO SCALE

ALL DETAILS ARE NOT TO SCALE

NOT FOR CONSTRUCTION

419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-25-2025
CHECKED BY: MJN

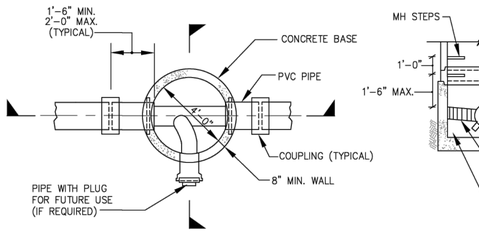
REVISIONS		
DATE	BY	DESCRIPTION

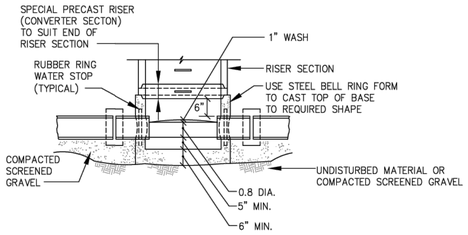
COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50666
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

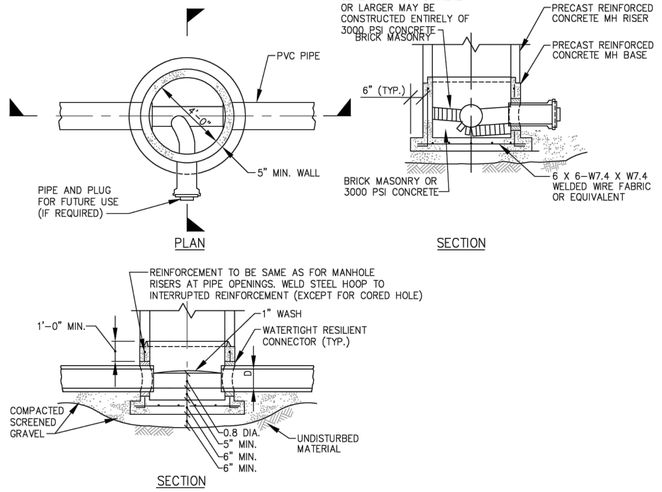
SHEET
C-6.2





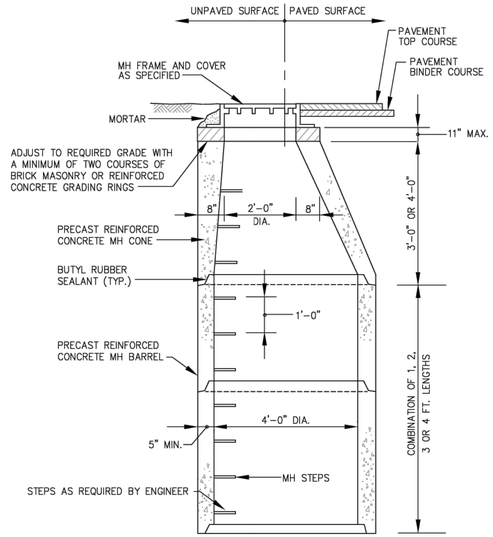
CAST-IN-PLACE CONCRETE BASE FOR PVC SEWERS

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



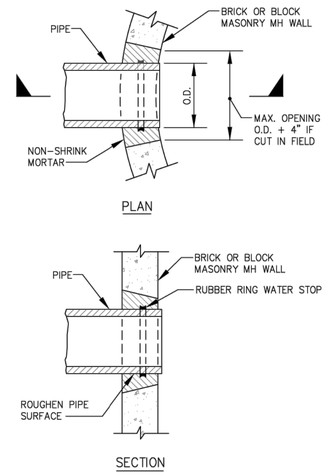
4'-0" PRECAST REINFORCED CONCRETE MANHOLE BASE FOR PVC SEWERS AND DRAINS

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



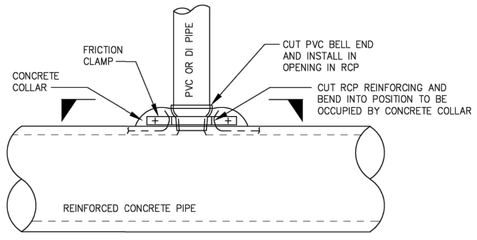
MANHOLE RISER WITH ECCENTRIC CONE TOP

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



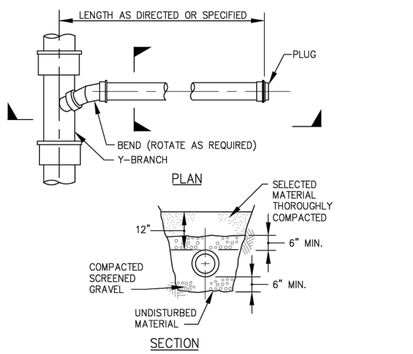
NON-SHRINK MORTAR JOINTS FOR CONNECTING PIPES TO BRICK OR BLOCK MASONRY MANHOLES

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



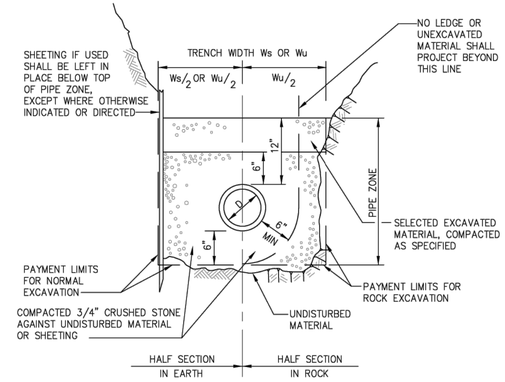
T-BRANCH FOR BUILDING OR CHIMNEY CONNECTION IN RC PIPE (PVC OR DI PIPE BRANCH)

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



BUILDING CONNECTION FOR DI OR PVC PIPE

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

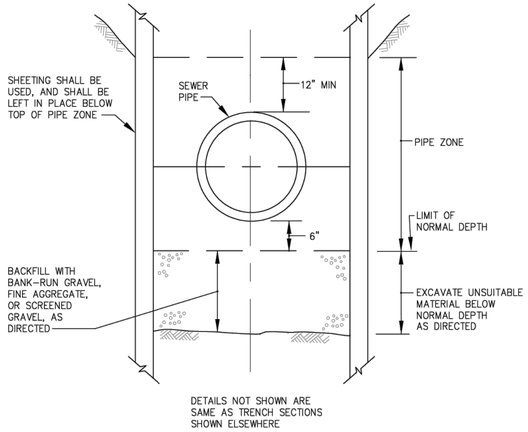


1. PIPE TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH Ws (SHEETED) OR Wu (UNSHEETED) ABOVE THE TOP OF PIPE ZONE.
2. TRENCHES SHALL NOT BE EXCAVATED BEYOND THE TRENCH WIDTH Wu BELOW THE TOP OF PIPE ZONE.
3. SHEETING MUST BE USED IF EXCAVATION AND BACKFILL, BELOW NORMAL DEPTH, IS REQUIRED. SHEETING 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)

ALL DETAILS ARE NOT TO SCALE

NOT FOR CONSTRUCTION

419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DATE: 2-25-2025
DRAWN BY: MVC
CHECKED BY: MJN

REVISIONS

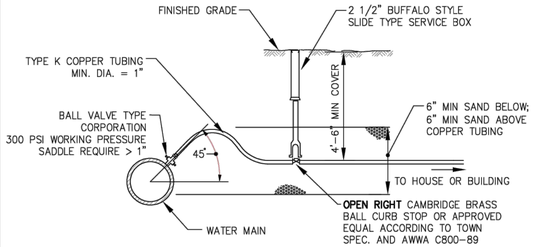
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50656
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2854
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

SHEET
C-6.3

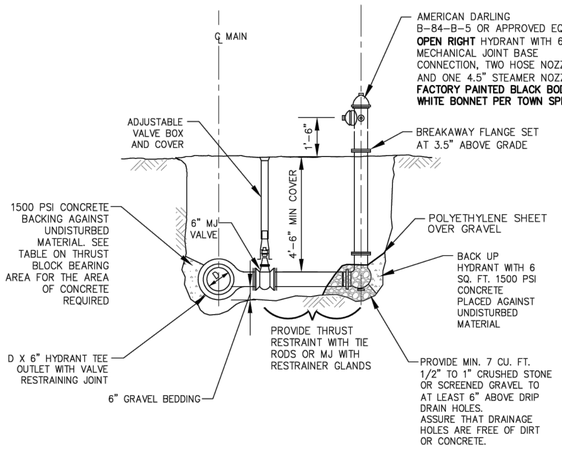


NOTES:

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.

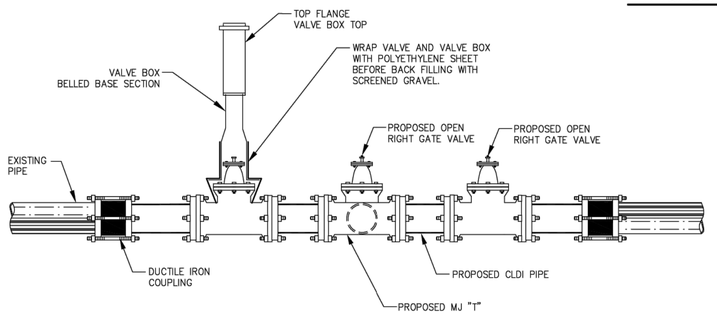
WATER SERVICE CONNECTION (1" MIN TO 2" MAX)

NTS

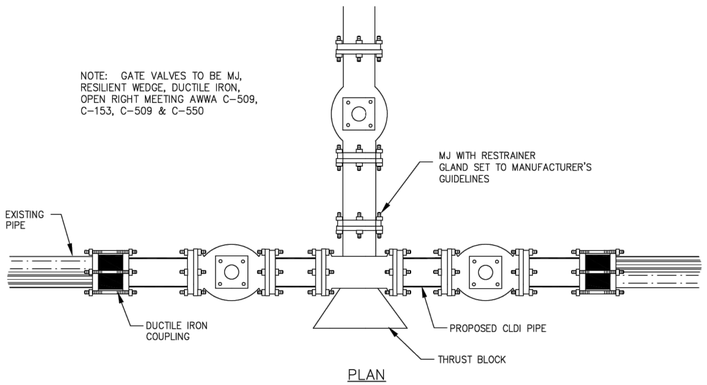


TYPICAL HYDRANT ASSEMBLY WITH DRAIN

NTS



ELEVATION



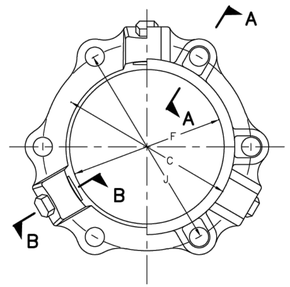
PLAN

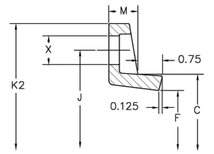
TRIPLE GATE CUT IN WATER MAIN CONNECTION

NTS

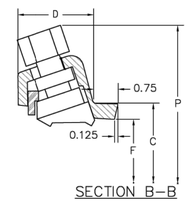
NOTES:

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.





SECTION A-A

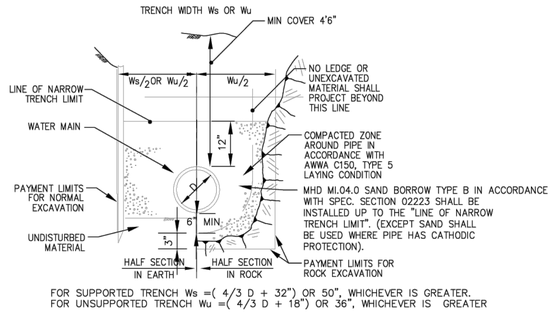


SECTION B-B

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.



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

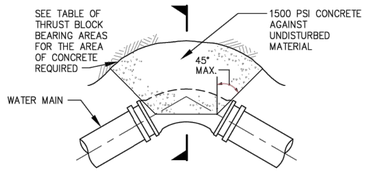
NOTES:

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.

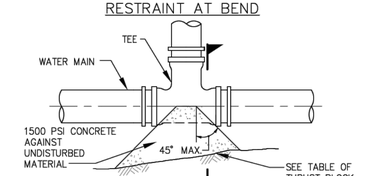
WATER MAIN TRENCH SECTION

NTS

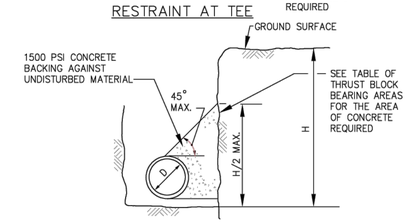
ALL DETAILS ARE NOT TO SCALE



PLAN OF THRUST RESTRAINT AT BEND



PLAN OF THRUST RESTRAINT AT TEE



THRUST BLOCK SECTION

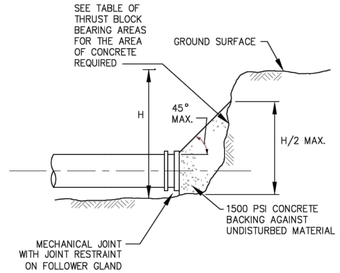
THRUST RESTRAINT AT FITTINGS

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 FOR CONSTRUCTION

419, 429, 433 & 439 MARRETT ROAD LEXINGTON, MA

DRAWN BY: MVC | DATE: 2-25-2025

CHECKED BY: MJN

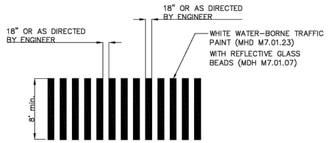
REVISIONS		
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. NOVAK CIVIL No. 50686 REGISTERED PROFESSIONAL ENGINEER

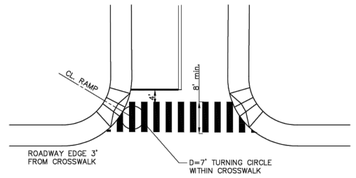
PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

SHEET
C-6.4



CROSSWALK ALL LOCATIONS



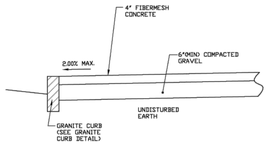
DETAIL~FOR CROSSWALK ALL LOCATIONS

NOTES:

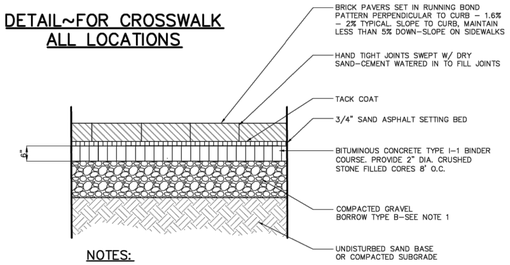
1. WHERE PROVIDED, STOP LINES SHOULD BE PLACED NO LESS THAN 4 FEET BEHIND AN ADJACENT CROSSWALK LINE.

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



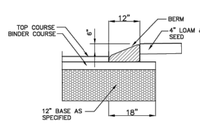
CONCRETE SIDEWALK



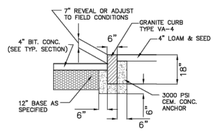
NOTES:

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.

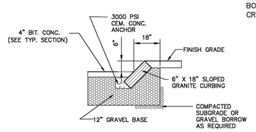
BRICK SIDEWALK PAVING



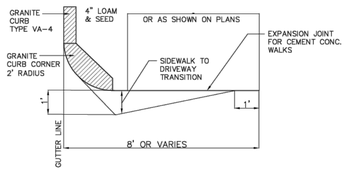
BIT. CONC. BERM



GRANITE CURB TYPE VA-4

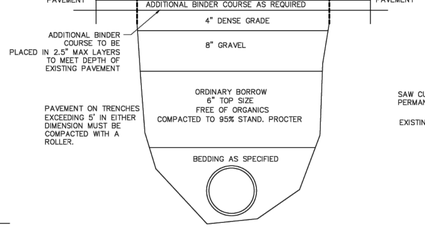


SLOPED GRANITE CURB DETAIL

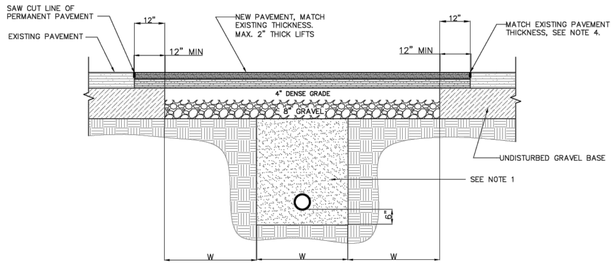


PLAN VIEW

TYPICAL CURB RETURN DETAIL



TRENCH RESTORATION



TYPICAL DETAIL TRENCH RESTORATION FOR MORATORIUM STREETS

NOTES:

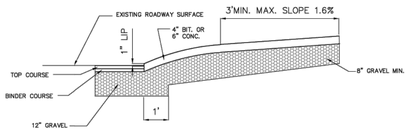
1. THE TRENCH EXCAVATION AROUND THE UTILITY WILL BE BACK FILLED WITH FLOWABLE FILL OR, IN CASE OF NATURAL GAS SERVICE, WITH GRAVEL COMPACTED TO 95% DENSITY.

2. NEW GRAVEL SUB BASE WILL BE INSTALLED AND COMPACTED TO 95% DENSITY.

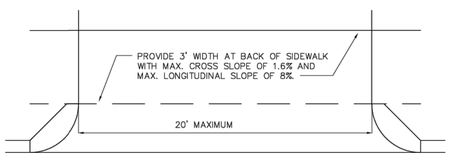
3. THE FINAL TRENCH PATCH WILL BE FROM CURB TO CURB, OR AS APPROVED BY THE ENGINEER.

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.



DRIVEWAY SECTION



ZONING OFFSETS

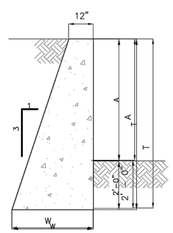
ZONING DISTRICT	DISTANCE FROM STREET INTERSECTION	DISTANCE FROM LOT LINE	WALL OF PRINCIPAL BUILDING
RS,RO,RT	25	5	5
RD,RM	25	8	5
CRO,CLO,CM	50	10	5
CRS,CS,CB,CN	10	NO REQUIREMENT	5

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



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		WIDTH	AREA	CU. YDS.
A	T	W	SQ. FT.	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

ALL DETAILS ARE NOT TO SCALE

NOT FOR CONSTRUCTION

419, 429, 433 & 439
MARRETT ROAD
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-25-2025
CHECKED BY: MJN

REVISIONS

DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50686
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2854
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
DND HOMES

SHEET
C-6.5

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

80 Bedford Street - Preliminary Subdivision

PRESENTER:

Applicant: Michael Novak & James Johnston

ITEM NUMBER:

SUMMARY:

Application proposes subdividing property into 3 lots on a cul-de-sac.
The property is located at 80 Bedford Street, Lexington, MA also known as Map 57, Lot 81 in the RS (One Family Dwelling) and VO (Village Overlay) zoning districts.
Application materials may be viewed at https://lexingtonma.portal.opengov.com/records/102009
The existing property contains a residential home and a garage with a finished upper story. Both structures are on Lexington's Comprehensive Cultural and Historical Inventory and are subject to a demolition delay pursuant to § 19 of the Code of Lexington. Additionally, condition #8 refers to the section in the Board's Subdivision Regulations that requires all new roads to be at least 125 ft. from nearby intersections. This will need to be shown on the definitive subdivision submission because the intersection with Lois Lane may be within that, which means a waiver from the Board may be required.

SUGGESTED MOTION:

Staff recommends approval with conditions to be included in a definitive subdivision submission.

Move to approve the preliminary subdivision plan for 80 Bedford Street as outlined in the draft approval with conditions prepared by staff.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

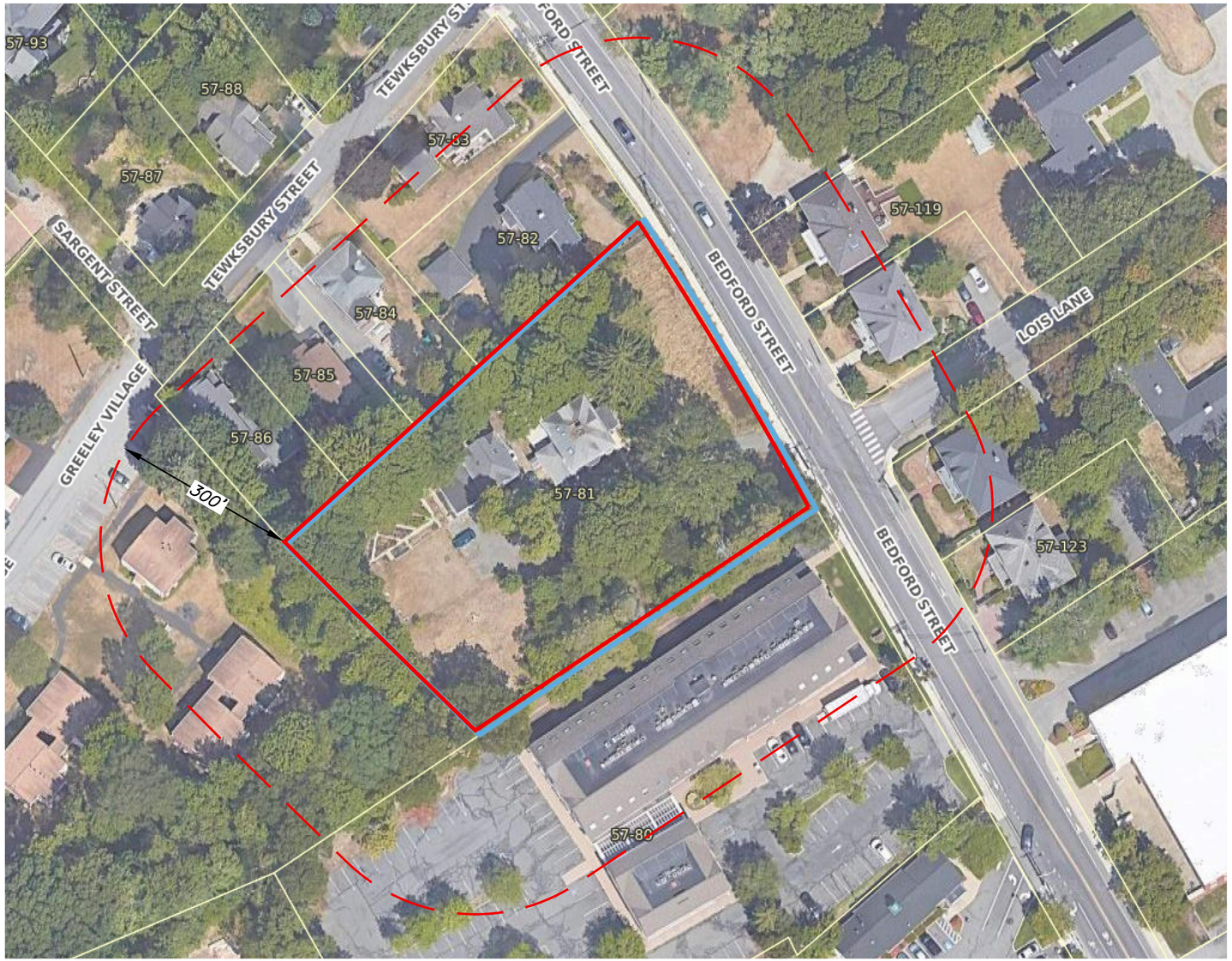
ATTACHMENTS:

	Description	Type
🗋	Preliminary Subdivision Plan - 80 Bedford Street	Cover Memo

80 BEDFORD STREET
ASSESSORS MAP 57 LOT 81
PRELIMINARY SUBDIVISION PLAN
LOCATED IN LEXINGTON, MA
FEBRUARY 28, 2025

NOTES:

1. THE INFORMATION DEPICTED ON THIS PLAN HAS BEEN COMPILED FROM THE TOWN OF LEXINGTON GIS SYSTEM
2. LAND USE WITHIN 300 FEET OF THE SUBJECT PROPERTY CONSISTS OF A MIX OF SINGLE FAMILY DWELLINGS, AN APARTMENT COMPLEX AND COMMERCIAL USE



LOCUS CONTEXT MAP
(SCALE 1"=100')

PREPARED BY:

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50596
REGISTERED PROFESSIONAL ENGINEER

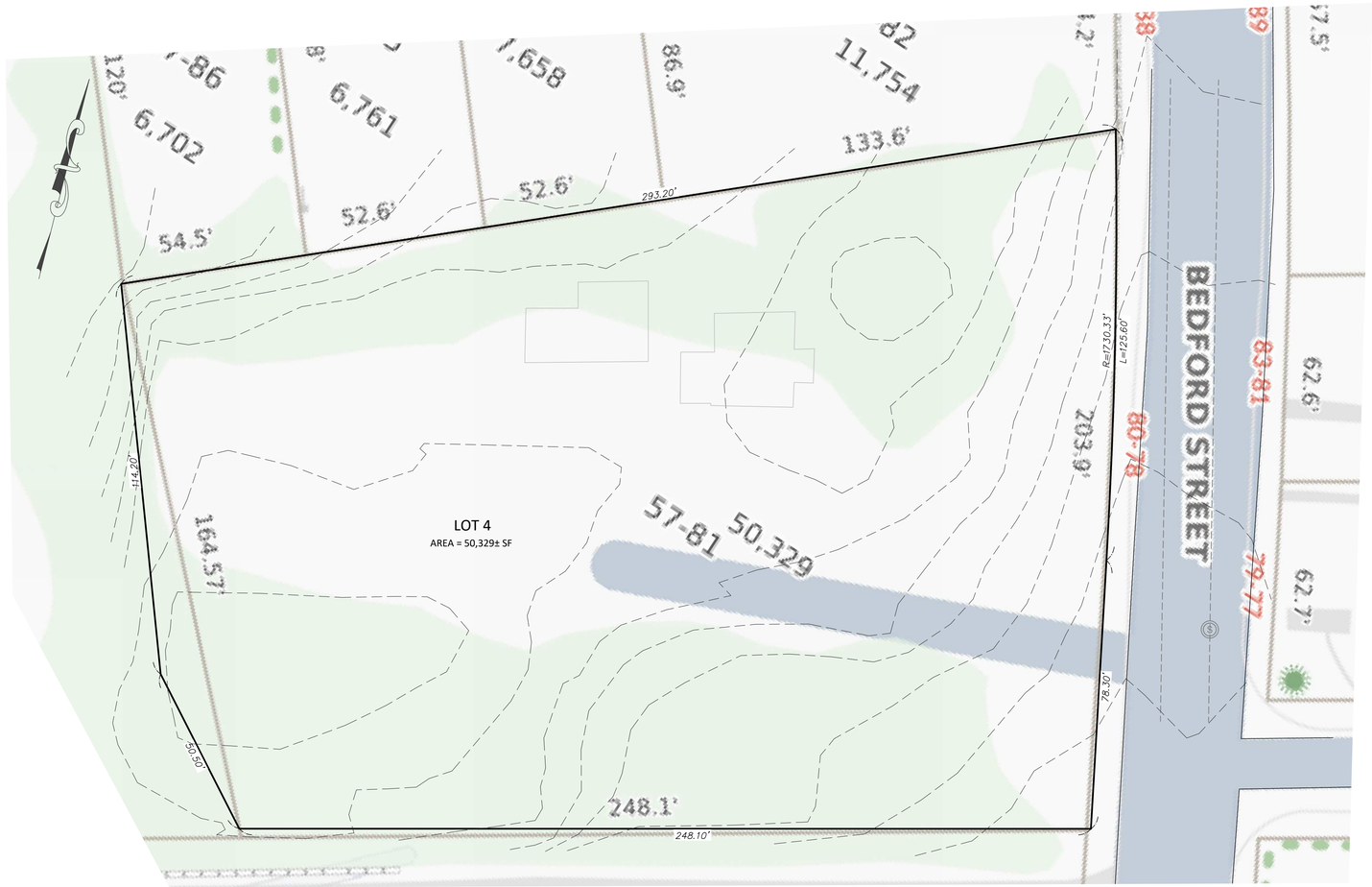
SHEET INDEX

RECORD OWNER:

JAMES C JOHNSTON TRUST
80 BEDFORD STREET
LEXINGTON, MA 02420

NOTES:

1. THIS PLAN IS BASED ON A LEXINGTON GIS AND RECORD PLANS.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS ZONING DISTRICT.
3. THE SUBJECT PROPERTY IS DEPICTED AS LOT 81 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 57.
4. 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.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.



20 0 10 20 40

GRAPHIC SCALE IN FEET

TABLE OF DIMENSIONAL REQUIREMENTS

ITEM	REQUIREMENT	
	ZONE: RS	ZONE: VO (VILLAGE OVERLAY)
MIN LOT AREA	15,500 S.F.	DOES NOT APPLY
MIN FRONTAGE	125'	20'
MIN FRONT YARD	30'	0' or 15'
MIN SIDE YARD	15'	7.5' - 15'
MIN REAR YARD	15'	15'

REFERENCES :

PLAN AT END OF RECORD BOOK 4078

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

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
CHECKED BY: MJN
DATE: 2-26-2025

REVISIONS

DATE	BY	DESCRIPTION

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

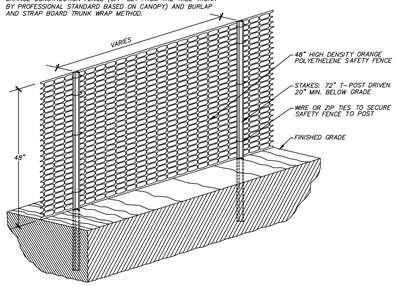
PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

EXISTING CONDITIONS PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C - 1

NOTE:

1. EXISTING TREES TO BE SAVED SHALL BE PROTECTED WITH ORANGE CONSTRUCTION FENCE (OFF-SET FROM THE TREE TRUNK BY PROFESSIONAL STANDARD BASED ON CANOPY) AND BURLAP AND STRAP BOARD TRUNK WRAP METHOD.



CONSTRUCTION FENCE/TREE PROTECTION
(NOT TO SCALE)

PHASE I CONSTRUCTION SEQUENCE

1. INSTALL ALL EROSIONS CONTROL MEASURES AS REQUIRED.
2. MEET WITH LEXINGTON PLANNING STAFF, SITE CONTRACTOR, AND EROSION CONTROL MONITOR AT PRE-CONSTRUCTION MEETING TO REVIEW EROSION CONTROL MEASURES AND SITE PLAN REVIEW CONDITIONS.
3. INSTALL TEMPORARY, HIGH VISIBILITY, ORANGE CONSTRUCTION FENCING AROUND ENTIRE PROPERTY TO DELINEATE WORK AREA. TEMPORARY CONSTRUCTION FENCING WILL BE INSTALLED BEHIND EROSION CONTROL MEASURES TO ENSURE ADEQUATE ACCESS TO THE EROSION CONTROLS FOR INSPECTION, MAINTENANCE, AND REPAIR AS NEEDED FOR THE DURATION OF CONSTRUCTION.
4. REMOVE AND DISPOSE OF ALL TRASH AND DEBRIS FROM SITE.
5. REMOVE ALL SPECIFIED TREES AND STUMPS.
6. TEST REMAINING SOIL FOR CONTAMINANTS AND PLANTING SUITABILITY.
7. DRESS THE TEMPORARY STAGING AND PARKING AREAS ON SITE WITH CRUSHED STONE.

PHASE II CONSTRUCTION SEQUENCE

1. EXCAVATE BASEMENT AREAS TO BOTTOM OF FOOTING. STOCKPILE MATERIAL FOR BACKFILL AND HAUL REMAINDER OF MATERIAL OFF SITE.
2. FURNISH AND INSTALL BASEMENT FOOTINGS AND FOUNDATION WALLS.
3. WATERPROOF, INSULATE AND BACKFILL BASEMENT FOOTINGS AND FOUNDATION WALLS
4. EXCAVATE FOR AND INSTALL PERIMETER FOOTINGS AND FOUNDATION FROST WALLS AND INTERIOR FOOTINGS. WATERPROOF, INSULATE AND BACKFILL THESE AREAS.
5. EXCAVATE AND BACKFILL ALL NECESSARY TRENCHES IN ORDER TO FURNISH AND INSTALL ALL UNDERGROUND PLUMBING, SECONDARY ELECTRICAL, ETC.
6. EXCAVATE FOR AND CONSTRUCT INFILTRATION SYSTEM(S).
7. FROM THIS POINT ON, THE VERTICAL CONSTRUCTION CONTINUES IN THE SAME CONVENTIONAL MANNER AS ANY MAJOR URBAN DEVELOPMENT PROJECT.

PHASE III CONSTRUCTION SEQUENCE

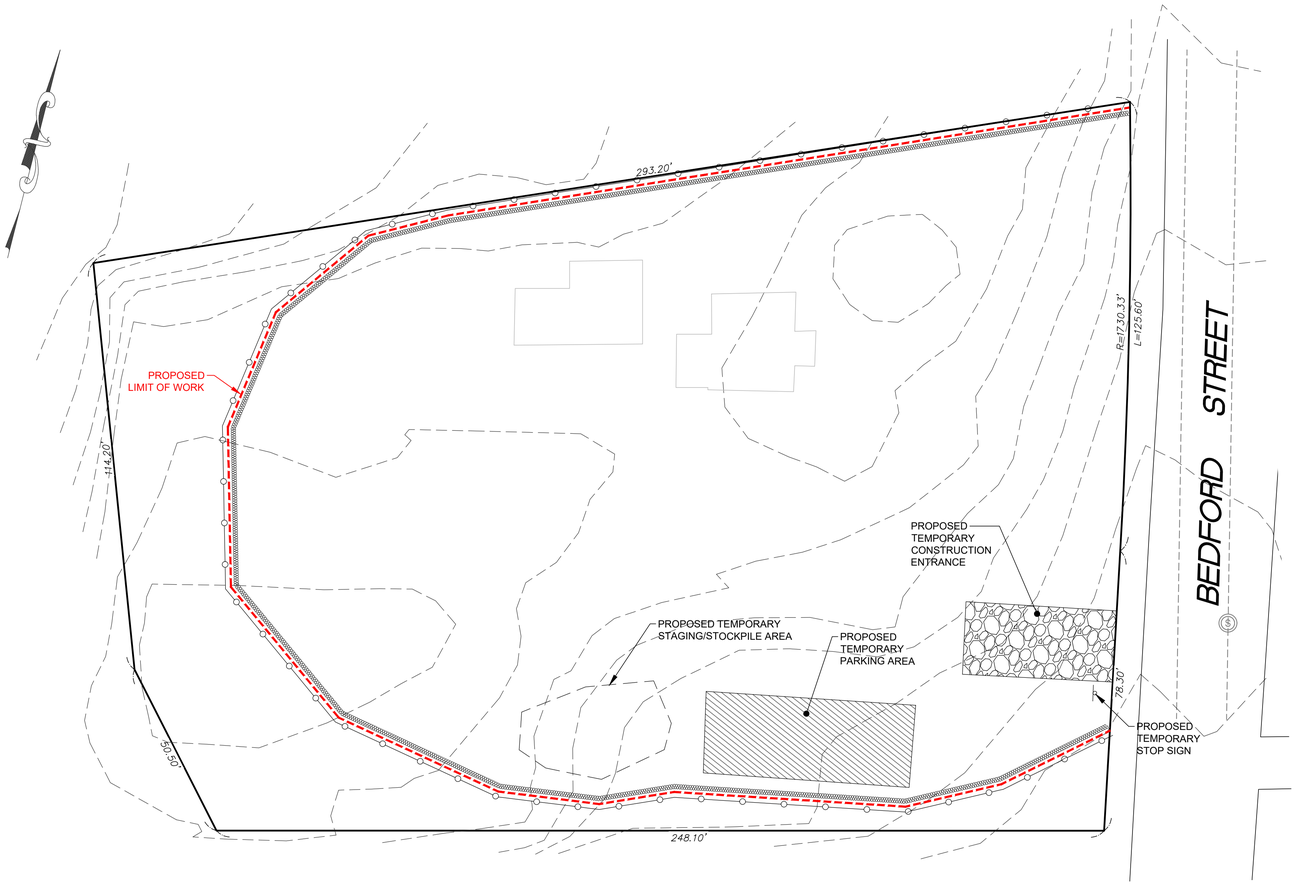
1. TILL SUBSOIL OR SCARIFY WITH EXCAVATOR BUCKET TEETH TO ENSURE FRIABLE SOIL PLANTING MEDIUM BENEATH TOPSOIL
2. FURNISH AND SPREAD APPROVED TOPSOIL FROM SUB GRADE TO FINISH GRADE PER TOPSOIL SPECIFICATIONS ON APPROVED LANDSCAPE PLANS. TOPSOIL TO BE TESTED FOR LOAMY SAND TEXTURE AND 5-8% ORGANIC CONTENT
3. FURNISH, DELIVER AND INSTALL ALL PLANT MATERIAL PER APPROVED DESIGN DOCUMENTS. PROJECT WETLAND SCIENTIST AND/OR LANDSCAPE ARCHITECT SHALL INSPECT PLANTS PRIOR TO INSTALLATION, AND OVERSEE SITING AND INSTALLATION OF ALL PLANTS.
4. AT THE TIME OF INSTALLATION, ALL PLANTS TO RECEIVE A DEEP WATERING.
5. CLEANUP AND DEMOBILIZE.
6. UPON SUCCESSFUL SEED GERMINATION AND SOIL STABILIZATION, REMOVE EROSION CONTROLS.

CONSTRUCTION AND TRAFFIC MANAGEMENT LOGISTICS

1. SIDEWALKS ALONG BUILDING FRONTAGE TO BE CLOSED UNTIL VERTICAL CONSTRUCTION IS SUBSTANTIALLY COMPLETED.
2. PEDESTRIAN TRAFFIC WILL BE DIVERTED TO THE EASTERN SIDE OF BEDFORD ST.
3. FURNISH AND INSTALL ROADWAY MARKINGS DEPICTING THE LIMITS OF THE SIDEWALKS ACROSS BEDFORD ST.

ADDITIONAL CONSTRUCTION NOTES:

- TRASH REMOVAL: THE 30 YARD DUMPSTER THAT IS REQUIRED FOR GENERAL CONSTRUCTION WASTE IS APPROXIMATELY 22' X 8'. IT WILL BE SCREENED BY SIX FOOT TALL TEMPORARY FENCING AND SCRIM.
- TEMPORARY RESTROOM FACILITIES: TEMPORARY RESTROOM FACILITIES WILL BE LOCATED BEHIND THE DUMSTER AREA WITHIN THE CONSTRUCTION ZONE SO THAT THEY WILL BE SCREENED FROM THE ROAD, THERE WILL BE A TOTAL OF TWO TO FOUR RESTROOM COMPARTMENTS REQUIRED FOR THE PROJECT DURATION.
- SNOW MANAGEMENT: DURING CONSTRUCTION SNOW WILL BE REMOVED IN ITS ENTIRETY ON THE CONSTRUCTION SIDE OF THE FENCE BY THE GENERAL CONTRACTOR AND HAULED OFF SITE AS REQUIRED. THE TOWN OF LEXINGTON WILL REMOVE SNOW ON THE PUBLIC SIDE OF THE FENCE AS IT NORMALLY WOULD. ANY RESIDUAL SNOW THAT MAY BE IN CONTACT WITH THE PUBLIC SIDE OF THE TEMPORARY FENCING WILL BE REMOVED BY THE GENERAL CONTRACTOR.
- ONCE INFILTRATION SYSTEMS ARE IN PLACE NO PARKING OR MATERIAL STORAGE IS PERMITTED ABOVE THEM.
- NO STORMWATER RUNOFF SHOULD BE DISCHARGED TO THE ON-SITE STORMWATER MANAGEMENT SYSTEM UNTIL THE SITE IF FULLY STABILIZED; WITH THE EXCEPTION OF ROOF LEADERS THAT CAN BE CONNECTED ONCE ABLE TO BE INSTALLED.
- THE ON-SITE INFILTRATION SHOULD BE BLOCKED FROM VEHICLE TRAFFIC DURING CONSTRUCTION UNTIL THE SITE IS FULLY STABILIZED.
- SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORK DAY. SIDE SLOPES NOT TO EXCEED 2:1. 12" DIAMETER (MINIMUM) FILTERMITT SHALL BE INSTALLED AROUND EACH STOCKPILE
- NO ONSITE REFUELING OF CONSTRUCTION VEHICLES OR EQUIPMENT.
- DUST CONTROL LIMITED TO POTABLE WATER. CALCIUM CHLORIDE SHALL NOT BE USED FOR DUST CONTROL.
- SEGMENTS OF BEDFORD ST ON WHICH ANY SEDIMENT IS DEPOSITED SHALL BE SWEPT WITHIN 24 HOURS OR MORE FREQUENTLY AS REQUIRED OR DIRECTED BY TOWN STAFF.
- ANY SEDIMENT OR DEBRIS DISCHARGED TO ANY TOWN DRAINAGE STRUCTURE OR DRAINLINE SHALL BE REMOVED WITHIN 24 HOURS.



LEGEND	DESCRIPTION
	PROPOSED LIMIT OF WORK LINE
	PROPOSED FILTERMITT
	PROPOSED TEMPORARY CONSTRUCTION ENTRANCE
	PROPOSED TEMPORARY CONSTRUCTION PARKING
	PROPOSED TEMPORARY CONSTRUCTION FENCING

20 0 10 20 40
GRAPHIC SCALE IN FEET

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

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
CHECKED BY: MJN
DATE: 2-26-2025

REVISIONS

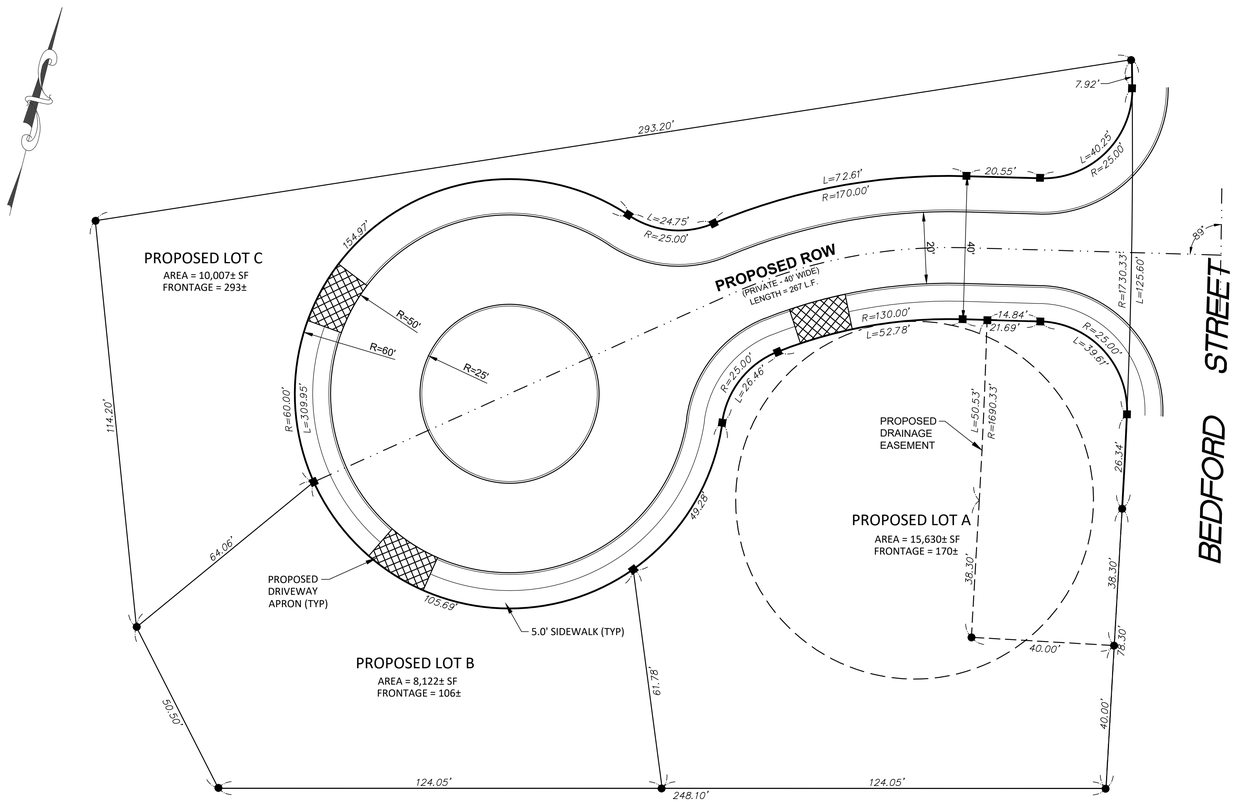
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50698
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

CONSTRUCTION MANAGEMENT PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C - 2



20 0 10 20 40

GRAPHIC SCALE IN FEET

NOTES:

1. THIS PLAN IS BASED ON A LEXINGTON GIS AND RECORD PLANS.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS ZONING DISTRICT.
3. THE SUBJECT PROPERTY IS DEPICTED AS LOT 81 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 57.
4. 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.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.

TABLE OF DIMENSIONAL REQUIREMENTS

ITEM	REQUIREMENT	
	ZONE: RS	ZONE: VO (VILLAGE OVERLAY)
MIN LOT AREA	15,500 S.F.	DOES NOT APPLY
MIN FRONTAGE	125'	20'
MIN FRONT YARD	30'	0' or 15'
MIN SIDE YARD	15'	7.5' - 15'
MIN REAR YARD	15'	15'

REFERENCES :

PLAN AT END OF RECORD BOOK 4078

LEGEND:

	APPROXIMATE EXISTING PROPERTY LINES
	PROOF CIRCLE
	PROPOSED CENTERLINE
R=	RADIUS
TYP	TYPICAL
PEOP	PROPOSED EDGE OF PAVEMENT
SF	SQUARE FEET
ROW	RIGHT OF WAY
	PROPOSED PAVEMENT
	PROPOSED DRIVEWAY APRON
	PROPOSED STONE BOUND
	PROPOSED IRON ROD

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-26-2025
CHECKED BY: MJN

REVISIONS

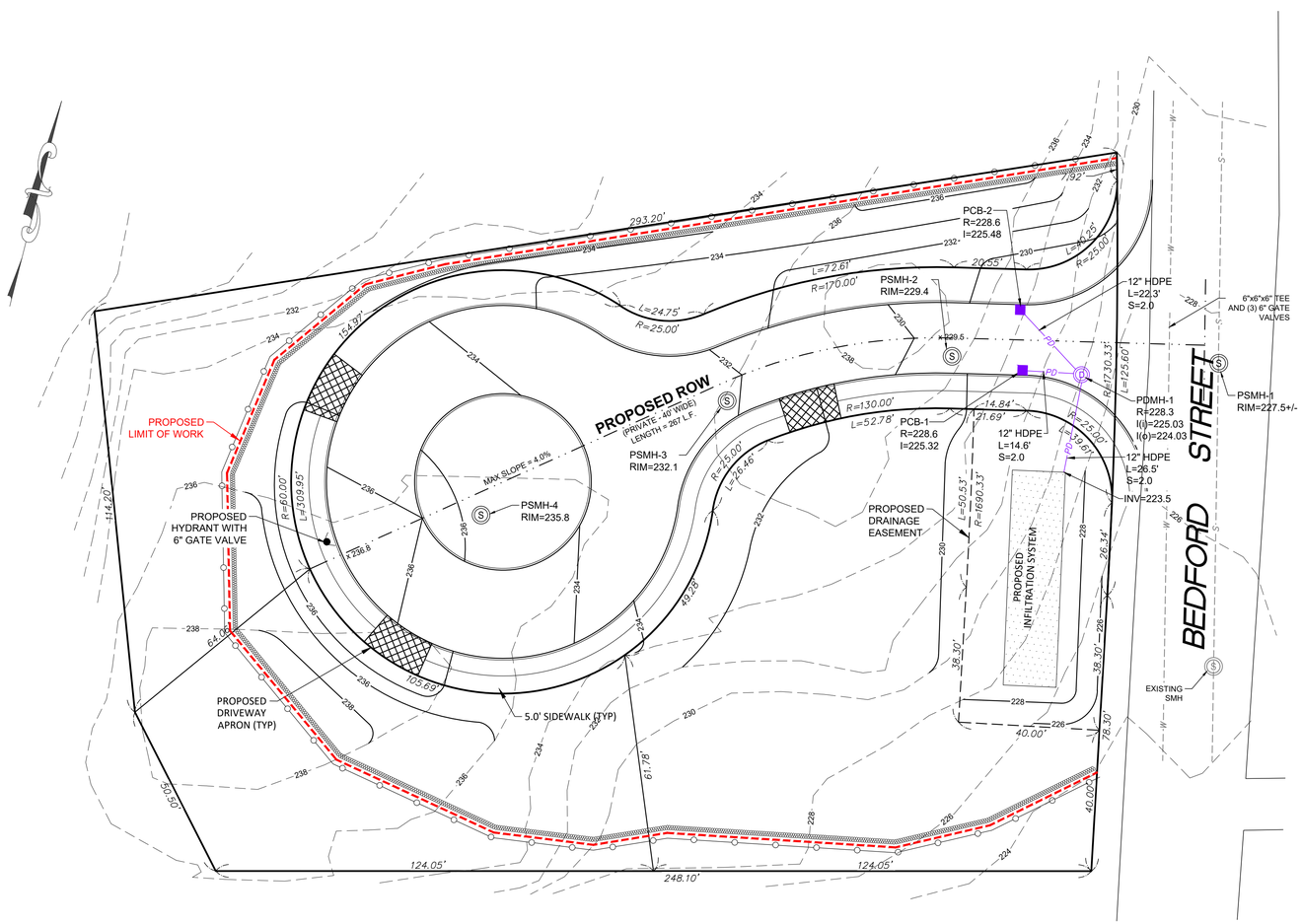
DATE	BY	DESCRIPTION

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

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

PRELIMINARY SUBDIVISION PLAN
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C - 3



NOTES:

1. THIS PLAN IS BASED ON A LEXINGTON GIS AND RECORD PLANS.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS ZONING DISTRICT.
3. THE SUBJECT PROPERTY IS DEPICTED AS LOT 81 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 57.
4. 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.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.

TABLE OF DIMENSIONAL REQUIREMENTS

ITEM	REQUIREMENT	
	ZONE: RS	ZONE: VO (VILLAGE OVERLAY)
MIN LOT AREA	15,500 S.F.	DOES NOT APPLY
MIN FRONTAGE	125'	20'
MIN FRONT YARD	30'	0' or 15'
MIN SIDE YARD	15'	7.5' - 15'
MIN REAR YARD	15'	15'

LEGEND	DESCRIPTION
PEOP	PROPOSED EDGE OF PAVEMENT
PVGC	PROPOSED VERTICAL GRANITE CURB
■	PROPOSED CATCH BASIN (PCB)
178	PROPOSED CONTOUR
Ⓓ	PROPOSED DRAIN MANHOLE (PDMH)
	PROPOSED FIRE HYDRANT
	PROPOSED FILTERMITT
	PROPOSED LIMIT OF WORK LINE
Ⓢ	PROPOSED SEWER MANHOLE (PSMH)

20 0 10 20 40
GRAPHIC SCALE IN FEET

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

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-26-2025
CHECKED BY: MJN

REVISIONS

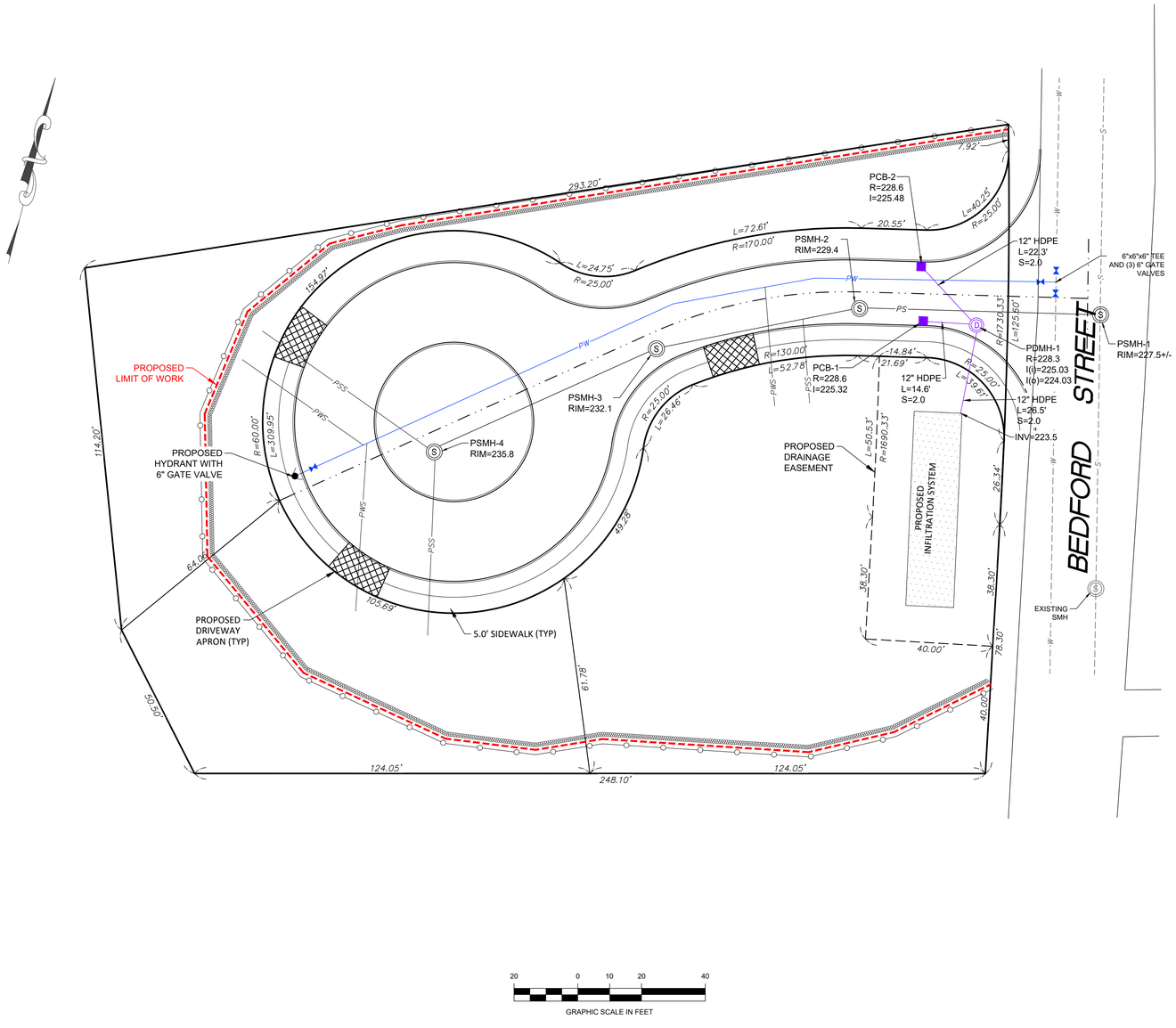
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
No. 50686
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

SITE PLAN - GRADING & DRAINAGE
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C - 4



20 0 10 20 40

GRAPHIC SCALE IN FEET

NOTES:

1. THIS PLAN IS BASED ON A LEXINGTON GIS AND RECORD PLANS.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE RS ZONING DISTRICT.
3. THE SUBJECT PROPERTY IS DEPICTED AS LOT 81 ON THE TOWN OF LEXINGTON ASSESSOR'S MAP 57.
4. 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.
5. 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 6" DI, UNLESS OTHERWISE NOTED.
4. ALL PROPOSED WATER SERVICES SHALL BE 1.5" COPPER, UNLESS OTHERWISE NOTED.
5. SEPARATION OF SEWER AND WATER LINES SHALL BE 18 INCHES (18") VERTICALLY OR 10 FEET (10') HORIZONTALLY, IF THIS CANNOT BE ACHIEVED THE SEWER SHALL BE INCASED IN CONCRETE.
6. ALL STORM DRAIN MAINS AND LATERALS SHALL BE 12" SCHEDULE 40 PVC. (EXCEPT ROOF AND YARD DRAIN CONNECTIONS WHICH SHALL BE 6" SCHEDULE 40 PVC OR APPROVED EQUAL)
7. ALL CABLE/POWER UTILITIES TO BE INSTALLED UNDERGROUND ONSITE

LEGEND	DESCRIPTION
PEOP	PROPOSED EDGE OF PAVEMENT
PVGC	PROPOSED VERTICAL GRANITE CURB
■	PROPOSED CATCH BASIN (PCB)
Ⓓ	PROPOSED DRAIN MANHOLE (PDMH)
PD	PROPOSED DRAIN LINE
PS	PROPOSED SEWER LINE
PWS	PROPOSED WATER SERVICE
PSS	PROPOSED SEWER SERVICE
	PROPOSED FIRE HYDRANT
Ⓢ	PROPOSED SEWER MANHOLE (PSMH)
PW	PROPOSED WATER LINE

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

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
CHECKED BY: MJN
DATE: 2-26-2025

REVISIONS

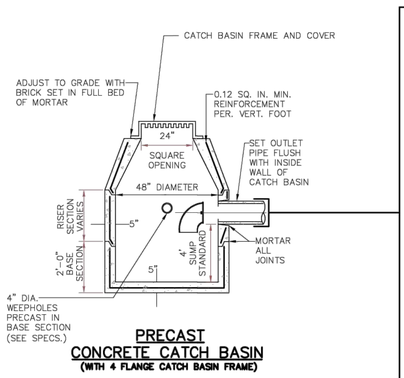
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 36096
REGISTERED PROFESSIONAL ENGINEER

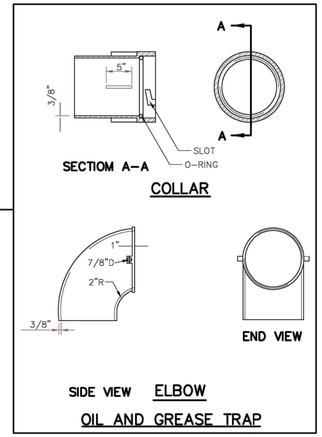
PATRIOT Engineering
PO BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

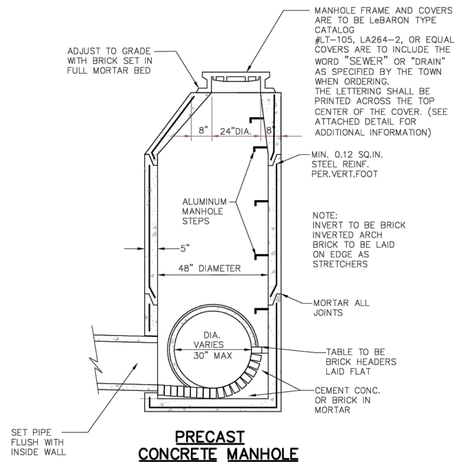
SITE PLAN - UTILITY
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C - 5

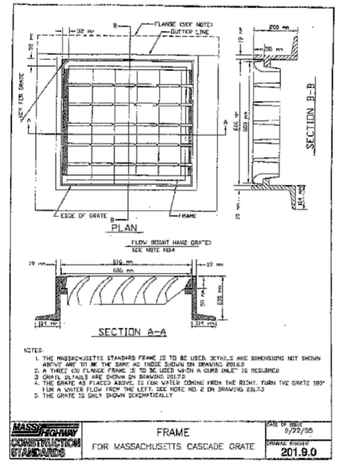


PRECAST CONCRETE CATCH BASIN
(WITH 4 FLANGE CATCH BASIN FRAME)

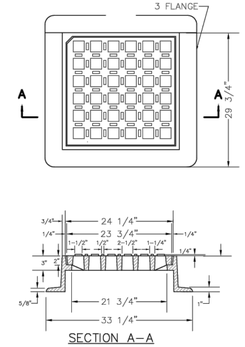




PRECAST CONCRETE MANHOLE



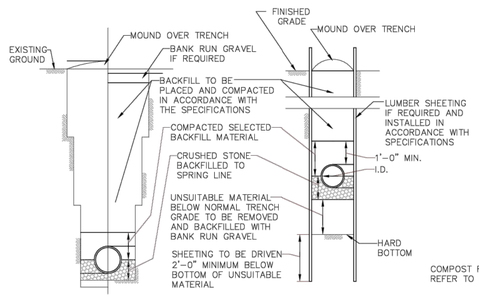
CATCH BASIN FRAME AND GRATE
N.T.S.



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

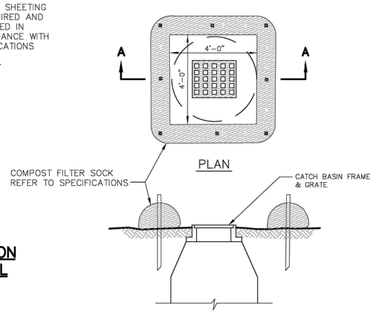
CATCH BASIN FRAME AND GRATE
N.T.S.

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

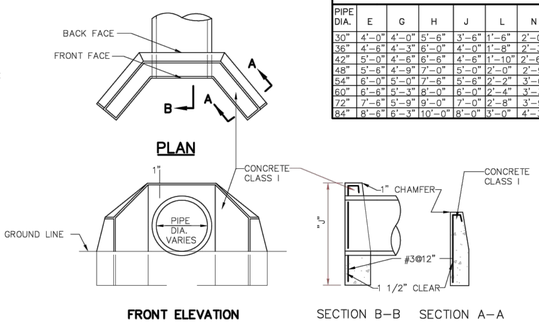


TYPICAL TRENCH SECTION STABLE GROUND

TYPICAL TRENCH SECTION UNSUITABLE MATERIAL

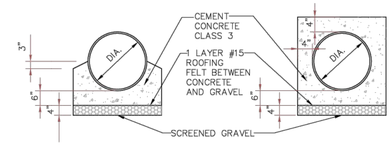


BALED HAY SILT BARRIER AROUND CATCH BASIN
N.T.S.



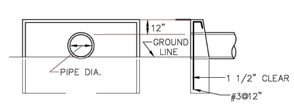
CONCRETE HEADWALL DETAILS FOR 30" TO 84" PIPE CULVERTS

1 1/2:1 & 2:1 SLOPES								1 1/2 SLOPES			2:1 SLOPES		
PIPE DIA.	E	G	H	J	L	N	P	F	CU. YDS.	LBS.	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"	3.39	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"	7.86	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



DETAIL CONCRETE CRADLE

DETAIL CONCRETE ENCASEMENT



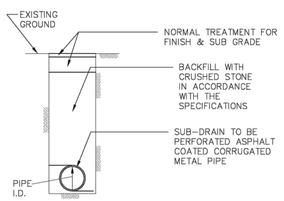
FRONT ELEVATION **END ELEVATION**

CONCRETE HEADWALL DETAILS FOR 8" TO 30" PIPE CULVERTS

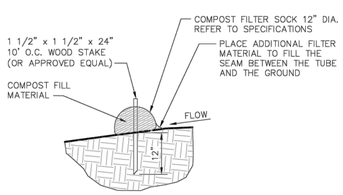
PIPE DIA.	1 1/2:1 SLOPE			2:1 SLOPE		
	L	CU.YDS.	LBS.	L	CU.YDS.	LBS.
8"	4'-2"	0.77	15	5'-10"	1.08	21
10"	4'-10"	0.92	20	6'-8"	1.28	23
12"	5'-6"	1.08	21	7'-6"	1.49	29
15"	6'-6"	1.34	24	8'-9"	1.82	32
18"	7'-6"	1.61	30	10'-0"	2.18	39
21"	8'-8"	1.95	34	11'-6"	2.62	43
24"	9'-3"	2.16	35	12'-6"	2.97	50
30"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

NOTE:
SEDIMENT TRAPS TO BE PLACED IN UPLAND LOCATIONS ONLY

SEDIMENT CONTROL TRAP
N.T.S.

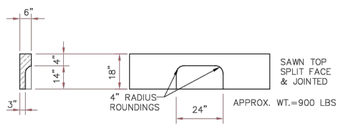


SUB-DRAIN DETAIL



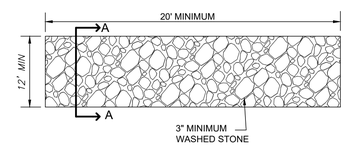
NOTE: EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH ORDER OF CONDITIONS.

SEDIMENTATION BARRIER

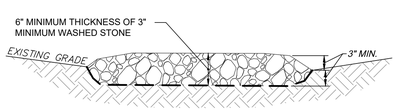


GRANITE CURB INLET DETAILS

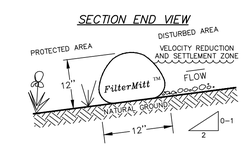
NOTES:
1. ALL CONCRETE CORNERS SHALL BE CHAMFERED
2. ALL CONCRETE SHALL BE 3000 PSI

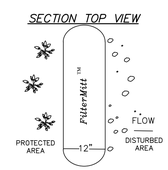


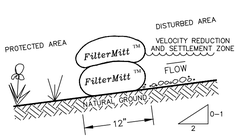
PLAN VIEW

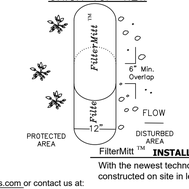


SECTION A-A
CONSTRUCTION ENTRANCE









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./f.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

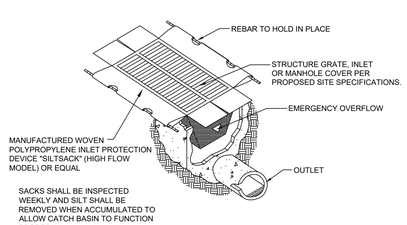
FILTERMITT 2:1 SLOPES OR LESS

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.



SACKS SHALL BE INSPECTED WEEKLY AND SILT SHALL BE REMOVED WHEN ACCUMULATED TO ALLOW CATCH BASIN TO FUNCTION PROPERLY

SILT SAC
(NOT TO SCALE)

ALL DETAILS ARE NOT TO SCALE

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
CHECKED BY: MJN
DATE: 2-26-2025

REVISIONS

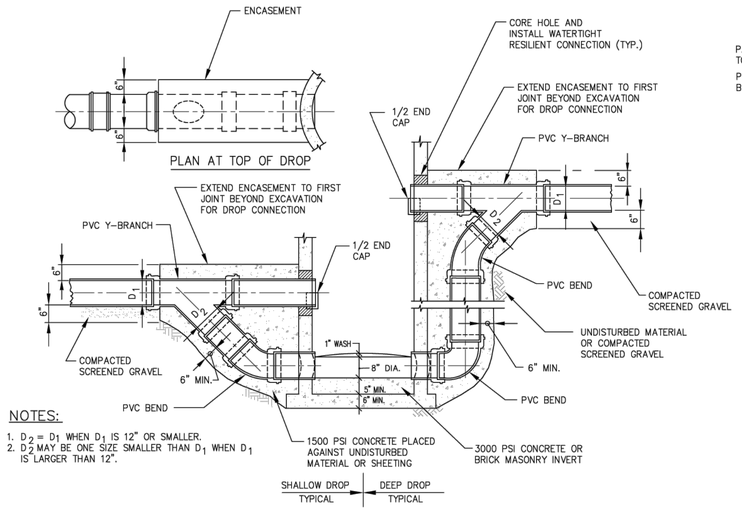
DATE	BY	DESCRIPTION

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

PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2854
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C-6.1

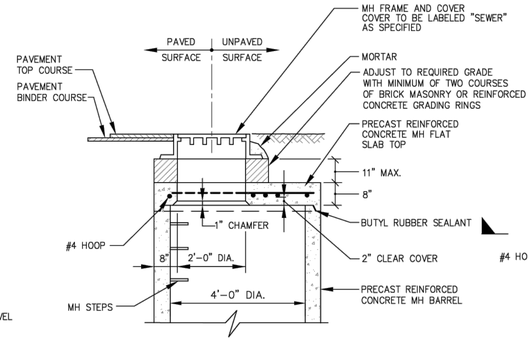


NOTES:

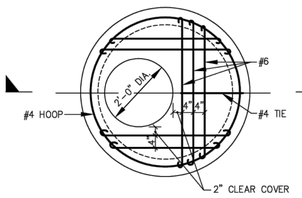
1. $D_2 = D_1$ WHEN D_1 IS 12" OR SMALLER.
2. D_2 MAY BE ONE SIZE SMALLER THAN D_1 WHEN D_1 IS LARGER THAN 12".

DROP INLETS FOR PVC PIPE SEWERS

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



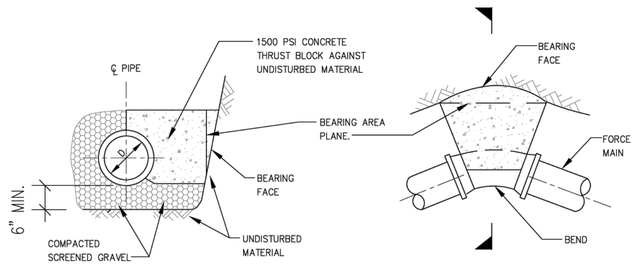
SECTION



PLAN OF PRECAST SLAB

PRECAST FLAT SLAB TOP FOR SHALLOW MANHOLE

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



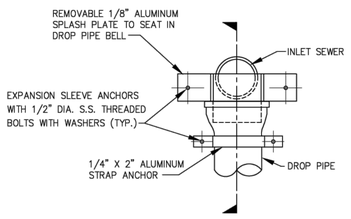
SECTION PLAN

NOTES:

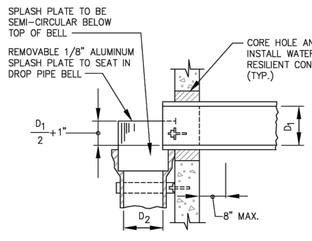
1. WHERE SO INDICATED ON PLANS, THE FORCE MAIN BENDS SHALL BE BACKED UP WITH A CONCRETE THRUST BLOCK BETWEEN THE PIPE AND UNDISTURBED MATERIAL.
2. REQUIRED BEARING AREA TO BE CALCULATED ON VERTICAL PLANE 90 DEG. TO RADIAL PLANE PASSING THROUGH MIDPOINT OF BEND.
3. MINIMUM BEARING AREA: 2.0 SQ.FT.
4.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

FORCE MAIN THRUST BLOCK

NOT TO SCALE
2-1.6.1 (REV. 03-15-95)

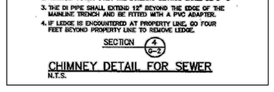


ELEVATION



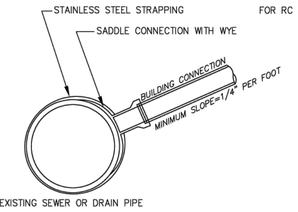
SECTION

ALUMINUM SPLASH PLATE DETAIL



TYPICAL CHIMNEY DETAIL

NO SCALE

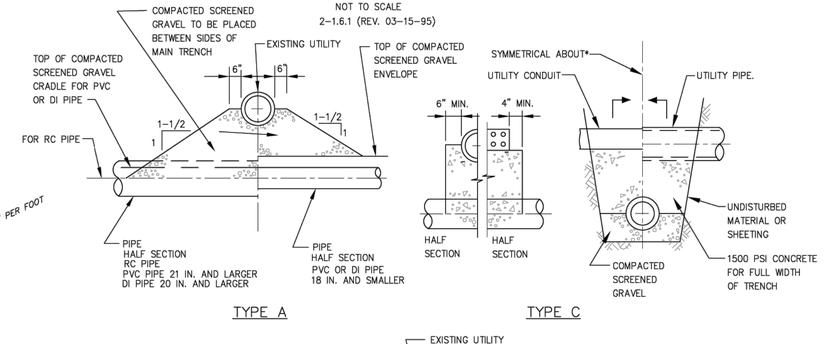


NOTES:

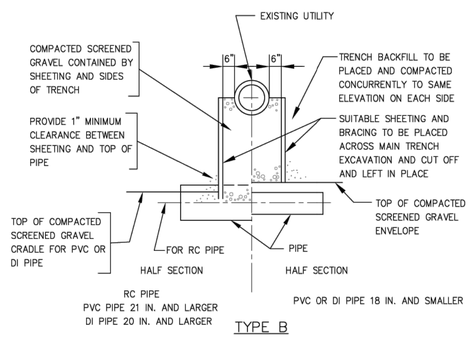
1. FULL PVC OR IRON SADDLE MAY BE USED TO CONNECT TO EXISTING PVC, CLAY, CONCRETE OR IRON PIPE.
2. SADDLES MUST HAVE RUBBER GASKETS AND SHALL BE TIGHTENED WITH STRAPS. SADDLES WILL NOT BE CEMENT ONTO THE PIPE.
3. FULL WYE CONNECTION FITTINGS MAY BE USED.
4. PIPE SHALL BE CUT TO CONFORM TO THE OPENING 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



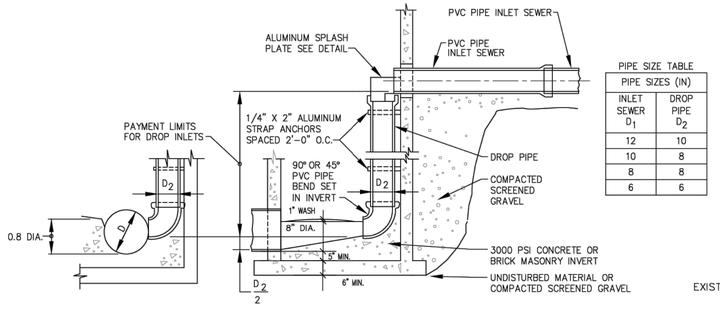
TYPE A TYPE C



TYPE B

TYPICAL SUPPORTS FOR UTILITIES

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



PIPE SIZE TABLE

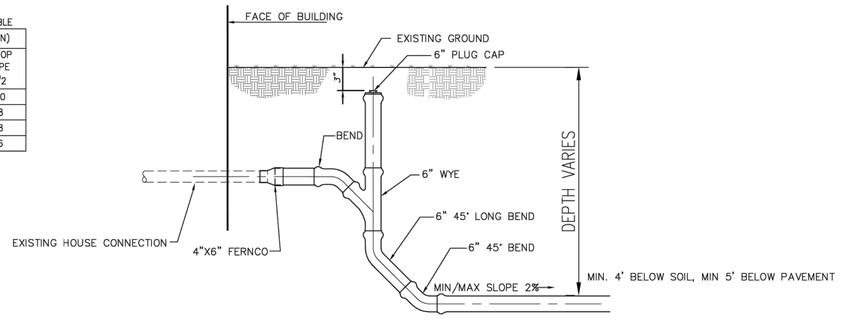
PIPE SIZES (IN)	
INLET SEWER D_1	DROP PIPE D_2
12	10
10	8
8	8
6	6

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

ALL DETAILS ARE NOT TO SCALE

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-26-2025
CHECKED BY: MJN

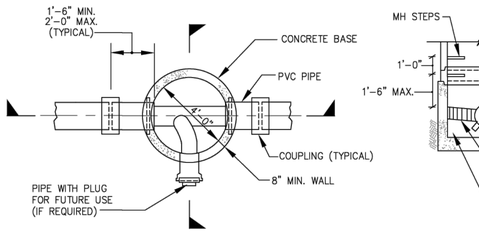
REVISIONS		
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50666
REGISTERED PROFESSIONAL ENGINEER

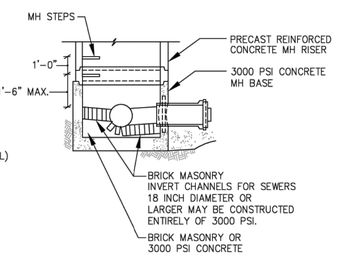
PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

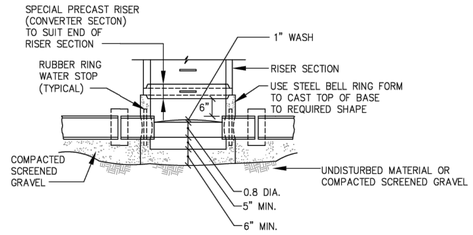
SHEET
C-6.2



PLAN



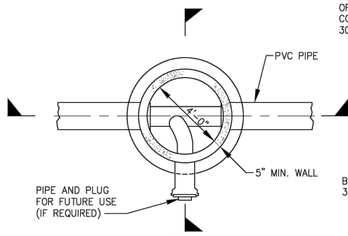
SECTION



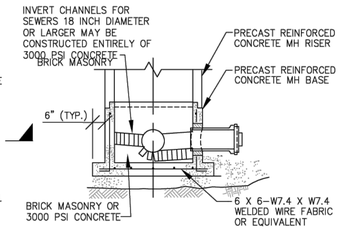
SECTION

CAST-IN-PLACE CONCRETE BASE FOR PVC SEWERS

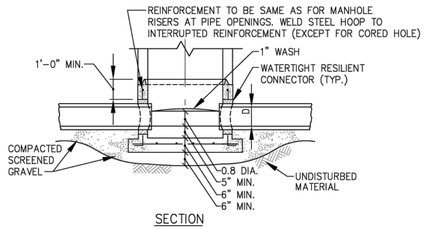
NOT TO SCALE
2-1.5.4 (REV. 03-15-95)



PLAN



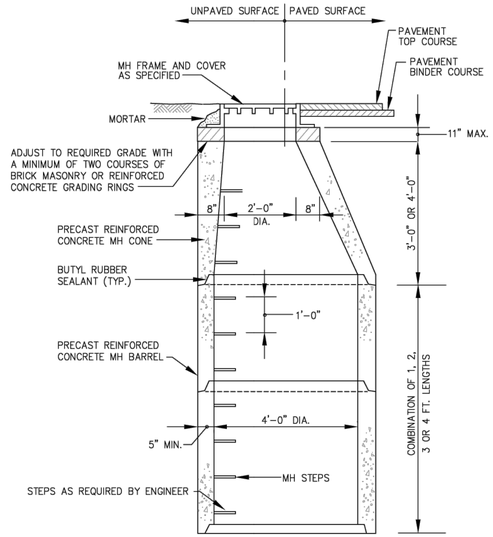
SECTION



SECTION

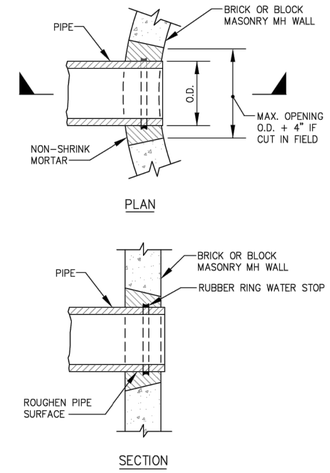
4'-0" PRECAST REINFORCED CONCRETE MANHOLE BASE FOR PVC SEWERS AND DRAINS

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)

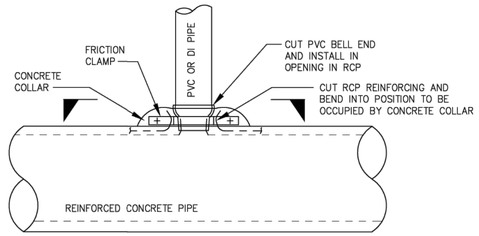


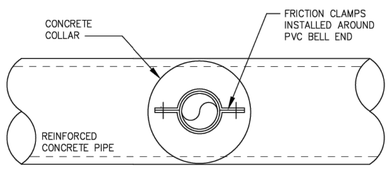
PLAN

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)

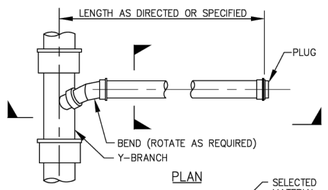




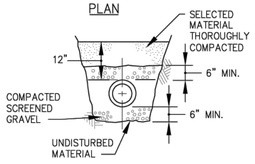
SECTION

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

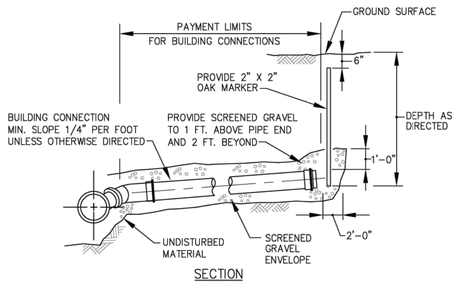
NTS
2-1.2.15 (REV. 08-17-95)



PLAN



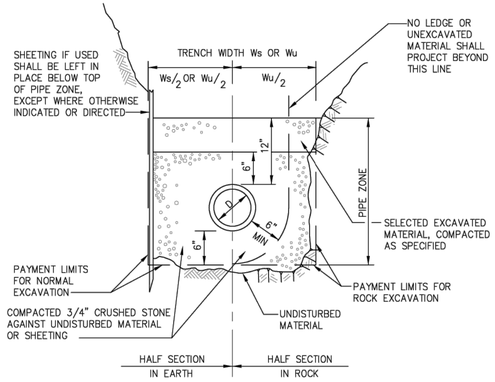
SECTION



SECTION

BUILDING CONNECTION FOR DI OR PVC PIPE

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

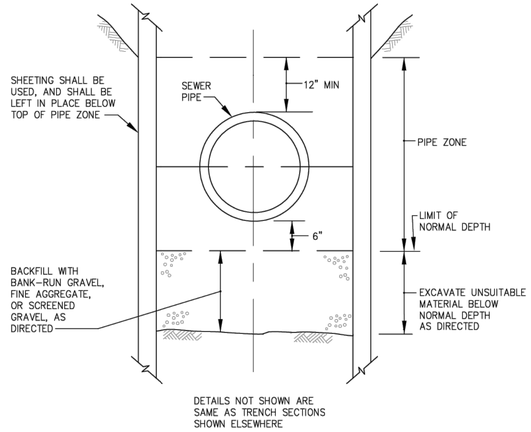


1. PIPE TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH Ws (SHEETED) OR Wu (UNSHEETED) ABOVE THE TOP OF PIPE ZONE.
2. TRENCHES SHALL NOT BE EXCAVATED BEYOND THE TRENCH WIDTH Wu BELOW THE TOP OF PIPE ZONE.
3. SHEETING MUST BE USED IF EXCAVATION AND BACKFILL, BELOW NORMAL DEPTH, IS REQUIRED. SHEETING 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)

ALL DETAILS ARE NOT TO SCALE

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
DATE: 2-26-2025
CHECKED BY: MJN

REVISIONS

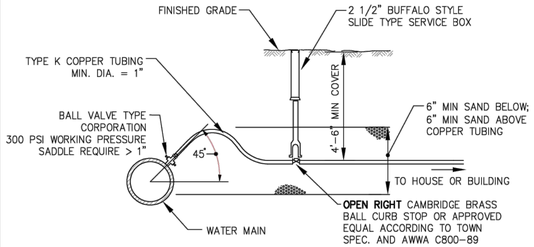
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50646
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2854
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C-6.3

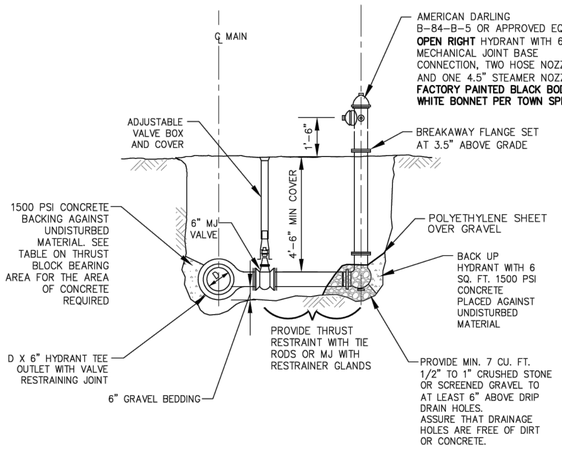


NOTES:

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.

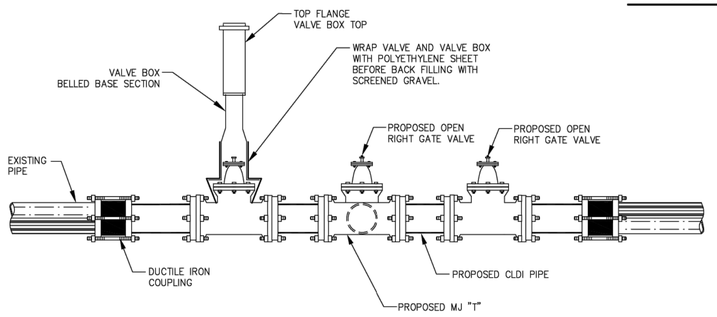
WATER SERVICE CONNECTION (1" MIN TO 2" MAX)

NTS



TYPICAL HYDRANT ASSEMBLY WITH DRAIN

NTS



ELEVATION

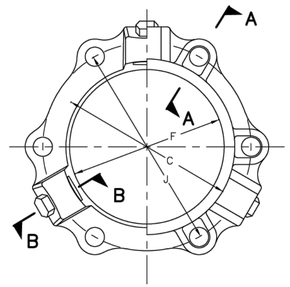
PLAN

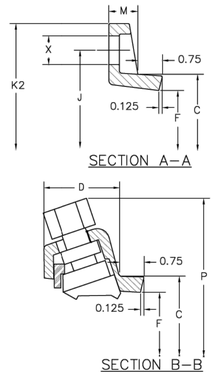
TRIPLE GATE CUT IN WATER MAIN CONNECTION

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.

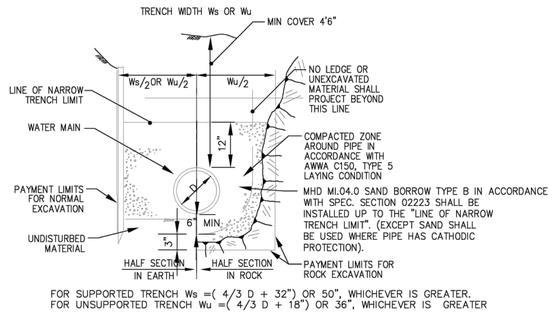




SERIES	PRESSURE RATING	C	D	F	J	M	X	NO. OF WEDGES	NO. OF BOLTS	P	P (W/ NUTS TWISTED OFF)	K2
1103	350	4.84	2.27	4.06	6.19	0.62	3/4	2	4	9.36	9.06	7.69
1104	350	5.92	2.27	4.90	7.50	0.75	7/8	2	4	10.20	9.90	9.12
1106	350	8.02	2.27	7.00	9.50	0.88	7/8	3	6	12.30	12.00	11.12
1108	350	10.17	2.31	9.15	11.75	1.00	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.



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

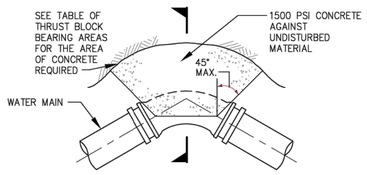
NOTES:

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.

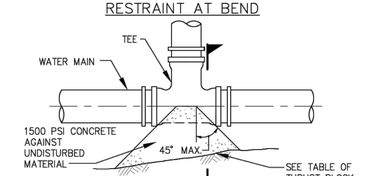
WATER MAIN TRENCH SECTION

NTS

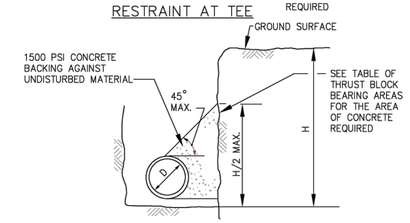
ALL DETAILS ARE NOT TO SCALE



PLAN OF THRUST RESTRAINT AT BEND



PLAN OF THRUST RESTRAINT AT TEE



THRUST BLOCK SECTION

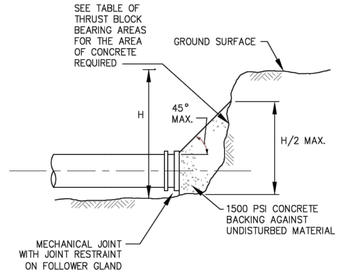
THRUST RESTRAINT AT FITTINGS

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 FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DATE: 2-26-2025
DRAWN BY: MVC
CHECKED BY: MJN

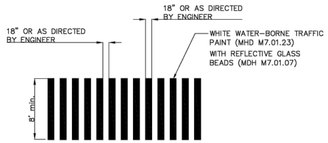
REVISIONS		
DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50686
REGISTERED PROFESSIONAL ENGINEER

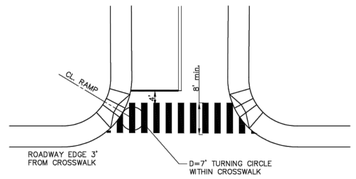
PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C-6.4



CROSSWALK ALL LOCATIONS



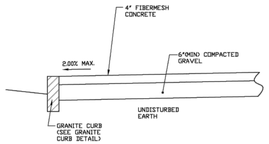
DETAIL~FOR CROSSWALK ALL LOCATIONS

NOTES:

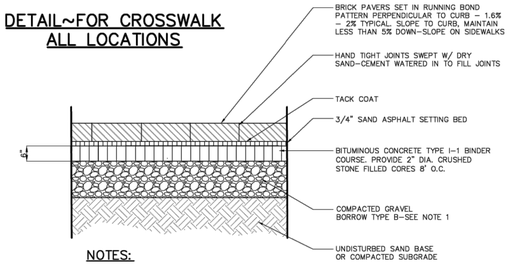
1. WHERE PROVIDED, STOP LINES SHOULD BE PLACED NO LESS THAN 4 FEET BEHIND AN ADJACENT CROSSWALK LINE.

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



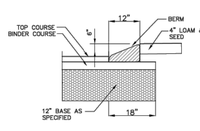
CONCRETE SIDEWALK



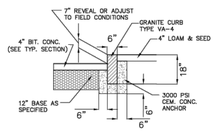
NOTES:

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.

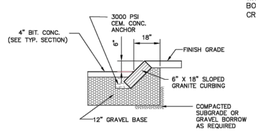
BRICK SIDEWALK PAVING



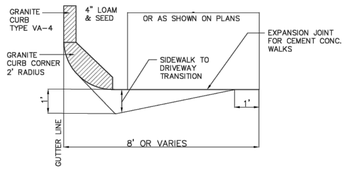
BIT. CONC. BERM



GRANITE CURB TYPE VA-4

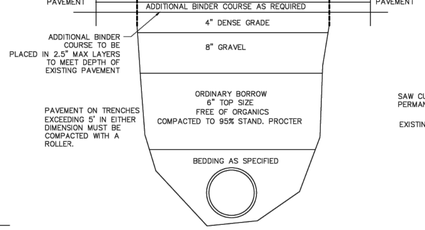


SLOPED GRANITE CURB DETAIL

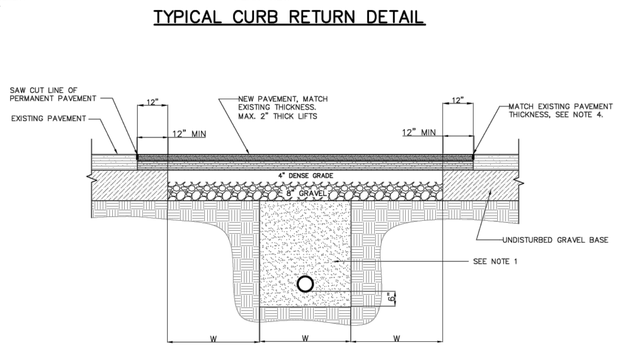


PLAN VIEW

TYPICAL CURB RETURN DETAIL



TRENCH RESTORATION



TYPICAL DETAIL TRENCH RESTORATION FOR MORATORIUM STREETS

NOTES:

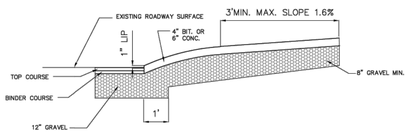
1. THE TRENCH EXCAVATION AROUND THE UTILITY WILL BE BACK FILLED WITH FLOWABLE FILL OR, IN CASE OF NATURAL GAS SERVICE, WITH GRAVEL COMPACTED TO 95% DENSITY.

2. NEW GRAVEL SUB BASE WILL BE INSTALLED AND COMPACTED TO 95% DENSITY.

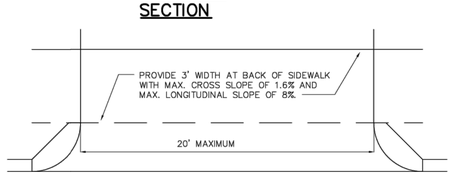
3. THE FINAL TRENCH PATCH WILL BE FROM CURB TO CURB, OR AS APPROVED BY THE ENGINEER.

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.



DRIVEWAY SECTION



ZONING OFFSETS

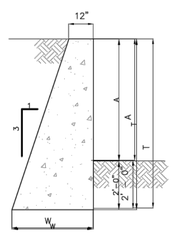
ZONING DISTRICT	DISTANCE FROM STREET INTERSECTION	DISTANCE FROM LOT LINE	WALL OF PRINCIPAL BUILDING
RS,RO,RT	25	5	5
RD,RM	25	8	5
CRO,CLO,CM	50	10	5
CRS,CS,CB,CN	10	NO REQUIREMENT	5

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



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		WIDTH	AREA	CU. YDS.
A	T	W	SQ. FT.	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

ALL DETAILS ARE NOT TO SCALE

NOT FOR CONSTRUCTION

80 BEDFORD ST
LEXINGTON, MA

DRAWN BY: MVC
CHECKED BY: MJN
DATE: 2-26-2025

REVISIONS

DATE	BY	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. NOVAK
CIVIL
No. 50686
REGISTERED PROFESSIONAL ENGINEER

PATRIOT Engineering
P.O. BOX 362
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2854
www.patriot-eng.com

DETAILS
LOCATED IN
LEXINGTON, MA
(MIDDLESEX COUNTY)
PREPARED FOR
JAMES & MARY JOHNSTON

SHEET
C-6.5

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

287 & 295 Waltham Street - Special Residential Development

PRESENTER:

Applicant: Iqbal Quadir, LexTerrace LLC

ITEM NUMBER:

SUMMARY:

Application is to construct five (5) buildings consisting of 15 total units; 3 buildings will contain 3 town-house style units each, and 2 buildings will contain 3 garden-style units each. Development also proposes a cul-de-sac, landscaping, and stormwater improvements.
The properties are located at 287 Waltham Street, 295 Waltham Street, and 9 Bushnell Drive, Lexington, MA also known as Map 41, Lot 8, 9, 10D in the RS (One Family Dwelling) zoning district.
Application materials may be viewed at (click files tab) https://lexingtonma.portal.opengov.com/records/100633
A staff memo and memo from the peer review consultant are attached.
The Applicant will present their project, staff and the peer review consultant will report on their memos, and board members will discuss and ask questions. The Chair will then open the hearing up to public comments. After public comments, the Applicant, board members, and staff may respond to public comments. At the end of the night, the Board will vote to continue the public hearing to a future meeting date to respond to requests.

SUGGESTED MOTION:

At the end of the evening's discussion, staff recommends the public hearing be continued to the Planning Board's May 28 meeting to allow time for the applicant to respond to staff comments, the peer review memo, board comments, and other items raised during the public hearing.

Move to continue the site plan review hearing for 287 & 295 Waltham Street to **Wednesday, May 28 at or after 6:00 pm on Zoom**.

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

ATTACHMENTS:

Description	Type
LexTerrace Proposed Plans	Cover Memo
Staff Memo 4.4.25	Cover Memo
Nitsch Peer Review Memo 4.4.25	Cover Memo

Do Not Scale Drawings

Lex Terrace Development

Lex Terrace Development

287 - 295 Waltham Street, Lexington, MA 02421

(Note: Colors in all renderings are computer generated. They may not exactly represent eventual building colors or texture. Additional information will be provided prior to building department approval.)

View Above: Thre Buildings with three townhouses each. The grading shown are tentative. For accurate grading information see site plan.

Summary:

Lex Terrace is a residential development in the heart of Lexington. It will provide fifteen apartments to a city that will benefit from much needed housing.

The development will have five separate buildings. Three of the buildings will have townhouses, with each building having three independent apartments. Two of the building units will be multifamily housing, with ground floor of each being handicap accessible.

Each townhouse unit will have a covered garage, an open air car parking lspace , space for two, covered, bicycles per townhouse, and a basement with a greenhouse and composting capability within each townhouse.

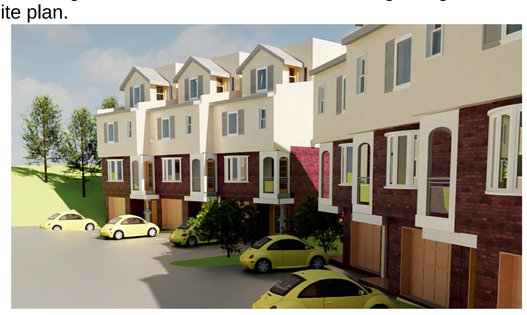
Othe provisions include guest parking spaces as well as provision for handicap parking.

The buildings are being built with energy efficiency and sustainability in mind, and in conformance with local and state building codes and statutes.

LEX Terrace **GFA Calculation**

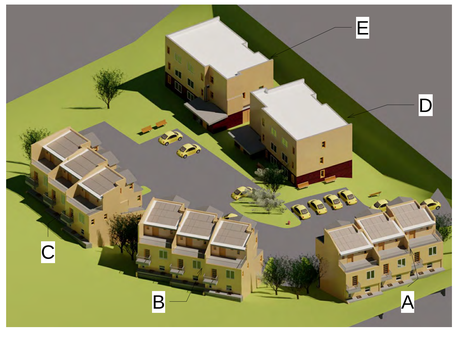
	Garage Level (sf)	First Floor (sf)	Second Floor (sf)	Third Floor (sf)	Total (sf)	Max Allowed* (sf)
Building A	1,583	1,953	2,042	1,129	6,707	7,030
Building B	1,583	1,953	2,042	1,129	6,707	7,030
Building C	1,583	1,953	2,042	1,129	6,707	7,030
Building D	-	1,786	1,539	1,539	4,864	7,030
Building E	-	1,786	1,539	1,539	4,864	7,030
				Total	29,849	31,400

Max Allowed * = By Lexington Zoning By-Laws



Other Views below

View of Building "A" - Front Perspective



Bird's Eye view of Five Buildings

Sheet List				
Sheet Number	Sheet Name	Sheet Issue Date	Revision #	Revision Date
A101	Cover Sheet	01/12/2025		
A102	Townhouse - Key Features	01/12/2025		
A103	Building - Townhouse Views	01/12/2025		
A104	Building - Multifamily Design	01/12/2025		
A105	Sections & GFA Calculation	01/12/2025		
A106	Building A - Garage & First	01/12/2025		
A107	Building A - Second & Third Floor	01/12/2025		
A108	Townhouse - Area Calculation	01/12/2025		
A109	Building B Garage & First Plan	01/12/2025		
A110	Building B Second & Third Floor	01/12/2025		
A111	Building B Area Plan	01/12/2025		
A112	Building "C" Garage & First Floor	01/12/2025		
A113	Building C - Second & Third Floor	01/12/2025		
A114	Building C Area Plan	01/12/2025		
A115	Building D - Floor Plan	01/12/2025		
A116	Building D - 3rd Floor & Area Plan	01/01/25		
A117	Building E - Floor Plan	01/12/2025		
A118	Building E - 3rd Floor & Area Plan	01/12/2025		
A120	Site Plan	01/12/2025		

Key Features:

Lex Terrace Development

- *Supplementing town's housing*
- *Nine single family housing units as townhouses*
- *Sustainable design*
- *Two multi-family buildings, with three apartments in each building*
- *Handicap Housing Provision in multi-family buildings*
- *Townhouse basements with composting and greenhouse potential*
- *Sustainable design*
- *Solar PV's on the roof to supplement grid electricity*
- *Facilities for car and bike parking*
- *Each townhouse with an enclosed Garage and additional on-site parking*
- *Permeable walkways, with barrier free access for mobility impaired*
- *Walking distance to town center*
- *Supports aging population looking to downsize while staying in town*
- *Attracts young professionals and families seeking affordability*
- *Close access to public transportation facilities*

Lex Terrace Development

287-295 Waltham Street, Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:

Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Cover Sheet

Project Number	ECO-135
Date	03/04/2025
Drawn By	NS
Checked By	JS

A101

Scale 1 1/2" = 1'-0"

3/3/2025 3:11:53 PM

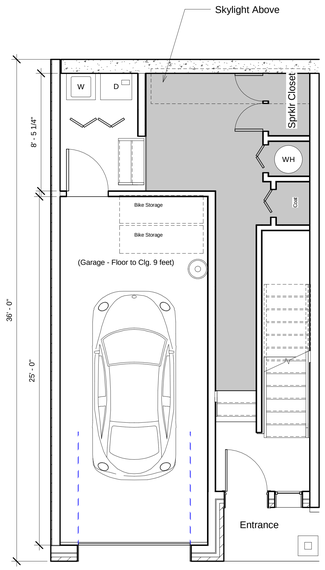
Do Not Scale Drawings

Lex Terrace Development

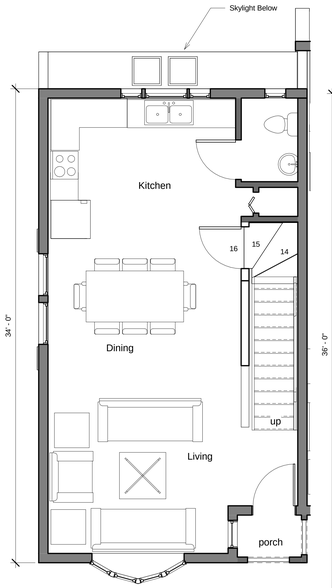
Townhouses

Single family and Multifamily Housing
Key Features

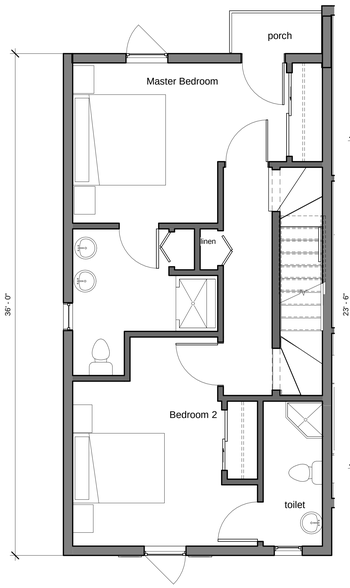
- *Nine single family housing units as townhouse development*
- *Sustainable design*
- *Two multi-family buildings, with three apartments in each*
- *Handicap Housing Provision in multi-family buildings*
- *Townhouse basements with composting and greenhouse potential*
- *Solar PV's on the roof to supplement grid electricity*
- *Facilities for car and bike parking*
- *Each townhouse with an enclosed Garage and additional on-site parking*
- *Exterior Walls: Base, from grade to sill level, with with veneer brick, on reinforced concrete foundation wall. Above sill level, fibrecement, hardi plank or equivalent, on wood frame structure. Fire resistant assembly. All walls exposed to elements R-40, including Basement. Party walls R-30, where not directly exposed to elements.*
- *Solar Hot water utilization for pre-warming water in electric hot water heaters, and potential use for passive heating .*
- *Possible use of geothermals for passive cooling and heating to reduce electricity use for heating and cooling.*
- *Battery powerpack, for storage of solar pv electricity, and to reduce use of grid electricity during peak hours.*



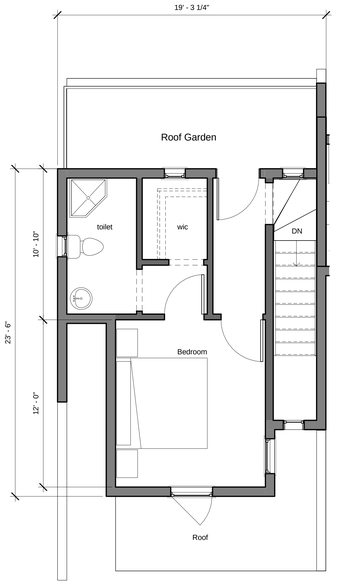
Building A
Individual Townhouse
Gatage Level



Building A
Individual Townhouse
First Floor

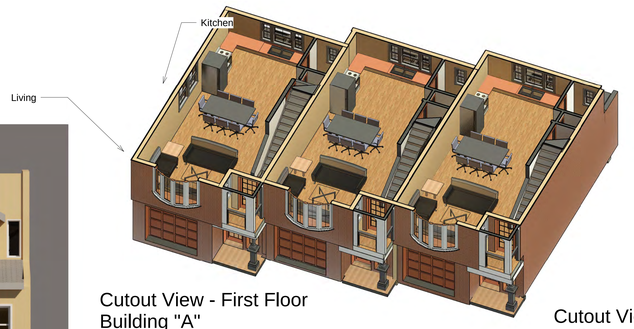


Building A
Individual Townhouse
Second Floor



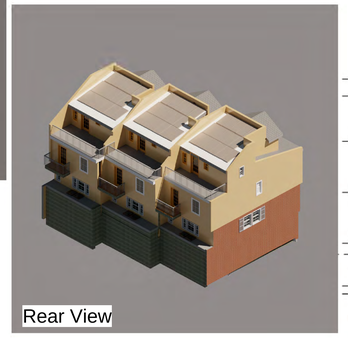
Building A
Individual Townhouse
Third Floor

Building "A" - Front View



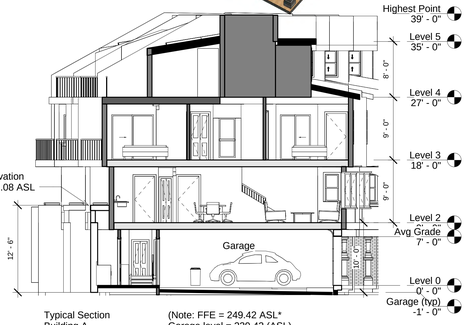
Cutout View - First Floor
Building "A"
Three Townhouses - Side by Side

Cutout View - Second Floor Floor
Building "A"
Three Townhouses - Side by Side



Rear View

Typical Section - Townhouse - Building "A"



Typical Section
Building A

(Note: FFE = 249.42 ASL*
Garage level = 239.42 (ASL)
ASL* = Above Sea Elevation

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contact: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Townhouse - Key Features

Project Number	ECO-135
Date	03/04/2025
Drawn By	NS
Checked By	JS

A102

Scale As indicated

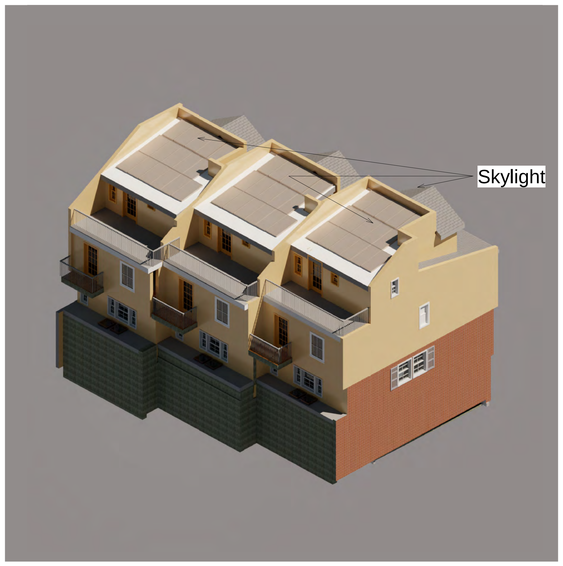
3/3/2025 3:11:59 PM

Do Not Scale Drawings

Lex Terrace Development

Building "A" - Orthographic View - North Facade
(Site Grading Not Shown)

Typical Long Section - Building "A":



Building "A" - Rear View
(Site Grading Not Shown)

Front View Building A (North Facade)

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building - Townhouse Views

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A103

Scale 1/4" = 1'-0"

3/3/2025 3:12:03 PM

Do Not Scale Drawings

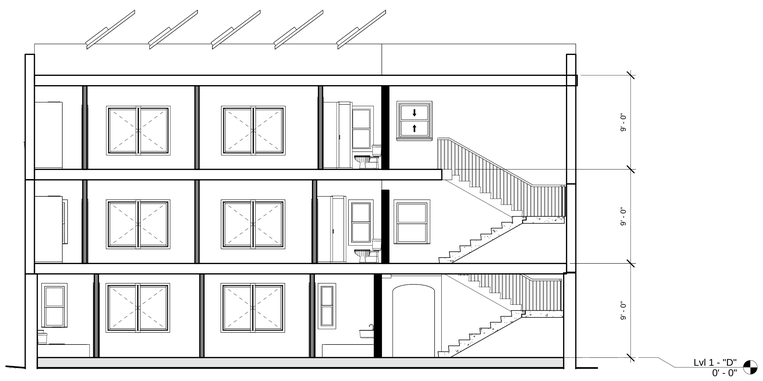
Lex Terrace Development

Multifamily Housing
Key Features

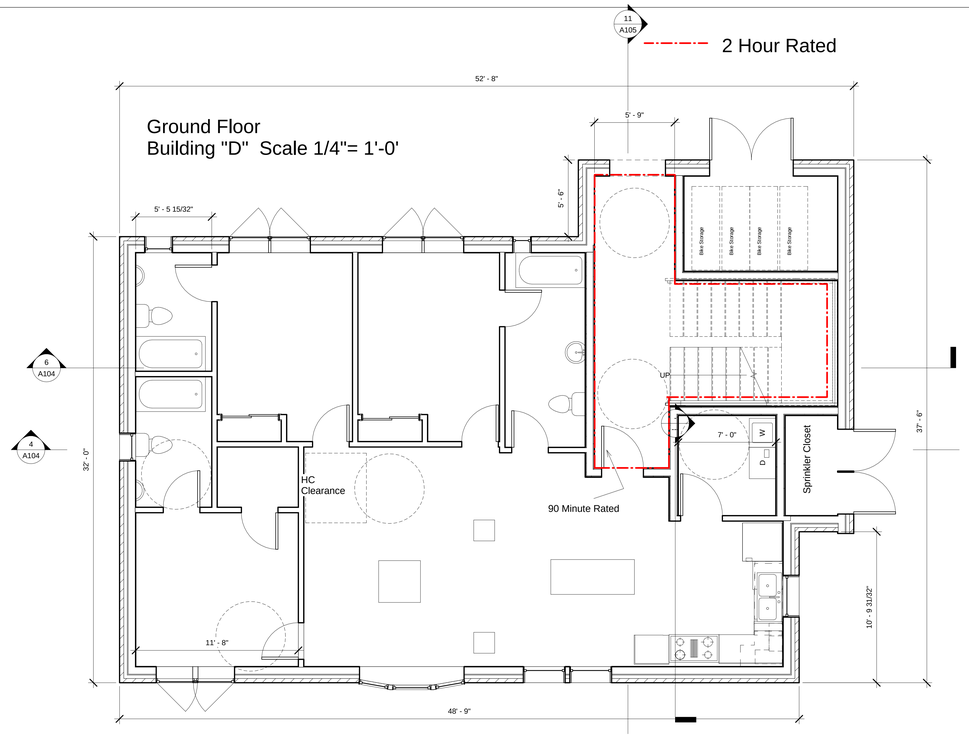
- *Two multi-family buildings, with three apartments in each*
- *Handicap Housing provision in multi-family buildings*
- *Sustainable design*
- *Solar PV's on the roof to supplement grid electricity*
- *Green development close to town center*
- *Facilities for car and bike parking*
- *Four Bicycle Parking per building*
- *Each townhouse with an enclosed garage and additional on-site parking*
- *Permeable walkways, with barrier free access for mobility impaired*
- *Development adjacent to public transportation facilities*

Section - Across

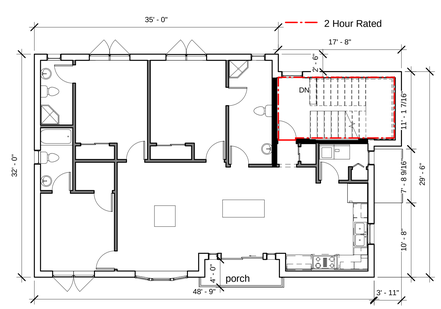
Typical Building E Scale 3/16" =1'-0"



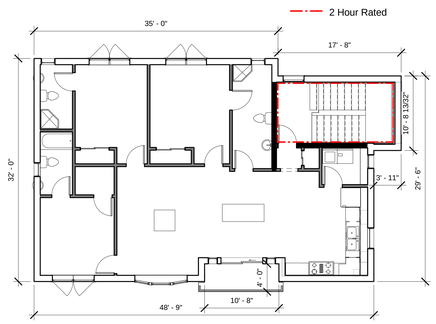
Building "D" - Section thru Staircase
Scale 3/16"= 1'-0"



Ground Floor
Building "D" Scale 1/4"= 1'-0'

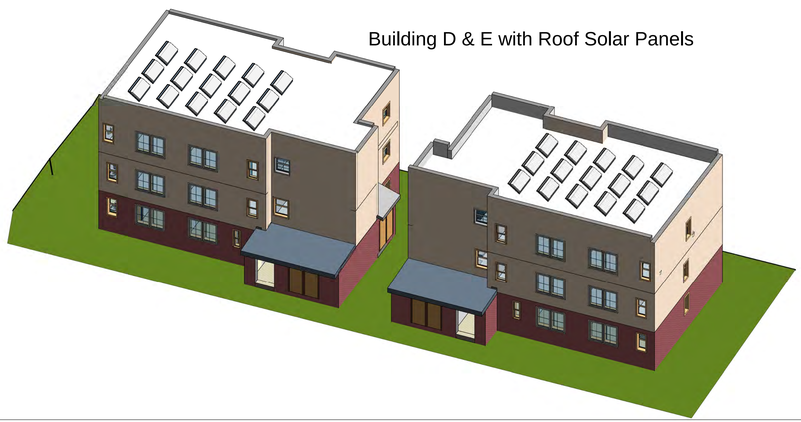


Second Floor
Building "D" Scale 1/8"= 1'-0"



Building D - Third Floor
Scale 1/8"= 1'-0"

Building D & E with Roof Solar Panels



Lex Terrace Development

287-295 Waltham Street, Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:

Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building - Multifamily Design

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

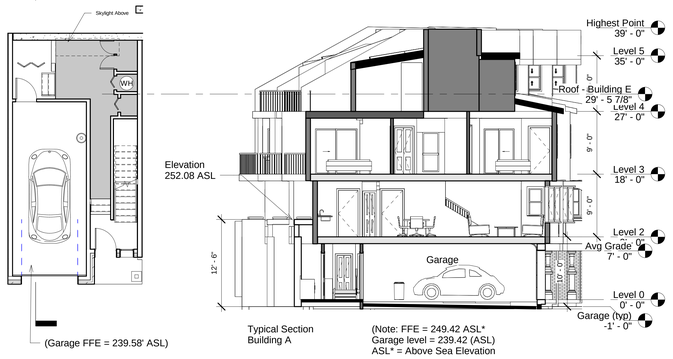
A104

Scale	As indicated

3/3/2025 3:12:06 PM

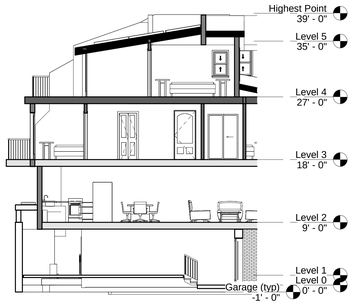
Do Not Scale Drawings

Lex Terrace Development

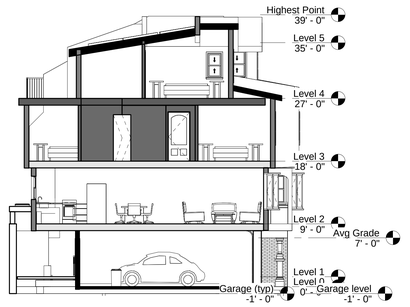


Typical Section
Building A

(Note: FFE = 249.42 ASL*
Garage level = 239.42 (ASL)
ASL* = Above Sea Elevation



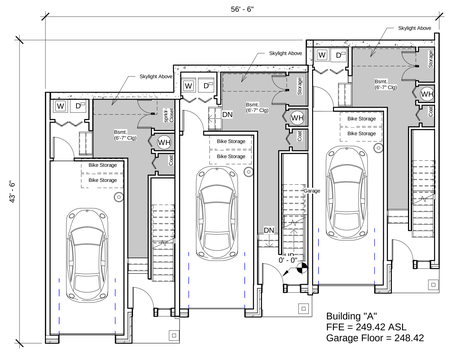
Typical Section - Building B
Building B: FFE = 252 ASL
Garage level 242 ASL



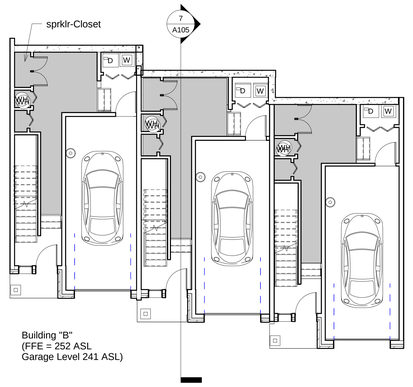
LEX Terrace **GFA Calculation**

	Garage Level (sf)	First Floor (sf)	Second Floor (sf)	Third Floor (sf)	Total (sf)	Max Allowed* (sf)
Building A	1,583	1,953	2,042	1,129	6,707	7,030
Building B	1,583	1,953	2,042	1,129	6,707	7,030
Building C	1,583	1,953	2,042	1,129	6,707	7,030
Building D	-	1,786	1,539	1,539	4,864	7,030
Building E	-	1,786	1,539	1,539	4,864	7,030
				Total	29,849	31,400

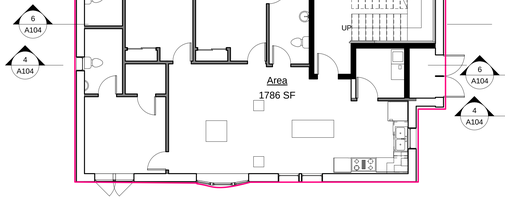
Max Allowed * = By Lexington Zoning By-Laws



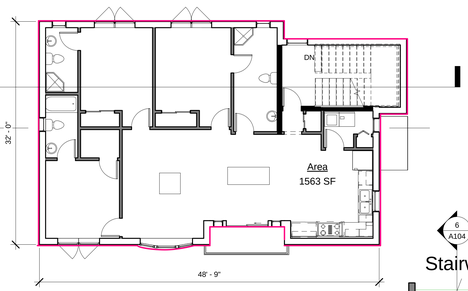
Building "A"
FFE = 249.42 ASL
Garage Floor = 248.42



Building "B"
(FFE = 252 ASL
Garage Level 241 ASL)

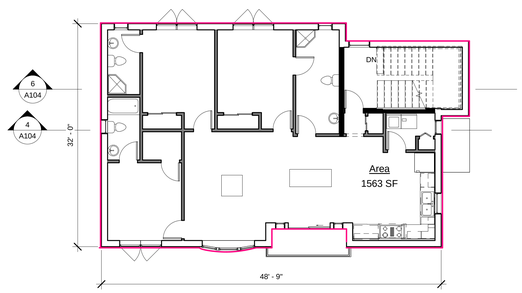


Building D - Ground Floor
GFA = 1,786 sf

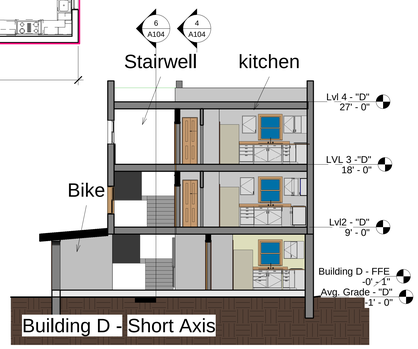


Building "D" - Third Floor
GFA = 1,539

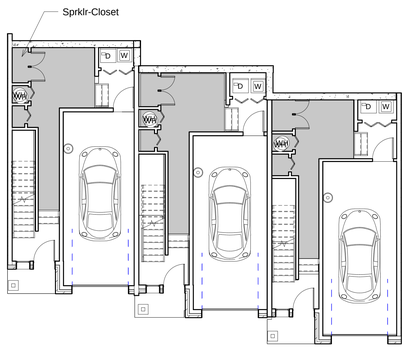
Building "C"
(FFE = 253.75 ASL
(Garage level 252.75 ASL)



Building "D" - Second Floor
GFA = 1,539



Note: For Building D -
Elevation 0.00 = 244.17 Above Sea Level (ASL)



Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant:	Civil Engineering	
Company:	Patriot Engineering, Inc.	
Name:	Michael NovaK	
Address	35 Beford Street, Suite 4	
	Lexington, MA 02420	
Phone	(978)726 2654	
Email	MNOVAK@PATRIOT-ENG.com	
Consultant:	Landscape Architect	
Name:	Gary Larson	
Phone	(781)771 5119	
Email	GLLARSON.GL@GMAIL>COM	
Consultant:	Architect	
Company:	EcoHabitat, Inc.	
Contact;	Javed Sultan, RA	
Address	66 Middle Street, lexington, MA 02421	
Phone	(781) 315 1105	
Email	Sultanj2012@gmail.com	
Consultant:	Fire Protection	
Address:	Jigsaw Lifesafety	
Contatc:	Alex Riley, P.E.	
Address	76 Lea Avenue,	
	Northbridge, MA 01534	
Phone	(617)351-9600	
Email	ariley@jigsawlifesafety.com	
Contact	Iqbal Quadir	
Address	9 Bushnell Drive	
Address	Lexington, MA 02421	
Address		
Phone		

Note:

Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Sections & GFA Calculation

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A105

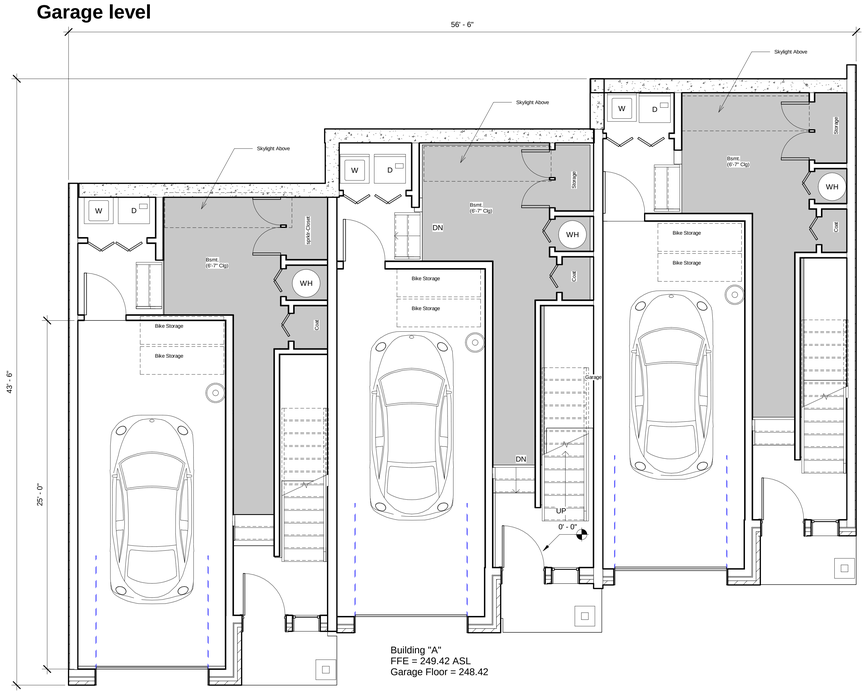
Scale	1/8" = 1'-0"

3/3/2025 3:12:10 PM

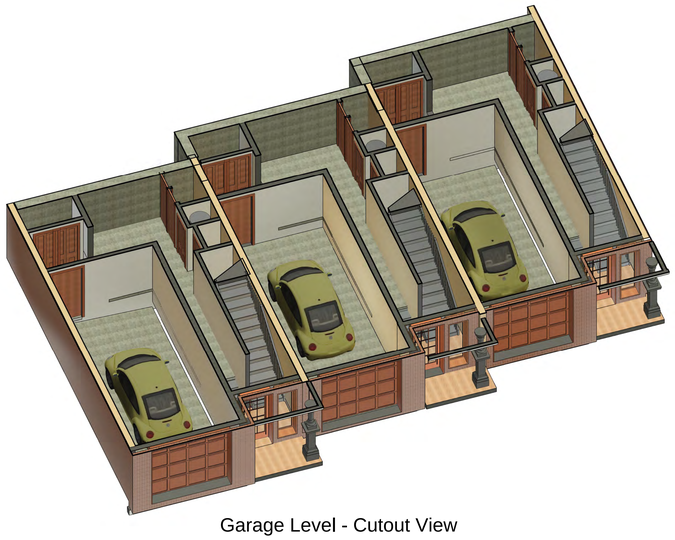
Do Not Scale Drawings

Lex Terrace Development

Garage level

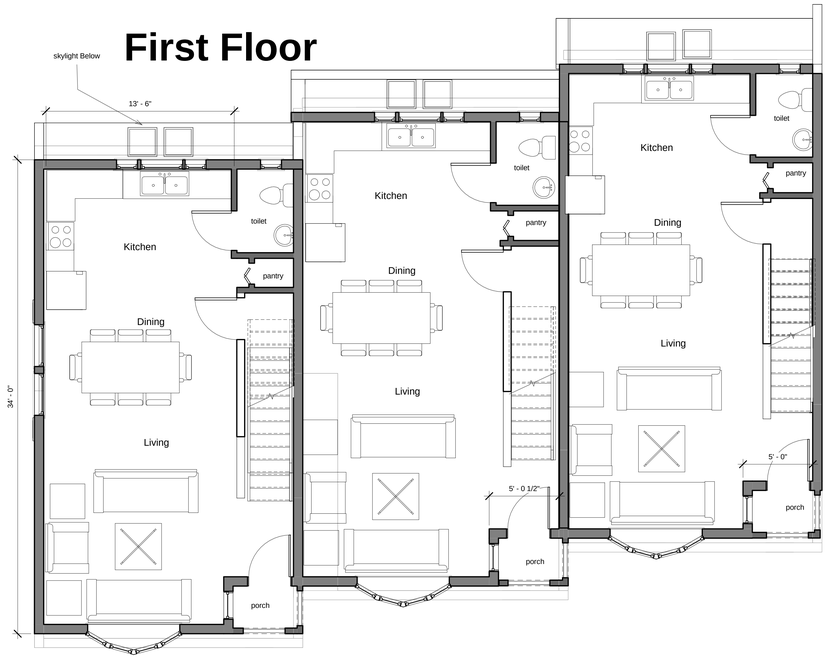


Building "A"
FFE = 249.42 ASL
Garage Floor = 248.42



Garage Level - Cutout View

First Floor



First Floor (L1)
Building "A"

Second Floor - Cutout View

Lex Terrace Development

287-295 Waltham Street, Lexington, MA 02421

www.ecohab2.com

Consultant:	Civil Engineering
Company:	Patriot Engineering, Inc.
Name:	Michael NovaK
Address	35 Beford Street, Suite 4 Lexington, MA 02420
Phone	(978)726 2654
Email	MNOVAK@PATRIOT-ENG.com

Consultant:	Landscape Architect
Name:	Gary Larson
Phone	(781)771 5119
Email	GLLARSON.GL@GMAIL>COM

Consultant:	Architect
Company:	EcoHabitat, Inc.
Contact;	Javed Sultan, RA
Address	66 Middle Street, lexington, MA 02421
Phone	(781) 315 1105
Email	Sultanj2012@gmail.com

Consultant:	Fire Protection
Address:	Jigsaw Lifesafety
Contatc:	Alex Riley, P.E.
Address	76 Lea Avenue, Northbridge, MA 01534
Phone	(617)351-9600
Email	ariley@jigsawlifesafety.com

Contact	Iqbal Quadir
Address	9 Bushnell Drive
Address	Lexington, MA 02421
Address	
Phone	

Note:

Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building A - Garage & First

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A106

Scale	1/4" = 1'-0"

3/3/2025 3:12:14 PM

Do Not Scale Drawings

Lex Terrace Development

Second Floor

Second Floor (L2)
Building "A"

Third Floor

Third Floor (L2)
Building "A"

Cutout View 3rd Floor

Cutout View - 4th Floor

Lex Terrace Development

287-295 Waltham Street, Lexington, MA 02421

www.ecohab2.com

Consultant:	Civil Engineering
Company:	Patriot Engineering, Inc.
Name:	Michael NovaK
Address	35 Beford Street, Suite 4 Lexington, MA 02420
Phone	(978)726 2654
Email	MNOVAK@PATRIOT-ENG.com

Consultant:	Landscape Architect
Name:	Gary Larson
Phone	(781)771 5119
Email	GLLARSON.GL@GMAIL>COM

Consultant:	Architect
Company:	EcoHabitat, Inc.
Contact;	Javed Sultan, RA
Address	66 Middle Street, lexington, MA 02421
Phone	(781) 315 1105
Email	Sultanj2012@gmail.com

Consultant:	Fire Protection
Address:	Jigsaw Lifesafety
Contatc:	Alex Riley, P.E.
Address	76 Lea Avenue, Northbridge, MA 01534
Phone	(617)351-9600
Email	ariley@jigsawlifesafety.com

Contact	Iqbal Quadir
Address	9 Bushnell Drive
Address	Lexington, MA 02421
Address	
Phone	

Note:

Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building A - Second & Third Floor

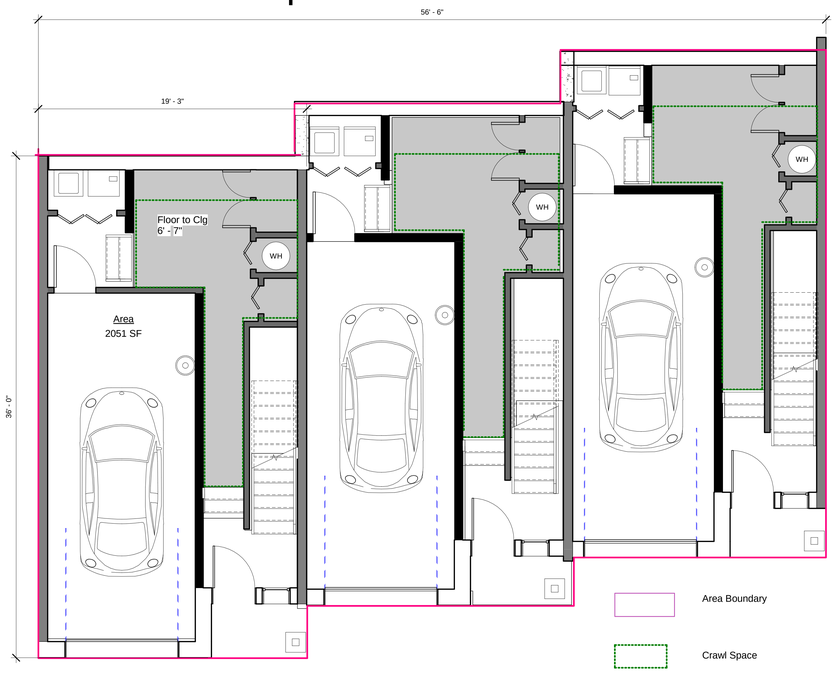
Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A107

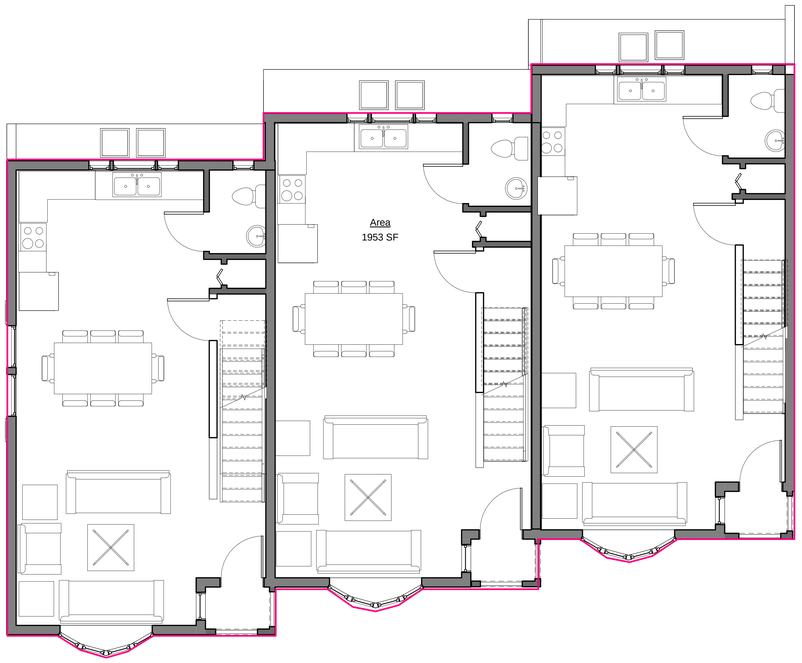
Scale	1/4" = 1'-0"

3/3/2025 3:12:20 PM

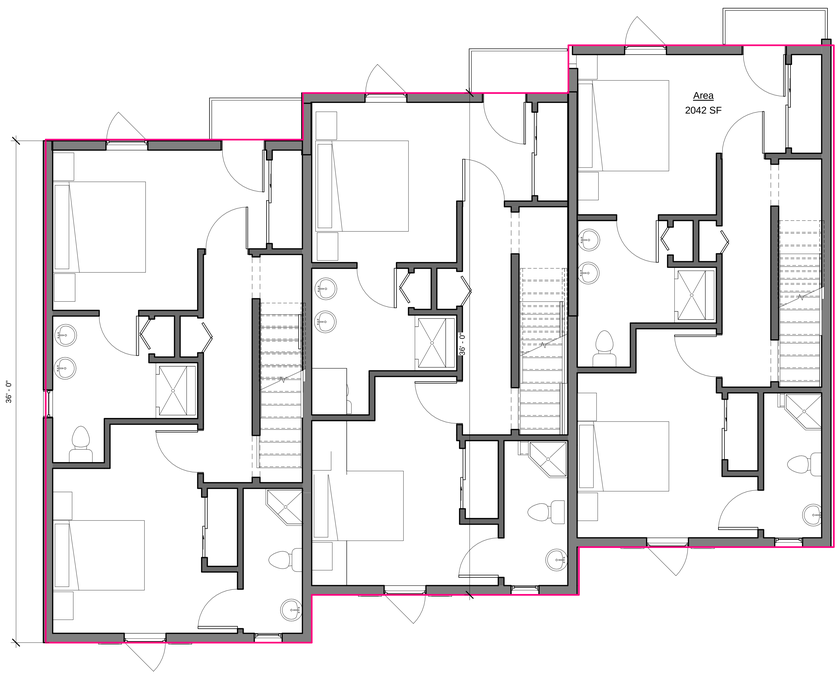
Lex Terrace Development



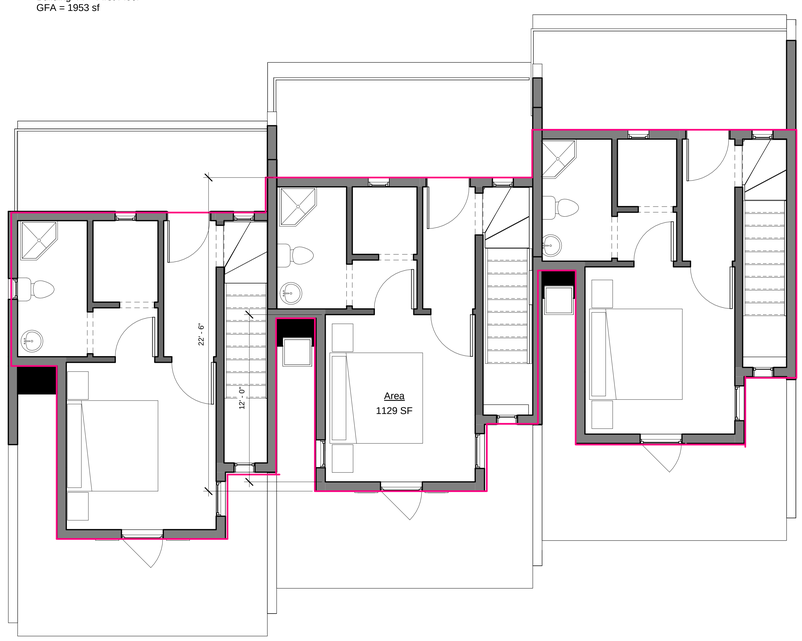
Garage Level - Building "A"
Gross = 2,051 sf
Crawl Space= - 468 sf
Net GFA = 1,553 sf
(Note Crawl Space Ceiling < 6' 8")



Building "A" - First Floor
GFA = 1953 sf



Building A" - Third Floor
GFA = 2,042 sf



Building "A" - Third Floor
GFA = 1,129 sf

Do Not Scale Drawings

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant:	Civil Engineering	
Company:	Patriot Engineering, Inc.	
Name:	Michael NovaK	
Address	35 Beford Street, Suite 4	
	Lexington, MA 02420	
Phone	(978)726 2654	
Email	MNOVAK@PATRIOT-ENG.com	
Consultant:	Landscape Architect	
Name:	Gary Larson	
Phone	(781)771 5119	
Email	GLLARSON.GL@GMAIL>COM	
Consultant:	Architect	
Company:	EcoHabitat, Inc.	
Contact;	Javed Sultan, RA	
Address	66 Middle Street, lexington, MA 02421	
Phone	(781) 315 1105	
Email	Sultanj2012@gmail.com	
Consultant:	Fire Protection	
Address:	Jigsaw Lifesafety	
Contatc:	Alex Riley, P.E.	
Address	76 Lea Avenue,	
	Northbridge, MA 01534	
Phone	(617)351-9600	
Email	ariley@jigsawlifesafety.com	
Contact	Iqbal Quadir	
Address	9 Bushnell Drive	
Address	Lexington, MA 02421	
Address		
Phone		

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Townhouse - Area Calculation

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

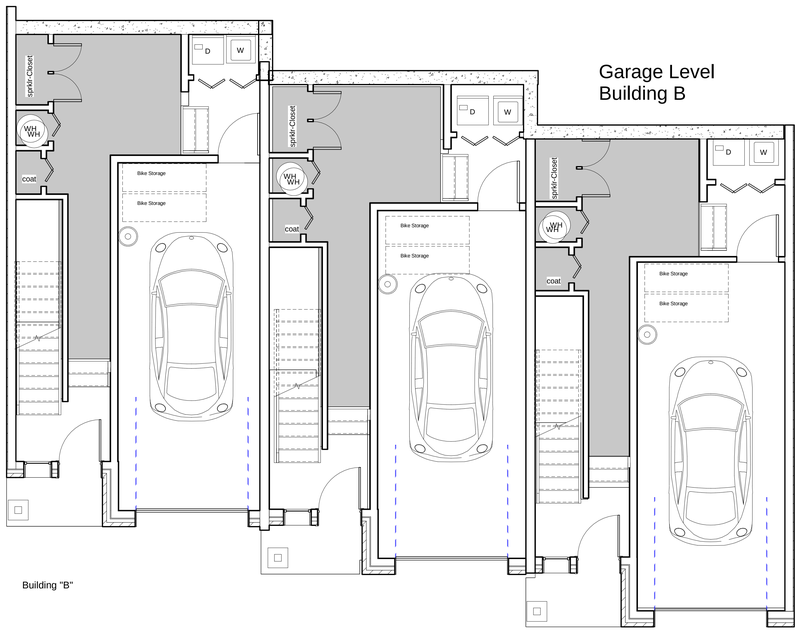
A108

Scale 1/4" = 1'-0"

3/3/2025 3:12:20 PM

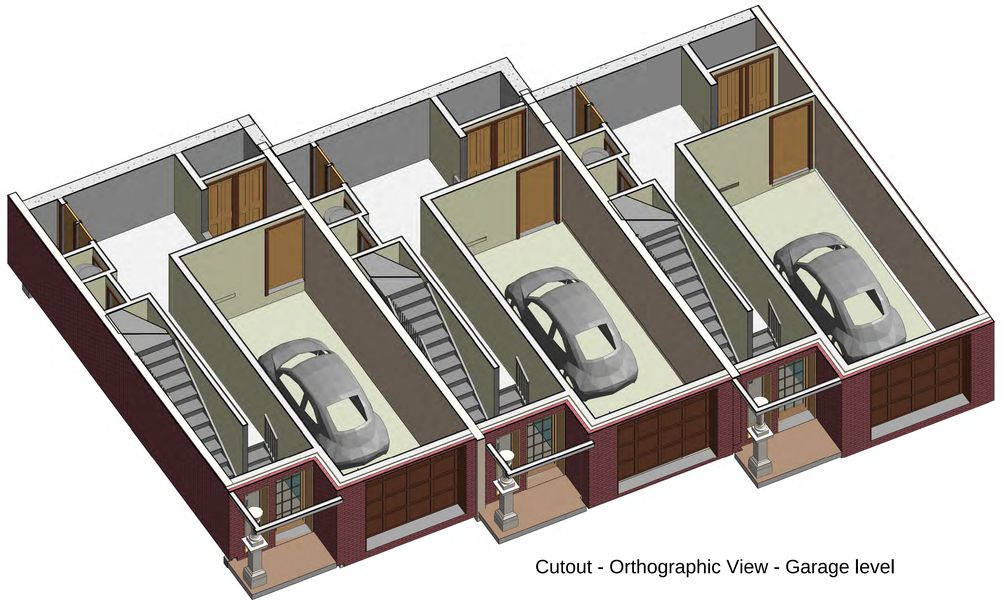
Do Not Scale Drawings

Lex Terrace Development

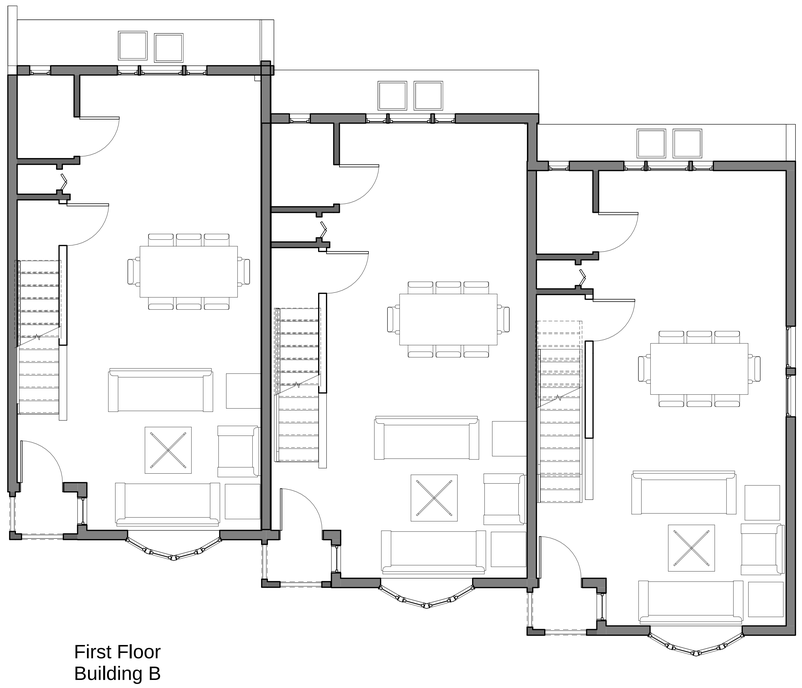


Garage Level
Building B

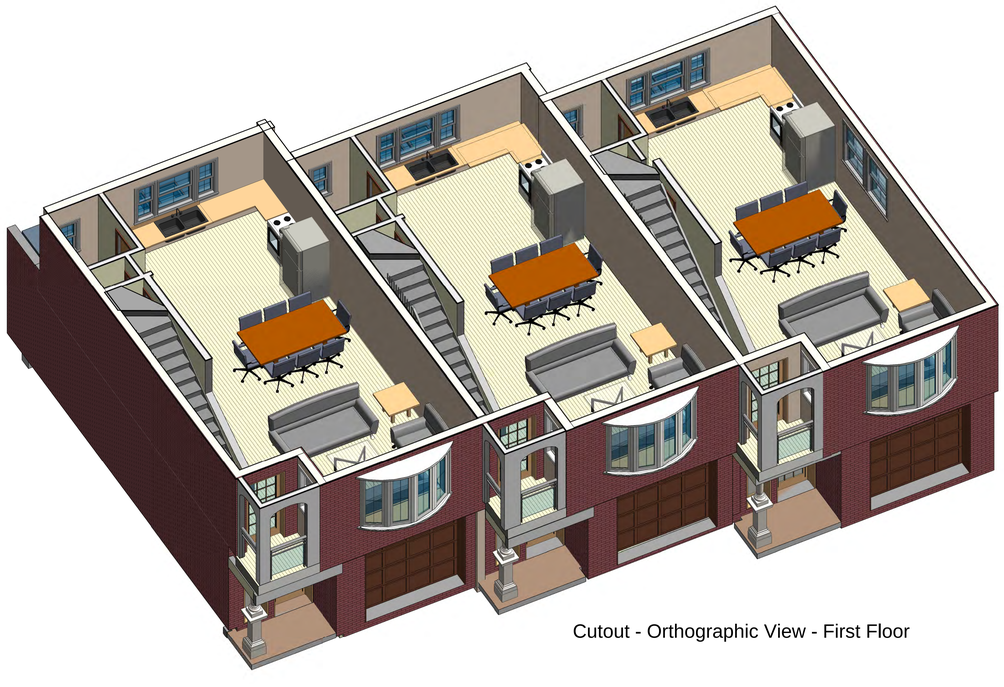
Building "B"



Cutout - Orthographic View - Garage level



First Floor
Building B



Cutout - Orthographic View - First Floor

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant:	Civil Engineering
Company:	Patriot Engineering, Inc.
Name:	Michael NovaK
Address	35 Beford Street, Suite 4
	Lexington, MA 02420
Phone	(978)726 2654
Email	MNOVAK@PATRIOT-ENG.com

Consultant:	Landscape Architect
Name:	Gary Larson
Phone	(781)771 5119
Email	GLLARSON.GL@GMAIL>COM

Consultant:	Architect
Company:	EcoHabitat, Inc.
Contact;	Javed Sultan, RA
Address	66 Middle Street, lexington, MA 02421
Phone	(781) 315 1105
Email	Sultanj2012@gmail.com

Consultant:	Fire Protection
Address:	Jigsaw Lifesafety
Contatc:	Alex Riley, P.E.
Address	76 Lea Avenue,
	Northbridge, MA 01534
Phone	(617)351-9600
Email	ariley@jigsawlifesafety.com

Contact	Iqbal Quadir
Address	9 Bushnell Drive
Address	Lexington, MA 02421
Address	
Phone	

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building B Garage & First Plan

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A109

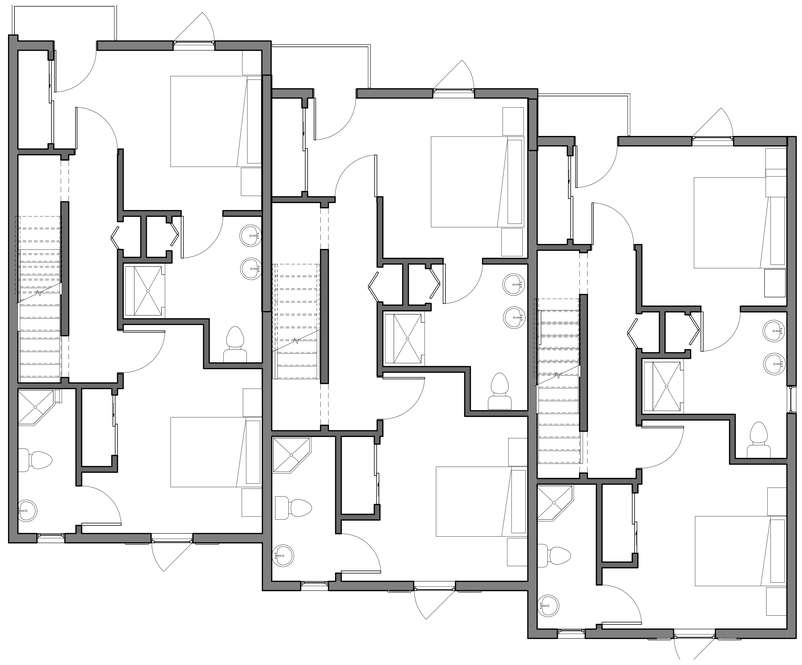
Scale 1/4" = 1'-0"

3/3/2025 3:12:25 PM

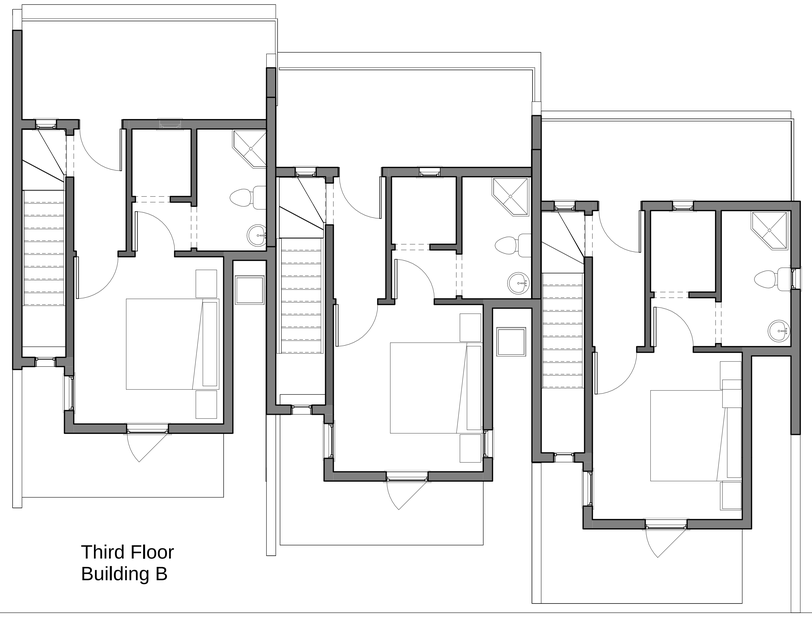
Do Not Scale Drawings

Lex Terrace Development

Second Floor
Building B



Cutout - Orthographic View - Second Floor



Third Floor
Building B

Cutout - Orthographic View - Fourth Floor

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:

Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building B Second & Third Floor

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A110

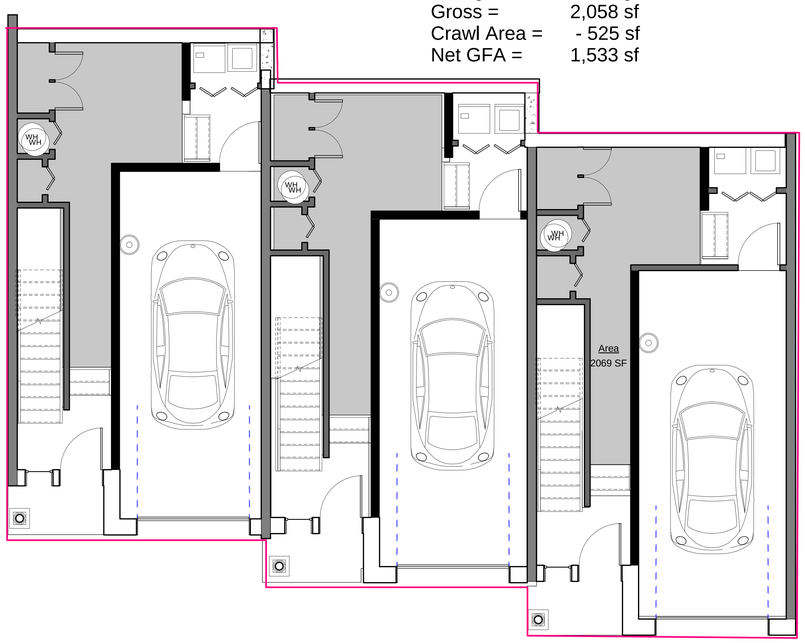
Scale	1/4" = 1'-0"

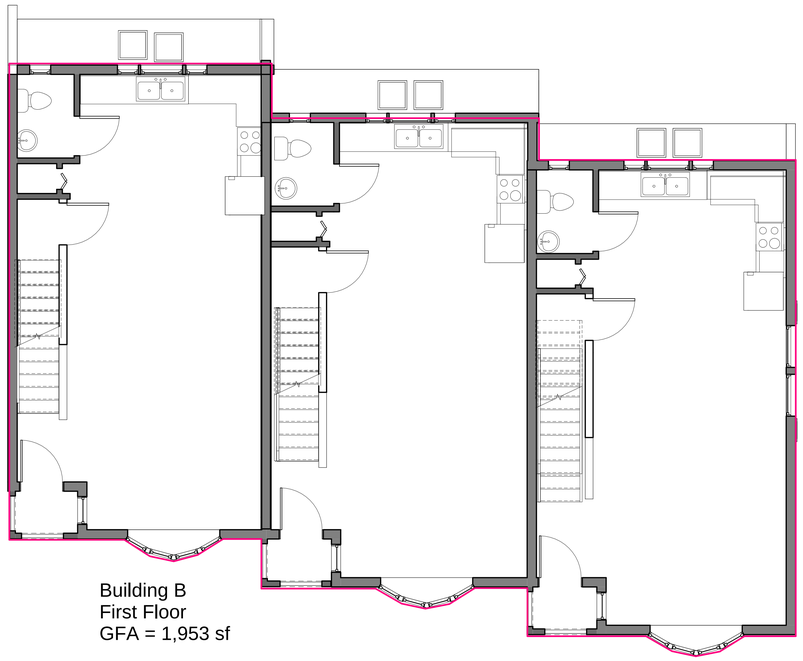
3/3/2025 3:12:29 PM

Do Not Scale Drawings

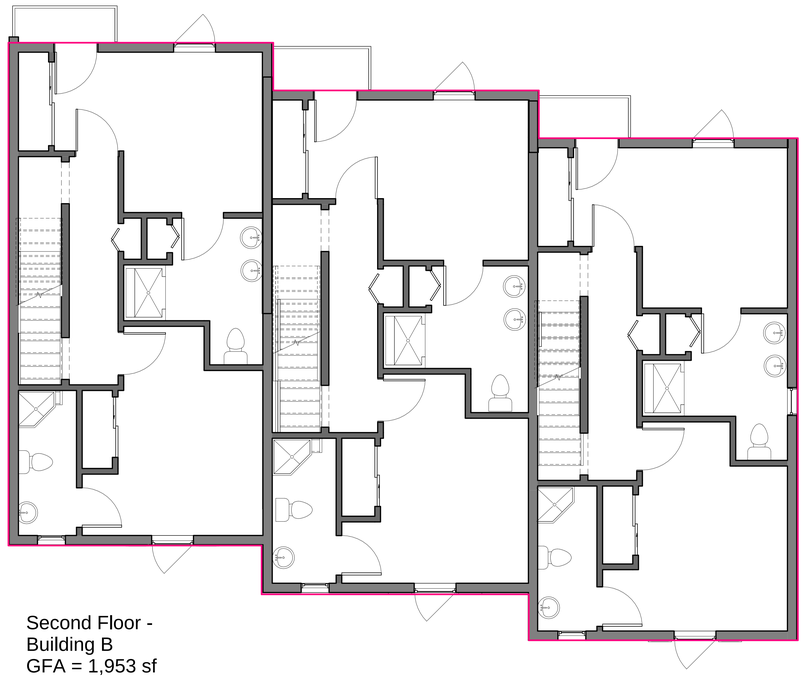
Lex Terrace Development

Garage Level - Building B
Gross = 2,058 sf
Crawl Area = - 525 sf
Net GFA = 1,533 sf

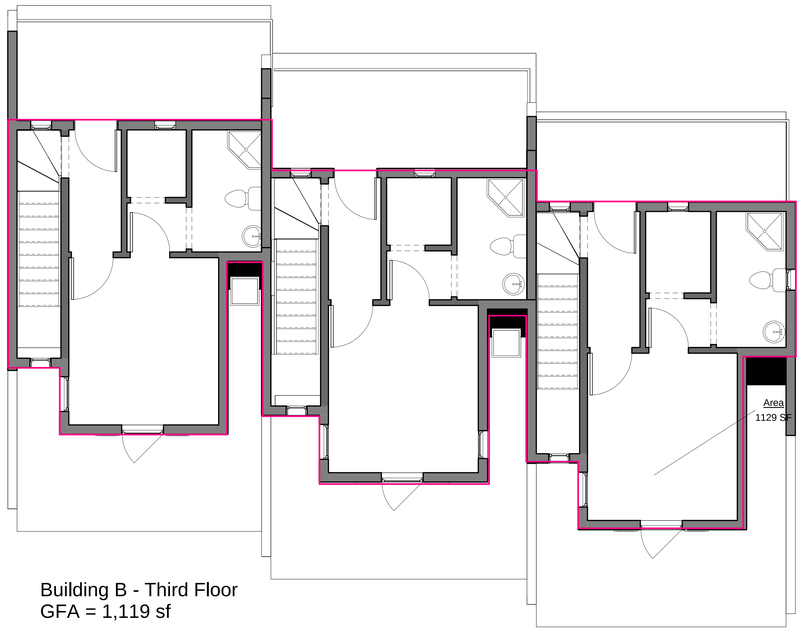




Building B
First Floor
GFA = 1,953 sf



Second Floor -
Building B
GFA = 1,953 sf



Building B - Third Floor
GFA = 1,119 sf

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building B Area Plan

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

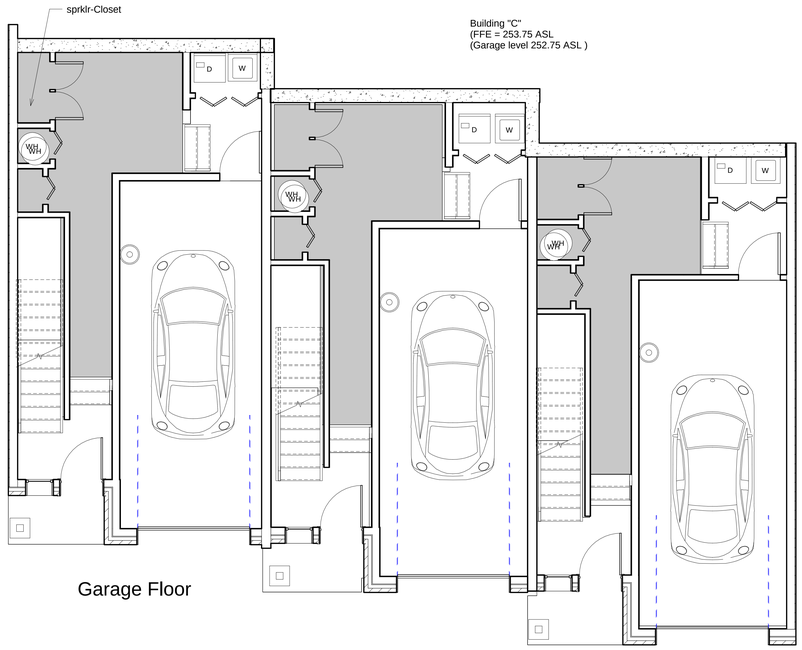
A111

Scale 1/4" = 1'-0"

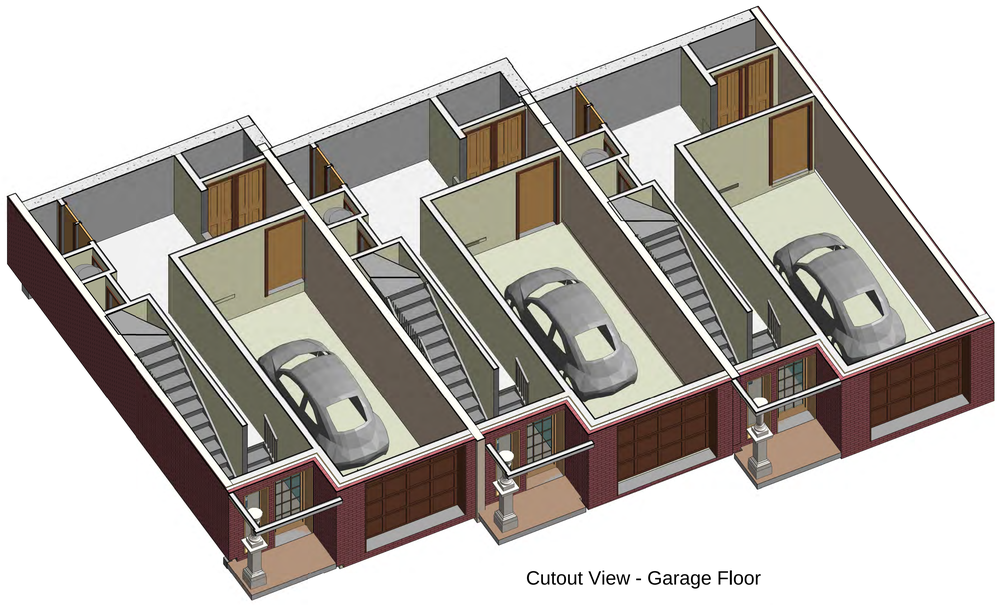
3/3/2025 3:12:30 PM

Do Not Scale Drawings

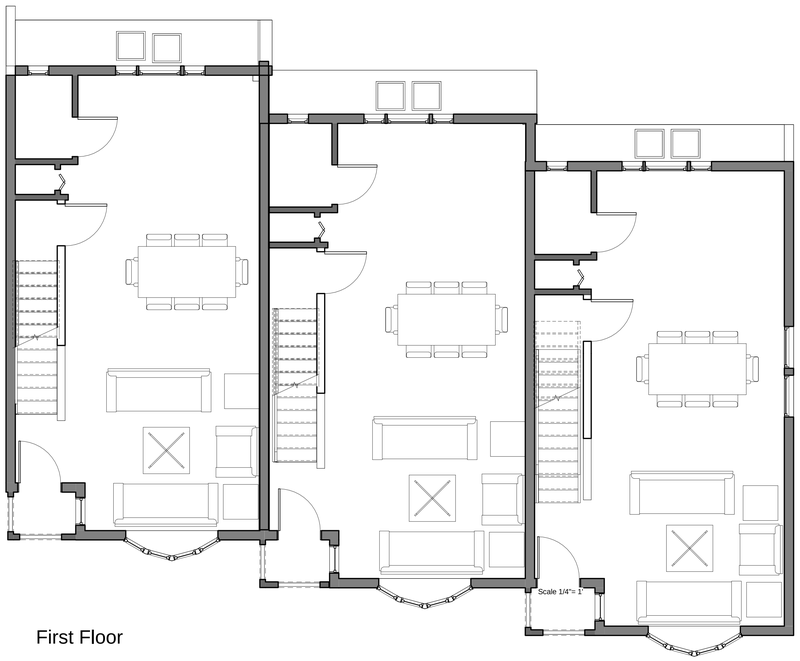
Lex Terrace Development



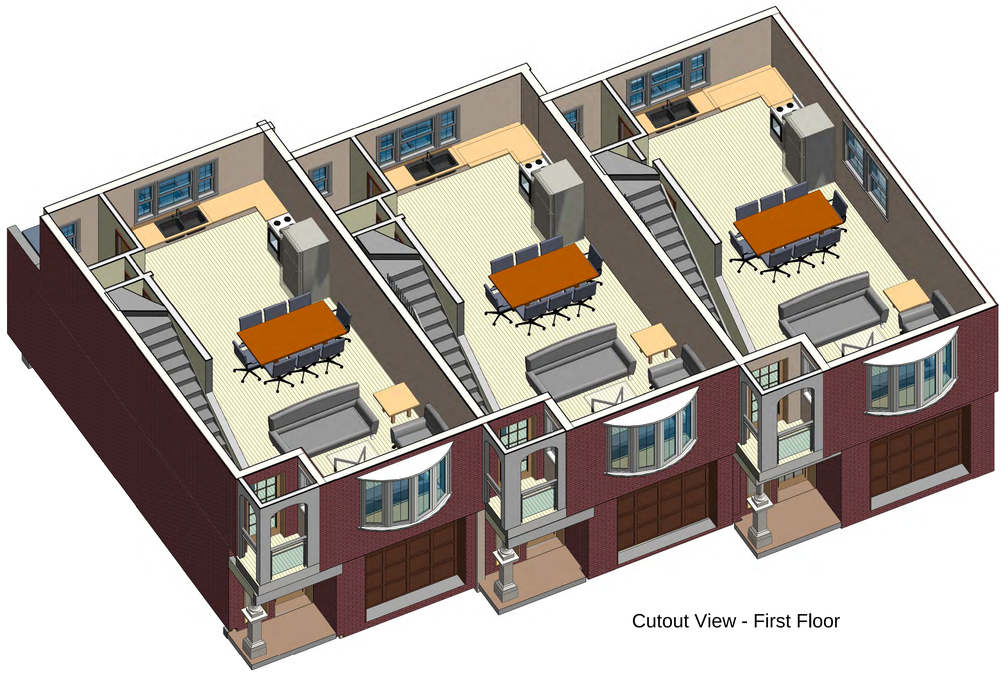
Garage Floor



Cutout View - Garage Floor



First Floor



Cutout View - First Floor

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant:	Civil Engineering
Company:	Patriot Engineering, Inc.
Name:	Michael NovaK
Address	35 Beford Street, Suite 4 Lexington, MA 02420
Phone	(978)726 2654
Email	MNOVAK@PATRIOT-ENG.com

Consultant:	Landscape Architect
Name:	Gary Larson
Phone	(781)771 5119
Email	GLLARSON.GL@GMAIL>COM

Consultant:	Architect
Company:	EcoHabitat, Inc.
Contact;	Javed Sultan, RA
Address	66 Middle Street, lexington, MA 02421
Phone	(781) 315 1105
Email	Sultanj2012@gmail.com

Consultant:	Fire Protection
Address:	Jigsaw Lifesafety
Contatc:	Alex Riley, P.E.
Address	76 Lea Avenue, Northbridge, MA 01534
Phone	(617)351-9600
Email	ariley@jigsawlifesafety.com

Contact	Iqbal Quadir
Address	9 Bushnell Drive
Address	Lexington, MA 02421
Address	
Phone	

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building "C" Garage & First Floor

Project Number	ECO-135
Date	03/04/2025
Drawn By	NS
Checked By	JS

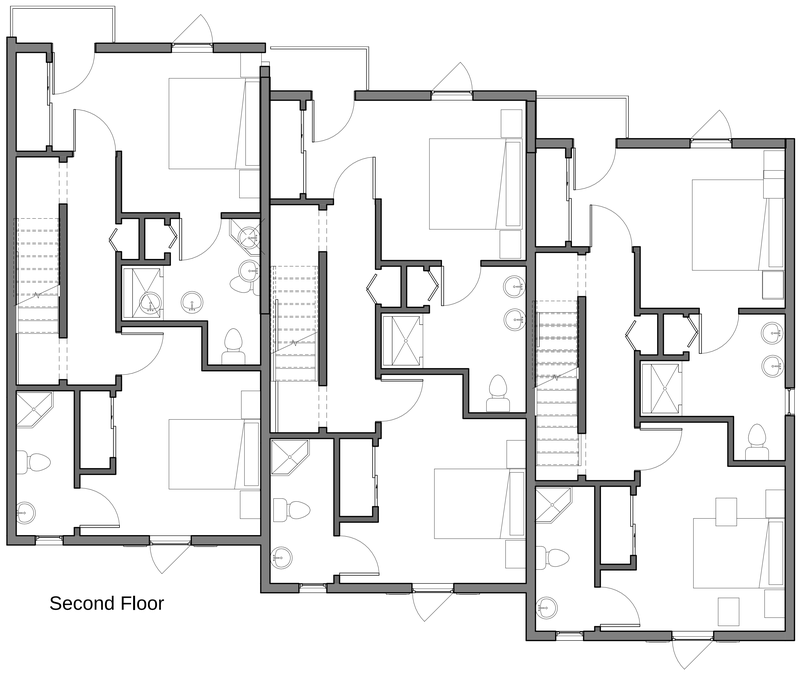
A112

Scale	1/4" = 1'-0"

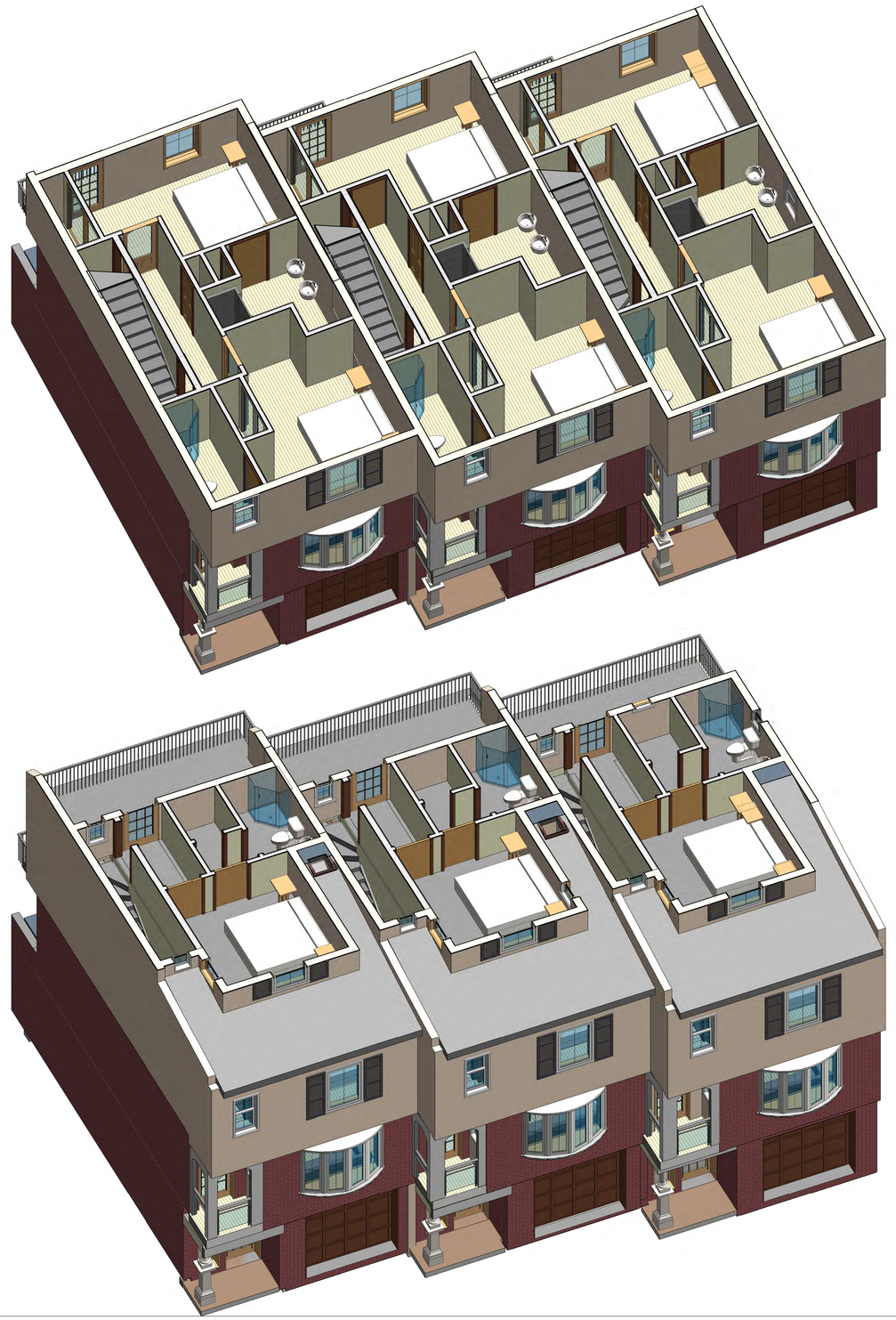
3/3/2025 3:12:34 PM

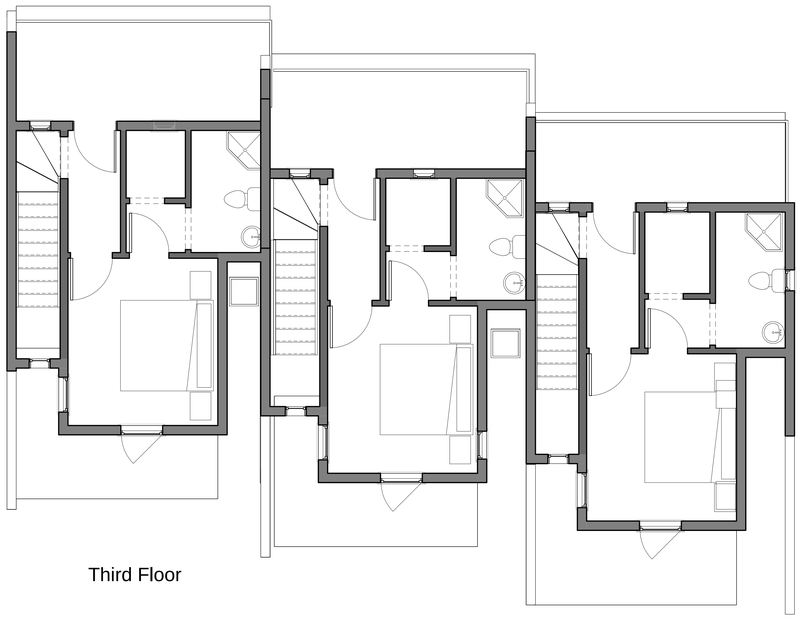
Do Not Scale Drawings

Lex Terrace Development



Second Floor





Third Floor

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:

Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building C - Second & Third Floor

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A113

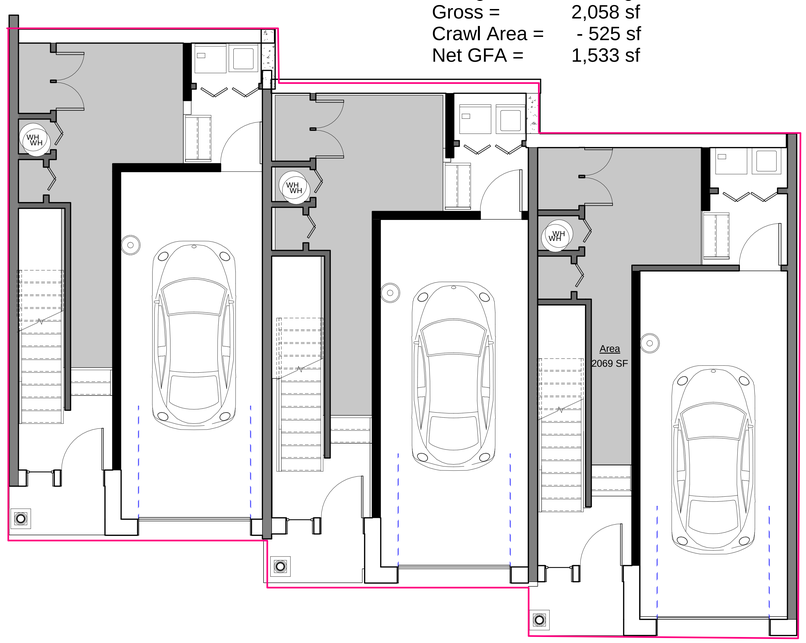
Scale 1/4" = 1'-0"

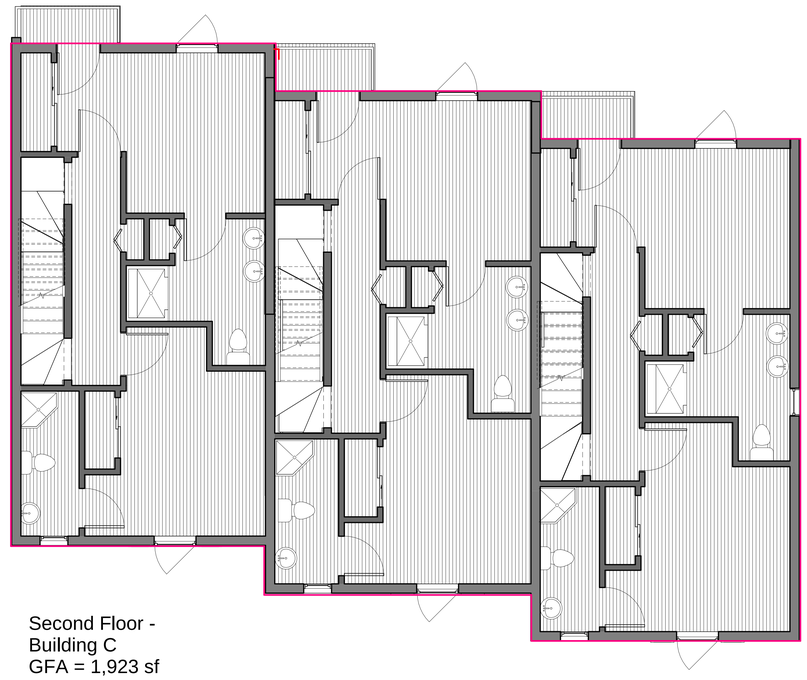
3/3/2025 3:12:39 PM

Do Not Scale Drawings

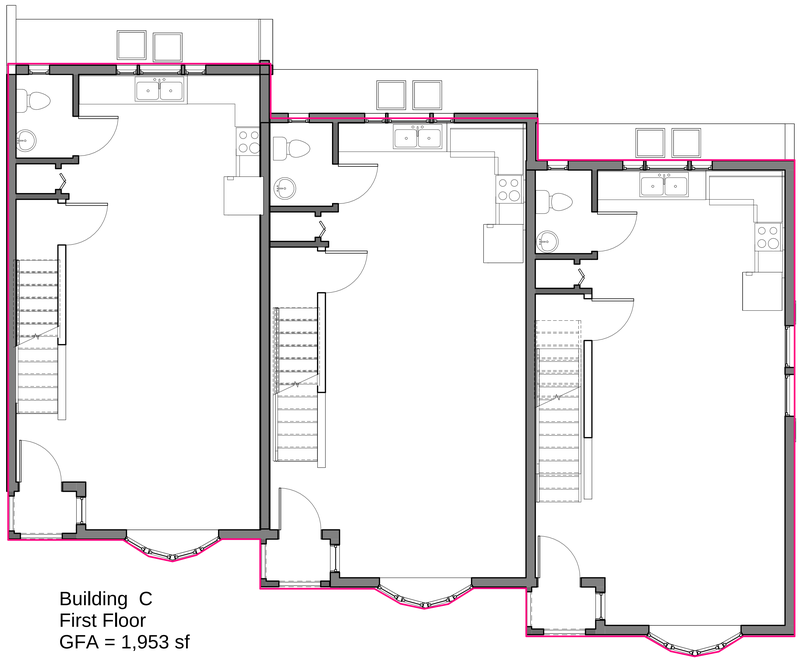
Lex Terrace Development

Garage Level - Building C
Gross = 2,058 sf
Crawl Area = - 525 sf
Net GFA = 1,533 sf

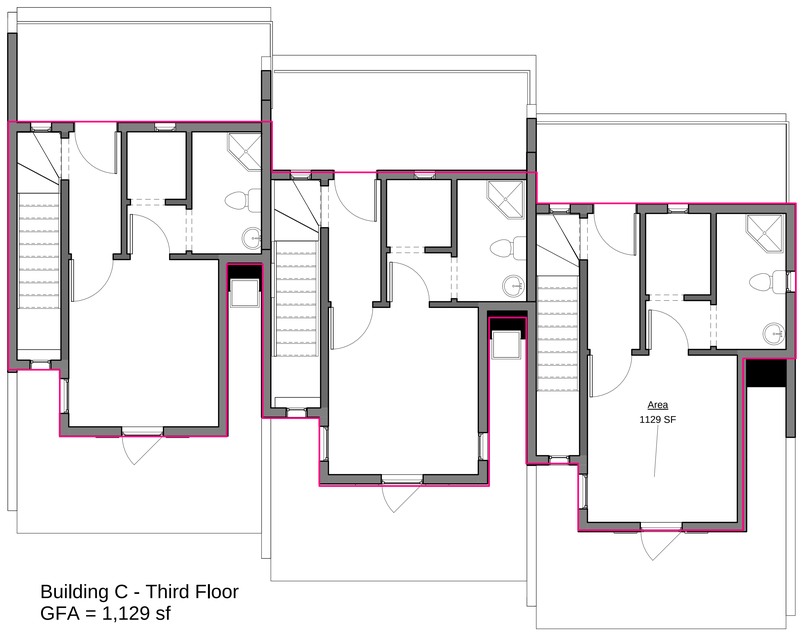




Second Floor -
Building C
GFA = 1,923 sf



Building C
First Floor
GFA = 1,953 sf



Building C - Third Floor
GFA = 1,129 sf

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building C Area Plan

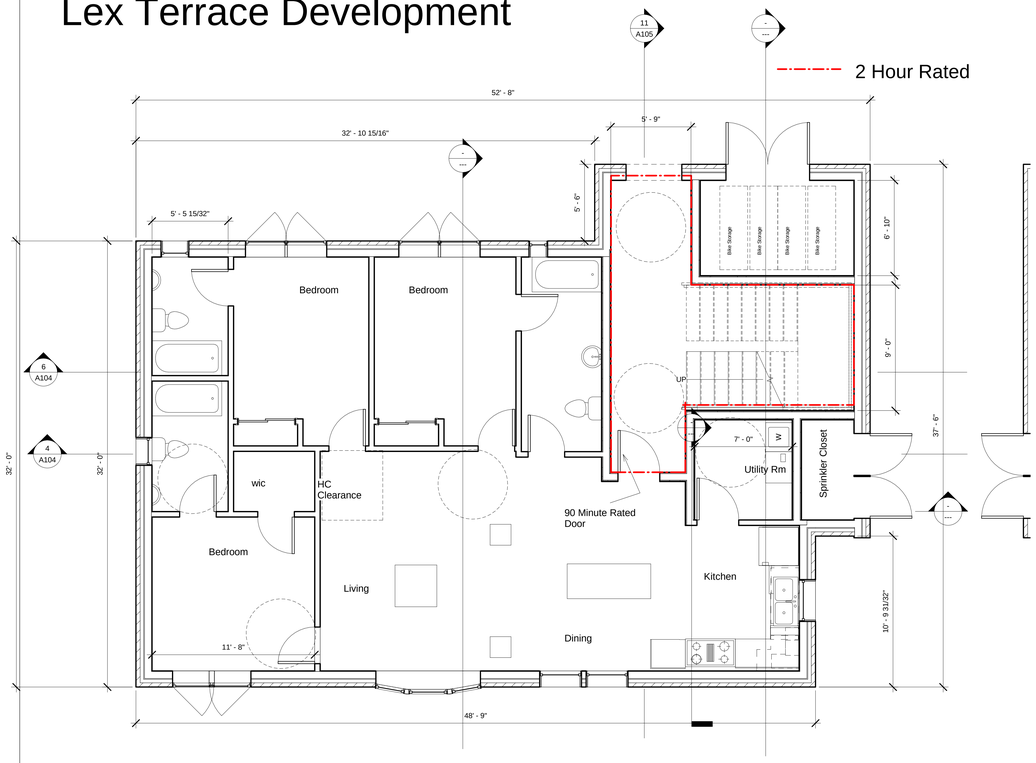
Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A114

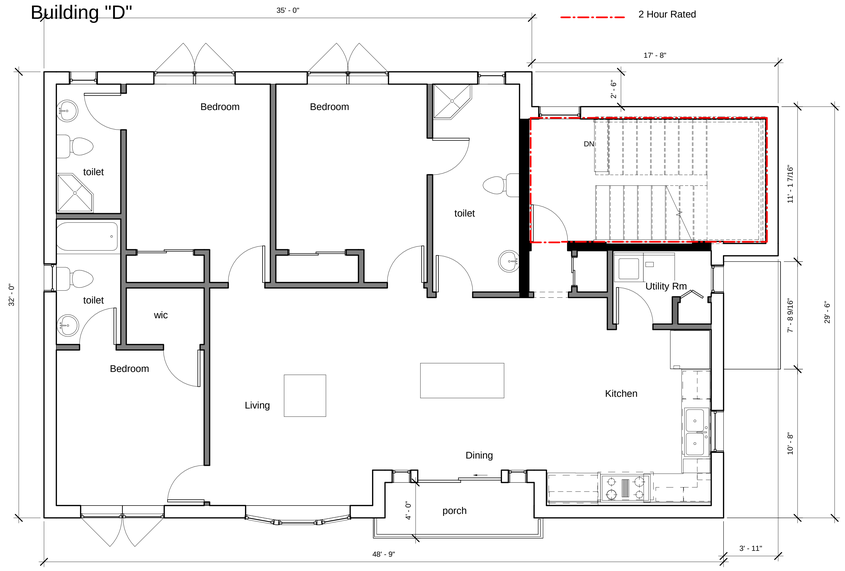
Scale 1/4" = 1'-0"

3/3/2025 3:12:40 PM

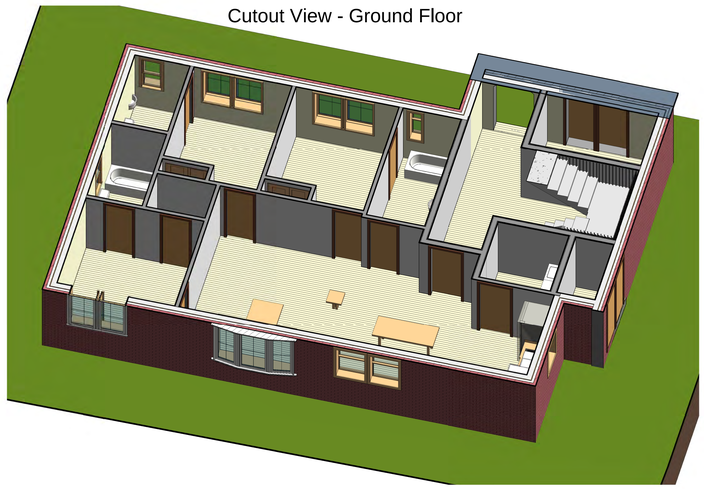
Lex Terrace Development



Ground Floor
Building "D"



Second Floor
Building "D"



Cutout View - Ground Floor

Cutout View - Second Floor

Do Not Scale Drawings

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant:	Civil Engineering
Company:	Patriot Engineering, Inc.
Name:	Michael NovaK
Address	35 Beford Street, Suite 4 Lexington, MA 02420
Phone	(978)726 2654
Email	MNOVAK@PATRIOT-ENG.com

Consultant:	Landscape Architect
Name:	Gary Larson
Phone	(781)771 5119
Email	GLLARSON.GL@GMAIL>COM

Consultant:	Architect
Company:	EcoHabitat, Inc.
Contact;	Javed Sultan, RA
Address	66 Middle Street, lexington, MA 02421
Phone	(781) 315 1105
Email	Sultanj2012@gmail.com

Consultant:	Fire Protection
Address:	Jigsaw Lifesafety
Contatc:	Alex Riley, P.E.
Address	76 Lea Avenue, Northbridge, MA 01534
Phone	(617)351-9600
Email	ariley@jigsawlifesafety.com

Contact	Iqbal Quadir
Address	9 Bushnell Drive
Address	Lexington, MA 02421
Address	
Phone	

Note:

Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building D - Floor Plan

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

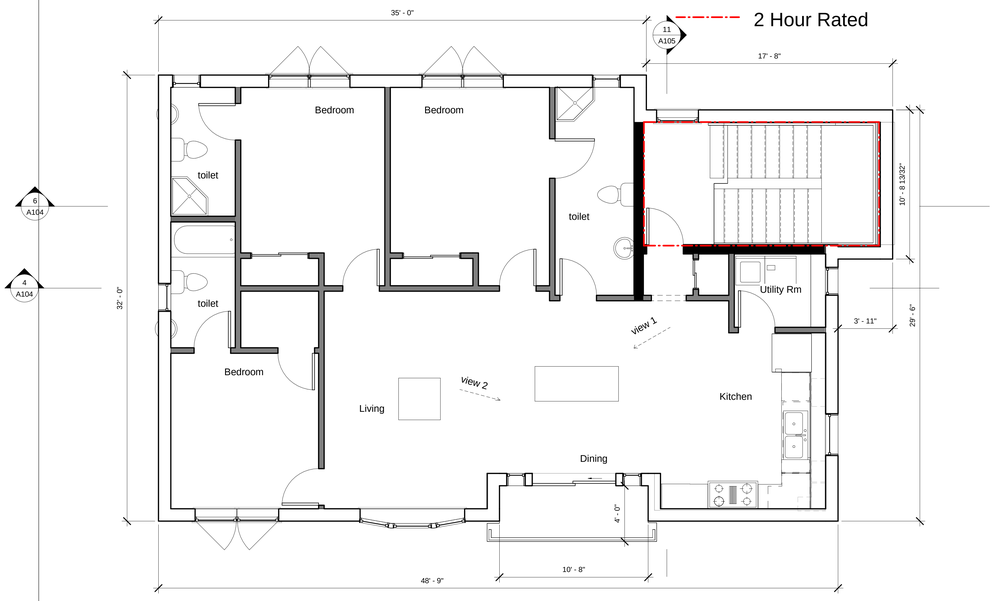
A115

Scale	1/4" = 1'-0"

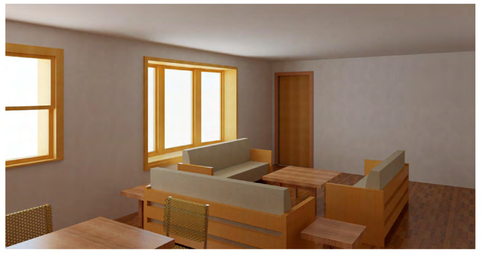
3/3/2025 3:12:43 PM

Do Not Scale Drawings

Lex Terrace Development

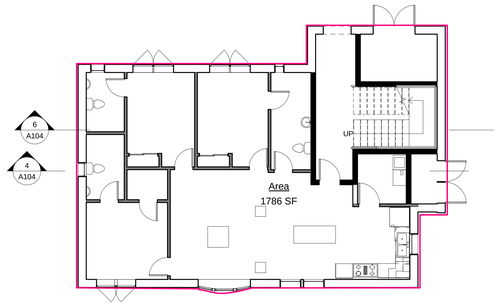


Building D - Third Floor



View 1 - Living room

View 2 - Kitchen, Dining, Living

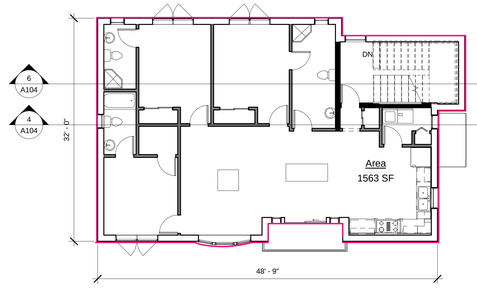


Building D - Ground Floor
GFA = 1,786 sf

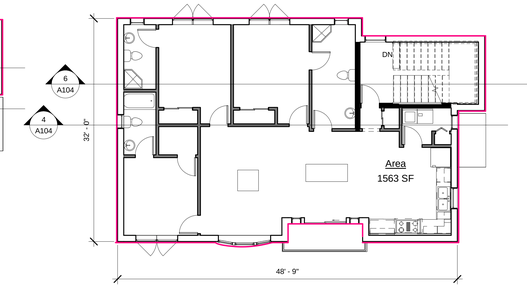
LEX Terrace **GFA Calculation**

	Garage Level (sf)	First Floor (sf)	Second Floor (sf)	Third Floor (sf)	Total (sf)	Max Allowed* (sf)
Building A	1,533	1,953	1,923	1,119	6,528	7,030
Building B	1,533	1,953	1,923	1,119	6,528	7,030
Building C	1,533	1,953	1,923	1,119	6,528	7,030
Building D	-	1,786	1,539	1,539	4,864	7,030
Building E	-	1,786	1,539	1,539	4,864	7,030
				Total	29,312	31,400

Max Allowed * = By Lexington Zoning by-laws



Building "D" - Second Floor
GFA = 1,539



Building "D" - Third Floor
GFA = 1,539

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building D - 3rd Floor & Area Plan

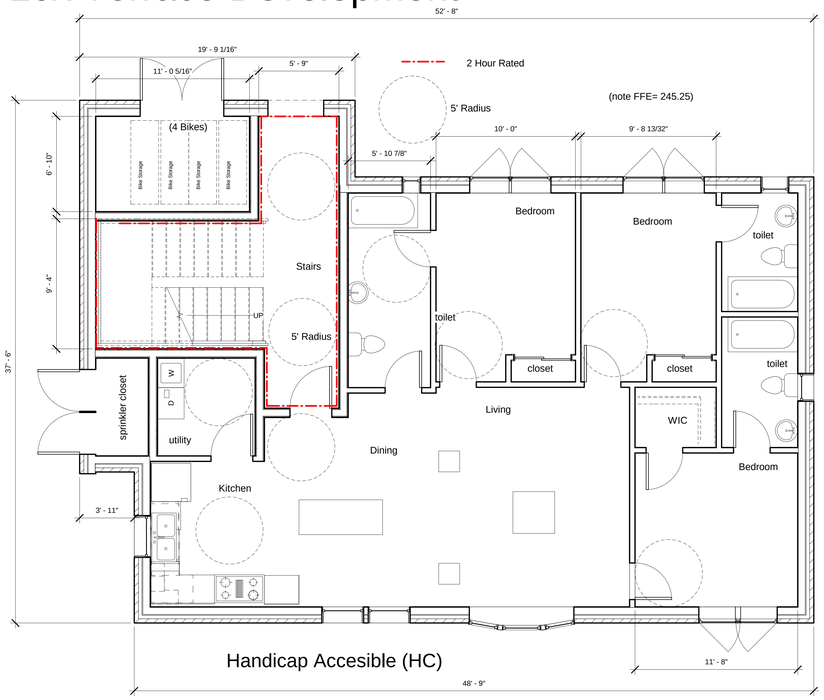
Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A116

Scale As indicated

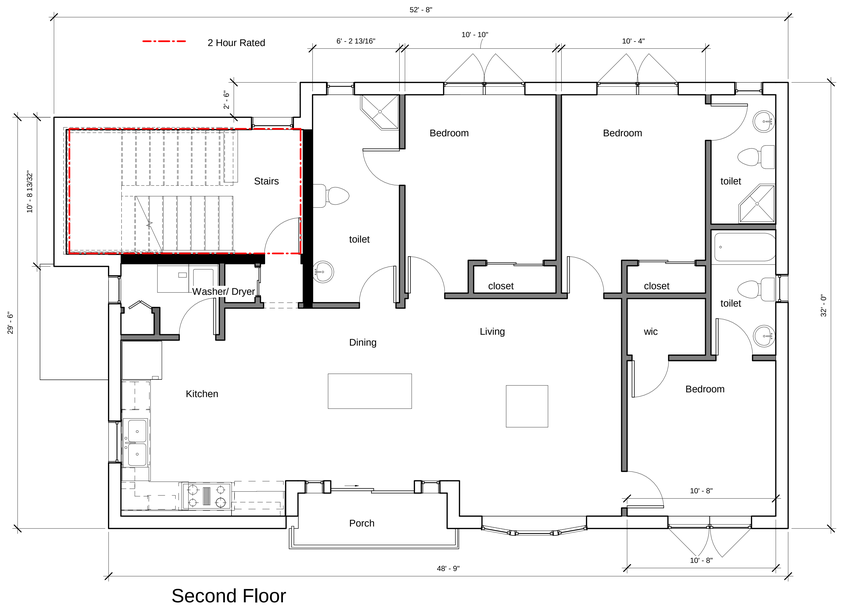
3/3/2025 3:12:46 PM

Lex Terrace Development



Handicap Accesible (HC)

Ground Floor
Building "E"



Second Floor
Building "E"

Cutoutview - Ground Floor

Cutout View - Second Floor

Do Not Scale Drawings

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant:	Civil Engineering	
Company:	Patriot Engineering, Inc.	
Name:	Michael NovaK	
Address	35 Beford Street, Suite 4	
	Lexington, MA 02420	
Phone	(978)726 2654	
Email	MNOVAK@PATRIOT-ENG.com	
Consultant:	Landscape Architect	
Name:	Gary Larson	
Phone	(781)771 5119	
Email	GLLARSON.GL@GMAIL>COM	
Consultant:	Architect	
Company:	EcoHabitat, Inc.	
Contact;	Javed Sultan, RA	
Address	66 Middle Street, lexington, MA 02421	
Phone	(781) 315 1105	
Email	Sultanj2012@gmail.com	
Consultant:	Fire Protection	
Address:	Jigsaw Lifesafety	
Contatc:	Alex Riley, P.E.	
Address	76 Lea Avenue,	
	Northbridge, MA 01534	
Phone	(617)351-9600	
Email	ariley@jigsawlifesafety.com	
Contact	Iqbal Quadir	
Address	9 Bushnell Drive	
Address	Lexington, MA 02421	
Address		
Phone		

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building E - Floor Plan

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

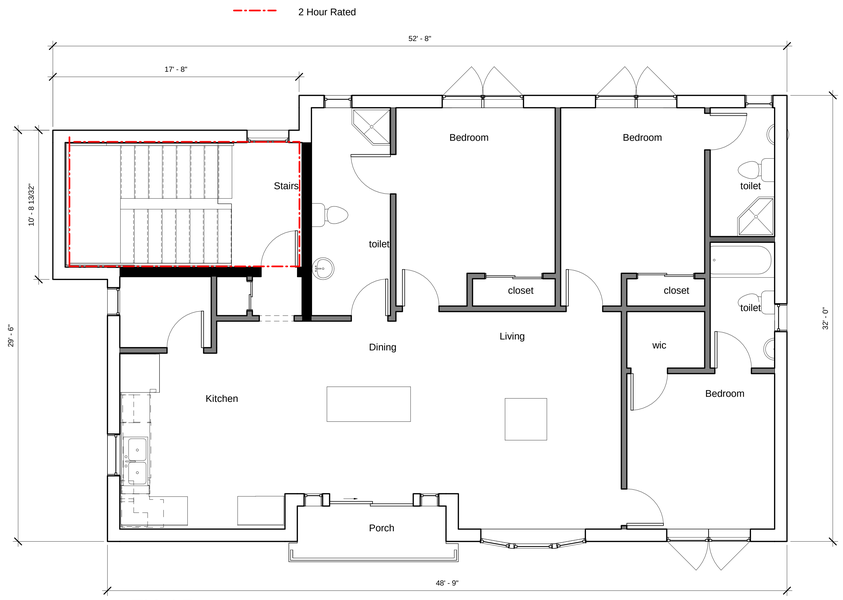
A117

Scale 1/4" = 1'-0"

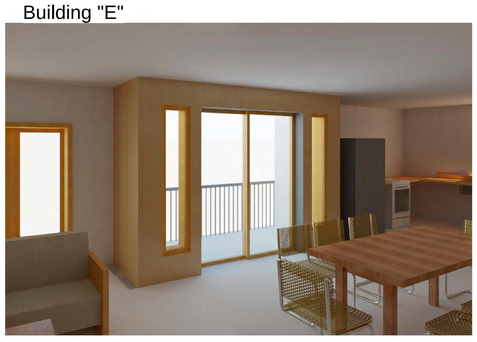
3/3/2025 3:12:50 PM

Do Not Scale Drawings

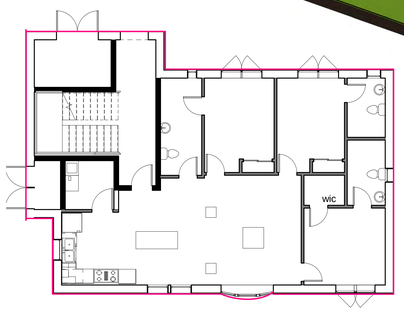
Lex Terrace Development



Third Floor
Building "E"

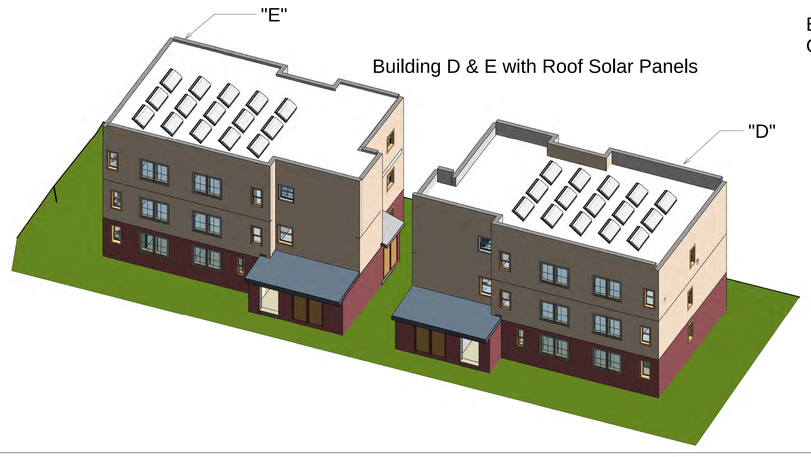


Cutout View - Third Floor

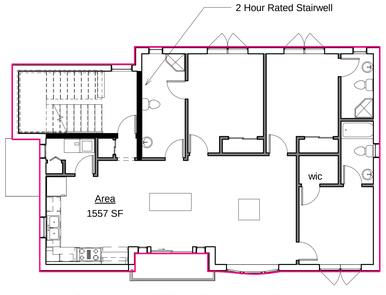


Building "E" - Ground Floor
GFA = 1,786 sf

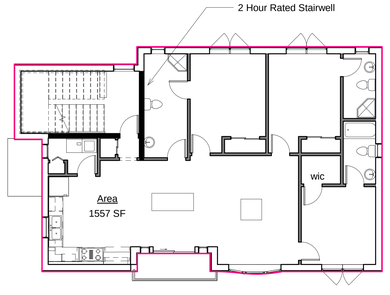
LEX Terrace	GFA Calculation					
	Garage Level (sf)	First Floor (sf)	Second Floor (sf)	Third Floor (sf)	Total (sf)	Max Allowed* (sf)
Building A	1,533	1,953	1,923	1,119	6,528	7,030
Building B	1,533	1,953	1,923	1,119	6,528	7,030
Building C	1,533	1,953	1,923	1,119	6,528	7,030
Building D	-	1,786	1,539	1,539	4,864	7,030
Building E	-	1,786	1,539	1,539	4,864	7,030
				Total	29,312	31,400
Max Allowed * = By Lexington Zoning by-laws						



Building D & E with Roof Solar Panels



Building "E" - Second Floor
GFA = 1,539 sf



Building "E" - Third Floor
GFA = 1,539 sf

Lex Terrace Development

287-295 Waltham Street,
Lexington, MA 02421

www.ecohab2.com

Consultant: Civil Engineering
Company: Patriot Engineering, Inc.
Name: Michael NovaK
Address 35 Beford Street, Suite 4
Lexington, MA 02420
Phone (978)726 2654
Email MNOVAK@PATRIOT-ENG.com

Consultant: Landscape Architect
Name: Gary Larson
Phone (781)771 5119
Email GLLARSON.GL@GMAIL>COM

Consultant: Architect
Company: EcoHabitat, Inc.
Contact; Javed Sultan, RA
Address 66 Middle Street, lexington, MA 02421
Phone (781) 315 1105
Email Sultanj2012@gmail.com

Consultant: Fire Protection
Address: Jigsaw Lifesafety
Contatc: Alex Riley, P.E.
Address 76 Lea Avenue,
Northbridge, MA 01534
Phone (617)351-9600
Email ariley@jigsawlifesafety.com

Contact Iqbal Quadir
Address 9 Bushnell Drive
Address Lexington, MA 02421
Address
Phone

Note:
Schematics (Revised 01-17-2025)
Not For Construction

No.	Description	Date

Owner:

Lex Terrace, LLC

9 Bushnell Drive
Lexington, MA 02421

Building E - 3rd Floor & Area Plan

Project Number	ECO-135
Date	03/04/2025
Drawn By	Author
Checked By	Checker

A118

Scale As indicated

3/3/2025 3:12:54 PM

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
Meghan McNamara, Assistant Director
Aaron Koepper, Planner
Carolyn Morrison, Planning Coordinator

To: **Lexington Planning Board**

From: **Aaron Koepper, Planner**

Re: **Project Review for 287-295 Waltham Street: SRD, Major Site Plan Review**

Date: **April 4, 2025**

Property Information	
Project Address	287-295 Waltham Street
Parcel ID	Map 41, Lots 8, 9, & 10D
Permit #	Plan-25-3
Applicant/Owner Name	Michael Novak on behalf of Iqbal Quadir
Type of Review	Major Site Plan Review, §6.9 Special Residential Developments
Zoning District	RS – One Family Dwelling
Property Size	1.51 ± Acres
Existing Conditions	The current lots hold three (3) single family homes, each with a paved or gravel driveway. The house on Lot 10D has a wooden deck extension, a wood shed, carport, and concrete basketball court towards the southern boundary of the lot. Existing driveway easement for access to Lot 10D described in deed book 9231, page 348 and depicted on Plan 696 of 1958.
Environmental Conditions	Properties are not located in a water protection or flood zones. Tree growth is present surrounding each house, with a larger wooded area on the western side of Lot 10D. The site is sloping and naturally wooded, with slopes varying from 12% to 40%

Important Dates/Timelines	
Public Meeting	April 10, 2025
Filed with Town Clerk	February 3, 2025
Decision Deadline (150 days)	July 3, 2025

Approval Information	
Action Required at Decision Deadline	The decision of the Planning Board shall be by a majority vote of the Board as constituted. The Project is permitted by right, and site plan review approval is required. The Planning Board shall review and act upon the site plan, requiring such conditions as necessary to satisfy the Review Standards and the Zoning Regulations.

Applicability	Under the provisions of § 135-6.9.2, a Special Residential Development ("SRD") is a project in which one or more lots, tracts, or parcels of land are to be improved for use as a coordinated site for housing and for which deviations from the dimensional standards that apply to conventional developments are allowed in order to achieve a diversity of household types, sizes and affordability.
Waivers	None requested

Executive Summary

Main items to be resolved:

- Buildings A, B, & C need a second means of egress
- Show the inclusionary dwelling unit locations on the plans and ensurethe gross floor area meets the requirements of the 2025 Annual Town Meeting zoning amendment.
- Submit all required tree/landscaping information including analysis of any trees removed in the setbacks pretarining to the Tree Bylaw §120
- Update to meet the bicycle parking requirements for short and long-term parking
- Add a snow removal plan
- Clarify dimensions (setbacks, maneuvering aisle, etc.)
- Revised plans to provide 15% common open space requirement
- Fire Department concerns

Project Summary

This proposal is for a Compact Neighborhood Development (CND), meaning the size of dwelling units is limited per c. 135 § 6.9.7.3. The applicant proposes five (5) buildings, with a total of fifteen (15) units. The applicant proposes three (3) townhouse-style buildings with three (3) units each, and two (2) garden apartment-style buildings, containing three (3) units each. All units are proposed as rental.

The townhouse-style buildings all include a "basement" area as well as parking on the ground level, and three stories of living space above. The basement area houses a water heater, sprinkler room, storage. The parking section includes area for one (1) car and two (2) bicycle parking spaces, as well as a laundry room. The first floor of living space has a combined kitchen, dining, and living area, a pantry, a bathroom, and a porch. The second floor of living space includes two (2) bedrooms, a master and a second bedroom, both with an attached bathroom and closet. A porch is present off of the master bedroom, next to the closet. The third floor of living space includes a third bedroom with an attached bathroom and closet, and a roof garden.

The garden-style units each follow a similar layout, with the ground floor of each building proposed as an accessible unit. The ground floor of each garden-style building holds a combined kitchen, dining, and living area, a utility room with a washer and dryer, and three (3) bedrooms, each connected to a bathroom and closet. There is additional access to one (1) bathroom from the combined kitchen, dining, and living area. A sprinkler room and bicycle parking for four (4) bicycles are accessable from the exterior of the building, on the ground floor. The second and third stories of the garden-style units have identical layouts, with a combined kitchen, dining, and living area, a utility room with a washer and dryer, three (3) bedrooms, each connected to a bathroom and closet, and a porch.

All buildings on the site will utilize a common drive entrance/exit with access to Waltham Street.

On March 24, 2025, Annual Town Meeting 2025 voted to approve Article 30, "AMEND ZONING BYLAW – INCLUSIONARY HOUSING FOR SPECIAL RESIDENTIAL DEVELOPMENTS." As such, c. 135 § 6.9.8 states that "at least 15% of the of the total gross floor area of all dwelling units other than inclusionary dwelling units shall be incorporated into inclusionary dwelling units." The 2025 Town Meeting vote occurred after the application submittal, therefore the applicant shall revise plans to comply with the new inclusionary GFA requirements.

On October 30, 2024, the Applicant met with staff for a Development Review Team (DRT) meeting to review their proposal. On March 3, 2025, the Applicant held a neighborhood meeting at 6:00 pm, in The Knights of Columbus Hall at 177 Bedford Street. The applicant has provided a summary for each, which are available on the OpenGov portal under permit # Plan-25-3.

Planning staff and Board members performed a site visit on April 1st, 2025; photographs are provided in this memo.

The Planning Board hired a peer review consultant to assist in this review. Peer Review memo from Nitsch Engineering dated April 4, 2025 is included with further comments and focused review on utilities and Stormwater Management.

Parking Analysis/GFA & IDU

Parking Analysis:

Vehicle Parking	Parking Required		Provided	Notes
Long-Term Bicycles	1.5 per dwelling unit	23	26	Complies; however, the 6 garden-style units have access to only 8 spaces
Short-Term Bicycles	0.1 per dwelling unit	2	**0**	Show on plans. Request the applicant provide more than the minimum given the high number of bedrooms
Car Parking Spaces	1 per dwelling unit	15	20 (9 garaged, 9 surface, 2 accessible)	Paved area outside of garages not counted

Gross Floor Area and Inclusionary Dwelling Units:

	Required or Allowed (Sq. Ft.)	Provided (Sq. Ft.)	Notes
GFA not including IDU	27,777 - 27,779	24,013 - 24,025	
IDU	3,602 - 3,604	3,545 - 3,557	Estimation using 3/24/2025 zoning update, please provide square footage of each unit for accuracy; **Applicant will need to update plans to comply**
SHI	2,401 - 2,403	3,454 - 3,557	

Total Allowable GFA	31,381	27,570	Base GFA + IDU

Chapter 135 Zoning Bylaw Review

Staff believes the proposed development meets the requirements of Chapter 135, except as noted below.

Section 5.0 General Regulations

5.1 Off-Street Parking and Loading

Section 5.1.8.3 states that each bicycle parking space shall be sufficient to accommodate a bicycle 6' in length and 2' in width. Applicant will need to update plans with dimensions to show compliance.

Plans do not show any short-term bicycle parking spaces, applicant will need to update plans to comply. Per § 5.1.8.4, bicycle parking apparatus shall be of a high-security deisgn to which the frame and wheel may be attached, installed in a visible location to deter vandalism and theft, and permanently mounted to the ground. "Inverted-U-Frame or other racks that support the bicycle at two or more points above the center of gravity are required."

Section 5.1.11.3 states that paved parts of all parking spaces, driveways, and maneuvering aisles shall be set back 25' from the street line. Applicant will need to update plans with the dimensions of each setback line to show compliance.

Section 5.1.13.1 requires the minimum width of a maneuvering aisle for standard parking spaces to be 22'. Plans show a width reading 20', however, this measurement does not appear to account for the entire maneuvering aisle. Applicant will need clarify plans to comply.

Section 5.1.13.6 states that a strip of land not less than 5' in width shall be provided on at least two sides of a parking lot for the storage of snow and designated on the off-street parking and loading plan. Applicant will need to update plans to comply.

5.2 Signs

Plans show a "No Parking" sign. Per § 5.2.3.6, signs directing traffic flow are permitted. If other signage is proposed please provide a preliminary signage package for Board review that complies with § 5.2 of the Zoning Bylaw.

5.4 Outdoor Lighting

Section 5.4.6 states that outdoor lighting shall not be illuminated between 11:00 pm and 6:00 am; except for low-level lighting sufficient for security purposes. Please show on photometric plan if any/which lights will remain illuminated overnight.

Section 6.0 Special Regulations

6.9 Special Residential Developments

Section 6.9.6.4 states that, "as measured by stories, (the height limit) shall be three stories in all districts." The provided Average Natural Grade and Elevations forms are not signed/stamped by surveyor. Please stamp/sign forms and Building Commissioner will review height and stories.

Section 6.9.8 states that at least 15% of the of the total gross floor area of all dwelling units other than inclusionary dwelling units (IDU) shall be incorporated into inclusionary dwelling units, and at least two-thirds of the Inclusionary GFA be incorporated into the Town's Subsidized Housing Inventory. (§ 6.9.8.2) IDUs shall be similar in size and layout, and (§ 6.9.8.3) shall be proportionally dispersed throughout the development, with (§ 6.9.8.4) the same access to common areas, facilities and services. Applicant will need to update plans to specify the units to confirm these requirements are being met.

Section 6.9.10 states that at least 15% of developable site area shall be set aside as common open space. Please label on plans where designated open space is and provide the slope of the area.

Chapter 176 Planning Board Zoning Regulations Review

Staff believes the proposed development meets the requirements and/or expectations of Chapter 176, except as noted otherwise below.

Section 5.0 Submission Materials

5.2 Informtion Required

Section 5.2.2.1(b) requires a site analysis map showing steep slopes distinguished as follows: Slopes greater than 15% but less than 25%; Slopes greater than 25% but less than 40%; and Slopes greater than 40%. Applicant will need to update plans to comply.

Section 5.2.2.1(d) requires a note containing the number and total diameter at breast height (DBH) of all trees with a DBH greater than six inches. Applicant will need to update plans to comply.

Section 5.2.8.3 requires identification of the total number, species, and caliper inches for trees with a six-inch DBH or greater within the limit of work, as well as identification of trees being retained, removed, and transplanted. Please update landscaping plan to comply or provide separate plan with required information.

Per § 5.2.10.1, please update or add parking, circulation, and loading plan that shows dimensions of all driveways, maneuvering spaces/aisles, parking spaces, and trash/recycle removal areas. "Site Plan-Layout" sheet lists some information, but is incomplete.

Section 9.0 Site Plan Review

9.3 Major Site Plan Review

Section 9.3.9 requests a narrative summary of any proposed on-site energy efficient measures proposed. Staff notes and appreciates the instillation of SPV (solar pannels) on building rooftops.

Section 12.0 Site Plan Review Design Regulations

12.4 Access; Parking; Transportation

Section 12.4.1.2(d) requires that dumpsters "be located in low visibility areas such as within or behind buildings. All dumpsters shall have a lid, be located on an impervious surface with proper drainage, and

be screened with a gated solid enclosure." Plans do not show a dumpster on site. If one is needed, please ensure that it is properly stored and screened.
Section 12.4.4 dictates that "projects shall be accessible for shuttles and public transportation," and that, "projects near a bus stop are encouraged to provide a bench and shelter". Has the applicant considered the installation of a bench or shelter on Waltham Street to provide access for the A1/A2 Lexpress bus route and connection to the nearby MBTA 76 and 62 bus routes? Also, please consider a safe location for school-aged children to wait for the school bus. School buses will not drive onto the site.

Section 12.4.6.2(a) encourages canopy solar energy systems and water retention in surface parking areas. Encourage applicant to consider above options for planned surface parking.

12.6 Landscaping
The proposed tree plantings shown on the landscape plan dated 1/17/2025 include *Hedera Helix* which is listed on Lexington's prevalent invasive species list. Request that the applicant remove this planting or consider an alternative from the recommended native species plantings list.

The proposed tree plantings shown on the landscape plan dated 1/17/2025 include *Juniperus Chinensis* which is not included on Lexington's recommended plantings list. Revise with an alternative for these plantings.

The plans show plantings of twelve (12) *Juniperus Communis* at the driveway entrance, and nine (9) plantings of *Juniperus Chinensis* in landscaped areas next to parking. Both *Juniperus Communis* and *Juniperus Chinensis* are salt sensitive. Recommend the applicant use a more salt tolerant option to go anywhere that snow/salt accumulation may occur.

Staff recommends using salt tolerant plantings in any area where snow removal/storage will be planned.

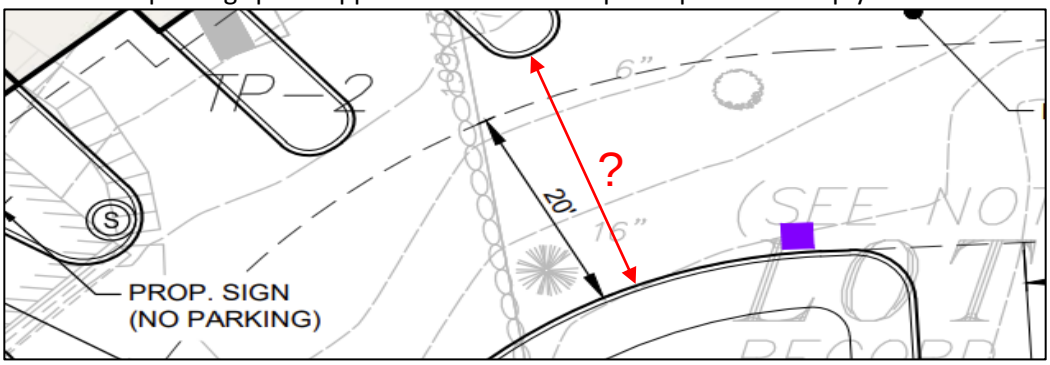
12.8 Outdoor Lighting (and 5.4 of Zoning Bylaw)
Photometrics plans show light spillage across property lines, applicant will need to update plans to comply.

Plans show a 16' high lighting fixtures, request the applicant to consider lowering the height to 12'.

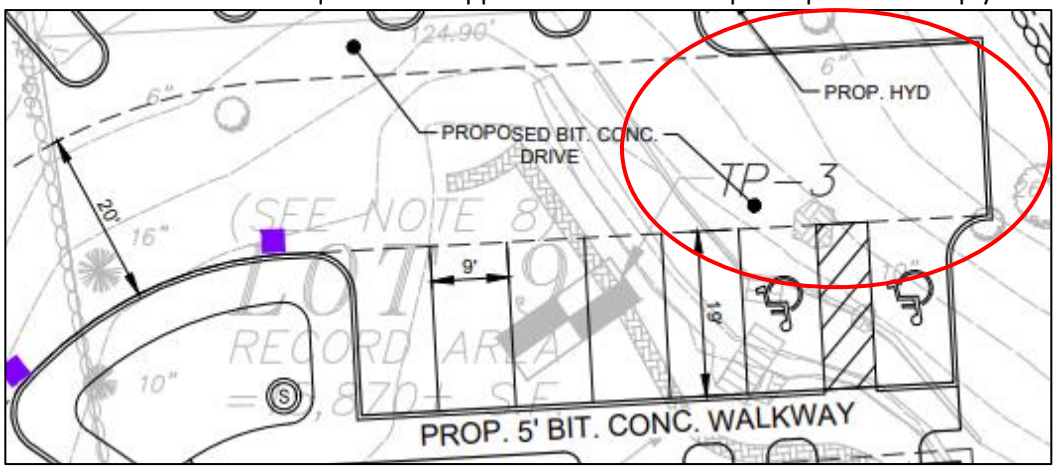
12.9 Utilities
Section 12.9.5.8 says "use stormwater harvesting systems, such as cisterns and ponds, for plant irrigation." The Applicant should explore ways to meet this recommendation.

Town Staff & Board/Committee Comments
Planning: - Please identify which townhouse-style unit and which garden apartment-style unit will be designated as inclusionary dwelling units. - Provide a chart that details the proposed GFA for each individual dwelling unit. This is required to confirm compliance with the zoning bylaw 135-6.9.7.3

- What is the height of the walls in between, and on the sides of, buildings A, B, & C? How can these be maneuvered in reference to the Fire Departement's question about a 250' hose needing to reach around the buildings unimpeded.
- How is trash/recycling collection planned? Will each unit have individual barrels or will the site utilize a dumpster? Where will collection take place?
- Request a plan showing location of trash/recycle pick-up and diagram of how a refuse truck will enter, turn around, and exit the property.
- Short-term bicycle parking is not shown on plans, applicant will need to update to comply.
- Where is the proposed location of the mailboxes? USPS prefers cluster mailboxes, and these must be accessible.
- Please provide a plan showing snow storage and removal.
- It was mentioned in the DRT meeting that the required width of a maneuvering aisle for standard size parking is 22'. Plans show a 20' aisle labeled, which is sufficient for the two-way driveway entering the property (18' requirement), but is not for the maneuvering aisle required to navigate to and from parking spots. Applicant will need to update plans to comply.



- The maneuvering aisle located behind the two handicapped parking spaces does not appear to meet the 22' minimum requirement. Applicant will need to update plans to comply.



Building

- Townhouse-style buildings (A, B, & C) need to provide a second means of egress.
- Some electric water heaters need up to 7' of clearance, and plans locate water heater in room with a height of 6'7". As plans develop ensure that adequate space is provided for utilities.
- Please have a land surveyor stamp/sign the ANG and elevation forms.
- The Building Department will conduct a full code analysis at the time of building permit

Zoning:

- Buildings A & B: The basement floor elevation is located below the ESHGW elevation. CH. 135 § 4.5.4 requires the basement to be located a minimum of 2 ft. above ESHGW unless the applicant provides sufficient evidence that a proposed lesser vertical distance will not impact the structure being proposed in a manner contrary to the purposes of this Section 4.5, any other structures or constructed facilities, or the functions of the natural groundwater system (such as base flow maintenance) and if all of the following conditions are met:
    - Detailed engineering plans, certified by a Registered Professional Engineer showing a foundation and perimeter drain management system and roof stormwater management system(s) that will mitigate and control groundwater discharge and stormwater runoff, are provided;
    - The provided foundation and perimeter drain discharge management system and roof stormwater management system plans have been reviewed by the Building, Conservation, Health and Engineering Departments and comments adequately addressed;
    - Roof drains and downspouts connect to a stormwater management system designed by a Registered Professional Engineer; and
    - The applicant has agreed to pay the fee for consulting services to perform engineering review pursuant to the provisions of MGL Chapter 44, Section 53G.
- Maneuvering aisle width needs to be 22 ft. where there is the 90° parking. Through most of the property there seems to be extra space outside of the marked 20 ft maneuvering aisle but specifically looking at the handicap spaces, there is not 22 ft. there. (also will the last handicap spot have enough space to back out of the spot to then be facing forward to leave the property?)
- Would like to reiterate lighting for security purposes is allowed 11 p.m. -6 a.m., 0.5 ft candles only.

Fire: (Referencing your Site Access Plan Pg. C-203)

- What is the distance from the end location of the truck, to the turnaround cut-out?
- You show the truck having to cross over non-paved areas to negotiate the turnaround. Truck should not have to cross un-paved area.
- Need to show an exit path for a truck leaving the cut-out.
- You need to show that the rear of any of the buildings is reachable by 250/ft of hose from both sides and meeting. This cannot be impeded by retaining walls, or excessive grade.
- What is the grade of the road leading into the development?
- Townhouse style units show access to sprinkler rooms through private entrance, access will need to be provided from the exterior of building as no common area is present.
- Is the sprinkler system for the townhouse units a 13R or a 13D?

Health:

- Applicant will be required to provide a pest control plan and dust management plan during site prep and construction phases.

Tree Committee/Tree Bylaw:

- Staff will review for compliance with tree bylaw when all required materials are submitted. Staff recommends any trees in the setbacks to be removed be replanted on the property with large shade trees and trees similar to the ones removed.

Environmental Services:

- Environmental Services Superintendant recommends that refuse, recycling and organic's collection costs be the responsibility of the developer or property manager.

Historical:

- 9 Bushnell Road is in HC inventory. This application does not propose any changes to the dwelling on the lot, only the lot lines.

Housing:

- Show the proposed locations of the inclusionary units and their parking spaces. Description should include the number of bedrooms and square footage for the market rate units and inclusionary units.
- Will the cost of parking spaces for the garden-style units (since no garage) be separate from the cost of rent? If so, recommend providing cost of parking at a discount for the inclusionary units.

Sustainability and Resilience:

- Solar is proposed on the roofs and composting services shown. Geothermal is mentioned as a consideration.It would be helpful to provide more information on that and what would influence whether it could be implemented.

Engineering:

- Applicant has provided a proposed sewer capacity memo. This is still being reviewed by the Engineering Department.
- Project will need to comply with Lexington's Stormwanter Management Regulations for above-threshold classification, which requires the removal of 90% TSS and 60% TP. See memo from Nitsch Engineering.

Assessing:

- Applicant will be required to file an ANR to combine the lots and reconfigure the lot lines
- When lot reconfiguration is recorded at Registry, town records will be updated with new map and lot number
- Addresses for each unit will be coordinated with Building, Public Safety, Assessing and Engineering Staff. A meeting of these groups will be scheduled following a decision issuance.

Design Comments

Buildings A, B, & C

- Is the rendering uploaded 3/10/2025 the most recent/updated design?
- Prefer originally presented design (from DRT meeting) which included roof parapets that focally divided units and created a more New England regional feel.
- Multiple gables affixed across flat roofs gives off a pseudo-traditional styling that is inconsistent with the neighborhood.
- Windows feel irregularly placed, using random proportionality.
- Roofing shingles shown in original DRT rendering compliment the project's desired feel better than the standing seam roof shown.
- Are there still skylights on the roofs? March 4th submission has them included but March 10th rendering does not show any.
- Side windows are only present on one side of the building, and look out of place.

- The side of the building without windows creates a large continuous unused space that sticks out.

Buildings D & E

- Preferred the design with a cornice and friezes at eaves that was originally presented.
- Window hoods and molding complimented the design, but have been removed.
- Would like to see more welcoming entryways that are open to the air rather than boxed-in.
- The exterior of the stairwell produces two large walls of continuous unused space, one being directly above the entryway to the building.
- Grey siding & brick veneer styling being the same as buildings A, B, & C makes project look monotonous.
- The nondescript building style contrasts desired feel of the neighborhood and project.
- Please provide renderings showing buildings from Waltham Street. (c. 176 § 9.3.2.2)

Photos

Photo 1: GIS map showing the project site

Photo 2: Street view of 287 & 295 Waltham Street

Photo 3: Aerial Photo – April 10, 2024

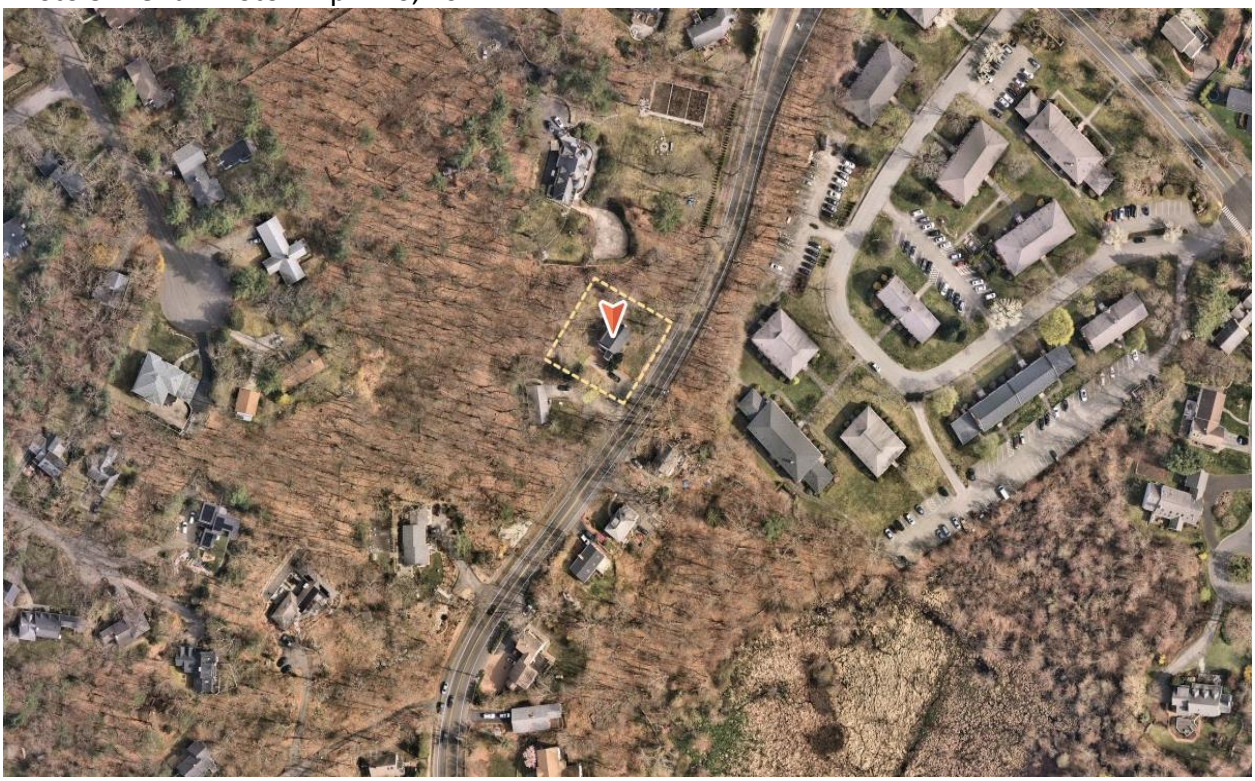


Photo 4: Aerial Photo – October 19, 2024

Photo 5: Staff Site Visit, 3/26/2025

Photo 6: Planning Board and Staff Site Visit, 4/1/2025 (1 of 4)

Photo 7: Planning Board and Staff Site Visit, 4/1/2025 (2 of 4)

Photo 8: Planning Board and Staff Site Visit, 4/1/2025 (3 of 4)

Photo 10: Planning Board and Staff Site Visit, 4/1/2025 (4 of 4)

Nitsch Engineering

2 Center Plaza, Suite 430
Boston, MA 02108-1928
T: 617-338-0063
F: 617-338-6472
www.nitscheng.com

April 4, 2025

Lexington Planning Board
c/o Abby McCabe, AICP
Planning Director
1625 Massachusetts Avenue
Lexington, MA 02420

RE: Nitsch Project #15854.4
First Review Letter
287 & 295 Waltham Street
Lexington, MA

Dear Planning Board Members:

Nitsch Engineering, Inc. (Nitsch) received and reviewed the following information for the 287 & 295 Waltham Street project as part of our initial review:

- Plan set entitled, "Lex Terrace Development, 287 – 295 Waltham Street, Lexington, MA 02421, for Lex Terrace, LLC", dated January 21, 2025;
- Plan entitled, "Lex Terrace Development, 287 – 295 Waltham Street, Lexington, MA 02421, soil Logs Sketch", dated March 3, 2025;
- Project Narrative prepared by Patriot Engineering dated January 24, 2025;
- Zoning Narrative prepared by Nicholson, Sreter & Gilgun, PC dated January 31, 2025; and
- Stormwater Management Report and calculations for a Multi-Family Development at 287 & 295 Waltham Street, Lexington, Massachusetts, prepared by Patriot Engineering, dated January 18, 2025.

Nitsch used the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook, Lexington Stormwater Management Regulations and Standard Engineering Practice as guides in reviewing the stormwater design for the project.

Nitsch's comments are intended to assist the Lexington Planning Board in understanding the proposed project, to identify the technical issues relating to the stormwater design and to make recommendations to the Town of Lexington (the Town) for possible technical improvements to the proposed project.

Nitsch Engineering understands that this project is a c Compact Neighborhood Development under Section 6.9 of the Zoning Bylaw for Special Residential Developments and is also subject to a stormwater permit for an above-threshold project classification under the Stormwater Management Regulations, which is consolidated into the site plan review approval. Section 12.9 of the Planning Board's Regulations require site plan review applications to consolidate the stormwater review into the Planning Board's site plan review.

PROJECT OVERVIEW

Currently, the subject properties have a combined area of approximately 5.7±-acres with a two (2) existing dwellings and driveways. The Applicant is proposing to demolish the existing dwellings and construct five (5) buildings with a total of 15 units, utilities and surface parking areas with a total of 20 parking spaces.

TOWN OF LEXINGTON STORMWATER RULES AND REGULATIONS

1. Section 181-72.B(1)(i)[1] states that a copy of the NPDES Construction General Permit be submitted with the Application. The Limit of work (LOW) is not indicated on the plan. The Applicant should confirm the area of disturbance and whether a NPDES permit is required for the project.

2. Section 181-75.D indicates the requirements for an Operation and Maintenance (O&M) Plan. The submission did include an O&M Plan. However, Nitsch Engineering requests that the Applicant provide an updated O&M Plan based on any revised stormwater calculations and site utility improvements that complies with Section 181-75.

UTILITY COMMENTS

1. The Plan does not indicate any protection bollards and a bollard detail for the proposed transformer. The Plan should be revised indicating protection bollards for the transformer in accordance with electric utility requirements and a detail should be provided.

2. The Plans should be revised to indicate the proposed path for electric, cable and telephone services to the site and buildings.

3. The Plan does not indicate any fire protection services to each of the buildings. The Plan should be revised indicating fire protection services to each of the building, if applicable, along with any applicable details.

4. The Plan indicates that the proposed sewer connection to the existing sewer manhole in Waltham Street will be a drop inlet. Based on the existing invert elevations of that sewer manhole, this new connection may be the second type inlet for that structure. The Applicant should confirm with the Town that the proposed sewer connection to the existing sewer manhole is acceptable. If not, the Plan should be revised accordingly.

5. The Plan does not indicate the proposed cutting & capping of utility services for the two (2) family dwelling units to be demolished. The Plan should be revised indicating the cutting & capping of utility services for the two (2) family dwelling units to be demolished.

6. The Town of Lexington should confirm whether any of the proposed capping of utilities should be performed at their respective utility mains.

7. The Plans indicate the water quality inlet detail have elevations 30+ feet higher than those listed in the drainage design. The Applicant should review and revise accordingly.

8. The Applicant should confirm with the Lexington Fire Department the location and number of fire hydrants to service the site.

DRAINAGE/STORMWATER MANAGEMENT COMMENTS

1. The Plan indicates that the soil logs were performed in December 2018 and June 2019. Nitsch Engineering is not aware of more recent soil testing being performed. Nitsch recommends that more recent soil testing be performed in the vicinity of the proposed infiltration systems and building foundations prior to completing the site plan review process.

DRAINAGE/STORMWATER MANAGEMENT COMMENTS – comments

2. The Plan indicates that the bottom of Subsurface Infiltration System–1 is located two (2) feet above the refusal elevation of 234.7 as indicated in the soil log for Test Pit 3. Nitsch recommends that the Applicant provide a soil mounding analysis.

3. The Plan indicates that the bottom of Subsurface Infiltration System–2 is located two (2) feet above the refusal elevation of 231.8 as indicated in the soil log for Test Pit 4. Nitsch recommends that the Applicant provide a soil mounding analysis.

4. The Plans do not indicate the location of the access/manhole covers for the infiltration system. The Plan should be revised indicating the location and details of the access/manhole covers for the infiltration systems.

5. The subsurface infiltration system details do not indicate the locations and elevations of the inlet and outlet pipes. The Plan should be revised to include the locations and elevations of the inlet and outlet pipes.

6. The detail for the Outlet Control Structure indicates the height of the structure being greater than ten (10) feet tall. Based on the soil test logs, the Applicant should indicate how the unit will installed if refusal is located higher than the bottom of the structure.

7. The Plans do not indicate any overflow device(s) for each of the subsurface infiltration systems. The Applicant should review and revise accordingly.

8. The Plan does not provide any information on the proposed stone walls located on the site and whether there are any subdrainage pipes for the walls and connections to the proposed storm drain systems. The Plan should be revised with details for the proposed stone walls and any storm drainpipe connection requirements.

9. The Plans indicate details for concrete headwalls, concrete headwalls and they do not appear to be used on the site. The Applicant should review and revise accordingly.

10. The Plans indicate the use of area drains, however, no sumps are indicated for the area drains. The Plans should be revised with a sump.

11. The Plans indicate a trench drain detail, however, the location of trench drain(s) for the site are not indicated. The Plans should be revised with the locations of trench drains.

12. The Stormwater Report indicates that the project will remove 90% TSS and is proposing the use of a water quality inlet structure known as Barracuda. The Applicant should provide documentation that this unit will provide 50% TSS Removal.

13. A snow storage plan was not provided by the Applicant. The Applicant should provide a snow storage plan.

14. The Applicant should prove pipe sizing calculations for the storm drain system.

DRAINAGE/STORMWATER MANAGEMENT COMMENTS – comments

15. The Stormwater Report indicates that an exfiltration rate of 2.41 inches per hour (in/hour) was used for the subsurface infiltration systems. As noted above, additional soil testing should be performed in the area of the infiltration systems and Nitsch recommends that permeability testing be performed to indicate the hydraulic conductivity of the soil.

DEP STORMWATER MANAGEMENT STANDARDS

Nitsch provided additional comments in reference to the 10 Stormwater Standards below:

Standard 1: No new untreated stormwater conveyances to wetland resources area. *This Standard does not appear applicable*.

Standard 2: Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. *The Applicant provided information that indicates that this standard has been met; however, some changes to the calculations have been recommended. This standard will be reviewed again once the applicable changes have been made.*

Standard 3: Annual recharge to groundwater. *Nitsch recommends that the Applicant conduct a mounding analysis.*

Standard 4: For new development, stormwater management systems must be designed to remove 80% of the average annual load (post-development conditions) of Total Suspended Solids (TSS). *The Stormwater Report indicates that the project complies to remove 90% TSS, but since Nitsch has recommended that the changes be made to the Stormwater Report, this standard will be reviewed again once the applicable changes have been made.*

Standard 5: Stormwater discharges from areas with higher potential pollutant loads require the use of specific stormwater management Best Management Practices (BMP) (see chart on page 1-8). The use of infiltration practices without pretreatment is prohibited. *This standard does not appear to be applicable.*

Standard 6: Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas. *This Standard does not appear to be applicable.*

Standard 7: Redevelopment of previously developed sites. *The project will not result in a reduction of impervious area in the proposed conditions*.

Standard 8: Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities. *Steep slopes on the property shall be properly stabilized to minimize erosion during construction. Erosion controls shall not be removed until all slopes are stabilized and vegetated.*

Standard 9: All stormwater management systems must have an O & M Plan to ensure that systems function as designed. *A snow storage plan was not provided by the Applicant.*

Standard 10: Prohibition of Illicit Discharges. *The Applicant should provide a signed Illicit Discharge Statement.*

SUMMARY

The Applicant should update the Planning Board of any additional Federal, State and Local permitting requirements needed for the project.

Additional information is required to complete the review of this project. Currently, the project as submitted does not provide sufficient information to show that the proposed project meets the requirements of the Lexington Stormwater and Utility Regulations.

Nitsch recommends the Applicant submit written comments to this letter and provide the additional requested detailed information to the Planning Board for review.

If the Planning Board has any questions, please call.

Very truly yours,

Nitsch Engineering, Inc.

William R. Maher, PE, LSIT
Project Manager

WRM

P:\15000-16999\15854.4 Waltham Street\Civil\Project Data\Reviews\1st Review Letter\15854.4 L1 Lex Terrace - Waltham Street,Lexington Review 2025-04-04 WRM.docx

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Discussion of Annual Town Meeting Article 34: Amendments to §7.4 Village Overlay Districts and Reconsideration of Article 30: Amend the Inclusionary Housing for Special Residential

PRESENTER:

Board Discussion

ITEM NUMBER:

SUMMARY:

Discussion of Annual Town Meeting Article 34: Amendments to §7.4 Village Overlay Districts and Reconsideration of Article 30: Amend the Inclusionary Housing for Special Residential

Article 34: Minor edits suggested by Select Board, revised April 3
Article 30: Floor amendment submitted for reconsideration, April 10

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Board Member & Staff Updates

PRESENTER:

ITEM NUMBER:

SUMMARY:

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Review Summer Meeting Schedule

PRESENTER:

ITEM NUMBER:

SUMMARY:

Suggested dates: Wednesdays June 11, June 25, July 16, August 13, and August 27.

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Review of Draft Meeting Minutes: March 5

PRESENTER:

ITEM NUMBER:

SUMMARY:

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Upcoming Meetings

PRESENTER:

ITEM NUMBER:

SUMMARY:

Thur. April 17, Wednesdays: May 7, May 28

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Adjourn – The meeting will continue until all items are finished. The estimated adjournment time is 10:00 pm.

PRESENTER:

ITEM NUMBER:

SUMMARY:

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025

AGENDA ITEM SUMMARY

LEXINGTON PLANNING BOARD

AGENDA ITEM TITLE:

Zoom Details - https://www.lexingtonma.gov/377/Access-Virtual-Meetings

PRESENTER:

ITEM NUMBER:

SUMMARY:

SUGGESTED MOTION:

FOLLOW-UP:

DATE AND APPROXIMATE TIME ON AGENDA:

4/10/2025