

NEEDHAM PLANNING BOARD

Tuesday, November 17, 2020

7:15 p.m.

Virtual Meeting using Zoom

Meeting ID: **826-5899-3198**

(Instructions for accessing below)

To view and participate in this virtual meeting on your phone, download the “Zoom Cloud Meetings” app in any app store or at www.zoom.us. At the above date and time, click on “Join a Meeting” and enter the following Meeting ID: **826-5899-3198**

To view and participate in this virtual meeting on your computer, at the above date and time, go to www.zoom.us click “Join a Meeting” and enter the following ID: **826-5899-3198**

1. Public Hearing:

7:20 p.m. Amendment to Major Project Site Plan Special Permit No. 99-2: BP 140 Kendrick Street LLC c/o Boston Properties Limited Partnership, 800 Boylston Street, Suite 1900, Boston, MA, Petitioner. (Property located at 140 Kendrick Street, Needham, Massachusetts). Regarding allowance of leasing to multiple tenants and site improvement.

7:40 p.m. Amendment to Major Project Site Plan Special Permit No. 2012-07: The Children’s Hospital Corporation c/o Boston Children’s Hospital, 300 Longwood Avenue, Boston, MA, Petitioner. (Property located at 66 B Street, 360 First Avenue, 410 First Avenue, and 37 A Street, Needham, MA, Needham, Massachusetts). Regarding request of to build out development for Children’s Hospital (see legal notice for more info).

2. Review and Approval of draft Subdivision documents and plans:

Heather Lane Definitive Subdivision: William John Piersiak, William John Piersiak, Trustee of the 768B Chestnut Street Realty Trust, Evelyn Soule Maloomian, and Koby Kemple, Manager of the 766 Chestnut LLC, Petitioners, (Property located at 764, 766, 768-768A, and 768B Chestnut Street, Needham, Norfolk County, Massachusetts).

Heather Lane Extension Definitive Subdivision and Residential Compound: William John Piersiak, Petitioner, (Property located at 768-768A Chestnut Street, Needham, Norfolk County, Massachusetts).

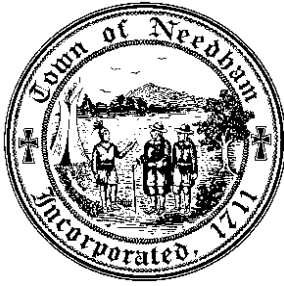
3. Board of Appeals – November 19, 2020.

4. Minutes.

5. Correspondence.

6. Report from Planning Director and Board members.

(Items for which a specific time has not been assigned may be taken out of order.)



LEGAL NOTICE
Planning Board
TOWN OF NEEDHAM
NOTICE OF HEARING

In accordance with the provisions of M.G.L., Chapter 40A, S. 11, and the Needham Zoning By-Laws, Sections 7.4, and Section 3.2 of Major Site Plan Special Permit No. 99-2 dated June 15, 1999, the Needham Planning Board will hold a public hearing on **Tuesday, November 17, 2020 at 7:20 PM Zoom Web ID Number 826-5899-3198** (further instructions for accessing are below), regarding the application of BP 140 Kendrick Street LLC c/o Boston Properties Limited Partnership, 800 Boylston Street, Suite 1900, Boston, MA, for a Special Permit under Site Plan Review, Section 7.4 of the Needham Zoning By-Law.

The subject property is located at 140 Kendrick Street, Needham, MA, shown on Assessor's Map No. 300 as Parcels 1 and 3, and containing 621,402 square feet in the New England Business Center Zoning District. The requested Major Project Site Plan Special Permit Amendment would, if granted, permit the Petitioner to renovate the existing single tenant space to allow for multiple tenants to lease buildings. Exterior improvements are limited to adding entrance locations to the buildings, patio improvements, an added trail linkage to Cutler Lake, accessible parking and landscape improvements at the new entrance locations, and a service walkway at the rear of Building A.

In accordance with the Zoning By-Law, Section 7.4, a Major Project Site Plan Review is required. In accordance with Major Project Site Plan Special Permit No. 99-2, Section 3.2, as amended, further site plan review is required.

To view and participate in this virtual hearing on your phone, download the "Zoom Cloud Meetings" app in any app store or at www.zoom.us. At the above date and time, click on "Join a Meeting" and enter the following Meeting ID: 826-5899-3198

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The application may be viewed at this link: <https://www.needhamma.gov/planningapplication>. Interested persons are encouraged to attend the public hearing and make their views known to the Planning Board. This legal notice is also posted on the Massachusetts Newspaper Publishers Association's (MNPA) website at (<http://masspublicnotices.org/>).

NEEDHAM PLANNING BOARD

Needham Times: October 29, 2020 and November 5, 2020.

TOWN OF NEEDHAM
MASSACHUSETTS



500 Dedham Avenue
Needham, MA 02492
781-455-7550

RECEIVED TOWN CLERK
NEEDHAM, MA 02492
2020 OCT 28 PM 2:17

PLANNING BOARD

APPLICATION FOR SITE PLAN REVIEW

Project Determination: (circle one) Major Project Minor Project

This application must be completed, signed, and submitted with the filing fee by the applicant or his representative in accordance with the Planning Board's Rules as adopted under its jurisdiction as a Special Permit Granting Authority. Section 7.4 of the By-Laws.

Location of Property 140 Kendrick Street
Name of Applicant BP 140 Kendrick Street LLC c/o Boston Properties Limited Partnership
Applicant's Address 800 Boylston Street, Suite 1900 - Boston MA 02199
Phone Number 617-236-3392

Applicant is: Owner X Tenant _____
Agent/Attorney _____ Purchaser _____

Property Owner's Name BP 140 Kendrick Street LLC c/o Boston Properties Limited Partnership
Property Owner's Address 800 Boylston Street, Suite 1900 - Boston MA 02199
Telephone Number 617-236-3392

Characteristics of Property: Lot Area 621,402 sf Present Use Office
Map # 30 Parcel # 1,3 Zoning District New England
Business Center

Description of Project for Site Plan Review under Section 7.4 of the Zoning By-Law:

The 140 Kendrick Street Project was originally approved and constructed pursuant to Special permit/Site Plan Review issued by the Planning Board on June 15th, 1999. The current project consists of renovating the existing single tenant office space to allow multiple tenants to lease the buildings. Exterior improvements are limited to adding entrance locations to the buildings, patio improvements, and accessible parking & landscape improvements at the new entrance locations.

Signature of Applicant (or representative)

Address if not applicant

Telephone # (617) 617-512-0319 (617) 617-296-3333

Owner's permission if other than applicant

BP 140 KENDRICK STREET LLC

By Frederick J. DeAngelis

FREDERICK J. DEANGELOS SR VP + COUNSEL

SUMMARY OF PLANNING BOARD ACTION

Received by Planning Board _____ Date _____

Hearing Date _____ Parties of Interest Notified of Public Hearing _____

Decision Required by _____ Decision/Notices of Decision sent _____

Granted _____

Denied _____ Fee Paid _____ Fee Waived _____

Withdrawn _____

NOTE: Reports on Minor Projects must be issued within 35 days of filing date.

BOSTON PROPERTIES, INC.

Assistant Secretary's Certificate

RECEIVED TOWN CLERK
NEEDHAM, MA 02452
2020 OCT 28 PM 2:17

The undersigned, being the duly elected, qualified and acting Assistant Secretary of Boston Properties, Inc., a Delaware corporation (the "Corporation"), hereby certifies that Frederick J. DeAngelis is a duly elected, qualified and acting Senior Vice President of the Corporation, and has the requisite authority, on behalf of the Corporation in its capacity as the general partner of Boston Properties Limited Partnership, a Delaware limited partnership, in its capacity as the sole member and manager of BP 140 Kendrick Street LLC, a Delaware limited liability company, to negotiate, execute and deliver an Application for Modification of the June 15, 1999 Special Permit/Site Plan Review with the Town of Needham, acting by and through its Planning Board, with respect to the 140 Kendrick Street, Needham, Massachusetts development, with such terms as such officer may deem necessary or advisable.

IN WITNESS WHEREOF, the undersigned has executed this Assistant Secretary's Certificate as of this 23 day of October, 2020.



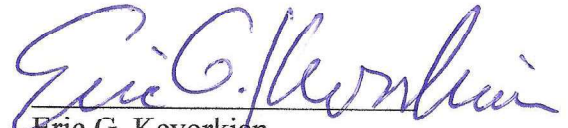
Eric G. Kevorkian
Senior Vice President,
Senior Corporate Counsel &
Assistant Secretary

BOSTON PROPERTIES, INC.

Assistant Secretary's Certificate

The undersigned, being the duly elected, qualified and acting Assistant Secretary of Boston Properties, Inc., a Delaware corporation (the "Corporation"), hereby certifies that Frederick J. DeAngelis is a duly elected, qualified and acting Senior Vice President of the Corporation, and has the requisite authority, on behalf of the Corporation in its capacity as the general partner of Boston Properties Limited Partnership, a Delaware limited partnership, in its capacity as the sole member and manager of BP 140 Kendrick Street LLC, a Delaware limited liability company, to negotiate, execute and deliver an Application for Modification of the June 15, 1999 Special Permit/Site Plan Review with the Town of Needham, acting by and through its Planning Board, with respect to the 140 Kendrick Street, Needham, Massachusetts development, with such terms as such officer may deem necessary or advisable.

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Eric G. Kevorkian
Senior Vice President,
Senior Corporate Counsel &
Assistant Secretary

BP 140 KENDRICK STREET LLC
C/O BOSTON PROPERTIES, INC.
800 Boylston Street
Boston, MA 02199

FREDERICK J. DEANGELIS, ESQUIRE
Senior Vice President & Senior Counsel

October 15, 2020

Needham Planning Board
500 Dedham Avenue
Needham, Massachusetts 02492
Attn: Lee Newman
Planning Director

Re: 140 Kendrick Street, Needham MA
Application of BP 140 Kendrick Street LLC for Malfunction of Site Plan
Special Permit

Dear Board Members:

By Decision of the Needham Planning Board filed with the Needham Town Clerk on or about June 17, 1999 (Application 99-2), a Site Plan Special Permit for the 140 Kendrick Street Project was granted to the predecessor in title to the current owner, BP 140 Kendrick Street LLC (an affiliate of Boston Properties and herein called the "Applicant"). The Applicant plans to convert the 140 Kendrick Street Project from a single tenant to a multi-tenant project. Exterior improvements are limited to adding entrance locations to the buildings, patio improvements, and accessible parking and landscape improvements at the new entrance locations (the "Improvements").

The Applicant has filed a Notice of Intent with the Needham Conservation Commission and an Application with the Needham Design Review Board.

A hearing before the Conservation Commission was held on October 8, 2020 at which all matters were addressed and satisfactorily answered. The hearing was continued in order to obtain a Massachusetts DEP File Number.

The Design Review Board hearing is scheduled for October 19, 2020.

Page 2
October 15, 2020

The Applicant is submitting herewith an Application seeking a modification of the 1999 Site Plan Special Permit to allow the construction of the Improvements, all as shown on the plans submitted with the Application.

Should you have any questions or need additional information, please do not hesitate to call me (cell: 617-512-0319 or email: rdeangelis@bxp.com), or our Civil Engineer, Nick Skoly of VHB (cell: 401-595-6442 or email: nskoly@vhb.com).

Very truly yours,



Frederick J. DeAngelis

cc: David C. Provost
Madeleine C. Timin, Esq.

TOWN OF NEEDHAM
MASSACHUSETTS



500 Dedham Avenue
Needham, MA 02492
781-455-7550

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BP 140 KENDRICK STREET LLC

By Frederick J. DeAngelis

FREDERICK J. DEANGELIS SR VP + COUNSEL

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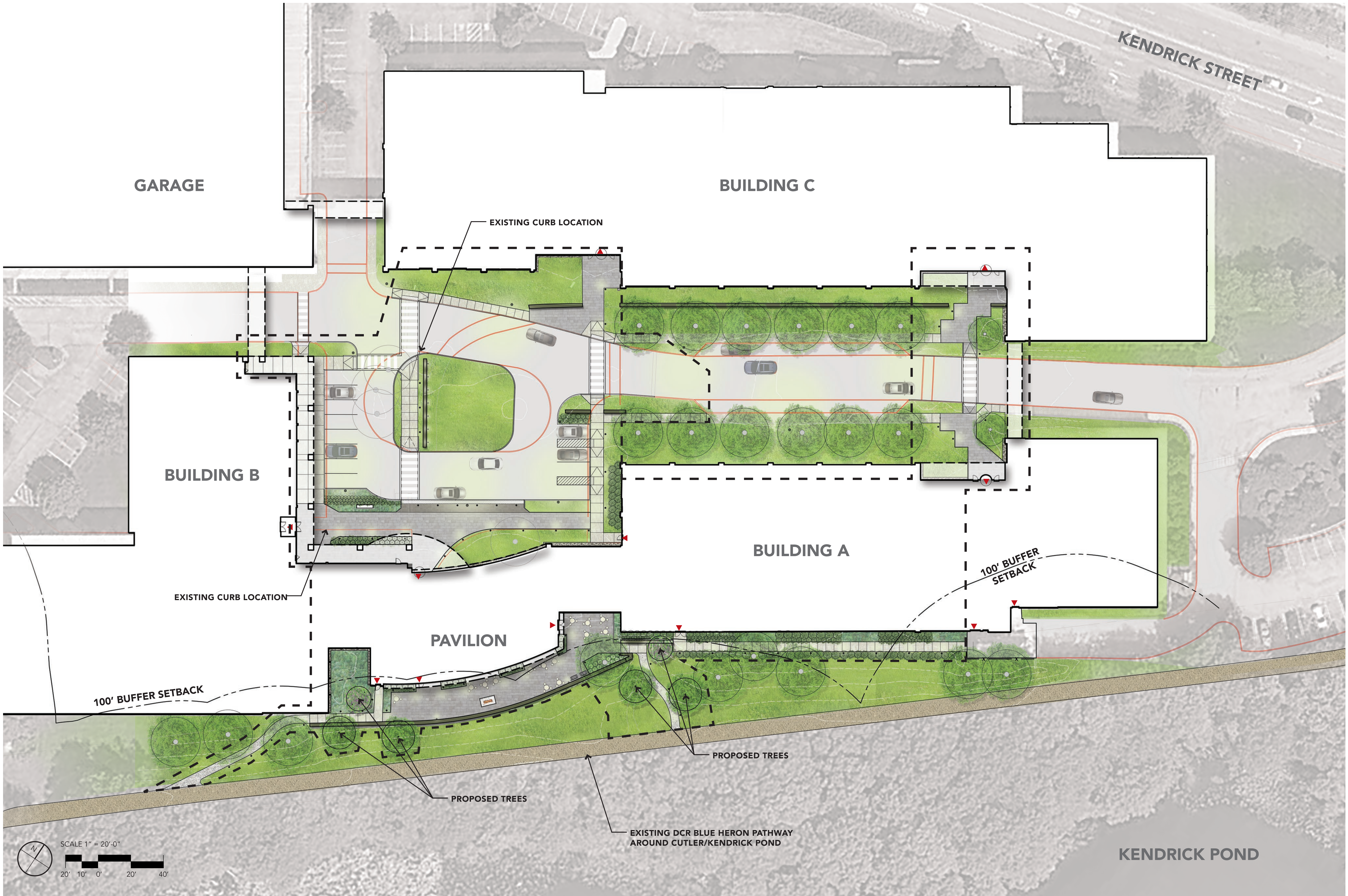
Granted _____

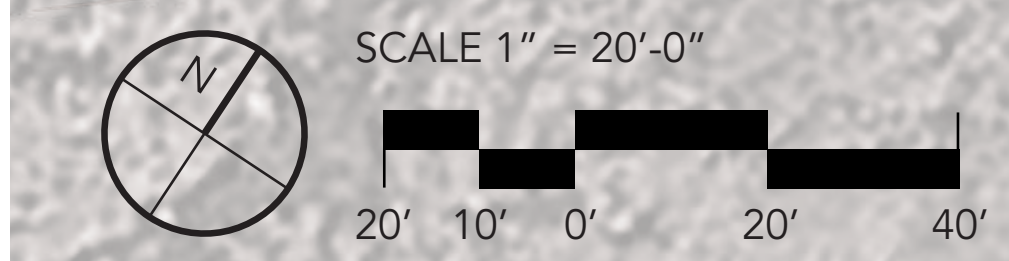
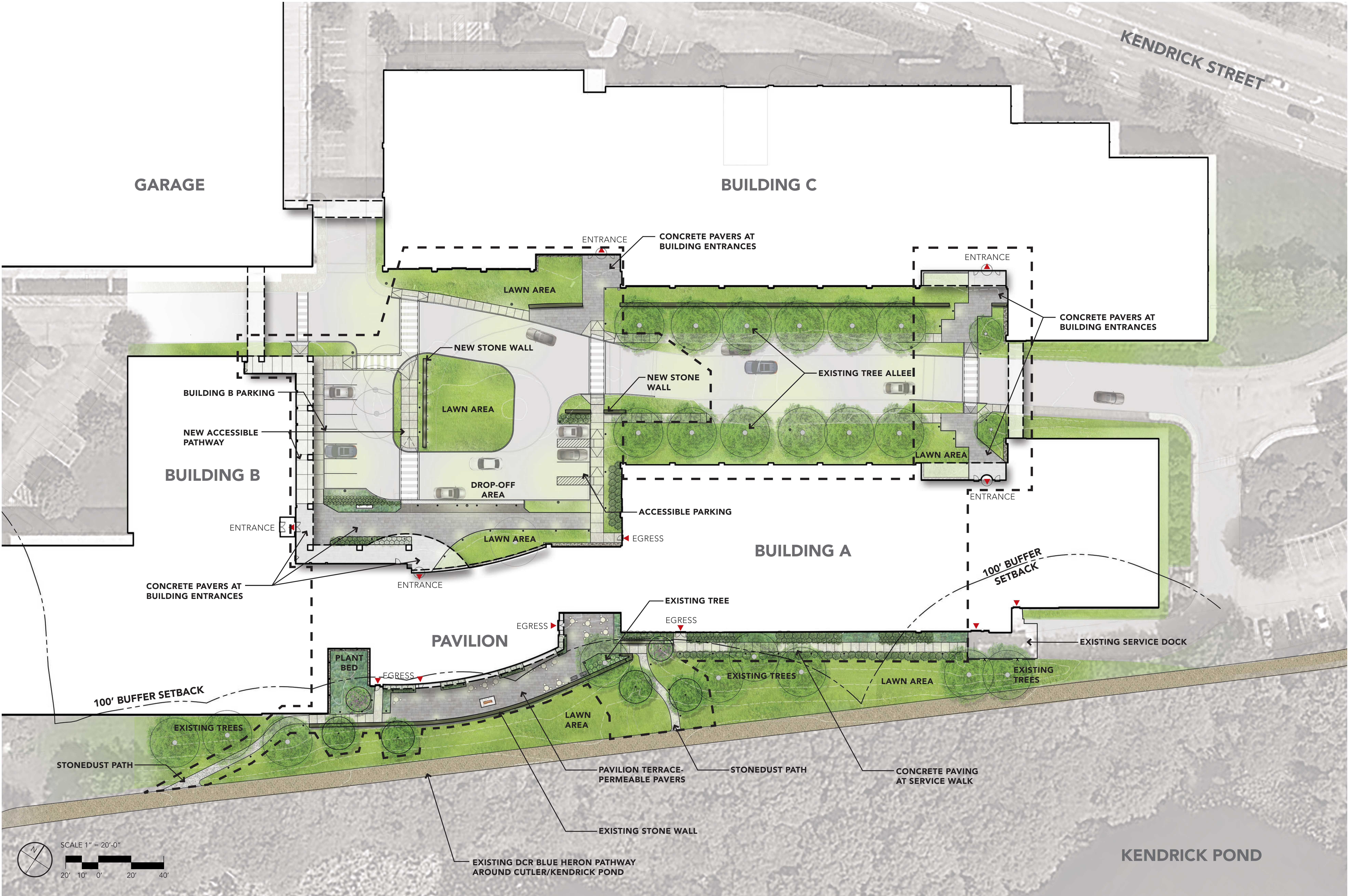
Denied _____

Fee Paid _____ Fee Waived _____

Withdrawn _____

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Copley Wolff Design Group
Landscape Architects & Planners

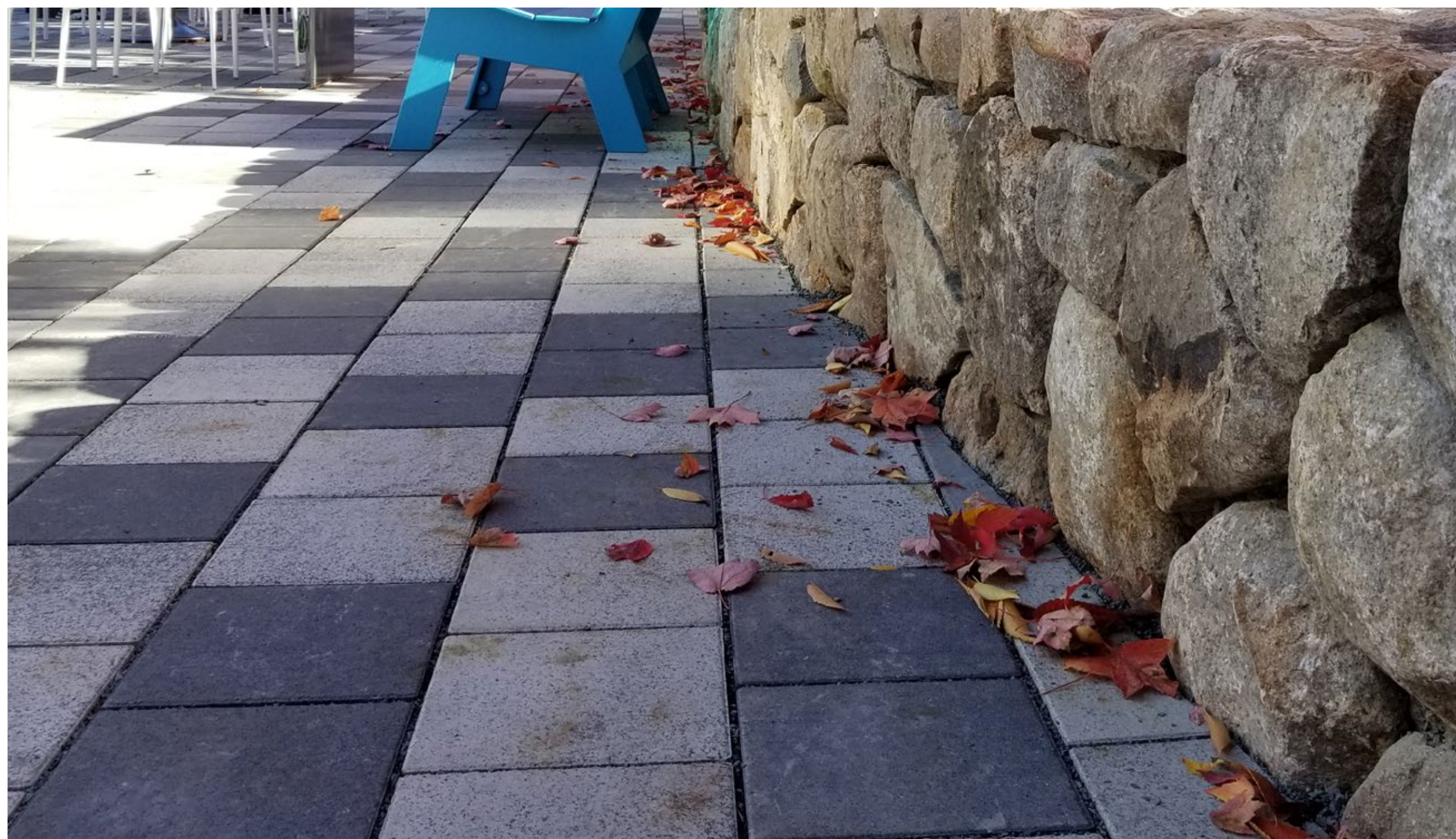
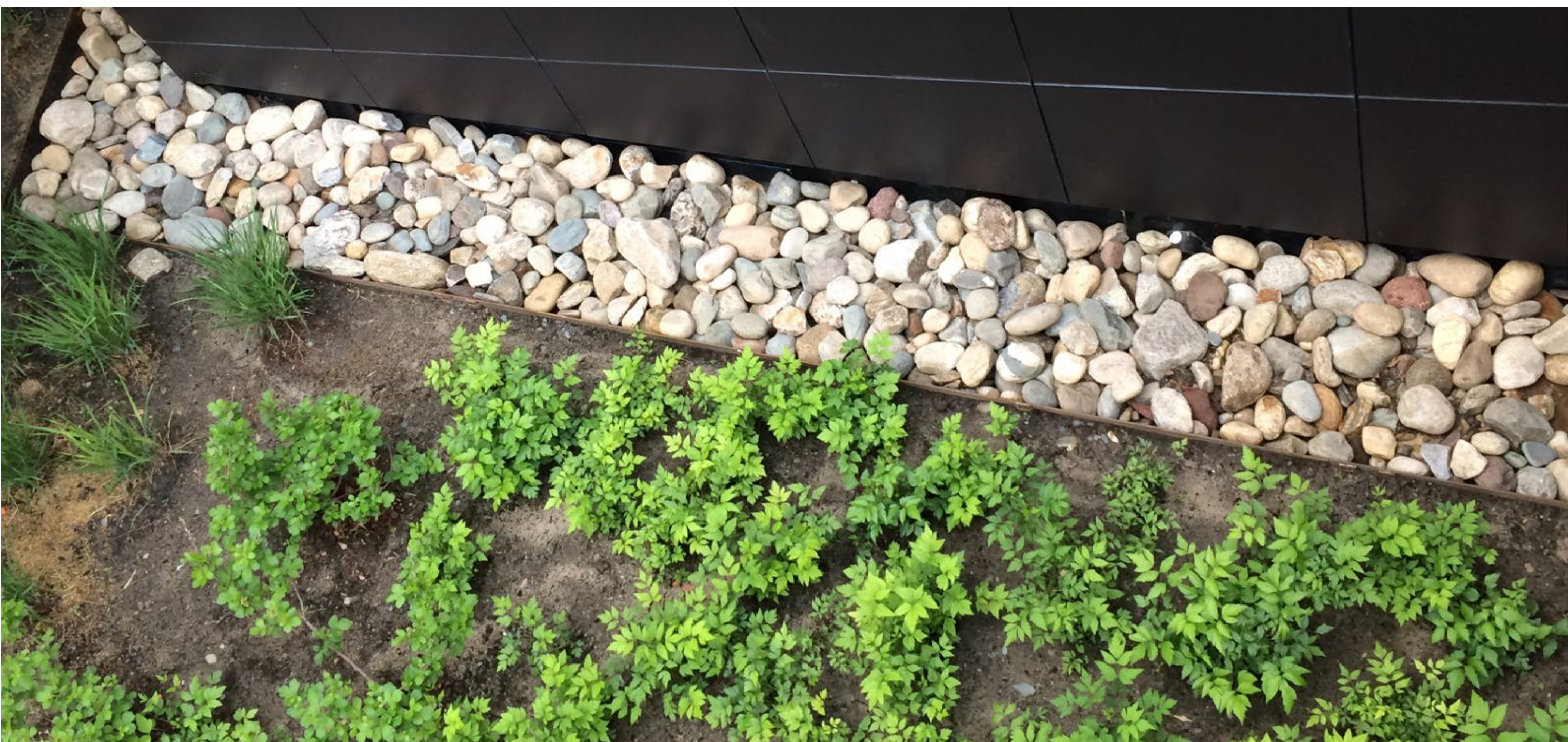
140 KENDRICK STREET

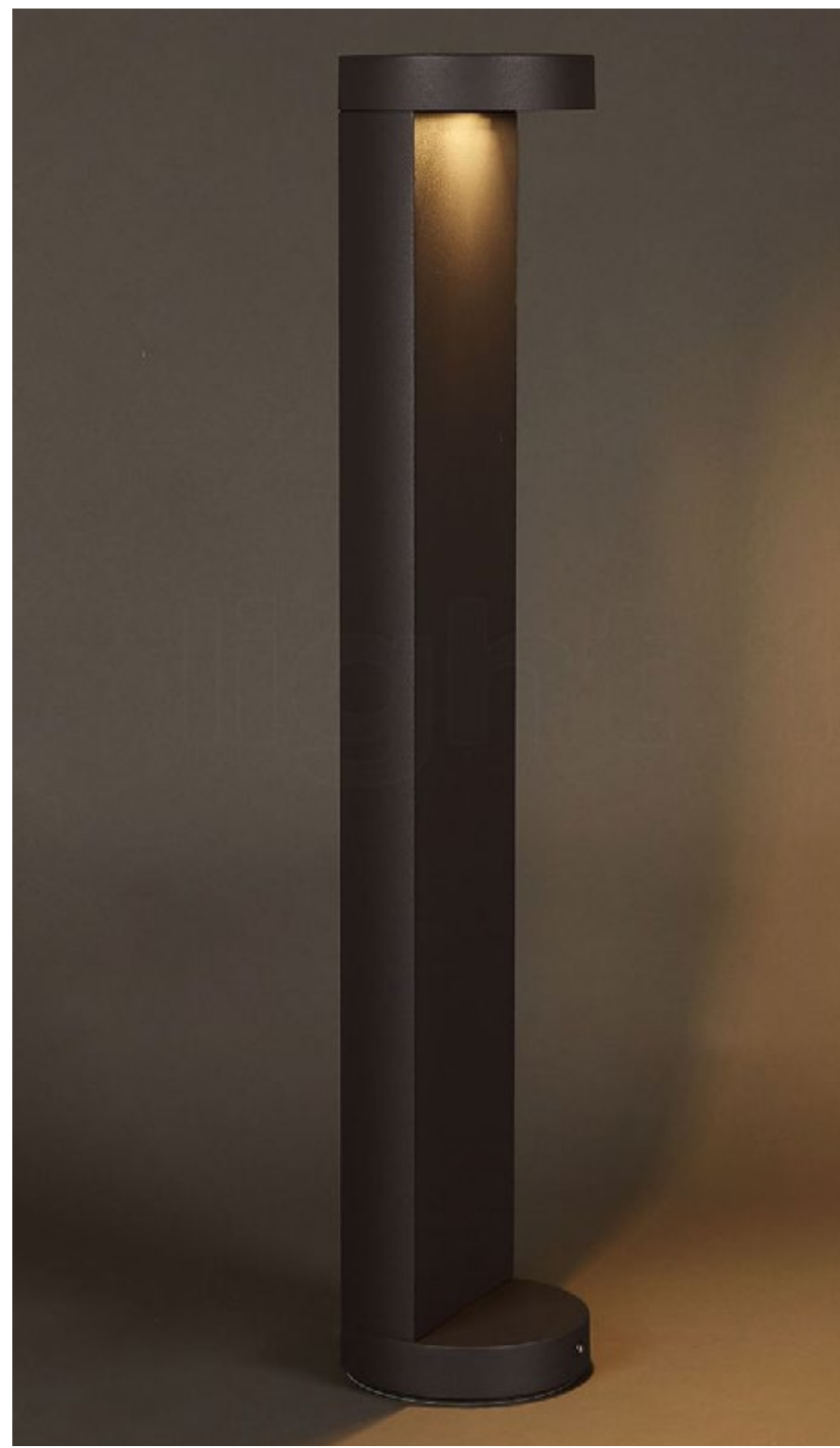
Boston Properties
Needham, MA

PROPOSED PLAN RENDERING

OCTOBER 19, 2020







Copley Wolff Design Group
Landscape Architects & Planners

140 KENDRICK STREET

Boston Properties
Needham, MA

AMENITY PRECEDENT PHOTOS - TERRACE, TECHNOLOGY, PATHWAY LIGHTING, PERMEABLE PAVERS, FIRE TABLE

OCTOBER 19, 2020



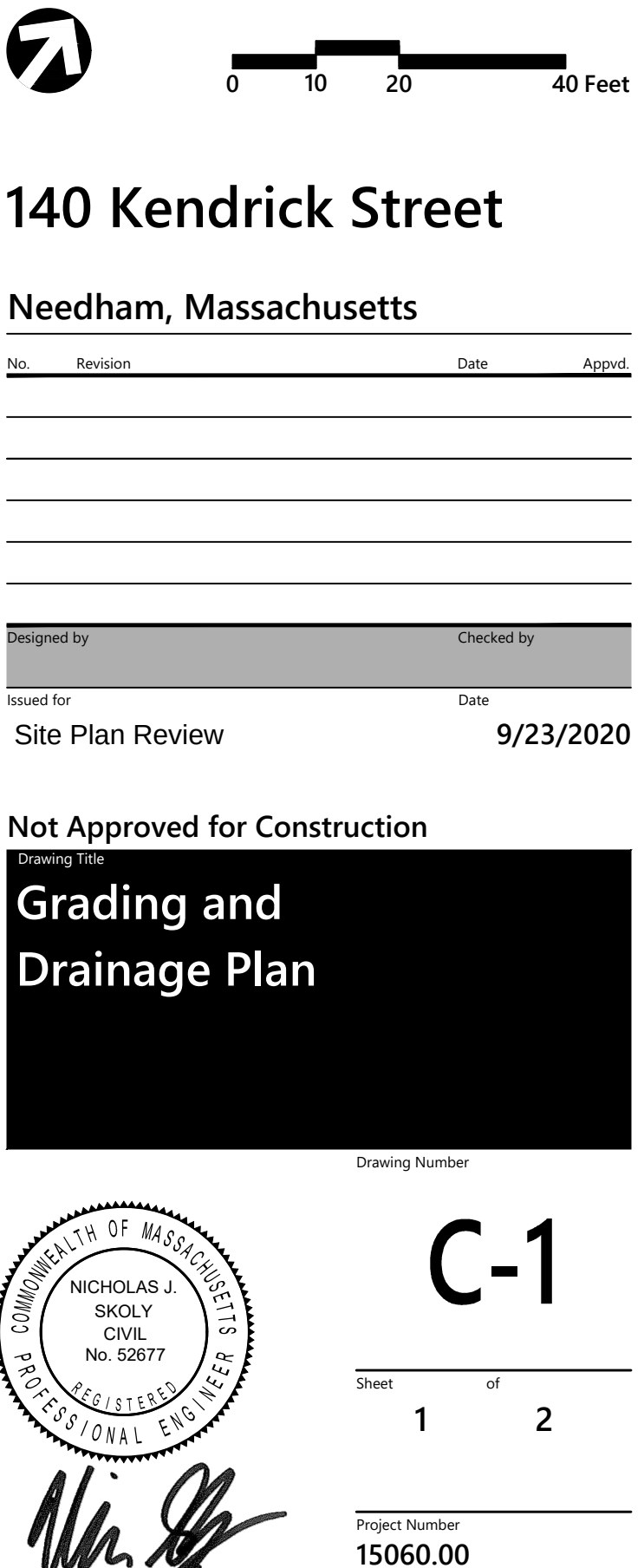


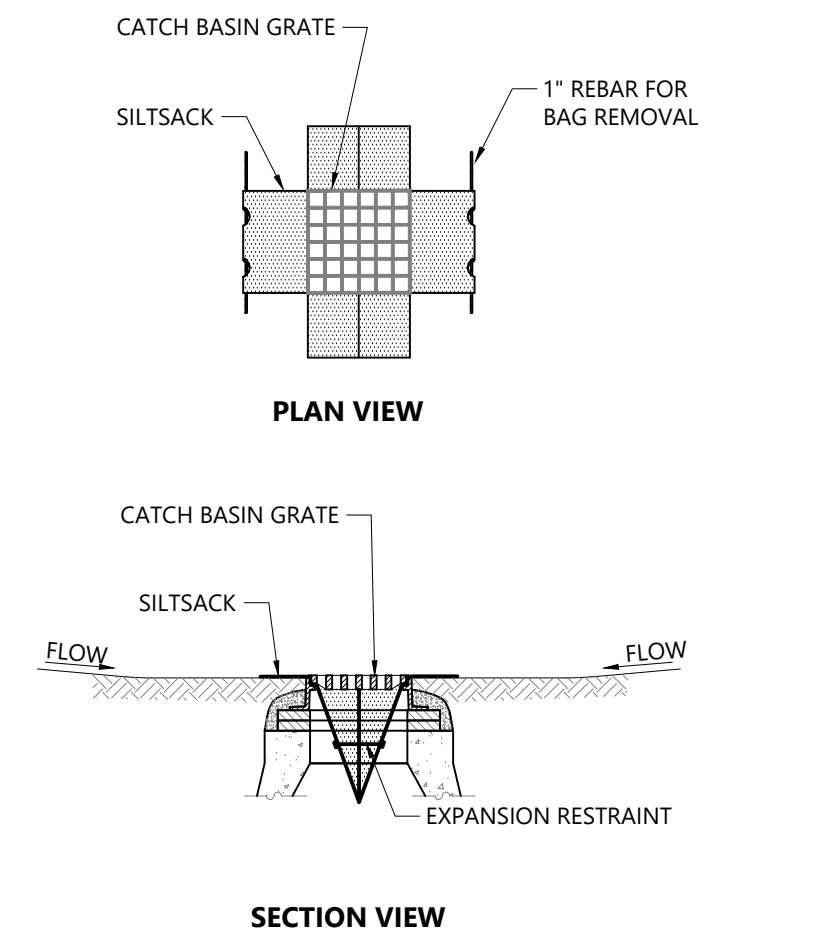
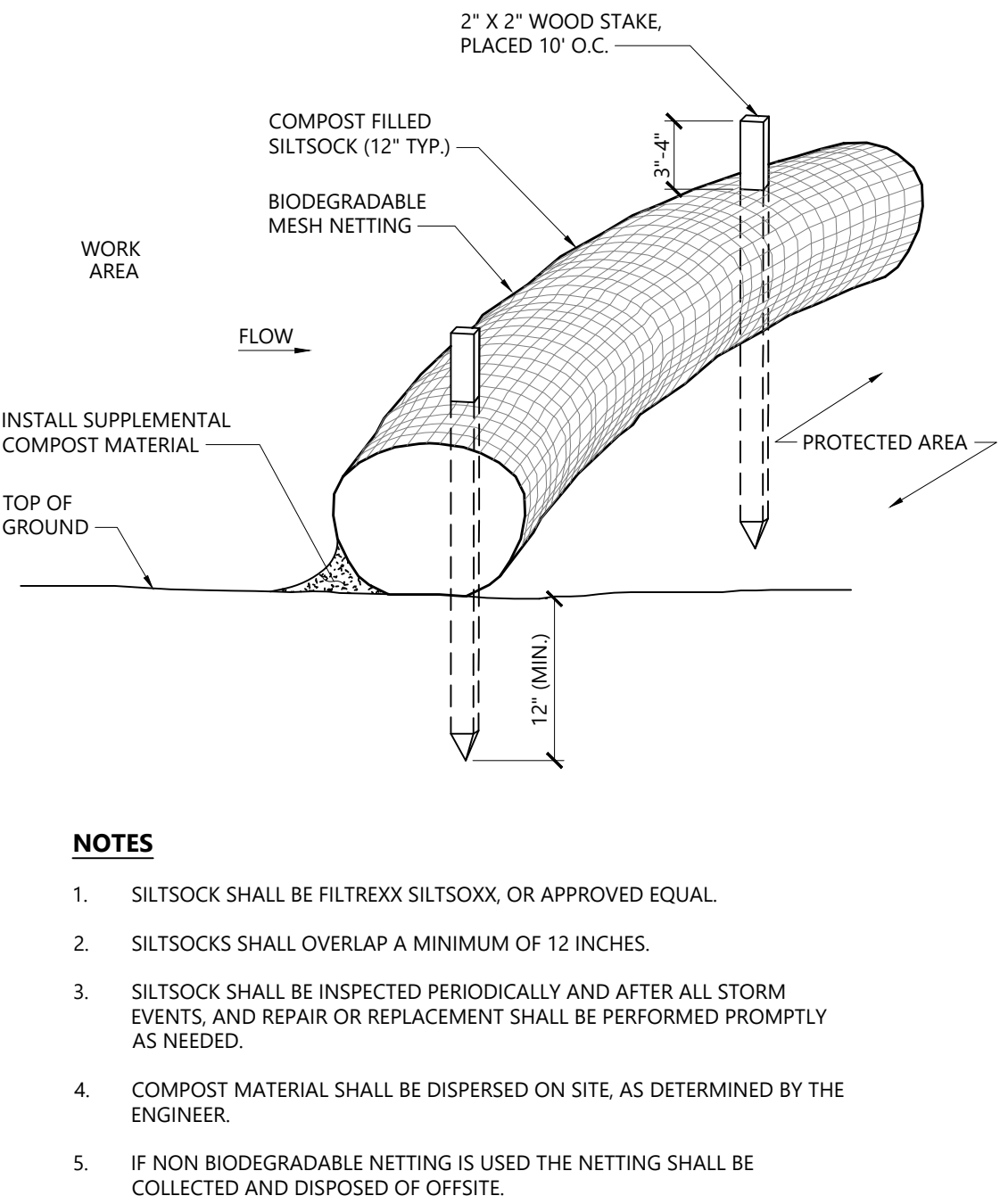
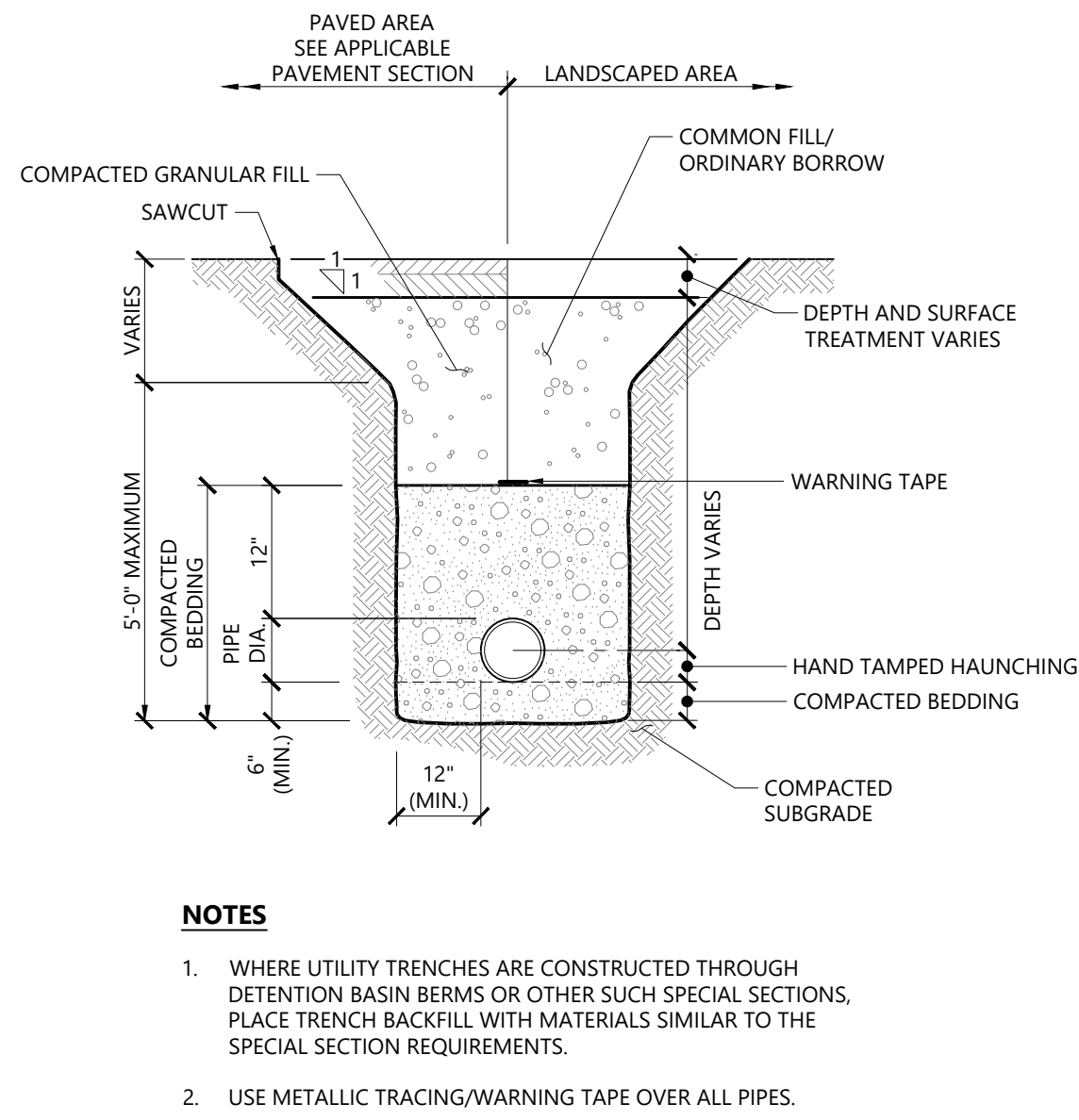
Description	Spaces	
	Existing	Provided
STANDARD SURFACE SPACES	187	182
COMPACT SURFACE SPACES	20	27
STANDARD STRUCTURE SPACES	613	611
COMPACT STRUCTURE SPACES	514	514
TOTAL SPACES	1334	1334

ALLOWABLE COMPACT PERCENTAGE= 50%
541 / 1,334 = 40.6%

ADA Requirements

Description	Spaces		
	Required	Existing	Provided
STANDARD ADA SPACES	20	18	20
VAN ACCESSIBLE SPACES	4	4	4
TOTAL SPACES	24	22	24

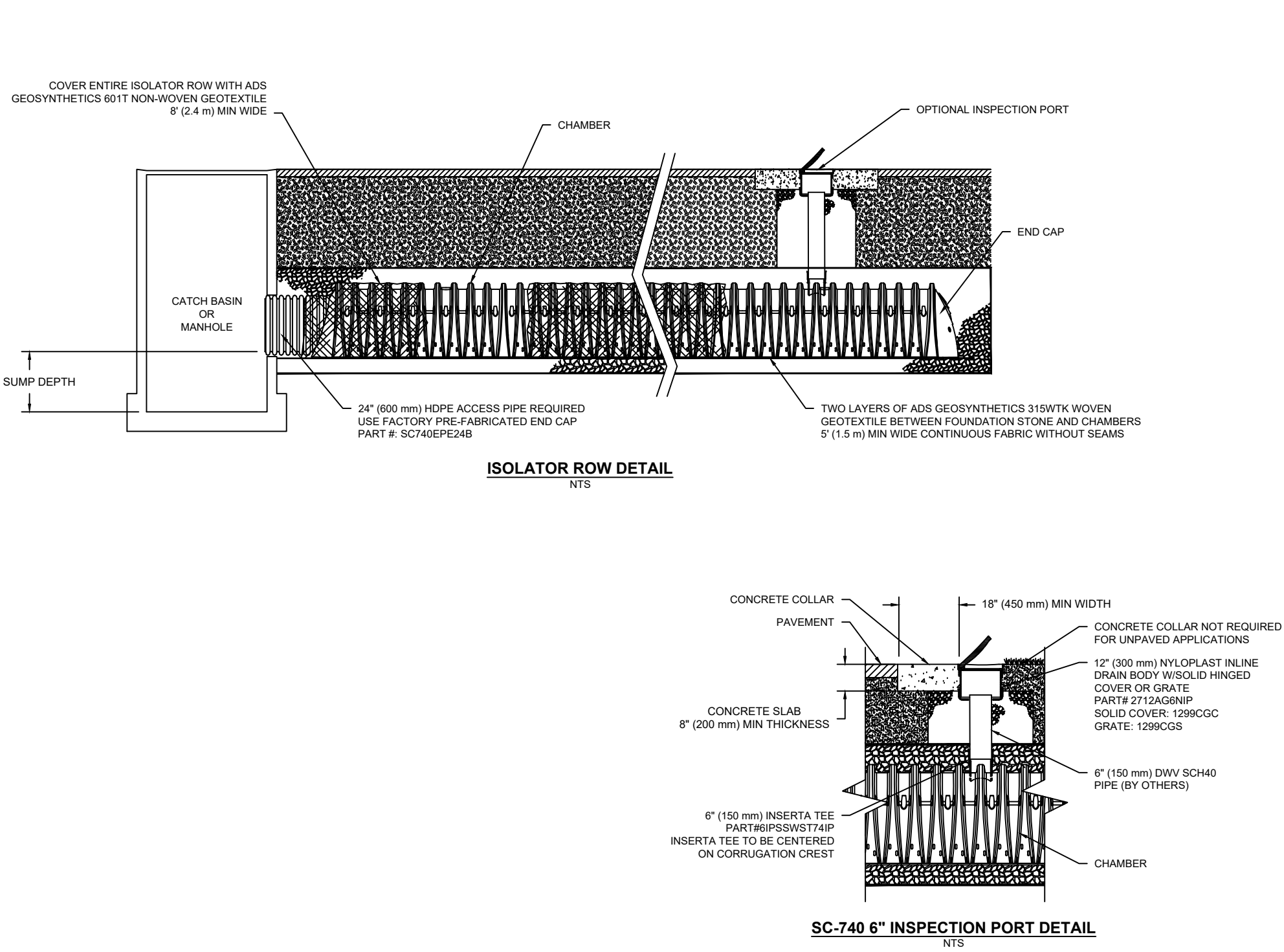




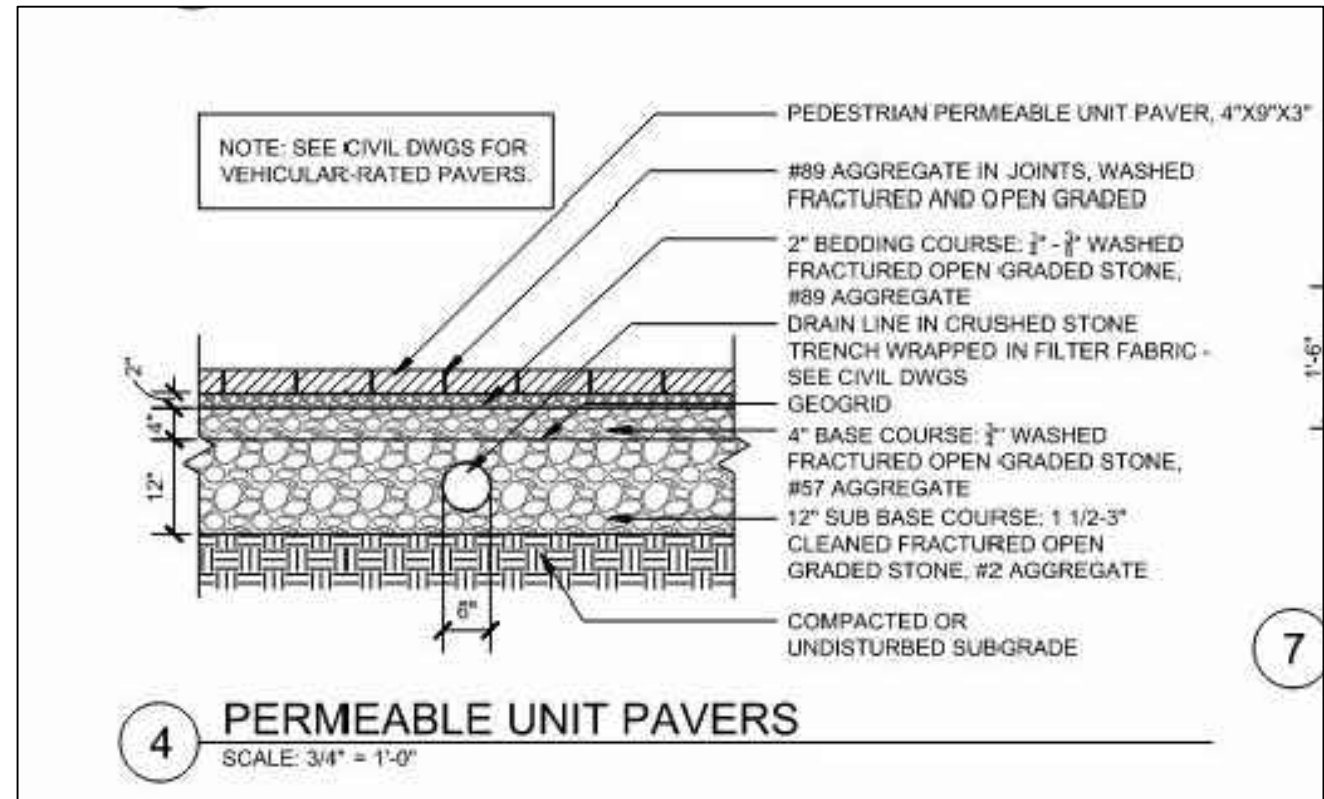
Utility Trench 1/1/1
 N.T.S. Source: VHB LD_301

Siltsock - Erosion Control Barrier		1/16
N.T.S.	Source: VHB	LD_658

Siltsack Sediment Trap		1/16
N.T.S.	Source: VHB	LD_674



Area Drain (AD)		9/17
N.T.S.	Source: VHB	LD 197



Drawing Number

Parking Summary Chart

Description	Spaces	
	Existing	Provided
STANDARD SURFACE SPACES	187	182
COMPACT SURFACE SPACES	20	27
STANDARD STRUCTURE SPACES	613	611
COMPACT STRUCTURE SPACES	514	514
TOTAL SPACES	1334	1334

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STANDARD ADA SPACES	20	18	20
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TOTAL SPACES	24	22	24



140 Kendrick Street

Needham, Massachusetts

No.	Revision	Date	App'd.
-----	----------	------	--------

Designed by	Checked by
-------------	------------

Issued for	Date
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Site Plan Review	9/23/2020
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Not Approved for Construction

Parking Plan



Nick Skidly

C-3

Sheet 3 of 2

Project Number
15060.00

LANDSCAPE MATERIAL NOTES

1. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS AND NOTES TO DETERMINE THE TOTAL SCOPE OF WORK AND ALL REQUIRED COORDINATION.
2. THE CONTRACTOR IS RESPONSIBLE FOR A THOROUGH SITE EXAMINATION TO SATISFY HIM OR HERSELF AS TO THE ACTUAL SITE CONDITIONS BEFORE SUBMISSION OF BIDS.
3. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
4. CONTRACTOR SHALL ARRANGE PRE-INSTALLATION CONFERENCES AT PROJECT SITE FOR STONE WALLS AND PAVEMENT WORK. ATTENDEES SHALL INCLUDE OWNER'S REPRESENTATIVE, LANDSCAPE ARCHITECT, GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS DIRECTLY CONCERNED WITH THE WORK.
5. CONTRACTOR SHALL PREPARE SUBMITTALS TO THE LANDSCAPE ARCHITECT FOR ALL COMPONENTS OF THE FINISHED WORK, INCLUDING SHOP DRAWINGS, PRODUCT DATA, MATERIAL CERTIFICATIONS, MIX DESIGNS AND SAMPLES.
6. CONTRACTOR SHALL FURNISH AND INSTALL CONSTRUCTED SAMPLES (MOCK-UPS) DEMONSTRATING ALL COMPONENTS OF THE DESIGN, INCLUDING FINISHED EXPOSED EDGES AND SURFACES, COLORS AND JOINTING FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTING FINAL WORK. MOCK-UPS MAY BE PART OF THE FINAL CONSTRUCTION. MOCK-UPS SHALL BE MAINTAINED AND PROTECTED THROUGHOUT THE DURATION OF THE PROJECT AND WILL SERVE AS PROJECT STANDARD. CONTRACTOR SHALL DEMOLISH AND RECONSTRUCT MOCK-UP UNTIL APPROVAL FROM LANDSCAPE ARCHITECT. MOCK-UPS SHALL INCLUDE: ONE FULL HEIGHT AND WIDTH BY 6' LONG STONE WALL SECTION AND ONE 6' X 6' PANEL OF CONCRETE PAVEMENT. THE DIMENSIONS OF PAVEMENT JOINTS AS SHOWN ON THE DRAWINGS ARE TO THE CENTER LINE OF EACH TYPE OF JOINT EXCEPT WHERE PAVEMENT MEETS A VERTICAL FACE; AT THIS LOCATION DIMENSIONS ARE TO THE VERTICAL FACE. THE DIMENSIONS SHOWN ON DRAWINGS SHOW DESIGN INTENT AND MUST BE FIELD VERIFIED PRIOR TO PREPARATION OF SHOP DRAWINGS. ALL ALIGNMENTS SHALL BE INSTALLED AS SHOWN.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING THE LOCATIONS OF ALL EXISTING SITE ELEMENTS TO BE RESET IN THEIR SAME HORIZONTAL LOCATION.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE INSIDE OR OUTSIDE OF LIMIT OF WORK LINE DUE TO HIS/HER CONSTRUCTION OPERATIONS.
10. STORAGE AREAS FOR THE GENERAL CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE LOCATED WITHIN THE LIMITS OF WORK AS APPROVED BY THE LANDSCAPE ARCHITECT.
11. WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING WITH NEW CONSTRUCTION.
12. AT ALL LOCATIONS WHERE EXISTING BITUMINOUS CONCRETE PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAW CUT TO A CLEAN SMOOTH EDGE.
13. ALL EXISTING LIGHT POLES AND LIGHT BOLLARDS SHALL BE SAVED FOR OWNER FOR RELOCATION
14. EXISTING LIGHTS AND FLAG POLES SHALL BE SAVED FOR OWNER

MATERIALS LEGEND

CONCRETE PAVING

UNIT PAVERS TYPE 1

PERMEABLE UNIT PAVERS TYPE 2

UNIT PAVERS TYPE 3

STONE DUST PATH

STONE WALL, EXISTING TO REMAIN

STONE WALL, PROPOSED

FIRE PIT IN TABLE

EX-1 WALL WASH LIGHT - MP LIGHTING L01

EX-3 TREE UPLIGHT - BK LIGHTING DELTA STAR

EX-4 BOLLARD LIGHT - BEGA 99058

EX-6 TAPE LIGHT BELOW FIRE PIT - OPTIC ARTS FLEX AC 4

EX-6 POLE LIGHT, MATCH EXISTING. SEE CIVIL DRAWINGS

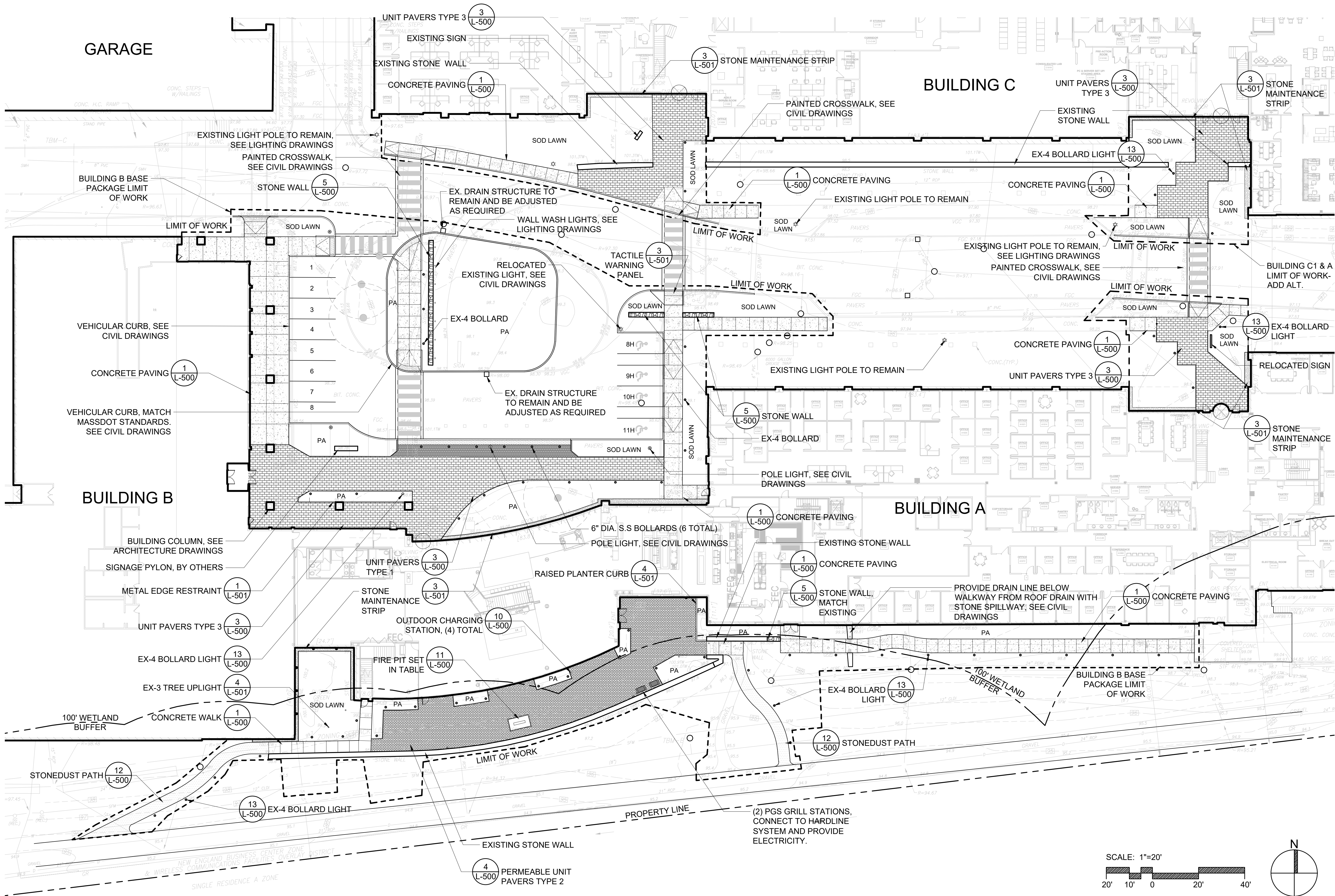
EXISTING POLE FIXTURE

PA PLANTING

PAVER SCHEDULE - HANOVER

TYPE	PRODUCT	PERMEABILITY	SIZE (LXWXD)	COLOR	TOTAL SF
1	PREST PAVERS	NON-PERMEABLE	3.25" X 18" X 4"	STANDARD/TUDOR FINISH	395
2	PERMEABLE 12" X 18"	PERMEABLE	12" X 18" X 4"	STANDARD/TUDOR FINISH	3,350
3	PREST PAVERS	NON-PERMEABLE	12" X 36" X 4"	STANDARD/TUDOR FINISH	7,035

1. ALL CONCRETE PAVERS WILL BE SELECTED FROM THE RANGE OF STANDARD MANUFACTURER COLORS
2. ALL PAVERS SHALL BE GAUGED



Consultant

Notes

DESIGN PACKAGE	2/20/2012
SCHEMATIC DESIGN	2/20/2012
Issued/Revision	XXXXMMDD

Permit/Seal

PRELIMINARY
NOT FOR
CONSTRUCTION

Scale 1"=20'-0"
Project No. 2012

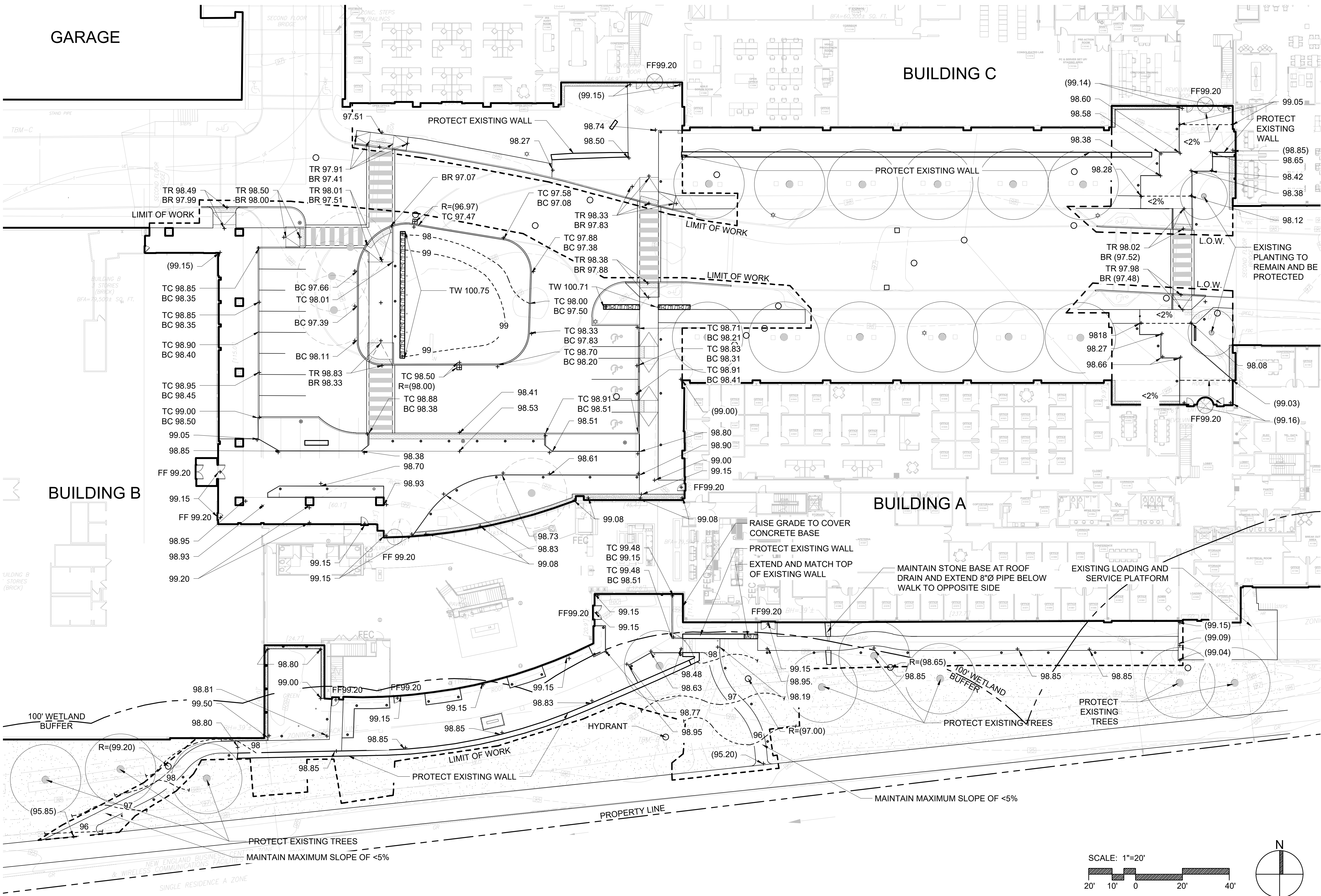
LANDSCAPE
MATERIALS PLAN

L-100

1. SEE CIVIL ENGINEERING PLANS FOR FINAL GRADING.
2. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVING AREAS MUST PITCH TO DRAIN AT MIN. PITCH OF $\frac{1}{8}$ " PER FOOT UNLESS OTHERWISE SHOWN. REPORT ANY DISCREPANCIES BETWEEN EXISTING AND PROPOSED SPOT GRADES THAT DO NOT PITCH ACCORDINGLY TO THE LANDSCAPE ARCHITECT BEFORE COMMENCING WORK.
3. WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING SMOOTHLY WITH NEW CONSTRUCTION.
4. EXCAVATION ADJACENT TO EXISTING AND PROPOSED UTILITY LINES AND EXISTING TREES SHALL BE DONE BY HAND. CONTRACTOR SHALL PROTECT ALL EXPOSED UTILITIES.
5. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES, EXISTING STRUCTURES, IMPROVEMENTS, APPURTENANCES AND VEGETATION TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE INCURRED AT NO COST TO OWNER.

6. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF PERMITS AND LICENSES ISSUED BY THE FEDERAL, STATE AND LOCAL AGENCIES (SEE SPECS).
7. THE CONTRACTOR SHALL COORDINATE ALL SITE UTILITY IMPROVEMENTS WITH THE PROPER AUTHORITIES.
8. MAINTAIN A MAXIMUM OF 1.8% CROSS SLOPE ON ALL PAVED SURFACES, UNLESS OTHERWISE NOTED.
9. ALL MANHOLES, DRAINAGE STRUCTURES, STEAM MANHOLES, ELECTRIC MANHOLE FRAMES AND COVERS WITHIN THE PROJECT WORK AREA SHALL BE ADJUSTED TO FINISH GRADES UNLESS OTHERWISE NOTED.
10. SEE CIVIL ENGINEER'S DRAWINGS FOR GRADING IN VEHICULAR AREAS, SIDEWALKS, AND ACCESSIBLE CURB RAMPS.

+ (XX.XX)	EXISTING SPOT GRADE (SEE CIVIL/SURVEY DRAWINGS)
+ 15.92	PROPOSED SPOT GRADE
FFE	FINISH FLOOR ELEVATION
TC / BC	TOP/BOTTOM OF CURB
FC	FLUSH CURB
TW / BW	TOP/BOTTOM OF WALL
+ HP	HIGH POINT
+ LP	LOW POINT



2	DESIGN PACKAGE	2020.09
1	SCHEMATIC DESIGN	2020.08
Issued/Revision		YYYY.MM.

Permit/Seal

**PRELIMINARY
NOT FOR
CONSTRUCTION**

Scale	1"=20'
Project No.	20

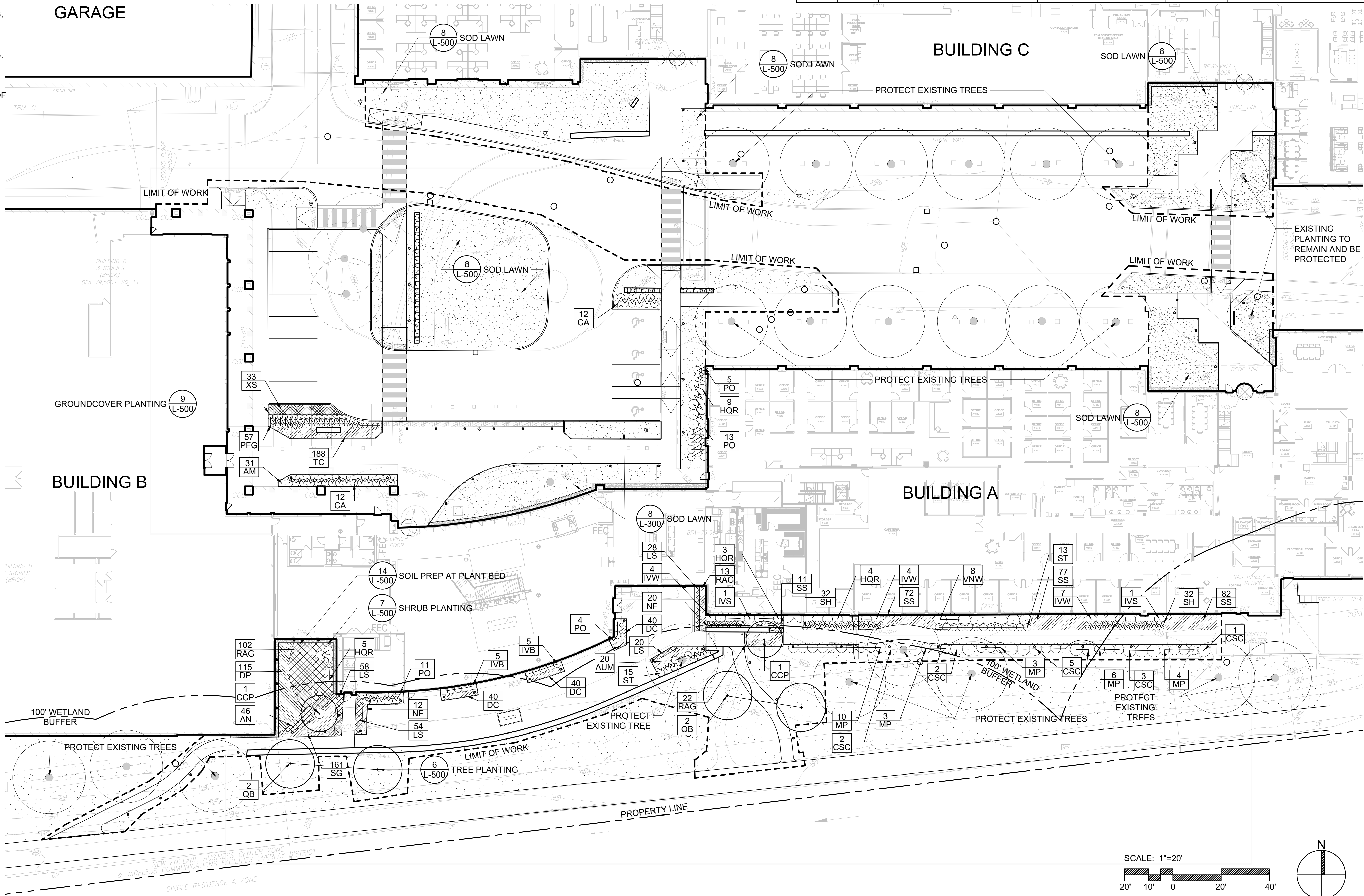
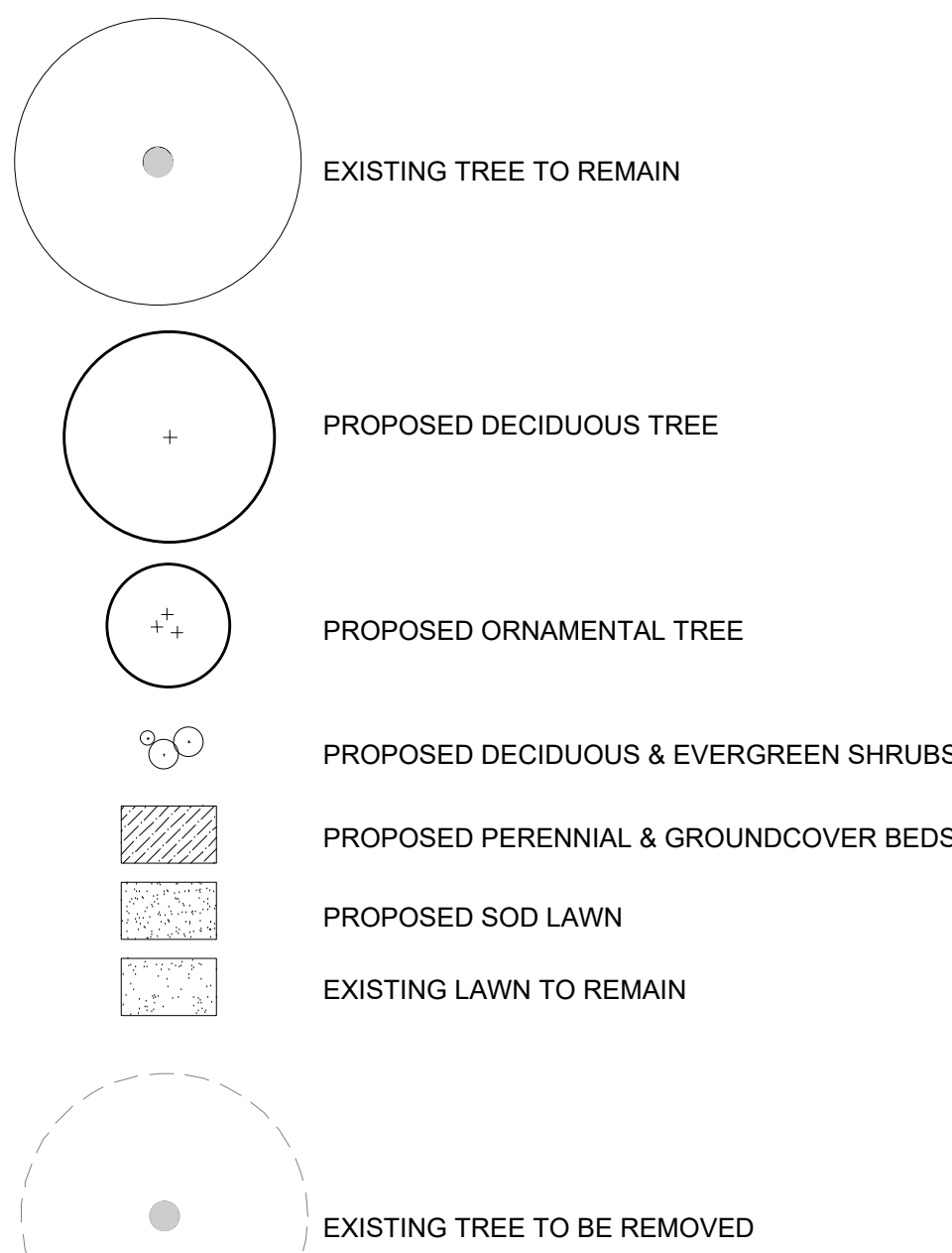
LANDSCAPE
GRADING PLAN

L-300

PLANTING AND SOIL NOTES

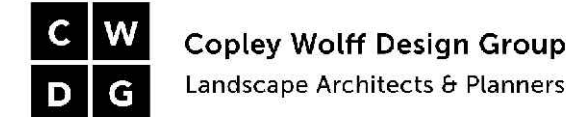
- IF DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE PLANT LIST, THE PLANTING PLAN SHALL GOVERN.
- ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
- THE LANDSCAPE ARCHITECT SHALL ONLY REVIEW TREES THAT ARE IN THE GROUND AT THE NURSERY. NO PRE-DUG TREES WILL BE ACCEPTED. THEREFORE TIMING OF IN-GROUND REVIEWS MUST BE COORDINATED WITH EXPECTED INSTALLATION DATES.
- ALL NEW PLANTS TO BE BALLED & BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE NOTED ON THE PLANT LIST.
- THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
- ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND ONLY AFTER WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO THE SITE.
- CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
- STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING.
- NEW SHRUBS AND GROUND COVER SHALL BEAR THE SAME RELATIONSHIP TO GRADE AS IT BORE TO PREVIOUS GRADE. TREES SHALL BE SET 3" HIGHER THAN PREVIOUS GRADE. NO TREES SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING.
- ALL PLANT BEDS TO RECEIVE UN-DYED, AGED AND SHREDDED BARK MULCH AS PER SPECIFICATIONS.
- ALL EXISTING TREES TO REMAIN SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. PROTECTION TECHNIQUES SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT.
- PRUNE TREES IN ACCORDANCE WITH THE SPECIFICATIONS.
- ALL PLANT MATERIAL SHALL BE MAINTAINED BY CONTRACTOR FOR ONE-FULL CALENDAR YEAR AND GUARANTEED FOR ONE-FULL CALENDAR YEAR.
- CONFIRM ALL QUANTITIES AGAINST PLANTING PLANS, GRADING PLANS, AND SPECIFICATIONS, INCLUDING SITE DISTURBANCE OUTSIDE OF THE LIMIT OF GRADING NECESSITATED TO FACILITATE CONSTRUCTION.
- WHERE SAND AND GRAVEL ARE SPECIFIED FOR A DRAINAGE LAYER, EXTEND DRAINAGE LAYER TO ASSOCIATED DRAIN LINES, DRAINAGE AREAS, OR DAYLIGHT.
- WHERE ONE SOIL TYPE MEETS ANOTHER SOIL TYPE, FORM A 1:1 SLOPED BOUNDARY TRANSITION.
- WHERE A SOIL PROFILE ENCROACHES WITHIN THE DRIP LINE OF EXISTING TREES, CONSULT WITH LANDSCAPE ARCHITECT PRIOR TO COMMENCING EXCAVATION.
- ALL EXCAVATION AND PLACEMENT OF SOILS WITHIN THE DRIP LINE OF EXISTING TREES TO BE PERFORMED BY HAND.
- SCARIFY SUBGRADE AS SPECIFIED BEFORE PLACEMENT OF ANY PLANTING SOILS.
- DO NOT PLACE OR HANDLE SOILS THAT ARE WET.
- PROTECT ALL EXISTING SOILS AGAINST COMPACTION, CONTAMINATION WITH CONSTRUCTION MATERIALS, AND ALL DISTURBANCE.
- CONTRACTOR IS RESPONSIBLE FOR ACTUAL SITE CONDITIONS, COORDINATION OF SOILS PLACEMENT, AND PLANTING SUBDRAINAGE.
- DO NOT PLACE ANY PLANTING SOIL PRIOR TO INSPECTION BY LANDSCAPE ARCHITECT.
- SAND BASED STRUCTURAL SOIL (SBSS) WHERE IDENTIFIED SHALL CONSIST OF A MINIMUM OF 1,000 C.F. OF SBSS FOR EACH TREE.
- ALL EXISTING TREES ON SITE SHALL BE PRESERVED AND PROTECTED UNLESS OTHERWISE NOTED.

PLANTING LEGEND



Stantec Architecture and Engineering P.C.
311 Summer Street
Boston, 02210-1723
Tel: (617) 234-3100
www.stantec.com

Consultant



Copley Wolff Landscape Architects
10 Post Office Square
Boston, 02109
Tel: (617) 454-9000
www.copley-wolff.com



Notes

DESIGN PACKAGE	2/20/2012
SCHEMATIC DESIGN	2/20/2012
Issued/Revision	XXXXXX.XX

Permit/Seal

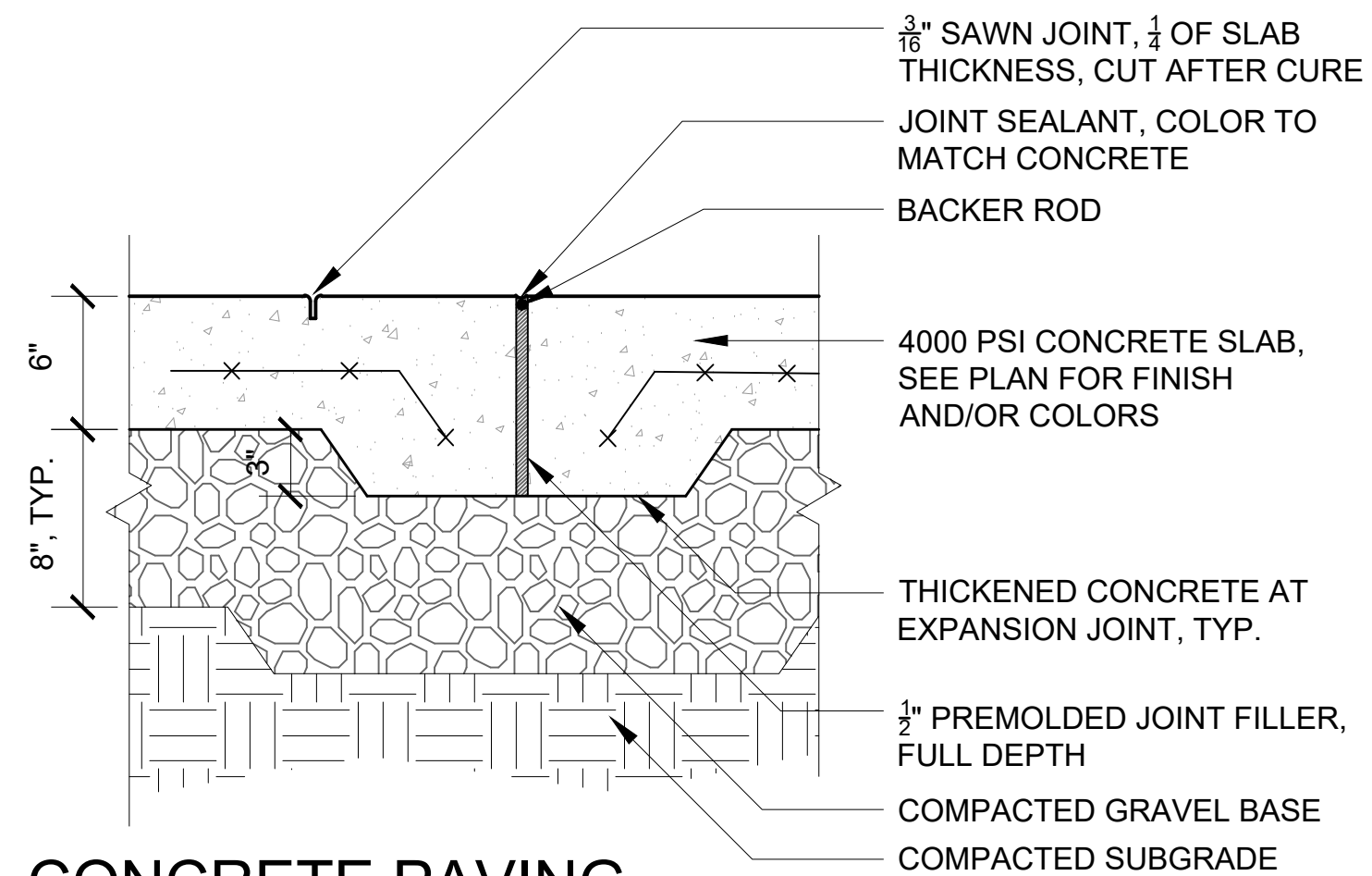
PRELIMINARY
NOT FOR
CONSTRUCTION

Scale 1"=20'-0"
Project No. 2012

LANDSCAPE
PLANTING PLAN

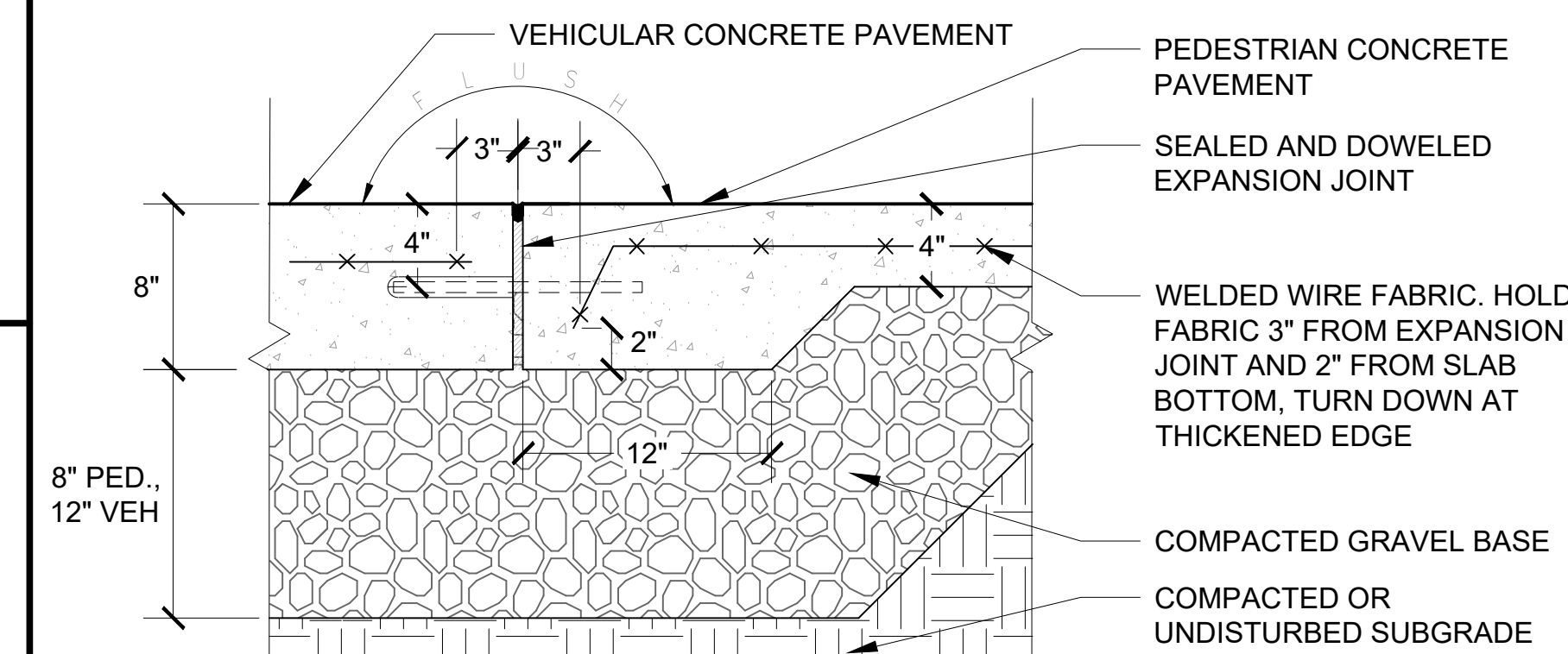
L-400

NOTE:
1. CONTROL JOINTS EVERY 5' UNLESS OTHERWISE SHOWN ON PLAN.
2. EXPANSION JOINTS EVERY 20' UNLESS OTHERWISE SHOWN ON PLAN.
3. PROVIDE 10" DEEP THICKENED EDGE AT PLANTING BEDS, 6" WIDTH.



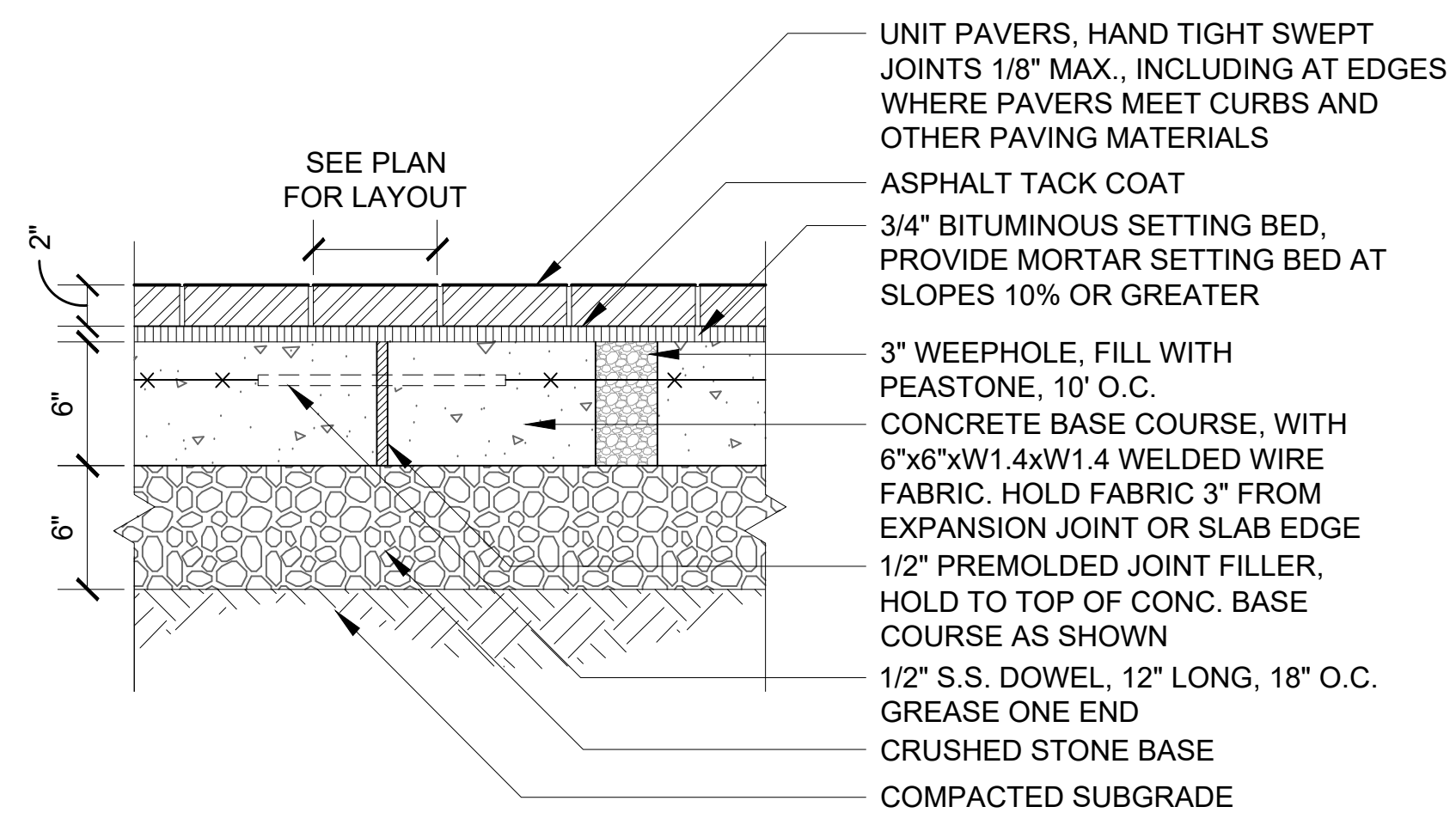
1 CONCRETE PAVING
SCALE: 1-1/2" = 1'-0"

NOTE:
1. PROVIDE EXPANSION JOINTS EVERY 20'-0" UNLESS OTHERWISE NOTED ON THE PLANS.
2. SEE CIVIL DWGS AND SPECS FOR VEHICULAR-RATED CONCRETE PAVEMENT.



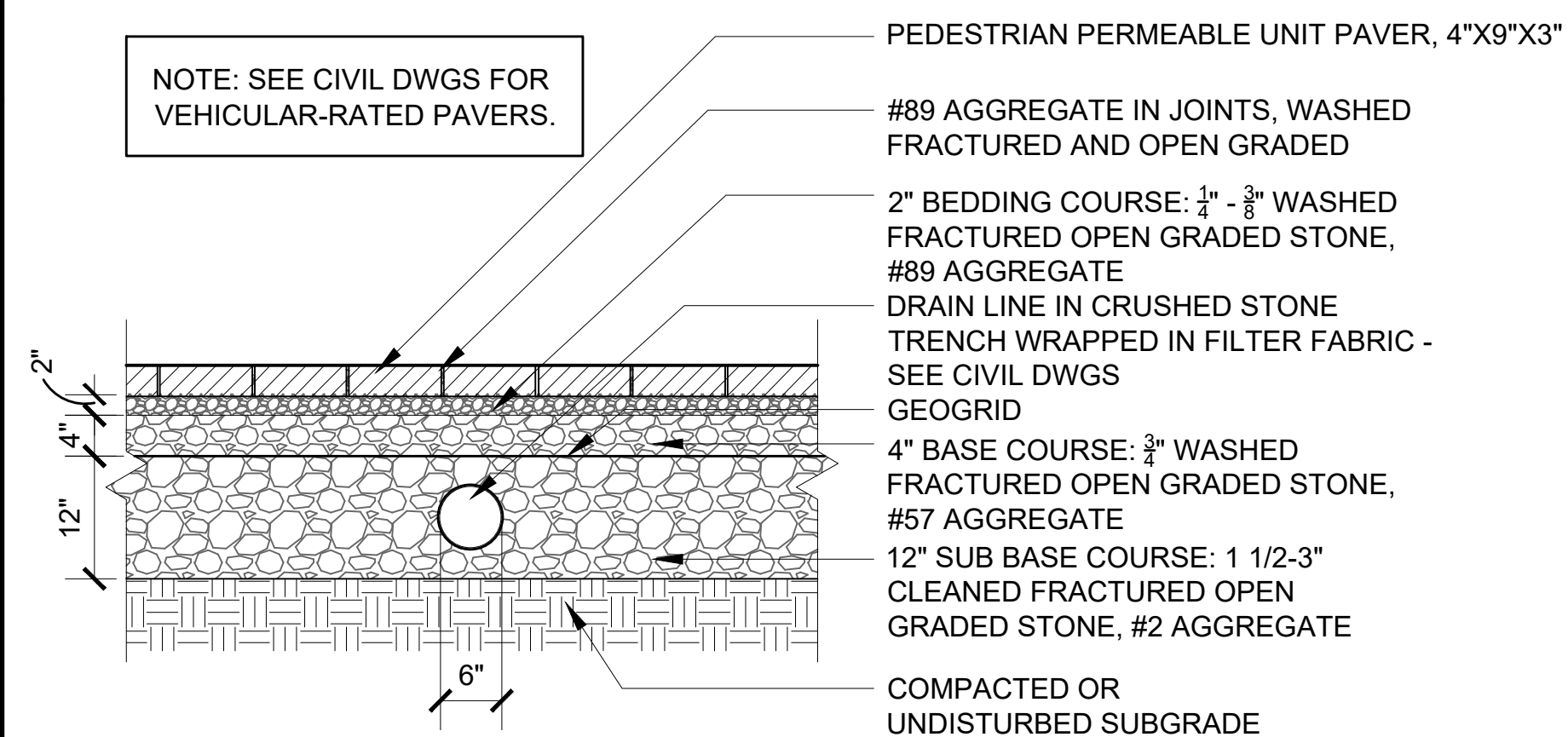
2 JOINT AT CONCRETE PAVEMENT
SCALE: 1-1/2" = 1'-0"

NOTE:
FOR UNIT PAVERS IN VEHICULAR AREAS, COORDINATE BASE COURSE DEPTH WITH PAVEMENT SECTIONS BY CIVIL ENGINEER

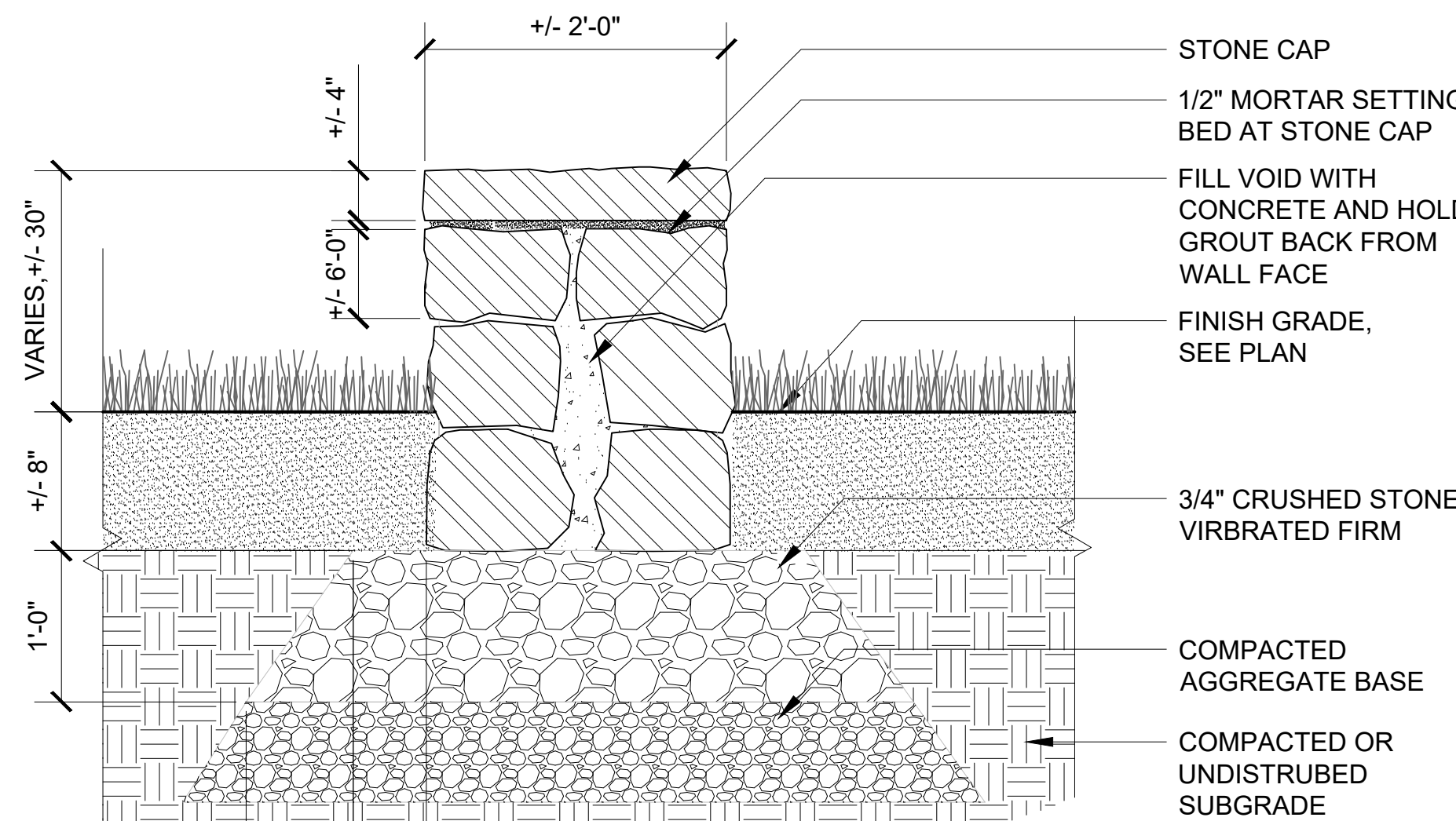


3 UNIT PAVERS
SCALE: 1-1/2" = 1'-0"

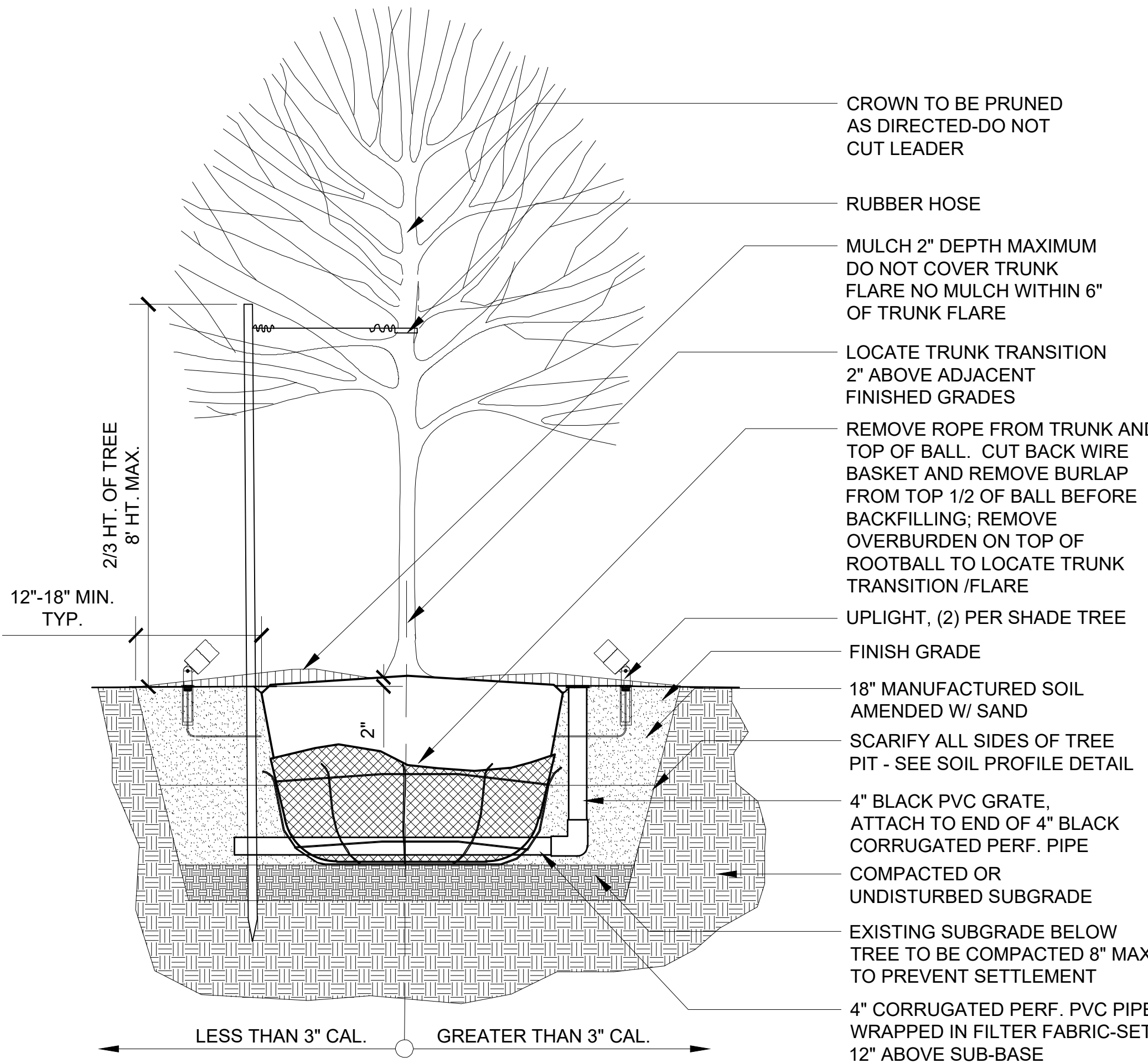
NOTE: SEE CIVIL DWGS FOR VEHICULAR-RATED PAVERS.



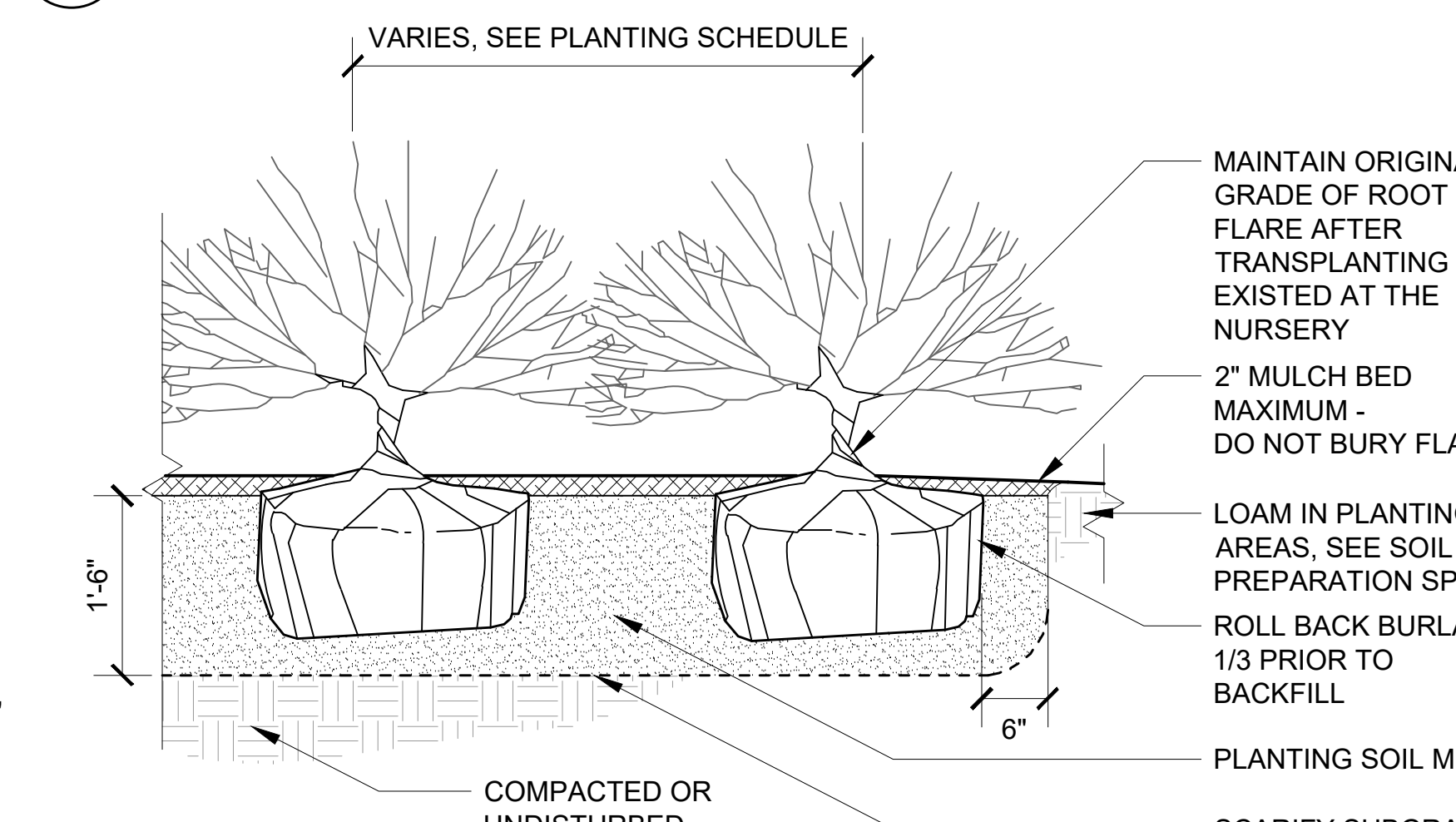
4 PERMEABLE UNIT PAVERS
SCALE: 3/4" = 1'-0"



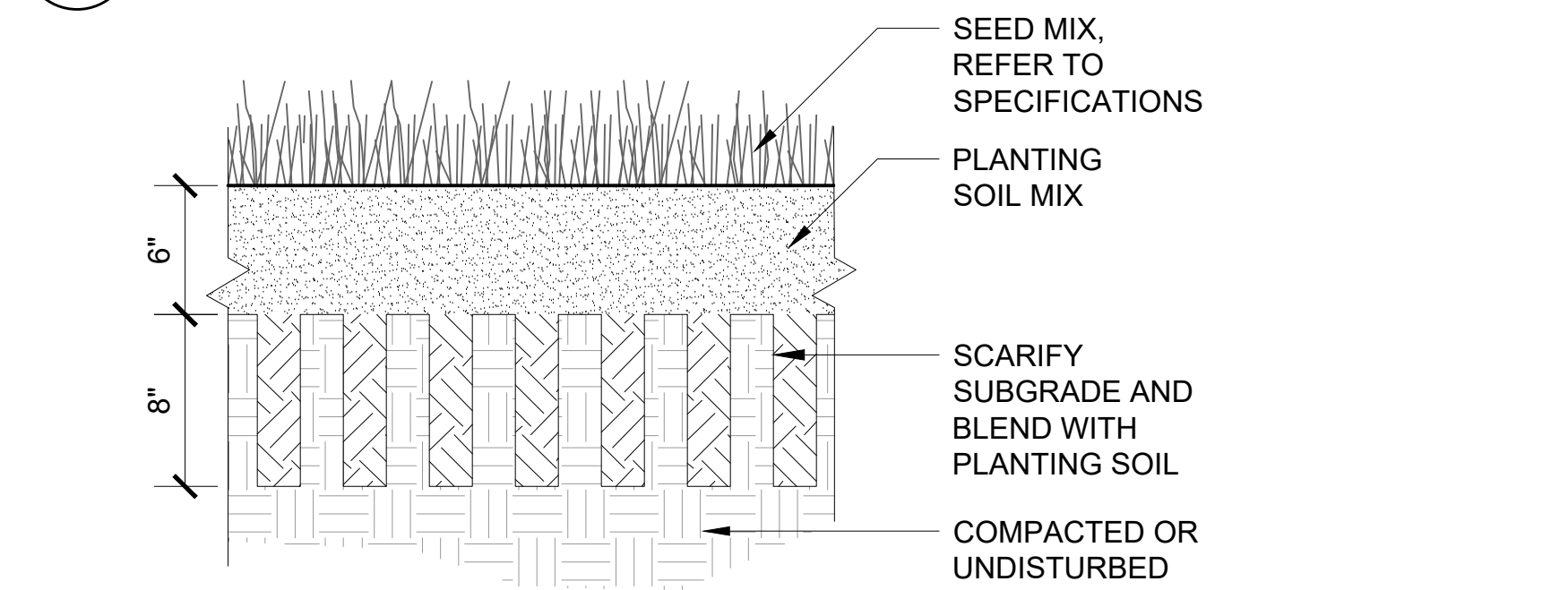
5 STONE WALL
SCALE: 1" = 1'-0"



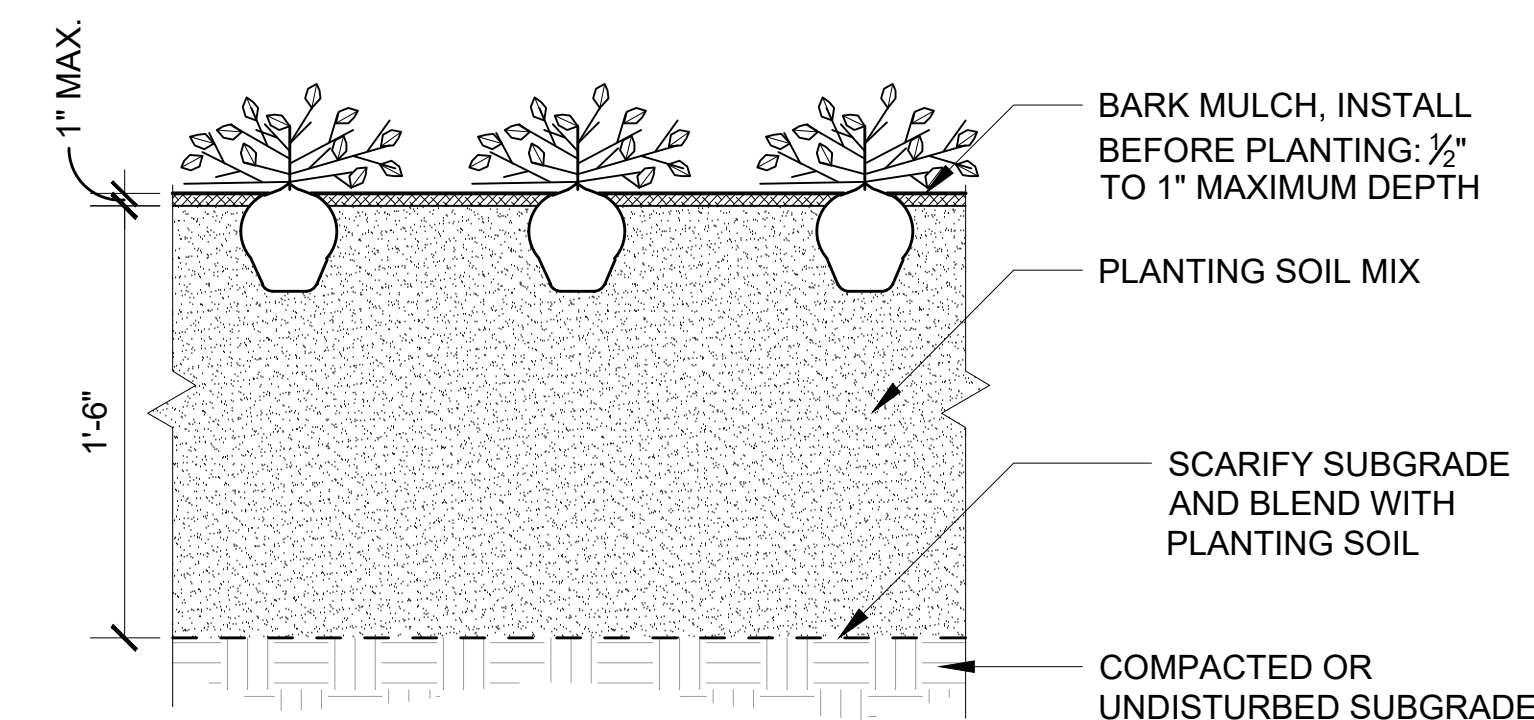
6 TREE PLANTING
SCALE: 1/2" = 1'-0"



7 SHRUB PLANTING
SCALE: 3/4" = 1'-0"

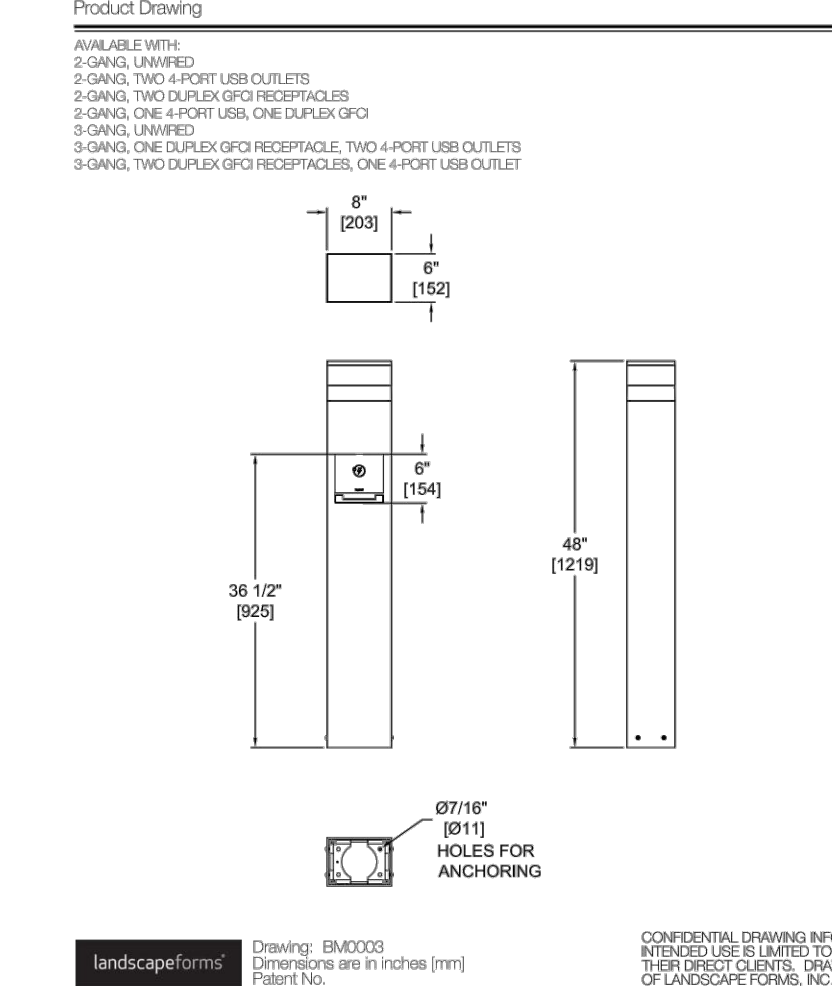


8 SOD LAWN
SCALE: 1-1/2" = 1'-0"

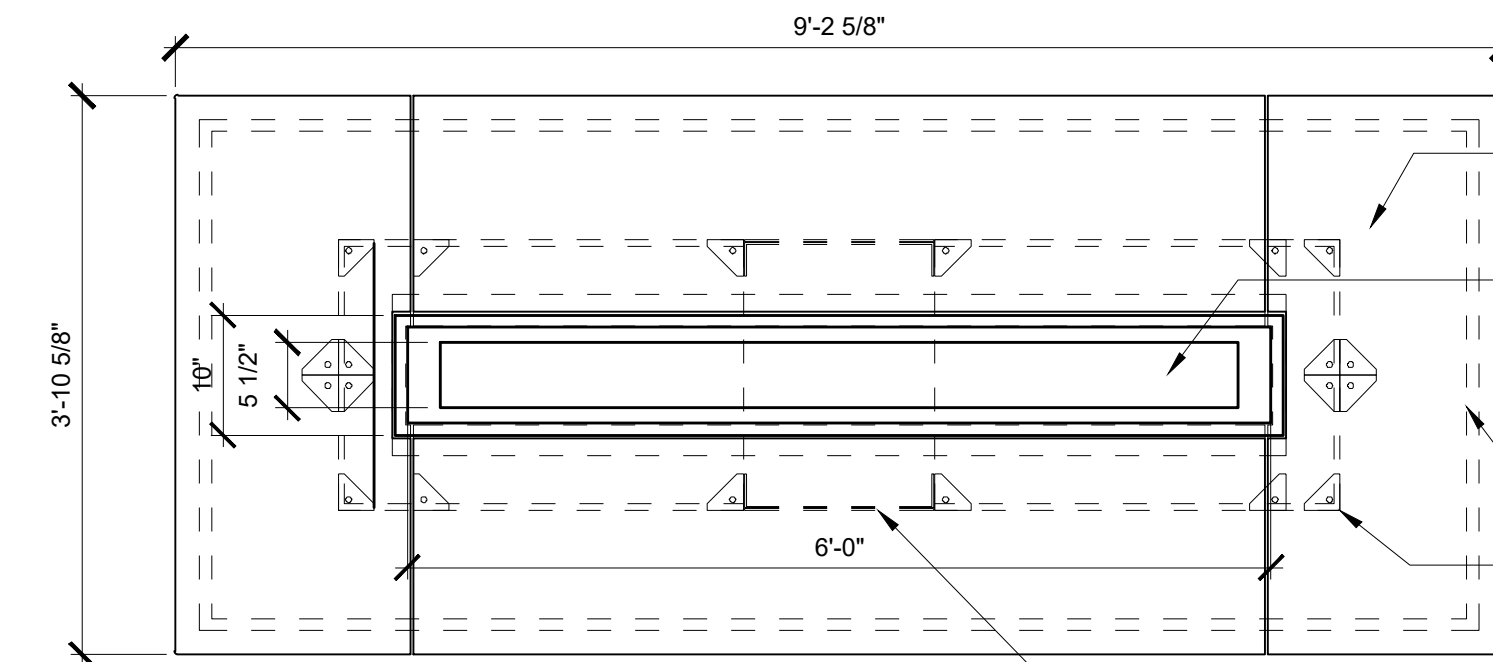


9 PERENNIAL / GROUNDCOVER PLANTING
SCALE: 1-1/2" = 1'-0"

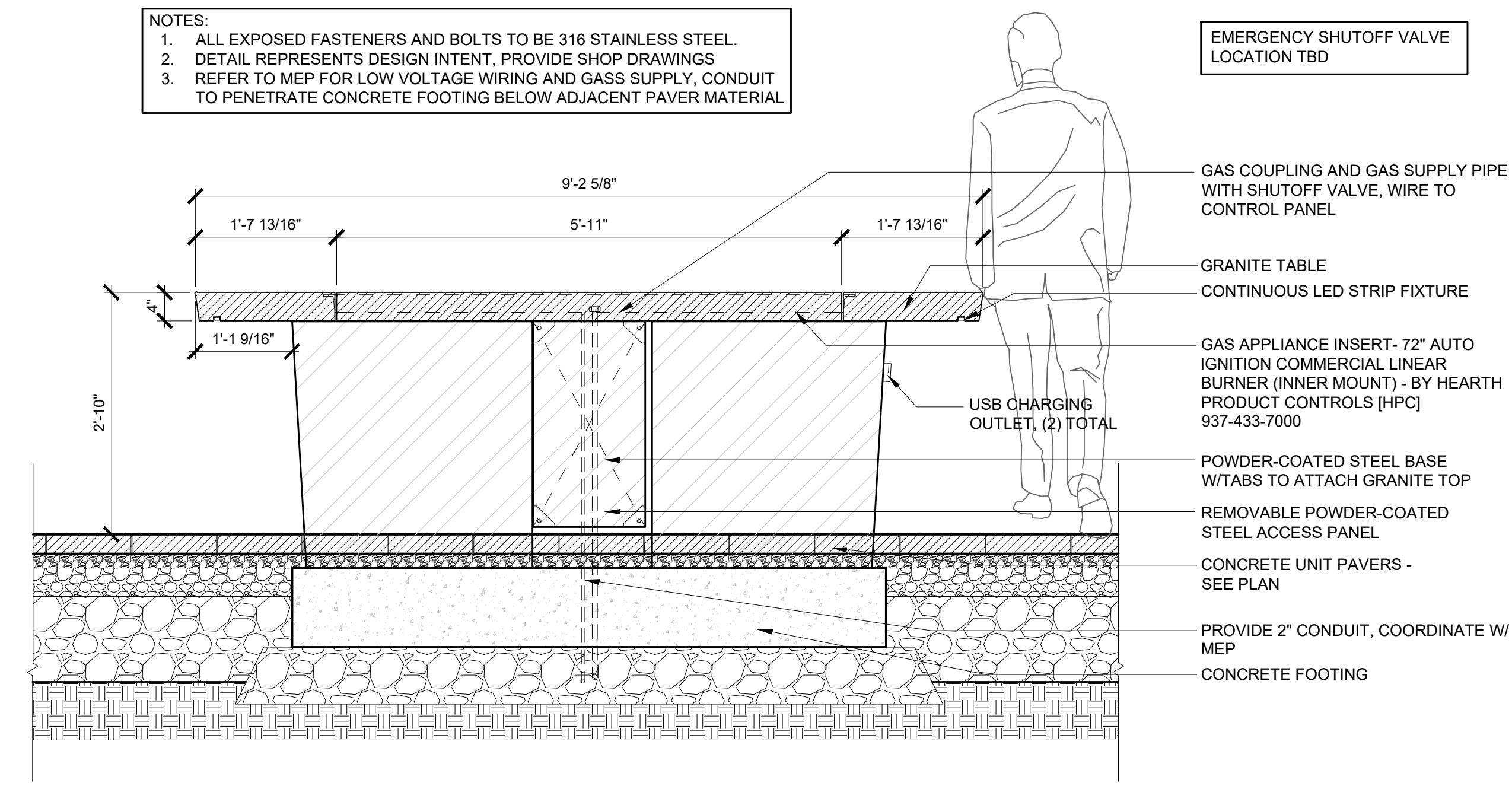
Outdoor charging station with area light



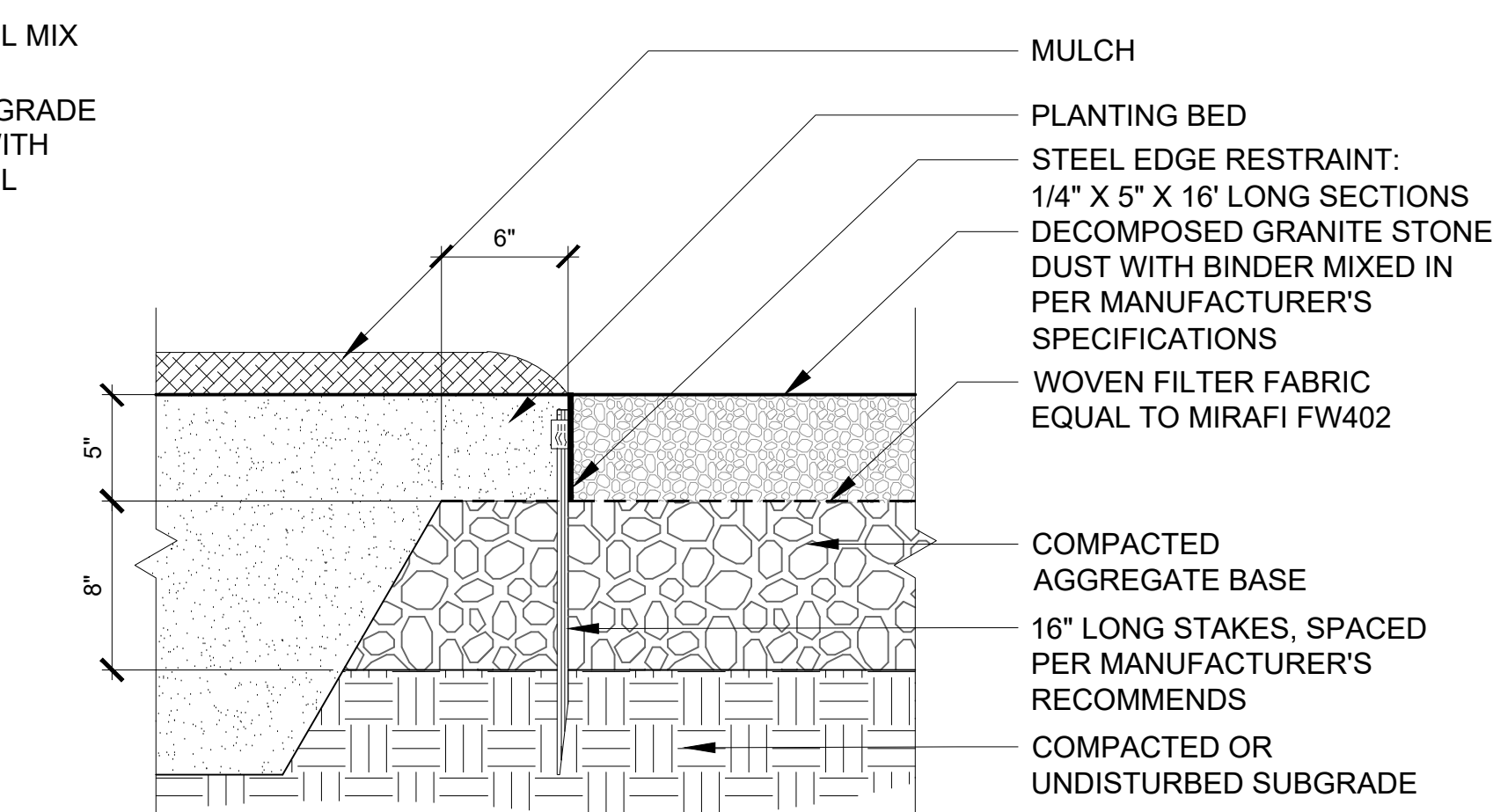
10 OUTDOOR CHARGING STATION
SCALE: NTS



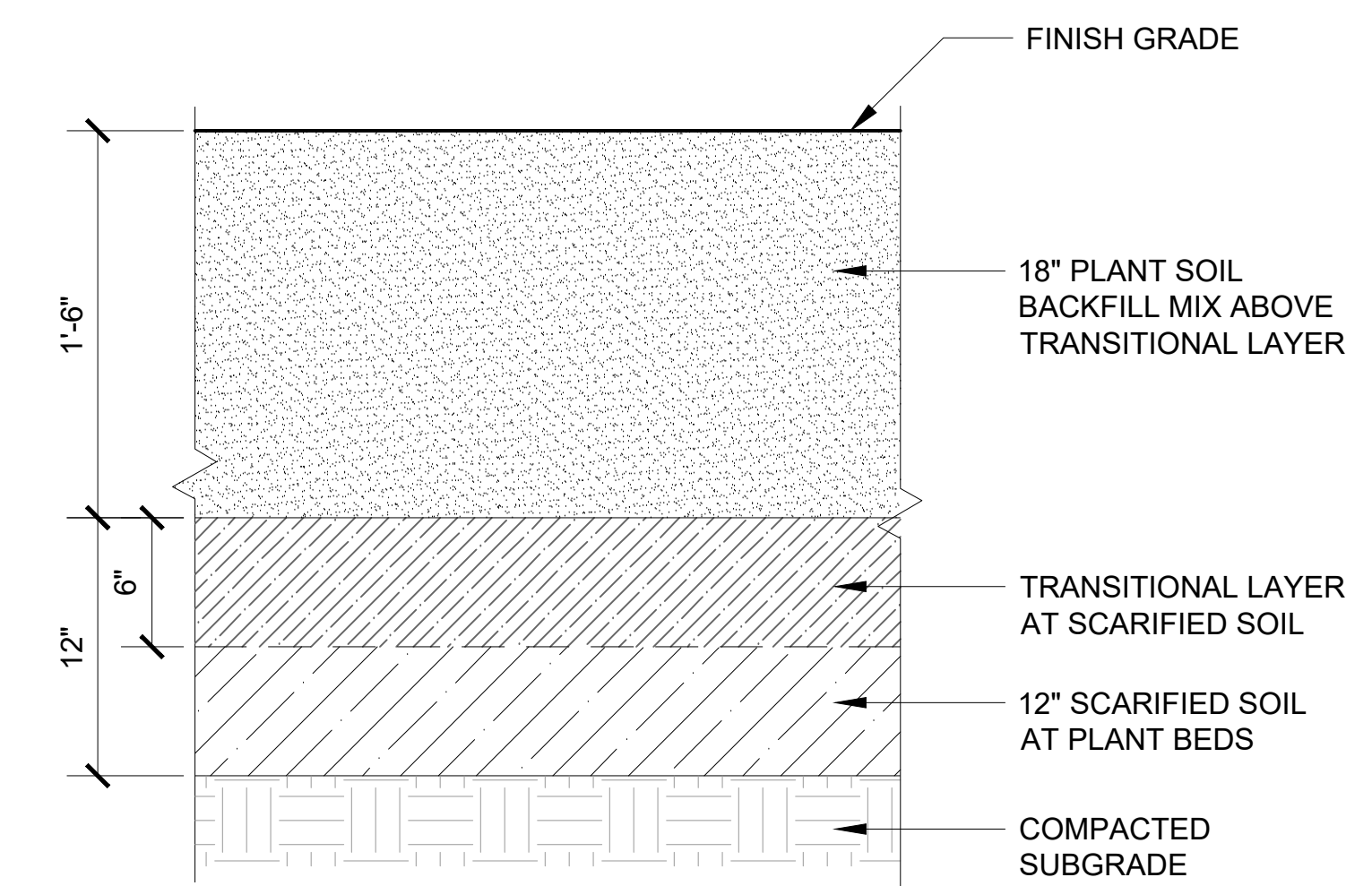
NOTES:
1. ALL EXPOSED FASTENERS AND BOLTS TO BE 316 STAINLESS STEEL.
2. DETAIL REPRESENTS DESIGN INTENT. PROVIDE SHOP DRAWINGS.
3. REFER TO MEP FOR LOW VOLTAGE WIRING AND GASS SUPPLY. CONDUIT TO PENETRATE CONCRETE FOOTING BELOW ADJACENT PAVER MATERIAL.



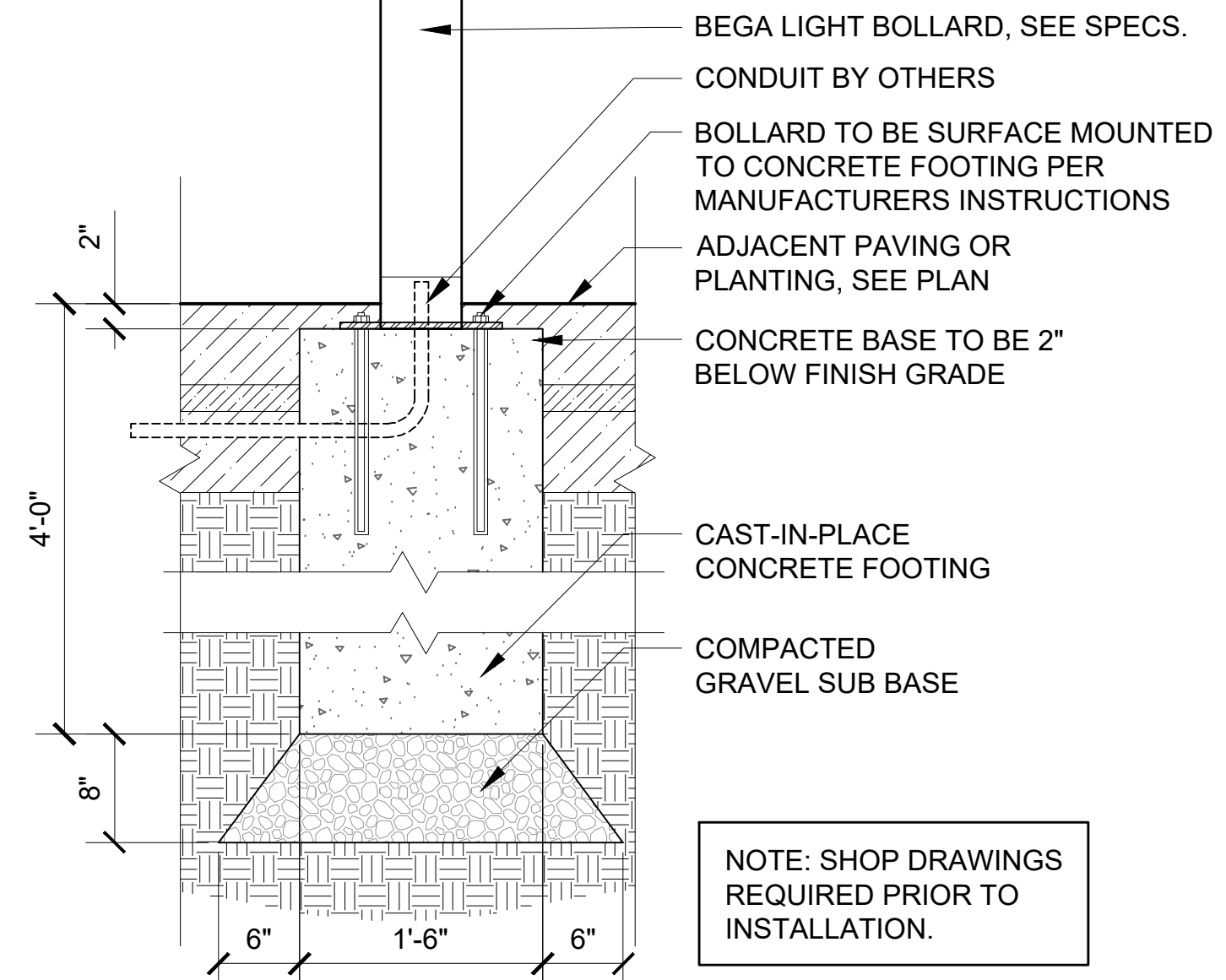
11 FIRE PIT SET IN GRANITE TABLE ON STEEL BASE
SCALE: 3/4" = 1'-0"



12 STONE DUST PATH
SCALE: 1-1/2" = 1'-0"



14 SOIL PREPARATION AT WOODY PLANTS
SCALE: 1-1/2" = 1'-0"



13 BEGA LIGHT BOLLARD
SCALE: 1" = 1'-0"

**PRELIMINARY
NOT FOR
CONSTRUCTION**

Scale AS NOTED
Project No. 2012

LANDSCAPE
DETAILS

L-500



Memorandum

To: Anthony L. Del Gaizo
Town Engineer
Public Services Administration
Building
500 Dedham Avenue
Needham, MA 02492

Date: September 23, 2020

Project #: 15060.00

From: Nicholas Skoly, PE

Re: 140 Kendrick Stormwater Analysis

On behalf of Boston Properties, Vanasse Hangen Brustlin, Inc. (VHB is pleased to submit the following memorandum to document the adherence to the Town of Needham Stormwater Regulations (Project). The proposed stormwater management infrastructure includes best management practices (BMP's) for maintaining stormwater runoff rates has been developed in compliance with the Massachusetts Stormwater Management Standards and the Town of Needham Requirements for On-Site Drainage (Stormwater management), as applicable.

A HydroCAD model, using TR-20 methodology, was developed to evaluate the site's existing and proposed stormwater runoff response for the 2-, 10-, 25-, and 100-year storm events. As summarized in the following sections, the analysis for these storm events indicates that there will be no increase in peak discharge rates or runoff volumes resulting from the additional impervious area.

Project Description

Boston Properties is proposing to renovate a portion of their existing building at 140 Kendrick Street. As part of that renovation, they are proposing to improve the hardscape and landscape areas surrounding the building. The exterior improvements will be limited to reworking parking spaces near the main entry, improving the vehicular drop off area and pedestrian circulation, and improving an outdoor patio.

Stormwater Approach

The exterior improvements are limited to the front entrance portion of the site located on the North side of the existing building and the back patio on the South side of the building. The improved drop-off area at the front entrance will generally maintain the same drainage patterns but will be improved with a subsurface detention system. Within the subcatchment, (approximately 60,675 sf) there is an increase in impervious area of approximately 1,620 sf. The improved patio area will generally maintain the same drainage patterns but will be improved with permeable pavers. Within the subcatchment (approximately 26,050 sf) there is a decrease in impervious area of approximately 960 sf.

The stormwater runoff in the proposed condition will be collected via the existing deep sump and hooded catch basins and routed to a subsurface detention basin installed adjacent to the catch basins via a pipe installed below the existing outlet of the catch basin. Once the detention basin reaches its capacity the stormwater will drain through the existing closed piping system and maintain the existing drainage patterns. The subsurface detention basin and permeable pavers provide the required volume for 1" over the impervious area. Under this requirement the design is required to store 3,575cf of runoff and the design provides stores 3,977cf. This storage assumes an infiltration rate of 1.02 which is consistent with the original stormwater design for the site. The Hydrologic model analyzes the subcatchment to the existing catch basin which encompasses all of the exterior work proposed.

Hydrologic Analysis

The rainfall runoff response of the Site under existing and proposed conditions was evaluated for storm events with recurrence intervals of 2-, 5-, 10-, 25-, and 100-years (as shown in the Site Construction permit Regulations.). Runoff coefficients for the pre- and post-development conditions, were determined using NRCS Technical Release 55 (TR-55) methodology as provided in HydroCAD. The HydroCAD model is based on NRCS Technical Release 20 (TR-20) Model for Project Formulation Hydrology. Printouts of the HydroCAD analyses are attached. Tables 1 below presents a summary of the existing and proposed conditions peak flow rates.

Table 1
Peak Discharge Rates (cubic feet per second)

<u>Design Point</u>	<u>2-year</u>	<u>10-year</u>	<u>25-year</u>	<u>100-year</u>
Design Point 1:				
Closed Drainage System				
Existing	2.26	5.06	6.90	9.85
Proposed	0.73	1.84	4.88	9.63
Design Point 2				
Closed Drainage System				
Existing	0.02	0.5	1.0	1.90
Proposed	0.02	0.44	0.9	1.66

Table 2
Runoff Volumes (cubic feet)

<u>Design Point</u>	<u>2-year</u>	<u>10-year</u>	<u>25-year</u>	<u>100-year</u>
Design Point 1:				
Closed Drainage System				
Existing	5,981	13,292	18,288	26,452
Proposed	1,987	8,158	13,001	20,981
Design Point 2:				
Closed Drainage System				
Existing	339	1,703	2,907	5,164
Proposed	293	1,474	2,545	4,681

Massachusetts Department of Environmental Protection (DEP) Stormwater Management Standards

Standard 1: No New Untreated Discharges or Erosion to Wetlands

The Project has been designed to comply with Standard 1.

The Best Management Practices (BMPs) included in the proposed stormwater management system have been designed in accordance with the Massachusetts Stormwater Handbook. Supporting information and computations demonstrating that no new untreated discharges will result from the Project are presented through compliance with Standards 4 through 6.

There are no new untreated discharges that will result from the project. The project is using existing infrastructure and supplementing it with additional stormwater BMPs.

Standard 2: Peak Rate Attenuation

The Project has been designed to fully comply with Standard 2.

This project has been designed to reduce the peak attenuation rate for the 2-yr, 10-yr, 25-yr and 100-yr storm, as shown in the tables above.

Standard 3: Stormwater Recharge

The Project has been designed to comply with Standard 3. All runoff from impervious areas from the site is discharging into an infiltration BMP. Recharge BMPs have been sized to infiltrate the required recharge volume and sized to drain within 72-hours. These calculations have been provided.

Standard 4: Water Quality

This project has been designed to comply with Standard 4. A water quality calculation has been provided to show that greater than 1" of volume will be treated on site.

Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)

This project is not considered a LUHPPL.

Standard 6: Critical Area

This project will not discharge stormwater near or to a critical area.

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the Maximum Extent Practicable

This project is a redevelopment project and has been designed to comply with all the Stormwater Management Standards.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Controls

The Project will disturb approximately 2 acres of land and is therefore required to obtain coverage under the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Construction General Permit. As required under this permit, a Stormwater Pollution Prevention Plan (SWPPP) will be developed and submitted before land disturbance begins. Recommended construction period pollution prevention and erosion and sedimentation controls to be finalized in the SWPPP are included attached.

Standard 9: Operation and Maintenance Plan

In compliance with Standard 9, a Post Construction Stormwater Operation and Maintenance (O&M) Plan has been developed for the Project. The O&M Plan is included in Appendix D as part of the Long Term Pollution Prevention Plan.

Standard 10: Prohibition of Illicit Discharges

Sanitary sewer and storm drainage structures which were part of the previous development on this site are to be completely removed during the site redevelopment. The design plans submitted with this report have been designed in full compliance with current standards. The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges.

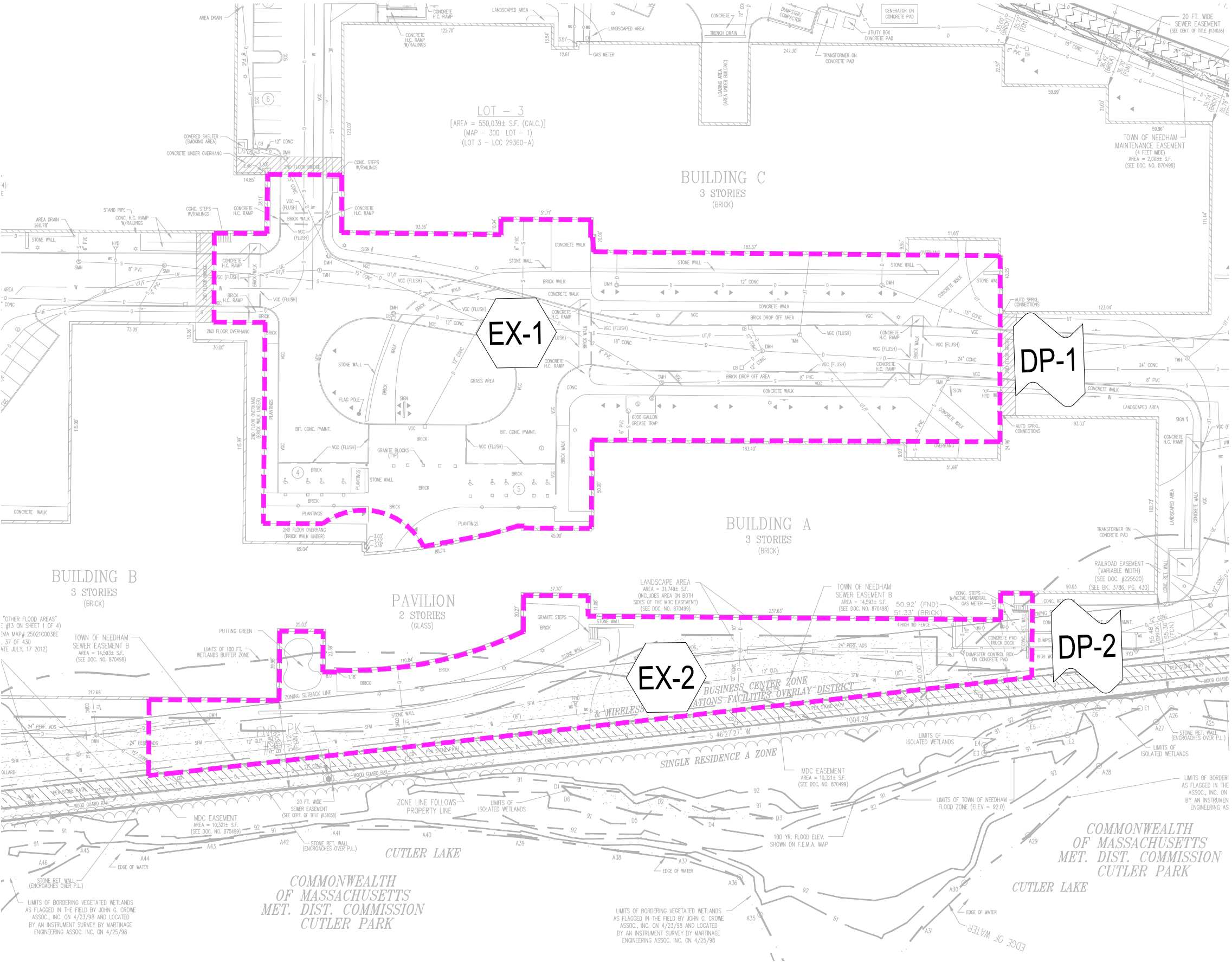
Stormwater Management Summary

The stormwater management design includes BMPs for maintaining stormwater runoff rates and has been developed with guidance provided by the DEP and in accordance with the applicable Town and State requirements listed in previous sections of the memo. A hydrologic model was developed to evaluate the Site's existing and proposed stormwater runoff response and the results of the analysis indicate that the site has been designed such that there will be no increase in peak discharge rates or volumes between the pre- and post-development conditions for the storm events studied. In addition, the subsurface infiltration system and permeable pavers provide a significant improvement to water quality as compared to the existing condition.

ATTACHMENTS:

Supporting Calculations:

Figure 1 – Existing Drainage Conditions
Figure 2 – Proposed Drainage Conditions
Figure 3 – Impervious Buffer Area Comparison
Water Quality Volume Calculations
Hydrologic Analysis
Long Term Pollution Prevention Plan
Operations and Maintenance Plan
FIRM



Legend

SYMBOLS

X

DESIGN POINT

X

DRAINAGE AREA DESIGNATION

X

POND

LINETYPES

DRAINAGE AREA BOUNDARY

100' BUFFER ZONE

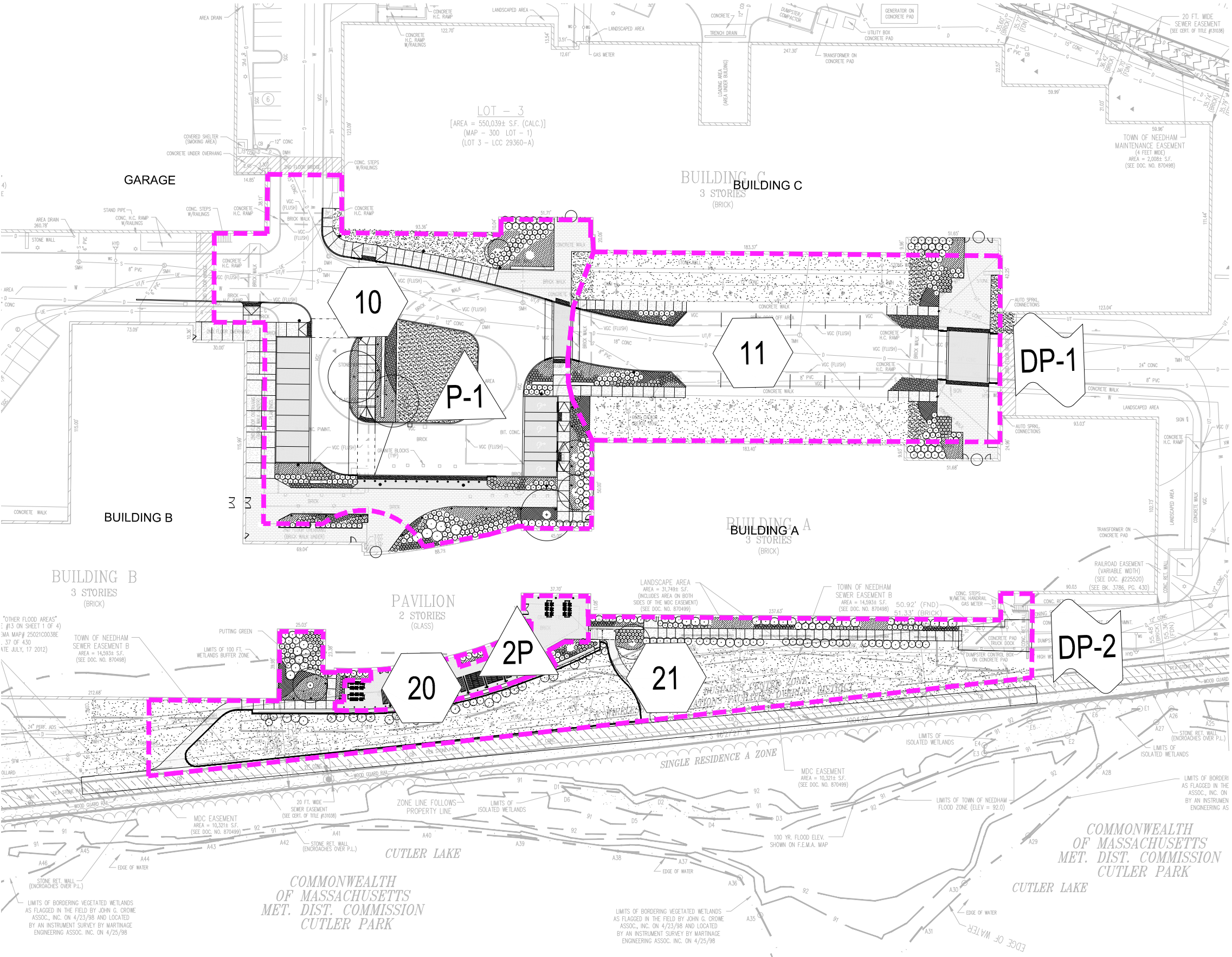
WETLAND BOUNDARY

Existing Drainage Conditions

140 Kendrick Street
Needham, MA

Figure 1

9/10/2020



Legend

SYMBOLS

X

DESIGN POINT

X

DRAINAGE AREA DESIGNATION

X

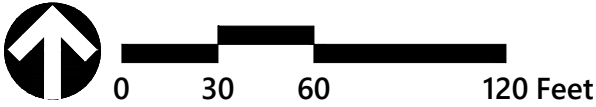
POND

LINETYPES

DRAINAGE AREA BOUNDARY

100' BUFFER ZONE

WETLAND BOUNDARY



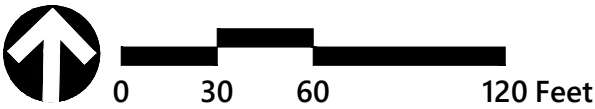
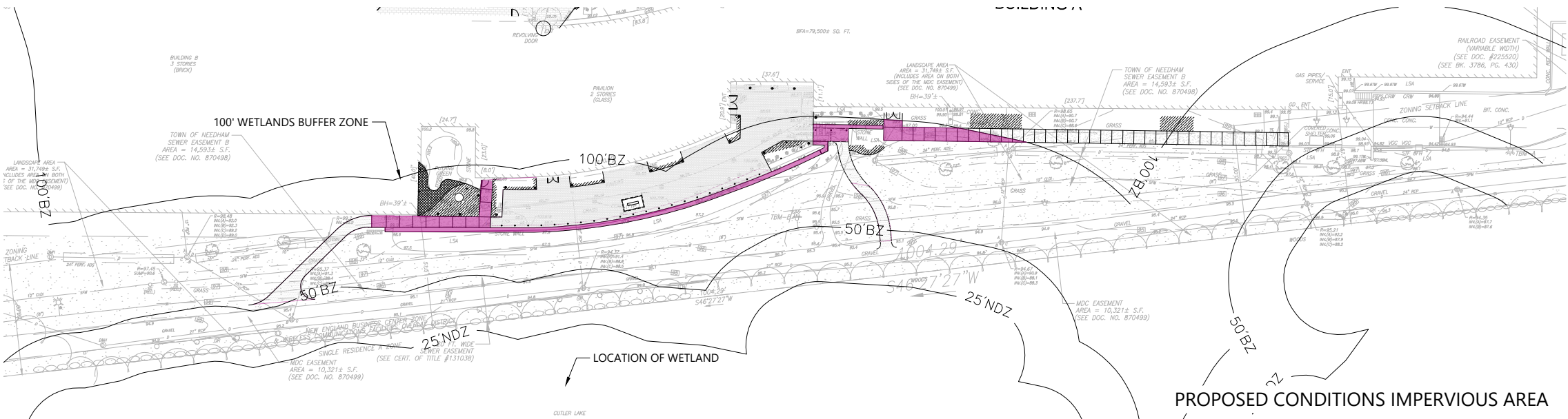
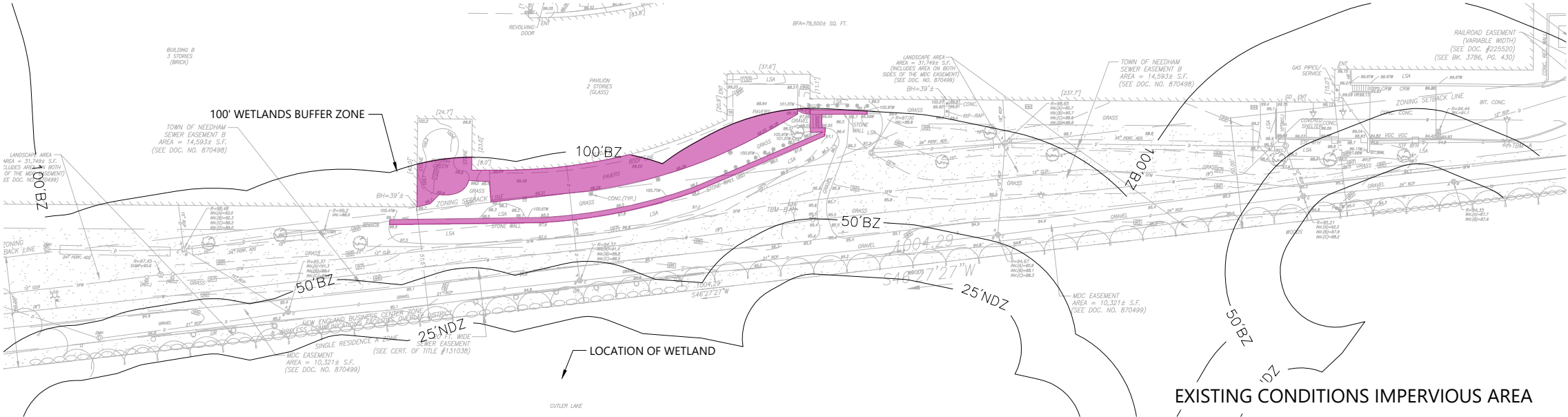
Wetland Buffer Areas

Designation	Existing	Proposed	Delta
APPROXIMATE IMPERVIOUS AREA WITHIN 100' BUFFER	2,480 SF	1,264 SF	-1,216 SF

Legend



IMPERVIOUS AREA WITHIN 100' BUFFER ZONE



Impervious Area

140 Kendrick Street
Needham, MA

Figure 3

9/23/20



Water Quality Volume Calculations

Project Name: 140 Kendrick Street
Project Location: Needham, MA

Proj. No.: -
Date: September 2020

Calculated by: NJS

Checked by:

Limit of Development Area

Total Impervious Area = 42,898 sf

Water Quality Requirement:

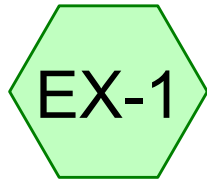
	Runoff Depth to be Treated (in.)	Required Volume (c.f.)
Water Quality Volume	1.0	3,575

Provided:

	Provided Volume (c.f.)	
Permeable Pavers (Rear of Building)	718	*For the 1-year design storm
Proposed Subsurface Infiltration System (Front Drop Off)	3,259	*For the 1-year design storm

Total Provided:

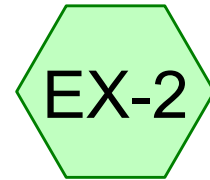
3,977



Front Entry



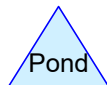
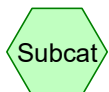
Front Entry



Back Patio



Back Patio



Routing Diagram for 1462800_EX

Prepared by VHB, Printed 9/17/2020

HydroCAD® 10.00-25 s/n 01038 © 2019 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
44,485	39	>75% Grass cover, Good, HSG A (EX-1, EX-2)
42,240	98	Paved parking, HSG A (EX-1, EX-2)
86,725	68	TOTAL AREA

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX-1: Front Entry

Runoff Area=60,675 sf 61.34% Impervious Runoff Depth=1.18"
Tc=5.0 min CN=75 Runoff=2.26 cfs 5,981 cf

SubcatchmentEX-2: Back Patio

Runoff Area=26,050 sf 19.27% Impervious Runoff Depth=0.16"
Tc=5.0 min CN=50 Runoff=0.02 cfs 339 cf

Link DP1: Front Entry

Inflow=2.26 cfs 5,981 cf
Primary=2.26 cfs 5,981 cf

Link DP2: Back Patio

Inflow=0.02 cfs 339 cf
Primary=0.02 cfs 339 cf

Total Runoff Area = 86,725 sf Runoff Volume = 6,320 cf Average Runoff Depth = 0.87"
51.29% Pervious = 44,485 sf 48.71% Impervious = 42,240 sf

Summary for Subcatchment EX-1: Front Entry

Runoff = 2.26 cfs @ 12.13 hrs, Volume= 5,981 cf, Depth= 1.18"

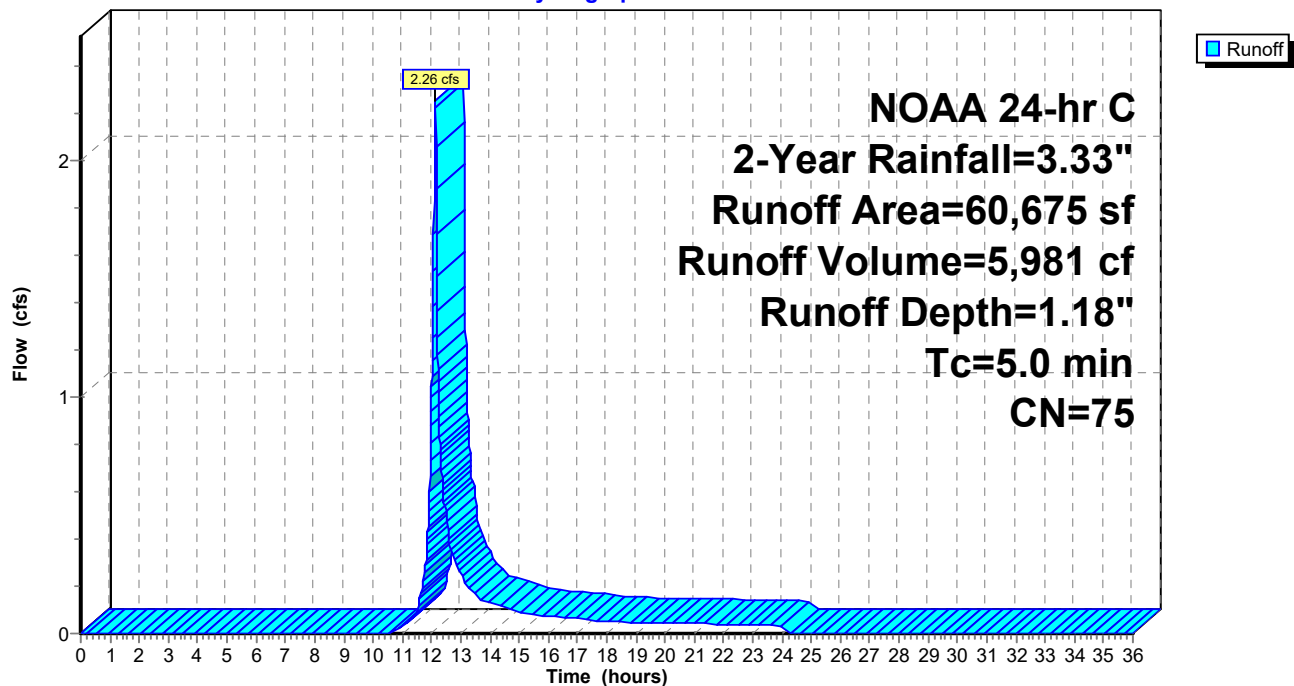
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
37,220	98	Paved parking, HSG A
23,455	39	>75% Grass cover, Good, HSG A
60,675	75	Weighted Average
23,455		38.66% Pervious Area
37,220		61.34% Impervious Area

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

Subcatchment EX-1: Front Entry

Hydrograph



Summary for Subcatchment EX-2: Back Patio

Runoff = 0.02 cfs @ 12.53 hrs, Volume= 339 cf, Depth= 0.16"

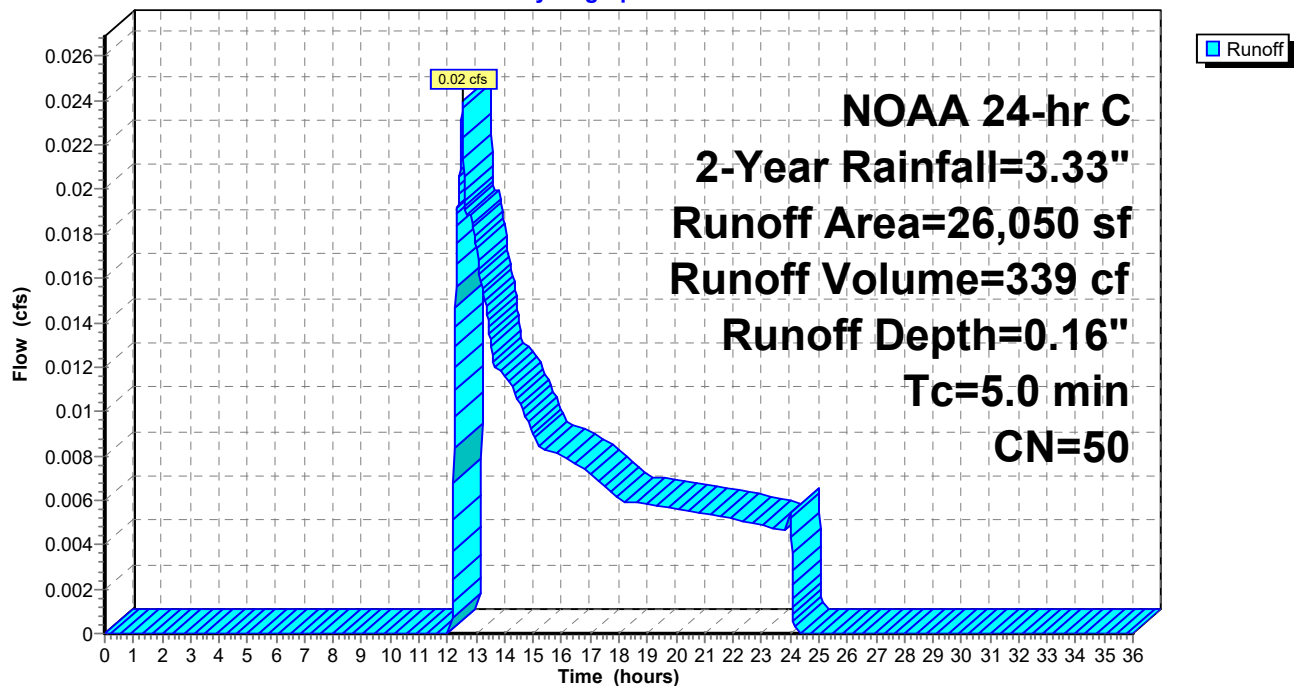
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
5,020	98	Paved parking, HSG A
21,030	39	>75% Grass cover, Good, HSG A
26,050	50	Weighted Average
21,030		80.73% Pervious Area
5,020		19.27% Impervious Area

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

Subcatchment EX-2: Back Patio

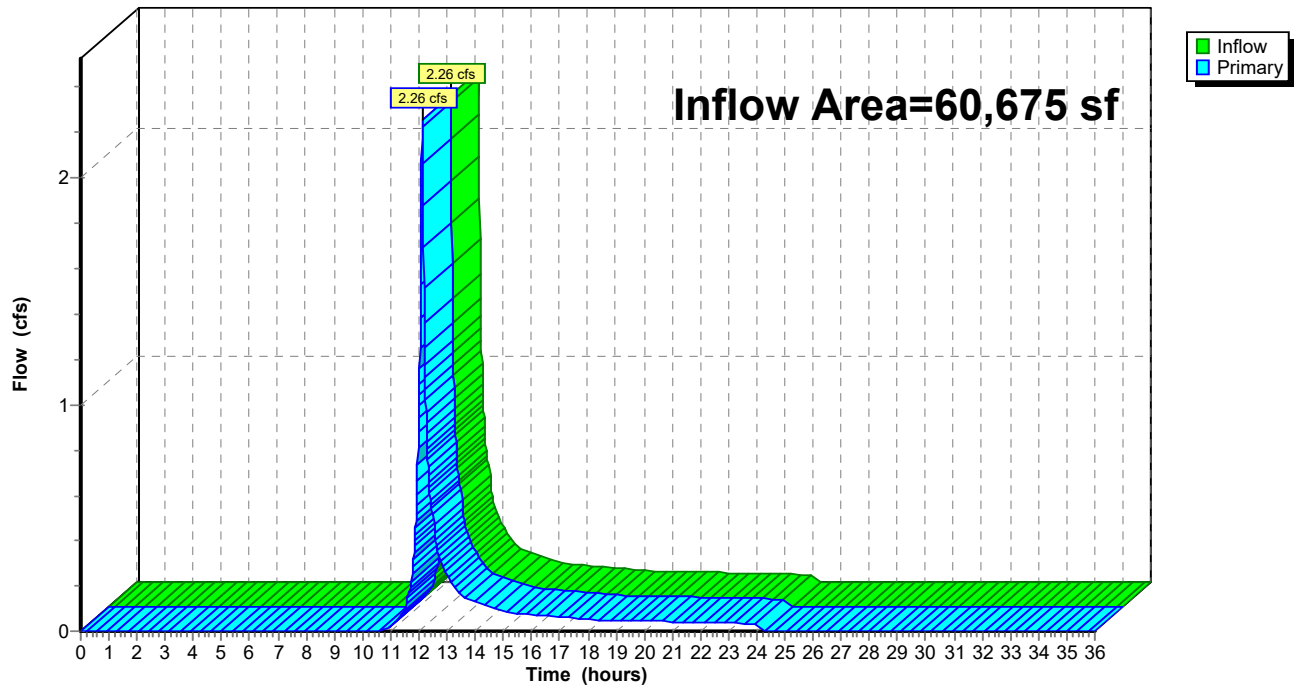
Hydrograph



Summary for Link DP1: Front Entry

Inflow Area = 60,675 sf, 61.34% Impervious, Inflow Depth = 1.18" for 2-Year event
Inflow = 2.26 cfs @ 12.13 hrs, Volume= 5,981 cf
Primary = 2.26 cfs @ 12.13 hrs, Volume= 5,981 cf, Atten= 0%, Lag= 0.0 min

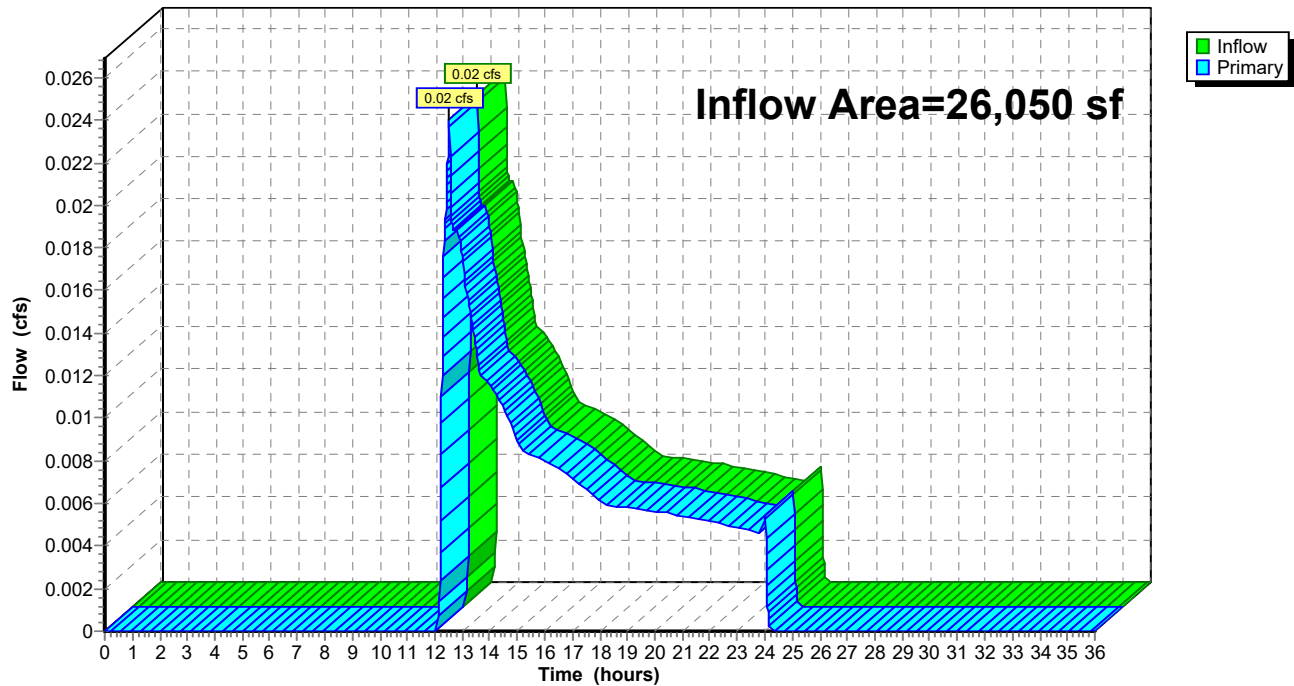
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP1: Front Entry**Hydrograph**

Summary for Link DP2: Back Patio

Inflow Area = 26,050 sf, 19.27% Impervious, Inflow Depth = 0.16" for 2-Year event
Inflow = 0.02 cfs @ 12.53 hrs, Volume= 339 cf
Primary = 0.02 cfs @ 12.53 hrs, Volume= 339 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP2: Back Patio**Hydrograph**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX-1: Front Entry

Runoff Area=60,675 sf 61.34% Impervious Runoff Depth=2.63"
Tc=5.0 min CN=75 Runoff=5.06 cfs 13,292 cf

SubcatchmentEX-2: Back Patio

Runoff Area=26,050 sf 19.27% Impervious Runoff Depth=0.78"
Tc=5.0 min CN=50 Runoff=0.50 cfs 1,703 cf

Link DP1: Front Entry

Inflow=5.06 cfs 13,292 cf
Primary=5.06 cfs 13,292 cf

Link DP2: Back Patio

Inflow=0.50 cfs 1,703 cf
Primary=0.50 cfs 1,703 cf

Total Runoff Area = 86,725 sf Runoff Volume = 14,995 cf Average Runoff Depth = 2.07"
51.29% Pervious = 44,485 sf 48.71% Impervious = 42,240 sf

Summary for Subcatchment EX-1: Front Entry

Runoff = 5.06 cfs @ 12.13 hrs, Volume= 13,292 cf, Depth= 2.63"

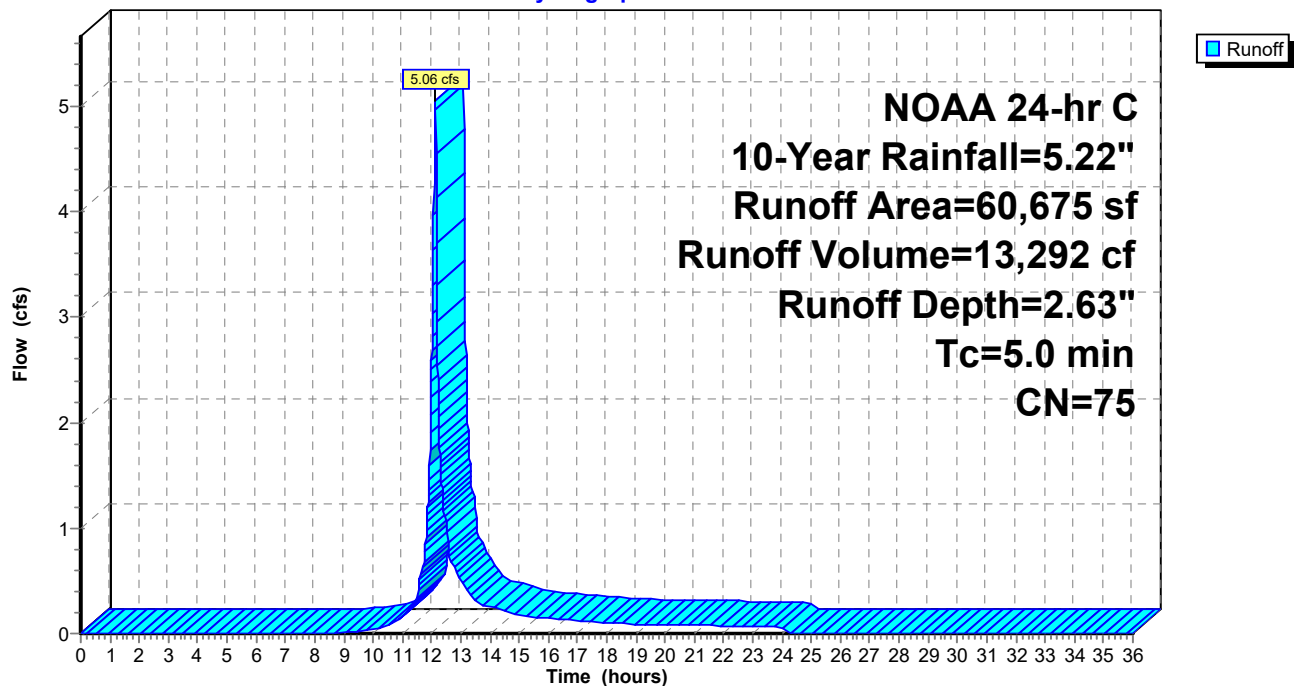
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 10-Year Rainfall=5.22"

Area (sf)	CN	Description
37,220	98	Paved parking, HSG A
23,455	39	>75% Grass cover, Good, HSG A
60,675	75	Weighted Average
23,455		38.66% Pervious Area
37,220		61.34% Impervious Area

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

Subcatchment EX-1: Front Entry

Hydrograph



Summary for Subcatchment EX-2: Back Patio

Runoff = 0.50 cfs @ 12.14 hrs, Volume= 1,703 cf, Depth= 0.78"

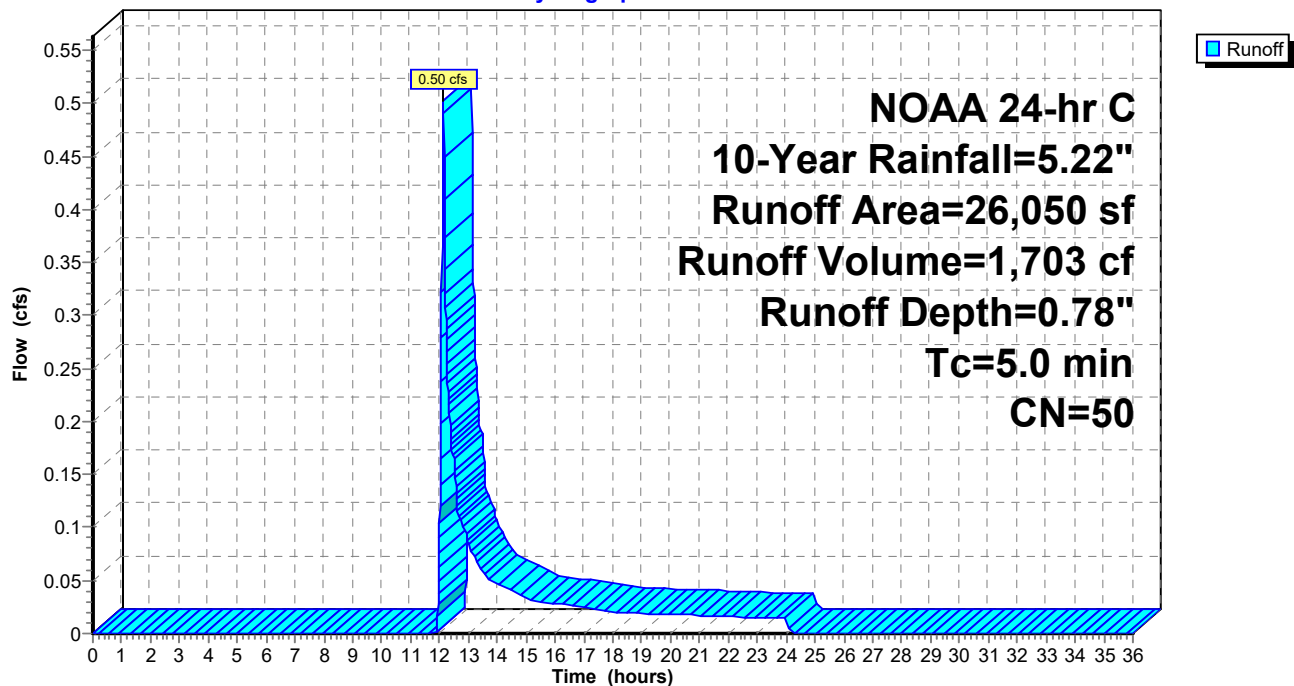
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 10-Year Rainfall=5.22"

Area (sf)	CN	Description
5,020	98	Paved parking, HSG A
21,030	39	>75% Grass cover, Good, HSG A
26,050	50	Weighted Average
21,030		80.73% Pervious Area
5,020		19.27% Impervious Area

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

Subcatchment EX-2: Back Patio

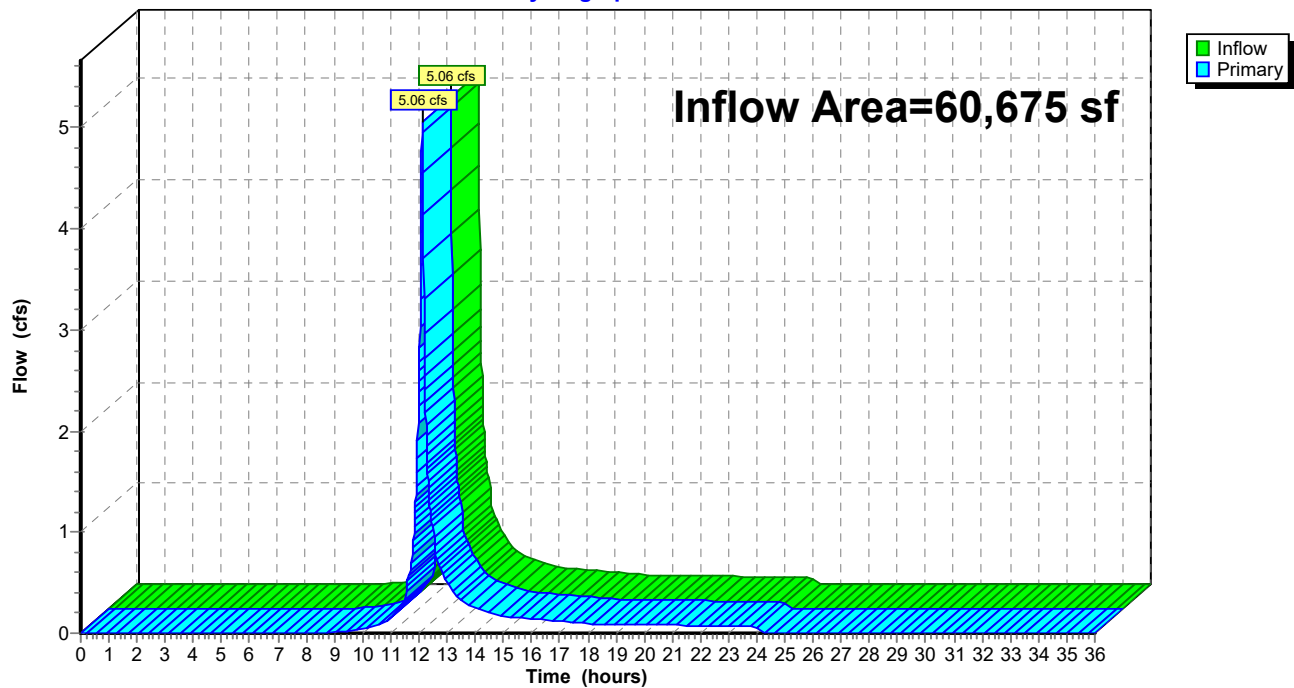
Hydrograph



Summary for Link DP1: Front Entry

Inflow Area = 60,675 sf, 61.34% Impervious, Inflow Depth = 2.63" for 10-Year event
Inflow = 5.06 cfs @ 12.13 hrs, Volume= 13,292 cf
Primary = 5.06 cfs @ 12.13 hrs, Volume= 13,292 cf, Atten= 0%, Lag= 0.0 min

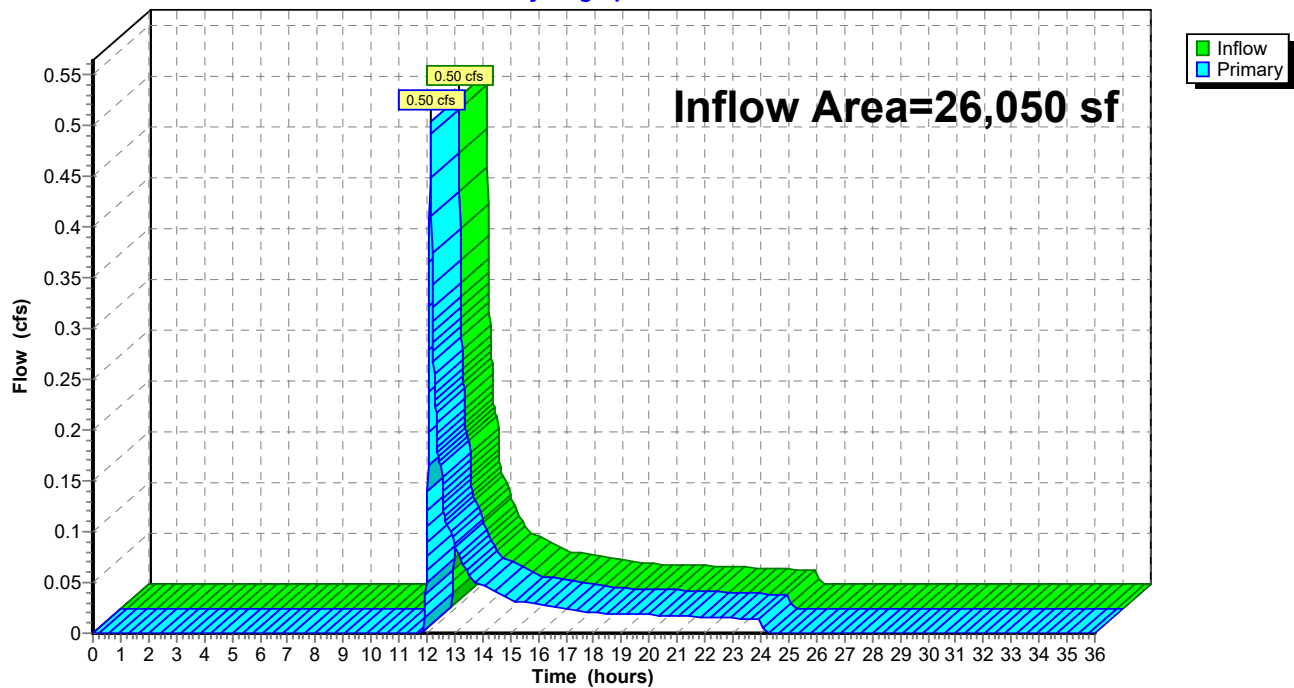
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP1: Front Entry**Hydrograph**

Summary for Link DP2: Back Patio

Inflow Area = 26,050 sf, 19.27% Impervious, Inflow Depth = 0.78" for 10-Year event
Inflow = 0.50 cfs @ 12.14 hrs, Volume= 1,703 cf
Primary = 0.50 cfs @ 12.14 hrs, Volume= 1,703 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP2: Back Patio**Hydrograph**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX-1: Front Entry

Runoff Area=60,675 sf 61.34% Impervious Runoff Depth=3.62"
Tc=5.0 min CN=75 Runoff=6.90 cfs 18,288 cf

SubcatchmentEX-2: Back Patio

Runoff Area=26,050 sf 19.27% Impervious Runoff Depth=1.34"
Tc=5.0 min CN=50 Runoff=1.00 cfs 2,907 cf

Link DP1: Front Entry

Inflow=6.90 cfs 18,288 cf
Primary=6.90 cfs 18,288 cf

Link DP2: Back Patio

Inflow=1.00 cfs 2,907 cf
Primary=1.00 cfs 2,907 cf

Total Runoff Area = 86,725 sf Runoff Volume = 21,195 cf Average Runoff Depth = 2.93"
51.29% Pervious = 44,485 sf 48.71% Impervious = 42,240 sf

Summary for Subcatchment EX-1: Front Entry

Runoff = 6.90 cfs @ 12.12 hrs, Volume= 18,288 cf, Depth= 3.62"

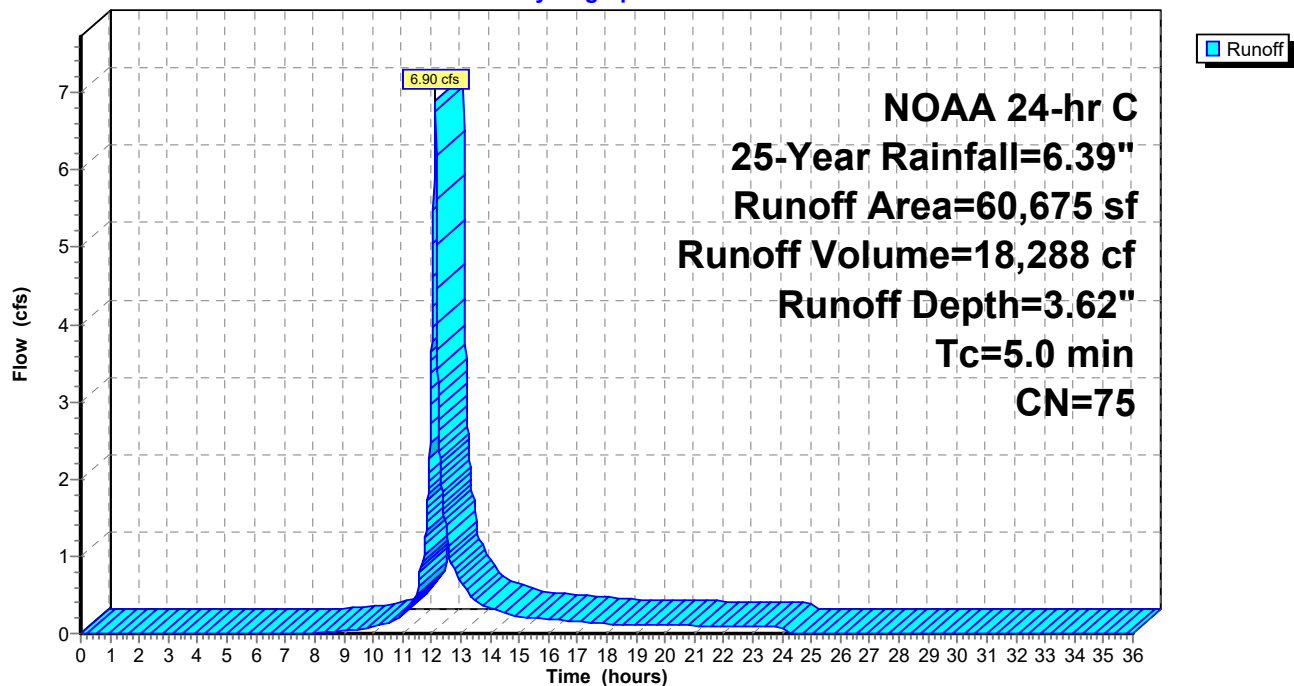
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 25-Year Rainfall=6.39"

Area (sf)	CN	Description
37,220	98	Paved parking, HSG A
23,455	39	>75% Grass cover, Good, HSG A
60,675	75	Weighted Average
23,455		38.66% Pervious Area
37,220		61.34% Impervious Area

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

Subcatchment EX-1: Front Entry

Hydrograph



Summary for Subcatchment EX-2: Back Patio

Runoff = 1.00 cfs @ 12.13 hrs, Volume= 2,907 cf, Depth= 1.34"

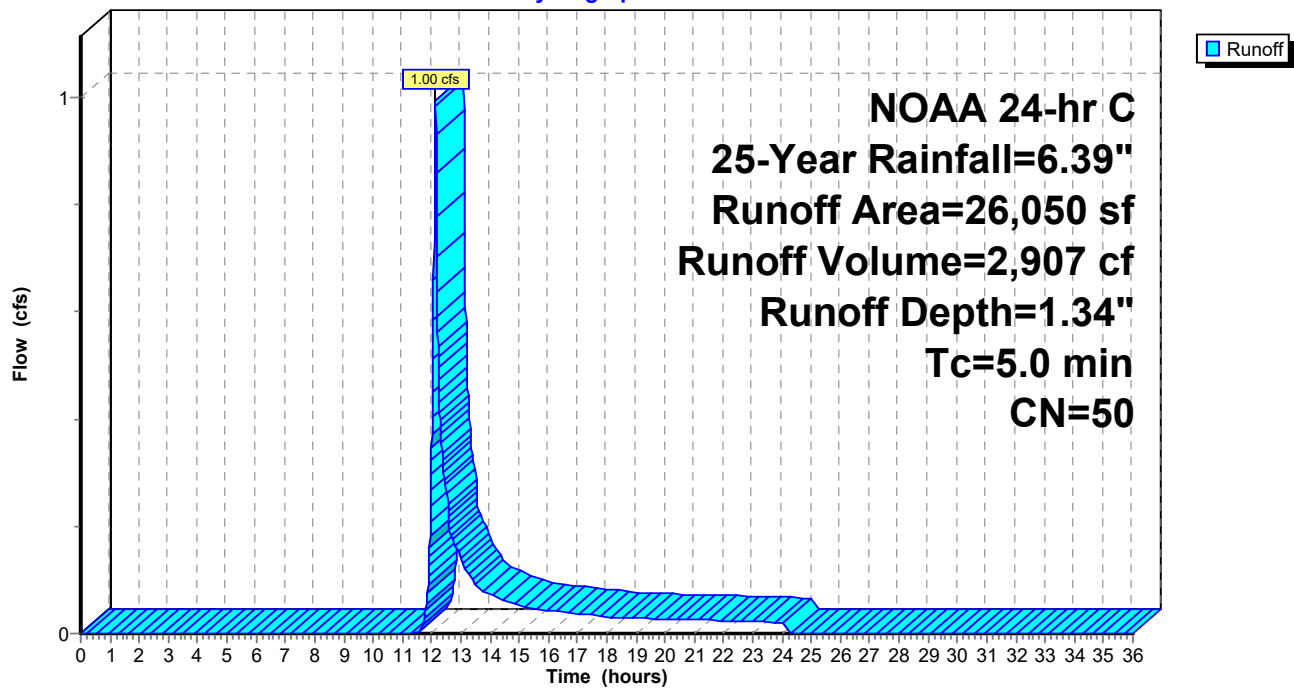
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 25-Year Rainfall=6.39"

Area (sf)	CN	Description
5,020	98	Paved parking, HSG A
21,030	39	>75% Grass cover, Good, HSG A
26,050	50	Weighted Average
21,030		80.73% Pervious Area
5,020		19.27% Impervious Area

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

Subcatchment EX-2: Back Patio

Hydrograph



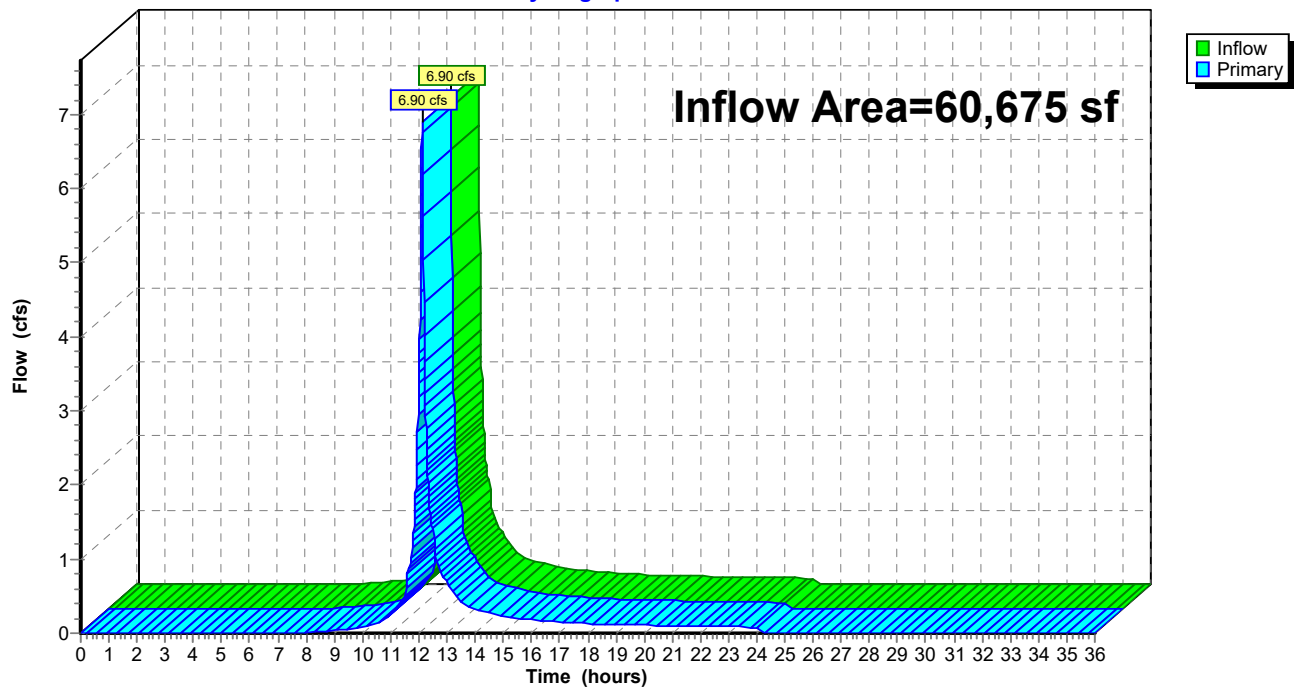
Summary for Link DP1: Front Entry

Inflow Area = 60,675 sf, 61.34% Impervious, Inflow Depth = 3.62" for 25-Year event
Inflow = 6.90 cfs @ 12.12 hrs, Volume= 18,288 cf
Primary = 6.90 cfs @ 12.12 hrs, Volume= 18,288 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP1: Front Entry

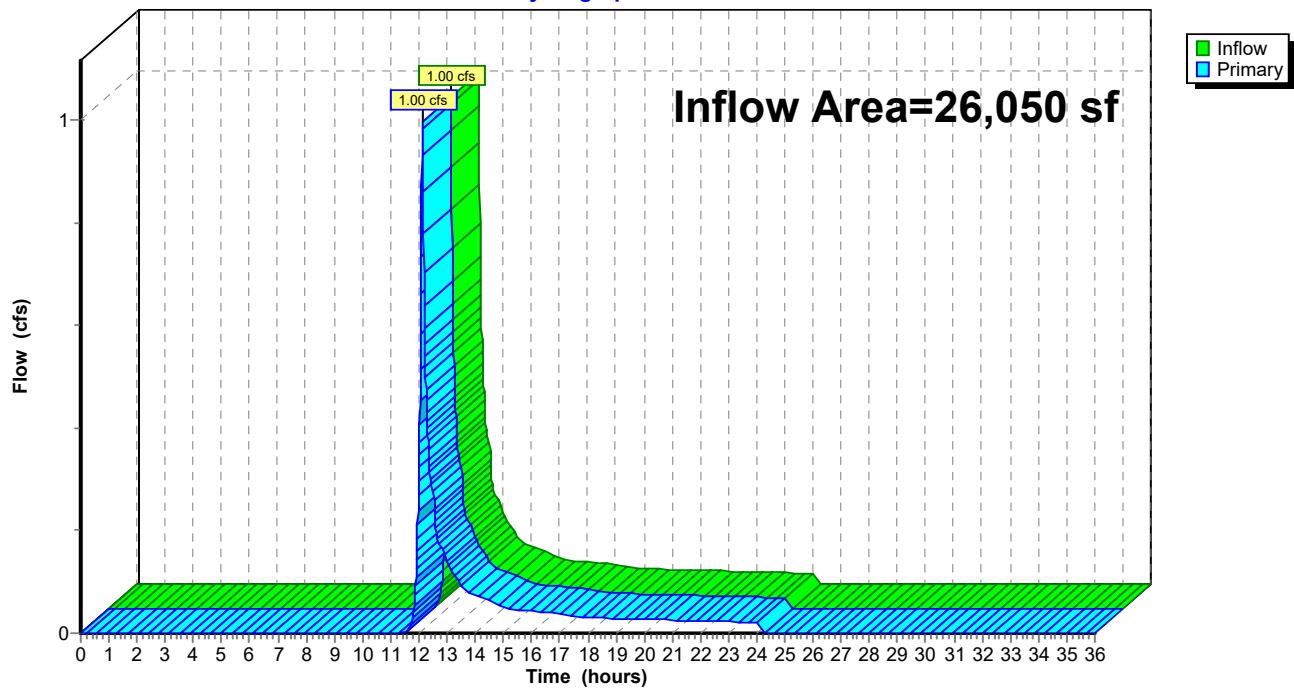
Hydrograph



Summary for Link DP2: Back Patio

Inflow Area = 26,050 sf, 19.27% Impervious, Inflow Depth = 1.34" for 25-Year event
Inflow = 1.00 cfs @ 12.13 hrs, Volume= 2,907 cf
Primary = 1.00 cfs @ 12.13 hrs, Volume= 2,907 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP2: Back Patio**Hydrograph**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX-1: Front Entry

Runoff Area=60,675 sf 61.34% Impervious Runoff Depth=5.23"
Tc=5.0 min CN=75 Runoff=9.85 cfs 26,452 cf

SubcatchmentEX-2: Back Patio

Runoff Area=26,050 sf 19.27% Impervious Runoff Depth=2.38"
Tc=5.0 min CN=50 Runoff=1.90 cfs 5,164 cf

Link DP1: Front Entry

Inflow=9.85 cfs 26,452 cf
Primary=9.85 cfs 26,452 cf

Link DP2: Back Patio

Inflow=1.90 cfs 5,164 cf
Primary=1.90 cfs 5,164 cf

Total Runoff Area = 86,725 sf Runoff Volume = 31,617 cf Average Runoff Depth = 4.37"
51.29% Pervious = 44,485 sf 48.71% Impervious = 42,240 sf

Summary for Subcatchment EX-1: Front Entry

Runoff = 9.85 cfs @ 12.12 hrs, Volume= 26,452 cf, Depth= 5.23"

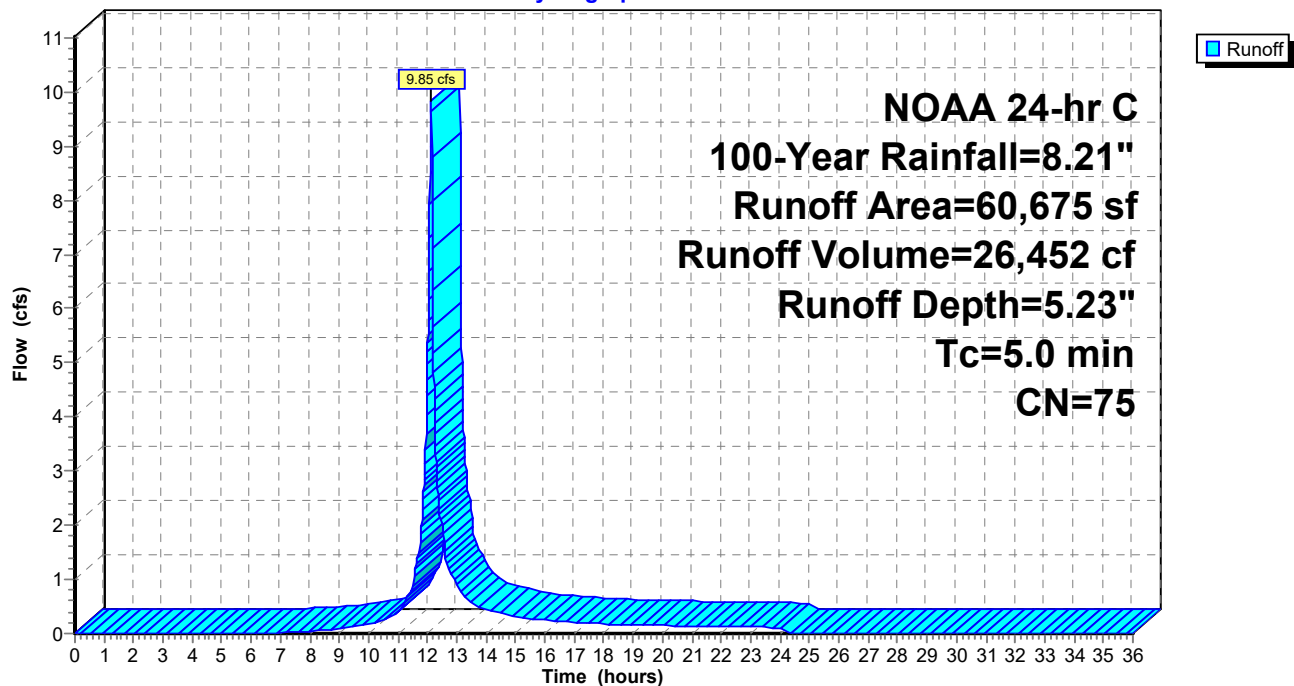
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 100-Year Rainfall=8.21"

Area (sf)	CN	Description
37,220	98	Paved parking, HSG A
23,455	39	>75% Grass cover, Good, HSG A
60,675	75	Weighted Average
23,455		38.66% Pervious Area
37,220		61.34% Impervious Area

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

Subcatchment EX-1: Front Entry

Hydrograph



Summary for Subcatchment EX-2: Back Patio

Runoff = 1.90 cfs @ 12.13 hrs, Volume= 5,164 cf, Depth= 2.38"

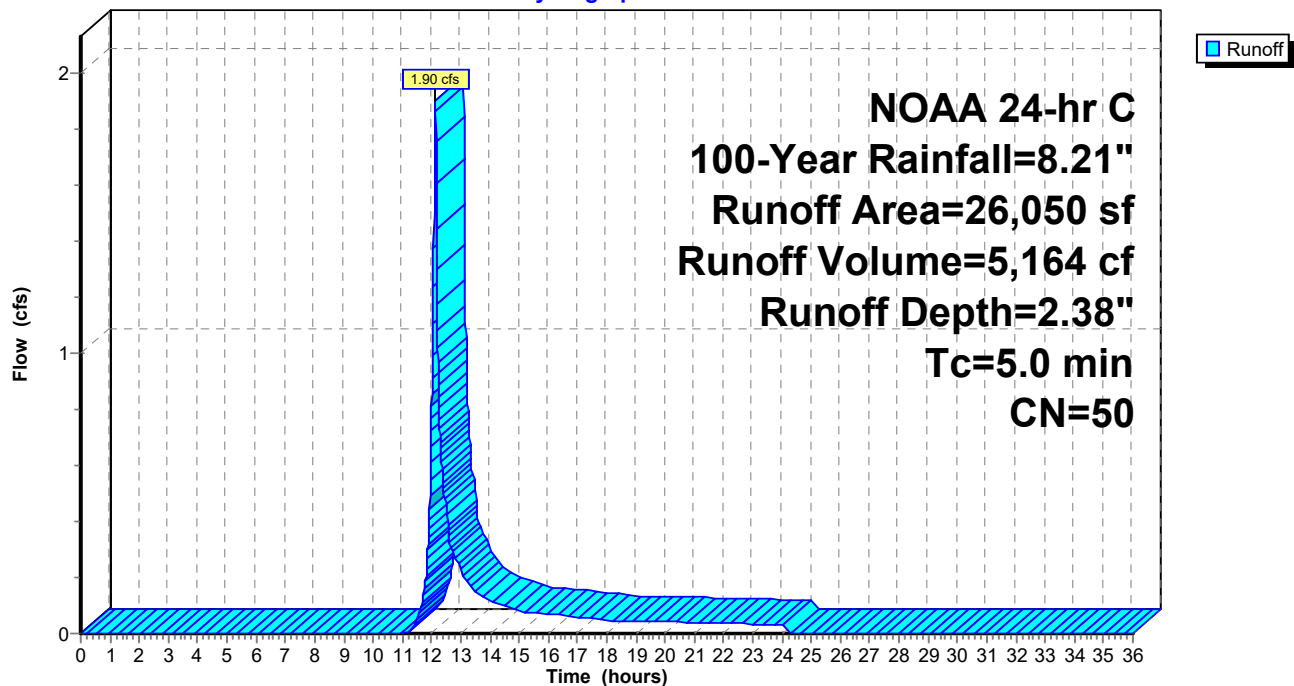
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 100-Year Rainfall=8.21"

Area (sf)	CN	Description
5,020	98	Paved parking, HSG A
21,030	39	>75% Grass cover, Good, HSG A
26,050	50	Weighted Average
21,030		80.73% Pervious Area
5,020		19.27% Impervious Area

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

Subcatchment EX-2: Back Patio

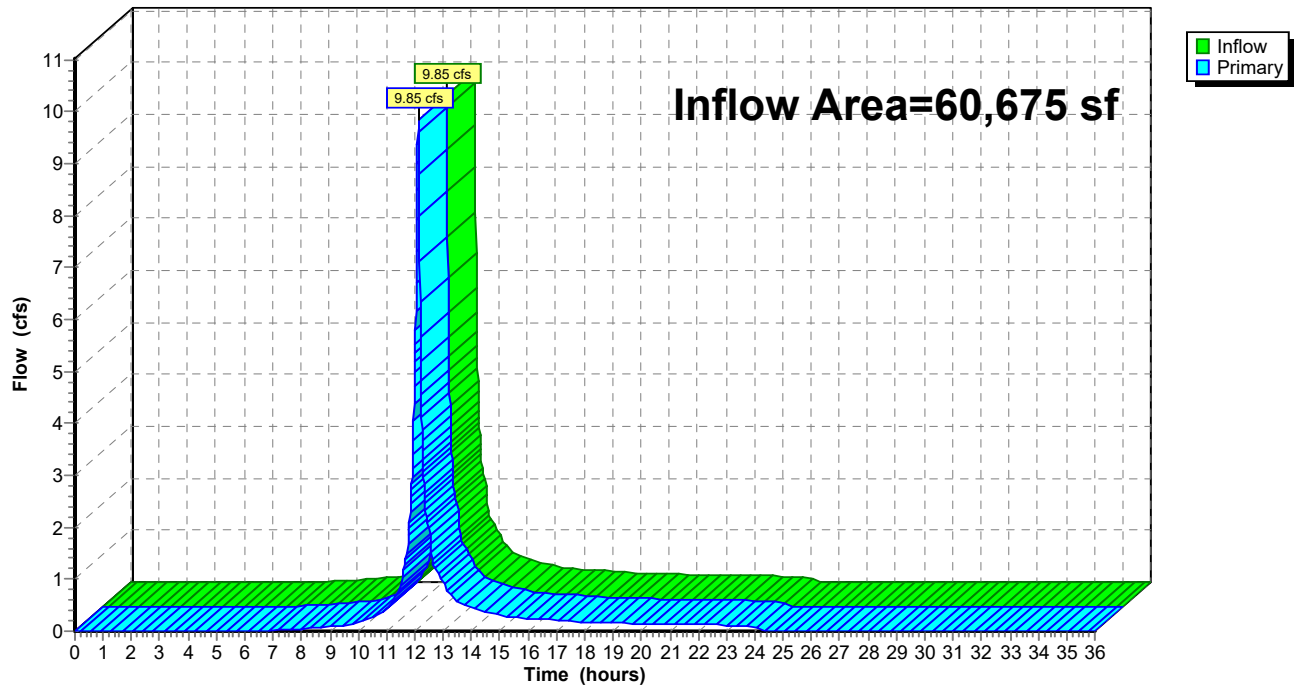
Hydrograph



Summary for Link DP1: Front Entry

Inflow Area = 60,675 sf, 61.34% Impervious, Inflow Depth = 5.23" for 100-Year event
Inflow = 9.85 cfs @ 12.12 hrs, Volume= 26,452 cf
Primary = 9.85 cfs @ 12.12 hrs, Volume= 26,452 cf, Atten= 0%, Lag= 0.0 min

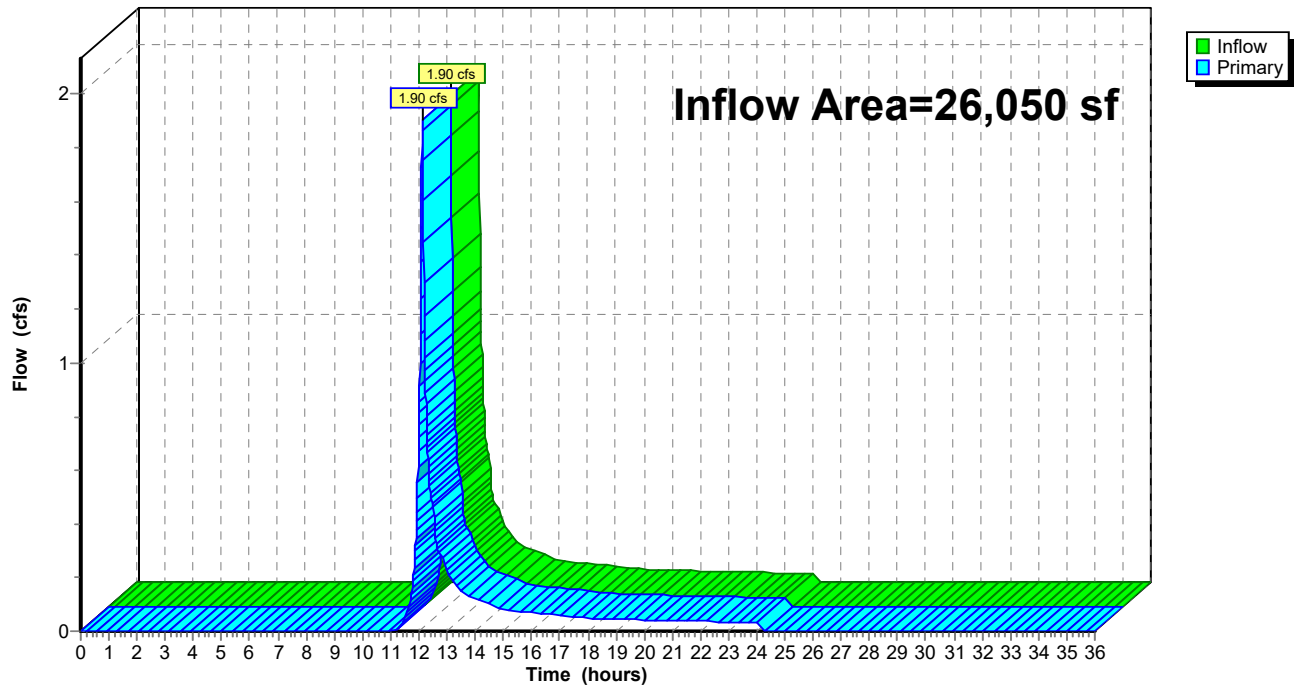
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

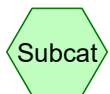
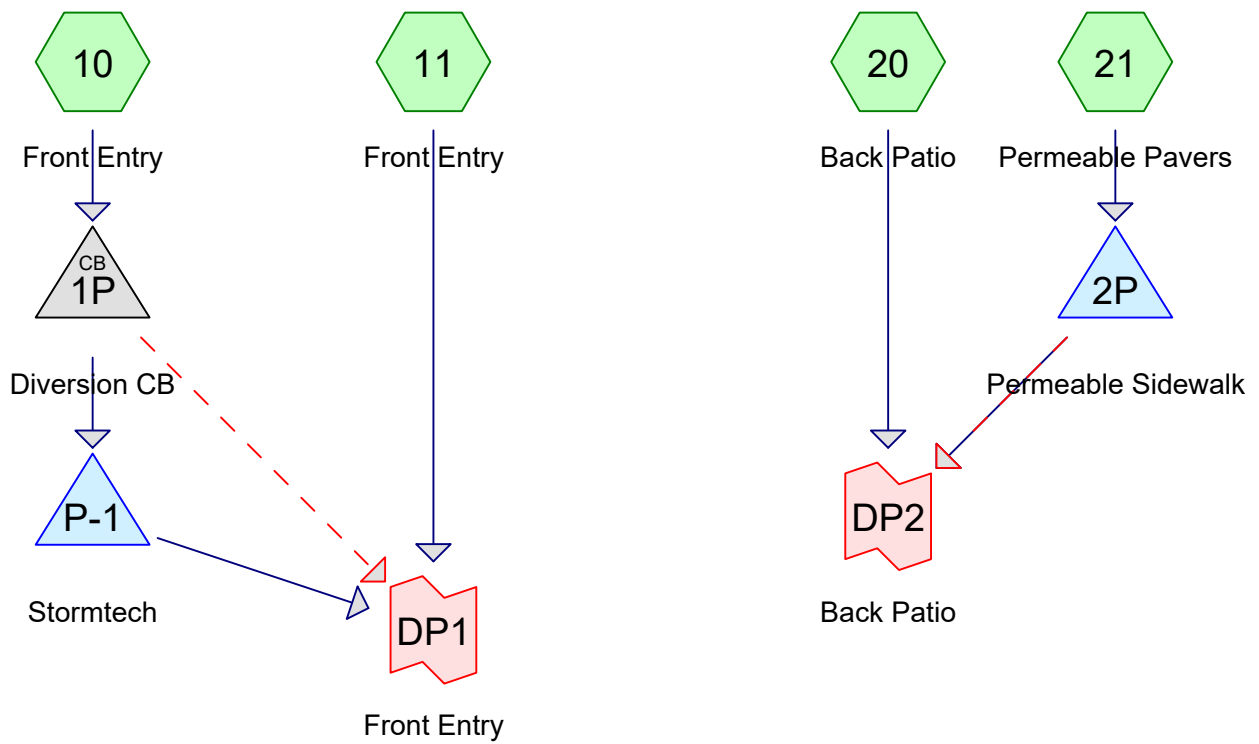
Link DP1: Front Entry**Hydrograph**

Summary for Link DP2: Back Patio

Inflow Area = 26,050 sf, 19.27% Impervious, Inflow Depth = 2.38" for 100-Year event
Inflow = 1.90 cfs @ 12.13 hrs, Volume= 5,164 cf
Primary = 1.90 cfs @ 12.13 hrs, Volume= 5,164 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

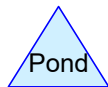
Link DP2: Back Patio**Hydrograph**



Subcat



Reach



Pond



Link

Routing Diagram for 1462800_PR

Prepared by VHB, Printed 9/17/2020

HydroCAD® 10.00-25 s/n 01038 © 2019 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
40,332	39	>75% Grass cover, Good, HSG A (10, 11, 20)
42,893	98	Paved parking, HSG A (10, 11, 20)
3,500	98	Permeable (21)
86,725	71	TOTAL AREA

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Front Entry Runoff Area=34,320 sf 72.93% Impervious Runoff Depth=1.64"
 Tc=5.0 min CN=82 Runoff=1.79 cfs 4,700 cf

Subcatchment11: Front Entry Runoff Area=26,355 sf 52.38% Impervious Runoff Depth=0.90"
 Tc=5.0 min CN=70 Runoff=0.73 cfs 1,987 cf

Subcatchment20: Back Patio Runoff Area=22,550 sf 18.00% Impervious Runoff Depth=0.16"
 Tc=5.0 min CN=50 Runoff=0.02 cfs 293 cf

Subcatchment21: Permeable Pavers Runoff Area=3,500 sf 100.00% Impervious Runoff Depth=3.10"
 Tc=5.0 min CN=98 Runoff=0.29 cfs 903 cf

Pond 1P: Diversion CB Peak Elev=93.98' Inflow=1.79 cfs 4,700 cf
 Primary=1.79 cfs 4,700 cf Secondary=0.00 cfs 0 cf Outflow=1.79 cfs 4,700 cf

Pond 2P: Permeable Sidewalk Peak Elev=98.60' Storage=135 cf Inflow=0.29 cfs 903 cf
 Discarded=0.08 cfs 904 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.08 cfs 904 cf

Pond P-1: Stormtech Peak Elev=93.98' Storage=2,771 cf Inflow=1.79 cfs 4,700 cf
 Discarded=0.05 cfs 4,511 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 4,511 cf

Link DP1: Front Entry Inflow=0.73 cfs 1,987 cf
 Primary=0.73 cfs 1,987 cf

Link DP2: Back Patio Inflow=0.02 cfs 293 cf
 Primary=0.02 cfs 293 cf

Total Runoff Area = 86,725 sf Runoff Volume = 7,884 cf Average Runoff Depth = 1.09"
46.51% Pervious = 40,332 sf 53.49% Impervious = 46,393 sf

Summary for Subcatchment 10: Front Entry

Runoff = 1.79 cfs @ 12.13 hrs, Volume= 4,700 cf, Depth= 1.64"

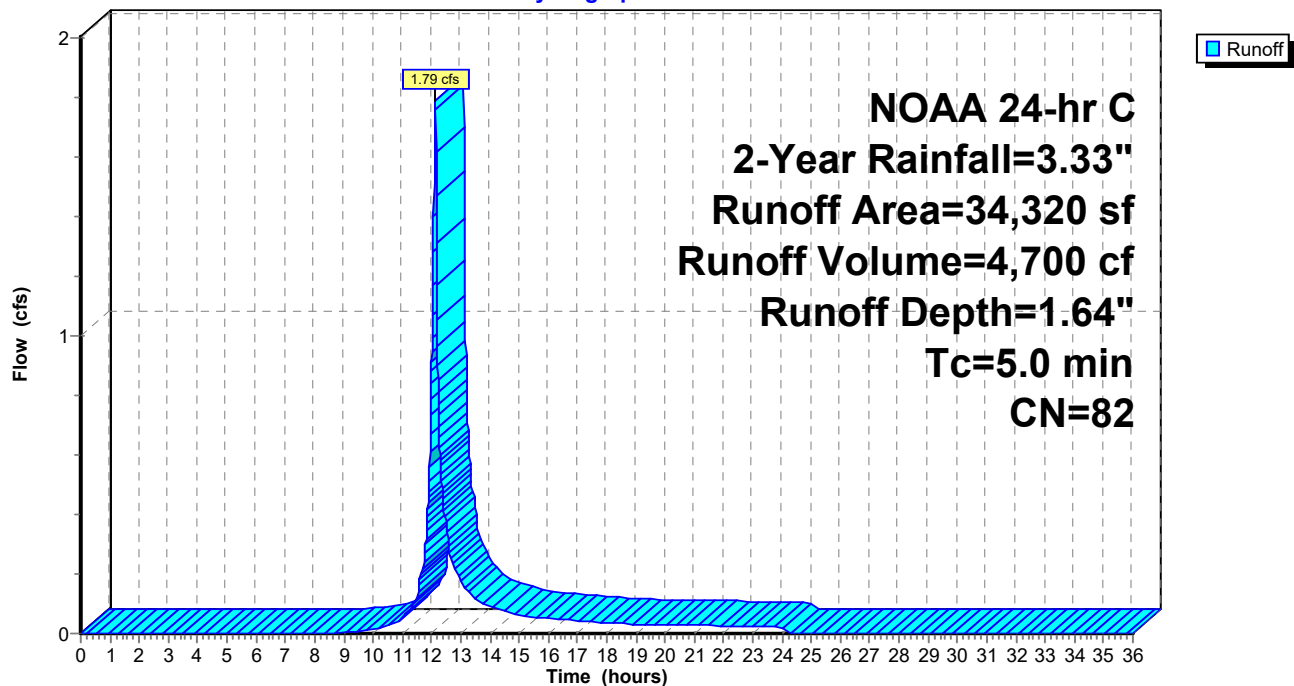
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
25,030	98	Paved parking, HSG A
9,290	39	>75% Grass cover, Good, HSG A
34,320	82	Weighted Average
9,290		27.07% Pervious Area
25,030		72.93% Impervious Area

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

Subcatchment 10: Front Entry

Hydrograph



Summary for Subcatchment 11: Front Entry

Runoff = 0.73 cfs @ 12.13 hrs, Volume= 1,987 cf, Depth= 0.90"

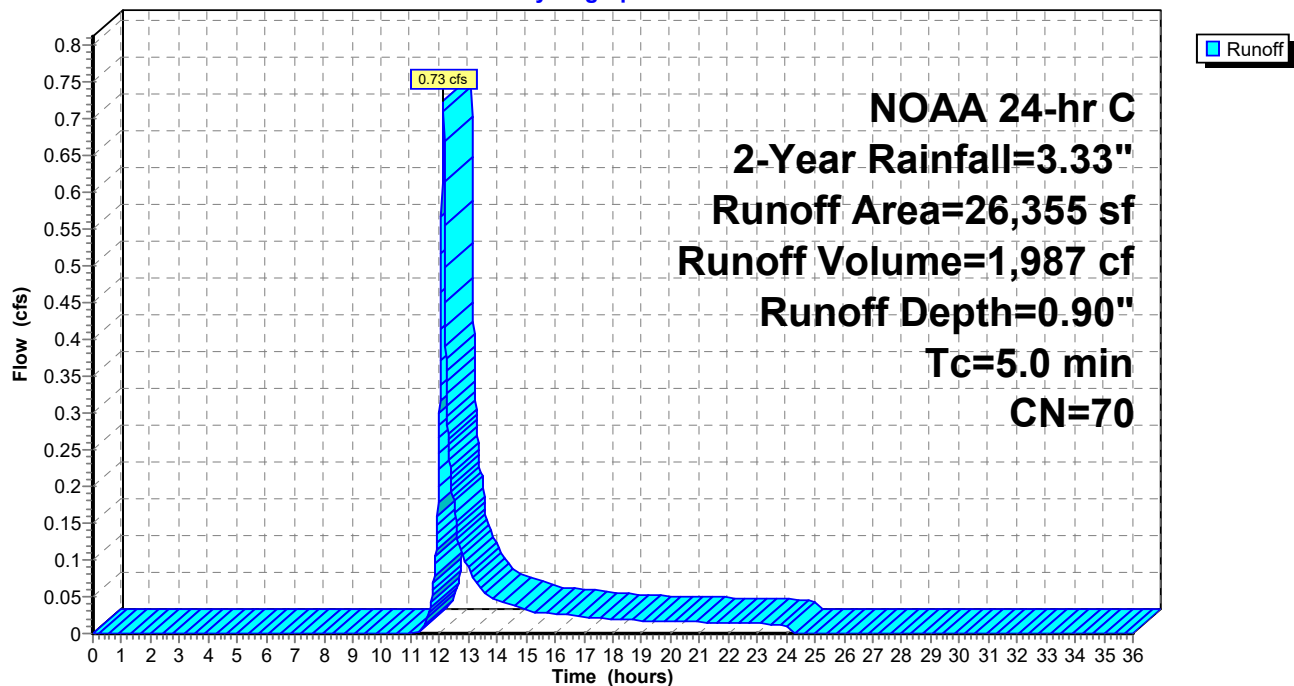
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
13,805	98	Paved parking, HSG A
12,550	39	>75% Grass cover, Good, HSG A
26,355	70	Weighted Average
12,550		47.62% Pervious Area
13,805		52.38% Impervious Area

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

Subcatchment 11: Front Entry

Hydrograph



Summary for Subcatchment 20: Back Patio

Runoff = 0.02 cfs @ 12.53 hrs, Volume= 293 cf, Depth= 0.16"

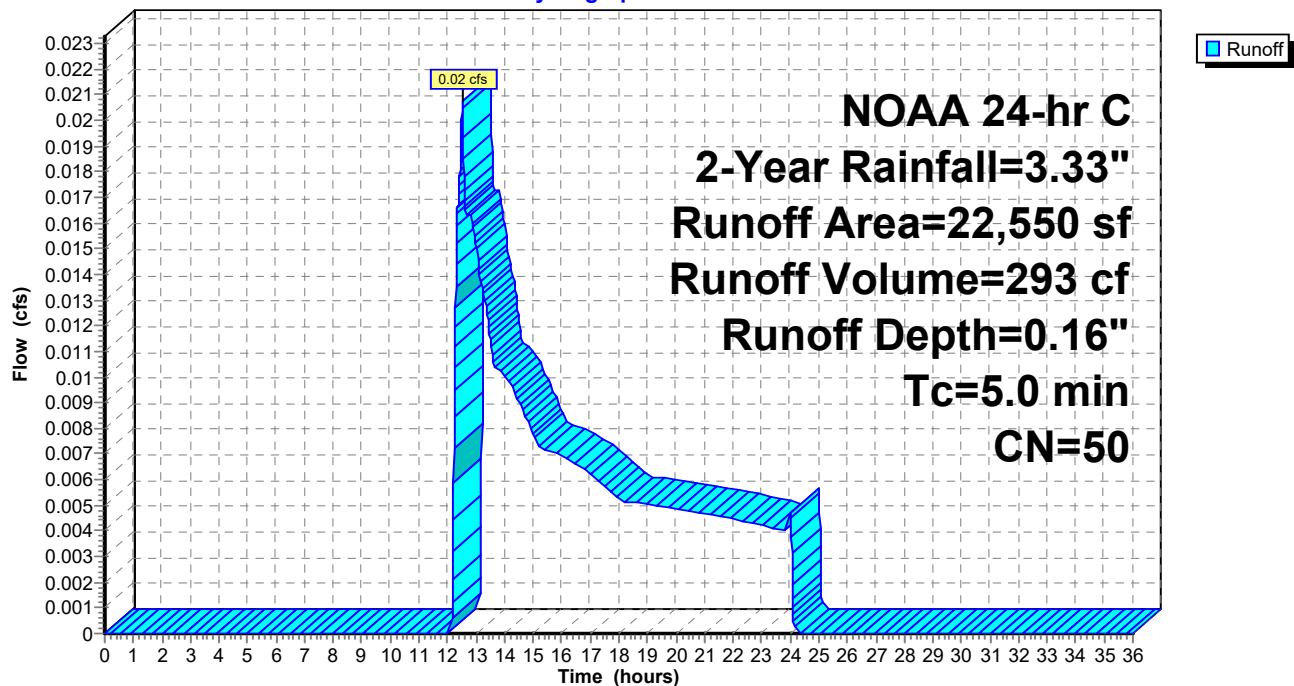
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
4,058	98	Paved parking, HSG A
18,492	39	>75% Grass cover, Good, HSG A
22,550	50	Weighted Average
18,492		82.00% Pervious Area
4,058		18.00% Impervious Area

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

Subcatchment 20: Back Patio

Hydrograph



Summary for Subcatchment 21: Permeable Pavers

Runoff = 0.29 cfs @ 12.12 hrs, Volume= 903 cf, Depth= 3.10"

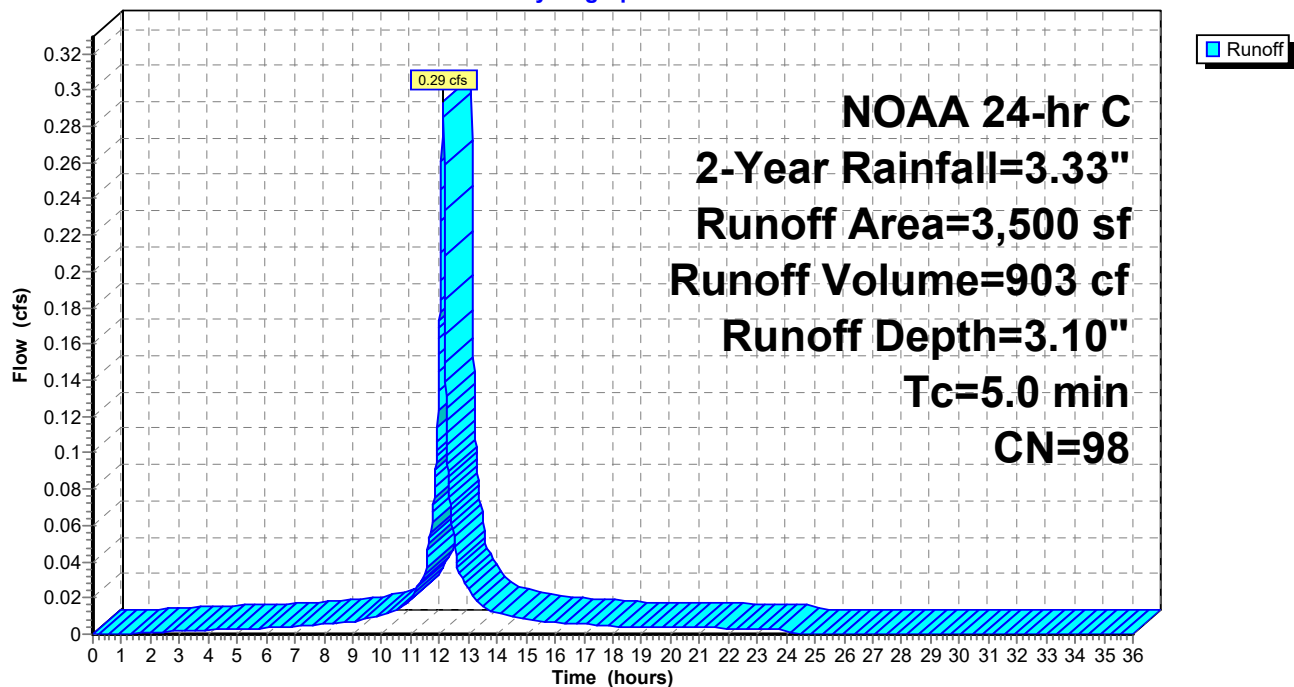
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

	Area (sf)	CN	Description
*	3,500	98	Permeable
	3,500		100.00% Impervious Area

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

Subcatchment 21: Permeable Pavers

Hydrograph



Summary for Pond 1P: Diversion CB

Inflow Area = 34,320 sf, 72.93% Impervious, Inflow Depth = 1.64" for 2-Year event
 Inflow = 1.79 cfs @ 12.13 hrs, Volume= 4,700 cf
 Outflow = 1.79 cfs @ 12.13 hrs, Volume= 4,700 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.79 cfs @ 12.13 hrs, Volume= 4,700 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

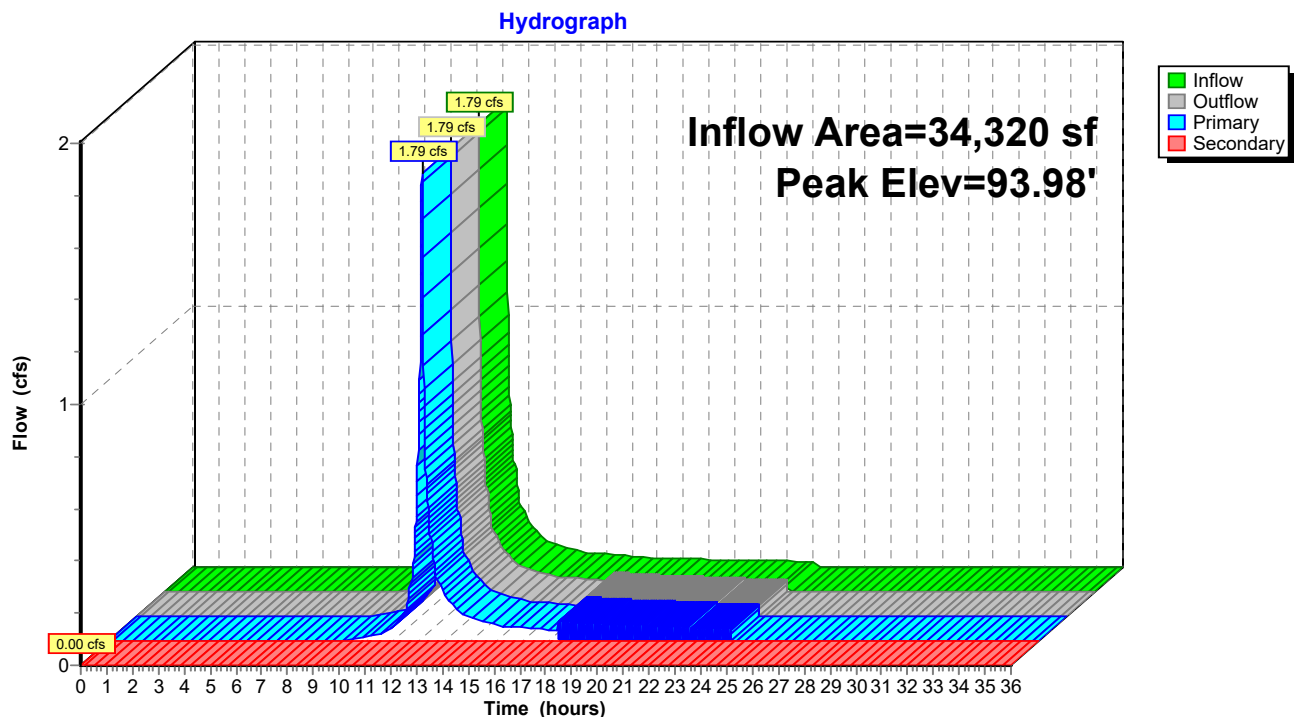
Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 93.98' @ 16.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.60'	24.0" Round Culvert L= 10.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 92.60' / 92.50' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	94.40'	10.0" Round Culvert L= 5.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 94.40' / 94.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=1.78 cfs @ 12.13 hrs HW=93.24' TW=92.93' (Dynamic Tailwater)
 ↳ **1=Culvert** (Barrel Controls 1.78 cfs @ 3.11 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=92.60' TW=0.00' (Dynamic Tailwater)
 ↳ **2=Culvert** (Controls 0.00 cfs)

Pond 1P: Diversion CB



Summary for Pond 2P: Permeable Sidewalk

Inflow Area = 3,500 sf, 100.00% Impervious, Inflow Depth = 3.10" for 2-Year event
 Inflow = 0.29 cfs @ 12.12 hrs, Volume= 903 cf
 Outflow = 0.08 cfs @ 12.01 hrs, Volume= 904 cf, Atten= 72%, Lag= 0.0 min
 Discarded = 0.08 cfs @ 12.01 hrs, Volume= 904 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 98.60' @ 12.32 hrs Surf.Area= 3,500 sf Storage= 135 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 6.7 min (762.5 - 755.8)

Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	1,750 cf	Permeable (Prismatic) Listed below (Recalc) 4,375 cf Overall x 40.0% Voids
#2	99.75'	875 cf	Surface (Prismatic) Listed below (Recalc) -Impervious
		2,625 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	3,500	0	0
99.75	3,500	4,375	4,375

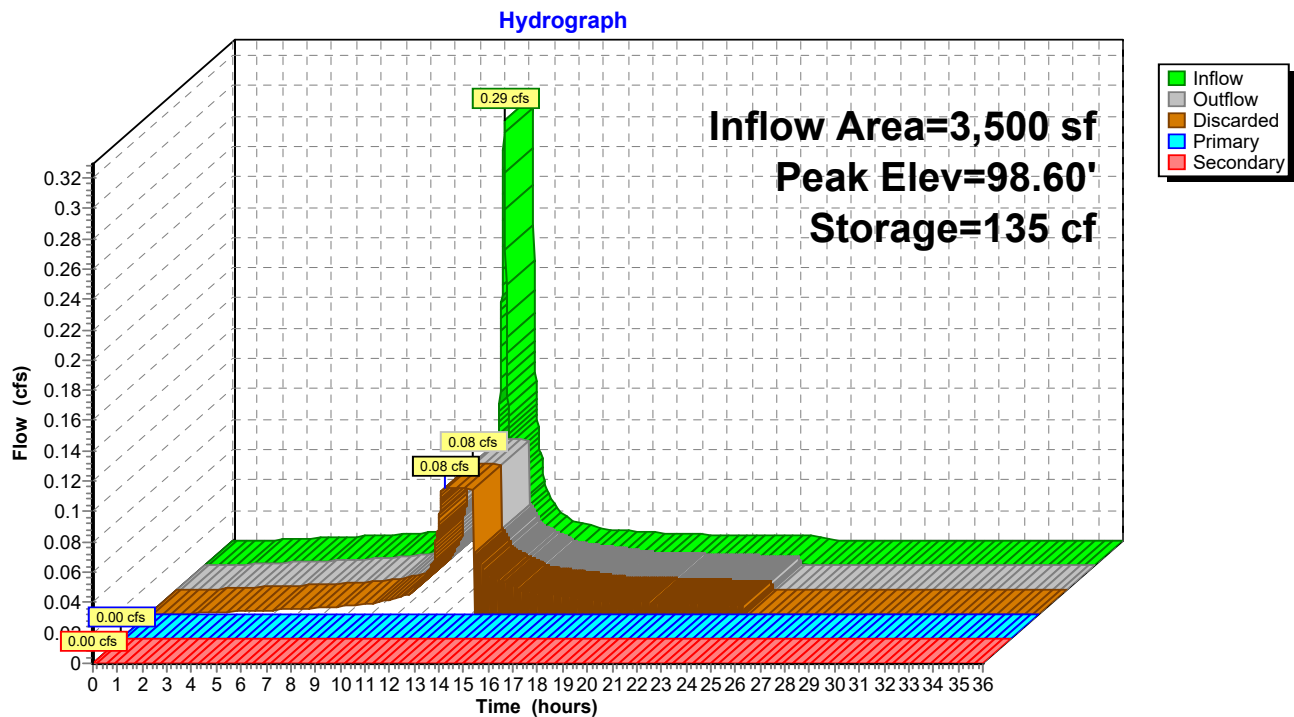
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.75	3,500	0	0
100.00	3,500	875	875

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.50'	1.020 in/hr Exfiltration over Surface area
#2	Primary	98.75'	6.0" Round Culvert L= 10.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 98.75' / 98.40' S= 0.0350 ' / Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#3	Secondary	99.95'	20.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.08 cfs @ 12.01 hrs HW=98.52' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=98.50' TW=0.00' (Dynamic Tailwater)
 ↑ **2=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=98.50' TW=0.00' (Dynamic Tailwater)
 ↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Permeable Sidewalk

Summary for Pond P-1: Stormtech

Inflow Area = 34,320 sf, 72.93% Impervious, Inflow Depth = 1.64" for 2-Year event
 Inflow = 1.79 cfs @ 12.13 hrs, Volume= 4,700 cf
 Outflow = 0.05 cfs @ 11.95 hrs, Volume= 4,511 cf, Atten= 97%, Lag= 0.0 min
 Discarded = 0.05 cfs @ 11.95 hrs, Volume= 4,511 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 93.98' @ 16.26 hrs Surf.Area= 2,062 sf Storage= 2,771 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 550.6 min (1,387.4 - 836.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	92.00'	1,878 cf	44.25'W x 46.34'L x 3.50'H Field A 7,176 cf Overall - 2,481 cf Embedded = 4,696 cf x 40.0% Voids
#2A	92.50'	2,481 cf	ADS_StormTech SC-740 +Cap x 54 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 54 Chambers in 9 Rows
#3	92.50'	861 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		5,220 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
92.50	12	0	0
96.90	12	53	53
97.00	110	6	59
97.50	3,100	803	861

Device	Routing	Invert	Outlet Devices
#1	Primary	96.90'	2.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Discarded	92.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.05 cfs @ 11.95 hrs HW=92.51' (Free Discharge)
 ↑ **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=92.00' TW=0.00' (Dynamic Tailwater)
 ↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-1: Stormtech - Chamber Wizard Field A**Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)**

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

6 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 44.34' Row Length +12.0" End Stone x 2 = 46.34' Base Length

9 Rows x 51.0" Wide + 6.0" Spacing x 8 + 12.0" Side Stone x 2 = 44.25' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

54 Chambers x 45.9 cf = 2,480.8 cf Chamber Storage

7,176.4 cf Field - 2,480.8 cf Chambers = 4,695.6 cf Stone x 40.0% Voids = 1,878.3 cf Stone Storage

Chamber Storage + Stone Storage = 4,359.0 cf = 0.100 af

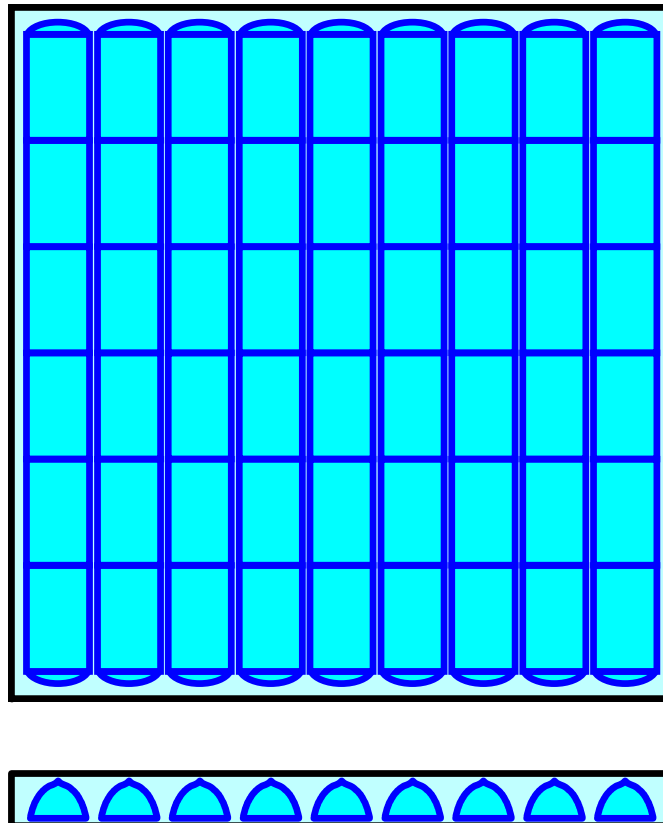
Overall Storage Efficiency = 60.7%

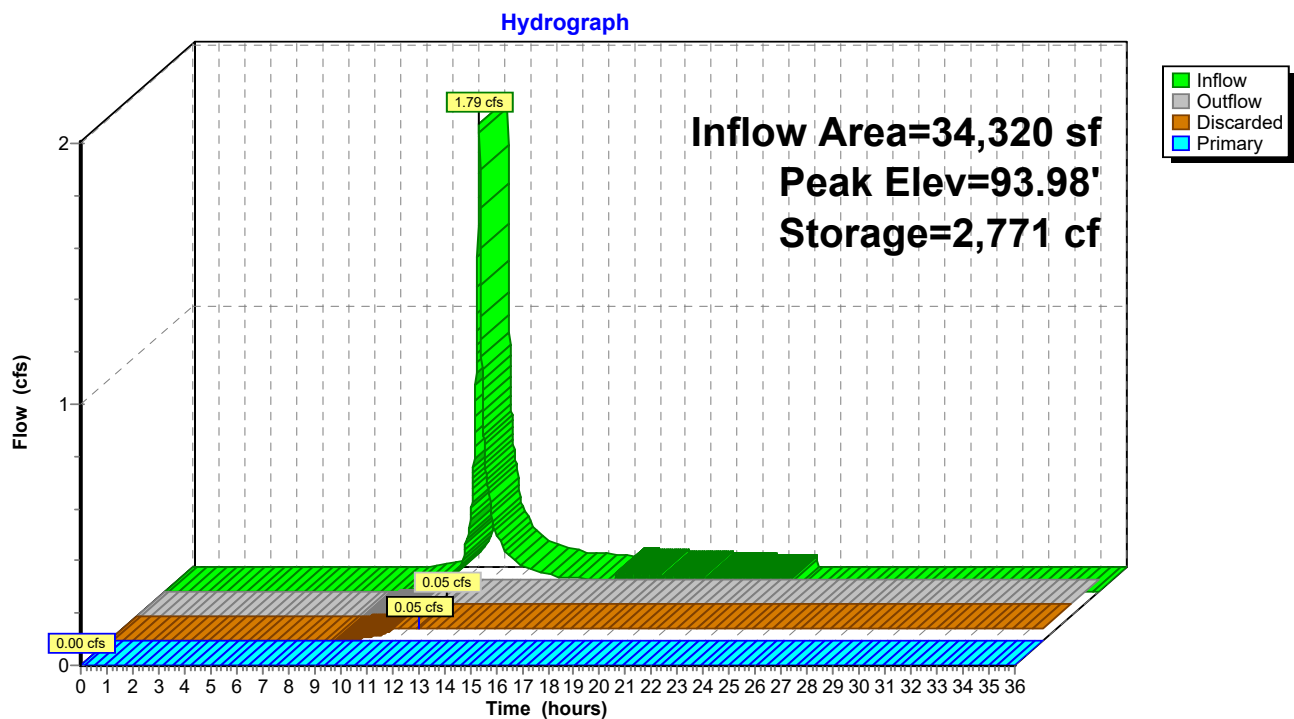
Overall System Size = 46.34' x 44.25' x 3.50'

54 Chambers

265.8 cy Field

173.9 cy Stone

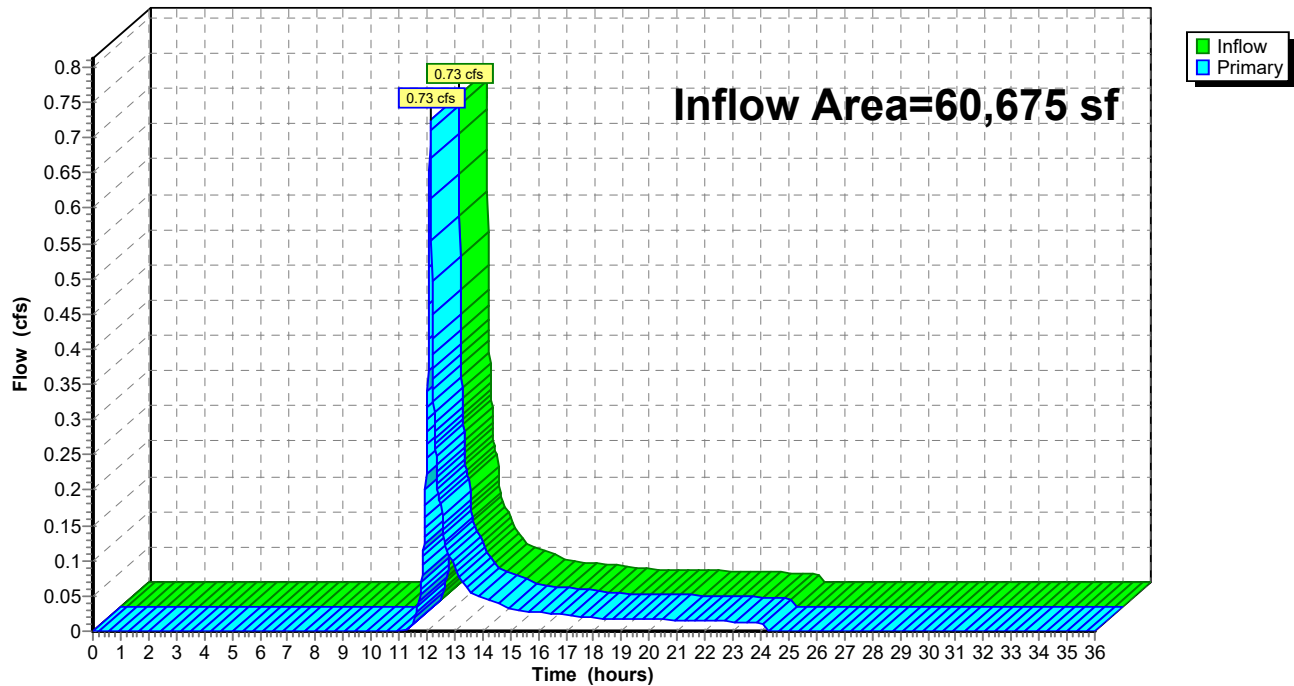


Pond P-1: Stormtech

Summary for Link DP1: Front Entry

Inflow Area = 60,675 sf, 64.00% Impervious, Inflow Depth = 0.39" for 2-Year event
Inflow = 0.73 cfs @ 12.13 hrs, Volume= 1,987 cf
Primary = 0.73 cfs @ 12.13 hrs, Volume= 1,987 cf, Atten= 0%, Lag= 0.0 min

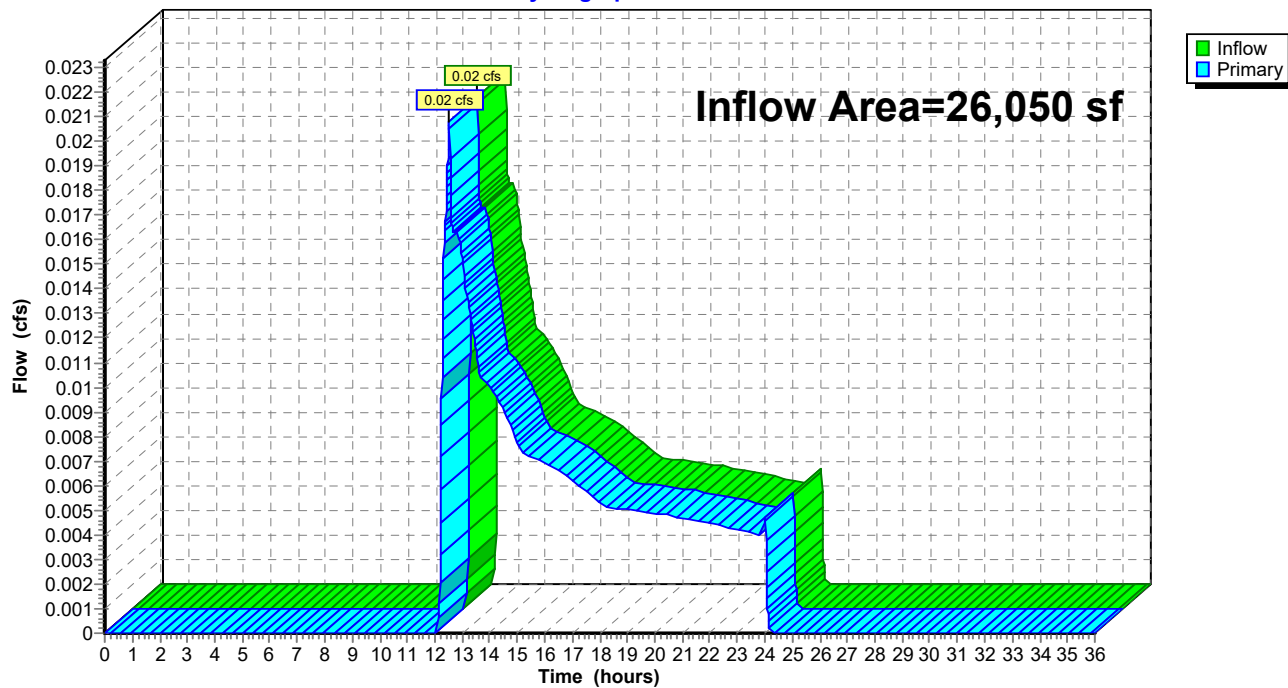
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP1: Front Entry**Hydrograph**

Summary for Link DP2: Back Patio

Inflow Area = 26,050 sf, 29.01% Impervious, Inflow Depth = 0.14" for 2-Year event
Inflow = 0.02 cfs @ 12.53 hrs, Volume= 293 cf
Primary = 0.02 cfs @ 12.53 hrs, Volume= 293 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP2: Back Patio**Hydrograph**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Front Entry Runoff Area=34,320 sf 72.93% Impervious Runoff Depth=3.28"
 Tc=5.0 min CN=82 Runoff=3.50 cfs 9,371 cf

Subcatchment11: Front Entry Runoff Area=26,355 sf 52.38% Impervious Runoff Depth=2.20"
 Tc=5.0 min CN=70 Runoff=1.84 cfs 4,834 cf

Subcatchment20: Back Patio Runoff Area=22,550 sf 18.00% Impervious Runoff Depth=0.78"
 Tc=5.0 min CN=50 Runoff=0.44 cfs 1,474 cf

Subcatchment21: Permeable Pavers Runoff Area=3,500 sf 100.00% Impervious Runoff Depth=4.98"
 Tc=5.0 min CN=98 Runoff=0.46 cfs 1,453 cf

Pond 1P: Diversion CB Peak Elev=94.94' Inflow=3.50 cfs 9,371 cf
 Primary=3.50 cfs 6,045 cf Secondary=0.87 cfs 3,325 cf Outflow=3.50 cfs 9,370 cf

Pond 2P: Permeable Sidewalk Peak Elev=98.73' Storage=320 cf Inflow=0.46 cfs 1,453 cf
 Discarded=0.08 cfs 1,454 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.08 cfs 1,454 cf

Pond P-1: Stormtech Peak Elev=94.94' Storage=3,928 cf Inflow=3.50 cfs 6,045 cf
 Discarded=0.05 cfs 4,813 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 4,813 cf

Link DP1: Front Entry Inflow=1.84 cfs 8,158 cf
 Primary=1.84 cfs 8,158 cf

Link DP2: Back Patio Inflow=0.44 cfs 1,474 cf
 Primary=0.44 cfs 1,474 cf

Total Runoff Area = 86,725 sf Runoff Volume = 17,132 cf Average Runoff Depth = 2.37"
46.51% Pervious = 40,332 sf 53.49% Impervious = 46,393 sf

Summary for Subcatchment 10: Front Entry

Runoff = 3.50 cfs @ 12.12 hrs, Volume= 9,371 cf, Depth= 3.28"

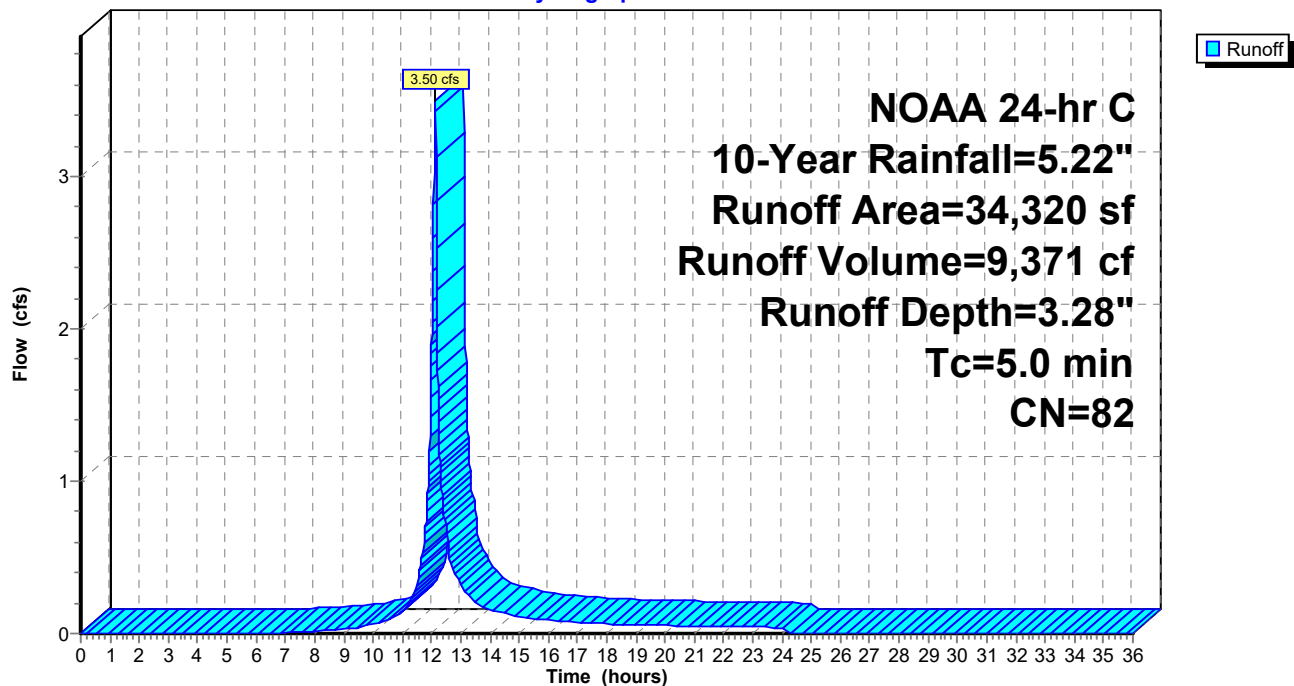
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 10-Year Rainfall=5.22"

Area (sf)	CN	Description
25,030	98	Paved parking, HSG A
9,290	39	>75% Grass cover, Good, HSG A
34,320	82	Weighted Average
9,290		27.07% Pervious Area
25,030		72.93% Impervious Area

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

Subcatchment 10: Front Entry

Hydrograph



Summary for Subcatchment 11: Front Entry

Runoff = 1.84 cfs @ 12.13 hrs, Volume= 4,834 cf, Depth= 2.20"

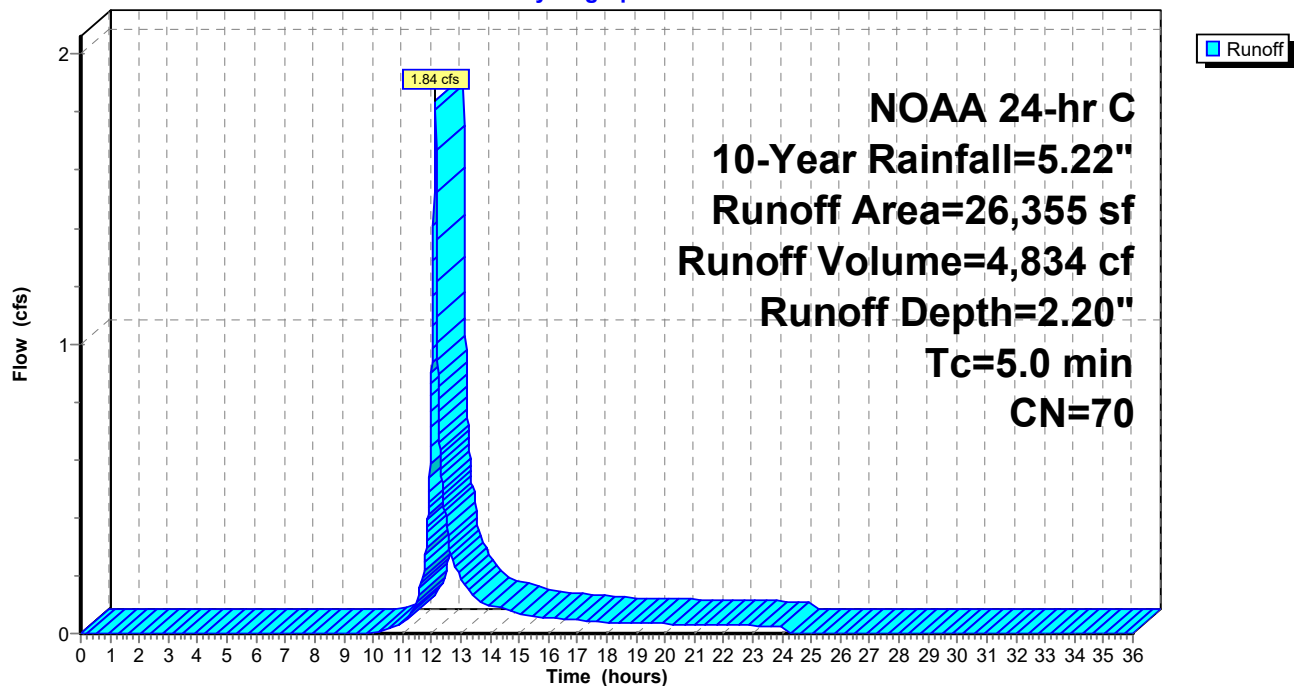
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 10-Year Rainfall=5.22"

Area (sf)	CN	Description
13,805	98	Paved parking, HSG A
12,550	39	>75% Grass cover, Good, HSG A
26,355	70	Weighted Average
12,550		47.62% Pervious Area
13,805		52.38% Impervious Area

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

Subcatchment 11: Front Entry

Hydrograph



Summary for Subcatchment 20: Back Patio

Runoff = 0.44 cfs @ 12.14 hrs, Volume= 1,474 cf, Depth= 0.78"

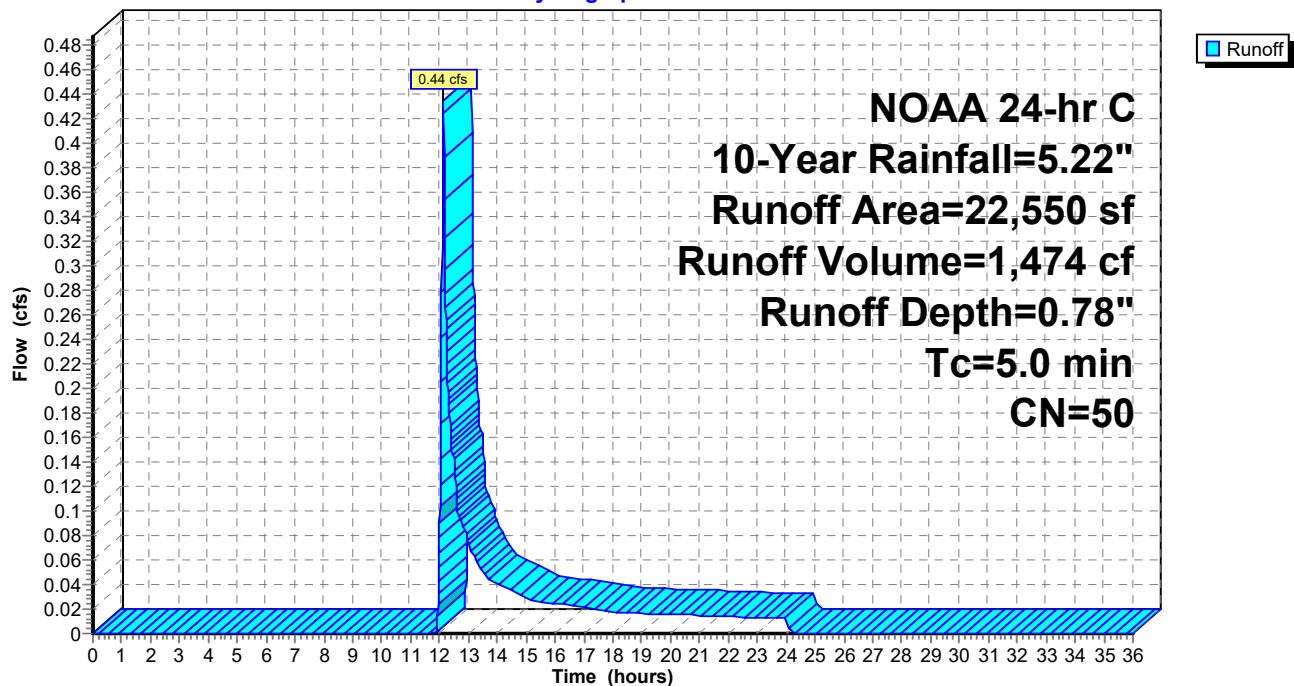
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 10-Year Rainfall=5.22"

Area (sf)	CN	Description
4,058	98	Paved parking, HSG A
18,492	39	>75% Grass cover, Good, HSG A
22,550	50	Weighted Average
18,492		82.00% Pervious Area
4,058		18.00% Impervious Area

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

Subcatchment 20: Back Patio

Hydrograph



Summary for Subcatchment 21: Permeable Pavers

Runoff = 0.46 cfs @ 12.12 hrs, Volume= 1,453 cf, Depth= 4.98"

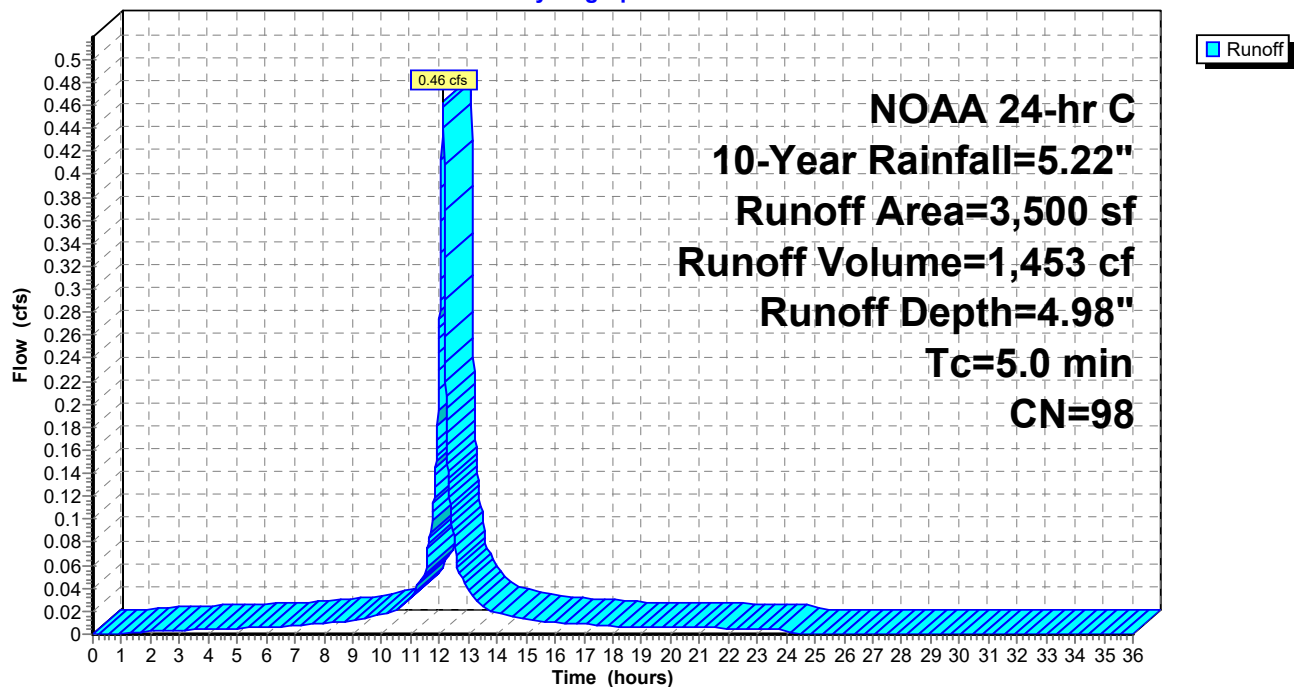
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 10-Year Rainfall=5.22"

	Area (sf)	CN	Description
*	3,500	98	Permeable
	3,500		100.00% Impervious Area

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

Subcatchment 21: Permeable Pavers

Hydrograph



Summary for Pond 1P: Diversion CB

Inflow Area = 34,320 sf, 72.93% Impervious, Inflow Depth = 3.28" for 10-Year event
 Inflow = 3.50 cfs @ 12.12 hrs, Volume= 9,371 cf
 Outflow = 3.50 cfs @ 12.12 hrs, Volume= 9,370 cf, Atten= 0%, Lag= 0.0 min
 Primary = 3.50 cfs @ 12.12 hrs, Volume= 6,045 cf
 Secondary = 0.87 cfs @ 12.36 hrs, Volume= 3,325 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Peak Elev= 94.94' @ 12.36 hrs

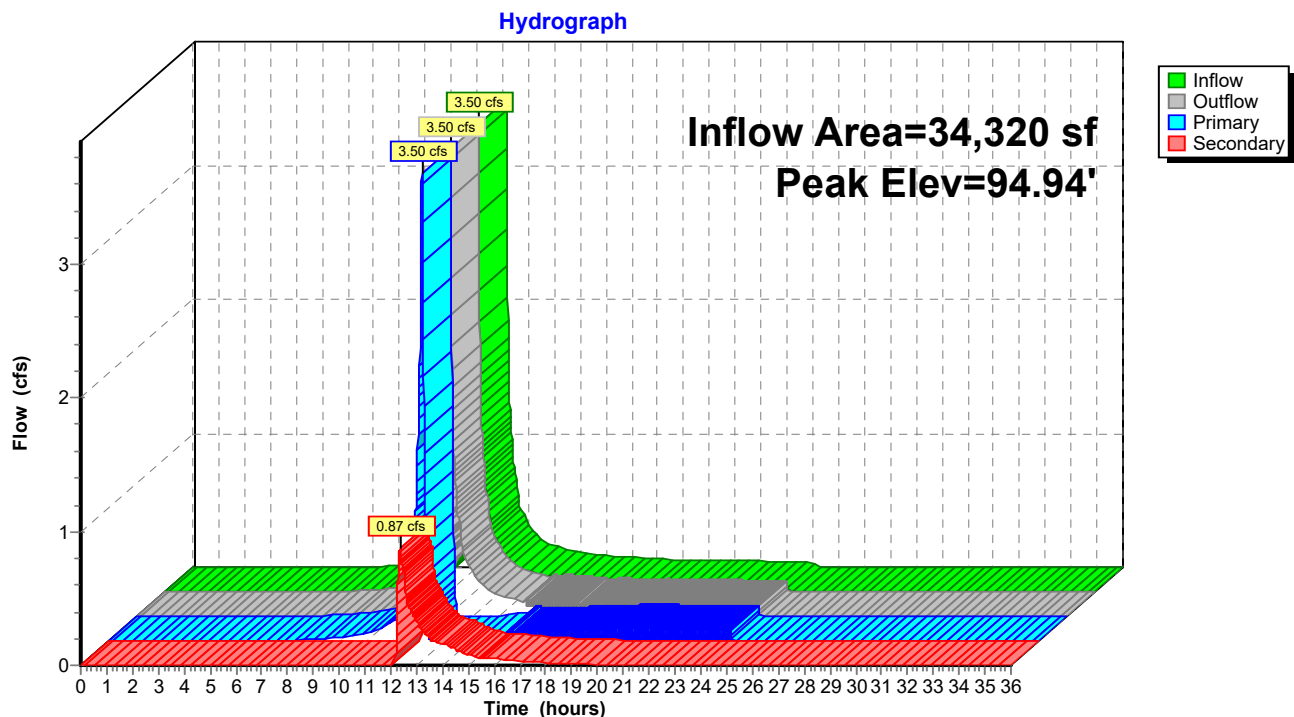
Device	Routing	Invert	Outlet Devices
#1	Primary	92.60'	24.0" Round Culvert L= 10.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 92.60' / 92.50' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	94.40'	10.0" Round Culvert L= 5.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 94.40' / 94.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=1.41 cfs @ 12.12 hrs HW=94.03' TW=94.02' (Dynamic Tailwater)

↑**1=Culvert** (Outlet Controls 1.41 cfs @ 0.82 fps)

Secondary OutFlow Max=0.87 cfs @ 12.36 hrs HW=94.94' TW=0.00' (Dynamic Tailwater)

↑**2=Culvert** (Barrel Controls 0.87 cfs @ 3.32 fps)

Pond 1P: Diversion CB

Summary for Pond 2P: Permeable Sidewalk

Inflow Area = 3,500 sf, 100.00% Impervious, Inflow Depth = 4.98" for 10-Year event
 Inflow = 0.46 cfs @ 12.12 hrs, Volume= 1,453 cf
 Outflow = 0.08 cfs @ 11.89 hrs, Volume= 1,454 cf, Atten= 82%, Lag= 0.0 min
 Discarded = 0.08 cfs @ 11.89 hrs, Volume= 1,454 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 98.73' @ 12.54 hrs Surf.Area= 3,500 sf Storage= 320 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 19.2 min (766.4 - 747.2)

Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	1,750 cf	Permeable (Prismatic) Listed below (Recalc) 4,375 cf Overall x 40.0% Voids
#2	99.75'	875 cf	Surface (Prismatic) Listed below (Recalc) -Impervious
		2,625 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	3,500	0	0
99.75	3,500	4,375	4,375

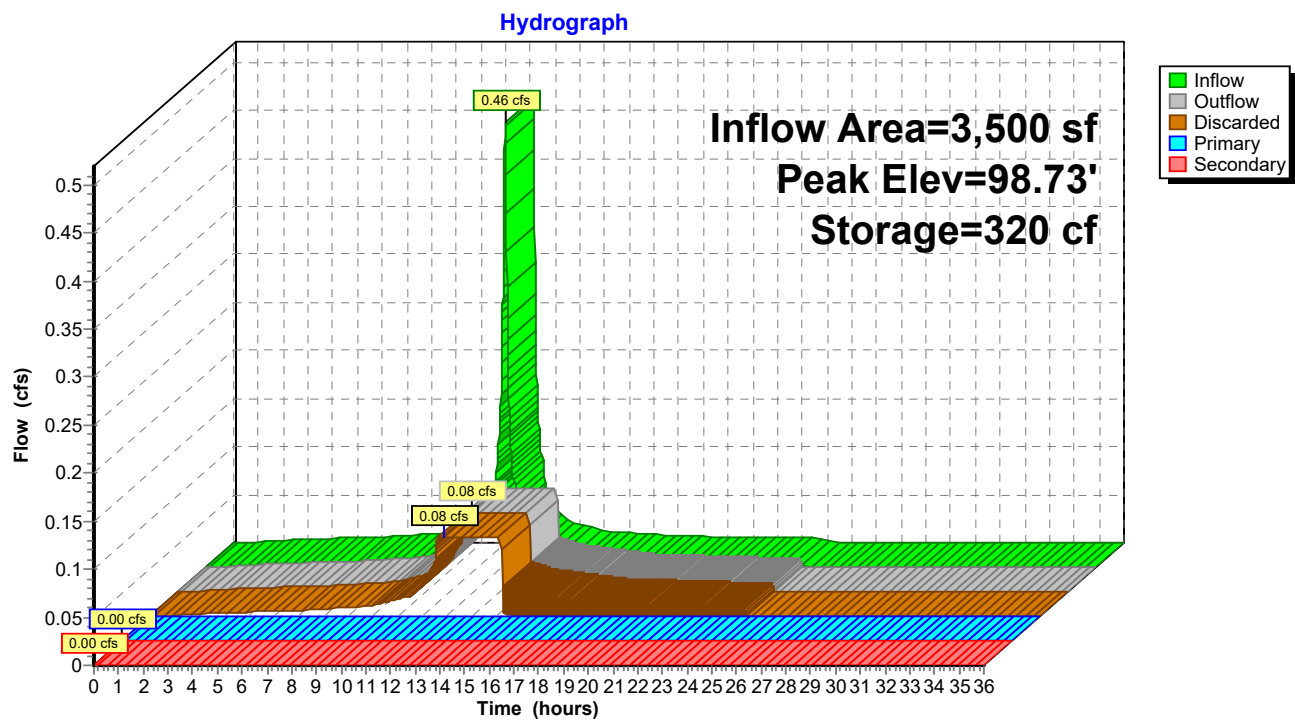
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.75	3,500	0	0
100.00	3,500	875	875

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.50'	1.020 in/hr Exfiltration over Surface area
#2	Primary	98.75'	6.0" Round Culvert L= 10.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 98.75' / 98.40' S= 0.0350 ' / Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#3	Secondary	99.95'	20.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.08 cfs @ 11.89 hrs HW=98.52' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=98.50' TW=0.00' (Dynamic Tailwater)
 ↑**2=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=98.50' TW=0.00' (Dynamic Tailwater)
 ↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Permeable Sidewalk

Summary for Pond P-1: Stormtech

Inflow Area = 34,320 sf, 72.93% Impervious, Inflow Depth = 2.11" for 10-Year event
 Inflow = 3.50 cfs @ 12.12 hrs, Volume= 6,045 cf
 Outflow = 0.05 cfs @ 11.45 hrs, Volume= 4,813 cf, Atten= 99%, Lag= 0.0 min
 Discarded = 0.05 cfs @ 11.45 hrs, Volume= 4,813 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 94.94' @ 12.36 hrs Surf.Area= 2,062 sf Storage= 3,928 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 523.5 min (1,335.6 - 812.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	92.00'	1,878 cf	44.25'W x 46.34'L x 3.50'H Field A 7,176 cf Overall - 2,481 cf Embedded = 4,696 cf x 40.0% Voids
#2A	92.50'	2,481 cf	ADS_StormTech SC-740 +Cap x 54 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 54 Chambers in 9 Rows
#3	92.50'	861 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		5,220 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
92.50	12	0	0
96.90	12	53	53
97.00	110	6	59
97.50	3,100	803	861

Device	Routing	Invert	Outlet Devices
#1	Primary	96.90'	2.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Discarded	92.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.05 cfs @ 11.45 hrs HW=92.50' (Free Discharge)

↑ **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=92.00' TW=0.00' (Dynamic Tailwater)

↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P-1: Stormtech - Chamber Wizard Field A**Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)**

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

6 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 44.34' Row Length +12.0" End Stone x 2 = 46.34' Base Length

9 Rows x 51.0" Wide + 6.0" Spacing x 8 + 12.0" Side Stone x 2 = 44.25' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

54 Chambers x 45.9 cf = 2,480.8 cf Chamber Storage

7,176.4 cf Field - 2,480.8 cf Chambers = 4,695.6 cf Stone x 40.0% Voids = 1,878.3 cf Stone Storage

Chamber Storage + Stone Storage = 4,359.0 cf = 0.100 af

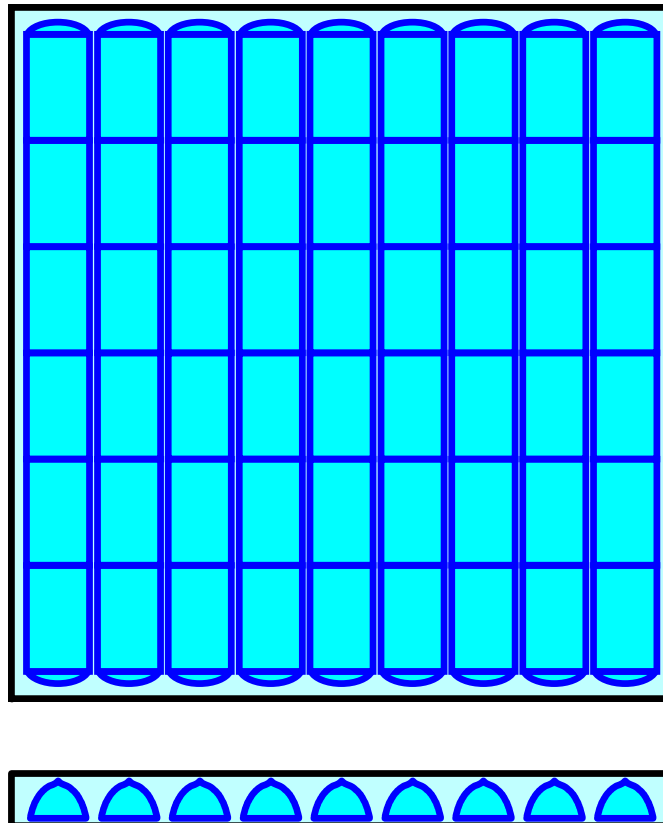
Overall Storage Efficiency = 60.7%

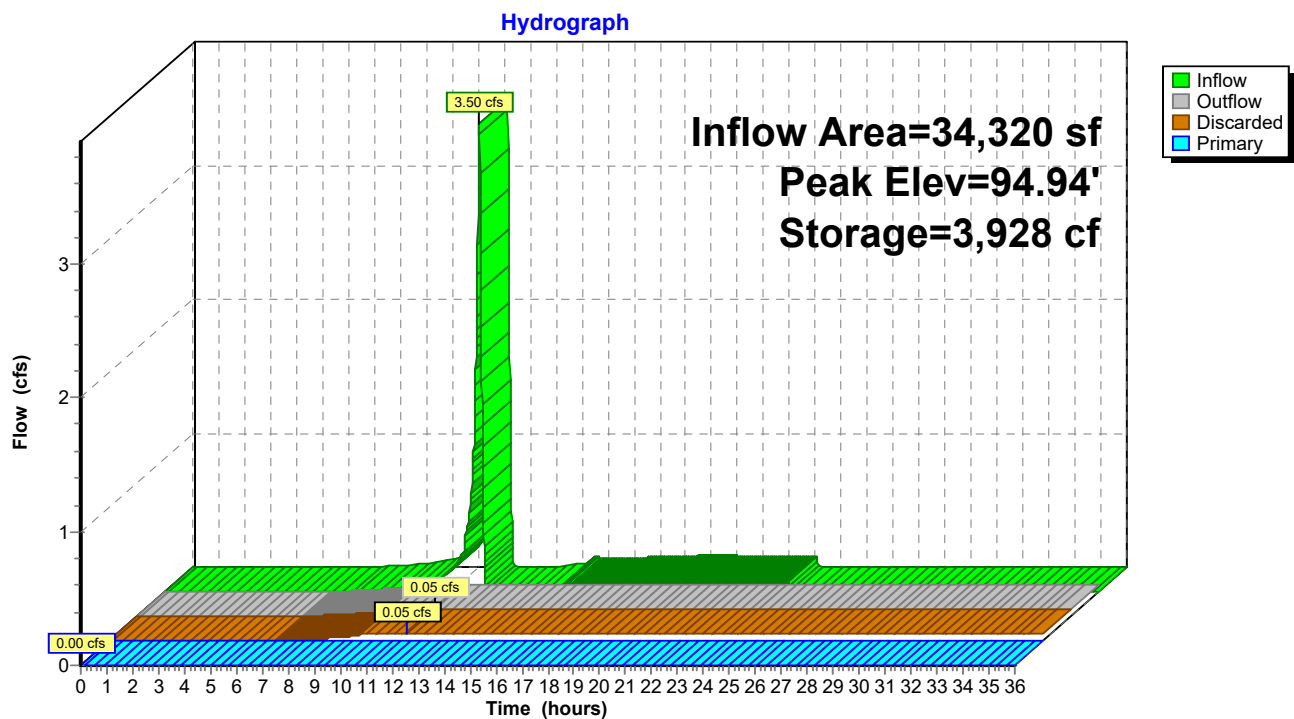
Overall System Size = 46.34' x 44.25' x 3.50'

54 Chambers

265.8 cy Field

173.9 cy Stone

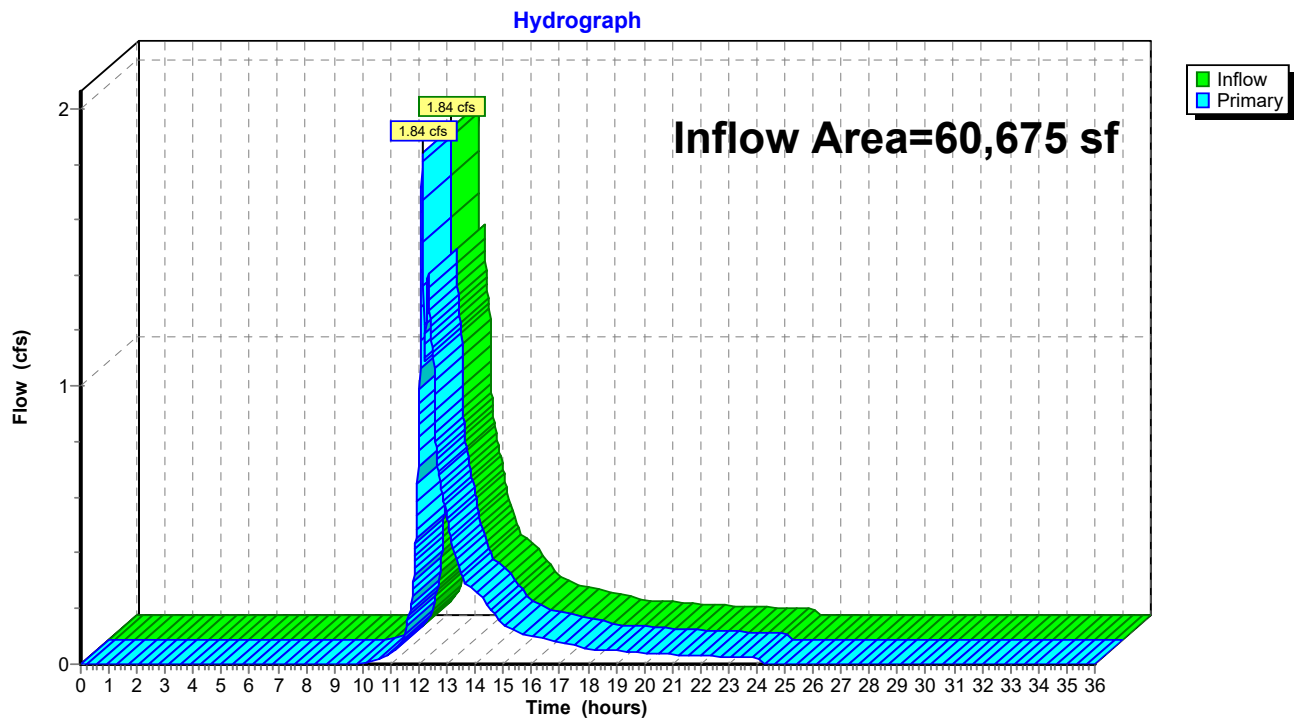


Pond P-1: Stormtech

Summary for Link DP1: Front Entry

Inflow Area = 60,675 sf, 64.00% Impervious, Inflow Depth = 1.61" for 10-Year event
Inflow = 1.84 cfs @ 12.13 hrs, Volume= 8,158 cf
Primary = 1.84 cfs @ 12.13 hrs, Volume= 8,158 cf, Atten= 0%, Lag= 0.0 min

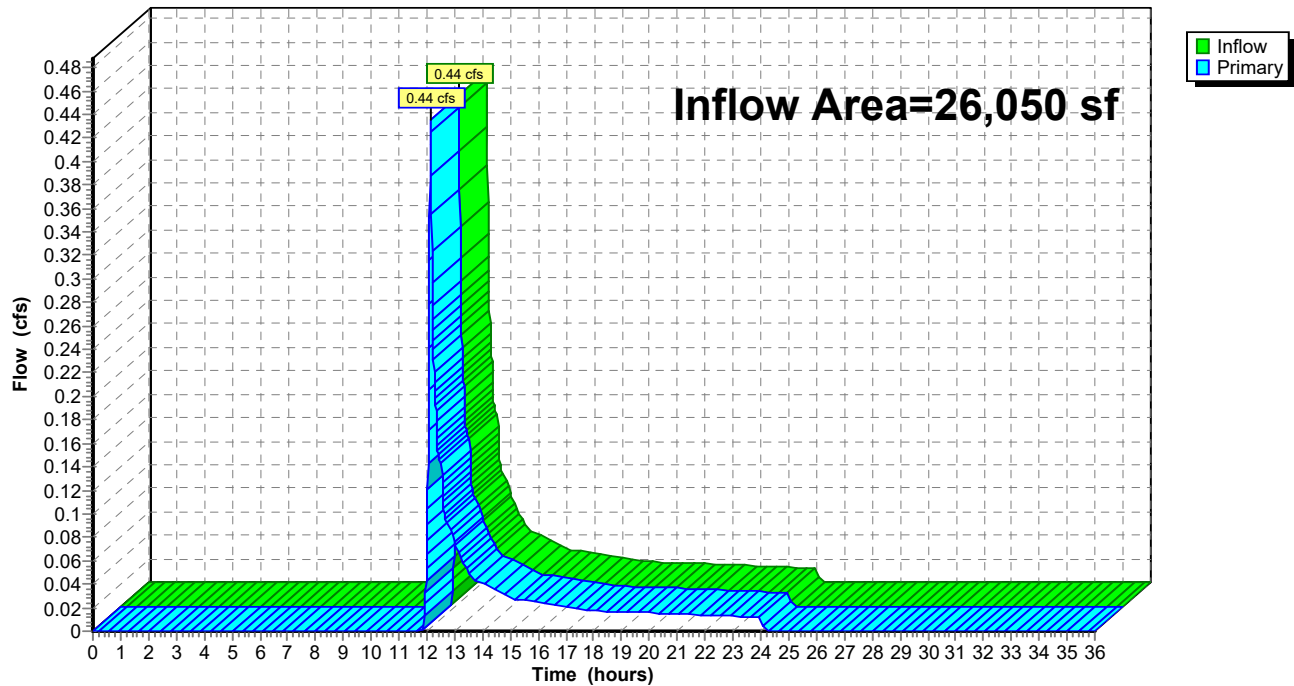
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP1: Front Entry

Summary for Link DP2: Back Patio

Inflow Area = 26,050 sf, 29.01% Impervious, Inflow Depth = 0.68" for 10-Year event
Inflow = 0.44 cfs @ 12.14 hrs, Volume= 1,474 cf
Primary = 0.44 cfs @ 12.14 hrs, Volume= 1,474 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP2: Back Patio**Hydrograph**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Front Entry Runoff Area=34,320 sf 72.93% Impervious Runoff Depth=4.35"
 Tc=5.0 min CN=82 Runoff=4.58 cfs 12,433 cf

Subcatchment11: Front Entry Runoff Area=26,355 sf 52.38% Impervious Runoff Depth=3.12"
 Tc=5.0 min CN=70 Runoff=2.61 cfs 6,848 cf

Subcatchment20: Back Patio Runoff Area=22,550 sf 18.00% Impervious Runoff Depth=1.34"
 Tc=5.0 min CN=50 Runoff=0.86 cfs 2,517 cf

Subcatchment21: Permeable Pavers Runoff Area=3,500 sf 100.00% Impervious Runoff Depth=6.15"
 Tc=5.0 min CN=98 Runoff=0.57 cfs 1,794 cf

Pond 1P: Diversion CB Peak Elev=95.75' Inflow=4.58 cfs 12,433 cf
 Primary=4.16 cfs 6,296 cf Secondary=2.94 cfs 6,137 cf Outflow=4.58 cfs 12,433 cf

Pond 2P: Permeable Sidewalk Peak Elev=98.82' Storage=445 cf Inflow=0.57 cfs 1,794 cf
 Discarded=0.08 cfs 1,766 cf Primary=0.01 cfs 28 cf Secondary=0.00 cfs 0 cf Outflow=0.10 cfs 1,794 cf

Pond P-1: Stormtech Peak Elev=97.03' Storage=4,425 cf Inflow=4.16 cfs 6,296 cf
 Discarded=0.06 cfs 4,979 cf Primary=0.25 cfs 17 cf Outflow=0.31 cfs 4,995 cf

Link DP1: Front Entry Inflow=4.88 cfs 13,001 cf
 Primary=4.88 cfs 13,001 cf

Link DP2: Back Patio Inflow=0.86 cfs 2,545 cf
 Primary=0.86 cfs 2,545 cf

Total Runoff Area = 86,725 sf Runoff Volume = 23,592 cf Average Runoff Depth = 3.26"
46.51% Pervious = 40,332 sf 53.49% Impervious = 46,393 sf

Summary for Subcatchment 10: Front Entry

Runoff = 4.58 cfs @ 12.12 hrs, Volume= 12,433 cf, Depth= 4.35"

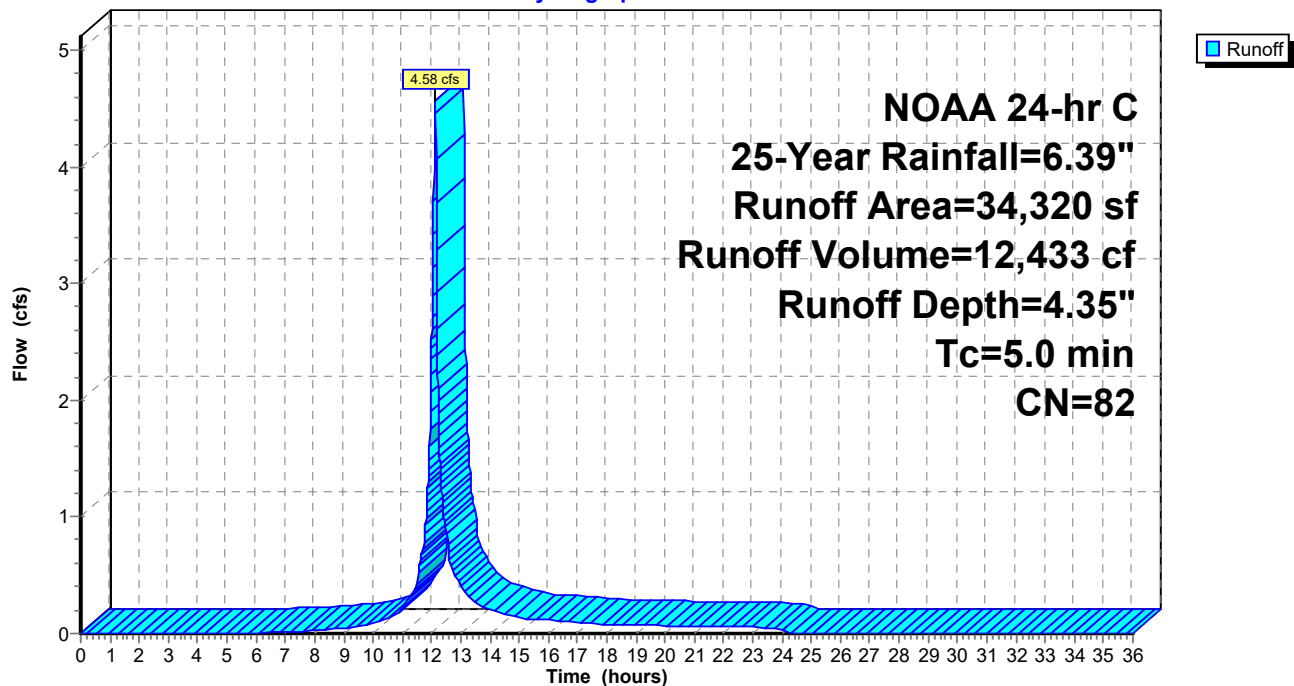
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 25-Year Rainfall=6.39"

Area (sf)	CN	Description
25,030	98	Paved parking, HSG A
9,290	39	>75% Grass cover, Good, HSG A
34,320	82	Weighted Average
9,290		27.07% Pervious Area
25,030		72.93% Impervious Area

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

Subcatchment 10: Front Entry

Hydrograph



Summary for Subcatchment 11: Front Entry

Runoff = 2.61 cfs @ 12.13 hrs, Volume= 6,848 cf, Depth= 3.12"

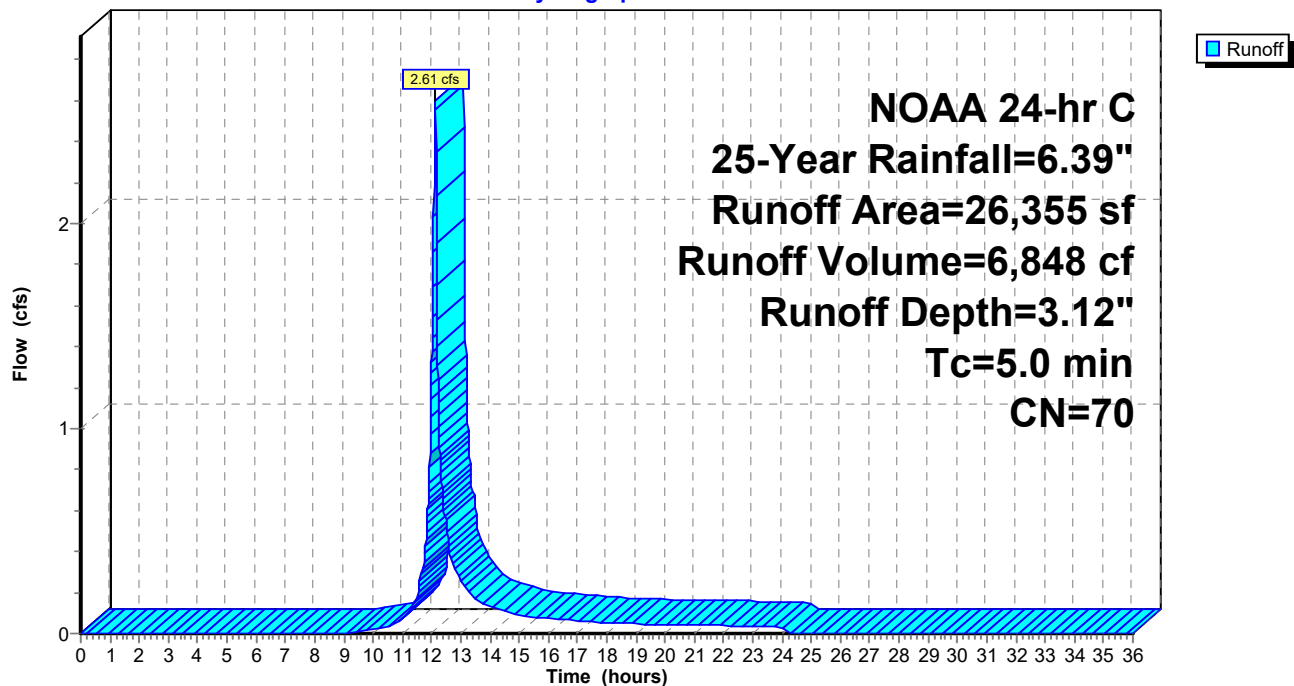
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 25-Year Rainfall=6.39"

Area (sf)	CN	Description
13,805	98	Paved parking, HSG A
12,550	39	>75% Grass cover, Good, HSG A
26,355	70	Weighted Average
12,550		47.62% Pervious Area
13,805		52.38% Impervious Area

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

Subcatchment 11: Front Entry

Hydrograph



Summary for Subcatchment 20: Back Patio

Runoff = 0.86 cfs @ 12.13 hrs, Volume= 2,517 cf, Depth= 1.34"

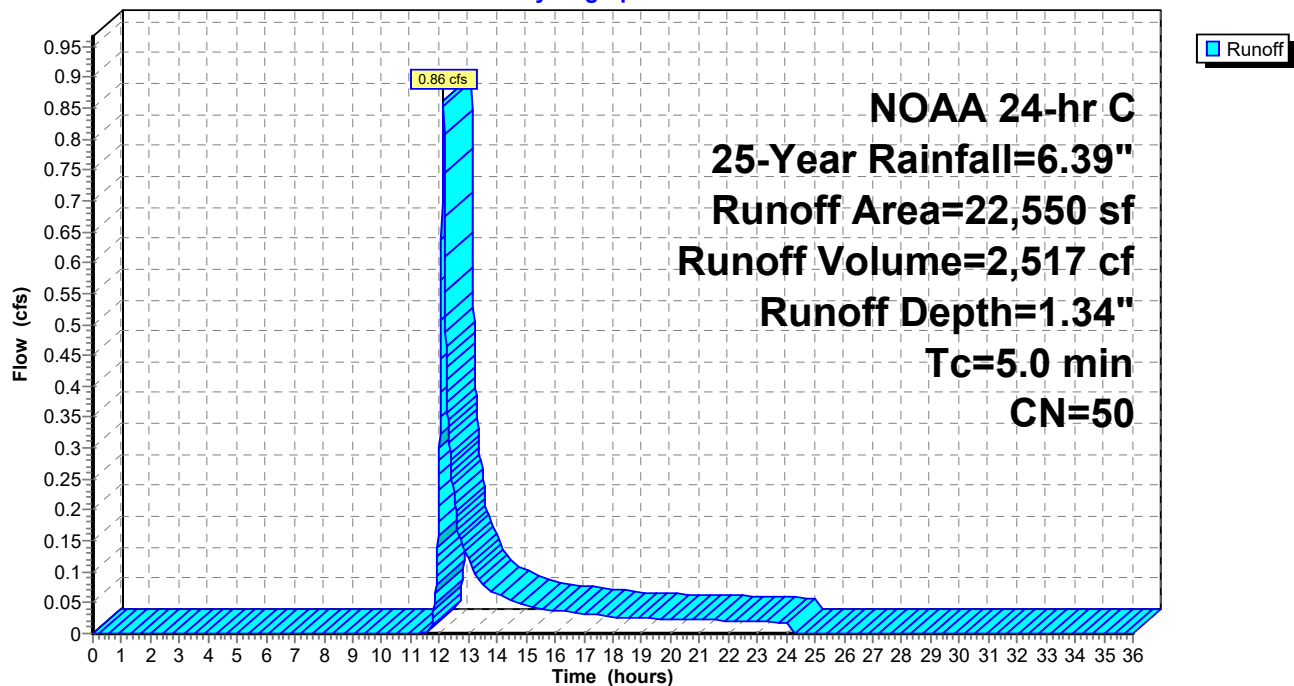
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 25-Year Rainfall=6.39"

Area (sf)	CN	Description
4,058	98	Paved parking, HSG A
18,492	39	>75% Grass cover, Good, HSG A
22,550	50	Weighted Average
18,492		82.00% Pervious Area
4,058		18.00% Impervious Area

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

Subcatchment 20: Back Patio

Hydrograph



Summary for Subcatchment 21: Permeable Pavers

Runoff = 0.57 cfs @ 12.12 hrs, Volume= 1,794 cf, Depth= 6.15"

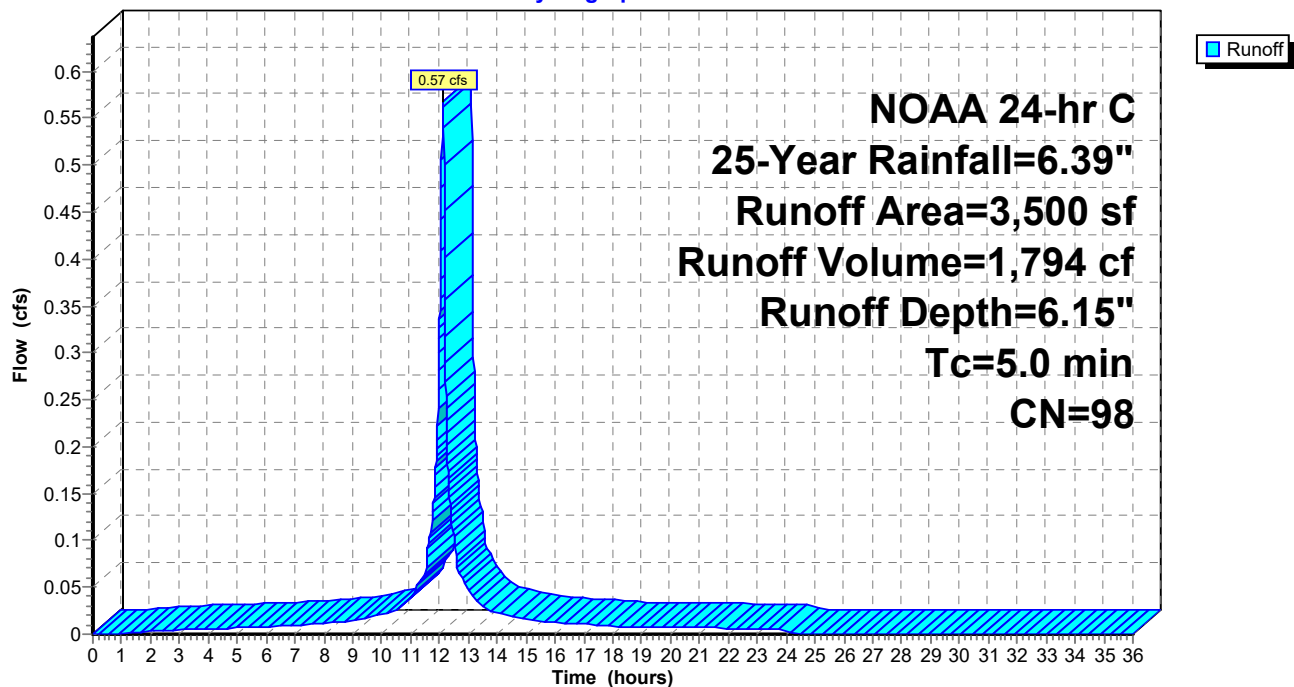
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 25-Year Rainfall=6.39"

Area (sf)	CN	Description
* 3,500	98	Permeable
3,500		100.00% Impervious Area

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

Subcatchment 21: Permeable Pavers

Hydrograph



Summary for Pond 1P: Diversion CB

Inflow Area = 34,320 sf, 72.93% Impervious, Inflow Depth = 4.35" for 25-Year event
 Inflow = 4.58 cfs @ 12.12 hrs, Volume= 12,433 cf
 Outflow = 4.58 cfs @ 12.12 hrs, Volume= 12,433 cf, Atten= 0%, Lag= 0.0 min
 Primary = 4.16 cfs @ 12.10 hrs, Volume= 6,296 cf
 Secondary = 2.94 cfs @ 12.18 hrs, Volume= 6,137 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Peak Elev= 95.75' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.60'	24.0" Round Culvert L= 10.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 92.60' / 92.50' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	94.40'	10.0" Round Culvert L= 5.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 94.40' / 94.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

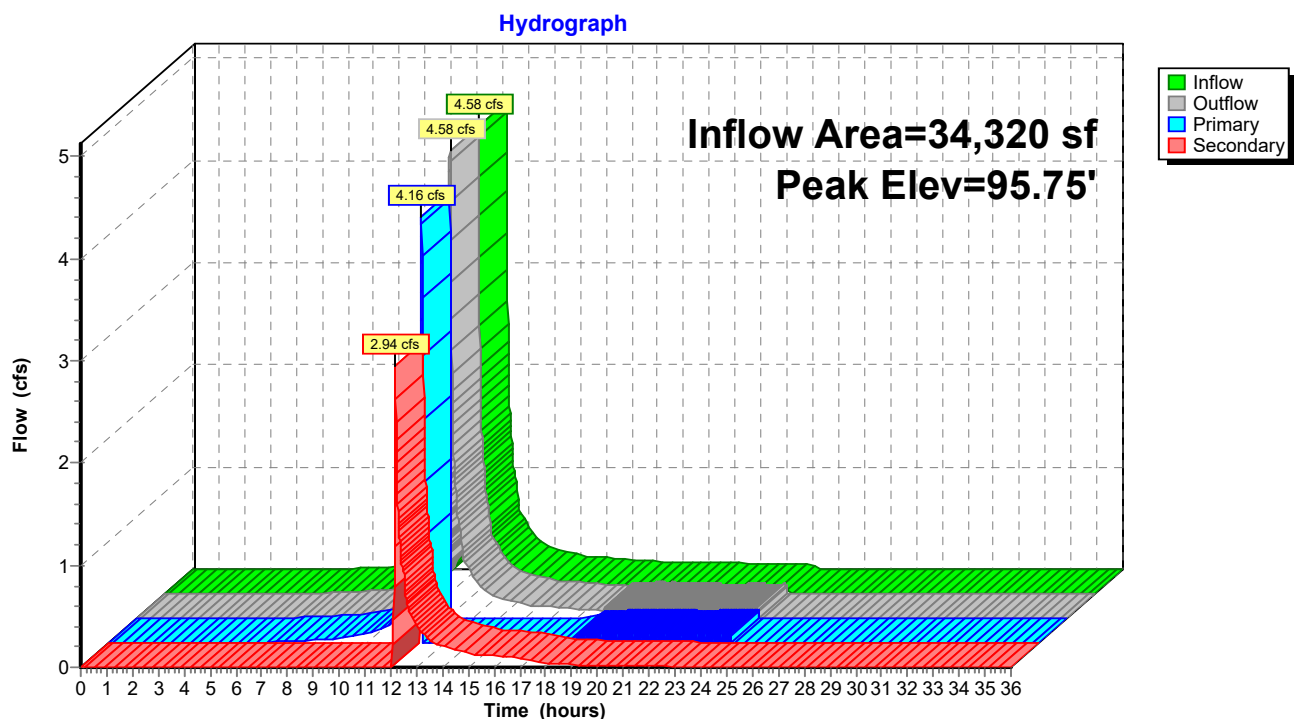
Primary OutFlow Max=0.00 cfs @ 12.10 hrs HW=94.60' TW=94.65' (Dynamic Tailwater)

↑**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=2.87 cfs @ 12.18 hrs HW=95.72' TW=0.00' (Dynamic Tailwater)

↑**2=Culvert** (Barrel Controls 2.87 cfs @ 5.27 fps)

Pond 1P: Diversion CB



Summary for Pond 2P: Permeable Sidewalk

Inflow Area = 3,500 sf, 100.00% Impervious, Inflow Depth = 6.15" for 25-Year event
 Inflow = 0.57 cfs @ 12.12 hrs, Volume= 1,794 cf
 Outflow = 0.10 cfs @ 12.55 hrs, Volume= 1,794 cf, Atten= 83%, Lag= 25.7 min
 Discarded = 0.08 cfs @ 11.80 hrs, Volume= 1,766 cf
 Primary = 0.01 cfs @ 12.55 hrs, Volume= 28 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 98.82' @ 12.55 hrs Surf.Area= 3,500 sf Storage= 445 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 27.2 min (771.2 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	1,750 cf	Permeable (Prismatic) Listed below (Recalc) 4,375 cf Overall x 40.0% Voids
#2	99.75'	875 cf	Surface (Prismatic) Listed below (Recalc) -Impervious
		2,625 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	3,500	0	0
99.75	3,500	4,375	4,375

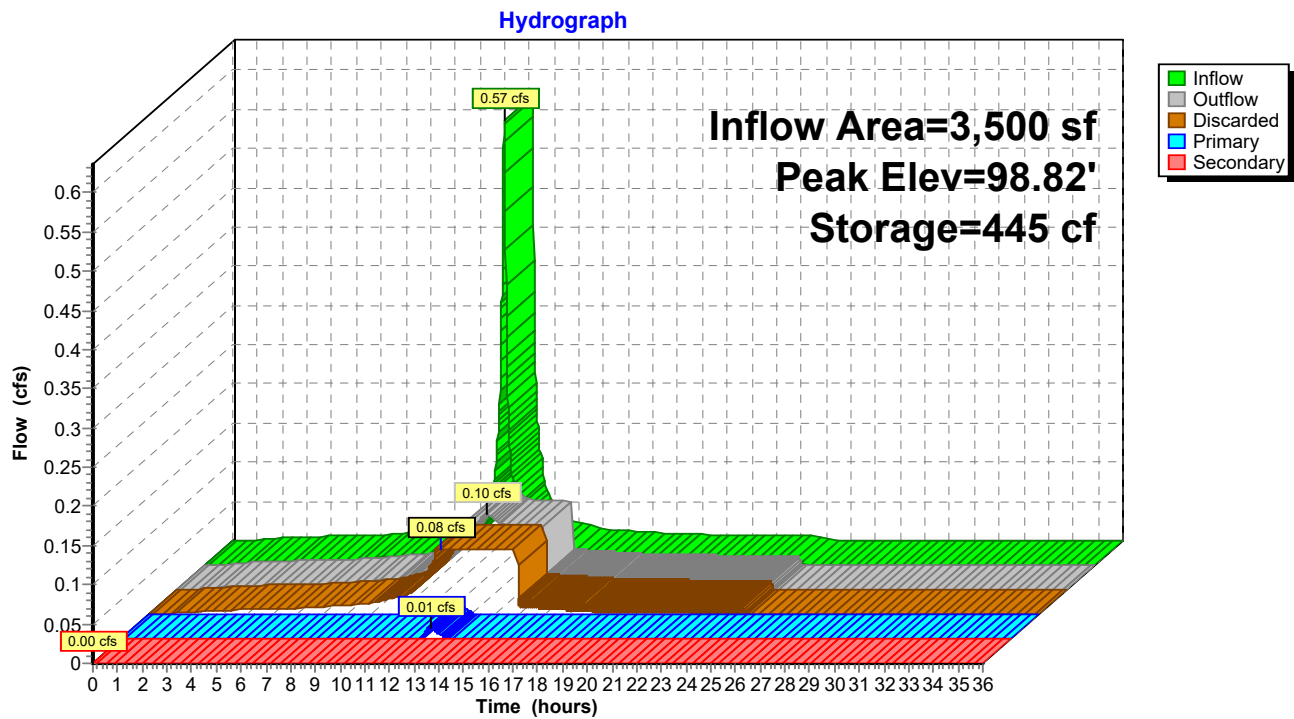
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.75	3,500	0	0
100.00	3,500	875	875

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.50'	1.020 in/hr Exfiltration over Surface area
#2	Primary	98.75'	6.0" Round Culvert L= 10.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 98.75' / 98.40' S= 0.0350 ' / Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#3	Secondary	99.95'	20.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.08 cfs @ 11.80 hrs HW=98.52' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.01 cfs @ 12.55 hrs HW=98.82' TW=0.00' (Dynamic Tailwater)
 ↑2=Culvert (Inlet Controls 0.01 cfs @ 0.89 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=98.50' TW=0.00' (Dynamic Tailwater)
 ↑3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 2P: Permeable Sidewalk

Summary for Pond P-1: Stormtech

Inflow Area = 34,320 sf, 72.93% Impervious, Inflow Depth = 2.20" for 25-Year event
 Inflow = 4.16 cfs @ 12.10 hrs, Volume= 6,296 cf
 Outflow = 0.31 cfs @ 12.18 hrs, Volume= 4,995 cf, Atten= 93%, Lag= 5.1 min
 Discarded = 0.06 cfs @ 12.18 hrs, Volume= 4,979 cf
 Primary = 0.25 cfs @ 12.18 hrs, Volume= 17 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 97.03' @ 12.18 hrs Surf.Area= 2,367 sf Storage= 4,425 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 522.9 min (1,305.2 - 782.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	92.00'	1,878 cf	44.25'W x 46.34'L x 3.50'H Field A 7,176 cf Overall - 2,481 cf Embedded = 4,696 cf x 40.0% Voids
#2A	92.50'	2,481 cf	ADS_StormTech SC-740 +Cap x 54 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 54 Chambers in 9 Rows
#3	92.50'	861 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		5,220 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
92.50	12	0	0
96.90	12	53	53
97.00	110	6	59
97.50	3,100	803	861

Device	Routing	Invert	Outlet Devices
#1	Primary	96.90'	2.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Discarded	92.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.06 cfs @ 12.18 hrs HW=97.03' (Free Discharge)

↑ **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.24 cfs @ 12.18 hrs HW=97.03' TW=0.00' (Dynamic Tailwater)

↑ **1=Broad-Crested Rectangular Weir** (Weir Controls 0.24 cfs @ 0.92 fps)

Pond P-1: Stormtech - Chamber Wizard Field A**Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)**

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

6 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 44.34' Row Length +12.0" End Stone x 2 = 46.34' Base Length

9 Rows x 51.0" Wide + 6.0" Spacing x 8 + 12.0" Side Stone x 2 = 44.25' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

54 Chambers x 45.9 cf = 2,480.8 cf Chamber Storage

7,176.4 cf Field - 2,480.8 cf Chambers = 4,695.6 cf Stone x 40.0% Voids = 1,878.3 cf Stone Storage

Chamber Storage + Stone Storage = 4,359.0 cf = 0.100 af

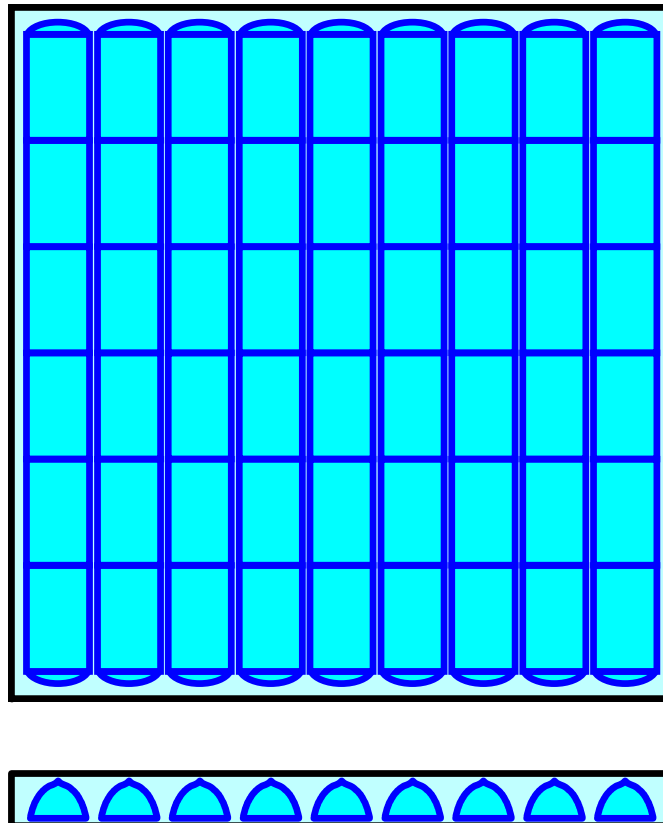
Overall Storage Efficiency = 60.7%

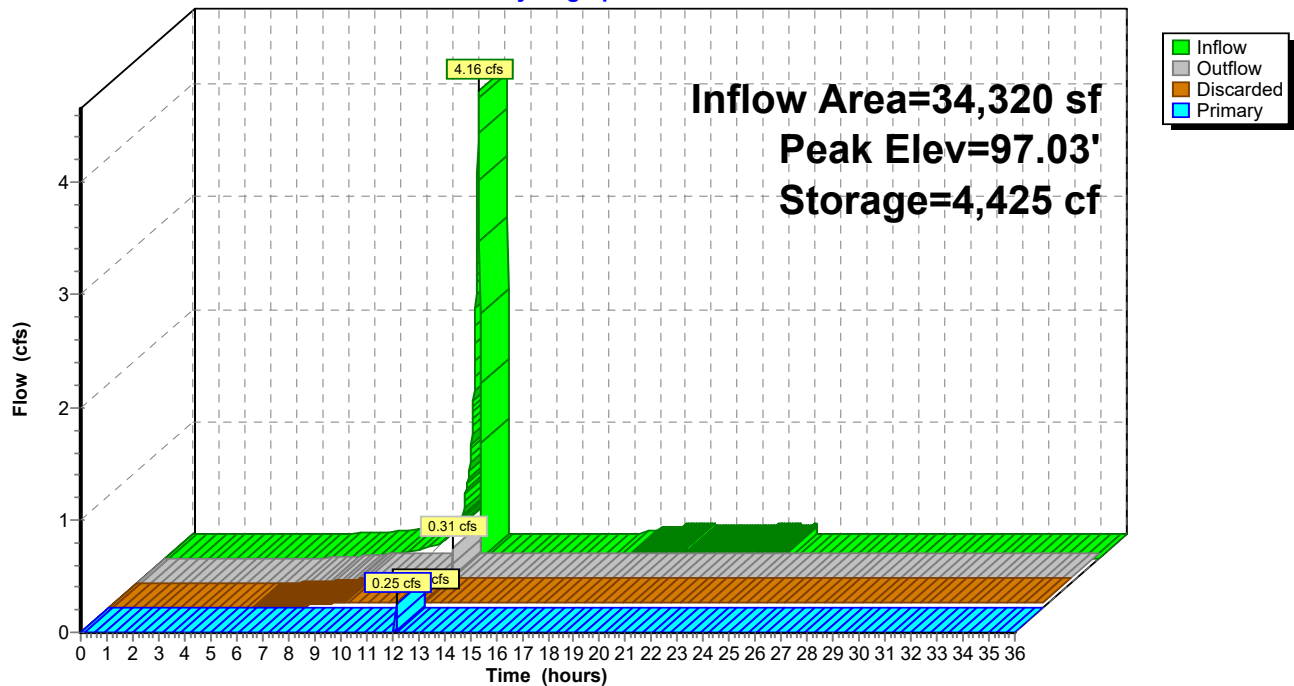
Overall System Size = 46.34' x 44.25' x 3.50'

54 Chambers

265.8 cy Field

173.9 cy Stone

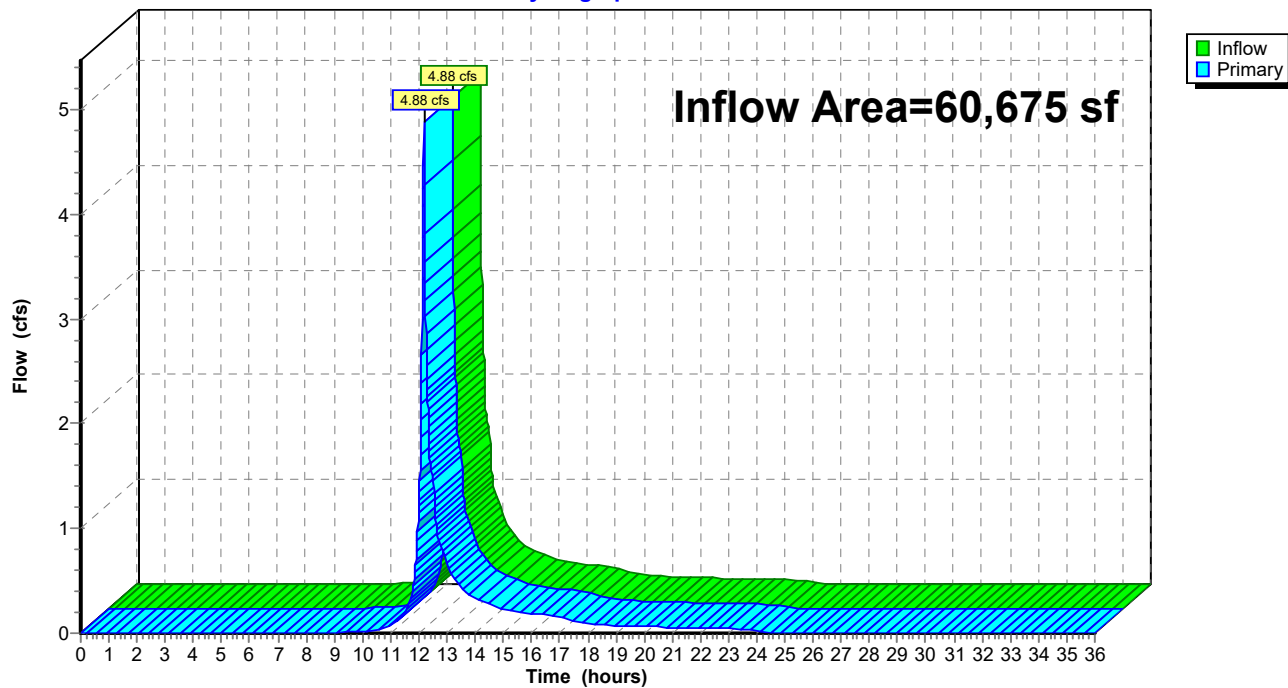


Pond P-1: Stormtech**Hydrograph**

Summary for Link DP1: Front Entry

Inflow Area = 60,675 sf, 64.00% Impervious, Inflow Depth = 2.57" for 25-Year event
Inflow = 4.88 cfs @ 12.18 hrs, Volume= 13,001 cf
Primary = 4.88 cfs @ 12.18 hrs, Volume= 13,001 cf, Atten= 0%, Lag= 0.0 min

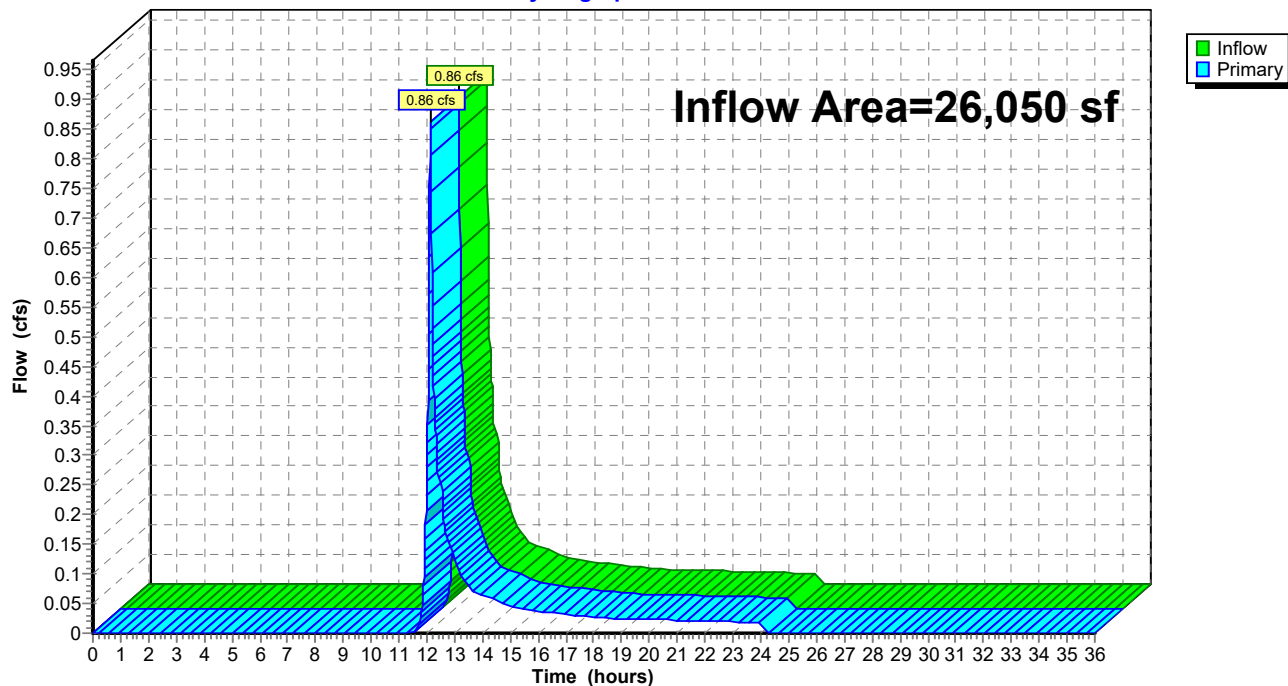
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP1: Front Entry**Hydrograph**

Summary for Link DP2: Back Patio

Inflow Area = 26,050 sf, 29.01% Impervious, Inflow Depth = 1.17" for 25-Year event
Inflow = 0.86 cfs @ 12.13 hrs, Volume= 2,545 cf
Primary = 0.86 cfs @ 12.13 hrs, Volume= 2,545 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP2: Back Patio**Hydrograph**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Front Entry Runoff Area=34,320 sf 72.93% Impervious Runoff Depth=6.06"
 Tc=5.0 min CN=82 Runoff=6.26 cfs 17,330 cf

Subcatchment11: Front Entry Runoff Area=26,355 sf 52.38% Impervious Runoff Depth=4.65"
 Tc=5.0 min CN=70 Runoff=3.85 cfs 10,202 cf

Subcatchment20: Back Patio Runoff Area=22,550 sf 18.00% Impervious Runoff Depth=2.38"
 Tc=5.0 min CN=50 Runoff=1.65 cfs 4,471 cf

Subcatchment21: Permeable Pavers Runoff Area=3,500 sf 100.00% Impervious Runoff Depth=7.97"
 Tc=5.0 min CN=98 Runoff=0.73 cfs 2,325 cf

Pond 1P: Diversion CB Peak Elev=97.19' Inflow=6.26 cfs 17,330 cf
 Primary=2.68 cfs 6,882 cf Secondary=5.05 cfs 10,449 cf Outflow=6.26 cfs 17,331 cf

Pond 2P: Permeable Sidewalk Peak Elev=98.92' Storage=585 cf Inflow=0.73 cfs 2,325 cf
 Discarded=0.08 cfs 2,116 cf Primary=0.08 cfs 210 cf Secondary=0.00 cfs 0 cf Outflow=0.16 cfs 2,326 cf

Pond P-1: Stormtech Peak Elev=97.18' Storage=4,540 cf Inflow=2.68 cfs 6,882 cf
 Discarded=0.08 cfs 5,210 cf Primary=0.78 cfs 331 cf Outflow=0.86 cfs 5,540 cf

Link DP1: Front Entry Inflow=9.63 cfs 20,981 cf
 Primary=9.63 cfs 20,981 cf

Link DP2: Back Patio Inflow=1.66 cfs 4,681 cf
 Primary=1.66 cfs 4,681 cf

Total Runoff Area = 86,725 sf Runoff Volume = 34,327 cf Average Runoff Depth = 4.75"
46.51% Pervious = 40,332 sf 53.49% Impervious = 46,393 sf

Summary for Subcatchment 10: Front Entry

Runoff = 6.26 cfs @ 12.12 hrs, Volume= 17,330 cf, Depth= 6.06"

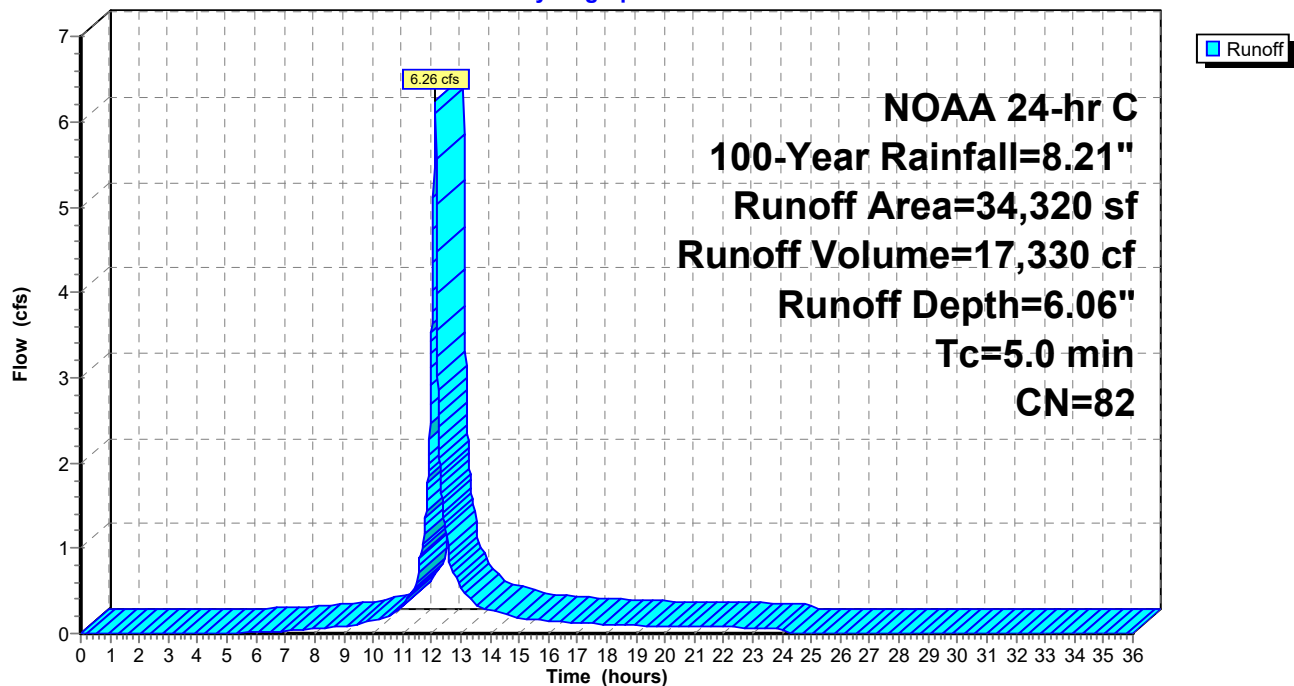
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 100-Year Rainfall=8.21"

Area (sf)	CN	Description
25,030	98	Paved parking, HSG A
9,290	39	>75% Grass cover, Good, HSG A
34,320	82	Weighted Average
9,290		27.07% Pervious Area
25,030		72.93% Impervious Area

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

Subcatchment 10: Front Entry

Hydrograph



Summary for Subcatchment 11: Front Entry

Runoff = 3.85 cfs @ 12.12 hrs, Volume= 10,202 cf, Depth= 4.65"

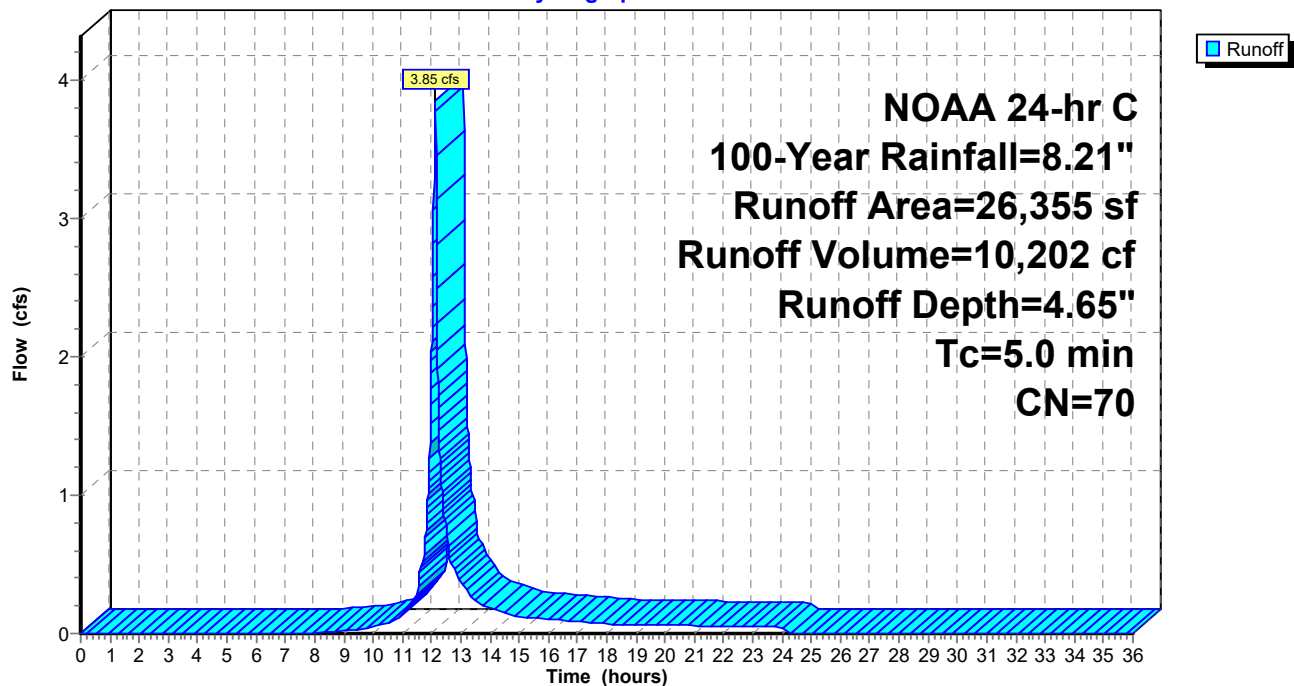
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 100-Year Rainfall=8.21"

Area (sf)	CN	Description
13,805	98	Paved parking, HSG A
12,550	39	>75% Grass cover, Good, HSG A
26,355	70	Weighted Average
12,550		47.62% Pervious Area
13,805		52.38% Impervious Area

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

Subcatchment 11: Front Entry

Hydrograph



Summary for Subcatchment 20: Back Patio

Runoff = 1.65 cfs @ 12.13 hrs, Volume= 4,471 cf, Depth= 2.38"

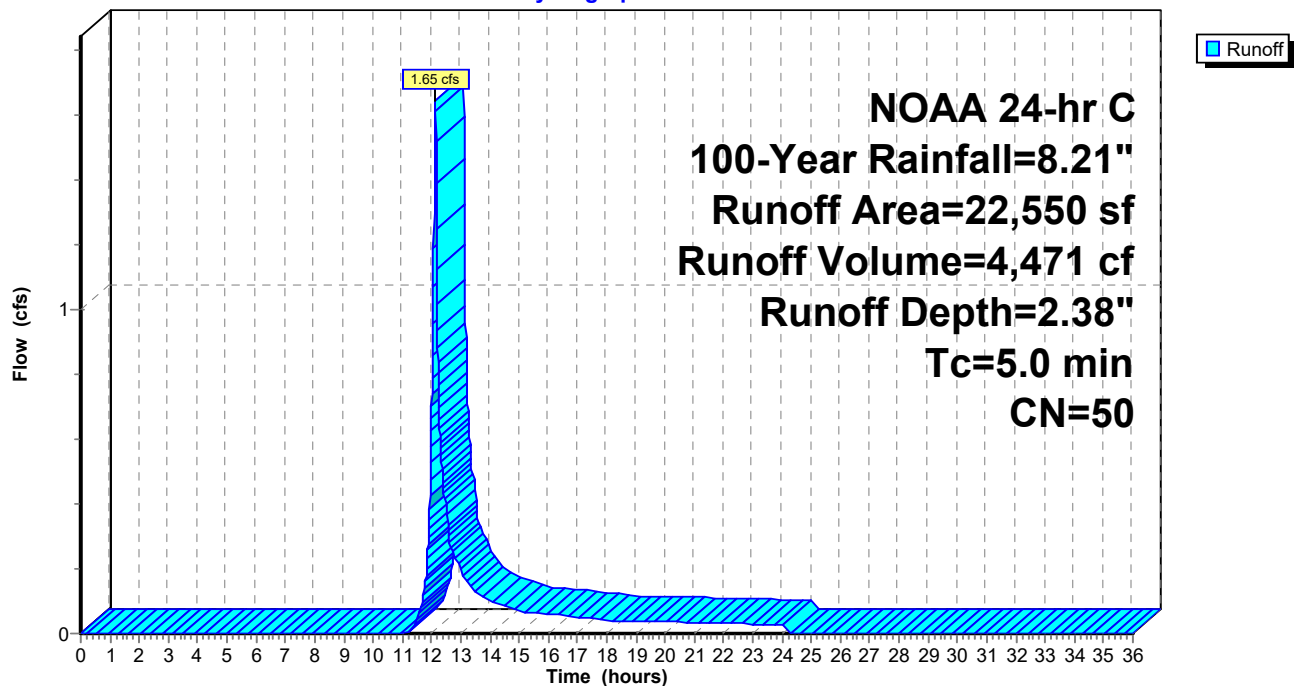
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 100-Year Rainfall=8.21"

Area (sf)	CN	Description
4,058	98	Paved parking, HSG A
18,492	39	>75% Grass cover, Good, HSG A
22,550	50	Weighted Average
18,492		82.00% Pervious Area
4,058		18.00% Impervious Area

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

Subcatchment 20: Back Patio

Hydrograph



Summary for Subcatchment 21: Permeable Pavers

Runoff = 0.73 cfs @ 12.12 hrs, Volume= 2,325 cf, Depth= 7.97"

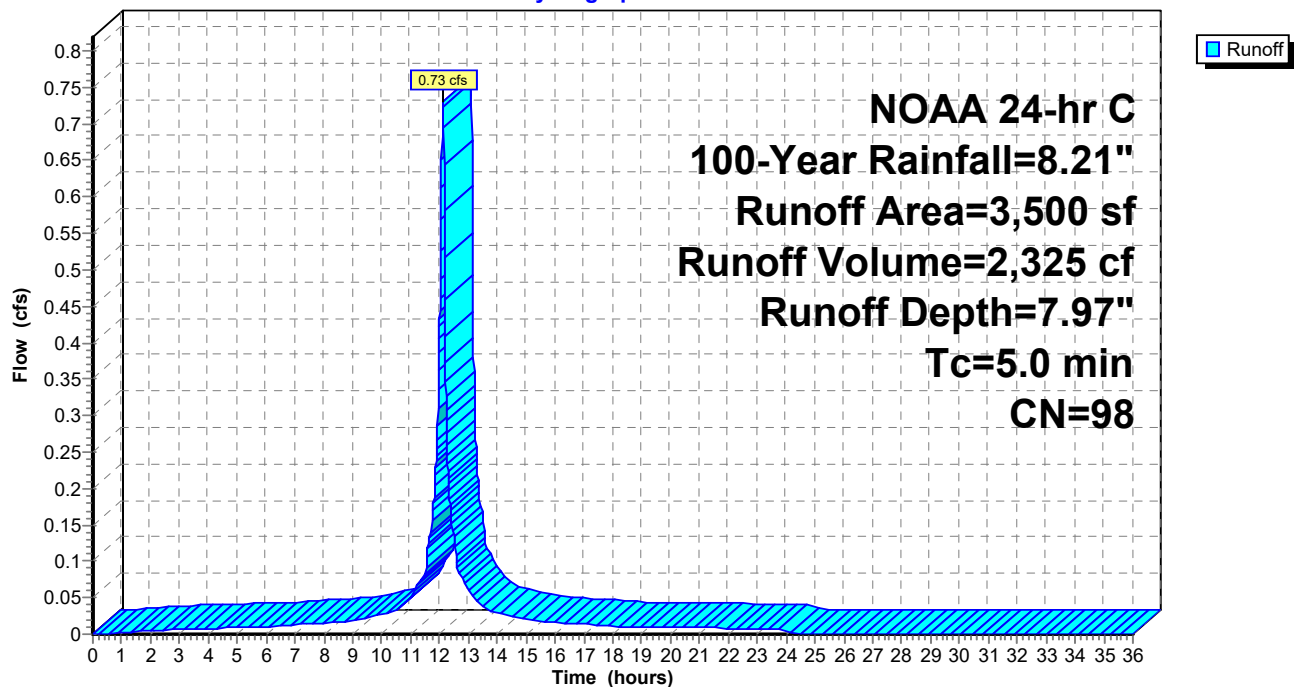
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 100-Year Rainfall=8.21"

	Area (sf)	CN	Description
*	3,500	98	Permeable
	3,500		100.00% Impervious Area

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

Subcatchment 21: Permeable Pavers

Hydrograph



Summary for Pond 1P: Diversion CB

Inflow Area = 34,320 sf, 72.93% Impervious, Inflow Depth = 6.06" for 100-Year event
 Inflow = 6.26 cfs @ 12.12 hrs, Volume= 17,330 cf
 Outflow = 6.26 cfs @ 12.12 hrs, Volume= 17,331 cf, Atten= 0%, Lag= 0.0 min
 Primary = 2.68 cfs @ 11.98 hrs, Volume= 6,882 cf
 Secondary = 5.05 cfs @ 12.15 hrs, Volume= 10,449 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 97.19' @ 12.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.60'	24.0" Round Culvert L= 10.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 92.60' / 92.50' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	94.40'	10.0" Round Culvert L= 5.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 94.40' / 94.30' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

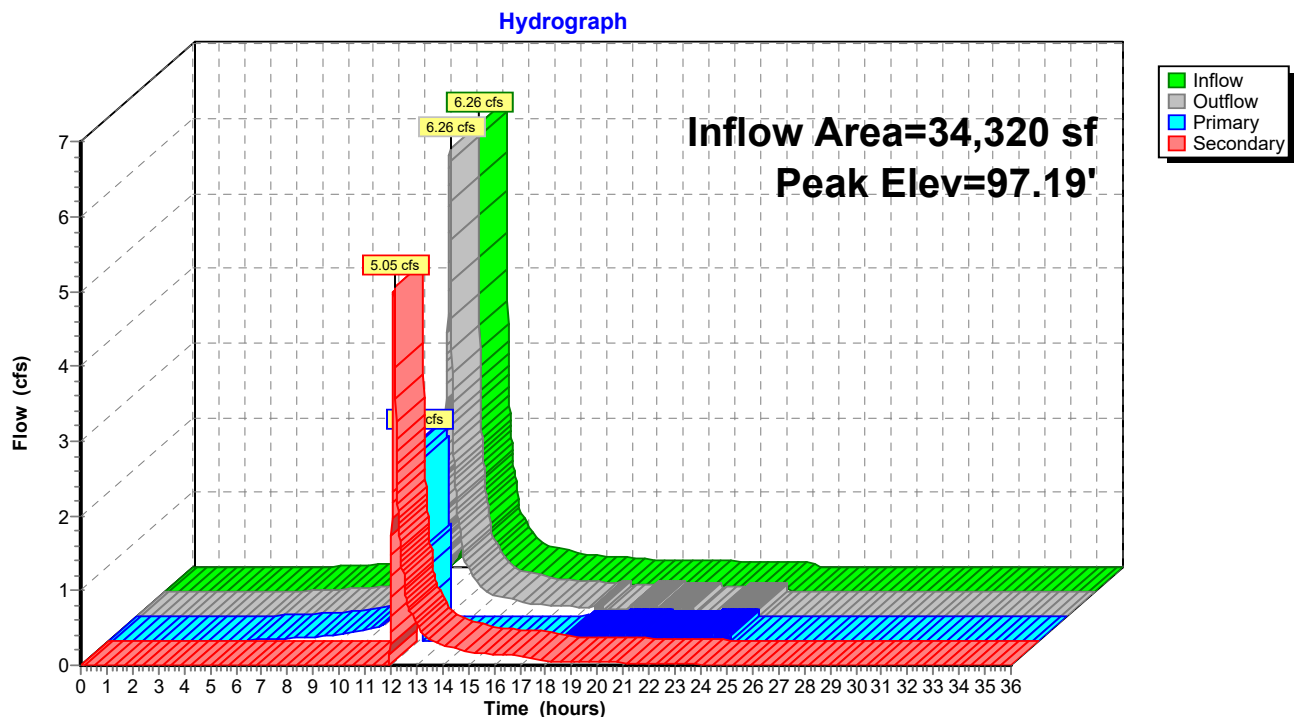
Primary OutFlow Max=0.00 cfs @ 11.98 hrs HW=94.76' TW=94.82' (Dynamic Tailwater)

↑1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=5.05 cfs @ 12.15 hrs HW=97.19' TW=0.00' (Dynamic Tailwater)

↑2=Culvert (Inlet Controls 5.05 cfs @ 9.26 fps)

Pond 1P: Diversion CB



Summary for Pond 2P: Permeable Sidewalk

Inflow Area = 3,500 sf, 100.00% Impervious, Inflow Depth = 7.97" for 100-Year event
 Inflow = 0.73 cfs @ 12.12 hrs, Volume= 2,325 cf
 Outflow = 0.16 cfs @ 12.38 hrs, Volume= 2,326 cf, Atten= 78%, Lag= 15.6 min
 Discarded = 0.08 cfs @ 11.69 hrs, Volume= 2,116 cf
 Primary = 0.08 cfs @ 12.38 hrs, Volume= 210 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 98.92' @ 12.38 hrs Surf.Area= 3,500 sf Storage= 585 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 30.3 min (770.8 - 740.5)

Volume	Invert	Avail.Storage	Storage Description
#1	98.50'	1,750 cf	Permeable (Prismatic) Listed below (Recalc) 4,375 cf Overall x 40.0% Voids
#2	99.75'	875 cf	Surface (Prismatic) Listed below (Recalc) -Impervious
		2,625 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
98.50	3,500	0	0
99.75	3,500	4,375	4,375

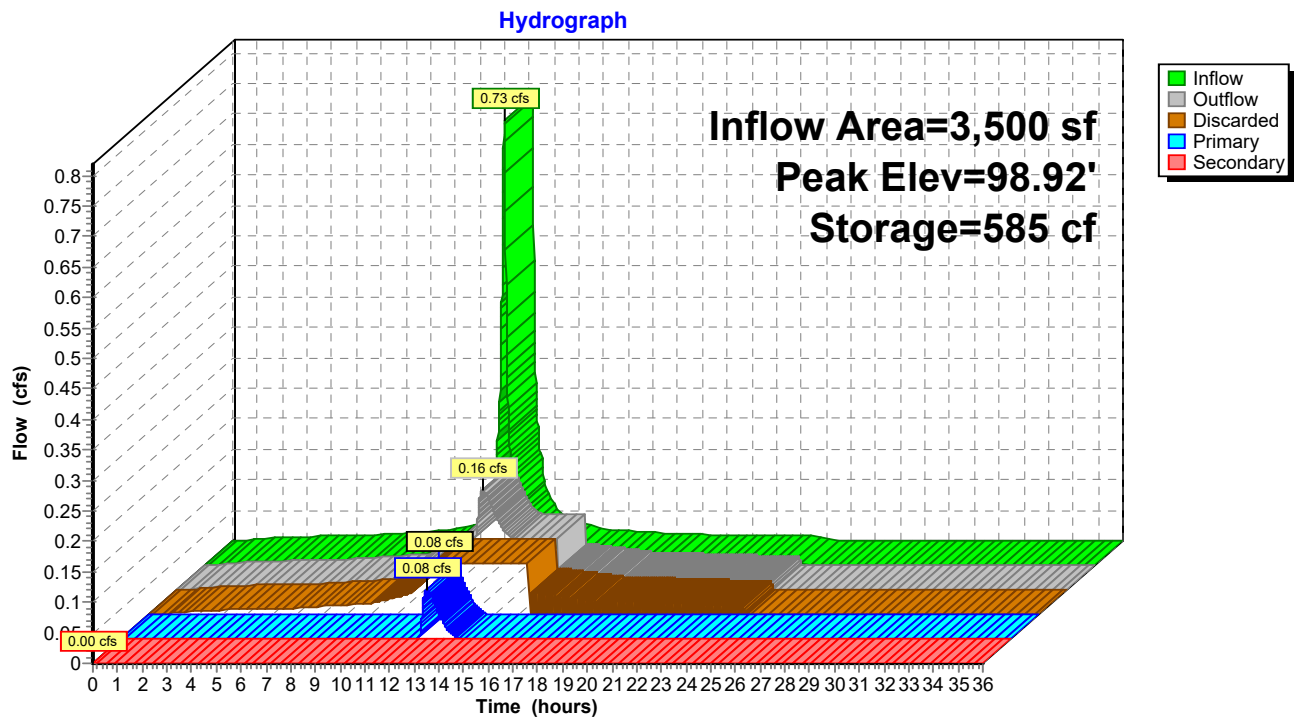
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.75	3,500	0	0
100.00	3,500	875	875

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.50'	1.020 in/hr Exfiltration over Surface area
#2	Primary	98.75'	6.0" Round Culvert L= 10.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 98.75' / 98.40' S= 0.0350 ' / Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#3	Secondary	99.95'	20.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.08 cfs @ 11.69 hrs HW=98.52' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.08 cfs @ 12.38 hrs HW=98.92' TW=0.00' (Dynamic Tailwater)
 ↑**2=Culvert** (Inlet Controls 0.08 cfs @ 1.40 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=98.50' TW=0.00' (Dynamic Tailwater)
 ↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Permeable Sidewalk

Summary for Pond P-1: Stormtech

Inflow Area = 34,320 sf, 72.93% Impervious, Inflow Depth = 2.41" for 100-Year event
 Inflow = 2.68 cfs @ 11.98 hrs, Volume= 6,882 cf
 Outflow = 0.86 cfs @ 12.14 hrs, Volume= 5,540 cf, Atten= 68%, Lag= 9.7 min
 Discarded = 0.08 cfs @ 12.14 hrs, Volume= 5,210 cf
 Primary = 0.78 cfs @ 12.14 hrs, Volume= 331 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 97.18' @ 12.14 hrs Surf.Area= 3,265 sf Storage= 4,540 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 479.8 min (1,236.3 - 756.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	92.00'	1,878 cf	44.25'W x 46.34'L x 3.50'H Field A 7,176 cf Overall - 2,481 cf Embedded = 4,696 cf x 40.0% Voids
#2A	92.50'	2,481 cf	ADS_StormTech SC-740 +Cap x 54 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 54 Chambers in 9 Rows
#3	92.50'	861 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		5,220 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
92.50	12	0	0
96.90	12	53	53
97.00	110	6	59
97.50	3,100	803	861

Device	Routing	Invert	Outlet Devices
#1	Primary	96.90'	2.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Discarded	92.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.08 cfs @ 12.14 hrs HW=97.18' (Free Discharge)
 ↑ **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.78 cfs @ 12.14 hrs HW=97.18' TW=0.00' (Dynamic Tailwater)
 ↑ **1=Broad-Crested Rectangular Weir** (Weir Controls 0.78 cfs @ 1.37 fps)

Pond P-1: Stormtech - Chamber Wizard Field A**Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)**

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

6 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 44.34' Row Length +12.0" End Stone x 2 = 46.34' Base Length

9 Rows x 51.0" Wide + 6.0" Spacing x 8 + 12.0" Side Stone x 2 = 44.25' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

54 Chambers x 45.9 cf = 2,480.8 cf Chamber Storage

7,176.4 cf Field - 2,480.8 cf Chambers = 4,695.6 cf Stone x 40.0% Voids = 1,878.3 cf Stone Storage

Chamber Storage + Stone Storage = 4,359.0 cf = 0.100 af

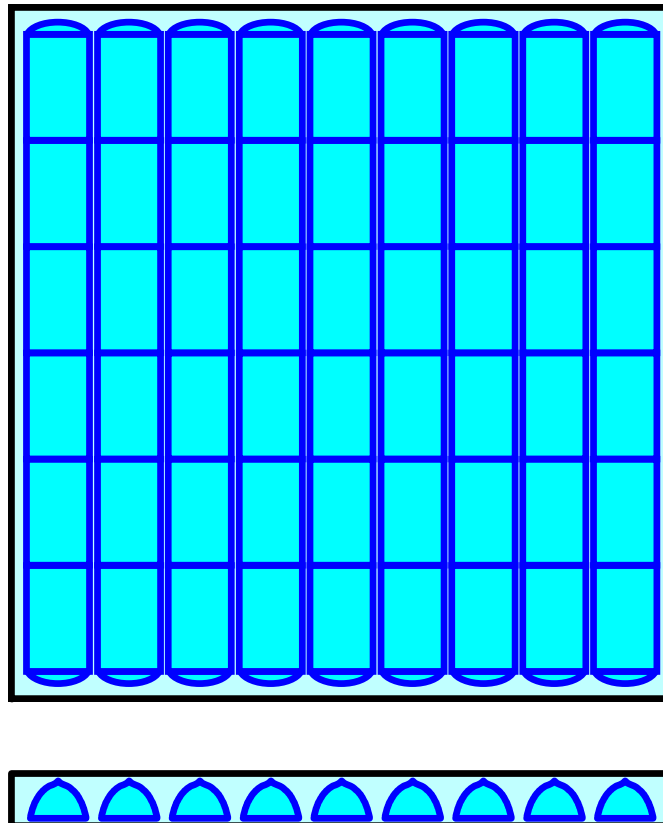
Overall Storage Efficiency = 60.7%

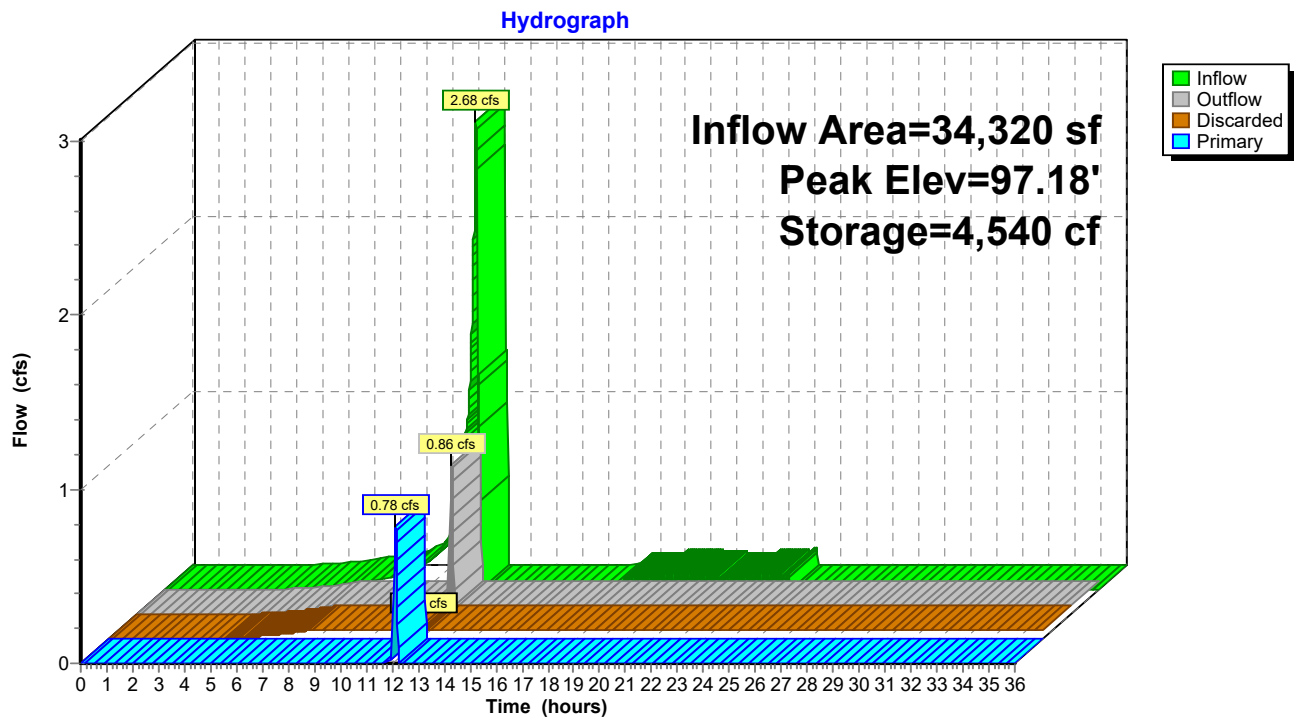
Overall System Size = 46.34' x 44.25' x 3.50'

54 Chambers

265.8 cy Field

173.9 cy Stone

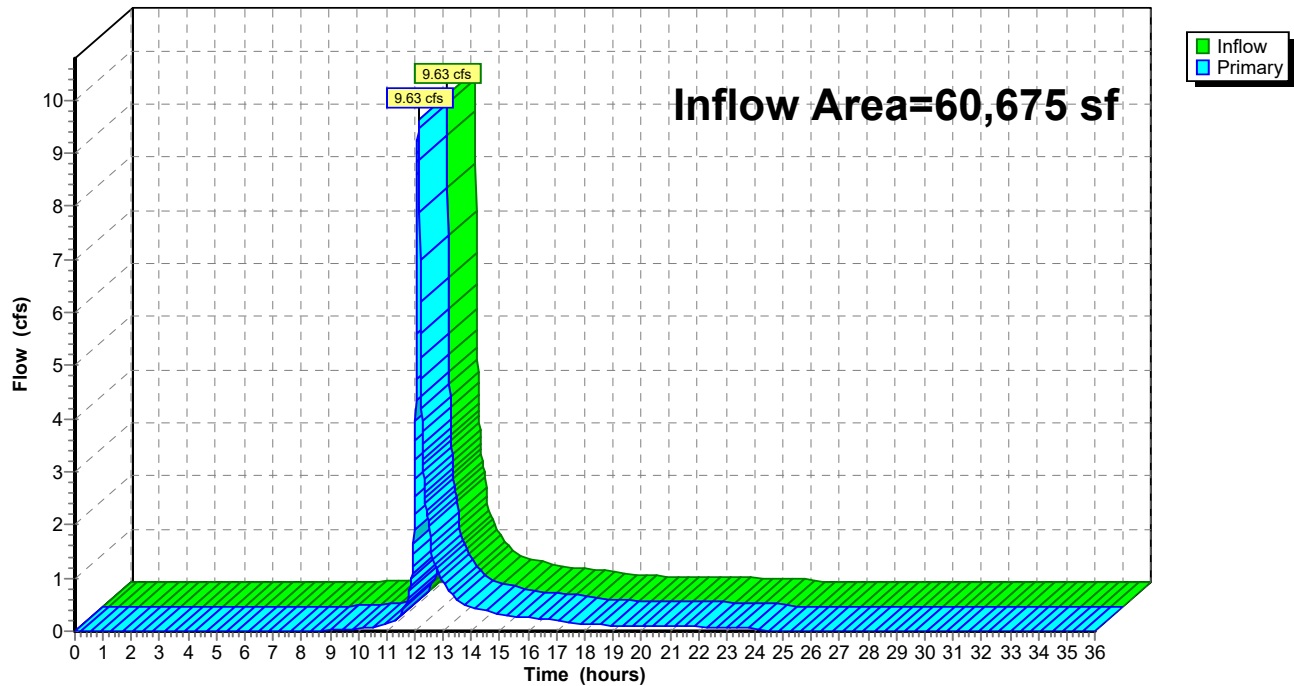


Pond P-1: Stormtech

Summary for Link DP1: Front Entry

Inflow Area = 60,675 sf, 64.00% Impervious, Inflow Depth = 4.15" for 100-Year event
Inflow = 9.63 cfs @ 12.13 hrs, Volume= 20,981 cf
Primary = 9.63 cfs @ 12.13 hrs, Volume= 20,981 cf, Atten= 0%, Lag= 0.0 min

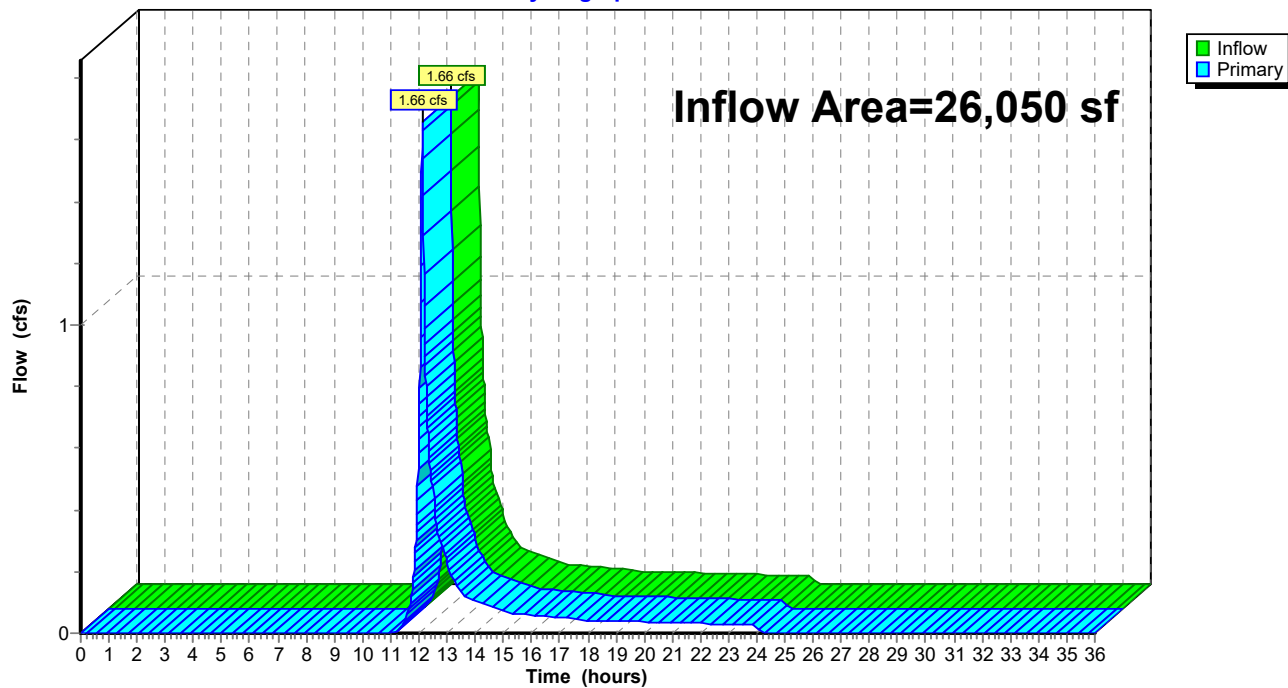
Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP1: Front Entry**Hydrograph**

Summary for Link DP2: Back Patio

Inflow Area = 26,050 sf, 29.01% Impervious, Inflow Depth = 2.16" for 100-Year event
Inflow = 1.66 cfs @ 12.13 hrs, Volume= 4,681 cf
Primary = 1.66 cfs @ 12.13 hrs, Volume= 4,681 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link DP2: Back Patio**Hydrograph**



Long-Term Pollution Prevention Plan

This Long-Term Pollution Prevention Plan has been developed to establish site management practices that improve the quality of stormwater discharges from the Project.

Description of Pollutant Sources

The project contains parking and drive areas that will experience high volume traffic that will potentially be a pollutant source.

Pollutant Control Approach

Maintenance of Pavement Systems

Standard Asphalt Pavement

Regular maintenance of pavement surfaces will prevent pollutants such as oil and grease, trash, and sediments from entering the stormwater management system. The following practices should be performed:

- Sweep or vacuum asphalt pavement areas [semi-annually, annually, monthly, etc] with a commercial cleaning unit and dispose of removed material.
- Check loading docks and dumpster areas frequently for spillage and/or pavement staining and clean as necessary
- Routinely pick up and remove litter from the parking areas, islands, and perimeter landscaping.

Permeable Pavers

The primary maintenance requirement for permeable pavers is to clean the surface drainage voids. Fine debris and dirt accumulate in the drainage openings and reduce the pavement's flow capacity. Even though some irreplaceable loss in permeability should be expected over the paver's lifetime, one can increase the longevity of the system by following the maintenance schedule for vacuum sweeping and high-



pressure washing, restricting the area's use by heavy vehicles, limiting the use of de-icing chemicals and sand, and implementing a stringent sediment control plan.

Preventing Clogging of Permeable Paver Surface Areas

- Patio areas and/or other areas with permeable pavers shall be cleaned annually with vacuums or washed with high pressure washers.
- Do not allow construction staging, soil/mulch storage, etc. on unprotected pavement surface.
- Maintain vegetated areas adjacent to areas with permeable pavers to prevent washout of soil onto surface.
- Do not apply any type of sealant to permeable pavers.

Inspecting the System

- Inspect areas paved with permeable pavers monthly for the first three months after construction to ensure proper functioning and correct any areas that have settled or experienced washouts.
- Inspect areas paved with permeable pavers annually after initial three month period. Annual inspections should take place after large storms, when puddles will make any clogging obvious.

Maintenance of Vegetated Areas

Proper maintenance of vegetated areas can prevent the pollution of stormwater runoff by controlling the source of pollutants such as suspended sediments, excess nutrients, and chemicals from landscape care products. Practices that should be followed under the regular maintenance of the vegetated landscape include:

- Inspect planted areas on a semi-annual basis and remove any litter.
- Maintain planted areas adjacent to pavement to prevent soil washout.
- Immediately clean any soil deposited on pavement.
- Re-seed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming.
- Plant alternative mixture of grass species in the event of unsuccessful establishment.
- The grass vegetation should be cut to a height between three and four inches.
- Pesticide/Herbicide Usage – No pesticides are to be used unless a single spot treatment is required for a specific control application.
- Fertilizer usage should be avoided. If deemed necessary, slow release fertilizer should be used. Fertilizer may be used to begin the establishment of vegetation in bare or damaged areas, but should not be applied on a regular basis unless necessary.
- Pet waste provision if applicable.

Management of Snow and Ice

Storage and Disposal

Snow shall be stockpiled on standard pavement surfaces so sand and salt may be swept in the spring or removed as snow melts and drains through the stormwater management system. Recommended locations for snow storage are shown on the attached Snow Storage Plan. Key practices for the safe storage and disposal of snow include:

- Under no circumstances shall snow be disposed or stored in wetland resource areas.
- Under no circumstances shall snow be disposed or stored in stormwater basins, ponds, rain gardens, swales, channels, or trenches.
- Do not stockpile snow on permeable pavement surfaces. Sand and grit in snow will clog pavement.
- Plow parking areas paved with permeable asphalt pavement carefully. Plow blades should be set approximately 1" higher than usual to avoid scarring the pavement and loosening material that could potentially clog surface pores.
- Do not apply abrasives such as sand or grit on or adjacent to permeable asphalt pavement.
- Monitor application rates of deicing materials on permeable pavement areas and reduce application rate accordingly. Permeable pavements tend to require less deicer per unit area because the water is not required to remain liquid over the entire parking surface area before discharge.
- Do not apply abrasives such as sand or grit on or adjacent to permeable pavers.
- Avoid plowing of areas with permeable pavers.

Salt and Deicing Chemicals

The amount of salt and deicing chemicals to be used on the site shall be reduced to the minimum amount needed to provide safe pedestrian and vehicle travel. The following practices should be followed to control the amount of salt and deicing materials that come into contact with stormwater runoff:

- Devices used for spreading salt and deicing chemicals should be capable of varying the rate of application based on the site specific conditions.
- Specific environmentally sensitive areas [engineer to identify] should be designated as no and/or reduced salt areas.
- Alternate materials [list alternate materials] should be used in place of standard salt and deicing chemicals in specific environmentally sensitive areas [engineer to identify].
- Sand and salt should be stockpiled under covered storage facilities that prevent precipitation and adjacent runoff from coming in contact with the deicing materials



Spill Prevention and Response Plan

Spill prevention equipment and training will be provided by the property management company.

Initial Notification

In the event of a spill the facility and/or construction manager or supervisor will be notified immediately.

FACILITY MANAGER

Name: _____ Home Phone: _____

Phone: _____ E-mail: _____

CONSTRUCTION MANAGER

Name: _____ Home Phone: _____

Phone: _____ E-mail: _____

The supervisor will first contact the Fire Department and then notify the Police Department, the Public Health Commission and the Conservation Commission. The Fire Department is ultimately responsible for matters of public health and safety and should be notified immediately.

Further Notification

Based on the assessment from the Fire Chief, additional notification to a cleanup contractor may be made. The Massachusetts Department of Environmental Protection (DEP) and the EPA may be notified depending upon the nature and severity of the spill. The Fire Chief will be responsible for determining the level of cleanup and notification required. The attached list of emergency phone numbers shall be posted in the main construction/facility office and readily accessible to all employees. A hazardous waste spill report shall be completed as necessary using the attached form.



Emergency Notification Phone Numbers

1. FACILITY MANAGER

Name: _____ Home Phone: _____
Phone: _____ E-mail: _____

ALTERNATE

Name: _____ Home Phone: _____
Phone: _____ E-mail: _____

2. FIRE DEPARTMENT

Emergency: **911**
Business: (781) 270-1925

POLICE DEPARTMENT

Emergency: **911**
Business: _____

3. CLEANUP CONTRACTOR:

Address: _____
Phone: _____

4. MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Emergency: _____
Northeast Region – Woburn Office: _____

5. NATIONAL RESPONSE CENTER

Phone: (800) 424-8802

ALTERNATE: U.S. ENVIRONMENTAL PROTECTION AGENCY

Emergency: _____
Business: _____

6. CONSERVATION COMMISSION

Contact: _____
Phone: _____

BOARD OF HEALTH

Contact: _____
Phone: _____



Hazardous Waste / Oil Spill Report

Date _____ Time _____ AM / PM

Exact location (Transformer #) _____

Type of equipment _____ Make _____ Size _____

S / N _____ Weather Conditions _____

On or near Water ☐ Yes If Yes, name of body of Water _____

☐ No

Type of chemical/oil spilled _____

Amount of chemical/oil spilled _____

Cause of Spill _____

Measures taken to contain or clean up spill _____

Amount of chemical/oil recovered _____ Method _____

Material collected as a result of cleanup:

_____ Drums containing _____

_____ Drums containing _____

_____ Drums containing _____

Location and method of debris disposal

Name and address of any person, firm, or corporation suffering damages:

Procedures, method, and precautions instituted to prevent a similar occurrence from recurring:

Spill reported to General Office by _____ Time _____ AM / PM

Spill reported to DEP / National Response Center by _____

DEP Date _____ Time _____ AM / PM Inspector _____

NRC Date _____ Time _____ AM / PM Inspector _____

Additional comments: _____



Assessment - Initial Containment

The supervisor or manager will assess the incident and initiate containment control measures with the appropriate spill containment equipment included in the spill kit kept on-site. A list of recommended spill equipment to be kept on site is included on the following page.

Fire / Police Department	911
Municipality Health Department	
Municipality Conservation Commission:	



Emergency Response Equipment

The following equipment and materials shall be maintained at all times and stored in a secure area for long-term emergency response need.

<i>Supplies</i>		<i>Recommended Suppliers</i>
SORBENT PILLOWS/"PIGS"	2	http://www.newpig.com
SORBENT BOOM/SOCK	25 FEET	Item # KIT276 — mobile container with two pigs,
SORBENT PADS	50	26 feet of sock, 50 pads, and five pounds of
LITE-DRI® ABSORBENT	5	absorbent (or equivalent)
POUNDS		http://www.forestry-suppliers.com
SHOVEL	1	Item # 43210 — Manhole cover pick (or
PRY BAR	1	equivalent)
GOGGLES	1 PAIR	Item # 33934 — Shovel (or equivalent)
GLOVES – HEAVY	1 PAIR	Item # 90926 — Gloves (or equivalent)
		<i>Item # 23334 — Goggles (or equivalent)</i>



Stormwater Operation and Maintenance Plan

Project Information

Site

140 Kendrick Street
Needham MA

Owner

Boston Properties
101 Federal Street
Boston, MA 02110

Site Supervisor

Name: __TBD_____

Telephone: _____

Cell phone: _____

Email: _____



Description of Stormwater Maintenance Measures

The following Operation and Maintenance (O&M) program is proposed to ensure the continued effectiveness of the stormwater management system. Attached to this plan are a Stormwater Best Management Practices Checklist and Maintenance Figure for use during the long term operation and maintenance of the stormwater management system.

Catch Basins

- All catch basins shall be inspected and cleaned a minimum of at least once per year.
- Sediment (if more than six inches deep) and/or floatable pollutants shall be pumped from the basin and disposed of at an approved offsite facility in accordance with all applicable regulations.
- Any structural damage or other indication of malfunction will be reported to the site manager and repaired as necessary
- During colder periods, the catch basin grates must be kept free of snow and ice.
- During warmer periods, the catch basin grates must be kept free of leaves, litter, sand, and debris.

Subsurface Infiltration System

- The subsurface infiltration systems will be inspected at least once each year by removing the manhole/access port covers and determining the thickness of sediment that has accumulated in the sediment removal row.
- If sediment is more than six inches deep, it must be suspended via flushing with clean water and removed using a vacuor truck.
- Manufacturer's specifications and instructions for cleaning the sediment removal row is provided as an attachment to this section.
- Emergency overflow pipes will be examined at least once each year and verified that no blockage has occurred.
- System will be observed after rainfalls to see if it is properly draining.

Inspection & Maintenance

Step 1) Inspect Isolator Row for Sediment

A. Inspection ports (if present)

- A.1. Remove/open lid on Nyloplast inline drain
- A.2. Remove and clean Flexstorm filter (if installed)
- A.3. Using a flashlight and stadia rod, measure depth of sediment and record on maintenance log



- A.4. Lower a camera into Isolator Row for visual inspection of sediment levels (optional)
- A.5. If sediment is at, or above, 3" proceed to Step 2. If not, proceed to Step 3

Step 2) Clean out Isolator Row using the JetVac process

- A. A fixed culvert cleaning nozzle with rear facing spread of 45" (1.1m) or more is preferred.
- B. Apply multiple passes of JetVac until backflush water is clean
- C. Vacuum structure sump as required

Permeable Pavers

The primary maintenance requirement for permeable pavers is to clean the surface drainage voids. Fine debris and dirt accumulate in the drainage openings and reduce the pavement's flow capacity. Even though some irreplaceable loss in permeability should be expected over the paver's lifetime, one can increase the longevity of the system by following the maintenance schedule for vacuum sweeping and high-pressure washing, restricting the area's use by heavy vehicles, limiting the use of de-icing chemicals and sand, and implementing a stringent sediment control plan.

Preventing Clogging of Permeable Paver Surface Areas

- Patio areas and/or other areas with permeable pavers shall be cleaned annually with vacuums or washed with high pressure washers.
- Do not allow construction staging, soil/mulch storage, etc. on unprotected pavement surface.
- Maintain vegetated areas adjacent to areas with permeable pavers to prevent washout of soil onto surface.
- Do not apply any type of sealant to permeable pavers.

Inspecting the System

- Inspect areas paved with permeable pavers monthly for the first three months after construction to ensure proper functioning and correct any areas that have settled or experienced washouts.
- Inspect areas paved with permeable pavers annually after initial three month period. Annual inspections should take place after large storms, when puddles will make any clogging obvious.

Stormwater Outfalls

- Inspect outfall locations monthly for the first three months after construction to ensure proper functioning and correct any areas that have settled or experienced washouts.
- Inspect outfalls annually after initial three month period.



- Annual inspections should be supplemented after large storms, when washouts may occur.
- Maintain vegetation around outfalls to prevent blockages at the outfall.
- Maintain rip rap pad below each outfall and replace any washouts.
- Remove and dispose of any trash or debris at the outfall.

Roof Drain Leaders

- Perform routine roof inspections quarterly.
- Keep roofs clean and free of debris.
- Keep roof drainage systems clear.
- Keep roof access limited to authorized personnel.
- Clean inlets draining to the subsurface bed twice per year as necessary.

not necessary density at areas subject to flooding, particularly from local drainage. The map is not intended to be used for flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. Floodway data is provided for the purpose of identifying areas where flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal base flood elevations are based on hydrologic and hydraulic data and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Massachusetts State Plane Mainland Zone (FIPS zone 2001). The **horizontal datum** was NAD 83. GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NINGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from digital orthophotography. Base map files were provided in digital format by Massachusetts Geographic Information System (MA GIS). The imagery was produced at a scale of 1:5,000. Aerial photography is dated April 2008.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

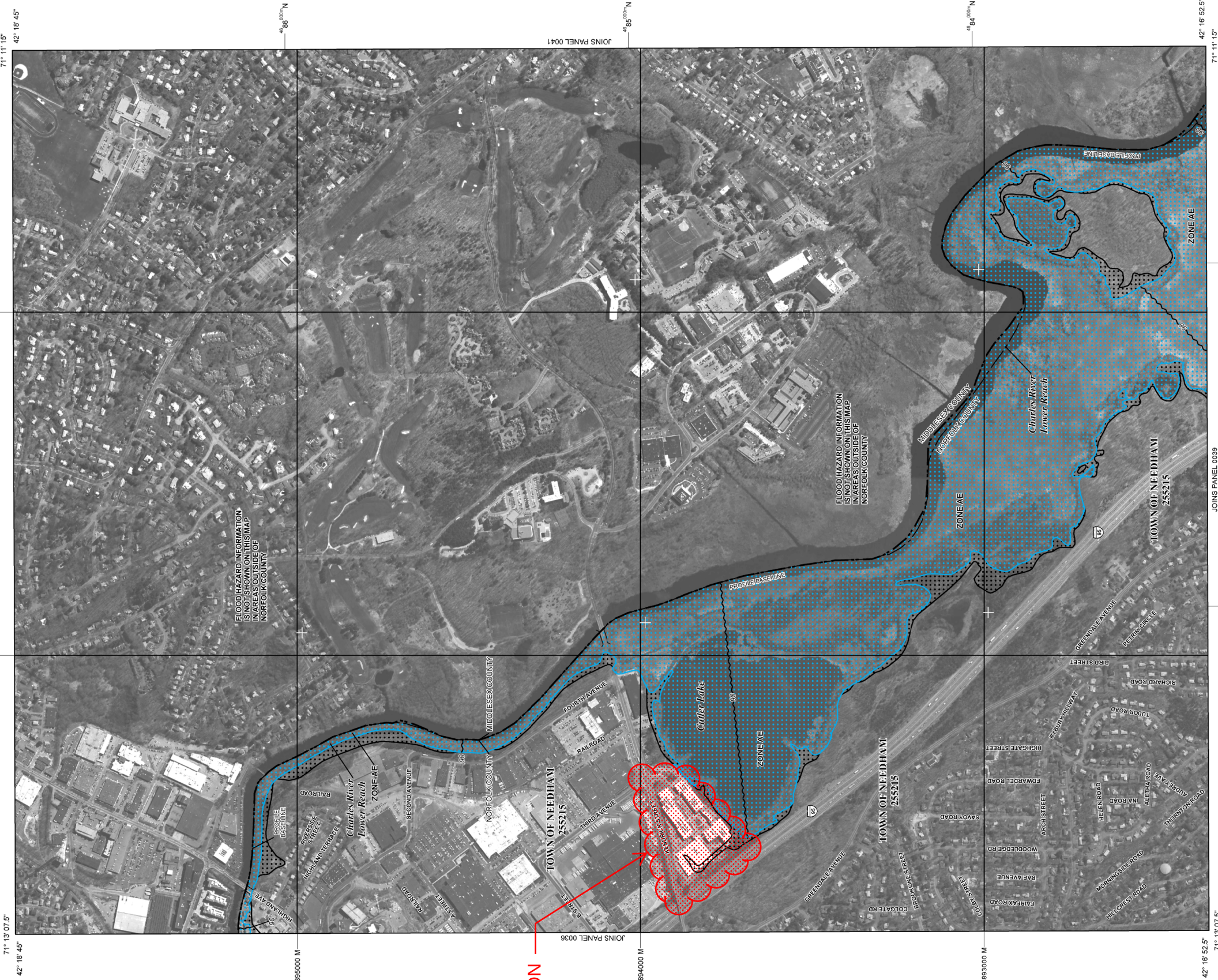
Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations** and **floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unimproved streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM, visit the **Map Service Center** (MSC) website at <http://www.fema.gov>. Available products may include digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at 1-877-FEMA-MAP (1-877-362-6627) or visit the FEMA website at <http://www.fema.gov/business/mip>.



SITE LOCATION

0.1% Annual Chance Flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. Flood areas subject to the 1% annual chance flood are shown on this map. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A
No Base Flood Elevations determined.

ZONE AE
Base Flood Elevations determined.

ZONE AH
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined; for areas of annual run flood, depths also determined.

ZONE AR
Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a levee system that was subsequently determined to be inadequate for protection from the 1% annual chance or greater flood.

ZONE A99
Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE
Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of obstructions to the passage of floodwaters so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; areas of flood with depths of less than 1 foot or with drainage areas less than 1 square mile; areas of flood with depths of less than 1 foot or with drainage areas less than 1 square mile.

OTHER AREAS
ZONE X
Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D
Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% Annual Chance Floodplain Boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
Base Flood Elevation line and value: elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*
*Referenced to the North American Vertical Datum of 1988

Cross section line
Transect line
Culvert
Bridge
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
1000-meter ticks: Massachusetts State Plane Mainland Zone (FIPS Zone 2001), Lambert Conformal Conic projection
1000-meter Universal Transverse Mercator grid values, zone 19N
Bench mark (see explanation in Notes to Users section of this FIRM panel)
River Mile
Map Repository Codes
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTY-WIDE FLOOD INSURANCE RATE MAP
July 17, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-8626.

MAP SCALE 1" = 500'
0 250 500 1000 FEET
0 150 300 METERS

FIRM
FLOOD INSURANCE RATE MAP
NORFOLK COUNTY,
MASSACHUSETTS
(ALL JURISDICTIONS)

PANEL 37 OF 430
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY
NEEDHAM TOWN OF

NUMBER
255215

PANEL
0037

SUFFIX
E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
25021C0037E

From: [Dennis Condon](#)
To: [Alexandra Clee](#)
Subject: RE: Request for comment - 140 Kendrick Street
Date: Thursday, October 22, 2020 1:55:57 PM
Attachments: [image001.png](#)
[image002.png](#)

Hi Alex,
The Fire Department is okay with this project.

Thanks,
Dennis

Dennis Condon
Chief of Department
Needham Fire Department
Town of Needham
(W) 781-455-7580
(C) 508-813-5107
Dcondon@needhamma.gov



Follow on Twitter: Chief Condon@NeedhamFire



Watch Needham Fire Related Videos on YouTube @ Chief Condon



From: Alexandra Clee <aclee@needhamma.gov>
Sent: Thursday, October 22, 2020 10:27 AM
To: Anthony DelGaizo <ADelgaizo@needhamma.gov>; David Roche <droche@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>
Subject: Request for comment - 140 Kendrick Street

Dear all,

The Planning Board will be holding a hearing on an Amendment to the 99-2 Special permit issued for 140 Kendrick. More information is included in the submitted documents, detailed below, which can be found here [K:\Planning_140Kendrick](#) . (some of you will receive a hard copy in the inter-office mail as well).

The documents included on the Common Drive for your review are:

1. Application submitted by BP 140 Kendrick Street LLC c/o Boston Properties Limited Partnership *(also attached to this email)*
2. Letter from Frederick J. DeAngelis, Attorney, dated October 15, 2020 *(also attached to this email)*
3. Presentation, prepared by Copley Wolff Design Group, dated October 19, 2020, consisting of 8 pages
4. Stormwater Analysis, prepared by VHB, dated September 23, 2020
5. Plan set prepared by vhb, 101 Walnut Street, PO Box 9151, Watertown, MA, Stantec, 311 Summer Street, Boston, Copley Wolff Design Group, 10 Post office Square, Boston, consisting of 8 sheets:
Sheet 1, Sheet C-1, entitled "Grading and Drainage Plan," dated September 23, 2020; Sheet 2, Sheet C-2, entitled "Site Details," dated September 23, 2020; Sheet 3, Sheet C-3, entitled "Parking plan," dated September 23, 2020; Sheet 4, Sheet L-100, entitled "Landscape Materials Plan," dated August 6, 2020, revised September 25, 2020; Sheet 5, Sheet L-300, entitled "Landscape Grading Plan," dated August 6, 2020, revised September 25, 2020; Sheet 6, Sheet L-400, entitled "Landscape Planting Plan," dated August 6, 2020, revised September 25, 2020; Sheet 7, Sheet L-500, entitled "Landscape Details," dated August 6, 2020, revised September 25, 2020; Sheet 8, Sheet L-501, entitled "Landscape Details," dated August 6, 2020, revised September 25, 2020.

The hearing is scheduled for November 17, 2020. If you wish to comment, please submit your comment by Tuesday November 10, 2020, so that the Petitioner has time to address any concerns or questions in advance of the hearing.

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Town of Needham
500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

**** Please note: I will not be in the office on Mondays. I will reply to you on Tuesdays, Wednesdays, Thursdays and Fridays.**

Alexandra Clee

From: Tara Gurge
Sent: Tuesday, November 10, 2020 1:05 PM
To: Alexandra Clee
Cc: Timothy McDonald
Subject: Public Health Division comments -RE: 140 Kendrick Street

Importance: High

Alex -

Here are the Public Health Division comments for #140 Kendrick St., specifically the Amendment to the 99-2 Special permit issued for 140 Kendrick St. See Below:

- In order to allow this approval for shared tenancy at this location, a completed Food Permit Plan Review packet needs to be submitted to the Public Health Division for our review and approval, along with a kitchen/cafeteria/patio layout plan, which contains sufficient food service equipment/storage space, etc., in order to accommodate the amount of tenants proposed on site that are going to share this space. (**UPDATE** - Plan review packet submitted to Health Division, and comments sent back, but still waiting for reply. Review is still in process.) Also, since this is proposed facility may also be a shared kitchen space, any additional food establishments that wish to vend or prep food out of this shared renovated facility, would also need a Food Permit Plan Review packet filled out and approved, at least a month prior to using the shared space. (**PLEASE NOTE:** We may need to limit the number of additional tenants that may be looking to use this shared kitchen space, if we find that insufficient food service equipment/storage space, is provided. This will be determined once we receive a definite idea of what specific food items will be offered on site and will also be based on #'s of meals provided, etc.
- Sufficient area must be located in the parking lot to accommodate a trash, food waste and a separate recycling dumpster. Will also need to ensure that there is sufficient space on site to accommodate an exterior waste oil grease barrel to accommodate this renovated shared kitchen.
- The proposed patio area off the cafeteria, which includes a proposed outdoor gas grill, if approved, will need to be inspected and permitted by the Needham Fire Dept.
- Both kitchen cafeteria and patio seating layouts must follow the up-to-date state and local COVID-19 guidelines with allowing for proper spacing between each table and abutting seat. These proposed seating areas will need to be reviewed and approved to ensure these layouts meet the updated state guidelines for number of seats allowed at each table, and also include the correct number of tables for your proposed indoor and outdoor spaces.

Please let us know if you have any additional questions on those requirements, and let us know if you need additional information on that.

Thanks,



TARA E. GURGE, R.S., C.E.H.T., M.S.
ASSISTANT PUBLIC HEALTH DIRECTOR
Needham Public Health Division
Health and Human Services Department
178 Rosemary Street
Needham, MA 02494
Ph- (781) 455-7940; Ext. 211/Fax- (781) 455-7922
Mobile- (781) 883-0127
Email - tgurge@needhamma.gov



**TOWN OF NEEDHAM, MASSACHUSETTS
PUBLIC WORKS DEPARTMENT
500 Dedham Avenue, Needham, MA 02492
Telephone (781) 455-7550 FAX (781) 449-9023**

November 10, 2020

Needham Planning Board
Needham Public Service Administration Building
Needham, MA 02492

RE: Amendment to Major Project Special Permit No. 99-2
140 Kendrick Street- Boston Properties

Dear Members of the Board,

The Department of Public Works has completed its review of the above referenced request for an Amendment to a Special Permit. The applicant proposes to renovate the existing single tenant space to allow multiple tenants in the buildings. The submitted documents and plans show exterior improvements by adding accessible entrances and parking locations to the buildings, patio improvements, and a trail linking to Cutler Lake.

The review was conducted in accordance with the Planning Board's regulations and standard engineering practice. The documents submitted for review are as follows:

1. Application submitted by BP 140 Kendrick Street LLC c/o Boston Properties Limited Partnership
2. Letter from Frederick J. DeAngelis, Attorney, dated October 15, 2020
3. Presentation, prepared by Copley Wolff Design Group, dated October 19, 2020, consisting of 8 pages.
4. Stormwater Analysis, prepared by VHB, dated September 23, 2020
5. Plan set prepared by vhb, 101 Walnut Street, PO Box 9151, Watertown, MA, Stantec, 311 Summer Street, Boston, Copley Wolff Design Group, 10 Post office Square, Boston, consisting of 8 sheets: Sheet 1, Sheet C-1, entitled "Grading and Drainage Plan," dated September 23, 2020; Sheet 2, Sheet C-2, entitled "Site Details," dated September 23, 2020; Sheet 3, Sheet C-3, entitled "Parking plan," dated September 23, 2020; Sheet 4, Sheet L-100, entitled "Landscape Materials Plan," dated August 6, 2020, revised September 25, 2020; Sheet 5, Sheet L-300, entitled "Landscape Grading Plan," dated August 6, 2020, revised September 25, 2020; Sheet 6, Sheet L-400, entitled "Landscape Planting Plan," dated August 6, 2020, revised September 25, 2020; Sheet 7, Sheet L-500, entitled "Landscape Details," dated August 6, 2020, revised September 25, 2020; Sheet 8, Sheet L-501, entitled "Landscape Details," dated August 6, 2020, revised September 25, 2020.

Our comments and recommendations are as follows:

- As part of the NPDES requirements, the applicant will need to comply with the Public Outreach & Education and Public Participation & Involvement control measures. The applicant shall submit a letter to the DPW identifying the measures selected and dates by

which the measures will be completed in order to incorporate it into the Planning Board's decision.

If you have any questions regarding the above, please contact our office at 781-455-7538.

Truly yours,

Thomas Ryder
Assistant Town Engineer



November 12, 2020

Ref: 15060.00

Town of Needham
Planning Board
470 Dedham Ave
Needham, MA 02492

Re: 140 Kendrick Street – Special Permit Amendment
Response to Comments

On behalf of our client, Boston properties, VHB respectfully submits the following responses to the comments received in the November 10th letter from the Engineering Department regarding the Special Permit Amendment Application. For reference, the Engineering Department comments have been repeated below preceding each response. The project team's responses to these comments are provided below in **bold type**.

- As part of the NPDES requirements, the applicant will need to comply with the Public Out Reach & Education and Public Participation & Involvement control measures. The applicant shall submit a letter to the DPW identifying the measures selected and dates by which the measures will be completed in order to incorporate it into the Planning Board's decision.

The Applicant (Boston Properties) will create and distribute an informational flyer (amount of flyers equal to number of employees for each tenant) to the tenants of the building and any future tenants of the building upon occupancy with information on Stormwater Best Management Practices.

We trust the comments have been addressed satisfactorily. We are available at your convenience if you wish to discuss any of these responses in more detail.

Sincerely,
VANASSE HANGEN BRUSTLIN, INC.

Nicholas Skoly, PE
Project Manager

Engineers | Scientists | Planners | Designers

101 Walnut Street
PO Box 9151
Watertown, Massachusetts 02471
P 617.924.1770
F 617.924.2286

From: John Schlittler
Sent: Tuesday, November 10, 2020 3:33 PM
To: Alexandra Clee
Subject: RE: Request for comment - 140 Kendrick Street

Alex,
As a stand alone project The Police have no issues. My only concern would be the impact to Kendrick Street with the addition of this property and the Children's project. I know they address traffic issues separately but am unsure of what the combined impact would be to this very busy location. Thanks

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Tuesday, November 10, 2020 11:05 AM
To: Anthony DelGaizo <ADelgaizo@needhamma.gov>; David Roche <droche@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Timothy McDonald <tmcDonald@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>
Subject: RE: Request for comment - 140 Kendrick Street

If you have not yet submitted comments and you wish to, it would be great to receive them today (or Thursday morning) so I can include them in the Planning Board packets.

Thanks!

Alexandra Clee
Assistant Town Planner
Town of Needham
Google Voice Phone: 339-225-9522
** Please note: Due to Covid-19, I am working primarily remotely. Email is the quickest way to reach me.

From: Alexandra Clee
Sent: Thursday, October 22, 2020 10:27 AM
To: Anthony DelGaizo <ADelgaizo@needhamma.gov>; David Roche <droche@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Timothy McDonald <tmcDonald@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>
Subject: Request for comment - 140 Kendrick Street

Dear all,

The Planning Board will be holding a hearing on an Amendment to the 99-2 Special permit issued for 140 Kendrick. More information is included in the submitted documents, detailed below, which can be found here [K:\Planning_140Kendrick](#) . (some of you will receive a hard copy in the inter-office mail as well).

The documents included on the Common Drive for your review are:

1. Application submitted by BP 140 Kendrick Street LLC c/o Boston Properties Limited Partnership (also

attached to this email)

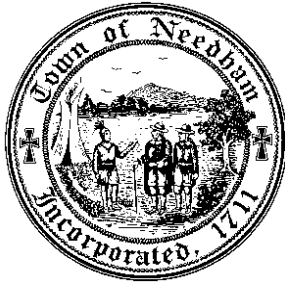
2. Letter from Frederick J. DeAngelis, Attorney, dated October 15, 2020 (also attached to this email)
3. Presentation, prepared by Copley Wolff Design Group, dated October 19, 2020, consisting of 8 pages
4. Stormwater Analysis, prepared by VHB, dated September 23, 2020
5. Plan set prepared by vhb, 101 Walnut Street, PO Box 9151, Watertown, MA, Stantec, 311 Summer Street, Boston, Copley Wolff Design Group, 10 Post office Square, Boston, consisting of 8 sheets: Sheet 1, Sheet C-1, entitled "Grading and Drainage Plan," dated September 23, 2020; Sheet 2, Sheet C-2, entitled "Site Details," dated September 23, 2020; Sheet 3, Sheet C-3, entitled "Parking plan," dated September 23, 2020; Sheet 4, Sheet L-100, entitled "Landscape Materials Plan," dated August 6, 2020, revised September 25, 2020; Sheet 5, Sheet L-300, entitled "Landscape Grading Plan," dated August 6, 2020, revised September 25, 2020; Sheet 6, Sheet L-400, entitled "Landscape Planting Plan," dated August 6, 2020, revised September 25, 2020; Sheet 7, Sheet L-500, entitled "Landscape Details," dated August 6, 2020, revised September 25, 2020; Sheet 8, Sheet L-501, entitled "Landscape Details," dated August 6, 2020, revised September 25, 2020.

The hearing is scheduled for November 17, 2020. If you wish to comment, please submit your comment by Tuesday November 10, 2020, so that the Petitioner has time to address any concerns or questions in advance of the hearing.

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Town of Needham
500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

** Please note: I will not be in the office on Mondays. I will reply to you on Tuesdays, Wednesdays, Thursdays and Fridays.



LEGAL NOTICE
Planning Board
TOWN OF NEEDHAM
NOTICE OF HEARING

In accordance with the provisions of M.G.L., Chapter 40A, S. 11, and the Needham Zoning By-Laws, Sections 7.4, and Section 4.2 of Major Site Plan Special Permit No. 2012-07 dated October 16, 2012, amended and restated April 2, 2013, and amended on September 17, 2013, January 6, 2015, April 28, 2015, November 10, 2015 and April 25, 2016, the Needham Planning Board will hold a public hearing on **Tuesday, November 17, 2020 at 7:40 PM Zoom Web ID Number 826-5899-3198** (further instructions for accessing are below), regarding the application of The Children's Hospital Corporation c/o Boston Children's Hospital, 300 Longwood Avenue, Boston, MA, for a Special Permit under Site Plan Review, Section 7.4 of the Needham Zoning By-Law.

The subject property is located at 66 B Street, 360 First Avenue, 410 First Avenue, and 37 A Street, Needham, MA, shown on Assessor's Map No. 300 as Parcel 28 containing 13.68 acres in the New England Business Center Zoning District. The requested Major Project Site Plan Special Permit Amendment would, if granted, permit the Petitioner to construct Building 1 of a previously approved development as an approximately 224,000 square foot Pediatric Medical Facility at 380 First Avenue. Building 2 and Building 4 of the previously approved development are expected to be constructed at a later date and the approved use is currently expected to remain office as set forth in the Existing Special Permit. Additionally, the Petitioner is seeking to increase the approved size of Building 1 by approximately 34,491 sq. ft. by reducing the size of Building 4 by 34,491 square feet and reallocating this square footage to Building 1. The Petitioner further proposes to construct 530 additional parking spaces to be located in an addition to Garage B and to construct an interim surface parking lot with 105 spaces at 37 A Street as shown on the Interim Condition Site Plan. More information can be found in the materials submitted with the application.

In accordance with the Zoning By-Law, Section 7.4, a Major Project Site Plan Review is required. In accordance with Major Project Site Plan Special Permit No. 2012-07, Section 4.2, as amended, further site plan review is required.

To view and participate in this virtual hearing on your phone, download the "Zoom Cloud Meetings" app in any app store or at www.zoom.us. At the above date and time, click on "Join a Meeting" and enter the following Meeting ID: 826-5899-3198

To view and participate in this virtual hearing on your computer, at the above date and time, go to www.zoom.us click "Join a Meeting" and enter the following ID: 826-5899-3198

The application may be viewed at this link: <https://www.needhamma.gov/planningapplication>. Interested persons are encouraged to attend the public hearing and make their views known to the Planning Board. This legal notice is also posted on the Massachusetts Newspaper Publishers Association's (MNPA) website at (<http://masspublicnotices.org/>).

NEEDHAM PLANNING BOARD

RECEIVED TOWN CLERK
NEEDHAM, MA 02492

2020 OCT 28 PM 2:16

**TOWN OF NEEDHAM
MASSACHUSETTS**



500 Dedham Avenue
Needham, MA 02492
781-455-7550

PLANNING BOARD

APPLICATION FOR SITE PLAN REVIEW

Project Determination: (circle one) Major Project Minor Project

This application must be completed, signed, and submitted with the filing fee by the applicant or his representative in accordance with the Planning Board's Rules as adopted under its jurisdiction as a Special Permit Granting Authority. Section 7.4 of the By-Laws.

Location of Property 66 B Street, 360 First Avenue, 410 First Avenue and 37 A Street
Name of Applicant The Children's Hospital Corporation, c/o Boston Children's Hospital
Applicant's Address 300 Longwood Avenue, Boston, MA 02115
Phone Number 617-574-4179 (Attorney Tim Sullivan)

Applicant is: Owner _____ Tenant _____
 Agent/Attorney _____ Purchaser X

Property Owner's Name Normandy GAP-V Development Needham, LLC, c/o Senlac Ridge Partners
Property Owner's Address 53 Maple Avenue, Morristown, NJ 07960
Telephone Number 617-974-3570 (Attorney Roy Cramer)

Characteristics of Property: Lot Area 596,000 SF (13.68 acres) Present Use Vacant Land/Approved Office Use
 Map # _____ Parcel # _____ Zoning District New England Business Center
 Parcel ID: 1993000002800010

Description of Project for Site Plan Review under Section 7.4 of the Zoning By-Law:
Please see attached cover letter.

Signature of Applicant (or representative) By: Timothy W. Sullivan
Address if not applicant 400 Atlantic Avenue, Boston, MA 02115
Telephone # 617-574-4179
Owner's permission if other than applicant Normandy GAP-V Development Needham, LLC

By: David Welsh

SUMMARY OF PLANNING BOARD ACTION

Received by Planning Board _____ Date _____
Hearing Date _____ Parties of Interest Notified of Public Hearing _____
Decision Required by _____ Decision/Notices of Decision sent _____
Granted _____
Denied _____ Fee Paid _____ Fee Waived _____
Withdrawn _____

NOTE: Reports on Minor Projects must be issued within 35 days of filing date.



October 13, 2020

BY HAND

Town of Needham Planning Board Members
Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492
Attn: Ms. Lee Newman

RECEIVED TOWN OF NEEDHAM
OCT 28 PM 2:16

Re: Center 128 West - 66B Street, 380 First Avenue, 410 First Avenue, 2B Street and 37A Street (collectively, the "Property")

Dear Planning Board Members:

We are counsel to The Children's Hospital Corporation (the "Applicant", or "Children's"), 300 Longwood Avenue, Boston, Massachusetts 02115, an affiliate of Boston Children's Hospital.

Boston Children's Hospital is the nation's premier pediatric academic medical center with a commitment to being the worldwide leader in the advancement of children's health. Boston Children's Hospital is the #1 ranked pediatric hospital in the nation for the seventh year in a row according to U.S. News & World Report's 2020-21 Best Children's Hospitals Honor Roll. It is home to the world's largest pediatric research enterprise, and it is the leading recipient of pediatric research funding from the National Institutes of Health.

Founded in 1869 as a 20-bed hospital for children, Boston Children's Hospital has grown significantly and has a legacy of firsts that have improved the practice of pediatric care across the world with a clear focus on four interwoven missions: providing the best clinical care to children, researching new cures for diseases, training the next generation of pediatric caregivers, and improving the health and well-being of children with a special emphasis on making the communities it serves a better place for families to live, work, and play.

In order for Boston Children's Hospital to continue delivering premier care, research and teaching on which it has built its reputation and address its growth in patients and employees, it is imperative that Boston Children's Hospital increase its

outpatient clinical care capacity within the surrounding local communities, as well as its supporting office and administrative space requirements.

To that end, the Applicant has been working diligently with the Town of Needham for over a year to facilitate the development of a 224,000 sq. ft. pediatric medical facility at 380 First Avenue (the "Project"). As a result of these collaborative efforts, the Town unanimously voted at its annual Town Meeting on June 8, 2020, to amend the New England Business Center zoning district (the "NEBC") to allow a Pediatric Medical Facility use upon the issuance of a special permit by the Planning Board (the "Board"). Additionally, despite its exemption from paying taxes as non-profit, the Applicant agreed with the Town to pay real estate taxes and make additional financial contributions to support child health and wellness services in the Town.

Pursuant to Chapter 40A of the Massachusetts General Laws, the Needham Zoning By-Law, the Board Rules and Section 4.2 of Major Site Plan Special Permit No. 2012-07, dated October 16, 2012 (as amended), enclosed is an Application for Further Site Plan Review and Special Permit Amendment in connection with the Project (the "Application"). In support of the Application, the Applicant is submitting the following materials and information (*5 copies of each unless otherwise indicated*):

1. Application for Further Site Plan Review;
2. Letter from Tetra Tech dated September 24, 2020, outlining the key changes as outlined on the Site Overlay Plan;
3. Plan Set titled "Boston Children's Hospital - Needham Satellite Project" (the "Plan Set"), which includes the following (*1 additional 11x17 copy mailed directly to each Board member*):
 - a. Existing Site and Surrounding Area Photographs;
 - b. Building and Garage Elevations;
 - c. Site Plan Overlay;
 - d. Revisions to the following sheets approved by the Existing Special Permit:
 - i. Sheet C-3 Layout and Materials Plan;
 - ii. Sheet C-4 Grading and Drainage Plan;
 - iii. Sheet C-5 Drainage Schedules;
 - iv. Sheet C-6 Utilities Plan;
 - v. Sheet D-4 Construction Details;
 - vi. Sheet LT-1 Site Lighting Plan;

- vii. Interim Condition Site Plan;
 - viii. Sheet L-1 Landscape Plan; and
 - ix. Sheet L-2 Landscape Details;
 - e. Basement Overall Plan;
 - f. Levels 1 – 5 Overall Plans;
 - g. Roof Plan;
 - h. South East Elevation;
 - i. South West Elevation;
 - j. North West Elevation;
 - k. South East Elevation;
 - l. Building Section – East West;
 - m. Building Section – East/West at Drop Off; and
 - n. Building Section – North South.
- 4. Traffic Impact Report prepared by Vanasse Hangen Brustlin, Inc., dated September 25, 2020;
 - 5. A fully compiled copy of the Existing Special Permit (hereinafter defined); and
 - 6. Check payable to the Town of Needham in the amount of \$1,000.00 representing the filing fee for an Amendment to Major Project Site Plan Review Decision.

The Applicant hereby requests pursuant to Zoning By-Law Section 7.4.4 that the Board waive the submission by Applicant of any of the required information not submitted herewith.

* * *

ZONING ANALYSIS DISCUSSION:

Background:

On October 16, 2012 the Board issued a Major Project Site Plan Special Permit, which approved a multi-phased project to construct multiple office/research and development buildings, a hotel, multiple parking garages, surface parking and associated landscaping and driveways at the Property (the "Original Decision"). The Original Decision has been amended by subsequent decisions issued by the Board on April 2, 2013, September 17, 2013, January 6, 2015, April 28, 2015, November 10, 2015 and

April 25, 2016 (collectively, the "Amendments" and, together with the Original Decision, the "Existing Special Permit").¹

The development program approved by the Existing Special Permit consists of: (a) four office/research and development buildings with a total combined square footage of approximately 740,000 sq. ft.; (b) two free standing parking garages (to contain a combined 3,525 parking spaces); (c) 117 surface parking spaces; (d) a hotel comprising approximately 89,740 sq. ft. and containing 128 guest units, approximately 1,240 sq. ft. of conference/function space, a guest dining area, lounge/bar area, indoor pool, exercise room and other hotel amenities, together with (e) associated driveways, landscaping and other associated site improvements. Additionally, the approved development program included the consolidation of the four (4) separate parcels into one (1) new parcel, which has encouraged pedestrian activity within the site, streamlined traffic activity in certain areas, and overall, has supported the "campus-like" environment envisioned by both the Applicant and the Board.

Each of the four office buildings are identified in the Existing Special Permit in the following manner: "Building 1" is the building to be located at 380 First Avenue; "Building 2" is the building to be located at 2 B Street; "Building 3" is the building located at 410 First Avenue; "Building 4" is the building to be located at 37 A Street; "Garage A" is the parking structure to be constructed with a total of 925 parking spaces; and "Garage B" is the parking structure to be constructed with a total of 2,600 parking spaces. We note that per the terms of the Existing Special Permit, a Reciprocal Parking and Access Easement Agreement has been executed and recorded in the land records to reflect the requirement that 857 parking spaces located in Parking Garage B have been allocated for use by the adjacent Center 128 East. As further discussed below, there will be sufficient parking at the Proposed Development to accommodate the Project without use of these 857 spaces that have been allocated to Center 128 East as required by the Existing Special Permit, and satisfy the zoning requirements applicable to all of the uses at the Property and Center 128 East.

A portion of the development has been constructed, which includes the hotel, Building 3 (currently occupied by TripAdvisor, Inc.), a portion of Garage B and 153 surface parking spaces (collectively, the "Constructed Improvements"). Accordingly, three (3) office buildings (Buildings 1, 2 and 4) with an aggregate of approximately 452,000 sq. ft., Garage A, a portion of Garage B, 153 surface parking spaces, and the remaining associated landscaping, driveways and other site improvements have yet to be developed (the "Remaining Development Rights"). The Project, together with the previously-approved Remaining Development Rights, are hereinafter referred to as the "Proposed Development".

¹ We note that the Existing Special Permit refers to this site as 360 First Avenue, though the current address is 380 First Avenue.

Proposed Project:

Use

The Applicant is seeking to construct Building 1 as an approximately 224,000 sq. ft. Pediatric Medical Facility. Building 2 and Building 4 are expected to be constructed at a later date and the approved use is currently expected to remain office as set forth in the Existing Special Permit. Pursuant to Section 3.2.4 of the Town of Needham Zoning Bylaw (the “Bylaw”), a Pediatric Medical Facility is allowed upon issuance of a special permit from the Board. Accordingly, a special permit is required to construct Building 1 as a Pediatric Medical Facility in lieu of an office building.

Building Size

Additionally, the Applicant is seeking to increase the approved size of Building 1 by approximately 34,491 sq. ft. by reducing the size of Building 4 by 34,491 sq. ft. and reallocating this square footage to Building 1. Accordingly, the Existing Special Permit must be amended to reflect the following changes:

Building #	Street Address	Approved in Existing Special Permit	Proposed
Building 1	380 First Ave.	189,509 sq. ft. 5 Stories / 84 feet	224,000 sq. ft. 5 Stories / 84 feet
Building 2	2 B Street	127,145 sq. ft. 5 Stories / 72 feet	No change
Building 4	37 A Street	135,000 sq. ft. 5 Stories / 70 feet	100,509 sq. ft. 4 Stories / 56 feet

Parking

The Applicant plans to construct 530 additional spaces to be located in an addition to Garage B and construct an interim surface parking lot with 105 spaces at 37 A Street as shown on the Interim Condition Site Plan. Additionally, there is currently a surplus of 264 spaces at the Property (i.e., 264 spaces greater than what is required under zoning for the all uses at the Property). Pursuant to Section 5.1.2 of the Bylaw, one (1) parking space is required per 290 sq. ft. of floor area in a Pediatric Medical Facility. In this case, 773 parking spaces are required for the Project, resulting in an overall parking requirement of 2,732 spaces (inclusive of the 857 spaces allocated to Center 128 East). Accordingly, the parking to be constructed, together with 138 of the existing surplus spaces, is sufficient to satisfy zoning.

The following chart demonstrates that, upon completion of the Project, the number of parking spaces at the Property will be sufficient to satisfy all of the uses:

Use	Space Required by Zoning	Existing Parking Spaces	Proposed Parking Spaces
Hotel	140 spaces <i>(1 space per sleeping unit, plus one space for each 200 sq. ft. of function or conference area, plus one space for each 3 employees on the largest shift)</i>		
Office <i>(Building 3)</i>	962 spaces <i>(1 space per 300 sq. ft.)</i>		
Pediatric Medical Facility	773 spaces <i>(1 space per 290 sq. ft.)</i>		
Center 128 East	857 ²		
<u>Total</u>	2,732	2,223 (2,070 in Garage B and 153 surface spaces)	2,858 (2,600 in Garage B and 258 surface spaces)

² Per the terms of the Existing Special Permit, 857 parking spaces located in Parking Garage B are allocated to the adjacent Center 128 East and satisfy the parking requirements for the development of Center 128 East under the special permit, as amended, that has been issued for Center 128 East.

Additionally, the following chart demonstrates that, upon completion of the Proposed Development, the number of parking spaces at the Property will be sufficient to satisfy all of the uses:

Use	Space Required by Zoning	Existing Parking Spaces	Proposed Parking Spaces
Hotel	140 spaces <i>(1 space per sleeping unit, plus one space for each 200 sq. ft. of function or conference area, plus one space for each 3 employees on the largest shift)</i>		
Office <i>(Buildings 2 - 4)</i>	1721 spaces <i>(1 space per 300 sq. ft.)</i>		
Pediatric Medical Facility	773 spaces <i>(1 space per 290 sq. ft.)</i>		
Center 128 East	857 ³		
<u>Total</u>	3,491	2,223 (2,070 in Garage B and 153 surface spaces)	3,642 (925 in Garage A, 2,600 in Garage B and 117 surface spaces)

³ See footnote #2.

Dimensional Requirements

The following chart, together with the Plan Set, demonstrates that Building 1, upon completion of the Project, will comply with the dimensional requirements applicable to the Property pursuant to the terms of the Existing Special Permit:

Item	Required	Approved under Existing Special Permit	Current Proposal	Compliance with Zoning
Minimum Lot Area	40,000 sf	596,000 sf	596,000 sf	YES
Minimum Lot Frontage	100 ft	450 ft	450 ft	YES
Minimum Floor Area Ratio	1.0	1.39	1.39	YES; relief previously granted in Existing Special Permit to increase FAR to 1.39
Minimum Front Yard	15 ft	15 ft	15 ft	YES
Minimum Side Yard	20 ft	20 ft 6 in.	20 ft 6 in	YES
Minimum Rear Yard	20 ft	15 ft 7 in	15 ft 7 in	YES; relief previously granted in Existing Special Permit to reduce side setback to 15 ft 7 in
Maximum Lot Coverage	65%	48%	52.3%	YES
Maximum Building Height	72 ft	84 ft	84 ft	YES; relief previously granted in Existing Special Permit to increase building height to 84 ft
Minimum Open Space	25%	23%	23%	YES; relief previously granted in Existing Special Permit to reduce open space to 23%
Maximum Uninterrupted Façade Length	300 ft	352 ft	337 ft	YES; relief previously granted in existing special Permit to allow uninterrupted façade length of up to 352 ft for Garage B ⁴
Minimum Street Trees	1 per 40 ft	1 per 40 ft	1 per 40 ft	YES

⁴ Amendment proposed to increase façade length for Garage A from 315' to 337', for which a special permit is being requested.

Other Requirements of the Existing Special Permit

Certain terms and conditions of the Existing Special Permit must be modified in connection with the Project. Specifically, Section 3.9 regarding permitted buildout and quantity of on-site parking and Section 3.11 regarding permitted uses must be amended to reflect the change in use from office to Pediatric Medical Facility in Building 1. Section 3.38 regarding Design Guidelines must be amended to reflect the change in use from office to Pediatric Medical Facility and to reflect the currently proposed design of Building 1. Section 4.6 regarding the permitted buildout period must be extended to allow for commencement of construction of the Project and subsequent construction of later phases. Each of the above Sections refer to the First Amended and Restated Major Site Plan Special Permit dated April 2, 2013.

Relief Requested:

Based on the foregoing analysis and in accordance with Section 7.4 of the Bylaw and Section 4.2 of the Existing Special Permit, the following items of zoning relief are requested:

1. Special Permit, in accordance with Bylaw Section 3.2.4 and Article II of the Board Rules for a Pediatric Medical Facility Use in the NEBC district.
2. Amendments to the Existing Special Permit decision, as follows:
 - a. Amendment to replace the previously governing special permit plan set with the Plan Set attached hereto;
 - b. Amendment to reallocate 34,491 sq. ft. from Building 4 to Building 1;
 - c. Amendment to Section 3.9 of the Existing Special Permit to reflect the change in proposed use and subsequent changes to buildout plans and parking;
 - d. Amendment to Section 3.11 of the Existing Special Permit to reflect the change in use from office to Pediatric Medical Facility in Building 1 and to provide that the incorporation at the Property of any uses permitted as-of-right in the NEBC will be allowed without any further amendment to the special permit (provided that parking ratios applicable to any such use can be satisfied using the number of spaces already approved in the Existing Special Permit);
 - e. Amendment to Section 3.38 of the Existing Special Permit to reflect the change in proposed use and current design of Building 1;

- f. Amendment to Section 4.6 of the Existing Special Permit to extend the date for commencement of construction of the Project and subsequent construction of later phases from November 14, 2022 to December 31, 2029;
- g. Amendment to Existing Special Permit to extend relief previously granted to allow for uninterrupted façade length in excess of 300 ft to apply to the 337 ft proposed for Garage A;
- h. Such other amendments to the Existing Special Permit as the Board deems necessary to accommodate the Project;
- i. For the sake of clarity, the Applicant notes that the Existing Special Permit is separate and distinct from the special permit previously granted for Center 128 East, and in granting the relief requested by the Applicant, the Applicant requests that the Board expressly find that the amendment of Existing Special Permit shall not be construed as an amendment or modification to the special permit granted previously for Center 128 East; and
- j. Additionally, the Applicant is presenting the enclosed Plan Set as an alternative to the plans previously filed and approved by the Board in the Existing Special Permit. The Applicant requests that in the unlikely event that Plan Set is approved by the Board, but the Applicant's purchase of the Property does not occur on or before March 31, 2021, then the Existing Special Permit shall remain in full force and effect without modification, with the following exceptions: 1) the termination date of the Existing Special Permit shall become December 31, 2029, unless further extensions are granted, and 2) the requested special permit to grant the uninterrupted façade length of Garage A from 315 feet to 337 feet shall continue to be in full force and effect.

Satisfaction of Criteria for Granting Relief Requested:

In accordance with Section 7.4.6 of the Bylaw the Project satisfies each of the following requirements for Site Plan Review, as follows:

- (a) **The adjoining premises are protected against seriously detrimental uses by provision of sufficient surface water drainage, sound and sight buffers and preservation of views, light and air;**

The adjoining premises will be protected against any seriously detrimental uses

on the Property through the provision of surface water drainage, sound and sight buffers, and preservation of views, light and air. The Property will in fact be configured such that the majority of proposed parking will be structured parking, which results in an increase in open space and a corresponding increase in groundwater recharge. The proposed location of buildings in relation to open space and parking purposefully create a campus-like environment minimizes negative impacts to adjacent premises. Surface water that is not recharged directly into the ground will be collected via a series of catch basins and drains. The undeveloped portions of the Property will be loamed and seeded on a temporary basis until future phases of work on the property are approved and implemented.

- (b) The convenience and safety of vehicular and pedestrian movement within the site and on adjacent streets, the location of driveway openings in relation to traffic and adjacent to streets, and regulations application to handicapped, minors and the elderly have all been adequately addressed;**

Convenience and safety of vehicular and pedestrian traffic will not be adversely affected by the Project. The parking garages and other parking areas proposed to be created will contain at least the number of parking spaces required by the Bylaw and will comply with the design criteria set forth in Section 5.1.3 of the Bylaw. Instead of the continuation of four separate parcels, each containing its own building and parking area, curb cuts and the like, the consolidated new parcel will streamline the parking and traffic to and from (as well as within) the Property, improve the convenience and safety of vehicular and pedestrian movement within the site and on adjacent streets, and the location of driveway openings in relation to traffic and adjacent streets will be enhanced. The Project also complies with other regulations for the handicapped, minors and the elderly.

- (c) The arrangement of parking and loading spaces in relation to the proposed use of the premises is adequate;**

Parking and loading spaces have been adequately arranged in relation to the proposed uses on the premises. The number of parking spaces required by the Bylaw will be provided. The bulk of the parking will be structured parking, which will protect employees and visitors to the site from the elements.

- (d) The methods of disposal of refuse and other wastes resulting from the uses permitted on the site are more than sufficient;**

Adequate methods for disposal of refuse and waste will be provided by the Project. Solid waste and refuse will be disposed of in compliance with all applicable rules and regulations. The waste-water system is connected to the

municipal sewer system and will continue to do so.

- (e) The relationship of structures and open spaces to the natural landscape, existing buildings and other community assets in the area has been thoughtfully planned and is favorable;**

The relationship of the structures to be constructed to those in the surrounding area will substantially improve the present condition of the Property. The addition of the world-class Pediatric Medical Facility will bring a valuable asset and significant economic resource to the Town of Needham and will complement the existing hotel and office uses on the Property. The creation of a campus-like environment and structured parking will enhance the relationship of structures and open space on the site. The Project will comply with the off-street parking requirements of Section 5.1.2 of the Bylaw as well as the parking design criteria set forth in Section 5.1.3 of the Bylaw.

- (f) Any adverse impacts on the Town's resources, including the effects on the Town's water supply and distribution system, sewer collection and treatment, fire protection, and streets, have all been adequately mitigated.**

The Project will not have any adverse impact on the Town's water supply and distribution system, sewer collection and treatment, fire protection and streets. The Project will not have any adverse impact on the Town's water or wastewater infrastructure. Sufficient pump stations, including the Reservoir B station, the Kendrick Street station, and a third pump station enhanced in connection with the Charles River Landing project all provide support for the area. With respect to fire protection, the new Building 1 will be fully accessible for the Town's firefighting apparatus. The maximum height of the proposed Building 1 is 84 feet, plus mechanicals, and all buildings will be properly accessible to fire-fighting equipment.

The special permit granting authority for the approvals required in connection with this Application is the Board. Pursuant to Section 7.6.1 of the Bylaw, the procedures and decision criteria for the Board are the same as specified in Section 7.5.2 for special permits acted on by the Board of Appeals. Thus, the criteria outlined in Section 7.5.2.1 for the granting of special permits, as outlined below, is applicable here. The application satisfies the Special Permit criteria outlined in Section 7.5.2.1 of the By-Law as follows:

- (a) Complies with such criteria or standards as set forth in the section this Bylaw which refers to the granting of the requested special permit;**

There are no additional criteria set forth in the Bylaw for the requested special permit.

(b) Is consistent with:

1) The general purposes of this Bylaw as set forth in subparagraph 1.1, and

The Project is consistent with the general purposes of the Bylaw, including the promotion of health, safety, convenience, morals or welfare for Needham residents. The addition of a state-of-the-art Pediatric Medical Facility will provide a valuable public health resource to residents, in addition to generating a source of employment for Needham residents and a significant economic benefit.

2) The more specific objectives and purposes of applicable to the requested special permit which may be set forth elsewhere in this Bylaw, such as, but not limited to, those at the beginning of the various sections;

There are no additional criteria set forth in the Bylaw for the requested special permit.

(c) Is designed in a manner that is compatible with the existing natural features of the site and is compatible with the characteristics of the surrounding area;

As described above, the Project is compatible with the existing natural features of the site and with the characteristics of the surrounding area. The orientation of the buildout with the parking garages located near the “rear” of the Property will result in limited visibility of the structures from the major surrounding roads, including Route 128, A Street, B Street and First Avenue. Trees and landscaping will complement existing features of the Property and surrounding area. The undeveloped portions of the Property will be loamed and seeded on a temporary basis until future phases of work on the property are approved and implemented.

(d) The circulation patterns for motor vehicles and pedestrians which would result from the use or structure which is the subject of the special permit will not result in conditions that unnecessarily add to traffic congestion or the potential for traffic accidents on the site or in the surrounding areas;

As described in the traffic management plan submitted in connection with this Application, motor vehicle traffic will be accommodated on the Property in such a way that compliments and encourages pedestrian activity and does not

result in additional traffic congestion. A series of pedestrian walkways will connect various buildings and parking garages, contributing to the “campus-like” environment of the Property.

(e) The proposed use, structure or activity will not constitute a demonstrable adverse impact on the surrounding area resulting from:

- 1) Excessive noise, level of illumination, glare, dust, smoke or vibration which are higher than levels now experienced from uses permitted in the surrounding area,**
- 2) Emission or discharge of noxious or hazardous materials or substances, or**
- 3) Pollution of water ways or groundwater.**

The proposed use, structure and activity at the Property will not have a demonstrable adverse impact on the surrounding area. Any minimal noise, illumination or glare associated with the Project will be mitigated with the design features such as landscaping and lighting, as more particularly demonstrated in the Plan Set submitted in connection with this Application. No noxious or hazardous substances are anticipated to be emitted as a result of the Project, and no waterways or groundwater will be polluted.

Finally, we believe this proposal and application is consistent with the goals set forth in the “Goals of the June 2001 New England Business Center, Highland Avenue Corridor, and Wexford/Charles Street Industrial District Plan”, as adopted by the Board on December 11, 2001 (the “Goals of the District Plan”), as follows:

(a) Create a high-quality office park that meets the space and infrastructure needs of the regional office market.

Overall, the Proposed Development replaces an underutilized commercial site with a modern, highly efficient and very attractive Pediatric Medical Facility, sophisticated hotel, and Class-A suburban office buildings of the design and quality sought after by the market. The Project will help to create a high-quality office and medical park that meets the space and infrastructure needs of the regional market. With structured parking and functional open space, the Proposed Development will cater to a wide variety of high-quality tenants looking to establish themselves in Needham. The visibility and prominence along Route 128 will further enhance the attraction of the Proposed Development to prospective tenants. The combination of uses on the Property will also enhance the attractiveness of the office park and will complement the business expected to locate at the Property.

(b) Create a “campus-like” character for the district through the design of buildings, streets and public spaces.

The Project will contribute to the “campus-like” character for the district through the design of buildings, streets and/or public spaces. The Proposed Development has been designed specifically to create a “campus-like” character. The consolidation of the four lots into a single lot with interior walking areas, and vibrant, functional plazas has served to connect the buildings through the use of open space. The placement of the proposed structured parking in relation to the buildings will maximize convenience for visitors. The incorporation of strategically located driveways and landscaped interior “streets” further promotes the campus ideal. The existing hotel on the campus increases the viability and success of the campus and serves to decrease vehicle trips for those business people doing business in the NEBC.

(c) Increase the amount of pervious surface and green space throughout the district.

The design of the Project will increase the amount of pervious surface and green space throughout the district as a result of the Project’s campus environment and shared parking structures. The vast majority of the parking servicing the Property will be structured parking. This will increase the amount of area available for open green space and pervious surfaces.

(d) Improve pedestrian access and views to the Charles River and Cutler Lake.

This goal is inapplicable to the Project.

(e) Design streets and open spaces to create a “sense of address” in each of the sub-areas along Route 128, in the center of the site, and along the river.

The Proposed Development will create a “sense of address” in the sub-area along Route 128. The Project will take advantage of First Avenue as the leading visible edge of the NEBC. By orienting the buildings perpendicular to First Avenue and Route 128, the Proposed Development will invite views not only into the Project itself and its carefully landscaped interiors, but views into the NEBC as a whole. The existing hotel located on B Street is also partially visible from Route 128 and increases the attractiveness and draw to the “campus”. The Project will enhance the NEBC’s strategic location in the highly competitive suburban office market and will facilitate a broader range of economic activity within the area and the Town of Needham.

(f) Locate parking garages on the interior of blocks and away from public open spaces.

By locating the structured parking towards the rear and interior of the site and with the use of strategic landscaping, the Project effectively screens the visual impact of the garages on the open public space. The buildings, not the garages, are located along the public roads.

(g) Design sidewalks, landscaping, lighting, signage, and street furnishings to create a unified sense of character and define a clear hierarchy of streets throughout the district.

The Project helps to create a unified sense of character and defines a clear hierarchy of streets throughout the district. Establishing First Avenue as a primary street will be accomplished not only with the orientation of the buildings themselves, but also by carefully treating the perimeter of the Proposed Development with appropriate levels of landscaping and streetscapes. Native trees and shrubs will compliment high-quality street furnishings and lighting elements throughout the Property. First Avenue will benefit from its visibility and innovative design to signify its primary street focus. In addition, the attractive state-of-the-art hotel on B Street, together with the landscaping and architectural elements visible from B Street, increases the attractiveness of the entire campus.

(h) Create a consistent edge to the district that provides an attractive face to Route 128.

The Project helps to create a consistent edge to the district that provides an attractive face to Route 128. The perpendicular orientation of the proposed buildings to Route 128 and First Avenue will provide an attractive face and sense of quality to motorists on Route 128. This orientation allows for excellent visibility into the Property from Route 128. Incorporating modern design and materials, the buildings will signify a new era for the NEBC, one that denotes progress and opportunity.

(i) Permitting taller buildings with the massing and height appropriate to the scale of the highway.

The Project proposes an 84 foot-tall building, with massing and height appropriate to the scale of the highway. The Project will contribute to the goal of permitting taller buildings along the Route 128 highway edge of the NEBC.

(j) Create spaces between buildings that allow views into the site from Route 128.

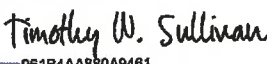
Planning Board Members
October 13, 2020
Page 17

The Project will create spaces between buildings that allow views into the Property from Route 128. By situating the buildings perpendicular to Route 128 and First Avenue, a more thorough campus setting has been created that allows for excellent visibility into the site from Route 128.

The Applicant is hereby submitting a copy of these applications to the Town Clerk. We submitted materials to and met with the Design Review Board on September 14, 2020, and their feedback and comments have been incorporated into this application. We appreciate your attention to this matter and look forward to meeting on November 17, 2020 or the soonest available meeting thereafter.

Thank you for your cooperation.

Very truly yours,

DocuSigned by:

961B4AA880A9461...
Timothy W. Sullivan
Attorney for The Children's
Hospital Corporation

Enclosures



September 24, 2020

Needham Planning Board
500 Dedham Avenue
Needham, Massachusetts 02492
Attn: Lee Newman, Planning Director

RE: Boston Children's Hospital – Pediatric Medical Facility
380 1st Avenue – Founders Park (formerly Center 128 West)

Dear Planning Board Members:

An application for Further Site Plan Review and Special Permit Amendment has been submitted on behalf of The Children's Hospital Corporation (the "Applicant") in connection with the development of a 224,000 square foot Pediatric Medical Facility at 380 First Avenue.

Like previous Center 128 Amended Special Permit Applications, the Applicant has included those plan sheets that have been revised. Revisions are shown on the site plan sheets using "bubbles". In addition, the Applicant has submitted an exhibit entitled "Site Plan Overlay" that compares the previously approved Center 128 West Special Permit Amendment #5 dated July 10, 2015 with the currently proposed BCH project.

The key changes as illustrated on the Site Plan Overlay are described as follows:

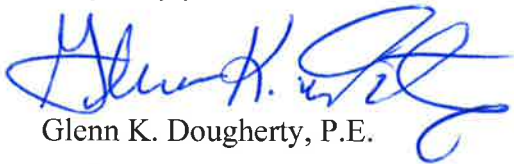
1. The proposed floor area of the BCH Pediatric Medical Building at 380 1st Avenue is 224,000 s.f., which is 34,491 s.f. greater than the previously approved 189,509 s.f. floor area for Office Building #1 at the same location.
2. To offset the floor area increase, proposed Office Building #4 located at 37 A Street has been reduced by the same 34,491 s.f. floor area from the previously approved 135,000 s.f.; therefore, no net change in the overall campus Floor Area Ratio is proposed for this project.
3. Proposed Office Building #4 has been reduced in height from the previously approved 5-story, 70-foot height to proposed 4-story, 56-foot height.
4. The Maximum Lot Coverage for the overall campus at Center 128 West is 52.3%; remaining significantly less than the 65% allowable maximum lot coverage.
5. Proposed Parking Garage A footprint is to be expanded by 2,750 s.f. per each of its 8 levels to provide an elevator lobby and stairwells.
6. No change in Open Space is proposed for the overall Center 128 West campus.
7. Several site improvements associated with the proposed project include a safe and accessible patient drop-off area at the main entrance, improved pedestrian connections between medical

building and parking garages, replacement of concrete sidewalks with more aesthetically-pleasing paver walkways, additional bike racks, improved loading/waste/recycle service area and improved landscape and hardscape spaces.

8. The Parking Summary Table has been revised to reflect the Pediatric Medical parking requirement of 773 spaces based on 1 space per 290 s.f. floor area. All numbers and footnotes have been updated accordingly.
9. The stormwater management system design has been modified slightly and reviewed with the Engineering Department. Two small rain gardens totaling 850 c.f. of storage volume have been deleted and replaced by 9 StormTech infiltration chambers providing 1,680 c.f. volume. The 9 chambers are added to the previously approved subsurface infiltration/recharge system of 27 chambers (i.e., for a new total of 36) located in the main site access driveway from 1st Avenue. The overall stormwater management system continues to comply with the Needham Stormwater By-Law.
10. Two new fire hydrants are proposed near the medical building that are in addition to the previously approved 7 hydrants serving the overall campus. Proposed utilities serving the medical building include 8" fire protection service, two 6" domestic water service connections, two 6" building sewer connections, natural gas, electric and communications.
11. Proposed wastewater flows for the BCH Medical Building as calculated by the project's plumbing engineer based on 155 GPD/bed x 135 beds = 20,925 gallons per day (GPD), an increase of 6,712 GPD from 14,213 GPD as previously approved for Office Building #1.

We appreciate your help with this request and look forward to meeting with the Board. Please contact me if you require additional information.

Very truly yours,



Glenn K. Dougherty, P.E.

Cc: Boston Children's Hospital
Robert Smart, Esquire
Timothy Sullivan, Esquire



November 6, 2020

Needham Engineering Department
500 Dedham Avenue
Needham, Massachusetts 02492
Attn: Anthony Del Gaizo, Town Engineer

RE: Boston Children's Hospital – Pediatric Medical Facility
380 1st Avenue – Founders Park (formerly Center 128 West)

Dear Tony:

Thank you for your time during our video meeting. As discussed, please accept this letter submission including storage volume calculations to compare stormwater management systems between the 2015 approved design with rain gardens and the currently proposed Children's Pediatric Medical design which replaces the rain gardens with additional infiltration/recharge chambers. As described in greater detail below and as shown in the attachments, the proposed Children's Building roof area is slightly larger than the roof area of the previous 2015 Office Building 1. To offset the lost storage volume from the two small rain gardens, the proposed stormwater management system design provides an additional nine (9) infiltration chambers and almost four times the volume that was provided by the rain gardens.

As shown on attached Figure 1, the 2015 stormwater management design for Office Building 1 included two pocket rain gardens that served to collect, treat and infiltrate runoff from building roof area and landscape area. Office Building 1's total roof area is 39,830 sf and the landscape area is approximately 7,000 sf (46,830 sf total). The storage volume provided by the two rain gardens totals approximately 420 cubic feet, as shown on the attached HydroCAD Stage-Storage calculation table and based on the following: The bottom elevation of the two rain gardens is 109.0, the ponding depth is approximately 8 inches (per Stormwater Handbook Structural BMPs Design, Vol. 2, Ch. 2), which corresponds to elevation 109.67 and 420 cubic feet of storage volume. The two small rain gardens have a combined infiltrative surface area of only 385 sf with the design inlet and outlet pipe invert elevations set at 109.0; thus, the design intent for the two pocket rain gardens was not necessarily to provide significant storage volume and recharge, but more as a landscape amenity.

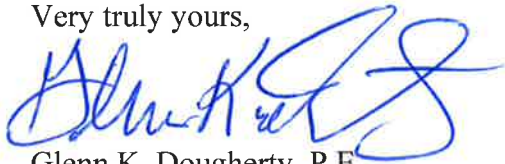
Figure 2 shows the current Children's project with the proposed building footprint area, 41,870 sf (5% larger than Office Building #1), which extends farther southeast than the previously proposed building and covers the area where the rain gardens had been located. To replace the rain gardens, the current design proposes adding nine (9) StormTech MC-3500 chambers to Subsurface Infiltration System #1, an increase from 27 to 36 chambers. The 2015 StormTech chamber design proposed 12" stone above and 9" stone below the chambers, as does the current proposal. As shown on the attached StormTech specification sheet, the minimum installed storage volume provided by MC-3500 chambers is 175.0 cubic feet per chamber and 45.1 cubic feet per end cap. Thus, 9 chambers plus 2 endcaps are equivalent to 1,665.2 cubic feet total storage volume.

In comparison, 9 chambers equaling 1,665 cubic feet is approximately 4 times the 420 cubic feet of volume that was provided for two small rain gardens. Based on this ratio, we believe the proposed stormwater design changes make sense to more than offset the loss of rain garden storage volume and to provide a larger infiltrative surface area (490 sf for 9 added chambers versus 385 sf rain garden's bottom surface area).

Lastly, attached please find "Interim Condition Grading & Drainage Plan" figure prepared by VHB showing the interim parking lot stormwater design. The proposed interim parking lot contains less impervious area than the approved Special Permit full-build design with Office Building 4, parking, loading and pedestrian plaza hardscape areas. The previously designed and approved Subsurface Infiltration System #4 and WQU-73 have been retained in the current proposed design with no changes to accommodate the full-build scenario when the time comes.

Tony, I appreciate all your help over the years with the Center 128 site development projects and I've certainly appreciated you saying that the stormwater management system is well-designed and exceeds the Town's Stormwater Bylaw requirements for providing recharge and removal of phosphorus. As always, if you have any questions regarding the design or the information contained in this letter, please contact me.

Very truly yours,



Glenn K. Dougherty, P.E.

Cc: Gerald Topping, Children's Hospital
Mary Kaitlin O'Connor, Children's Hospital
Robert Smart, Esquire
Timothy Sullivan, Esquire
Christopher Lovett, VHB

Needham Rain Gardens

Prepared by Tetra Tech Inc

HydroCAD® 10.00-24 s/n 02280 © 2018 HydroCAD Software Solutions LLC

Rainfall not specified

Printed 10/29/2020

Stage-Area-Storage for Pond 1P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
108.50	0	0	109.58	553	368
108.52	15	0	109.60	559	379
108.54	31	1	109.62	565	391
108.56	46	1	109.64	571	402
108.58	62	2	109.66	576	414
108.60	77	4	109.68	582	425
108.62	92	6	109.70	588	437
108.64	108	8	109.72	594	449
108.66	123	10	109.74	600	461
108.68	139	12	109.76	605	473
108.70	154	15	109.78	611	485
108.72	169	19	109.80	617	497
108.74	185	22	109.82	623	509
108.76	200	26	109.84	629	522
108.78	216	30	109.86	634	535
108.80	231	35	109.88	640	547
108.82	246	39	109.90	646	560
108.84	262	45	109.92	652	573
108.86	277	50	109.94	658	586
108.88	293	56	109.96	663	599
108.90	308	62	109.98	669	613
108.92	323	68	110.00	675	626
108.94	339	75			
108.96	354	81			
108.98	370	89			
109.00	385	96			
109.02	391	104			
109.04	397	112			
109.06	402	120			
109.08	408	128			
109.10	414	136			
109.12	420	145			
109.14	426	153			
109.16	431	162			
109.18	437	170			
109.20	443	179			
109.22	449	188			
109.24	455	197			
109.26	460	206			
109.28	466	215			
109.30	472	225			
109.32	478	234			
109.34	484	244			
109.36	489	254			
109.38	495	263			
109.40	501	273			
109.42	507	284			
109.44	513	294			
109.46	518	304			
109.48	524	314			
109.50	530	325			
109.52	536	336			
109.54	542	346			
109.56	547	357			

STORMTECH MC-3500 CHAMBER

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

STORMTECH MC-3500 CHAMBER (not to scale)

Nominal Chamber Specifications

Size (L x W x H)
90" x 77" x 45"
2,286 mm x 1,956 mm x 1,143 mm

Chamber Storage
109.9 ft³ (3.11 m³)

Min. Installed Storage*
175.0 ft³ (4.96 m³)

Weight
134 lbs (60.8 kg)

Shipping
15 chambers/pallet
7 end caps/pallet
7 pallets/truck

*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below chambers, 6" (150 mm) of stone between chambers/end caps and 40% stone porosity.

STORMTECH MC-3500 END CAP (not to scale)

Nominal End Cap Specifications

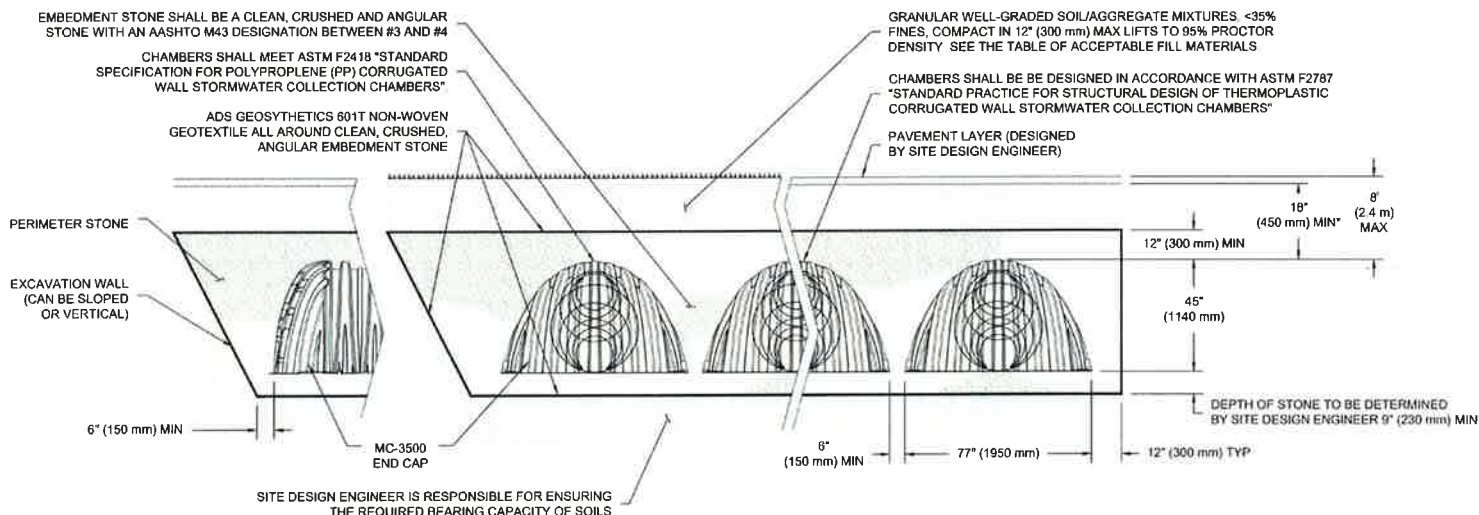
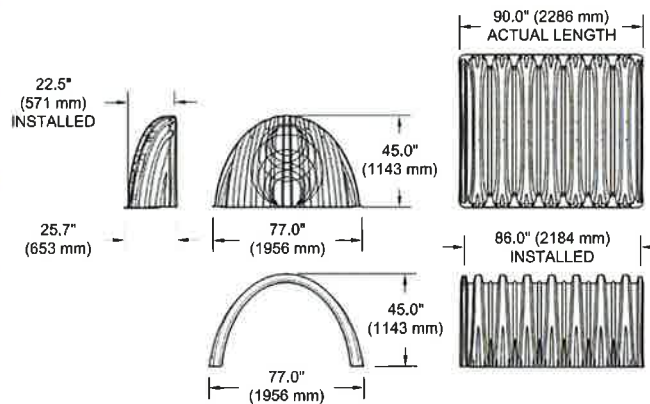
Size (L x W x H)
26.5" x 71" x 45.1"
673 mm x 1,803 mm x 1,145 mm

End Cap Storage
14.9 ft³ (0.42 m³)

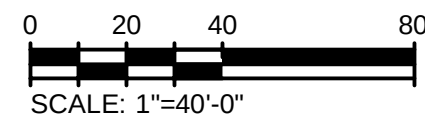
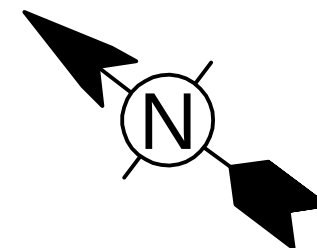
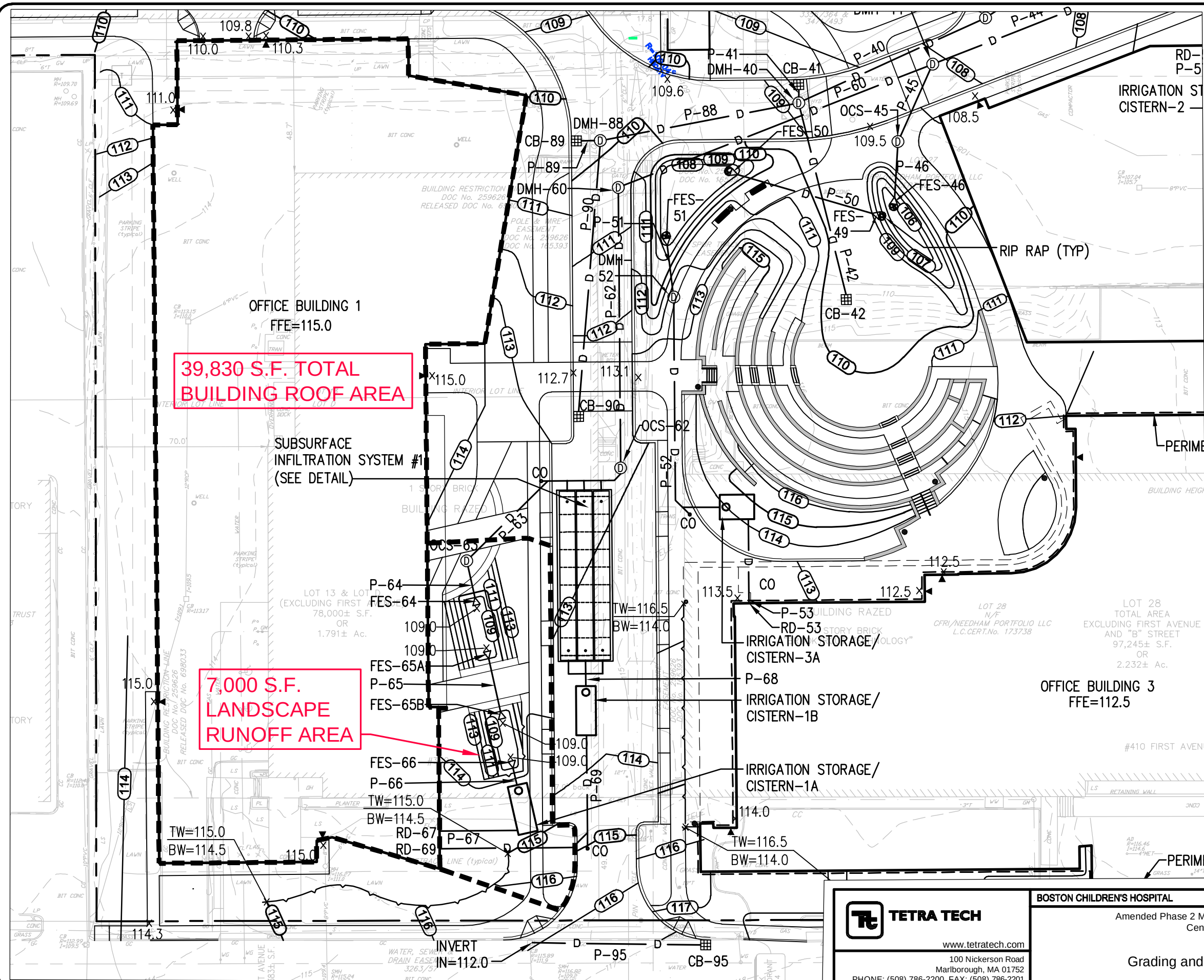
Min. Installed Storage*
45.1 ft³ (1.28 m³)

Weight
49 lbs (22.2 kg)

*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below, 6" (150 mm) of stone perimeter, 6" (150 mm) of stone between chambers/end caps and 40% stone porosity.



*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 24" (600 mm)



www.tetrattech.com
100 Nickerson Road
Marlborough, MA 01752
PHONE: (508) 786-2200 FAX: (508) 786-2201

BOSTON CHILDREN'S HOSPITAL

Amended Phase 2 Major Project Site Plan Review
Center 128 West

2015
Grading and Drainage Figure 1

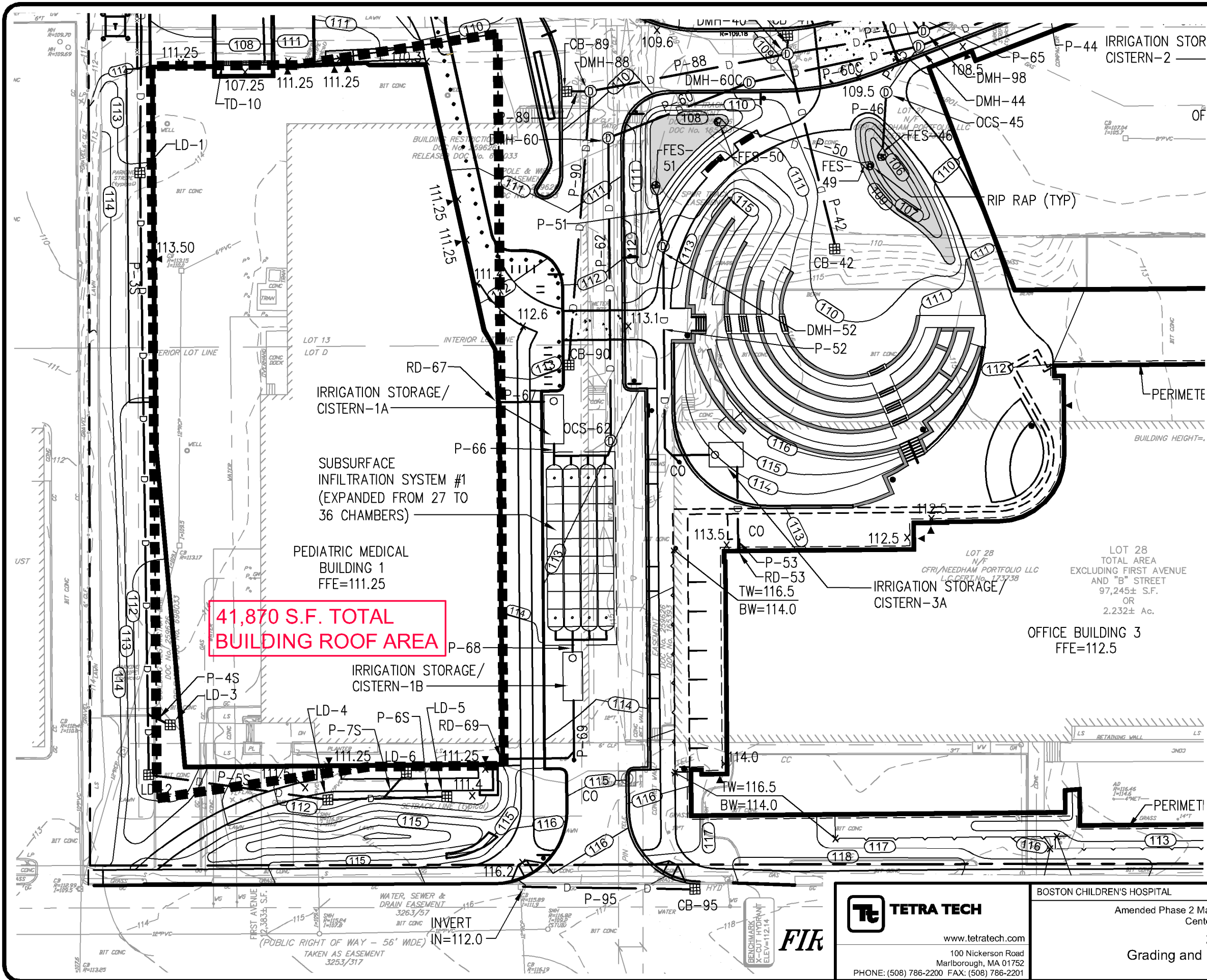
Project No.:	143-11218-20001
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Date: November 5, 2020

Designed By: GKD

Figure 1

11/5/2020 9:06:19 AM - P:\11218\11218-20001\CAD\SHETFILES\4 GRADING AND DRAINAGE PHASE-2.DWG - PAPPAS, JUD



TETRA TECH
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BOSTON CHILDREN'S HOSPITAL		Project No.: 143-11218-20001
Amended Phase 2 Major Project Site Plan Review		Date: November 5, 2020
Center 128 West		Designed By: GKD
2020		Figure 2
Grading and Drainage Figure 2		

MEMORANDUM

Date: September 21, 2020
To: Boston Children's Hospital
Attention: Gerald Topping
Project: 380 1st Avenue
Subject: Sewerage flow estimate
From : David Lee
CC: Megan van der Linde, PAI

Gerry,

The information below is a summary of the methodology used to estimate the daily sewerage flows for the proposed building at 380 First Ave. Typically, I use Massachusetts Title 5 for sewage flow estimates. Also known as 310 CMR. Unfortunately, there is not an exact fit for Outpatient clinic / day surgery. Directly below are sections of title 5 for commercial and institutional that include a doctors office, and a hospital, and those are the only options for buildings with medical patients. I feel as though this building is somewhere in between these options and therefore interpolated a bit based on Title 5 and other sources (NH septic regulations and Engineering text, also below). As we don't really have Beds for overnight patients, I instead used exam rooms, recovery rooms, procedure rooms, and imaging rooms as my "Beds" number, and for a Gallons per Day per Bed number I used 155, based on the engineering text chart. Therefore, 135 "beds" x 155 GPD/bed = 20,925 GPD. I suspect the original design estimate of 14,213 GPD was based on office space, and I would certainly expect this facility to have a greater GPD than office space, but not nearly as high as an actual hospital.

310 CMR (Title 5)

**** One bedroom unit Housing for the Elderly, and units with more than two bedrooms shall be designed based on 110 gallons per day per bedroom.			
(3) COMMERCIAL			
Airport	per passenger	5	150
Barber Shop/Beauty Salon	per chair	100	
Bowling Alley	per alley	100	
Country Club, dining room	per seat	10	
Country Club, snack bar or lunch room	per seat	10	
Country Club, lockers and showers	per locker	20	
Doctor Office	per doctor	250	
Dentist Office	per dentist	200	

(4) INSTITUTIONAL

Place of worship without kitchen	per seat	3
with kitchen	per seat	6
Correctional Facility	per bed	200
Function Hall	per seat	15
Gymnasium	per participant	25
Gymnasium	per spectator	3
Hospital	per bed	200
Nursing Home/Rest Home	per bed	150
Assisted Living Facilities	per bed	150
Public Park, toilet	per person	5

SEWAGE FLOW RATE ESTIMATING GUIDE

(Range and Typical are shown in gallons per unit)

Estimates are based on US standards for water usage and sewage strength.

Typical Wastewater Flow Rates from Commercial Sources

Source	Unit	Range	Typical
Airport	Passenger	2-4	3
Auto Service Station	Vehicle Served	7-13	10
	Employee	9-15	12
Bar	Customer	1-5	3
	Employee	10-16	13
Department Store	Toilet Room	400-600	500
	Employee	7-13	10
Industrial Building	Employee	7-16	13
(Sanitary Waste Only)			
Laundry (Self-Serve)	Machine	450-650	550
	Wash	45-55	50
Office	Employee	7-16	13
Restaurant	Meal	2-4	3
Shopping Center	Employee	7-13	10
	Parking Space	1-2	2

Typical Wastewater Flow Rates from Residential Sources**Typical Wastewater Flow Rates from Institutional Sources**

Source	Unit	Range	Typical
Hospital, Medical	Bed	125-240	155
	Employee	5-15	10
Hospital, Mental Health	Bed	75-140	100
	Employee	5-15	10
Correctional Institution (Prison)	Inmate	75-150	115
	Employee	5-15	10
Rest Home	Resident	50-120	85
School, day			
w/ cafeteria, gym, & showers	Student	15-30	25
w/ cafeteria only	Student	10-20	15
no cafeteria; no gym	Student	5-17	11
School, boarding	Student	50-100	75

Typical Wastewater Flow Rates from Recreational Sources

Source	Unit	Range	Typical
Apartment, Resort	Person	50-70	60
Cabin, Resort	Person	8-50	40

NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

Use	Unit Design Flow
GYMS	10 GPD/participant plus 3 GPD/Spectator seat
HAIRDRESSERS	150 GPD/Chair plus 20 GPD/Employee
HOSPITALS	200 GPD/Bed plus 20 GPD/Employee
HOTELS AND MOTELS	200 GPD/Room plus 10 GPD/Employee
INSTITUTIONS OTHER THAN HOSPITALS	See Residential Institutions
LAUNDROMATS, COIN-OPERATED	500 GPD/Machine
LOUNGES	See Food Service, Bars/Lounges



**Boston Children's Hospital
Needham Satellite Project
Needham Special Permit Submission
October 7, 2020**

NEEDHAM SATELLITE



SITE VIEW - FOUNDER'S DRIVE FROM B STREET



SITE VIEW – OFF FOUNDER'S DRIVE



SITE VIEW - 128 FROM SOUTH TRAVELING NORTH



SITE VIEW - 128 FROM NORTH TRAVELING SOUTH











CEDAR WOODS



GARAGE

PAYETTE





INDEX

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DRAWINGS

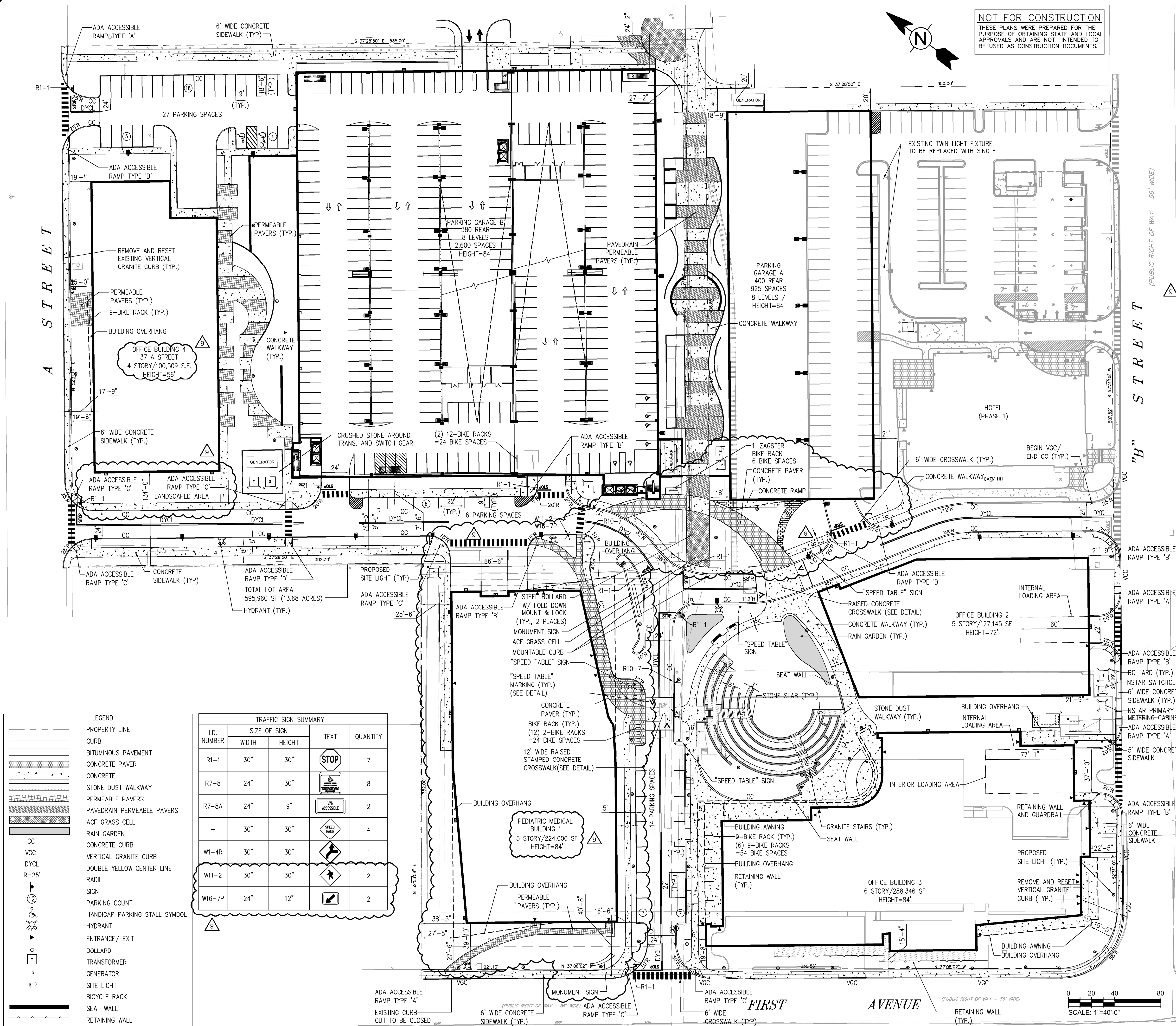
MARK	DATE	DESCRIPTION	BY	MARK	DATE	DESCRIPTION
	08/20/12	08/24/12		<u>6</u>	08/23/13	PLAN MODIFICATIONS
		LAYOUT AND TABLE REVISIONS		<u>7</u>	09/11/13	LOADING DOCK REVISIONS
<u>1</u>	09/18/12	TOWN COMMENTS		<u>8</u>	07/10/15	SPECIAL PERMIT AMENDMENT #5
<u>2</u>	10/02/12	TOWN COMMENTS		<u>9</u>	08/14/20	BCH PROJECT TEAM OVERLAY EXHIBIT
		11/01/12				
<u>3</u>	03/01/13	PLAN MODIFICATIONS				
<u>4</u>		TOWN COMMENTS				
<u>5</u>	04/12/13					

Center 128 West
Needham, MA

Project No.:	143-11218-20001
Designed By:	GKD
Drawn By:	JLP
Checked By:	GKD

LEGEND	
	PROPERTY LINE
	CURB
	BITUMINOUS PAVEMENT
	CONCRETE PAVER
	CONCRETE
	STONE DUST WALKWAY
	PERMEABLE PAVERS
	PAVEDRAIN PERMEABLE PAVERS
	ACF GRASS CELL
	RAIN GARDEN
	CONCRETE CURB
	VERTICAL GRANITE CURB
	DOUBLE YELLOW CENTER LINE
	RADI
	SIGN
	PARKING COUNT
	HANDICAP PARKING STALL SYMBOL
	HYDRANT
	ENTRANCE/ EXIT
	BOLLARD
	TRANSFORMER
	GENERATOR
	SITE LIGHT
	BICYCLE RACK
	SEAT WALL
	RETAINING WALL

TRAFFIC SIGN SUMMARY				
I.D. NUMBER	SIZE OF SIGN		TEXT	QUANTITY
	WIDTH	HEIGHT		
R1-1	30"	30"		7
R7-8	24"	30"		8
R7-8A	24"	9"		2
-	30"	30"		4
W1-4R	30"	30"		1
W11-2	30"	30"		2
W16-7P	24"	12"		2



FULL BUILD ZONING TABULATION			
NEEDHAM ZONING CLASSIFICATION: NEW ENGLAND BUSINESS CENTER (NEBC)			
PROPOSED USE: PEDIATRIC MEDICAL FACILITY, HOTEL, PROFESSIONAL, BUSINESS, ADMINISTRATIVE OFFICE AND/OR RESEARCH AND DEVELOPMENT			
DIMENSIONAL REQUIREMENTS			
ITEM	REQUIRED (NEBC)	PROPOSED	COMPLIANCE W/ ZONING
MINIMUM LOT AREA	40,000 SF	596,000 SF	✓
MINIMUM LOT FRONTAGE	100'	450'	✓
MAXIMUM FLOOR AREA RATIO	1.00	1.39	(1)
MINIMUM FRONT YARD	15'	15'-0"	✓
MINIMUM SIDE YARD	20'	20'-6"	✓
MINIMUM REAR YARD	20'	15'-7"	(2)
MAXIMUM LOT COVERAGE	65%	52.3%	✓
MAXIMUM BUILDING HEIGHT	72'	84'	(3)
MINIMUM OPEN SPACE	25%	23%	(4)
MAXIMUM UNINTERRUPTED FACADE LENGTH	300'	352'	(5)
MINIMUM STREET TREES	1 PER 40'	1 PER 40'	(6)
(1) SPECIAL PERMIT PREVIOUSLY GRANTED TO INCREASE MAXIMUM FLOOR AREA RATIO FROM 1.00 TO 1.39			
(2) SPECIAL PERMIT PREVIOUSLY GRANTED FOR REAR SETBACK AT GARAGE A			
(3) SPECIAL PERMIT PREVIOUSLY GRANTED TO INCREASE MAXIMUM BUILDING HEIGHT FROM 72' TO 84'			
(4) SPECIAL PERMIT PREVIOUSLY GRANTED TO REDUCE MINIMUM OPEN SPACE BY 25% TO 18.75% (23% OPEN SPACE PROVIDED)			
(5) SPECIAL PERMIT PREVIOUSLY GRANTED FROM ZONING SECTION 4.8.1 (6) FOR GARAGE A & B			
PROPOSED AMENDED SPECIAL PERMIT TO INCREASE PARKING GARAGE A UNINTERRUPTED FACADE LENGTH FROM 315' TO 337'. PARKING GARAGE B UNINTERRUPTED FACADE LENGTH OF 352' TO REMAIN AS APPROVED.			
(6) SPECIAL PERMIT REQUIRED FOR STREET TREE SPACING ALONG SECTIONS OF B STREET AND FIRST AVENUE			
PARKING SUMMARY TABLE			
DESCRIPTION	UNITS/AREA	REQUIRED	PROVIDED
HOTEL - PHASE 1			
(1 SP/UNIT)	128 UNITS	128 SP	
(1 SP/3 EMPLOYEES)	15 EMP	5 SP	
(1 SP/200 SF CONFERENCE)	1,300 SF	7 SP	
BUILDING 1-PEDIATRIC MEDICAL (1 SP/290 SF)	224,000 SF	773 SP	
BUILDING 2-OFFICE (1 SP/300 SF)	177,145 SF	424 SP	
BUILDING 3-OFFICE (1 SP/300 SF)	288,346 SF	962 SP	
BUILDING 4-OFFICE (1 SP/300 SF)	100,509 SF	335 SP	
TOTAL PARKING AT CENTER 128 WEST		2,634 SP	3,642*
* 3,642 TOTAL SPACES PROVIDED AT CENTER 128 WEST BASED ON THE FOLLOWING BREAKDOWN: 925 SPACES IN PARKING GARAGE A (400 REAR) 2,600 SPACES IN PARKING GARAGE B (380 REAR) 117 SURFACE SPACE (70 HOTEL + 47 OFFICE)			
NET NUMBER OF SPACES FOR USE BY CENTER 128 WEST		2,785**	
** 2,785 NET SPACES FOR USE BY CENTER 128 WEST BASED ON THE FOLLOWING BREAKDOWN: 3,642 TOTAL SPACES PROVIDED AT CENTER 128 WEST -857 SPACES IN PARKING GARAGE B DESIGNATED FOR USE BY CENTER 128 EAST			
***BICYCLE SPACES (1 PER 20 PARKING SP)		140	140
***117 BICYCLE SPACES ARE PROVIDED ON SITE. THE REMAINING ARE WITHIN THE OFFICE BUILDINGS.			
ZONING BY-LAW OF THE TOWN OF NEEDHAM SECTION 5.1.3: PARKING PLAN AND DESIGN REQUIREMENTS			
ITEM	REQUIRED (TOWN OF NEEDHAM)	PROPOSED LOT	COMPLIANCE
PARKING LOT ILLUMINATION	AVERAGE ILLUMINATION LEVEL OF 1 FC REQUIRED FOR ALL PARKING AREAS	AVERAGE ILLUMINATION LEVEL OF 1 FC PROVIDED FOR ALL PARKING AREAS	✓
LOADING REQUIREMENTS	PROVIDE OFF-STREET LOADING FACILITIES FOR NEW CONSTRUCTION	OFF-STREET LOADING FACILITIES PROVIDED AT PROPOSED BUILDINGS	✓
HANDICAPPED PARKING	PROVIDE HANDICAPPED PARKING IN ACCORDANCE W/ AAB REGULATIONS	HANDICAPPED PARKING SHOWN IN ACCORDANCE W/ AAB REGULATIONS	✓
DRIVEWAY OPENINGS	LOCATION SHALL MINIMIZE CONFLICT W/ TRAFFIC ON STREETS	OPENING LOCATIONS MINIMIZE CONFLICT W/ TRAFFIC ON STREETS	✓
COMPACT CARS	UP TO 50% OF OFF-STREET PARKING SPACES MAY BE COMPACT (8'X16')	LESS THAN 50% OF OFF-STREET PARKING SPACES ARE COMPACT	✓
PARKING SPACE SIZE	ALL NON-COMPACT PARKING SPACES SHALL BE 9'X18.5'	ALL NON-COMPACT PARKING SPACES ARE 9'X18.5'	✓
BUMPER OVERHANG	NO MORE THAN 1 FOOT OF AREA AT FRONT OR REAR OF SPACE ALLOWED	NO MORE THAN 1 FOOT OF AREA AT FRONT OR REAR OF SPACE SHOWN	✓
PARKING SPACE LAYOUT	PARKING AREAS SHALL BE DESIGNED SO THAT NO MOVEMENT OF OTHER VEHICLES IS REQUIRED	PARKING AREAS ARE DESIGNED SO THAT NO MOVEMENT OF OTHER VEHICLES IS REQUIRED	✓
WIDTH OF MANEUVERING AISLE	MINIMUM WIDTH OF MANEUVERING AISLES SHALL OBEY SECTION 5.1.3(i) OF THE ZONING BY-LAW	MINIMUM WIDTH OF MANEUVERING AISLES OBEYS SECTION 5.1.3(i) OF THE ZONING BY-LAW	✓
PARKING SETBACKS	MINIMUM 20' FROM ALL FRONT LOT LINES AND 4' FROM ALL SIDE AND REAR LOT LINES	PARKING SETBACKS FROM ALL FRONT, SIDE, AND REAR LOT LINES MEET THE MINIMUM CRITERIA	✓
LANDSCAPED AREAS	LANDSCAPED AREAS SHALL OBEY SECTION 5.1.3(k) OF THE ZONING BY-LAW	LANDSCAPED AREAS OBEY SECTION 5.1.3(k) OF THE ZONING BY-LAW	✓
TREES	ONE TREE SHALL BE PROVIDED FOR EVERY 10 PARKING SPACES	ONE TREE IS PROVIDED FOR EVERY 10 PARKING SPACES	✓
LOCATION	OFF-STREET PARKING SHALL BE ON EITHER THE SAME LOT AS THE PRINCIPAL USE OR ON A LOT WITHIN 300' & UNDER THE SAME OWNERSHIP	OFF-STREET PARKING IS LOCATED ON THE SAME LOT AS THE PRINCIPAL USE	✓
BICYCLE RACKS	PARKING AREAS OF 40 OR MORE SPACES, BICYCLE RACKS SHALL BE PROVIDED TO ACCOMMODATE 1 BICYCLE PER 20 PARKING SPACES	BICYCLE RACKS ARE PROVIDED	✓

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COMMONWEALTH OF MASSACHUSETTS
GLEN K. DOUGHERTY
CHIEF OF REGULATION
PROFESSIONAL ENGINEER

08/23/13 PLAN MODIFICATIONS
09/11/13 LOADING DOCK REVISIONS
07/10/15 SPECIAL PERMIT AMENDMENT #5
08/14/20 SPECIAL PERMIT AMENDMENT #6

08/23/12 LAYOUT AND TABLE REVISIONS
09/19/12 TOWN COMMENTS
10/02/12 TOWN COMMENTS
11/07/12 PLAN MODIFICATIONS
03/01/13 PLAN MODIFICATIONS
04/12/13 TOWN COMMENTS

Amended Phase 2: Major Project Site Plan Review

Center 128 West
Needham, MA

Layout and Materials Plan

Project No.: 143-11218-20001

Designed By: GKD

Drawn By: JLP

Checked By: GKD

C-3

Bar Measures 1 inch

CATCH BASIN SCHEDULE

STRUCTURE	RIM	INVERTS
CB-36	108.1	INVERT IN= 104.25 (DMH-34)
CB-38	107.5	INVERT OUT= 104.65 (DMH-36)
CB-39	108.0	INVERT OUT= 104.55 (DMH-36)
CB-41	108.8	INVERT OUT= 105.20 (DMH-40)
CB-42	109.0	INVERT OUT= 106.95 (DMH-40)
CB-85	106.4	INVERT OUT= 103.00 (DMH-2R)
CB-87	108.0	INVERT OUT= 103.50 (DMH-10R)
CB-89	109.7	INVERT OUT= 105.70 (DMH-88)
CB-90	112.3	INVERT OUT= 108.30 (DMH-88)
* CB-95	117.3	INVERT OUT= 113.00 (EXISTING CB)
* CB-96	108.0	INVERT OUT= 104.00 (EXISTING DMH)
* CB-97A	111.3	INVERT IN= 107.80 (LD-102)
		INVERT OUT= 107.70 (CB-98)
* CB-98	110.6	INVERT IN= 106.90 (CB-97A)
		INVERT OUT= 106.80 (EXISTING CB)
CB-99	108.65	INVERT OUT= 108.12 (DMH-98)
CB-101	108.6	INVERT OUT= 106.12 (DMH-34)
CB-1R	106.8	INVERT OUT= 99.71 (DMH-8R)

* TO BE TOWN STANDARD CATCH BASIN

IRRIGATION STORAGE/ CISTERN SCHEDULE

CISTERN	RIM	INVERTS
1A	112.5±	INVERT IN= 107.00 (RD-67)
		INVERT OUT= 106.75 (INFILTRATION SYSTEM #1)
1B	113.8±	INVERT IN= 107.00 (RD-69)
		INVERT OUT= 106.75 (INFILTRATION SYSTEM #1)
2	110.0±	INVERT IN= 105.20 (RD-57)
		INVERT OUT= 104.95 (INFILTRATION SYSTEM #2)
3A	114.3±	INVERT IN= 109.65 (RD-53)
		INVERT OUT= 109.40 (DMH-52)
3B	113.5±	INVERT IN= 106.70 (RD-60)
		INVERT OUT= 106.45 (INFILTRATION SYSTEM #3)
4A-R	108.5±	INVERT IN= 104.30 (RD-2R)
		INVERT OUT= 104.05 (INFILTRATION SYSTEM #4)

DRAIN MANHOLE SCHEDULE

STRUCTURE	RIM	INVERTS
DMH-34	109.0	INVERT IN= 104.05 (DMH-98)
		INVERT IN= 105.93 (CB-101)
		INVERT OUT= 103.95 (DMH-34A)
DMH-34A	110.1	INVERT IN= 103.40 (DMH-34)
		INVERT OUT= 103.30 (EXDMH-32)
		INVERT IN= 105.40 (RD-37)
DMH-36	108.0	INVERT IN= 105.40 (TD-36)
		INVERT IN= 105.60 (CB-100)
		INVERT OUT= 105.40 (DMH-98)
		INVERT IN= 105.15 (CB-41)
		INVERT IN= 106.55 (CB-42)
DMH-40	108.9	INVERT IN= 105.15 (DMH-88)
		INVERT OUT= 105.15 (DMH-98)
DMH-43	109.1	INVERT IN= 104.00 (DMH-44)
		INVERT OUT= 103.90 (DMH-43A)
DMH-43A	110.0	INVERT IN= 103.30 (DMH-43)
		INVERT OUT= 103.20 (EXDMH-40)
DMH-44	109.0	INVERT IN= 104.80 (DMH-60C)
		INVERT IN= 104.80 (OCS-45)
		INVERT OUT= 104.70 (DMH-43)
DMH-52	112.4	INVERT IN= 108.40 (CISTERN-3A)
		INVERT OUT= 108.30 (FES-51)
		INVERT IN= 104.75 (OCS-56)
DMH-55	110.6	INVERT OUT= 104.65 (EXISTING DMH)
DMH-58B	110.6	INVERT IN= 104.40 (DMH-89)
		INVERT OUT= 104.30 (EXIST DMH)
DMH-60	110.5	INVERT IN= 105.95 (OCS-62)
		INVERT OUT= 105.85 (DMH-44)
DMH-70	106.1	INVERT IN= 102.10 (OCS-71)
		INVERT IN= 100.45 (OCS-72)
		INVERT IN= 99.00 (WQU-73)
		INVERT OUT= 98.50 (EXISTING DMH)
DMH-77B	109.0	INVERT IN= 102.20 (RD-77)
		INVERT IN= 102.20 (DMH-9R)
		INVERT OUT= 102.10 (DMH-77A)
DMH-84	108.1	INVERT IN= 102.90 (CB-85)
		INVERT OUT= 102.25 (CB-87)
		INVERT OUT= 102.15 (DMH-80)
		INVERT IN= 105.65 (CB-89)
DMH-88	109.9	INVERT IN= 105.90 (CB-90)
		INVERT OUT= 105.55 (DMH-40)
		INVERT IN= 105.55 (OCS-59)
DMH-89	110.4	INVERT IN= 105.55 (WQU-100)
		INVERT IN= 106.90 (PD)
		INVERT OUT= 105.45 (DMH-58B)
		INVERT IN= 104.80 (DMH-40)
DMH-98	109.0	INVERT IN= 105.20 (DMH-36)
		INVERT IN= 106.00 (CB-99)
		INVERT OUT= 104.70 (DMH-34)
DMH-1R	109.0	INVERT IN= 102.85 (DMH-10R)
		INVERT IN= 103.00 (LD-1)
		INVERT OUT= 102.75 (DMH-2R)
DMH-2R	106.8	INVERT IN= 101.87 (DMH-1R)
		INVERT IN= 102.85 (CB-85)
		INVERT OUT= 101.77 (DMH-3R)
DMH-3R	109.0	INVERT IN= 101.12 (DMH-2R)
		INVERT OUT= 101.07 (DMH-4R)
DMH-4R	107.1	INVERT IN= 100.92 (DMH-3R)
		INVERT OUT= 100.87 (DMH-7R)
		INVERT IN= 100.90 (DMH-77B)
DMH-5R	108.0	INVERT IN= 102.14 (RD-1)
(FORMER DMH-77A)		INVERT OUT= 100.90 (DMH-6R)
DMH-6R	108.0	INVERT IN= 100.55 (DMH-5R)
		INVERT OUT= 100.55 (DMH-7R)
		INVERT IN= 100.34 (DMH-6R)
DMH-7R	107.5	INVERT IN= 99.90 (DMH-4R)
		INVERT OUT= 99.90 (DMH-8R)
		INVERT IN= 99.65 (DMH-7R)
DMH-8R	106.9	INVERT IN= 99.65 (CB-1R)
		INVERT OUT= 99.65 (WQU-73)
DMH-9R	108.0	INVERT IN= 102.92 (LD-1R)
		INVERT OUT= 102.82 (DMH-77B)
DMH-10R	108.9	INVERT IN= 103.25 (TD-10)
		INVERT IN= 103.17 (CB-87)
		INVERT OUT= 103.12 (DMH-1R)

ROOF DRAIN SCHEDULE

ROOF DRAIN	INVERTS
RD-37	INVERT OUT= 104.85 (DMH-36)
RD-53	INVERT OUT= 110.00 (CISTERN-3A)
RD-57	INVERT OUT= 105.30 (CISTERN-2)
RD-60	INVERT OUT= 107.10 (CISTERN-3B)
RD-67	INVERT OUT= 107.25 (CISTERN-1A)
RD-69	INVERT OUT= 107.25 (CISTERN-1B)
RD-77	INVERT OUT= 102.30 (DMH-77B)
RD-1R	INVERT OUT= 102.30 (DMH-5R)
RD-2R	INVERT OUT= 104.50 (CISTERN-4A-1)

*INVERT ELEVATIONS AT BUILDING

WATER QUALITY UNIT SCHEDULE

STRUCTURE	RIM	INVERTS
WQU-73	106.0	INVERT IN= 99.00 (DMH-74)
		INVERT OUT= 99.00 (DMH-70)
WQU-100	109.75	INVERT IN= 105.70 (DMH-89)
		INVERT OUT= 105.70 (DMH-89)

OUTLET CONTROL SCHEDULE

STRUCTURE	RIM	INVERTS
OCS-45	109.4	INVERT IN= 105.00 (FES-46)
		INVERT OUT= 105.00 (DMH-44)
OCS-56	111.0	INVERT IN= 104.85 (INFILTRATION SYSTEM #2)
		INVERT OUT= 104.85 (DMH-58B)
OCS-59	112.0	INVERT IN= 106.40 (INFILTRATION SYSTEM #3)
		INVERT OUT= 106.40 (DMH-80)
OCS-62	112.8	INVERT IN= 106.55 (INFILTRATION SYSTEM #1)
		INVERT OUT= 106.55 (DMH-60)
OCS-63	113.6	INVERT IN= 109.00 (FES-64)
		INVERT OUT= 109.00 (INFILTRATION SYSTEM #1)
		INVERT IN= 101.48 (MANFOLD INFLT. SYS. #4)
OCS-1R	106.5	INVERT IN= 101.48 (DMH-70)
		INVERT = 102.00 (WEIR)
		INVERT = 101.40 (4" ORIFICE)

FLARED END SECTION SCHEDULE

STRUCTURE	DIAMETER (IN.)	INVERTS
FES-46	12"	INVERT= 105.30
FES-49	12"	INVERT= 107.65
FES-50	12"	INVERT= 108.00
FES-51	12"	INVERT= 108.00
FES-64	12"	INVERT= 109.10
FES-65A	12"	INVERT= 109.10
FES-65B	12"	INVERT= 109.30
FES-66	12"	INVERT= 109.30

LANDSCAPE DRAIN SCHEDULE

STRUCTURE	RIM	INVERTS
LD-101	111.9	INVERT OUT= 108.80 (LD-102)
LD-102	111.7	INVERT IN= 108.55 (LD-101)
		INVERT OUT= 108.45 (CB-97A)
LD-1R	106.7	INVERT OUT= 103.94 (DMH 9R)

TRENCH DRAIN SCHEDULE

STRUCTURE	RIM	INVERTS
TD-83	106.50	INVERT OUT= 102.50 (DMH-82)
TD-99	109.5	INVERT OUT= 105.80 (WQU-100)
TD-10	107.20	INVERT OUT= 104.00 (DMH-10R)
TD-36	106.30	INVERT OUT= 105.58 (DMH-36)

PIPE SCHEDULE

PIPE	DIAMETER (IN.)	LENGTH (FT.)	SLOPE (FT./FT.)
P-34	24"	108'	0.005
P-36	18"	36'	0.006
P-37	15"	21'	0.010
P-40	18"	52'	0.007
*P-41	12"	4'	0.013
*P-42	12"	77'	0.005
P-43	18"	114'	0.005
P-44	18"	133'	0.005
P-45	12"	18'	0.011
P-46	12"	22'	0.014
*P-50	12"	62'	0.006
*P-51	12"	20'	0.015
P-52	12"	100'	0.010
P-53	12"	34'	0.010
P-56	12"	9'	0.011
P-57A	12"	4'	0.025
P-57B	12"	5'	0.020
P-59A	12"	83'	0.010
P-59B	12"	44'	0.010
P-60	15"	57'	0.007
P-60A	12"	18'	0.022
P-60B	12"	2'	0.025
P-60C	15"	66'	0.008
P-62	15"	120'	0.005
P-63	12"	50'	0.044
P-64	12"	16'	0.006
P-65	12"	12'	0.005
P-66	12"	5'	0.028
P-67	12"	18'	0.014
P-68	12"	5'	0.028
P-69	12"	50'	0.005
P-70	30"	11'	0.024
P-73	24"	6'	0.067
P-77B	18"	151'	0.008
*P-77C	18"	8'	0.012
P-84	15"	65'	0.008
P-85	12"	6'	0.017
P-87	12"	221'	0.006
P-88	12"	77'	0.005
P-89	12"	5'	0.010
P-90	12"	107'	0.022
P-95	12"	67'	0.015
P-96	12"	97'	0.015
P-97A	12"	80'	0.010
P-97B	12"	12'	0.008
P-98	24"	128'	0.005
P-99	6"	5'	0.020
P-100	8"	13'	0.012
P-101	12"	50'	0.005
P-102	12"	130'	0.005
P-103	12"	30'	0.020
P-104	6"	10'	0.010
P-105	12"	60'	0.005
P-106	12"	90'	0.005
P-107	12"	12'	0.010
P-108	6"	18'	0.010
P-109	12"	19'	0.010

* PIPE TO BE DUCTILE IRON

PIPE SCHEDULE

PIPE	DIAMETER (IN.)	LENGTH (FT.)	SLOPE (FT./FT.)
P-1R	12"	60'	0.006
P-2R	12"	176'	0.005
P-3R	12"	30'	0.005
P-4R	15"	126'	0.005
P-5R	15"	30'	0.005
P-6R	15"	194'	0.005
P-7R	24"	41'	0.005
P-8R	24"	70'	0.005
P-9R	15"	8'	0.020
P-10R	15"	124'	0.005
P-11R	12"	204'	0.005
P-12R	24"	40'	0.006
P-13R	12"	11'	0.005
P-14R	24"	94'	0.007
P-15R	12"	10'	0.020
P-16R	12"	154'	0.007
P-17R	12"	8'	0.030
P-18R	12"	44'	0.006

PIPE SCHEDULE

PIPE	DIAMETER (IN.)	LENGTH (FT.)	SLOPE (FT./FT.)
P-1S	12"	76'	0.010
P-2S	12"	126'	0.010
P-3S	12"	242'	0.010
P-4S	12"	9'	0.010
P-5S	12"	70'	0.010
P-6S	12"	44'	0.010
P-7S	12"	12'	0.010

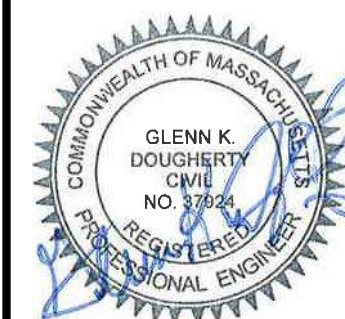
LANDSCAPE DRAIN SCHEDULE

STRUCTURE	RIM	INVERTS
LD-1	111.0	INVERT IN= 104.26 (LD-2)
		INVERT OUT= 104.26 (DMH-1R)
LD-2	111.0	INVERT IN= 106.68 (LD-4)
		INVERT OUT= 106.68 (LD-1)
LD-3	111.0	INVERT IN= 107.25 (P-4S)
LD-4	111.0	INVERT IN= 107.38 (LD-2)
		INVERT OUT= 107.38 (LD-5)
LD-5	111.0	INVERT OUT= 107.82 (LD-4)
LD-6	111.0	INVERT OUT= 107.72 (P-6S)

NOT FOR CONSTRUCTION

THESE PLANS WERE PREPARED FOR THE PURPOSE OF OBTAINING STATE AND LOCAL APPROVALS AND ARE NOT INTENDED TO BE USED AS CONSTRUCTION DOCUMENTS.

TETRA TECH



www.tetratech.com
100 Nickerson Road
Marlborough, Massachusetts 01752
PHONE: 508.786.2200 FAX: 508.786.2201

MARK	DATE	DESCRIPTION
9	08/11/13	REMOVE CLOUDS
9	07/11/15	SPECIAL PERMIT AMENDMENT #5
9	08/11/20	SPECIAL PERMIT AMENDMENT #6

Amended Phase 2: Major Project Site Plan Review

Center 128 West
Needham, MA
Drainage Schedules

Project No.: 143-11218-20001
Designed By: GKD
Drawn By: JLP
Checked By: GKD

C-5

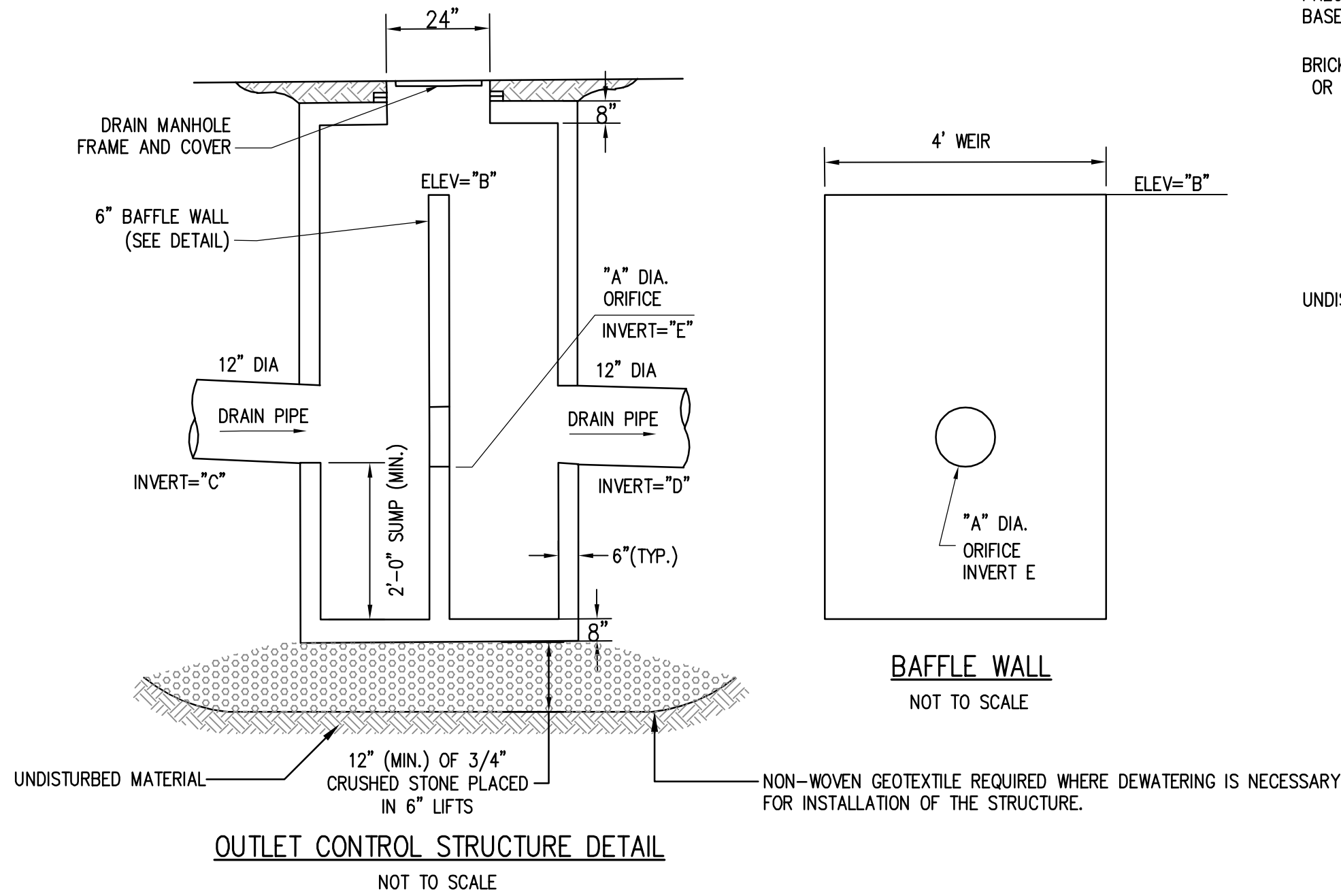
Bar Measures 1 inch

8/14/2020 9:55:30 AM - P:\11218143-11218-20001\CAD\SHEETFILES\C-DETAILS PHASE 2.DWG - PAPPAS, JUD

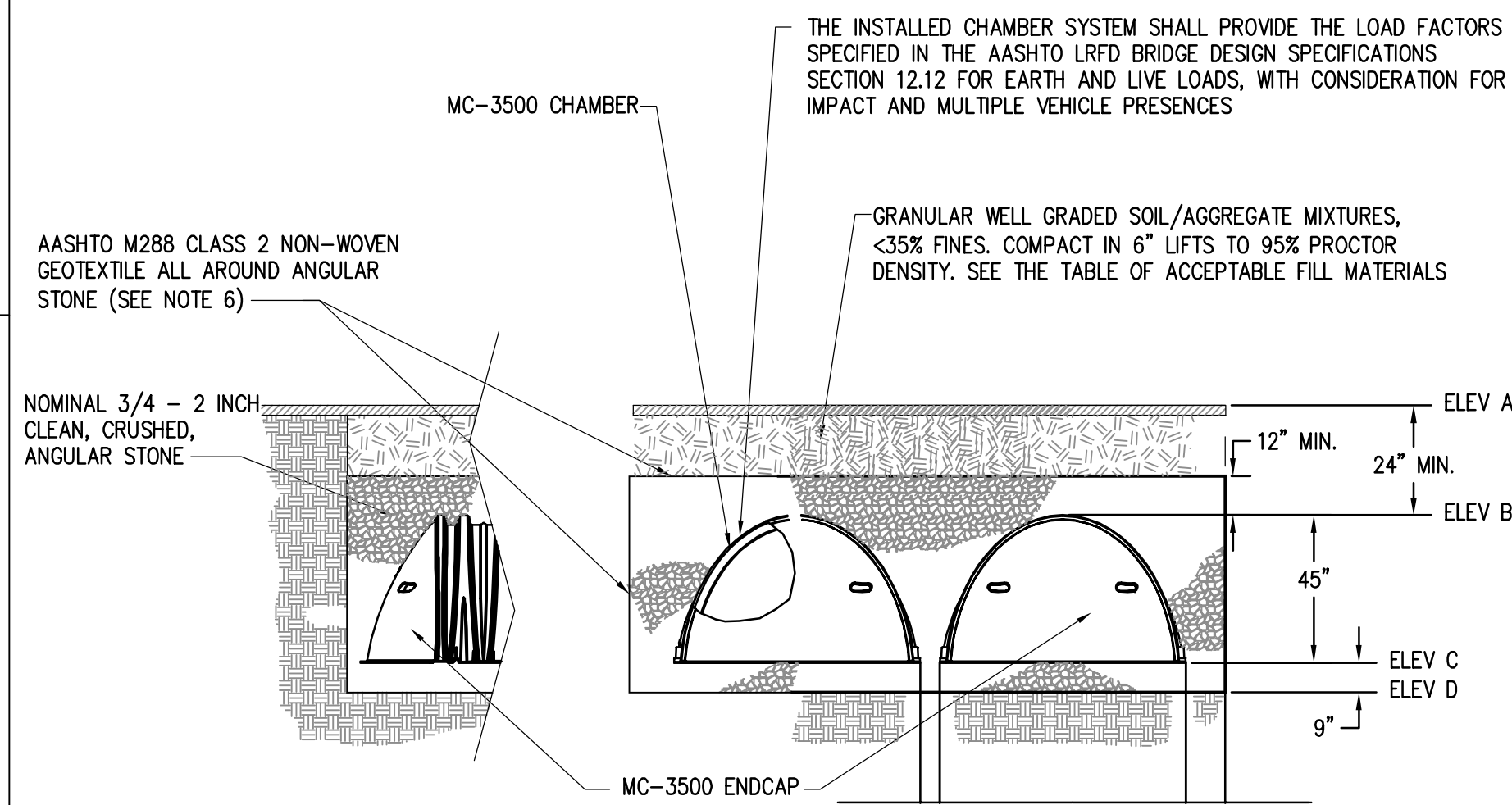
OCS	A	B	C	D	E
OCS-45	8"	108.10	105.00	105.00	105.00
OCS-56	8"	107.55	104.85	104.85	104.85
OCS-59	8"	109.60	106.40	106.40	106.40
OCS-62	8"	108.80	106.80	106.80	106.80
OCS-63	6"	112.00	109.00	109.00	109.00
OCS-71	4"	106.50	103.70	103.70	103.70
OCS-72	4"	107.25	101.40	101.40	101.40

I.D. (MIN)	A	B	D (MAX)
4'-0"	6"	5"	12'-18"
5'-0"	8"	6"	18'-24"
6'-0"	8"	6"	24'-30"

NOTES:
1. MANHOLE SHALL BE PRECAST CEMENT CONCRETE MANUFACTURED IN ACCORDANCE WITH ASTM C-478 DESIGNED FOR H-20 LOADING.
2. SEE GENERAL PLANS FOR PIPE SIZES, LINES AND GRADES.



OUTLET CONTROL STRUCTURE DETAIL
NOT TO SCALE



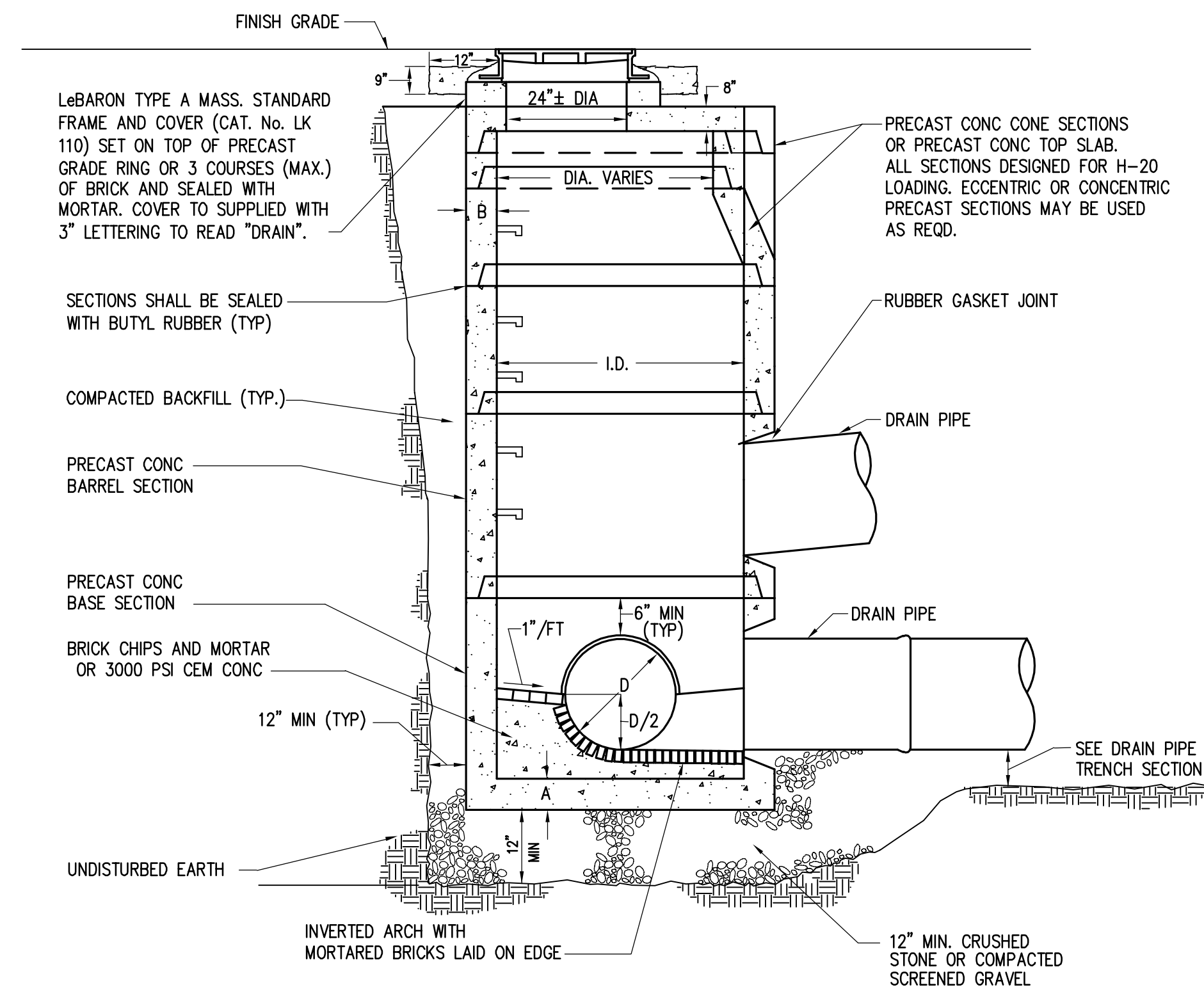
- NOTES:
- ALL DESIGN SPECIFICATIONS FOR STORMTECH MC-3500 CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH MC-3500 DESIGN MANUAL.
 - THE INSTALLATION OF STORMTECH MC-3500 CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH MC-3500 INSTALLATION INSTRUCTIONS.
 - THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION. CALL 1-888-892-2694 OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF THE LATEST STORMTECH MC-3500 INSTALLATION INSTRUCTIONS.
 - CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

INFILTRATION AREA	ELEV A	ELEV B	ELEV C	ELEV D	*ESHW
#1	112.7-113.5	110.25	106.50	105.75	100.00
#2	110.7-111.0	108.60	104.85	104.10	95.50
#3	112.1-113.1	110.15	106.40	105.65	99.00
#4	107.2-107.7	105.15	101.40	100.65	94.00

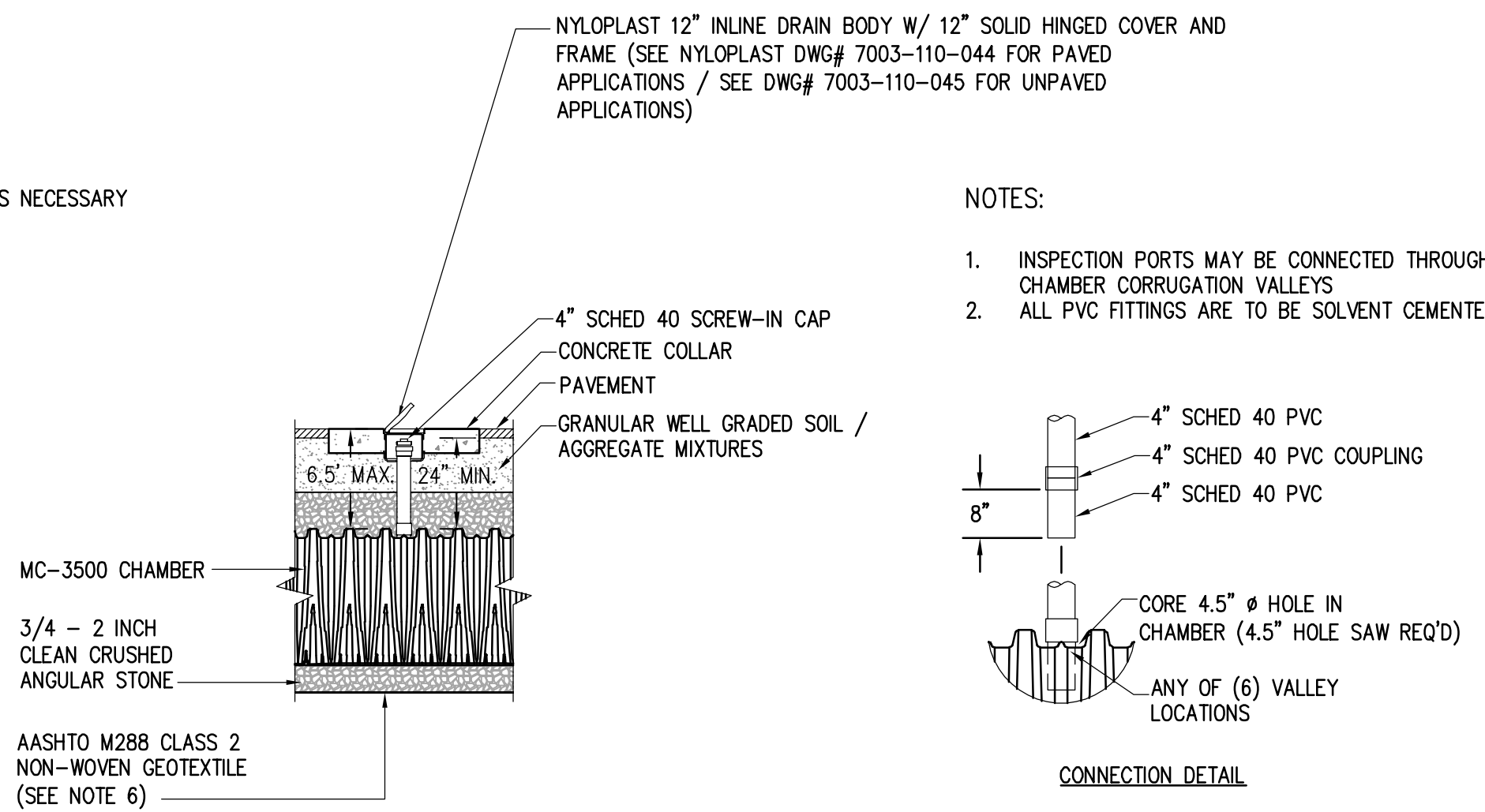
*ESHW - ELEVATION OF ESTIMATED SEASONAL HIGH WATER TABLE

INFILTRATION AREA #1 MC-3500 CHAMBER ELEVATIONS LOWERED BY 0.25 FEET

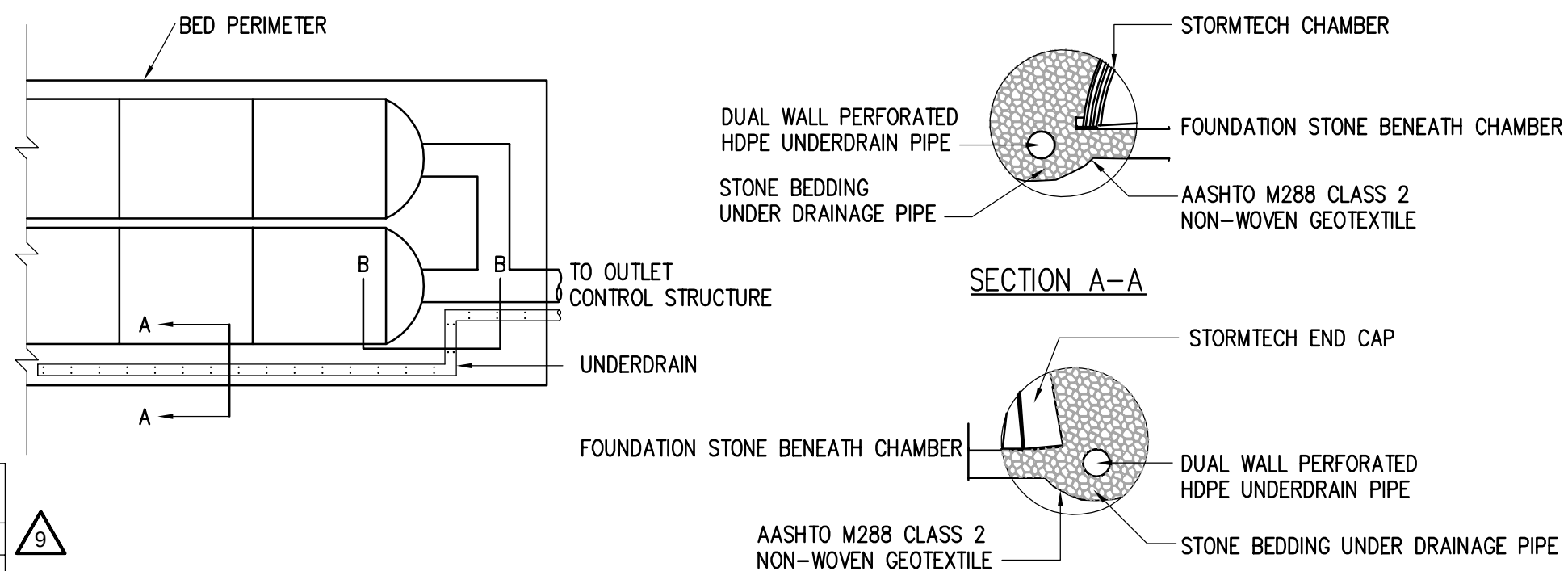
TYPICAL SUBSURFACE INFILTRATION AREA CROSS SECTION
NOT TO SCALE



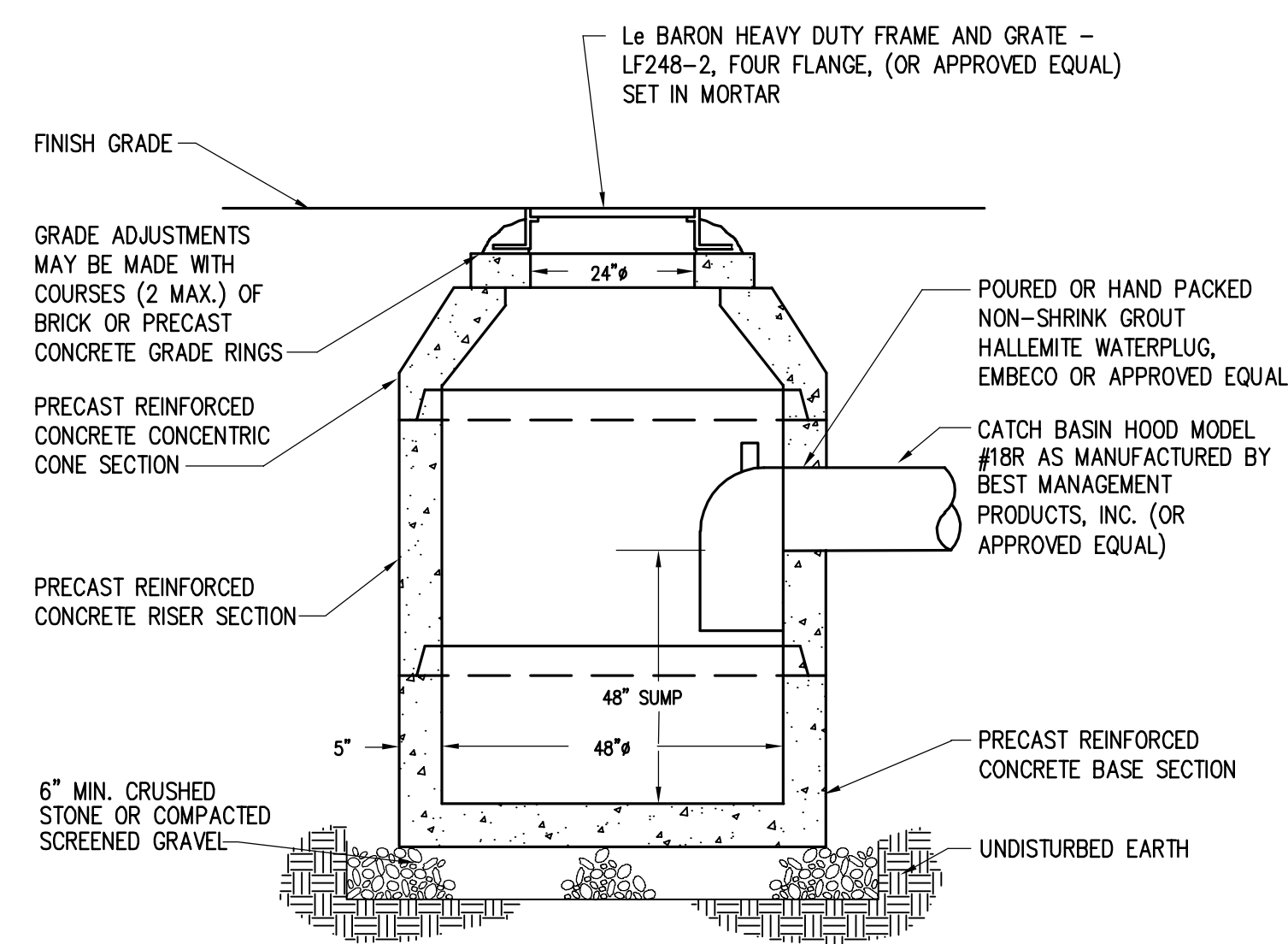
PRECAST CONCRETE DRAIN MANHOLE DETAIL
NOT TO SCALE



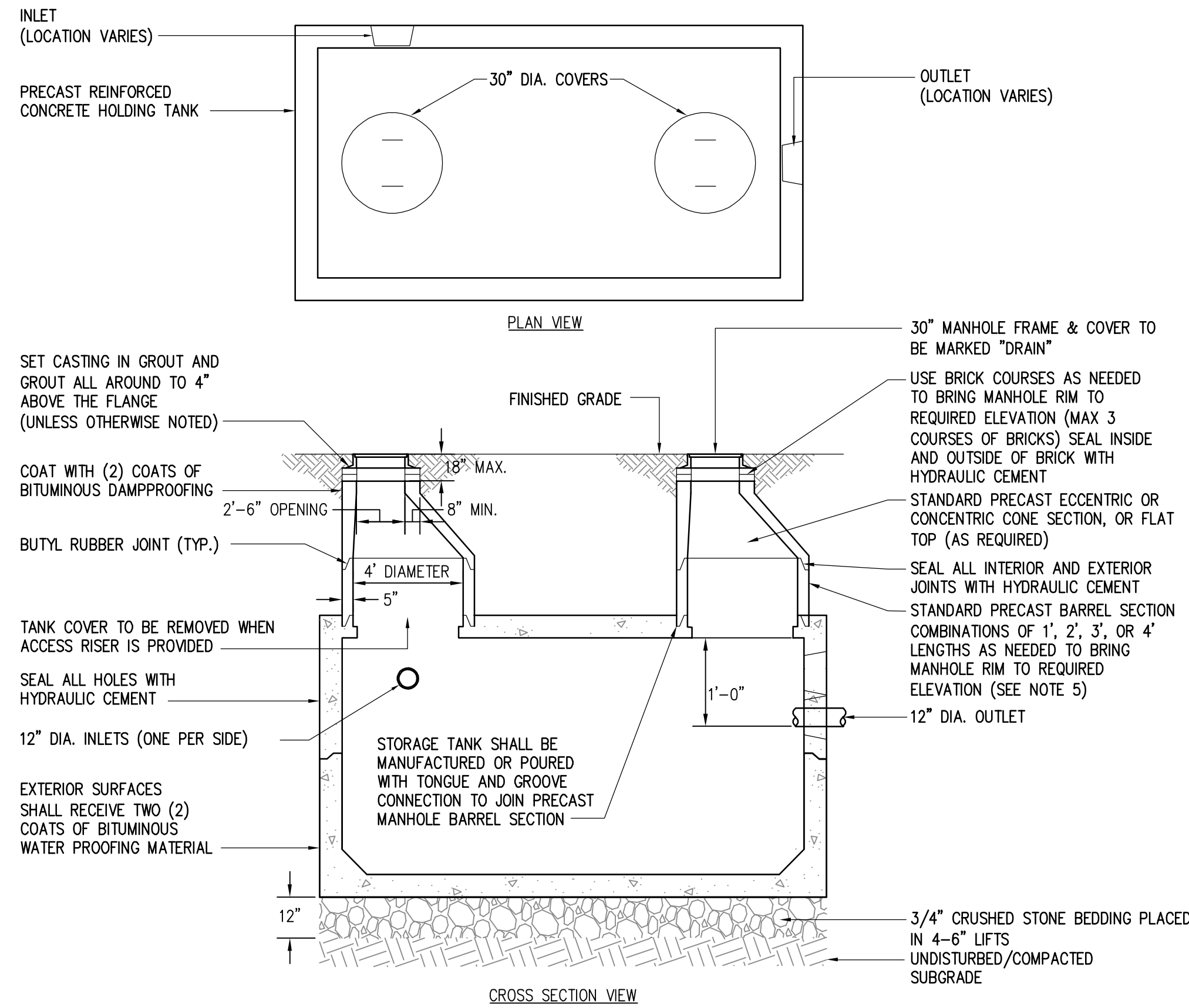
SUBSURFACE INFILTRATION AREA INSPECTION PORT DETAIL
NOT TO SCALE



SUBSURFACE INFILTRATION AREA OUTLET/UNDERDRAIN DETAIL
NOT TO SCALE



PRECAST CONCRETE CATCH BASIN DETAIL (SITE)
NOT TO SCALE



- NOTES:
- TANK SHALL BE PRECAST REINFORCED CONCRETE.
 - CONCRETE SHALL BE MINIMUM STRENGTH OF 5,000 PSI @ 28 DAYS.
 - STEEL REINFORCEMENT - ASTM A-165 GR. 60, A-185, OR A-497.
 - REQUIRED DESIGN LOAD OF AASHTO HS20-44.
 - PRECAST REINFORCED CONCRETE BOX SECTIONS MANUFACTURED IN ACCORDANCE WITH PRECAST REINFORCED STORAGE TANK.
 - STORAGE TANK WALL, ROOF, AND SLAB THICKNESS TO BE DESIGNED BY THE MANUFACTURER IF PRECAST.
 - PUMPS FOR IRRIGATION SYSTEM TO BE DESIGNED BY THE IRRIGATION CONSULTANT.

CISTERN DETAIL
NOT TO SCALE

NOT FOR CONSTRUCTION
THESE PLANS WERE PREPARED FOR THE PURPOSE OF OBTAINING STATE AND LOCAL APPROVALS AND ARE NOT INTENDED TO BE USED AS CONSTRUCTION DOCUMENTS.

TETRA TECH

www.tetratech.com

100 Nickerson Road
Marlborough, Massachusetts 01752
PHONE: 508.786.2200 FAX: 508.786.2201

COMMONWEALTH OF MASSACHUSETTS
GLENN K. DOUGHERTY
CIVIL
NO. 37824
PROFESSIONAL ENGINEER

Amended Phase 2: Major Project Site Plan Review
Center 128 West
Needham, MA
Construction Details

MARK	DATE	DESCRIPTION
	08/20/12	
	09/18/12	TOWN COMMENTS
4	03/01/13	REMOVE CLOUD/REVISE OCS SCHEDULE
5	04/12/13	TOWN COMMENTS
6	08/23/13	PLAN MODIFICATIONS
7	09/11/13	REMOVE CLOUDS
8	08/14/20	SPECIAL PERMIT AMENDMENT #6

Project No.: 143-11218-20001

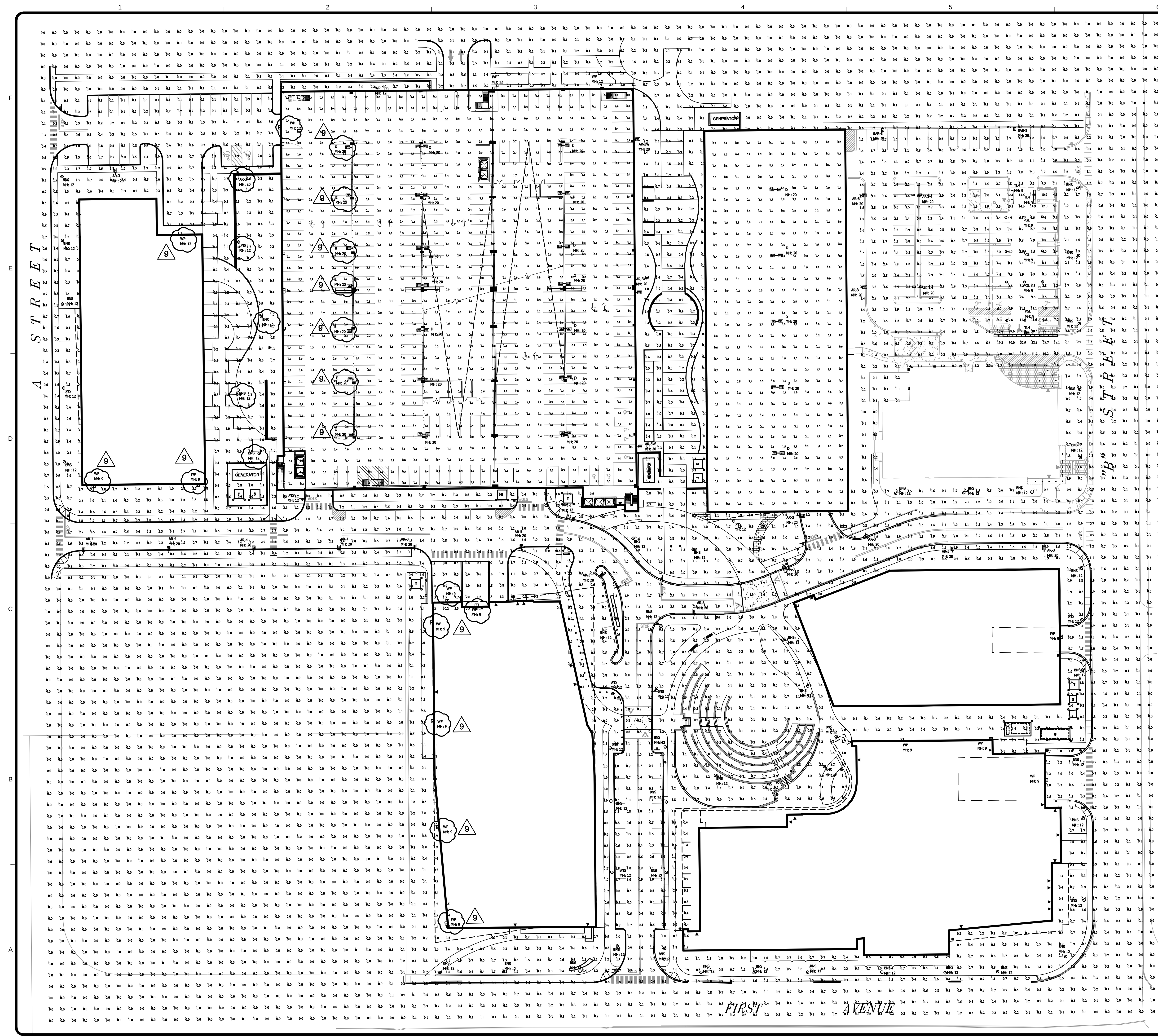
Designed By: KWC

Drawn By: SCV

Checked By: KWC

D-4

Bar Measures 1 inch

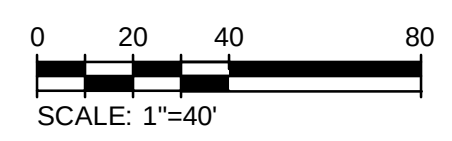


Luminaire Schedule					
Symbol	Qty	Label	Arrangement	LLF	Description
	10	AR-3	20' - 0" AFG	0.882	AR3/LED-5100K
	3	AR-3W	20' - 0" AFG	0.882	AR3/LED-5100K
	4	AR-4	20' - 0" AFG	0.882	AR4/LED-5100K
	3	AR-5	20' - 0" AFG	0.882	AR5/LED-5100K
	2	ARD-4	20' - 0" AFG	0.882	AR4/LED-5100K
	56	BNS	12' - 0" AFG	0.855	BNS5-60L5K
	17	CL	12' - 0" AFG	0.850	D4LED4-4D9LED435KFL35MFC
	6	LAS	Ground Mounted	0.584	OTHER
	12	PGL	9' - 0" AFG	0.882	PGL72N/LED-5100K
	2	SAR-3	20' - 0" AFG	0.882	SAR3/LED-5100K
	17	TL4	9' - 0" AFG	0.850	OTHER
	17	WP	9' - 0" AFG	0.855	WD14D3/LED-5100K
	19	D	20' - 0" AFG	0.850	AR4/LED-5100K
	7	E	20' - 0" AFG	0.850	AR4/LED-5100K

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
Center 128	Illuminanc	Fc	0.68	32.9	0.0	N.A.
Paved Area	Illuminanc	Fc	1.61	32.9	0.1	16.10

- THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO HUBBELL LIGHTING. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
- LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.
- CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

BIDDER'S NOTE:
FOR FIXTURE CLARIFICATION, SPECIFICATION SHEETS AND PRICING,
CONTRACTOR'S SHOULD CONTACT MELISSA MITCHELL WITH HUBBELL LIGHTING.
(540) 381-0406



TETRA TECH

www.tetrattech.com
100 Nickerson Road
Marlborough, Massachusetts 01752
PHONE: 508.786.2200 FAX: 508.786.2201

GLENN K. DOUGHERTY
NO. 13548
STATE OF MASSACHUSETTS
PROFESSIONAL ENGINEER

MARK	DATE	DESCRIPTION	BY
1	09/18/12	TOWN COMMENTS	
2	10/02/13	TOWN COMMENTS	
3	11/01/12	PLAN MODIFICATIONS	
4	03/01/13	PLAN MODIFICATIONS	
5	04/22/13	TOWN COMMENTS	
6	08/23/13	PLAN MODIFICATIONS	
7	09/11/13	LOADING DOCK REVISION	

Amended Phase 2: Major Project Site Plan Review

Center 128 West
Needham, MA

Site Lighting Plan

Project No.: 143-11218-20001

Designed By: GKD

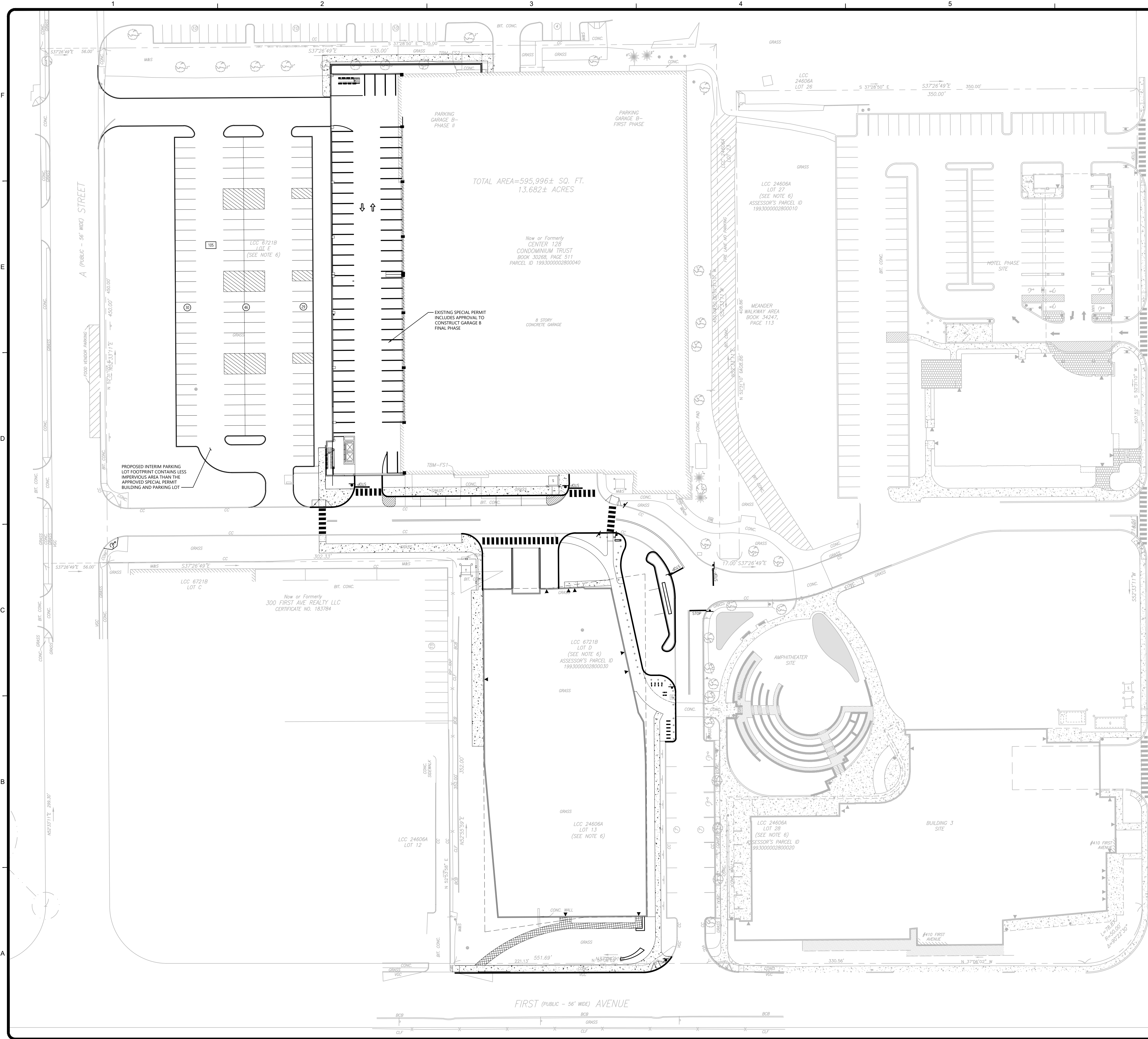
Drawn By: JLP

Checked By: GKD

LT-1

Bar Measures 1 inch

Copyright: Tetra Tech



Parking Summary Chart - Zoning

Description	Required	
80 B STREET - HOTEL (MARRIOTT)		
1 SPACE / UNIT	128 UNITS	128 SPACES
1 SPACE / 3 EMPLOYEES	15 EMPLOYEES	5 SPACES
1 SPACE / 200 SF CONFERENCE ROOMS	1,300 SF	7 SPACES
380 1ST AVE - PEDIATRIC MEDICAL FACILITY		
1 SPACE / 290 SF	224,000 SF	773 SPACES
400 1ST AVE - OFFICE (TRIP ADVISOR)		
1 SPACE / 300 SF	288,346 SF	962 SPACES
CENTER 128 EAST		
	PER SPECIAL PERMIT	857 SPACES
TOTAL SPACES		2,732 SPACES

Proposed Parking

Description	Provided
PARKING GARAGE B	2,600 SPACES
HOTEL - SURFACE LOT	118 SPACES
HOTEL - UNDER BUILDINGS	21 SPACES
380 & 400 1ST AVE SURFACE SPACES	14 SPACES
INTERIM SURFACE LOT	105 SPACES
TOTAL	2,858 SPACES



0 20 40 80 Feet

VHB

VANASSE HANGEN BRUSTLIN

NICHOLAS J. SKOLY

CIVIL

No. 52877

REGISTERED

PROFESSIONAL ENGINEER

101 Walnut Street

Watertown, Massachusetts 02472

Phone: 617.924.1770

Amended Phase 2: Major Project Site Plan Review

Center 128 West
Needham, MA

Interim Condition Site Plan

Project No.:

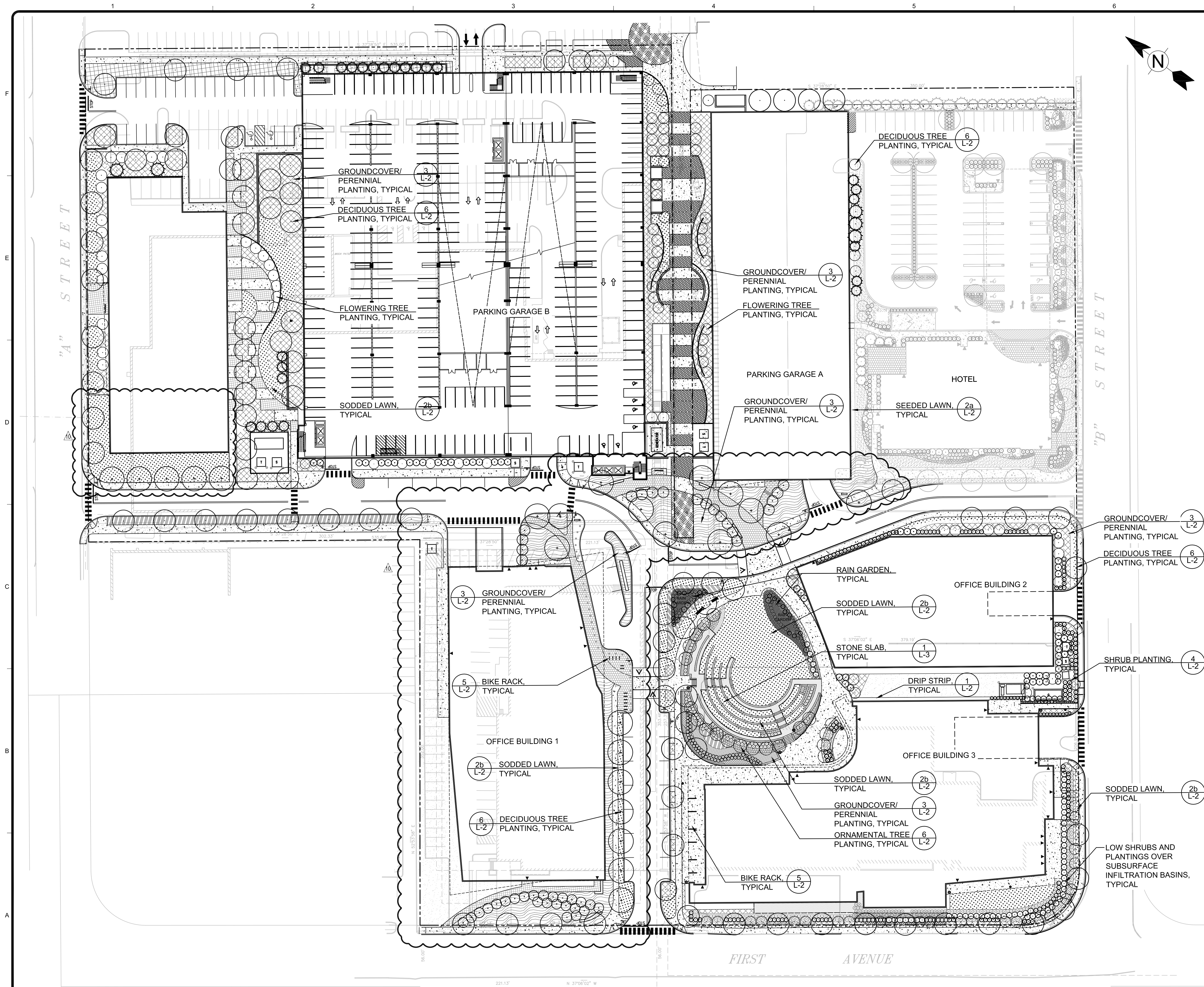
14631.00

Designed By:

Drawn By:

Checked By:

8/17/2020 10:45:38 AM - P:\20003_BCH FIRST AVE_SPERMIT_CAD_SPERMIT_TRIP-1STAVEPL_T20003.DWG - KELLY



GENERAL NOTES

REQUIRED ZONING AND SETBACK REQUIREMENTS TO BE VERIFIED PRIOR TO CONSTRUCTION.

HANDICAP ACCESSIBILITY SHALL BE PER MASSACHUSETTS STATE CODE AND THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES (WHICHEVER IS MORE STRINGENT).

ALL PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.

ANY PROPOSED SUBSTITUTIONS OF PLANT MATERIAL SHALL BE MADE WITH MATERIAL EQUIVALENT TO THE DESIRED MATERIAL IN OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE.

ALL PLANTING BEDS TO BE FILLED WITH SOIL TO A MINIMUM DEPTH OF 18" AND CROWNED ABOVE ADJACENT LAWN OR IMPROVED AREAS. PLANTING BEDS SHALL BE MULCHED WITH AGED PINE BARK MULCH, TO A DEPTH OF TWO (2) INCHES. PROVIDE CONTINUOUS MULCH BED AROUND SHRUB PLANTINGS.

VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND REPORT ANY CONFLICTS TO THE OWNER OR HIS REPRESENTATIVE.

ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.

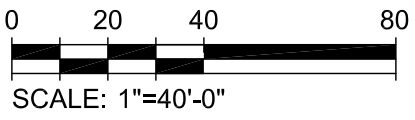
THE LANDSCAPE CONTRACTOR SHALL FURNISH TOPSOIL. TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL AND PRODUCTIVE TOPSOIL OF GOOD CLAY-LOAM TYPE. IT SHALL BE FREE OF WEED SEEDS. TOPSOIL SHALL BE WITHOUT ADMIXTURE OF SUBSOIL AND SHALL BE REASONABLY FREE OF STONES, LUMPS, ROOTS, STICKS AND OTHER FOREIGN MATTER. TOPSOIL SHALL NOT BE WORKED OR APPLIED IN A MUDDY OR WET CONDITION.

PLANT MATERIAL IS TO BE MAINTAINED BY THE LANDSCAPE CONTRACTOR WHILE THE PROJECT IS UNDERWAY.

PLANT QUANTITIES NOTED IN THE PLANT SCHEDULE ARE APPROXIMATE AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FURNISHING AND INSTALLATION OF ALL PLANT MATERIALS NOTED ON THE PLANTING PLAN.

LEGEND

- EXISTING DECIDUOUS TREE | SHRUB TO REMAIN
- EXISTING EVERGREEN TREE | SHRUB TO REMAIN
- PROPOSED DECIDUOUS TREE | SHRUB
- PROPOSED EVERGREEN TREE | SHRUB
- SOD HATCH
- SEED HATCH
- PERENNIAL HATCH
- PERENNIAL HATCH 2



TETRA TECH

www.tetrattech.com
One Grant Street
Framingham, Massachusetts 01701
Phone: 508.903.2000 Fax: 508.903.2001

Phase 2: Major Project Site Plan Review

Project No.: 127-21127-12001
Designed By: JC_KAC
Drawn By: PH
Checked By: JC_KAC

Center 128
Needham, MA
Landscape Plan

L-1

Copyright: Tetra Tech

MARK	DATE	DESCRIPTION
A	08/23/13	PLAN MODIFICATIONS
A	08/11/13	LOADING DOCK REVISION
A	10/15/14	PLANT SPECIES REVISION
A	07/10/15	SPECIAL PERMIT AMENDMENT #5
A	08/14/20	SPECIAL PERMIT AMENDMENT #6

MARK	DATE	DESCRIPTION
A	08/14/12	RELOCATE PLANTINGS TO AVOID LIGHTS
A	09/19/12	TOWN COMMENTS
A	10/02/12	TOWN COMMENTS
A	11/01/12	TOWN COMMENTS
A	03/01/13	PLAN MODIFICATIONS
A	04/12/13	TOWN COMMENTS

A1.00

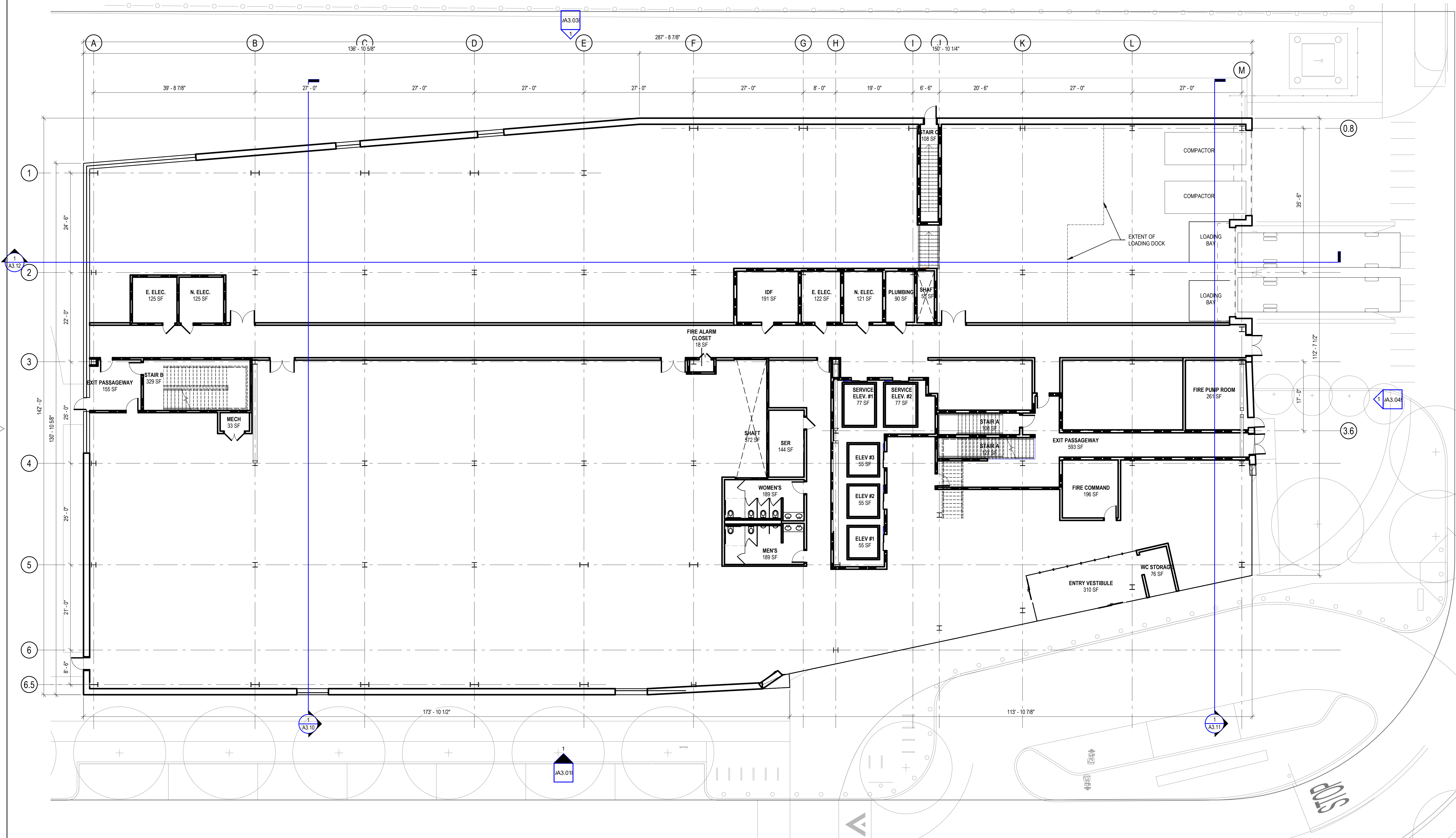
Architect
Payette Associates Inc.
290 Congress Street, Fifth Floor
Boston, MA 02210-1005
Tel: 617-895-1000

Civil Engineer	Structural Engineer
VHB 99 High St #10 Boston, MA 02110 Tel: 617-728-7777	McNamara Salvia 101 Federal St #1100 Boston, MA 02110 Tel: 617-737-0040

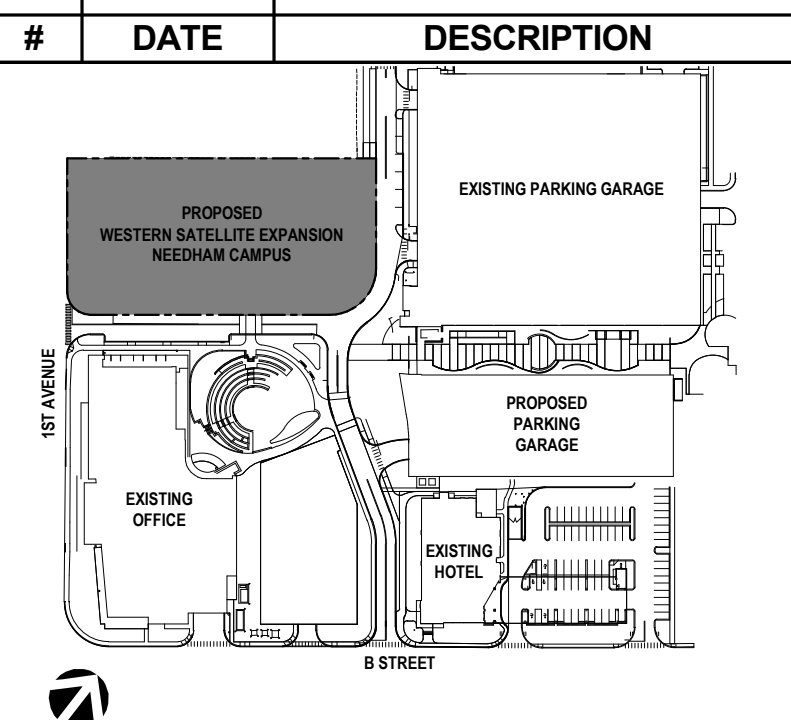
HVAC/Elec/LV Engineer	Plumbing/FP Engineer
BR+A 10 Guest St 4th Floor Boston, MA 02135 Tel: 617-254-0016	RW Sullivan 526 Main St #203 Boston, MA 02129 Tel: 617-523-8227

Code Consultant	Equipment Consultant
Jensen Hughes 1 Lincoln Street Boston, MA 02111 Tel: 617-620-8900	C/W Design Group 57 Bedford St, Ste 207 Lexington, MA 02420 Tel: 781-274-7275

Parking Structure
Walker Consultants 20 Park Plaza Boston, MA 02116 Tel: 617-350-5040



NOT FOR CONSTRUCTION



Boston Children's Hospital
Until every child is well™
NEEDHAM SATELLITE PROJECT
SCHEMATIC DESIGN

**LEVEL 1
OVERALL PLAN**

Drawing Scale 3/32" = 1'-0"	
Project Number 25790.00	
Date Issued 12 JUNE 2020	

A1.01

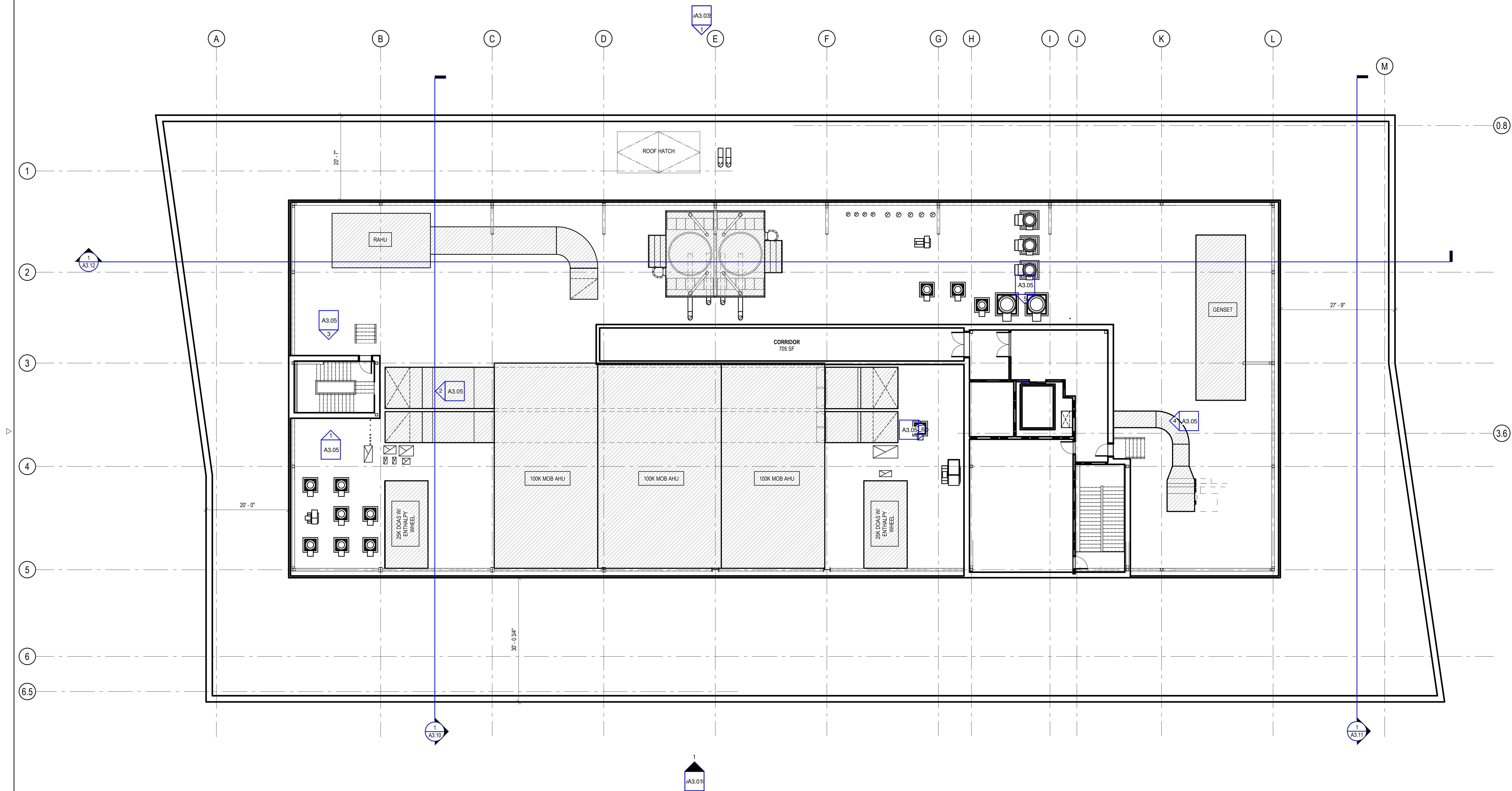
A1.02

A1.03

1 LEVEL 4
SCALE: 3/32" = 1'-0"

A1.05

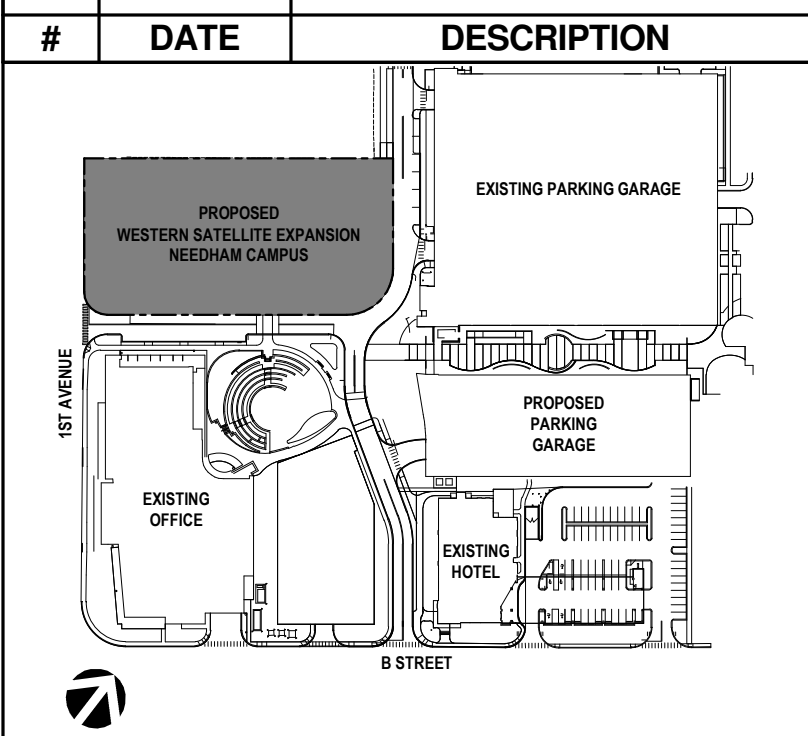
Architect Payette Associates Inc. 290 Congress Street, Fifth Floor Boston, MA 02210-1005 Tel: 617-895-1000	
Civil Engineer VHB 99 High St #10 Boston, MA 02110 Tel: 617-728-7777	Structural Engineer McNamara Salvia 101 Federal St #1100 Boston, MA 02110 Tel: 617-737-0040
HVAC/Elec/LV Engineer BR+A 10 Guest St 4th Floor Boston, MA 02135 Tel: 617-254-0016	Plumbing/FP Engineer RW Sullivan 526 Main St #203 Boston, MA 02129 Tel: 617-523-8227
Code Consultant Jensen Hughes 1 Lincoln Street Boston, MA 02111 Tel: 617-620-8900	Equipment Consultant C/W Design Group 57 Bedford St, Ste 207 Lexington, MA 02420 Tel: 781-274-7275
Parking Structure Walker Consultants 20 Park Plaza Boston, MA 02116 Tel: 617-350-5040	



ROOF TOP EQUIPMENT.
ALL ROOF TOP EQUIPMENT TO BE LESS THAN 25% ROOF COVERAGE

1 ROOF PLAN
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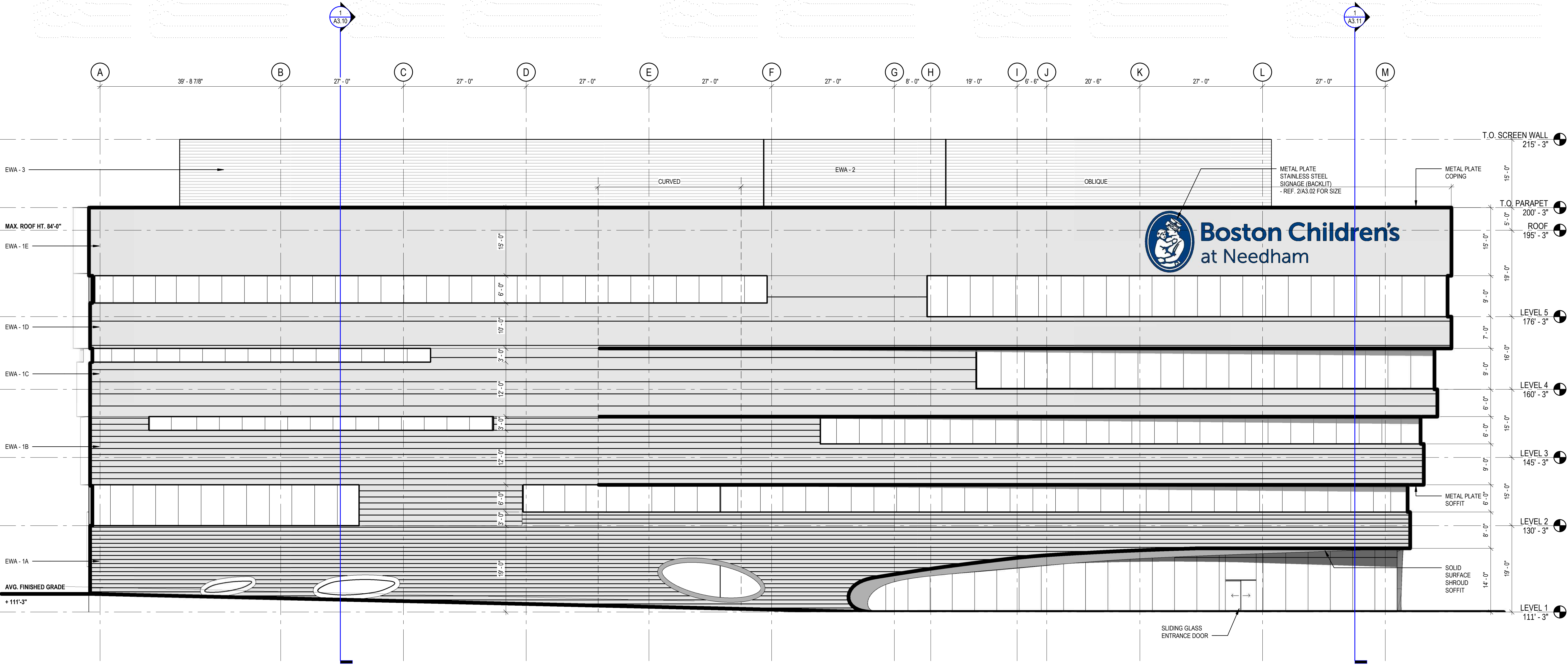
Boston Children's Hospital
Until every child is well™
NEEDHAM SATELLITE PROJECT
SCHEMATIC DESIGN

ROOF PLAN

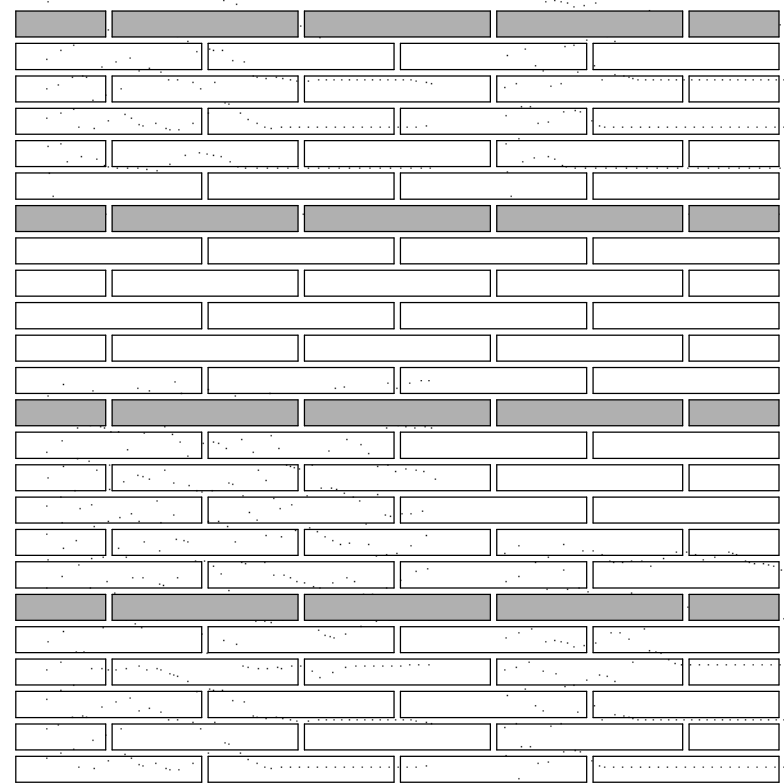
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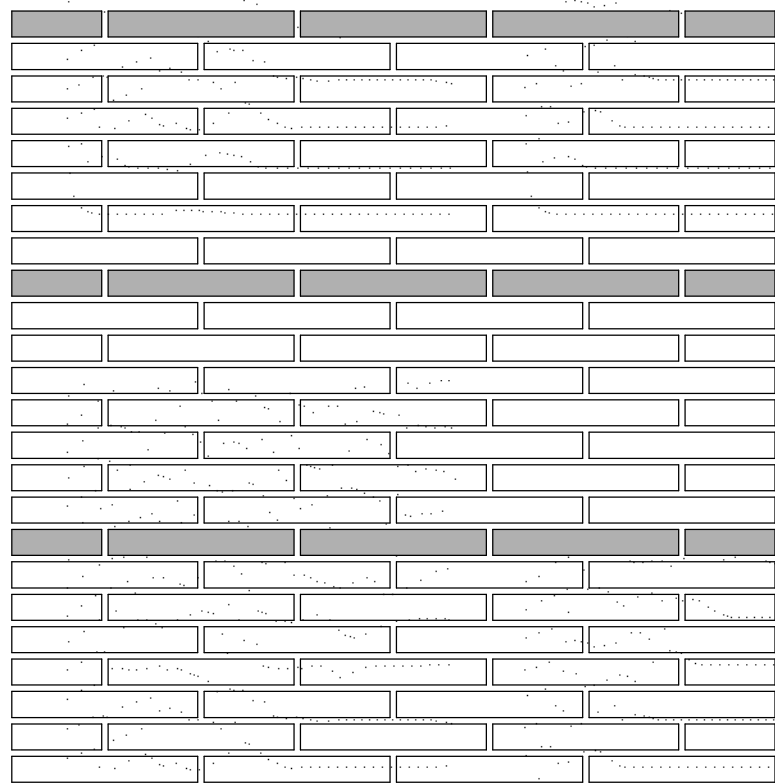
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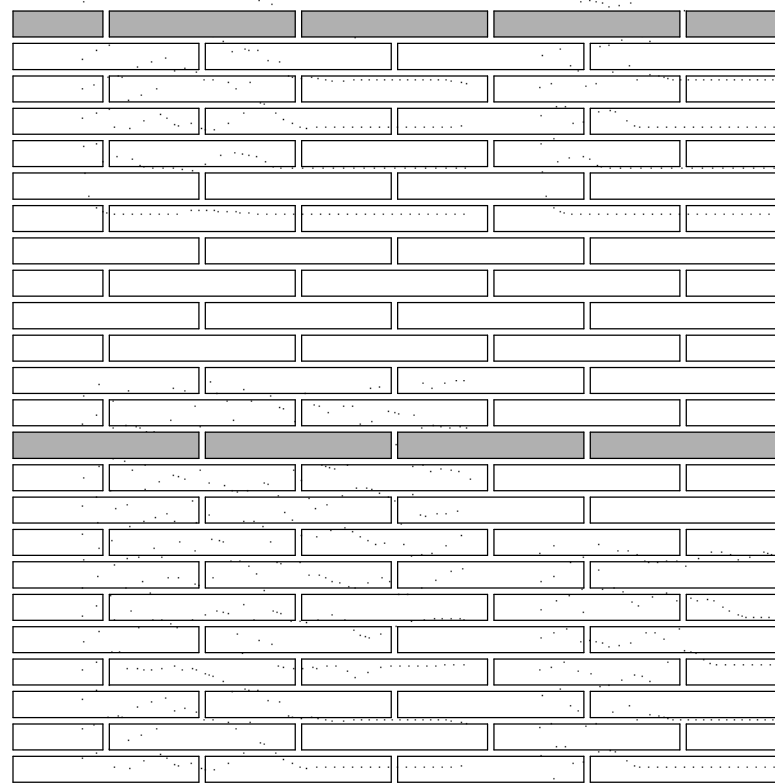
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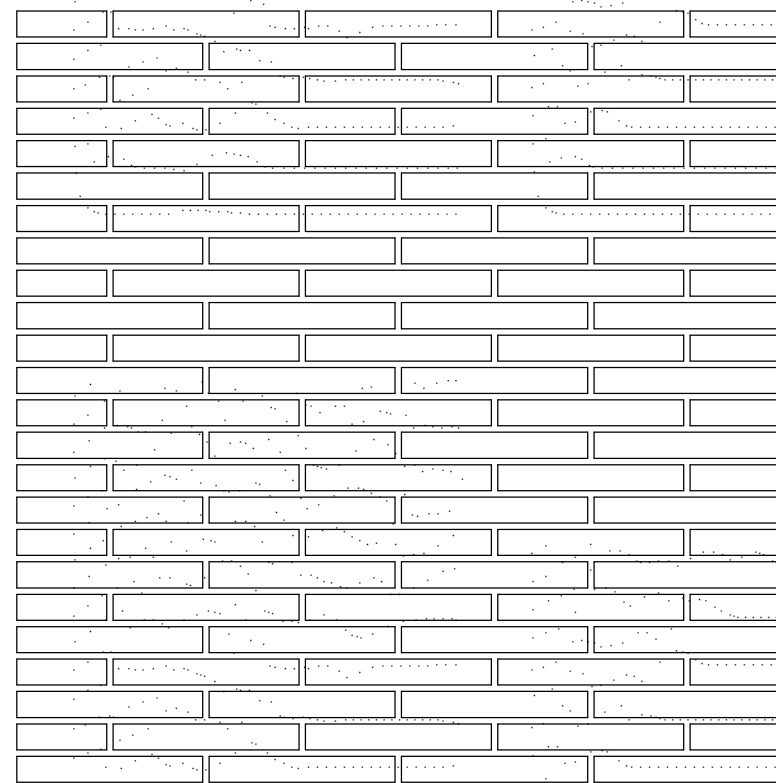
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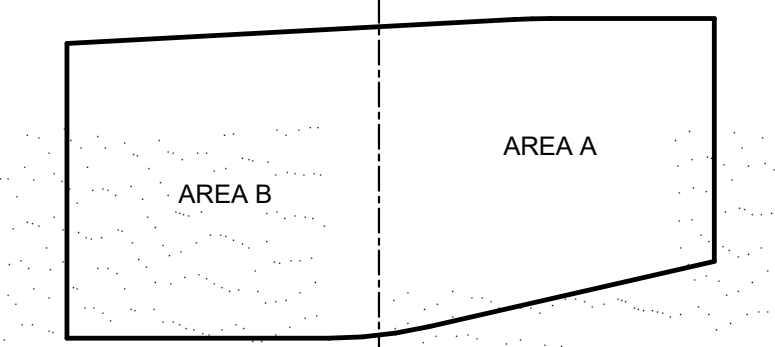
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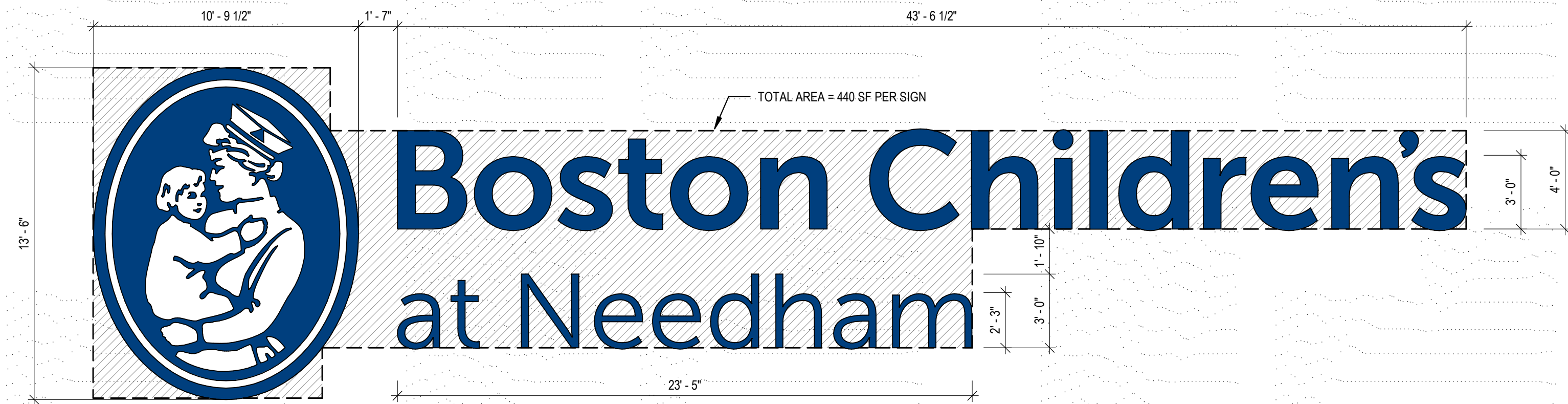
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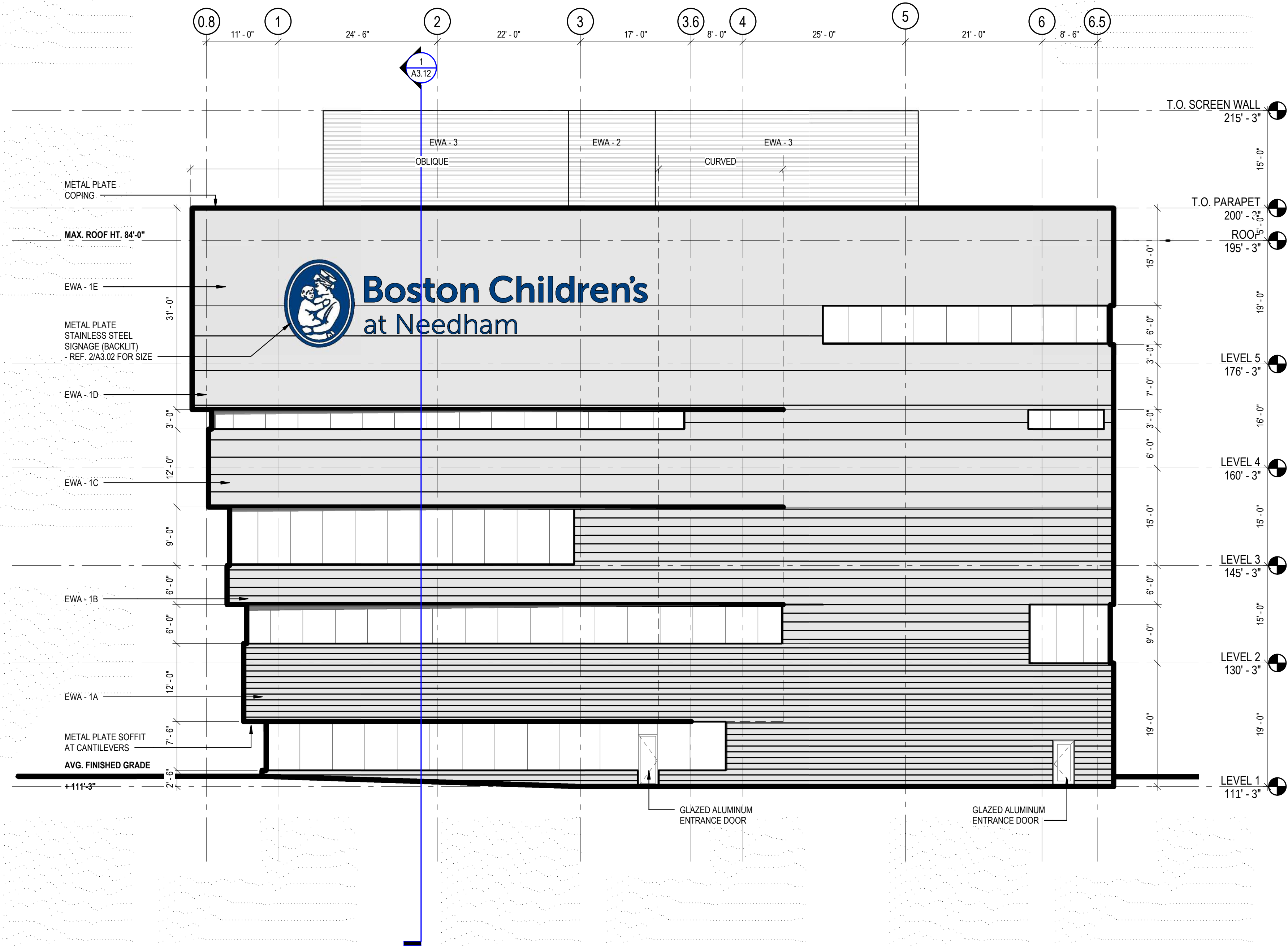
NEEDHAM SATELLITE PROJECT
SCHEMATIC DESIGN

SOUTH EAST ELEVATION

Drawing Scale As indicated	
Project Number 25790.00	
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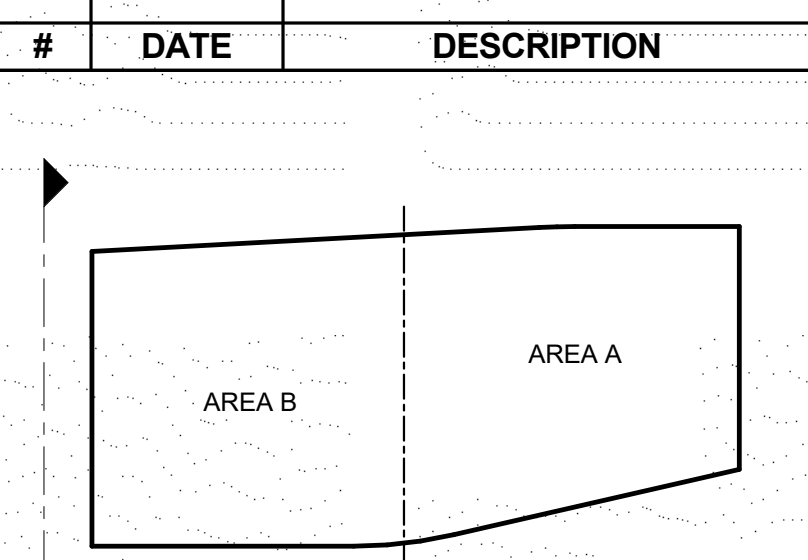
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SIGNAGE LEGIBILITY CHART	
LETTER HEIGHT	LEGIBLE VIEWING DISTANCE
9"	300' (FOOTBALL FIELD LENGTH)
12"	395'
14"	440'
18"	560'
24"	750'
36"	1130' (1/5 OF A MILE)
48"	1500'
72"	2230'
96"	3000' (3/5 OF A MILE)

PAYETTE	
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Parking Structure Walker Consultants 20 Park Plaza Boston, MA 02116 Tel: 617-350-5040	

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NEEDHAM SATELLITE PROJECT
SCHEMATIC DESIGN

SOUTH WEST ELEVATION

Drawing Scale As indicated	
Project Number 25790.00	
Date Issued 12 JUNE 2020	

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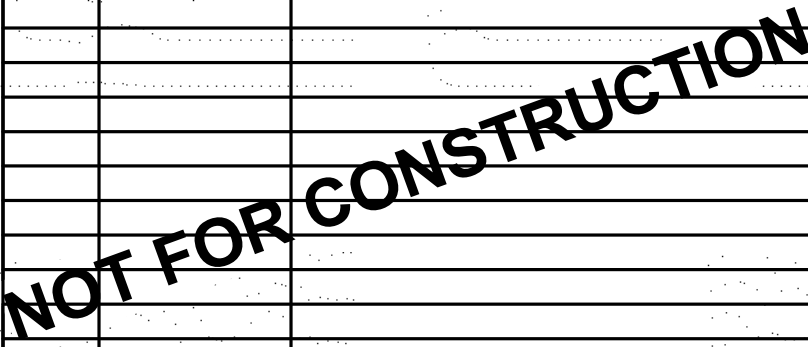
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Civil Engineer	Structural Engineer
HB 9 High St #10 Boston, MA 02110 Tel: 617-728-7777	McNamara Salvia 101 Federal St #1100 Boston, MA 02110 Tel: 617-737-0040

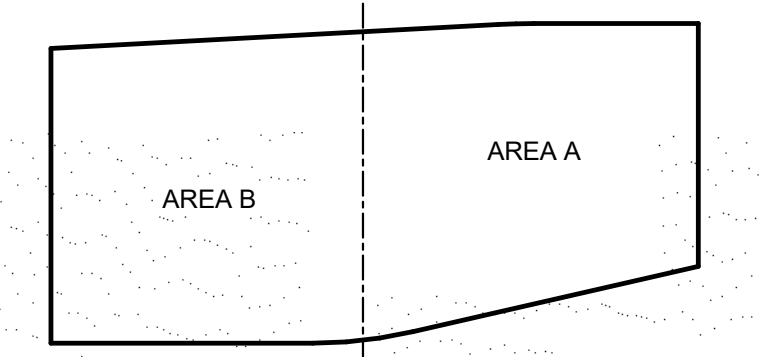
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Parking Structure
Walker Consultants
20 Park Plaza
Boston, MA 02116
Tel: 617-350-5040



#	DATE	DESCRIPTION
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NEEDHAM SATELLITE PROJECT

SCHEMATIC DESIGN

NORTH WEST ELEVATION

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Project Number 25790.00	
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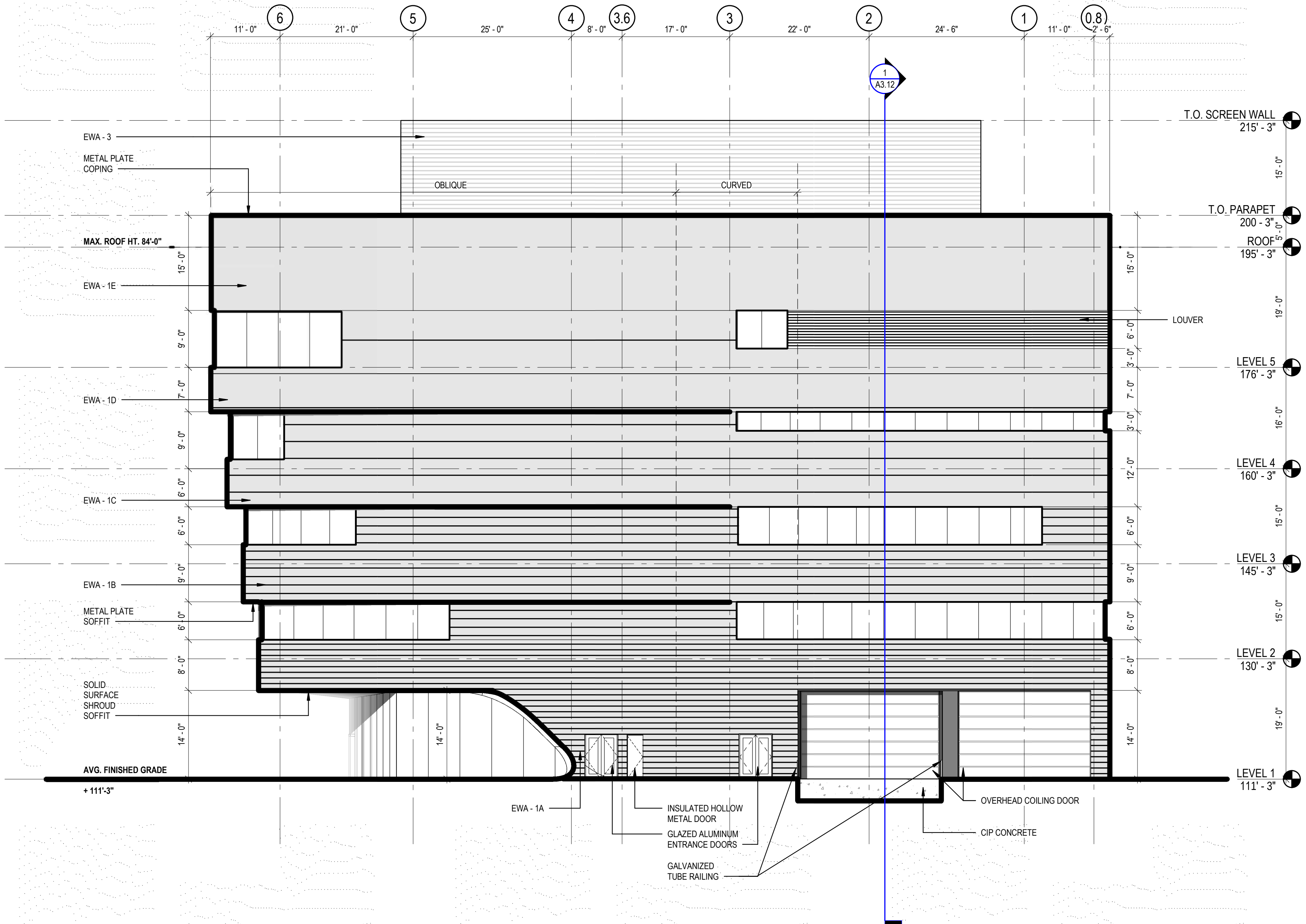
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Civil Engineer VHB 99 High St #10 Boston, MA 02110 Tel: 617-728-7777	Structural Engineer McNamara Salvia 101 Federal St #1100 Boston, MA 02110 Tel: 617-737-0040
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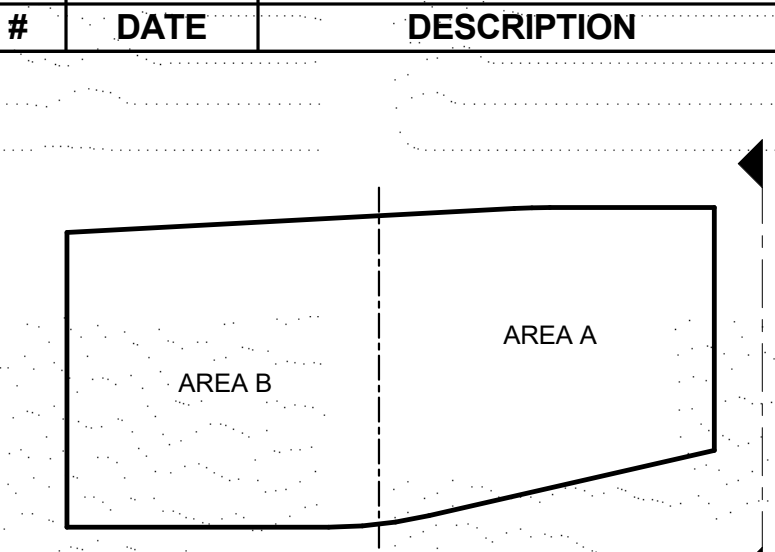
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Code Consultant Jensen Hughes 1 Lincoln Street Boston, MA 02111 Tel: 617-620-8900	Equipment Consultant C/W Design Group 57 Bedford St, Ste 207 Lexington, MA 02420 Tel: 781-274-7275
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20 Park Plaza
Boston, MA 02116
Tel: 617-350-5040



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NEEDHAM SATELLITE PROJECT
SCHEMATIC DESIGN

NORTH EAST ELEVATION

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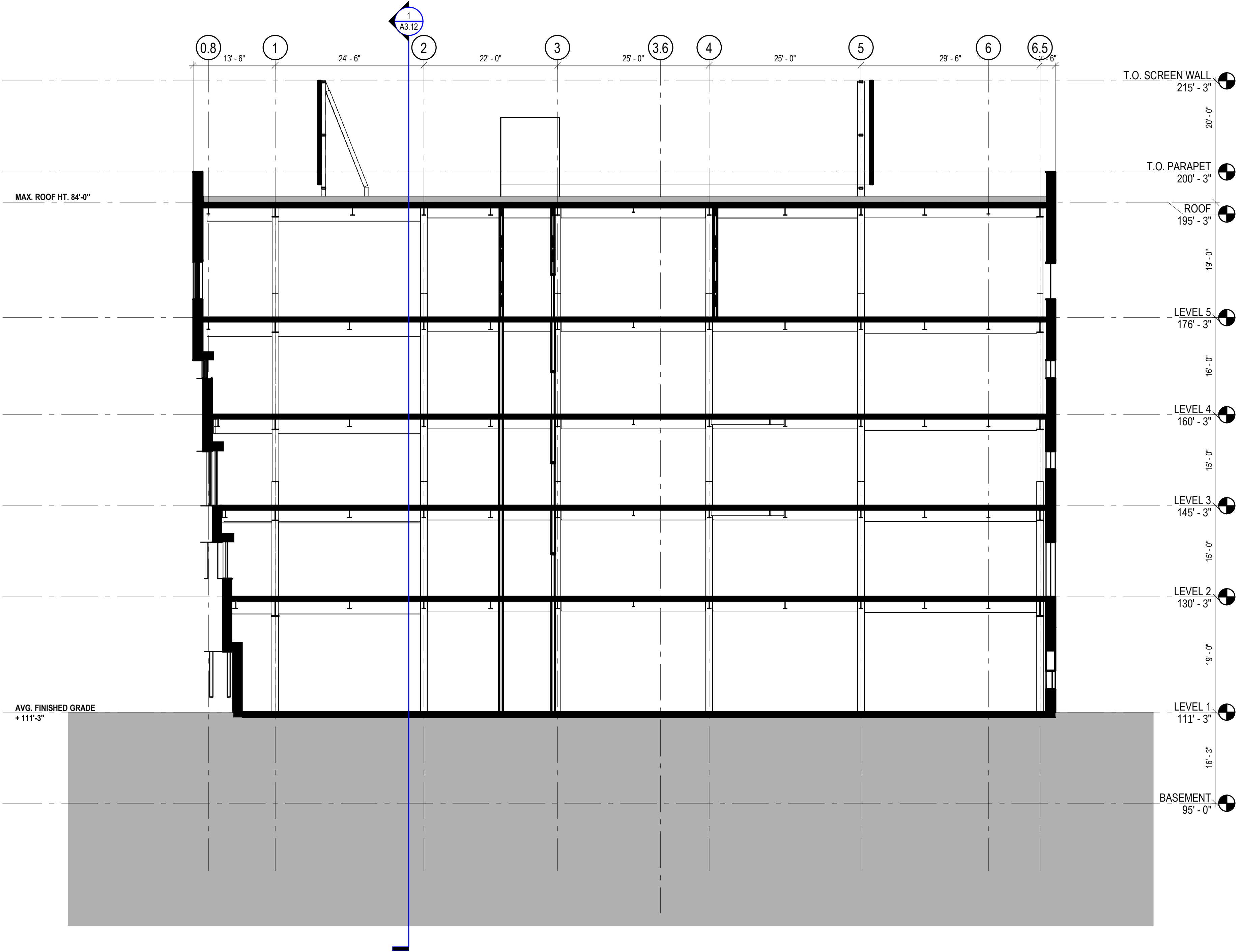
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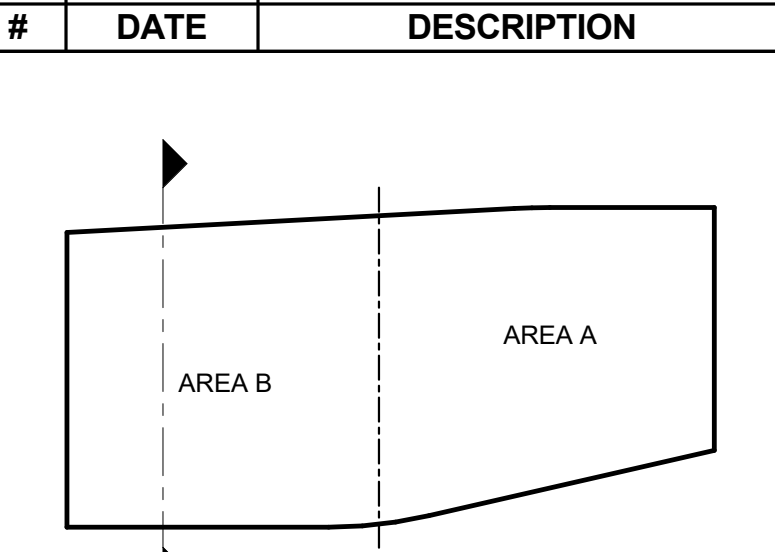
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NEEDHAM SATELLITE PROJECT
SCHEMATIC DESIGN

BUILDING SECTION - EAST
WEST

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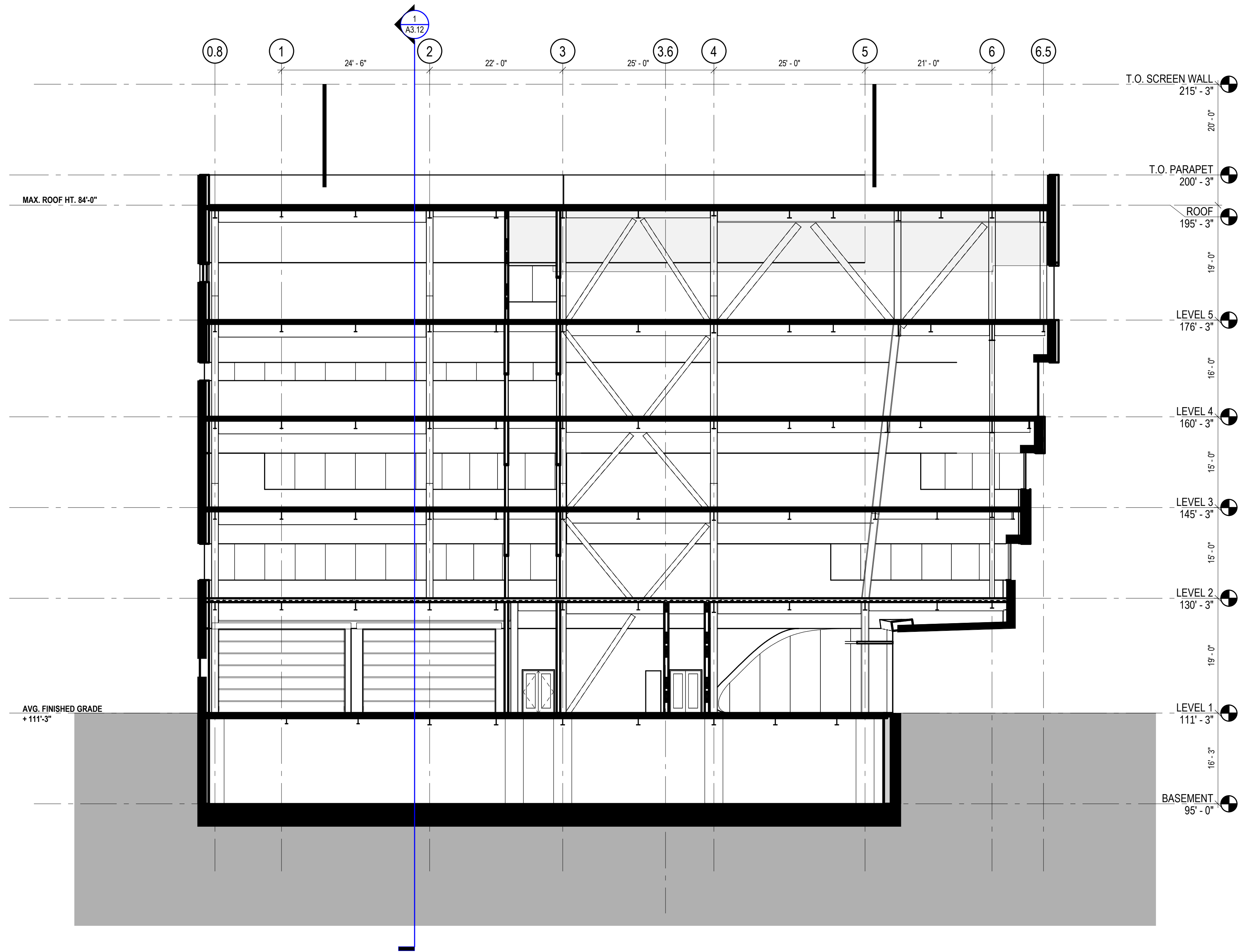
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HVAC/Elec/LV Engineer BR+A 10 Guest St 4th Floor Boston, MA 02135 Tel: 617-254-0016	Plumbing/FP Engineer RW Sullivan 526 Main St #203 Boston, MA 02129 Tel: 617-523-8227
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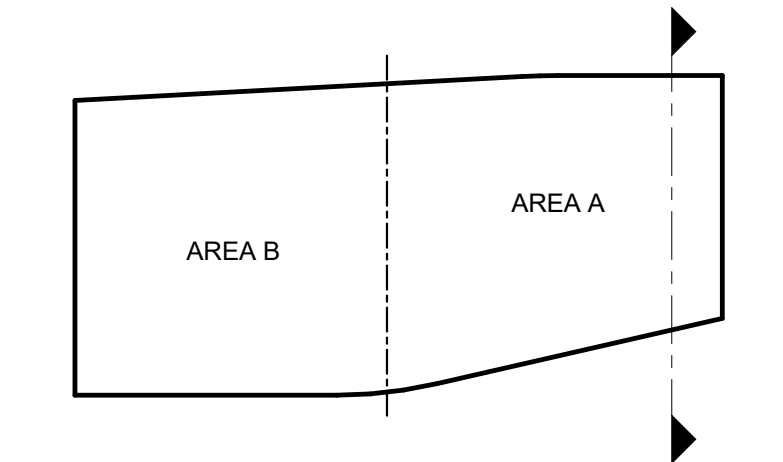
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Parking Structure
Walker Consultants
20 Park Plaza
Boston, MA 02116
Tel: 617-350-5040



NOT FOR CONSTRUCTION

#	DATE	DESCRIPTION
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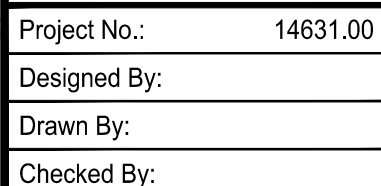
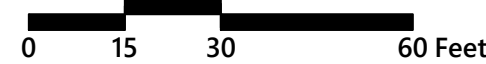


NEEDHAM SATELLITE PROJECT
SCHEMATIC DESIGN

BUILDING SECTION -
EAST/WEST AT DROP OFF

Drawing Scale 3/32" = 1'-0"	
Project Number 25790.00	
Date Issued 12 JUNE 2020	

A3.12



Boston Children's Hospital New Pediatric Medical Facility at Founders Park

Needham, Massachusetts

PREPARED FOR

Boston Children's Hospital
300 Longwood Avenue
Boston, MA 02115
617.355.6000

PREPARED BY



99 High Street, 10th Floor
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October 7, 2020

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1

Introduction

Boston Children's Hospital (hereinafter referred to as "Boston Children's" or "BCH" or "the Hospital") is the nation's premier pediatric academic medical center with a commitment to being the worldwide leader in the advancement of children's health. Boston Children's Hospital is the #1 ranked pediatric hospital in the nation for the seventh year in a row according to U.S. News & World Report's 2020-21 Best Children's Hospitals Honor Roll. It is home to the world's largest pediatric research enterprise, and it is the leading recipient of pediatric research funding from the National Institutes of Health.

Founded in 1869 as a 20-bed hospital for children, Boston Children's has grown significantly and has a legacy of firsts that have improved the practice of pediatric care across the world. For over 150 years, Boston Children's Hospital has maintained the same vision: to advance pediatric care worldwide. To support this vision, the Hospital's four-part mission is to:

- provide the highest quality of health care
- lead the way in research and discovery
- educate the next generation of leaders in health care
- enhance the health and well-being of the children and families in our local community

In order for Boston Children's to continue delivering premier care, research and teaching on which it has built its reputation and address its growth in patients and employees, it is imperative that the Hospital increases its clinical care capacity within the surrounding local communities, as well as its supporting office and administrative space requirements. For this reason, Boston Children's is looking to develop a new Pediatric Medical Facility in the

Founders Park Development (formally known as the Center 128 Development) of Needham, MA to help fulfill this vision (the Project).

As described in detail later in this study, the Founders Park development is an approved development. BCH is looking to acquire three sites within a portion of Founders Park (formally known as the Center 128 West) and modify the approved use of one of those sites from general office to a pediatric medical facility.

This Transportation Impact and Access Study (TIAS) provides an evaluation and summary of the Project's transportation elements, including a comparison of the expected transportation impacts of the Proposed BCH Project versus the Approved Project. It includes an analysis of estimated trip generation characteristics and qualitatively describes anticipated parking conditions, loading and service activities, drop-off amenities, and other important transportation mitigation and improvement actions that will be provided in connection with the Project. The purposes of these analyses are to:

- Describe the transportation-related characteristics of the Project;
- Quantify the transportation impacts that will be generated by the Proposed Boston Children's Project and compare those impacts to the Approved Project;
- Develop a set of mitigation strategies and traffic improvement measures that will help to lessen the transportation effects of the proposed Project, if needed; and
- Demonstrate that these transportation mitigation efforts will serve as exceptional public benefits as they relate to transportation issues.

The sections below provide an overview of the Project and a summary of findings of the transportation analysis. Subsequent sections provide a more detailed discussion of estimated traffic generation of the Project and comparison of those estimates to the Approved Project. The final section of the chapter presents a detailed summary of transportation mitigation and improvement actions that Boston Children's is committed to implementing in connection with the Project.

1.1 Project Site Overview

The proposed Site is located within the Founders Park development (formally known as the Center 128 Development), which comprises approximately 41 acres within Needham Crossing's commercial zone. The full development is roughly bounded by A Street to the north, Second Avenue and Fourth Avenue to the east, B Street to the south, and First Avenue and I-95/Route 128 to the west, as illustrated in **Figure 1**. Highland Avenue to the north and Kendrick Street to the south are the main arterial roadways providing vehicle access to the Site. In total, the approved development includes four new office buildings and two renovated office buildings totaling approximately 1,160,000 square feet, a 128-room hotel and a 180-room hotel with about 20,000 square feet of retail space, and a residential building with 390 units. A total of 4,879 parking spaces will be provided within the site, among the approximately 41 acres of land, allocated among three garages containing 4,101 spaces and 778 surface spaces.

As shown in **Figure 2**, four development sites within the total Founder's Park development are still undeveloped and one is unoccupied, as of October 2019. Three of the undeveloped sites (all permitted as office buildings) are located in Center 128 West and one undeveloped site and one unoccupied site (the unoccupied site is permitted as office and the other undeveloped site is permitted as an 180-room hotel with about 20,000 square feet of retail) are located in Center 128 East. In the full build condition, BCH is looking to develop the three sites (380 First Avenue, 37 A Street, and 2 B Street) in Center 128 West and modify the approved land use to a combination of pediatric medical facility for 380 First Avenue and general office for 37A Street and 2 B Street.

This Study refers to the Founders Park development as described in the Supplement Draft Environmental Impact Report (SDEIR) submitted to the Massachusetts Environmental Policy Act (MEPA) Office on August 31, 2015. The Founders Park site was separated into three components for the filing/permitting purposes: Center 128 West, Center 128 East, and the Second Avenue Residences. The Founders Park development received its MEPA certificate on November 16, 2015.

MassDOT's Section 61 Findings for the Center 128 project included mitigation measures at specific intersections, transportation demand management (TDM) measures, and transportation monitoring programs (TMP). Below is a summary of the commitments that have been made in connection with the Approved Project.

1.1.1 Mitigation and Infrastructure Improvements

In connection with the Approved Project, area infrastructure commitments were delineated and committed via Town approvals and Section 61 Finding. These include:

- Highland Avenue/First Avenue Intersection: Designed to be signalized as part of the MassDOT planned Highland Avenue corridor improvement project and to be coordinated with Highland Avenue/Second Avenue. The signalization will also allow for a more efficient left turn from First Avenue to Highland Avenue.
- Highland Avenue/Second Avenue Intersection: Designed for geometric and traffic signal modifications as part of the Highland Avenue corridor improvement project. The design will include upgraded signal equipment to accommodate the new lane configuration of the intersection, including dedicated left turn lanes on both Highland Avenue approaches. Second Avenue will maintain a left turn lane and a shared left/through lane and an exclusive right turn lane.
- Kendrick Street/Third Avenue Intersection: Traffic signal timing adjustments implemented as part of the recent Route 128 Add-A-Lane project.
- Kendrick Street/Fourth Avenue Intersection: The Proponent will contribute one million dollars to the New England Business Center Owner's Association to be used to address existing traffic issues. The intersection is not under MassDOT jurisdiction.
- Occupancy of all newly constructed buildings must follow the completion and operation of the I-95 NB off-ramp and I-95 SB on-ramp at Kendrick Street.

1.1.2 Status of Mitigation

As mentioned previously, the Founders Park Development included various transportation mitigation commitments. The current status of these commitments is outlined below in **Table 1**.

Table 1 Status of Founders Park Transportation Improvement and Mitigation Commitments

Mitigation Commitment	Current Status
Add-A-Lane Project, I-95 NB off-ramp and I-95 SB on-ramp at Kendrick Street	Completed
Signalization of Highland Avenue/First Avenue	Completed
Coordination with of timings at the intersections of First Avenue and Second Avenue along Highland Avenue	Completed
Kendrick Street/Third Avenue signal timing adjustments	Completed
Upon issuance of the building permit for the first office building to be constructed, the Proponent will contribute to the Town of Needham a Traffic Improvement Fee of \$930,000	Completed
Contribute to the Town of Needham an additional \$75,000 for use by the town to hire a traffic engineer to evaluate traffic measures that should be implemented to improve traffic conditions in the immediate area of Needham Crossing	Completed
Contribute \$1,000,000 to the New England Business Center Owner's Association (i.e., Needham Crossing Improvement Corporation) available to be used to address traffic issues serving the New England Business Center	Completed
Provide a bike share program for the New England Business Center	Completed
Contribute \$100,000 to fund new ingress and egress signs for the New England Business Center	Completed

Source: Section 61 Finding dated April 19, 2016

1.1.3 TDM Commitments

In addition to intersection improvements, the Approved Project included a comprehensive array of proactive TDM commitments aimed at further encouraging the use of alternative modes of transportation. These actions include:

- Appointed TDM Program Coordinator to oversee the program.
- Joined the 128 Business Council TMA.
- Provide a commuter information website and commuter information centers in each of the buildings on campus.

- Promote transit use to hotel guests on their website.
- Provide a shuttle bus service for employees of TripAdvisor.
- Provide 287 bicycle parking spaces.
- Provide on-site locker rooms and showers for employees.
- Participate in Zagster bicycle sharing program.
- Offer staggered and flexible work hours to reduce peak hour trips.
- Work with MassRIDES to promote ride matching and van pool programs.
- Provide information to MassRIDES in tenant's rental agreements.
- Offer on-site commuter events to promote alternative travel.
- Work with the 128 Business Council to facilitate on-site shuttle bus access.
- Offer on-site amenities for employees and residents to reduce mid-day trip making.

1.1.4 TMP Commitments

The Approved Project's TMP commitments are summarized below.

- The Proponent will conduct a post-occupancy transportation monitoring study of the project consisting of 24-hour continuous automatic traffic recorder (ATR) counts throughout the study area. The monitoring will commence three months (to coincide with the submission of the GHG Self Certification) after the opening of the Kendrick Street ramps and will continue for a period of five years after full occupancy. The monitoring plan will include:
 - The Highland Avenue/First Avenue intersection
 - The Highland Avenue/Second Avenue intersection
 - The Kendrick Street/Third Avenue intersection
 - The Kendrick Street/Fourth Avenue intersection
 - Site Driveway/B Street
 - Site Driveway/A Street
 - Site Driveway/First Avenue
- The Proponent will also circulate employee surveys to determine commuting modes, transit ridership, bicycle parking utilization, vanpool/carpool performance, and parking demands. The results of the data collection will be summarized in reports to be provided to MassDOT on an annual basis. The goal of the monitoring program will be to evaluate the assumptions made in the Transportation Analysis and identify the effectiveness of the project mitigation measures and TDM program.

1.2 Summary of Findings

The traffic generated by the Proposed BCH Project is estimated to total 713 trips during the morning peak hour (551 entering and 162 exiting), and 789 trips during the evening peak hour (204 entering and 585 exiting). Compared to the Approved Project (as described in the 2015 DSEIR), with the BCH Project in place, the site is expected to generate only four additional trips during the morning peak hour (35 more entering trips and 31 less exiting trips), and 90 additional trips during the evening peak hour (50 less entering trips and 139 more exiting trips). A comparative analysis of estimated Project trip generation in the context of current, counted traffic conditions versus the trip generation quantified for the Approved Project is presented in detail later in this document. This analysis uses traffic count data representing the actual traffic generated by the Founders Park Development in Fall 2019 (typical peak period traffic activity prior to the ongoing Covid-19 pandemic). These counts indicate that actual trip generation associated with constructed and occupied buildings within the development is, on average, about 250 fewer trips during the peak hours than the trip estimates that were previously calculated and presented in the Approved DSEIR.

The four Highland Avenue and Kendrick Street study intersections experience minor levels of congested conditions under 2019 conditions. As currently contemplated, the Project will be constructed in phases over time with only the Pediatric Medical Facility at 380 First Street to be constructed in the first phase. The trips associated with this first phase of the Project result in similar traffic operations to those of the Approved Project. The incremental increase in trips above that of the Approved Project will occur in the subsequent phases. While the full build out of the BCH Project is expected to be sufficiently accommodated at the study intersections with the previous mitigation commitments described above, it is the Proponent's desire and intention to further improve traffic operations along the southbound approach at Third Avenue and Kendrick Street. At this location, traffic operations concerns have been observed exiting the site during the evening peak. Options to improve this location include modifying the signal phasing and timings or increasing the storage capacity of the right turn lane. All other intersection locations are projected to experience similar or improved operations compared to the Approved Project, and as summarized previously in the SDEIR.

On-site parking will be adequate to accommodate the expected patient and employee demand of the Proposed Project. The proposed parking ratio for the Pediatric Medical Facility was conservatively calculated to be one parking space per 290 SF of floor area, or 3.45 spaces per 1,000 SF. This ratio will be applied to the first site to be developed, 380 First Avenue (224,000 SF), which produces an estimated parking need of 773 spaces. This parking demand will be accommodated by expanding the existing parking garage by 530 spaces at 380R First Avenue (Garage B) and constructing an interim surface parking lot with 105 spaces at 37 A Street. Additionally, there is currently a surplus of 264 spaces at the Property (i.e., 264 spaces greater than what is required under zoning for the all uses at the Property). Accordingly, the parking to be constructed, together with 138 of the existing surplus spaces, is sufficient to satisfy the parking demand. Consistent with the previously approved Founder's Park approach, a ratio of one space per 300 SF of floor area will be applied to the office space at the remaining two parcels of 37 A Street and 2 B Street (a total of 228,000 SF). The estimated parking need for the two office buildings is 760 spaces. The full build out of

the three sites will require approximately 1,533 spaces. This demand will be met by the existing and expanded parking garage at 380R (Garage B) and a proposed 925-space garage at 400R First Avenue (Garage A) within the site area that is permitted under existing Project approvals.

Children's is also exploring a wide array of TDM measures to offer as a means to reduce single occupant driving and increase use of alternative forms of transportation to access the workplace. Due to the nature of the services provided and the patient's age, it is expected that patients will arrive almost entirely via vehicle. These measures focus on employees commuting to the Site. Children's actively supports efforts to reduce auto use for employees traveling to the Hospital.

- Providing an Employee Transportation Advisor who will coordinate with the 128 Business Council;
- Providing shuttle service connectivity to nearby public transportation nodes (commuter rail and Green Line)
- 50 percent transit pass subsidy for employees;
- Carpool assistance and incentives;
- Emergency ride home;
- Bicycling/walking incentives and amenities;
- Telecommuting and compressed workweeks, when feasible;
- Display in the Main Lobby transportation-related information for employees, patients and visitors; and
- Promotional efforts.

2

2019 Baseline Condition

The 2019 Baseline Condition describes the existing characteristics of the site study area. As of October 2019 (time of the traffic data collection), five parcels within Founders Park had not yet been developed. Three of the undeveloped parcels (all permitted as office buildings) are located within Center 128 West and two of the undeveloped parcels (one permitted as office and the other as hotel with retail) are located within Center 128 East, as shown in

Figure 2.

Center 128 West is served primarily by First Avenue, A Street, and B Street, and currently contains the 400 1st Avenue Building (occupied by TripAdvisor), 80 B Street (Residence Inn by Marriott), and a 2,080-space parking garage (which has been designed and approved to be expanded to up to 2,600 spaces). Within Center 128 East, the unbuilt 180 room hotel/ 20,000sf retail site and the existing 89 A Street office building (SharkNinja) are adjacent to the proposed BCH parcels. North of the site area are other office building uses and south of the site area is the existing 9 B Street industrial facility (Coca-Cola Bottling Company).

Peak-hour turning movement counts (TMCs) were collected at study intersections to identify current traffic flow characteristics along the major roadways serving the project study area, and automatic traffic recorder (ATR) counts were collected within Founders Park to quantify internal site-specific traffic on October 10, 2019.

For the purposes of this study, four intersections were analyzed to quantify traffic impacts to the external roadway network surrounding Founders Park:

1. Highland Avenue at First Avenue
2. Highland Avenue at Second Avenue
3. Kendrick Street at Third Avenue
4. Kendrick Street at Fourth Avenue

A common traffic engineering practice is to seasonally adjust the collected traffic volumes to account for seasonal variability during certain months of the year. October, when the traffic data were collected, is typically representative of average traffic volume conditions compared to the whole year. Therefore, the traffic volumes collected for this study were not seasonally adjusted.

The traffic volume data revealed the overall weekday peak hours for the study area network to be 8:00 – 9:00 AM and 4:45 – 5:45 PM, forming the basis for the hourly volumes in this study.

Figure 3 and **Figure 4** reflect the 2019 Baseline Condition weekday morning and evening peak hour traffic volumes at the study area intersections, respectively.

An analysis of existing traffic operations surrounding the Founders Park site is presented later in the Traffic Operations Analyses section of this document.

3

Project Change Description

As mentioned previously, BCH is pursuing the acquisition and development of the three unbuilt development sites and supporting parking garage site located within Center 128 West portion of the approved Founders Park development. These development sites include 380 First Avenue, 37 A Street and 2 B Street. The changes to the proposed Founders Park development are related to the BCH Proposed Project, including building size and planned use. The only change impacting trip generation is the update of the building use of 380 First Avenue. Each of these sites were permitted as general office within the Approved Development. As BCH is a healthcare provider, the building uses are proposed to be modify into a combination of pediatric ambulatory center and general office.

Table 2 outlines the program comparison.

Table 2 Comparison of Permitted and Proposed Use

Address	Permitted ¹		Proposed ²	
	Use	Size	Use	Size
380 First Avenue	Office	189,509 SF	Pediatric Ambulatory Center	224,000 ³ SF
37 A Street	Office	135,000 SF	Office	101,000 SF
2 B Street	Office	127,145 SF	Office	127,000 SF
Program Total		451,654 SF		452,000 SF
380R First Avenue	Parking	2,600 Spaces	Parking	2,600 ⁵ Spaces
400R First Avenue	Parking	925 Spaces	Parking	925 Spaces
Parking Total⁴		3,525 Spaces		3,525 Spaces

¹Source: Center 128 SDEIR submitted to MEPA on August 15, 2015

²Source: Source: BCH

³Up to 224,000 SF of Pediatric Ambulatory Center, a portion may be general office/admin space

⁴General parking in Founders Park

⁵Represents both the existing 2,080 spaces and the proposed 5th Bay expansion, which includes 520 spaces as a component of the Project

As identified in **Table 2**, up to 224,000 SF of building space is proposed to be modified from general office space to Pediatric Medical Center. Note that the proposed increase in square footage on the 380 First Avenue parcel would be offset by a commensurate reduction in square footage on the 37A Street parcel. Total proposed square footage will not increase in connection with the Project. Further, the total number of parking spaces to be constructed is also not anticipated to change.

The Proposed BCH Project site plan is illustrated in **Figure 6**.

3.1 Proposed Site Parking

3.1.1 Interim Parking Plan

The first phase of the Project includes the construction of only the 380 First Avenue Building. To support the trips generated by this component of the Project, the Proponent will construct the previously approved addition onto the existing garage located at 380R First Street (Garage B). Currently, this garage has four bays and approximately 2,080 parking spaces. The garage will be expanded by 530 parking spaces to the planned five-bay dimension, as currently approved. In addition to the garage expansion, BCH also plans to utilize 138 of the 264 surplus parking spaces in the existing portion of Garage B (i.e. 264 spaces greater than what is required under zoning for all the uses at the Property), and constructing a temporary 105-space surface lot at 37 A Street. These spaces are expected to support the initial phase of development and will result in this initial building complying with minimum parking needs per Town of Needham zoning requirements.

3.1.2 Full Build Parking Plan

The full build out of the Project will include 380 First Avenue as a Pediatric Medical Facility and both 37 A Street and 2 B Street as office buildings. Once fully constructed, the BCH development will be supported by the two parking garages already included within the Approved Development. In addition to the garage expansion completed in the interim parking plan to support the development at 380 First Avenue, a new 925-space parking garage, located immediately to the south of the aforementioned garage, at 400R First Avenue (Garage A) which is not needed for the future development and occupancy of Center 128 East. These additional approved 925 parking spaces will support the full build out of the BCH Project and the continued growth of the campus.

3.2 Parking Analyses

A key element needed to support a premier arrival experience is ensuring that adequate parking is provided to accommodate expected patient and employee demands. The Project is required to accommodate all parking on-site and the goal of the study was to ensure the parking ratio is appropriate to accommodate expected demands and limit any unintended parking and traffic impacts.

During the rezoning process for the Project, a suitable parking ratio was developed for the Pediatric Medical Center space. A parking analysis memo has previously been submitted to the Town of Needham, which was peer reviewed. The proposed parking ratio for Pediatric Medical Facility land use was calculated to be one parking space per 290 SF of floor area (or 3.45 spaces per 1,000 sf). This parking ratio, along with the Pediatric Medical Facility use has been accepted and adopted by the Town and has been adopted into their Zoning Bylaw via Town Meeting approval in May 2020. The parking analysis memo and associated peer review is attached in the Appendix.

3.2.1 Proposed BCH Parking Need

As mentioned previously, providing adequate on-site parking needed to accommodate the expected patient and employee demand is a key element of the Proposed Project. The above approved parking ratio will be applied to the first parcel to be developed, 380 First Avenue (224,000 SF), which produces an estimated parking need of 773 spaces. Consistent with the previously approved Founder's Park approach (and as required per Zoning), a ratio of one space per 300 SF of floor area will be applied to the office space at the remaining two parcels of 37 A Street and 2 B Street (a total of 228,000 SF). The estimated parking need for the two office buildings is 760 spaces. The full build out of the three parcels will need approximately 1,533 spaces which will not affect the parking required for the Center 128 East future development and occupancy.

3.3 Proposed Site Access

Overall site access will not change from the Approved Project for each parcel. The three sites will be primarily served by First Avenue, A Street, B Street, and Third Avenue. With the exception of Third Avenue, these roadways provide access to the internal drives between the parcels, labelled New Way and Founders Drive in **Figure 5**.

380 First Avenue will be the first parcel developed. This will be the primary healthcare building for BCH Needham's campus. As such, the building will need to be supported by a dedicated patient drop-off at its main entry to accommodate patients who need direct access to the facility's front door. The drop-off will have an access driveway along Founders Drive and an egress driveway along New Way. All other drivers are anticipated to self-park and will utilize the 380R First Avenue garage (Garage B).

The other two building sites will be administrative office buildings supporting BCH and the 380 First Avenue building. 37 A Street will have a driveway constructed along A Street, which will provide entry to approximately 27 surface parking spaces and a connection to the existing 380R First Avenue garage. 2 B Street will be accessed via its front door with parking primarily in the 400R First Avenue garage. The three proposed buildings will share the New Way and Founders Drive infrastructure as well as the parking garages.

As this will be a Pediatric Medical Center, nearly all patients are expected to arrive with a parental guardian and most trips are expected to go directly to self-park in one of the parking garages. The strong pedestrian connections, including raised crosswalks will connect the parking facilities to the BCH facilities. These connections are illustrated in **Figure 6**.

3.4 Proposed Site Loading and Service

380 First Avenue will be supported by its own internal loading dock with an access driveway to be constructed on the eastern side of the building along Founders Drive. The loading platform will serve delivery vehicles and trucks. Adjacent to the loading dock is a dedicated ambulance loading area and access into the building for those patients who require special transportation to/from the building. The design of the driveway allows for clear sight lines

to maintain pedestrian visibility while crossing the driveway. The location of the loading dock driveway and ambulance access can be seen on **Figure 6**.

4

Trip Generation Analysis

The following section presents a summary of the trip generation analysis conducted to estimate the future trip making characteristics of the Project. As a starting point, a summary of the trip generation from the Founders Park SDEIR is presented. A Founders Park trip generation comparison is then presented. As many of the Founders Park buildings are already constructed/occupied, the Project team was able to conduct traffic counts and compare the estimated/permitted trips versus the actual trips generated. The BCH Proposed trip generation is then estimated in the context of current traffic conditions on site. When the BCH Proposed Project is added to the unbuilt Center 128 East office and hotel/retail trip generation, it produces the updated total development estimated trip generation. Finally, a comparison between the approved trip generation and the proposed trip generation estimates is presented. This trip generation process and trip generation estimates have been peer reviewed and approved through the Town's planning and re-zoning process. The trip generation memo developed by VHB and associated peer review is provided in the Appendix.

4.1 Approved Development Trip Generation Summary

The previously approved Founders Park trip generation for the morning and evening peak hours is presented below in **Table 3** and **Figure 7**. As described in the SDEIR, trip estimates are based on the standard Institute of Transportation Engineers (ITE) trips rates and methodology published in ITE's *Trip Generation Manual*, 9th edition.

Table 3 Approved Founders Park Trip Generation

Location	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Center 128 West	789	130	919	177	714	891
Center 128 East	517	93	610	151	485	636
Second Ave. Residences	32	129	161	125	67	192
Total	1,338	352	1,690	453	1,266	1,719

Approved Trips taken from SDEIR submitted to MEPA on August 15, 2015

4.2 Approved Development Trip Generation vs. Actual Counts

ITE trip generation estimates are generally conservative in estimating the actual number of trips generated by a development, and thus, can result in a higher trip generation estimate than the actual volumes generated by that development once built and occupied. In the case of Founders Park, as many of the buildings have been constructed and occupied, the Project team was able to conduct traffic counts and compare the estimated/permitted trips vs the actual trips generated. Counts were collected on October 10, 2019 using ATRs set up at each parking garage and parking lot entrance. The actual/counted trips were then compared to the estimated/permitted trips, accounting for only sites that are built and occupied. The sites that were unbuilt/unoccupied during the time of the counts include 380 First Avenue, 37 A Street, 2 B Street, 156 B Street, and 189 B Street. A summary of this comparative analysis is provided in **Table 4** and **Figure 8**.

The results of these counts indicate that the trips as approved in the SDEIR overestimate the actual number of trips generated by Founders Park under current 2019 conditions. There are multiple factors that likely drive this measured outcome, including the following:

- *ITE Trip Generation Manual* provides for a conservative quantification of future, anticipated trip making of compiled land uses in their reference documents
- Some employees choose to travel to work outside of traditional commuter peak periods
- Some percentage employees elect to work alternative work shifts (i.e. three or four-day weeks), work from home, etc.

Table 4 Comparison of Actual Trips and Estimated Trips

	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Estimated Trips¹	750	249	999	282	680	961
Actual Trips²	630	110	740	105	611	716
Difference (Actual - Approved)	(-120)	(-139)	(-259)	(-177)	(-69)	(-245)
% Difference	(-16%)	(-56%)	(-26%)	(-63%)	(-10%)	(-26%)

¹Estimated Trips taken from SDEIR submitted to MEPA on August 15, 2015, subtracting out trips generated by unconstructed buildings (380 First Ave, 37 A St, 2 B St, 156 B St, 189 B St)

²Actual trips from counts conducted on October 10, 2019

As summarized in **Table 4**, the results of these counts indicate that the trips, as approved in the SDEIR, are a very conservative estimation of the actual number of trips generated by Founders Park. During the morning peak and evening peak commuter periods, actual trip making was determined to be about 26 percent lower than that characterized during the permitting effort in 2015. The constructed/occupied buildings on-site are not producing trips at the permitted rate and actual trips to the site are below the permitted estimates.

4.3 Proposed BCH Project Trip Generation

The Proposed Project trips are based on the latest ITE *Trip Generation Manual* (10th Edition). There is no pediatric ambulatory land use within the ITE *Trip Generation Manual*. Therefore, a more detailed study of what comprises this land use was conducted in order to find a comparable land use with trip generation data within the ITE *Trip Generation Manual*. Upon further research, it was determined that the medical-dental office building and hospital land uses would be most appropriate in estimating the number of trips generated by a pediatric ambulatory center. As defined by the ITE *Trip Generation Manual*, 10th Edition, a medical-dental office building is "a facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care" and a hospital is "any institution where medical or surgical care and overnight accommodations are provided to non-ambulatory and ambulatory patients." A combination of the medical-dental office building and hospital uses as outlined below were determined to provide the most accurate representation of the pediatric ambulatory center use for the Proposed Project. The trips associated with the office portion of the Project are an incremental increase in total office square footage within the Center 128 West development area. To calculate the estimated trips associated with the office portion of the Project, the total office square footage of Center 128 West was used (including 400 First Avenue, 37 A Street, and 2 B Street). Then, to understand the number of trips associated with the BCH Project only, the trips associated with 400 First Avenue are subtracted from the total number of office trips, leaving the incremental trips between the existing building and the proposed total development. The estimated trips for each building are outlined in **Table 5** below. It is assumed that all medical trips will use a 100 percent auto mode share, and consistent with the previously approved SDEIR, all office uses will assume a 90 percent auto mode share.

Table 5 Estimated Proposed BCH Project Trip Generation

Address	Proposed Use	ITE Land Use Code	SF	Estimated Auto Trips					
				AM Peak			PM Peak		
				Enter	Exit	Total	Enter	Exit	Total
380 First Avenue	Pediatric Ambulatory Center	Medical-Dental Office Building	112,000	243	68	311	109	279	388
		Hospital	112,000	142	67	209	62	132	195
37 A Street	Office	General Office Building	121,000	81	13	94	16	85	101
2 B Street	Office	General Office Building	127,000	85	14	99	17	89	106
Total			452,000	551	162	713	204	585	789

4.4 Permitted vs Proposed Trip Generation Comparison

A comparison of the approved 2015 SDEIR trip estimates and the proposed Founders Park with BCH trip estimates is shown below. The trips associated with the proposed Founders Park with BCH are estimated by various sources:

- Actual/counted trips from the constructed Founders Park buildings (**Table 4**)
- BCH Trip Generation (**Table 5**)
- Unbuilt and unoccupied Center 128 East office and hotel/retail (estimate from 2015 SDEIR)

The BCH trips and unbuilt and unoccupied Center 128 East office and hotel/retail were added to the actual counted trips to provide a comparison of future anticipated trip making to the original 2015 SDEIR forecast. Consistent with the original 2015 SDEIR, the unbuilt and unoccupied sites in Center 128 East are estimated using the 9th Edition of the ITE *Trip Generation Manual*. **Table 6** and **Figure 9** provide a comparison of the trip generation estimates for the Proposed BCH Project to the approved SDEIR program.

Table 6 Trip Generation Comparison

Time Period & Direction	Approved Project ¹	Proposed Project ² +Actual Trips ³	Difference
Morning Peak Hour			
Entering	1,338	1,373	35
Exiting	<u>352</u>	<u>321</u>	<u>(-31)</u>
Total	1,690	1,694	4
Evening Peak Hour			
Entering	453	403	(-50)
Exiting	<u>1,266</u>	<u>1,405</u>	<u>139</u>
Total	1,719	1,809	90

¹Approved trips taken from SDEIR submitted to MEPA on August 15, 2015

²ITE Trip Generation Manual 10th Edition used for trip generation estimates per BCH program as previously noted

³Actual trips from counts conducted on October 10, 2019, also includes estimated trips associated with the unbuilt office and hotel/retail in Center 128 East using the ITE Trip Generation Manual 9th Edition

As shown in **Table 6** and **Figure 9**, the Proposed BCH Project is expected to have generally similar trip generation characteristics when compared to the Approved Project, dependent on the time period and directionality. During the morning peak hour, the Proposed BCH Project is expected to generate four more trips than the permitted estimate in the 2015 SDEIR. During the evening peak hour, the Project has been estimated to generate 90 more trips than the permitted estimate in the 2015 SDEIR.

4.5 Trip Distribution and Assignment

The approved trip generation traffic volumes shown in **Table 6** were used to develop a network depicting the traffic volumes distributed through each of the study intersections. The actual Founders Park trips compiled from the counts conducted in October 2019 and the trips associated with the unbuilt and unoccupied Center 128 East office and hotel/retail sites were subtracted from the approved trips to determine the remaining trips permitted/approved to be realized in the original SDEIR program. These trips represent the total project-generated trips for the Approved Project.

The trips were assigned to the study intersections according to the distribution and trip assignment developed in the 2015 DSEIR. **Figure 10** shows the distribution for trips associated with the office, hotel, and pediatric ambulatory center uses in the Center 128 West and Center 128 East development areas, as well as the separate distribution for trips associated with retail use in the Center 128 East development area. **Figure 11** and **Figure 12** show the resulting Approved Founders Park project-generated trips.

The Proposed BCH Project trip generation traffic volumes shown in **Table 5** and the distribution shown in **Figure 10** were used to develop the traffic volume networks depicting the Proposed BCH project-generated traffic volumes, shown in **Figure 13** and **Figure 14**.

5

Future Conditions

The 2019 Baseline Condition was compared to the two future build conditions, the Approved Project and the Proposed BCH Project, with the horizon year of 2026. This seven-year planning horizon is consistent with the method employed in the original DSEIR and conforms to MassDOT standards for the development of a TIA. The goal of this method was to create a comparison of traffic conditions between existing conditions, future conditions if the previously approved Founders Park development program were fully constructed, and future conditions if the proposed BCH development program is constructed.

Both future build scenarios account for other development projects expected to be completed and generating trips by 2026 in the Founders Park study area. Below presents a list of those other projects. The associated vehicle trips for these respective projects were estimated using ITE trip generation and added to both future build scenarios.

- 2 Wells Avenue (trips only associated with the unoccupied expansion of the project)
- 180 Wells Avenue
- Newton Nexus
- Northland Industrial (130 Charlemont)
- Northland Newton Development

The future trips associated with the unbuilt and unoccupied Center 128 East office and hotel/retail sites were included in both build conditions as other development project trips.

Both future build scenarios also include traffic volume growth in the study area due to general growth in the Greater Boston region. A 0.5 percent annual growth rate compounded over seven years was applied to the October 2019 traffic volumes. This annual growth rate is consistent with the rate also used in the 2015 DSEIR.

In addition to background growth and site-specific trips, future roadway improvements were included in both future scenarios. The intersection of Highland Avenue and Second Avenue are expected to be redesigned as part of the Highland Avenue/Needham Street Reconstruction Project, which aims to improve accommodations for all roadway users.

The Project is aware of the Highland Street Reconstruction Project. The First Street intersection, which is along the primary access route to the Site, has been reconstructed. Approximately 10-15% of the Project traffic is expected to arrive east of Second Street at Highland Avenue and is not expected to be adversely affected by this construction work. Construction at the Second Avenue intersection started in Summer 2020 and is expected to be completed before the construction of this Project. The final state conditions of the Highland Street intersections have been included in all scenarios of the traffic analysis.

5.1 2026 Approved Project Build Condition

The 2026 Approved Project Build Condition represents the 2019 Baseline Condition, plus the other planned development project trips, plus general traffic volume growth, plus the approved Founders Park project-generated trips (presented in **Figure 11** and **Figure 12**). The resulting scenario is a projection of traffic conditions seven years in the future if the previous Founders Park program were to be fully realized as permitted/approved. The total 2026 Approved Project Build Condition traffic volumes are depicted in **Figure 15** and **Figure 16**.

5.2 2026 Proposed BCH Build Condition

The 2026 Proposed BCH Build Condition represents the 2019 Baseline Condition, plus the other planned development project trips, plus general traffic volume growth, plus the proposed BCH development project-generated trips (presented in **Figure 13** and **Figure 14**). The total 2026 Proposed BCH Build Condition traffic volumes are depicted in **Figure 17** and **Figure 18**.

6

Traffic Operations Analyses

This section presents the transportation operations analyses for vehicular operations at study area intersections. These operations analyses provide a summary of transportation capacities and overall operations as they relate to delay and congestion.

The purpose of the analyses is to show the traffic impacts of the Proposed BCH Project relative to the Approved Project. If traffic impacts under the Proposed BCH Project are lower than or very similar to the traffic impacts of the Approved Project, then the Proposed BCH Project is not expected to require further mitigation measures than were permitted and approved under the previous project.

6.1 Level of Service and Delay Criteria

The evaluation criteria used to analyze area intersections in this traffic study are based on the 2000 *Highway Capacity Manual* (HCM) ¹.

Vehicle Level of Service (LOS) is a qualitative measure of control delay at an intersection providing an index to the operational qualities of a roadway or intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS A through D are considered acceptable, while LOS E indicates vehicles endure significant delay and LOS F suggests unacceptable delay for the average vehicle.

The LOS designations, which are based on delay, are reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection and LOS designation for overall conditions at the intersection. For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus, the LOS designation is for the critical movement exiting the side street, typically the left-turn out of the side street or site driveway.

6.2 Signalized Intersection Capacity Analyses

Table 7 presents a summary of the capacity analysis results for the signalized intersections in the study area. The complete results are included in the Appendix.

¹ Highway Capacity Manual; Transportation Research Board; 2000.

Table 7 Signalized Intersection Capacity Analysis Summary

Location	Peak Hour	Mov't	2019 Baseline Condition					2026 Approved Project Build					2026 BCH Proposed Project Build				
			v/c ¹	Del ²	LOS ³	Q50 ⁴	Q95 ⁵	v/c	Del	LOS	Q50	Q95	v/c	Del	LOS	Q50	Q95
Highland Avenue at First Avenue	AM	EB T	0.54	11	B	117	298	0.68	14	B	190	402	0.69	15	B	211	402
		EB R	0.50	5	A	0	22	0.73	9	A	4	51	0.78	10	B	4	#59
		WB T/R	0.37	6	A	48	123	0.46	10	A	139	m146	0.47	10	B	152	m144
		NB L	0.38	37	D	37	71	0.48	36	D	55	98	0.55	36	D	69	120
		NB T/R	0.09	35	C	5	36	0.19	34	C	16	55	0.28	33	C	28	73
		SB L/T/R	0.02	43	D	0	0	0.02	43	D	0	0	0.02	43	D	0	0
		Overall	0.52	9	A			0.71	13	B			0.75	14	B		
	PM	EB T	0.41	12	B	95	214	0.57	17	B	156	283	0.58	18	B	156	283
		EB R	0.12	3	A	0	12	0.18	3	A	0	14	0.22	3	A	0	16
		WB T/R	0.74	12	B	70	#525	1.00	39	D	396	m#673	1.02	42	D	396	m#657
		NB L	0.73	42	D	128	184	0.95	64	E	226	#376	1.04	89	F	~286	#443
		NB T/R	0.69	39	D	114	170	0.89	53	D	202	#341	0.98	73	E	237	#406
		SB L/T/R	0.01	43	D	0	0	0.01	43	D	0	0	0.01	43	D	0	0
		Overall	0.71	16	B			0.95	35	C			0.99	41	D		
Highland Avenue at Second Avenue	AM	EB L/T/R	0.51	4	A	25	14	-	-	-	-	-	-	-	-	-	-
		EB L	-	-	-	-	-	0.01	3	A	1	m0	0.02	3	A	1	m0
		EB T/R	-	-	-	-	-	0.62	6	A	312	38	0.63	6	A	301	41
		WB L/T/R	>1.20	8	A	66	142	>1.20	20	C	162	#243	>1.20	21	C	165	#255
		NB L	0.73	59	E	51	#112	0.65	47	D	52	#117	0.65	47	D	52	#117
		NB L/T	0.70	54	D	51	#108	0.63	45	D	53	#115	0.63	45	D	53	#115
		NB R	0.09	35	D	0	45	0.09	34	C	0	46	0.10	34	C	0	47
		SB L/T	0.54	50	D	14	35	0.39	44	D	15	37	0.39	44	D	15	37
		SB R	0.00	43	D	0	0	0.00	42	D	0	0	0.00	42	D	0	0
		Overall	0.71	12	B			0.90	17	B			0.91	17	B		
	PM	EB L/T/R	0.46	8	A	65	20	-	-	-	-	-	-	-	-	-	-
		EB L	-	-	-	-	-	0.07	4	A	2	m1	0.07	4	A	2	m2
		EB T/R	-	-	-	-	-	0.56	6	A	213	m31	0.56	6	A	217	m34
		WB L/T/R	0.68	12	B	145	189	0.97	34	C	~223	#402	0.99	40	D	~241	#423
		NB L	0.87	65	E	113	#190	0.89	70	E	118	#198	0.89	70	E	118	#198
		NB L/T	0.84	60	E	113	#185	0.86	63	E	117	#193	0.86	63	E	117	#193
		NB R	0.41	33	C	32	73	0.86	59	E	109	#174	0.92	70	E	120	#193
		SB L/T	0.72	61	E	38	#82	0.75	66	E	40	#86	0.75	66	E	40	#86
		SB R	0.01	40	D	0	0	0.01	40	D	0	0	0.01	40	D	0	0
		Overall	0.76	22	C			1.00	33	C			1.02	36	D		

Table 7 Continued Signalized Intersection Capacity Analysis Summary

Location	Peak Hour	Mov't	2019 Baseline Condition					2026 Approved Project Build					2026 BCH Proposed Project Build				
			v/c ¹	Del ²	LOS ³	Q50 ⁴	Q95 ⁵	v/c	Del	LOS	Q50	Q95	v/c	Del	LOS	Q50	Q95
Kendrick Street at Third Avenue	AM	EB L	0.84	65	E	244	326	1.09	107	F	~564	#793	>1.20	>120	F	~687	#923
		EB T	0.86	25	C	414	#1275	0.94	33	C	521	#1415	0.95	34	C	553	#1415
		EB R	0.03	3	A	0	8	0.03	4	A	0	8	0.03	4	A	0	8
		WB L	0.33	69	E	4	18	0.33	69	E	4	18	0.33	69	E	4	18
		WB T/R	0.49	29	C	193	#561	0.77	48	D	278	#714	0.79	49	D	288	#722
		NB L	0.20	62	E	8	22	0.20	62	E	8	22	0.20	62	E	8	22
		NB T/R	0.18	62	E	8	24	0.18	62	E	8	24	0.18	62	E	8	24
		SB L/T	0.64	62	E	89	67	0.71	66	E	103	75	0.74	68	E	112	81
		SB R	0.13	29	C	0	0	0.25	20	C	0	0	0.35	21	C	0	0
		Overall	0.78	31	C			0.91	47	D			0.97	56	E		
	PM	EB L	0.31	57	E	23	55	0.78	69	E	120	#228	1.09	>120	F	~193	#353
		EB T	0.48	16	B	154	468	0.53	18	B	178	#547	0.53	18	B	178	#547
		EB R	0.00	4	A	0	0	0.00	4	A	0	0	0.00	4	A	0	0
		WB L	0.38	68	E	4	18	0.38	68	E	4	18	0.38	68	E	4	18
		WB T/R	0.8	27	C	408	#983	1.06	75	E	616	#1215	1.07	78	E	623	#1222
		NB L	0.63	68	E	47	55	0.64	69	E	48	56	0.64	69	E	48	56
		NB T/R	0.04	56	E	2	11	0.04	56	E	2	11	0.04	56	E	2	11
		SB L/T	0.73	65	E	115	168	0.82	72	E	161	#243	0.88	81	F	172	#267
		SB R	0.24	42	D	0	47	0.97	75	E	340	#484	>1.20	>120	F	~600	#687
		Overall	0.70	29	C			0.99	60	E			1.09	85	F		

1 volume-to-capacity ratio for the critical movement

2 delay of critical approach only, rounded to the nearest whole second

3 level of service

4 50th percentile queue length, in feet5 95th percentile queue length, in feet

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; R = right; T = through, L = left

Under the 2019 Baseline Condition, each intersection operates overall at LOS C or better during the morning and evening peak hours. However, in both 2026 conditions, overall intersection operations worsen to LOS D or E (and in the case of Kendrick Street at Third Avenue, LOS F). Lower levels of service at study area intersections are due to both project and non-project-related factors. Kendrick Street at Third Avenue currently experiences the most congested traffic operations of the signalized intersections, with at least one movement on each approach during the morning and evening peak hours already operating at LOS E.

In general, the impact of the Proposed BCH Project on traffic operations at study intersections is equivalent to the impact of the Approved Project. However, the Proposed BCH Project generates more exiting traffic during the evening peak hour, which corresponds with some operations performing marginally worse than the Approved Project during this period.

6.2.1 Highland Avenue at First Avenue

The northbound First Ave approach out of the site area is most significantly impacted by the two future scenarios. The Proposed BCH Project produces a slight increase in delay at this

approach versus the Approved Project when compared to Baseline conditions during the evening peak hour. The resulting LOS E and F operations represent congested peak conditions on the approach for the Approved Project and Proposed BCH Project, respectively. However, overall intersection delay increases only six seconds from Approved conditions (despite a decrease from LOS C to LOS D, overall operations remain similar), and the other intersection approaches continue to operate at favorable peak hour conditions.

6.2.2 Highland Avenue at Second Avenue

The Proposed BCH Project has a minimal impact on traffic operations at this intersection compared to the Approved Project during both the morning and evening peak hours. The only movement where delay increases by more than six seconds is the northbound right turn during the evening peak hour only. The LOS E for this movement in the Approved condition remains the same under the Proposed BCH Project. While overall intersection operations again decrease from LOS C to LOS D, the overall intersection delay increases only three seconds from Approved conditions, indicating that overall operations remain similar during the evening peak hour. Again, other intersection approaches continue to operate at favorable peak hour conditions.

6.2.3 Kendrick Street at Third Avenue

During the morning peak hour, operations at each approach under both future conditions remain acceptable compared to Baseline Conditions with the exception of the eastbound left turn movement into the site. The Proposed BCH Project impacts this movement more than the Approved Project. Significant queues form along the single left turn lane under both future conditions, but average and maximum queues under the Proposed BCH Project are approximately five car-lengths longer. The additional delay to this movement primarily contributes to the worsening of overall intersection operations from LOS D to LOS E, and the overall delay increasing by nine seconds.

During the evening peak hour, the eastbound left turn lane experiences similarly high levels of congestion as the morning peak hour under both future conditions. However, the Proposed BCH Project generates average queues that are approximately three car-lengths longer and maximum queues that are approximately five car-lengths longer than what is observed in the Approved Project. It is worth noting that in both future conditions, queue lengths for this movement are approximately 70% shorter in the evening peak hour than in the morning peak hour.

The southbound Third Ave right turn lane out of the site area experiences LOS E operations under the Approved Project and LOS F operations under the Proposed BCH Project during the evening peak hour. Under the Proposed BCH Project, there are approximately 50 more vehicles turning right at the approach in the hour, which increases delay to LOS F. It is this movement, along with the eastbound left turn movement, that cause the overall intersection operations to worsen from LOS E to LOS F, and overall delay to increase by 15 seconds. All other movements see little to no change in delay.

6.3 Unsignalized Intersection Capacity Analysis

Table 8 presents a summary of the capacity analysis for the two-way stop-controlled intersection of Kendrick Street at Fourth Avenue.

The analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters, such as high critical gaps. Actual field observations indicate that drivers on minor streets generally accept smaller gaps in traffic than those used in the analysis procedures and experience less delay than reported by the analysis software. Therefore, the analysis results tend to overstate the actual delays experienced in the field.

Sufficient opportunities for side street traffic to enter the mainline were observed at this location due to adjacent signalized intersections. Subsequently, delays and queues were observed to be shorter than reported in **Table 8** on the northbound and southbound approaches. For this reason, the results of the unsignalized intersection analysis should be considered conservative.

Table 8 Unsignalized Intersection Capacity Analysis Summary

Location	Peak Hour	Mov't	2019 Baseline Condition					2026 Approved Project Build					2026 BCH Proposed Project Build				
			Dem ¹	v/c ²	Del ³	LOS ⁴	Q95 ⁵	Dem	v/c	Del	LOS	Q95	Dem	v/c	Del	LOS	Q95
Kendrick Street at Fourth Avenue	AM	NB L/T/R	6	0.41	>120	F	32	6	0.87	>120	F	50	6	0.9	>120	F	51
		SB L	73	>1.20	>120	F	213	76	>1.20	Err	F	Err	76	>1.20	Err	F	Err
		SB T/R	53	0.11	13	B	9	55	0.12	13	B	10	55	0.12	13	B	10
	PM	NB L/T/R	2	0.28	>120	F	22	2	0.53	>120	F	34	2	0.55	>120	F	34
		SB L	106	>1.20	Err	F	Err	110	>1.20	Err	F	Err	110	>1.20	Err	F	Err
		SB T/R	184	0.55	25	D	80	191	0.64	32	D	106	191	0.65	33	D	107

Source: VHB, Inc. using Synchro 10 software.

1 demand, in vehicles per hour

2 volume-to-capacity ratio for the critical movement

3 delay of critical approach only, rounded to the nearest whole second

4 level of service

5 95th percentile queue length, in feet

NB = Northbound; SB = Southbound; R = right; T = through, L = left

As shown in **Table 8**, the side streets currently operate with significant delays under Baseline conditions. The Proposed BCH Project adds a modest amount of traffic to the mainline and no additional traffic to Fourth Avenue. The result is very modest delay increases from the Baseline Condition, which already experiences congested conditions. The stop-controlled approaches may report high delays due to the nature of waiting for a gap in free-flow traffic along the main roadway, and, as previously described, the conservative gap parameters assumed in the analysis. As a result, it is likely the side street approaches that report LOS F with very excessive delays, actually experience shorter delays.

It should be noted that the easterly downstream intersection outside this project's study area was observed to impact operations at Fourth Avenue during both the morning and evening

peak hours. Queueing from the intersection of Nahanton Street at Winchester Street/Wells Avenue backed up to Kendrick Street at Fourth Avenue, affecting the eastbound movement on the mainline. However, queues along Fourth Avenue during the evening peak were usually only two to three cars, with six cars being the maximum queue length observed. There was virtually no queueing during the morning peak hour.

6.4 Summary of Traffic Operations Impacts

A comparison between the three analysis scenarios of overall operations at the Highland Avenue/First Avenue and Kendrick Street/Third Avenue intersections is illustrated in **Figure 19** and **Figure 20**. The Proposed BCH Project generally has slightly more impact on traffic operations at the study intersections than the Approved Project. However, the increase in estimated traffic volume can be managed by the surrounding roadway system. As mentioned previously, the BCH Project as currently contemplated, will be constructed in phases over time with the Pediatric Medical Facility at 380 First Street to be constructed in the first phase. The trips associated with the first phases and resulting traffic operations are expected to be similar to those of the Approved Project. The incremental increase in trips and slight impact to the traffic operations at the study intersections will occur in subsequent phases.

In the past five years, there have been multiple improvements to the Highland Avenue and Kendrick Street corridors including new traffic signals, optimized and coordinated signal operations, and added capacity through the Add-A-Lane project. The Highland Avenue corridor is expected to further improve through the reconstruction project started in Summer 2020. These improvements are expected lessen the impact of this Project. In addition to these roadway improvements, BCH is committed to implementing an extensive Transportation Demand Management (TDM) program modelled after their current TDM measures at other campuses. These TDM measures will include shuttles and transit subsidies aimed at reducing the number of vehicle trips expected to be generated by the Project. Furthermore, mitigation measures may be explored as outlined in Section 7.1.

7

Transportation Mitigation

As previously described in the Founders Park Site Overview section of this document, mitigation measures at specific intersections, transportation demand management measures, and transportation monitoring programs have been outlined under the previous program of the Founders Park Development. These measures would be sufficient to mitigate the Proposed BCH Project traffic impacts incurred at most study area locations based on the findings of the traffic operations analyses.

7.1 Site-Specific Mitigation Measures

As currently contemplated, the Proposed BCH Project will be constructed in phases over time starting with the construction of the Pediatric Medical Facility at 380 First Street in the first phase. As previously discussed, the trips associated with this first phase and resulting traffic operations are expected to be similar to those of the Approved Project. The full build out of the Proposed BCH Project generates an incremental increase in traffic to the southbound approach along Third Avenue out of the site area at Kendrick Street during the weekday evening peak hour. The increased traffic increases delays at the southbound right turn movement. The Proponent may implement additional mitigation measures to reduce the Project-related impacts at this intersection. Below presents a list of options for consideration to potentially improve the site-related operations at the Kendrick Street/Third Avenue intersection.

- Assess and implement signal timing and/or phasing changes to the intersection. The westerly ramps intersection and Hunting Road intersection are coordinated with the Third Avenue intersection; thus, any changes to the Third Avenue intersection must be compatible with the other two coordinated intersections. These two intersections are not within the scope of this Study and therefore signal timing and phasing changes at Third Avenue were not included in the traffic operations analyses as additional mitigated scenarios.
- Increase the storage capacity of the southbound right turn lane. Presently, the channelized right turn lane is painted to designate a storage length of approximately 70 feet. Additionally, the southbound Third Avenue lane is painted as a single lane with a width ranging from 20 – 24 feet. The right turn lane may be extended to designate additional storage capacity and to help prevent left-turning traffic from potentially blocking the right turn lane. As indicated in **Table 7**, the southbound right turn lane is projected to see average queues of approximately 475 feet, or about 19 car lengths.

7.2 Transportation Demand Management

Children's is exploring a wide array of TDM measures to offer as a means to reduce single occupant driving and increase use of alternative forms of transportation to access the workplace. Due to the nature of the services provided and the patient's age, it is expected that patients will arrive via almost entirely via vehicle. These measures focus on employees commuting to the Site. Children's actively supports efforts to reduce auto use for employees traveling to the Hospital.

- Providing an Employee Transportation Advisor who will coordinate with the 128 Business Council;
- Providing shuttle service connectivity to nearby public transportation nodes (commuter rail and Green Line)
- 50 percent transit pass subsidy for employees;
- Carpool assistance and incentives;
- Emergency ride home;
- Bicycling/walking incentives and amenities;
- Telecommuting and compressed workweeks, when feasible;
- Display in the Main Lobby transportation-related information for employees, patients and visitors; and
- Promotional efforts.

Children's is committed to maintaining its system-wide employee transit subsidy of 50 percent in connection with the construction of the Needham Campus. Children's will also continue to promote and improve its TDM program to benefit its employees and reduce traffic impacts to roadways and parking facilities within Founders Park and nearby neighborhoods.



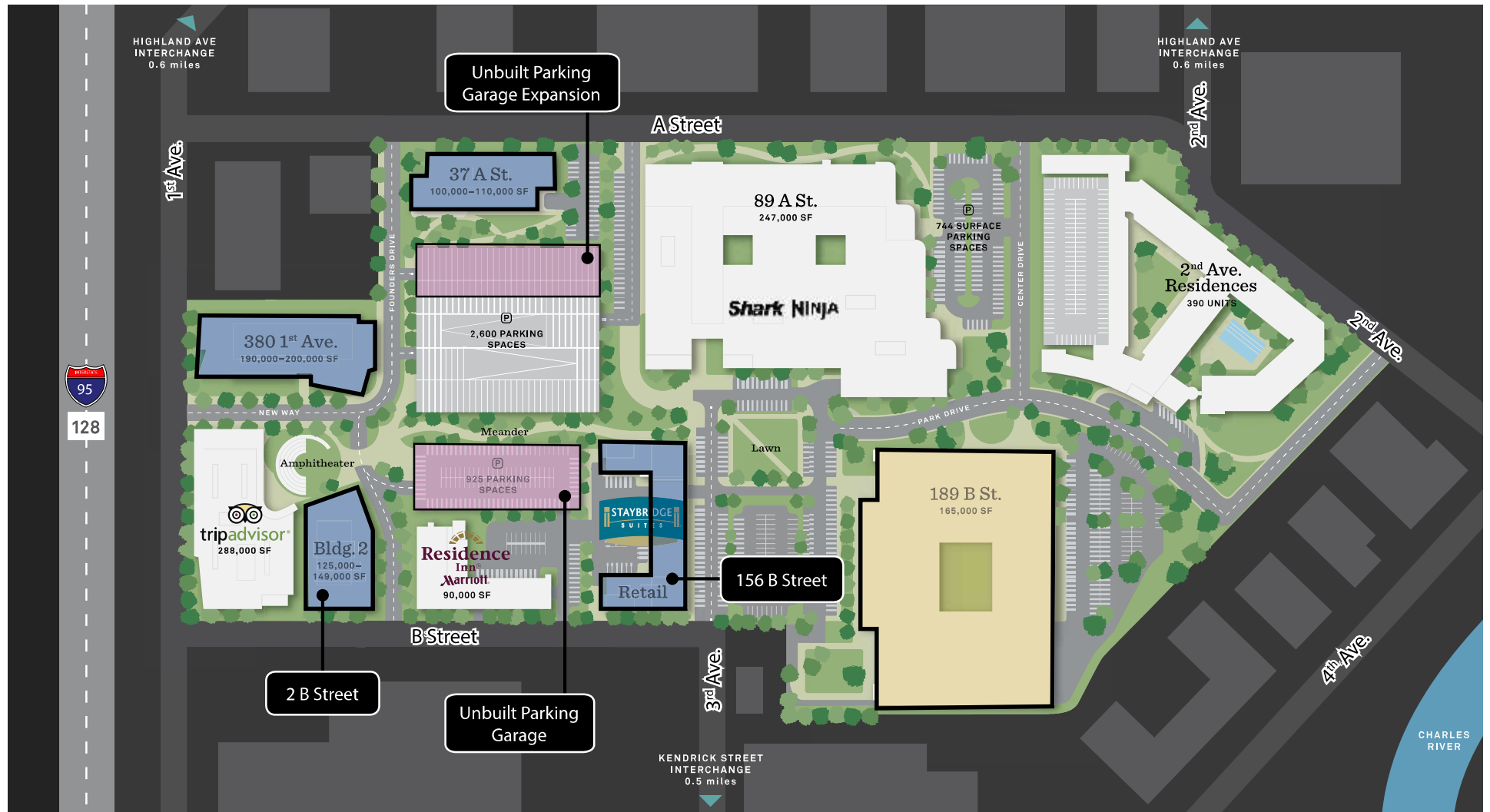
Source: Founders Park/CBRE



Figure 1

Founders Park Site Plan

**BCH Needham at Founders Park
Needham, Massachusetts**



Source: Founders Park/CBRE

Unbuilt Parcels

- Permitted Unbuilt
- Built Unoccupied
- Unbuilt Parking



Figure 2
Founders Park Current Status

**BCH Needham at Founders Park
Needham, Massachusetts**

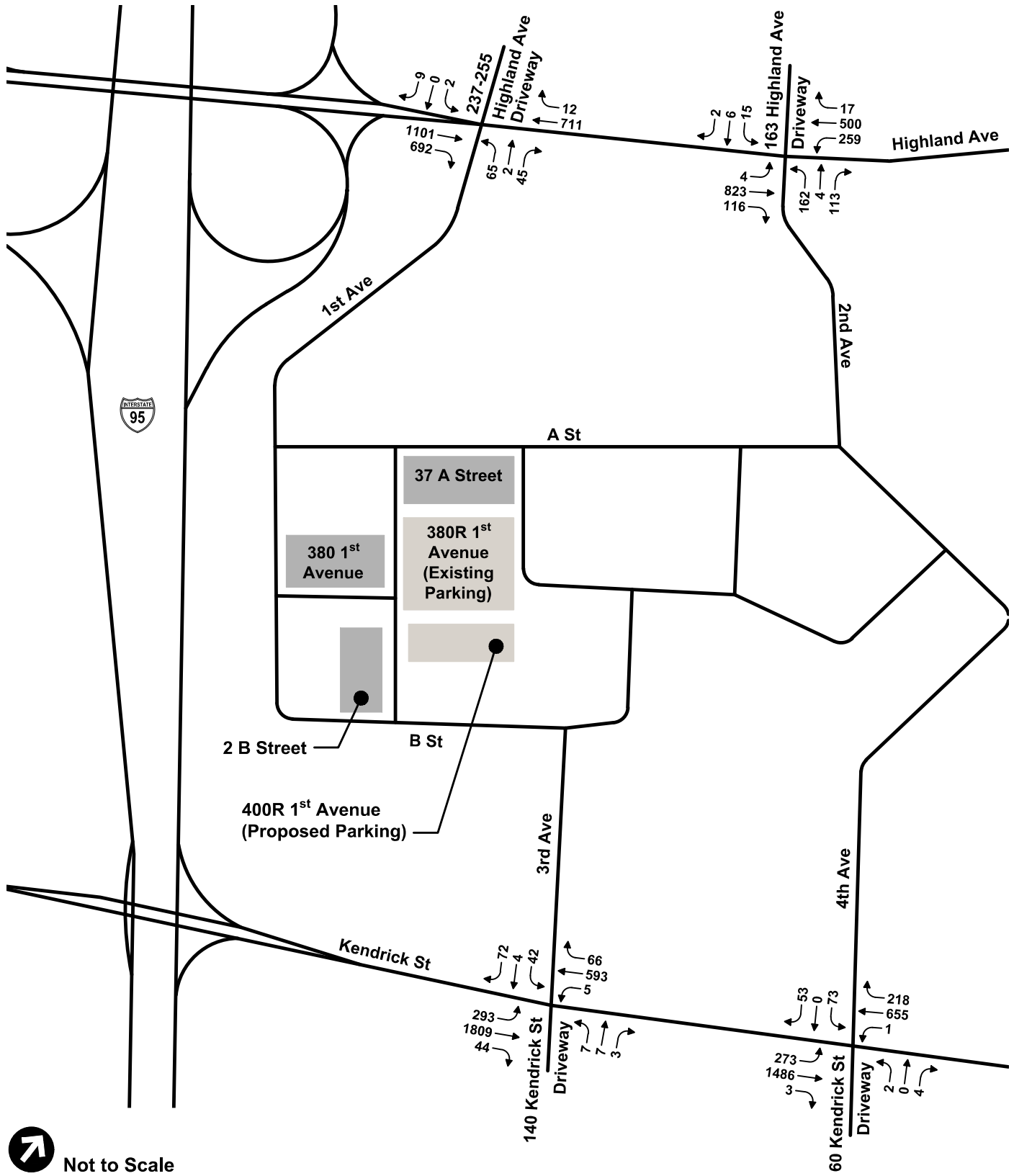


Figure 3
2019 Baseline Condition Traffic Volumes
Morning Peak Hour
**BCH Needham at Founders Park
Needham, Massachusetts**

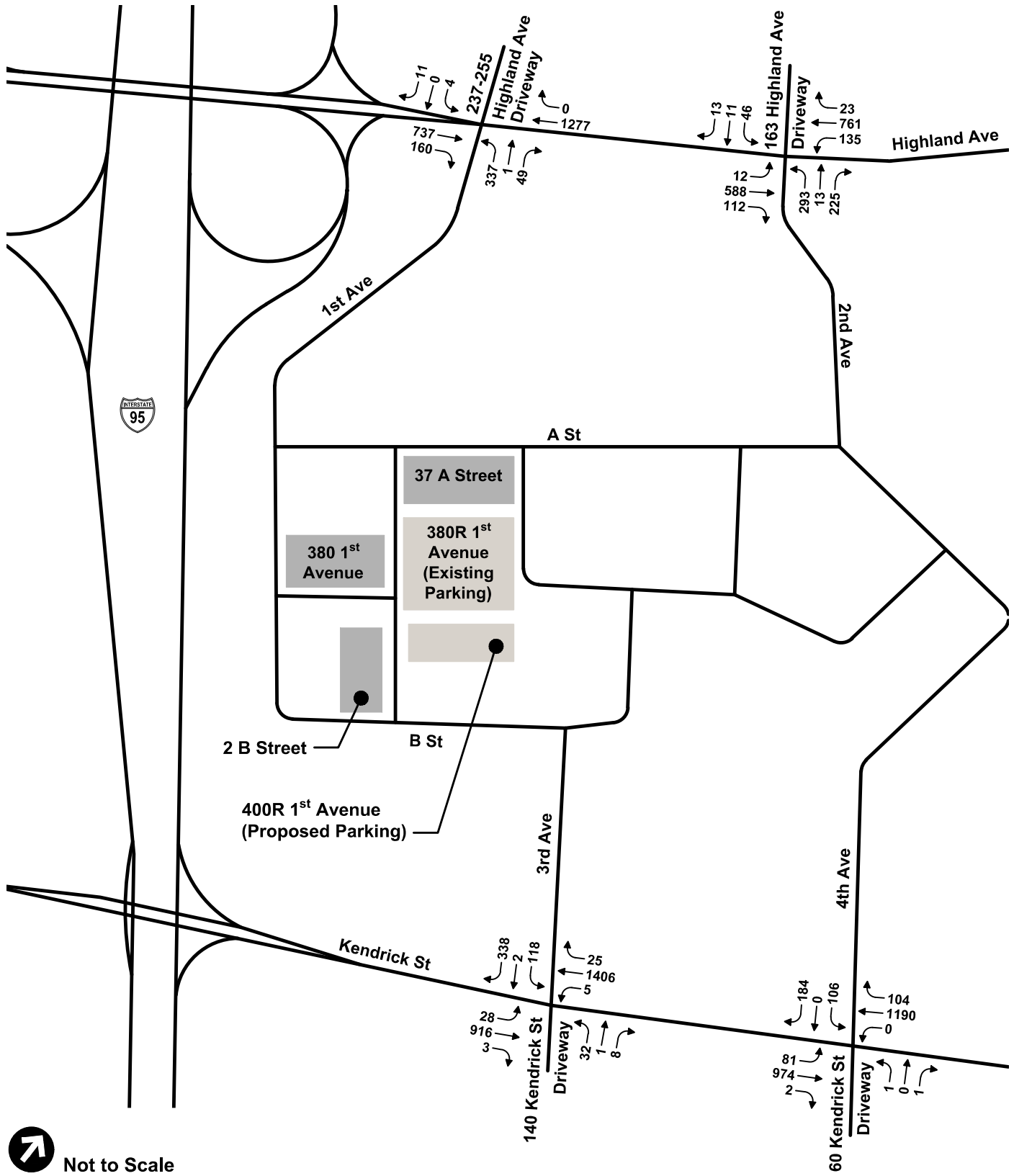
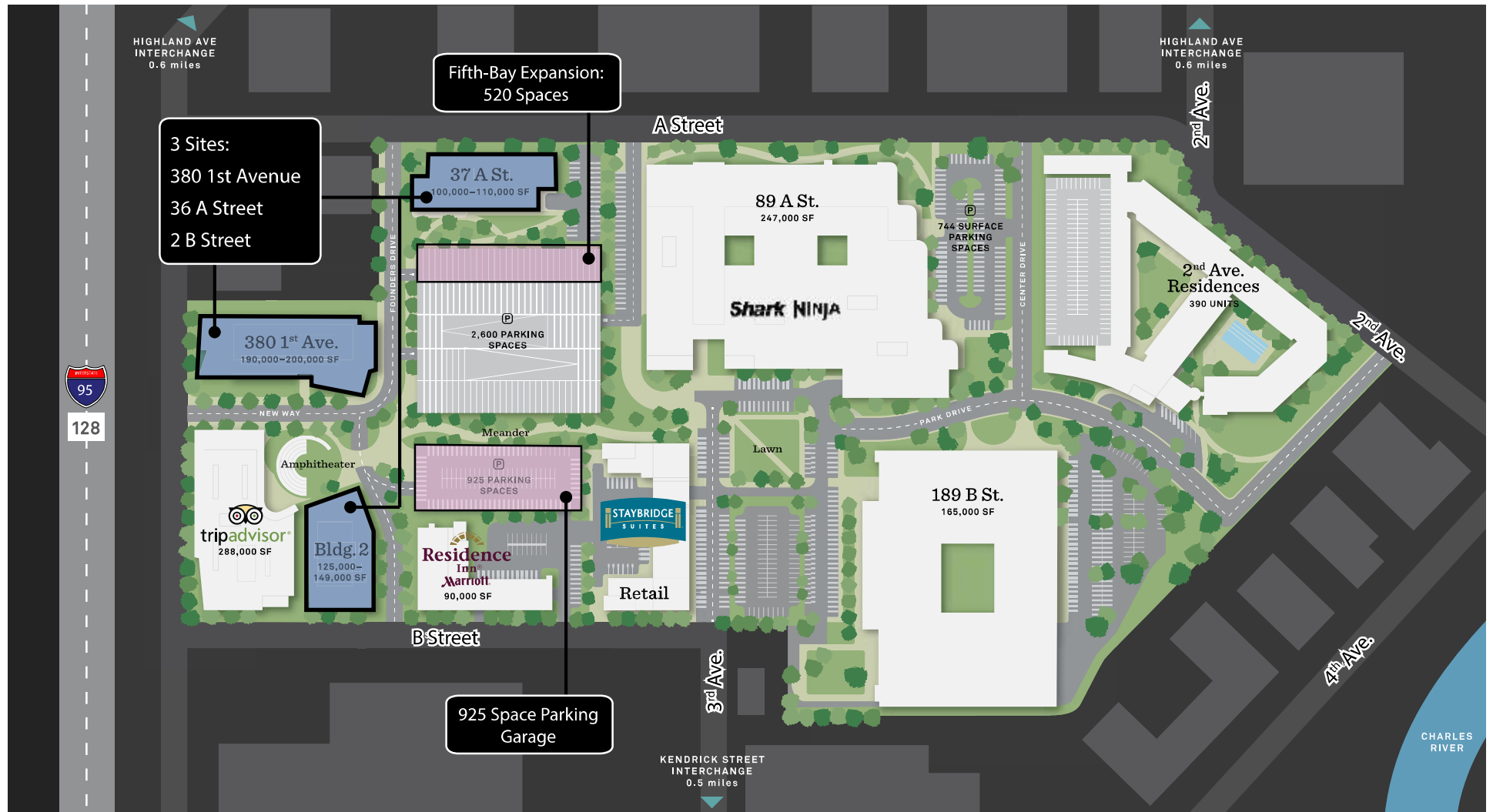


Figure 4

2019 Baseline Condition Traffic Volumes
Evening Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**



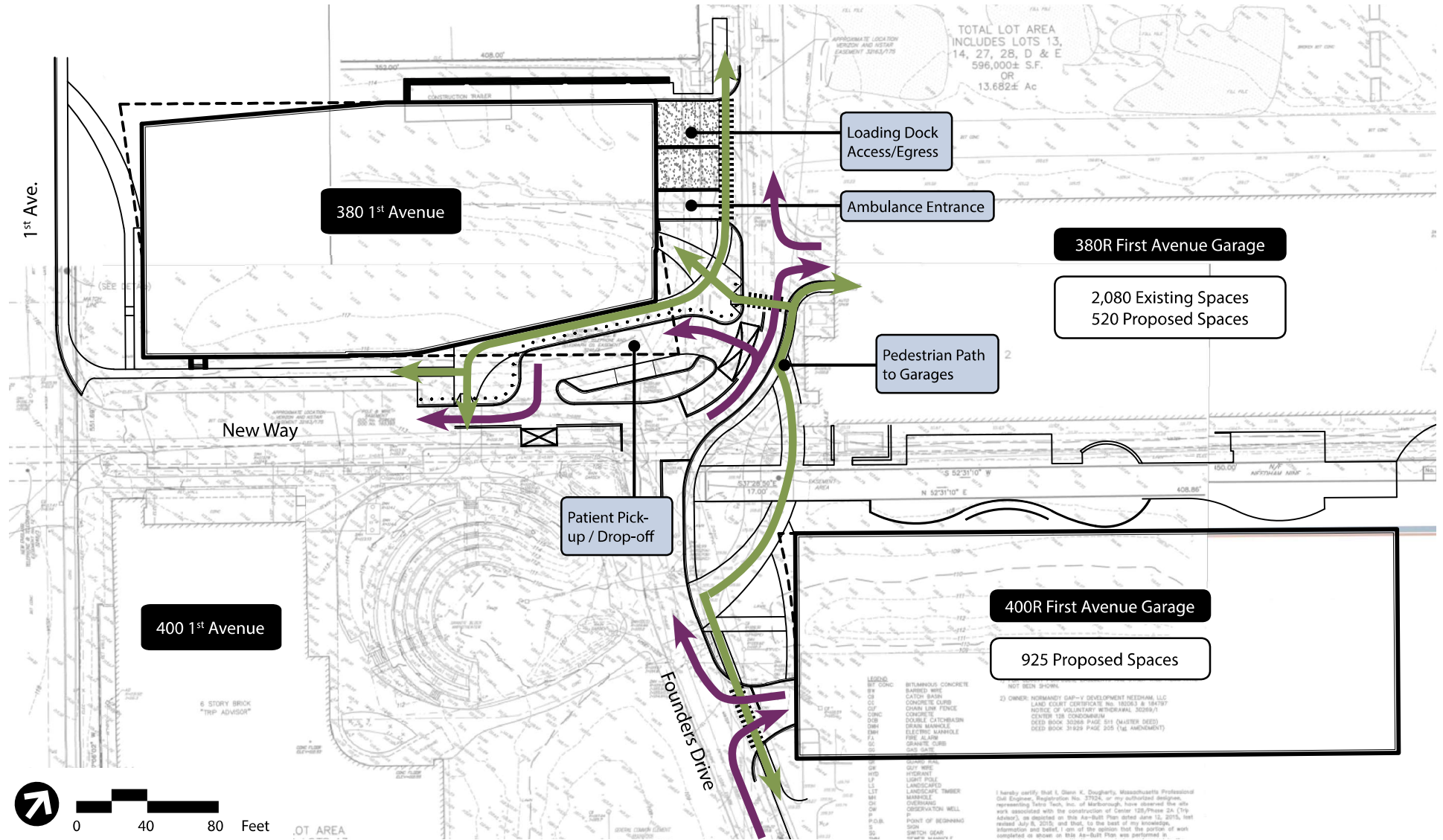
Not to Scale

Source: Founders Park/CBRE



Figure 5
Proposed BCH Site Plan

**BCH Needham at Founders Park
Needham, Massachusetts**



Source: Founders Park/CBRE



Figure 6

380 1st Avenue Site and Access Plan

- Garage Access Path
- Pedestrian Access Path

**BCH Needham at Founders Park
Needham, Massachusetts**

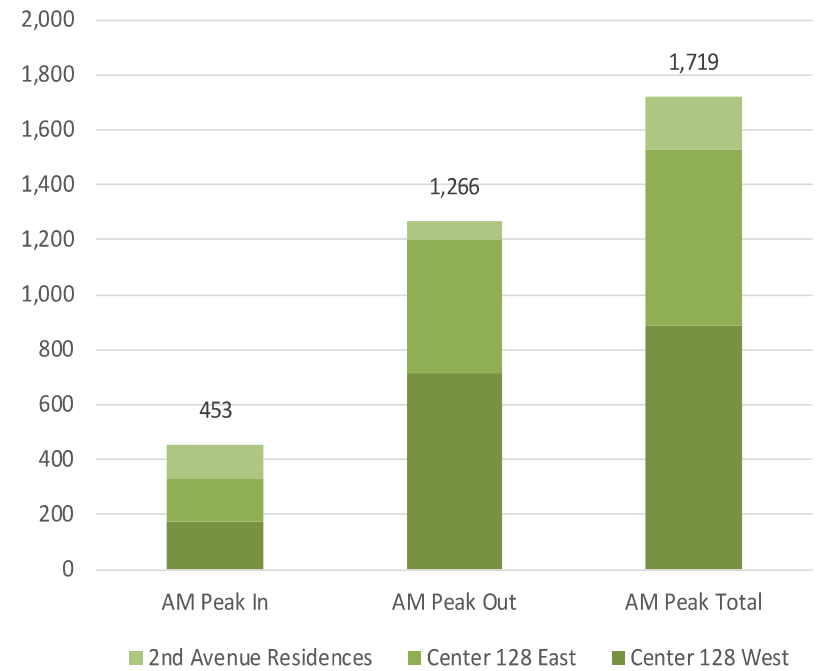
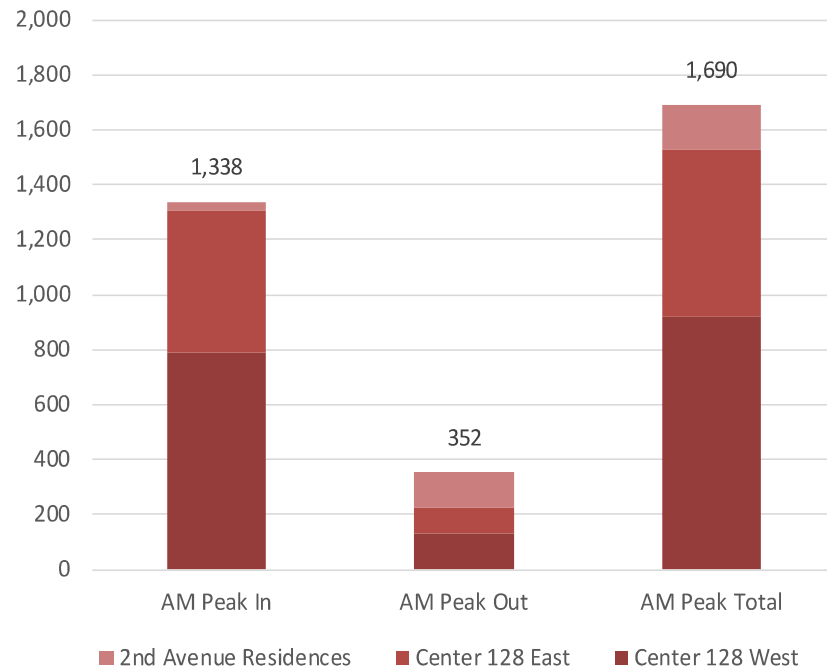


Figure 7

Approved Founders Park Trip
Generation

**BCH Needham at Founders Park
Needham, Massachusetts**

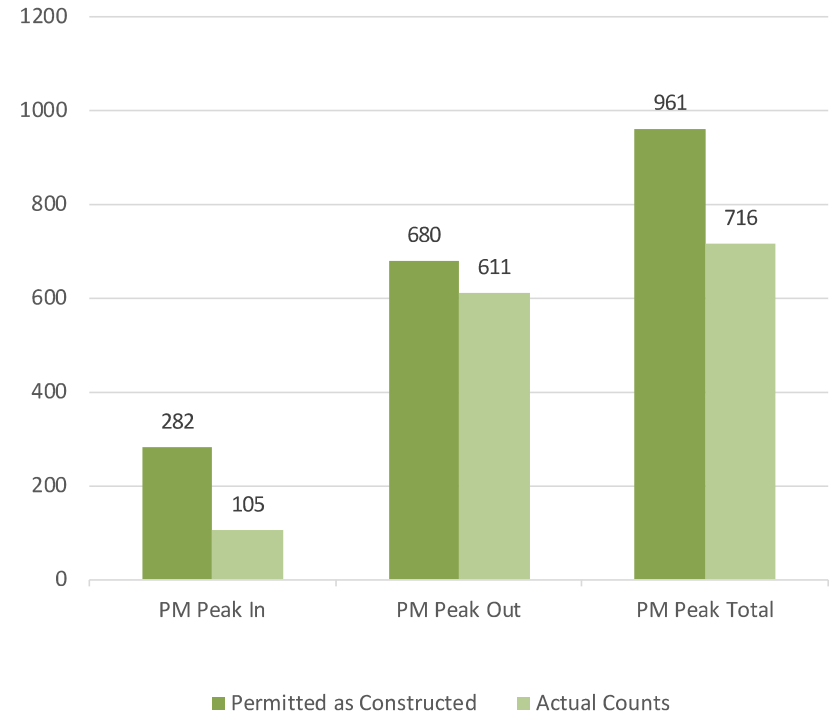
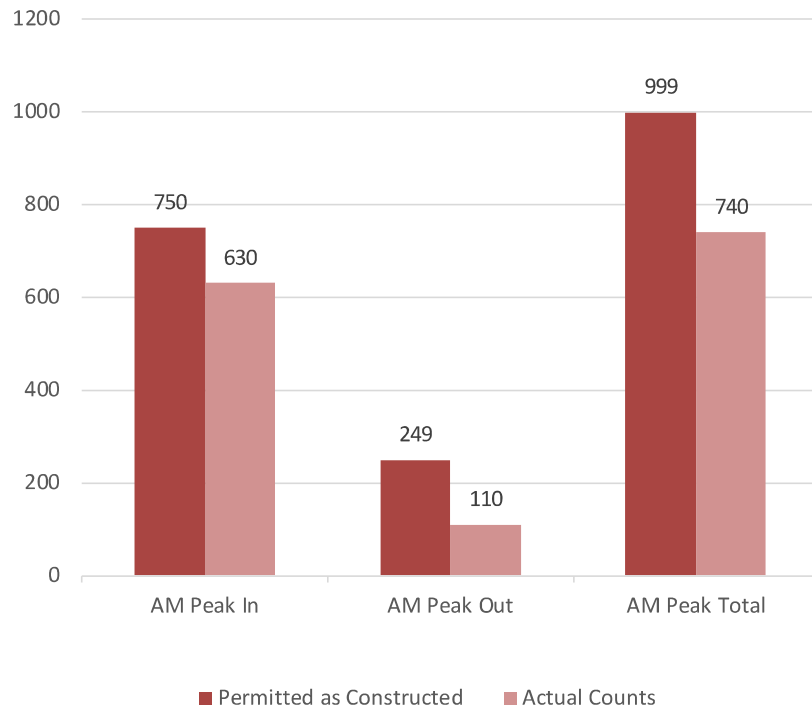


Figure 8

Comparison of Actual Trips and
Estimated Trips

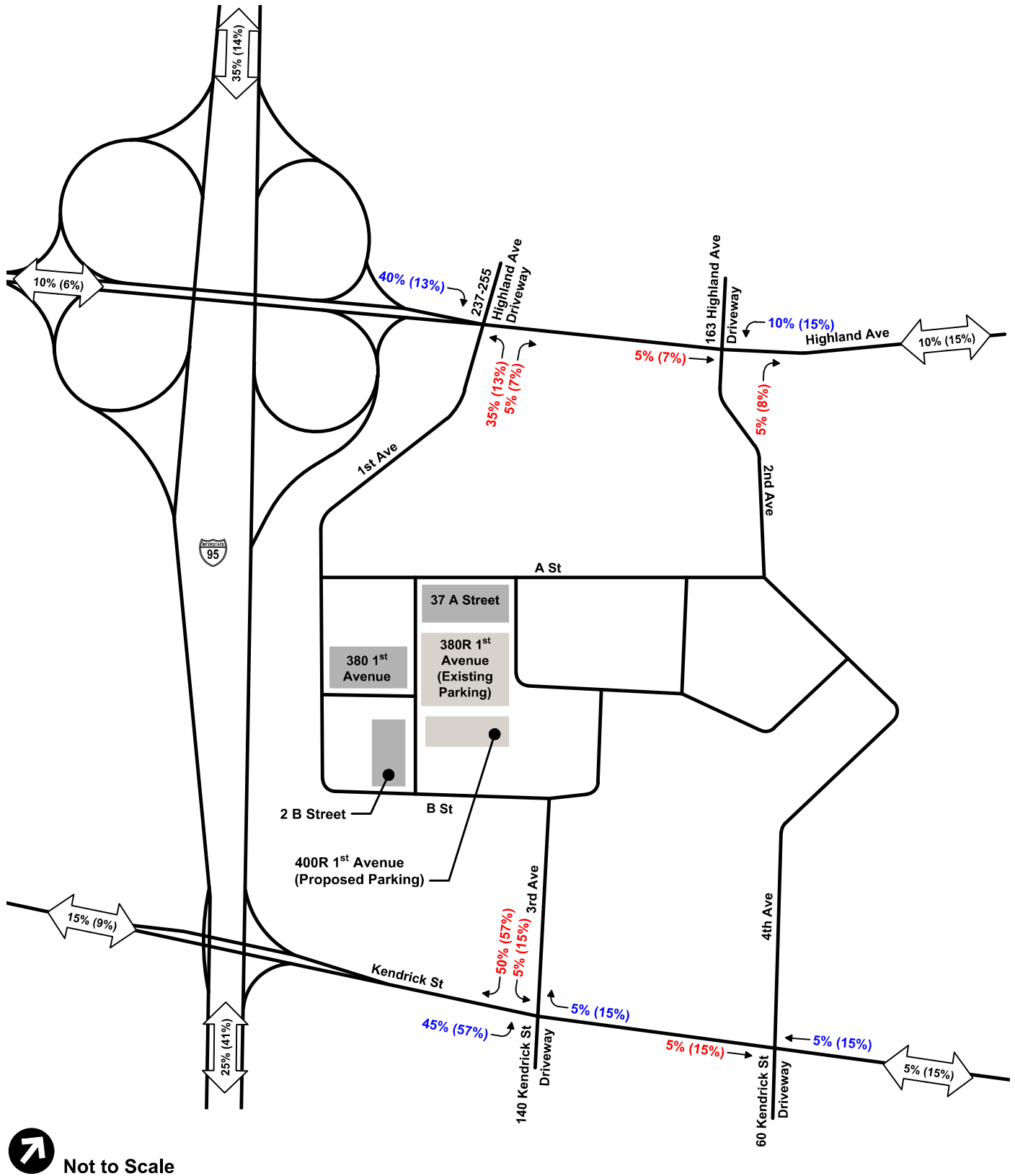
**BCH Needham at Founders Park
Needham, Massachusetts**



Figure 9

Approved Project vs. Proposed Project Trip Generation

**BCH Needham at Founders Park
Needham, Massachusetts**



Legend

- ##% Office, Hotel, Pediatric Medical Center
- (##%) Retail
- Blue Entering
- Red Exiting



Figure 10

Trip Distribution

**BCH Needham at Founders Park
Needham, Massachusetts**

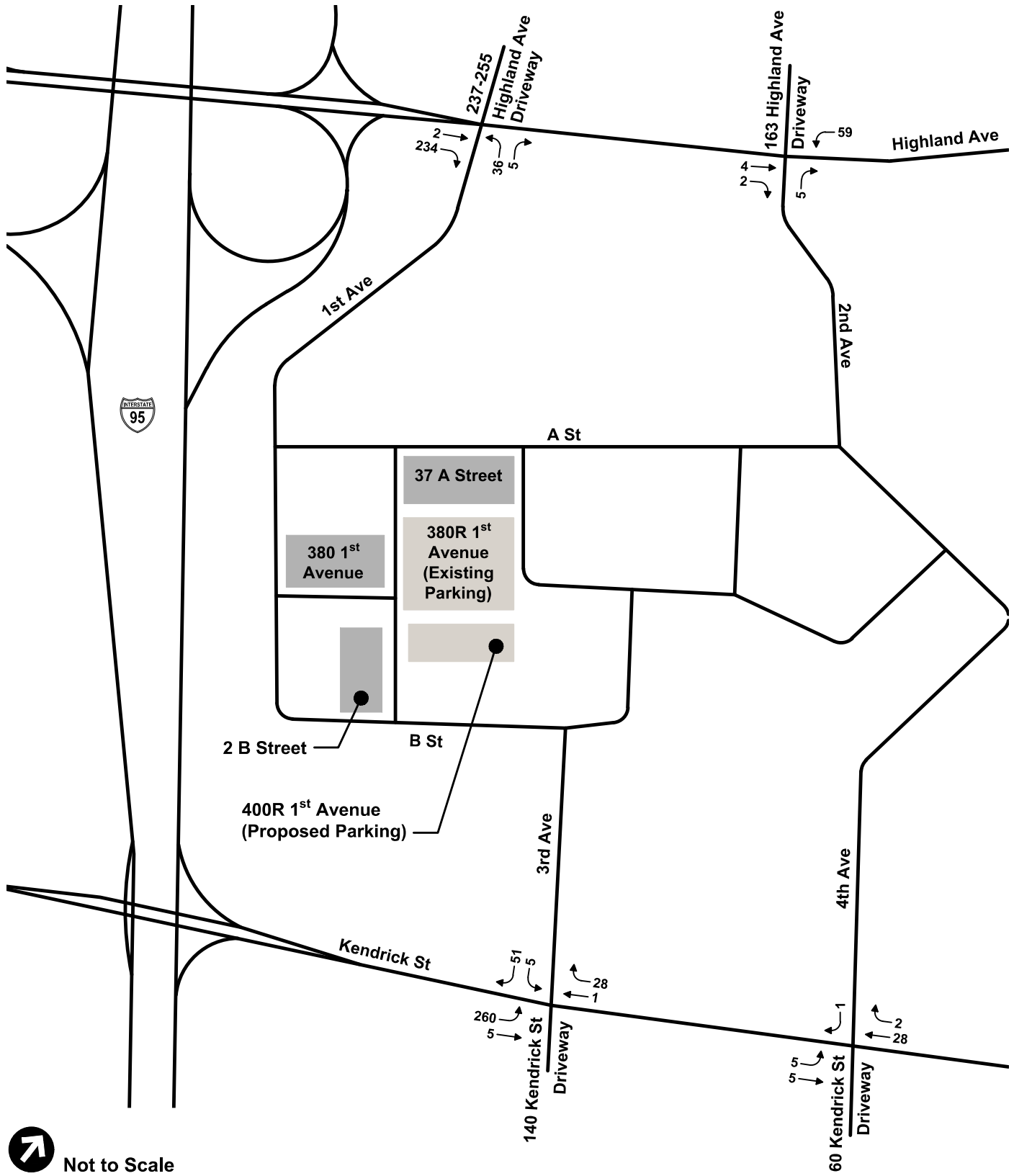


Figure 11

Approved Project Generated Trips
Morning Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

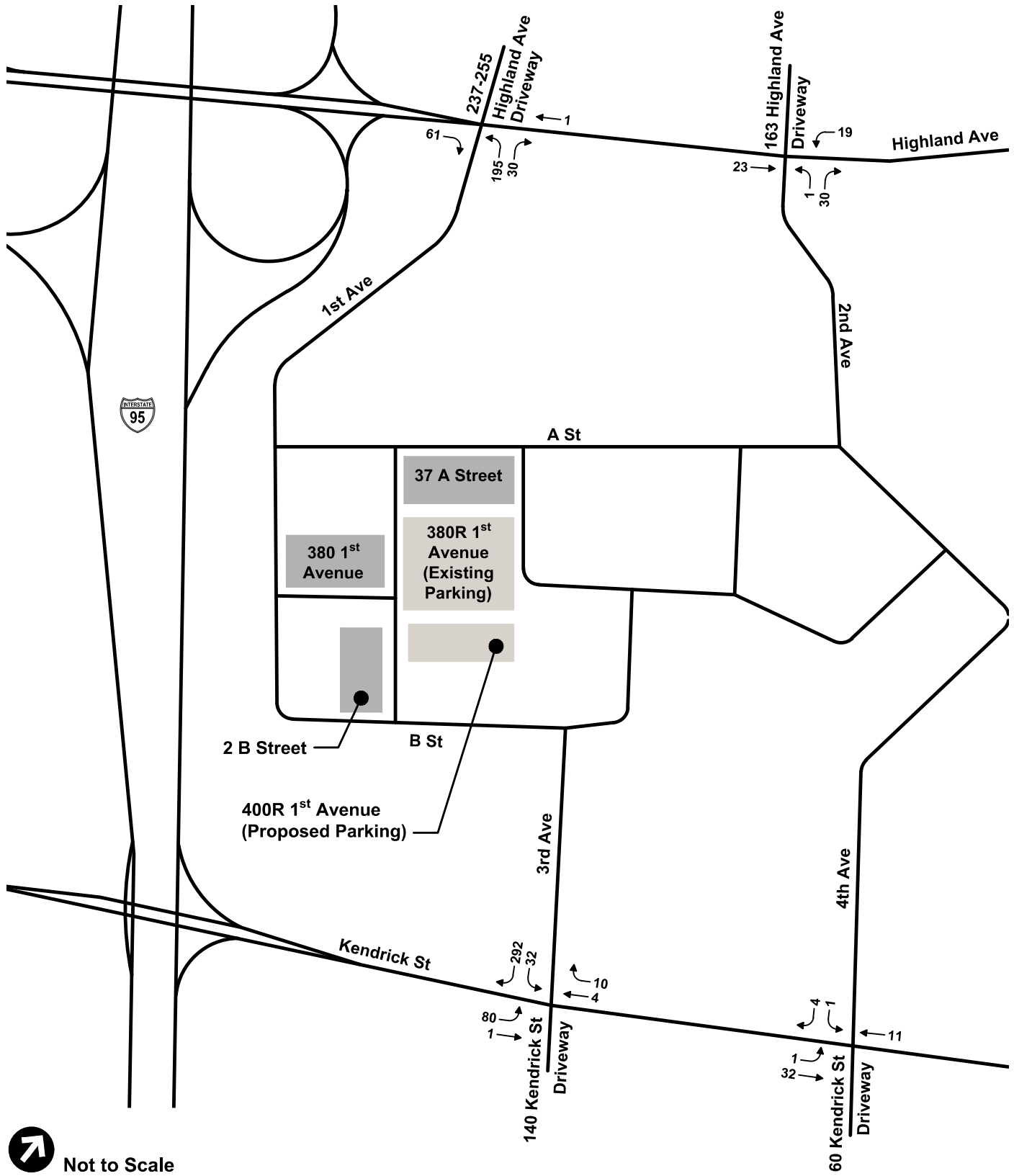


Figure 12

Approved Project Generated Trips
Evening Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

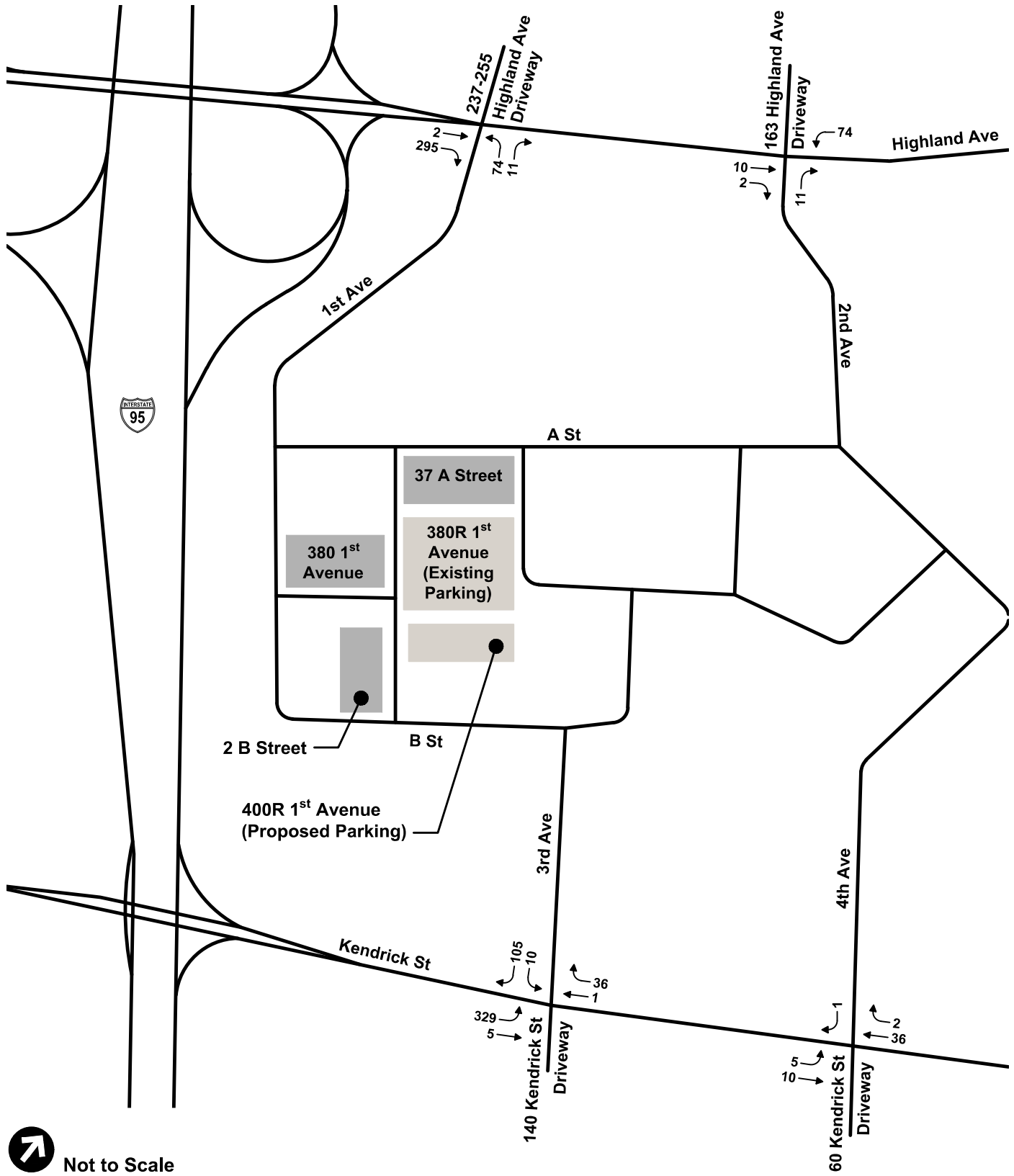


Figure 13

Proposed BCH Project Generated Trips
Morning Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

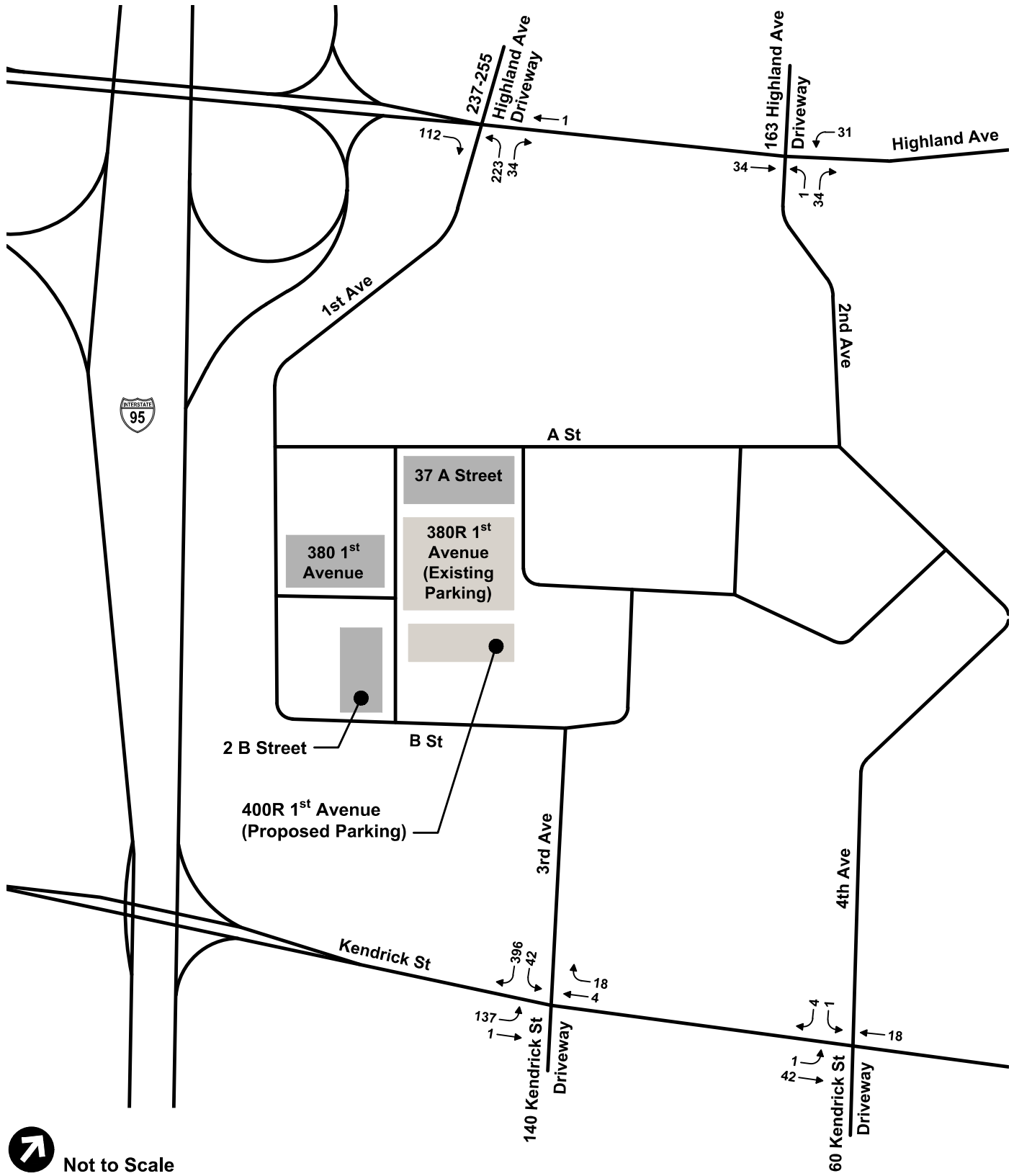


Figure 14

Proposed BCH Project Generated Trips
Evening Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

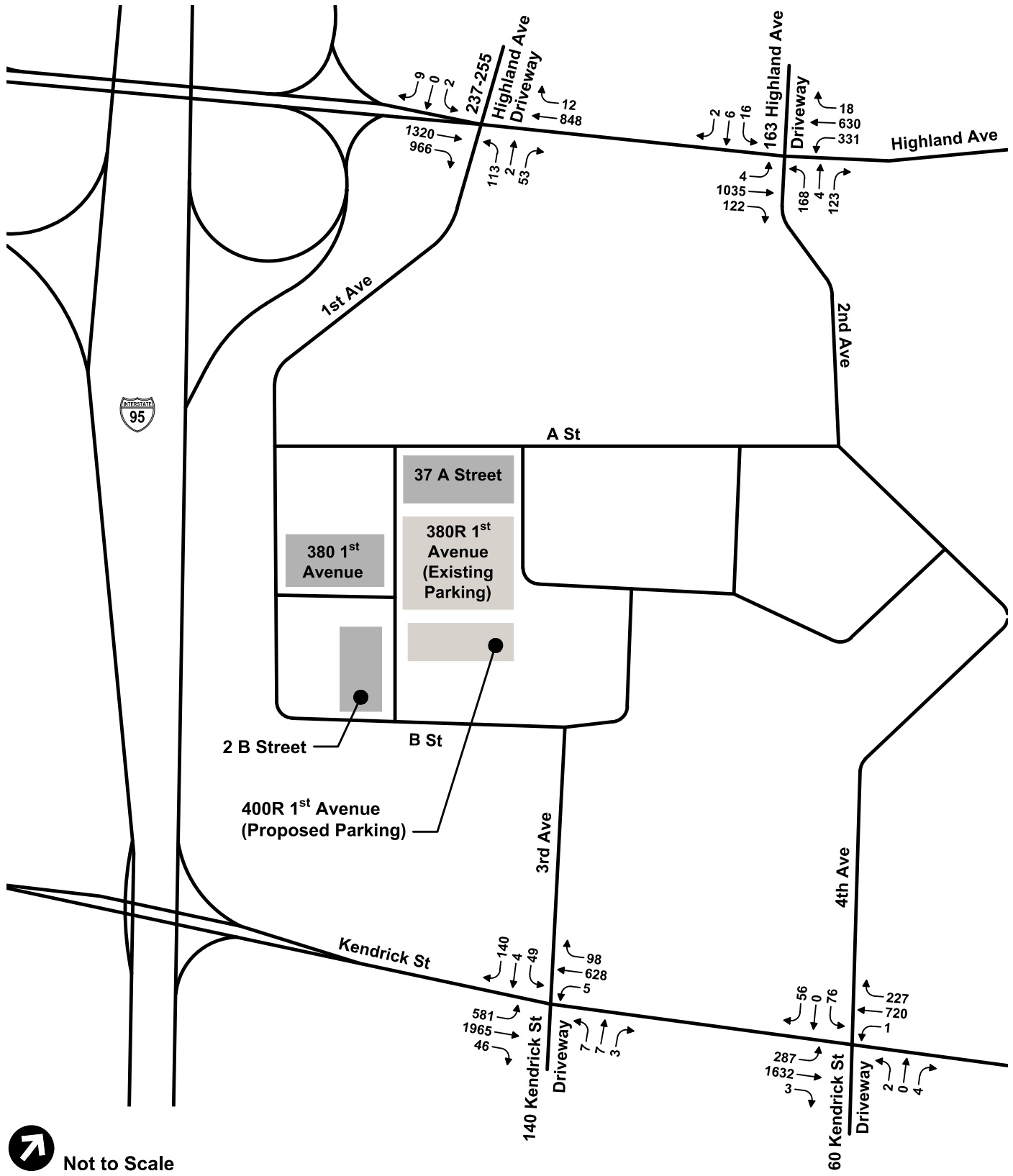


Figure 15

2026 Approved Project Build Condition
Morning Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

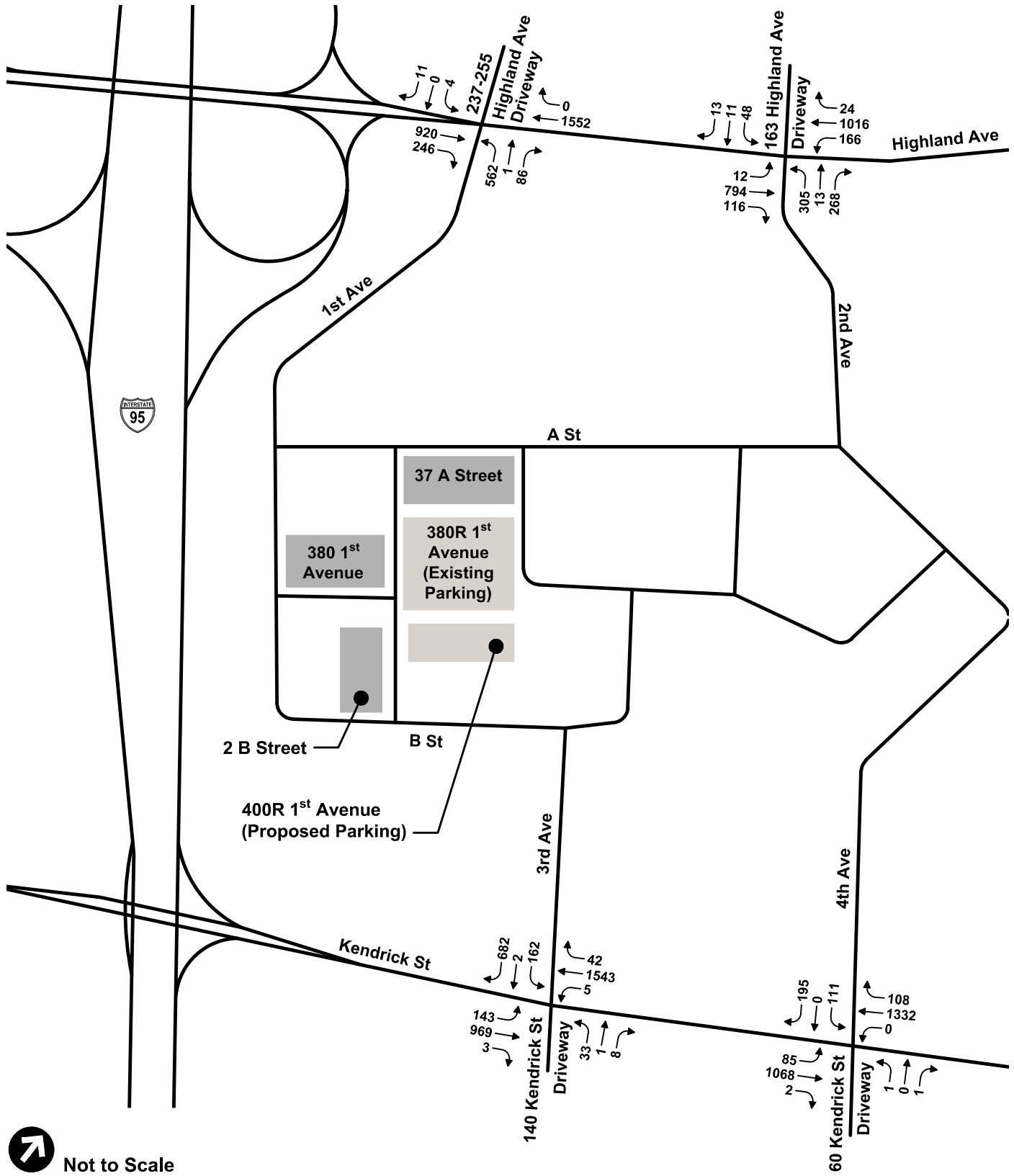


Figure 16

2026 Approved Project Build Condition
Evening Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

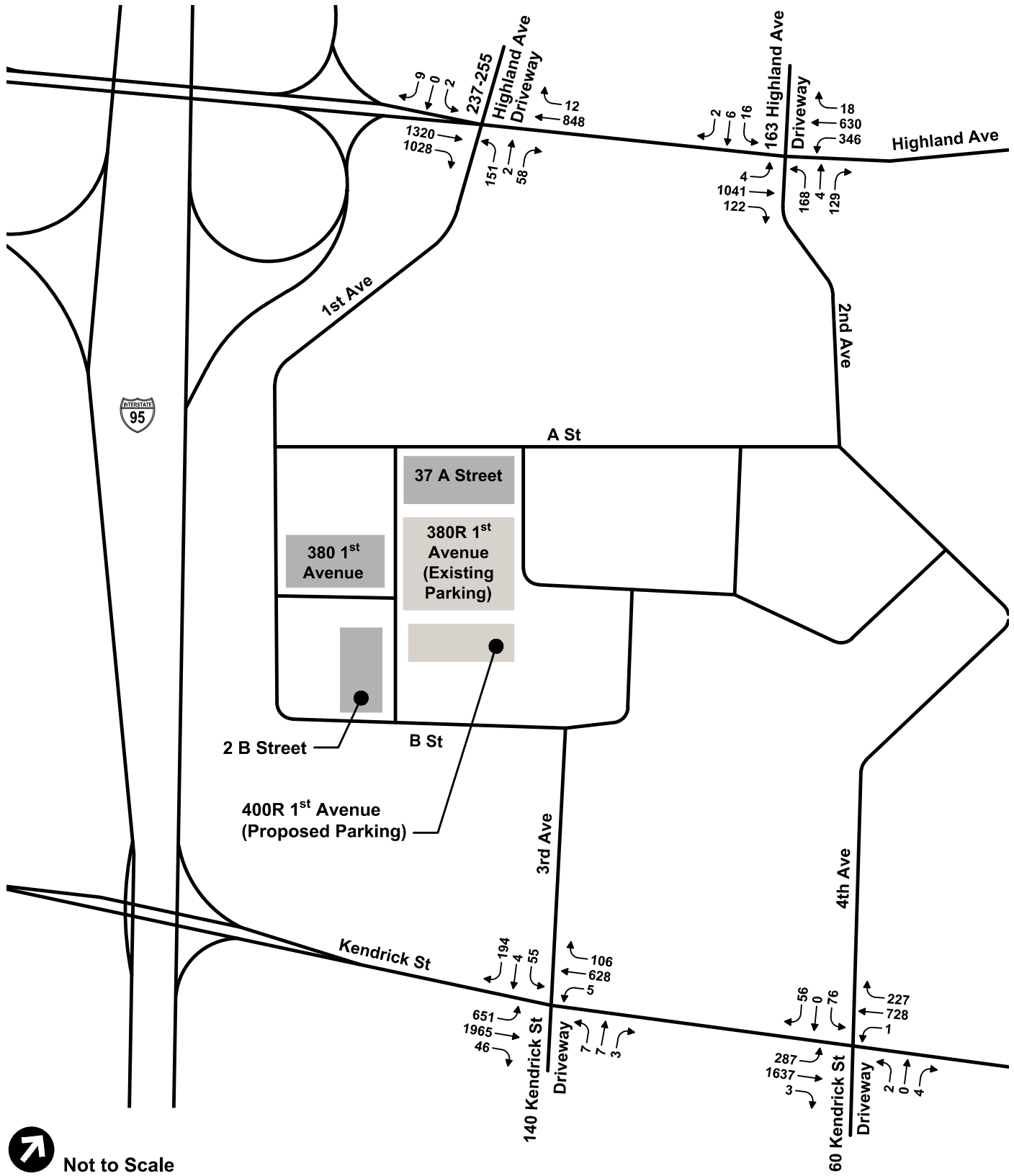


Figure 17

2026 Proposed BCH Build Condition
Morning Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

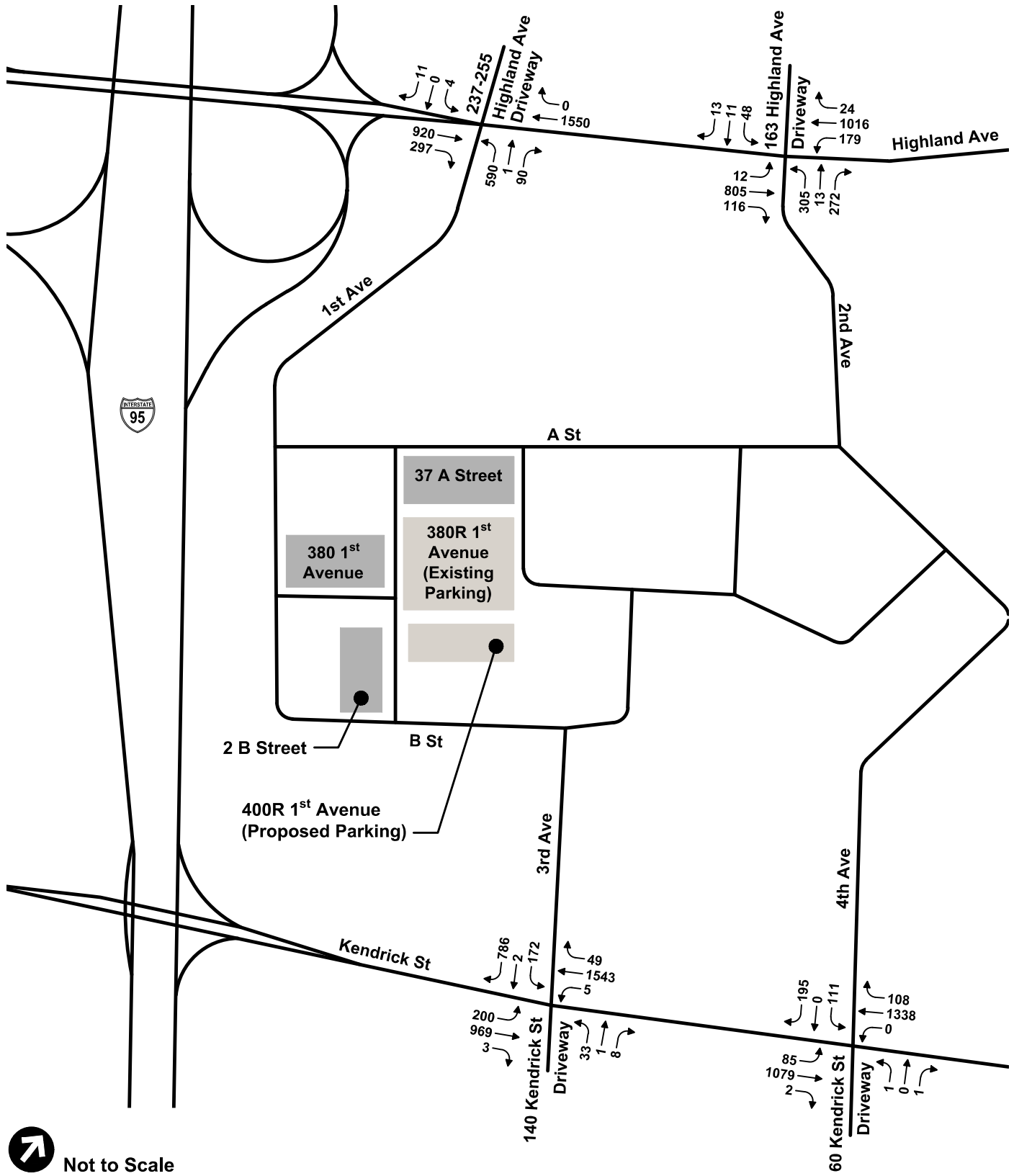
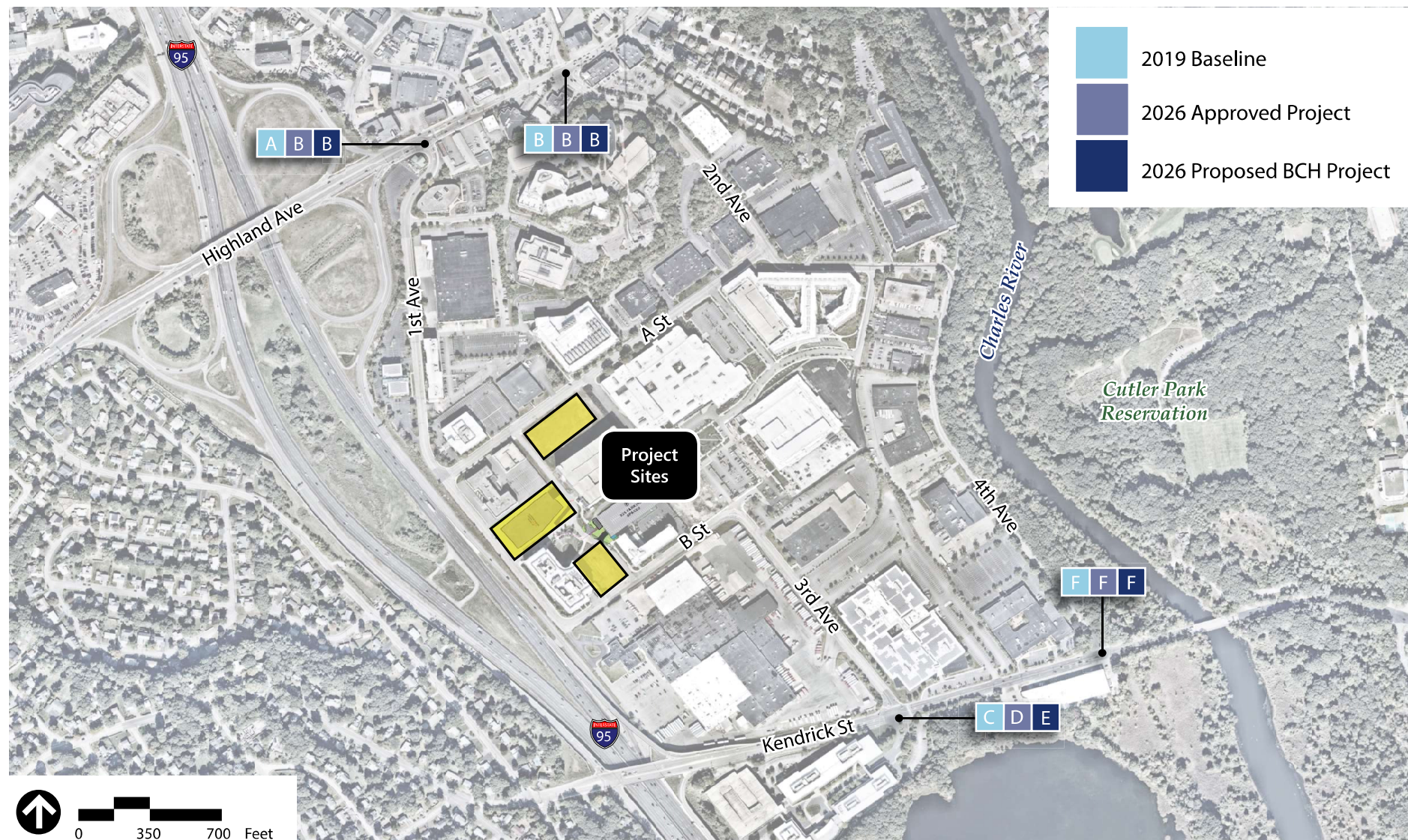


Figure 18

2026 Proposed BCH Build Condition
Evening Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

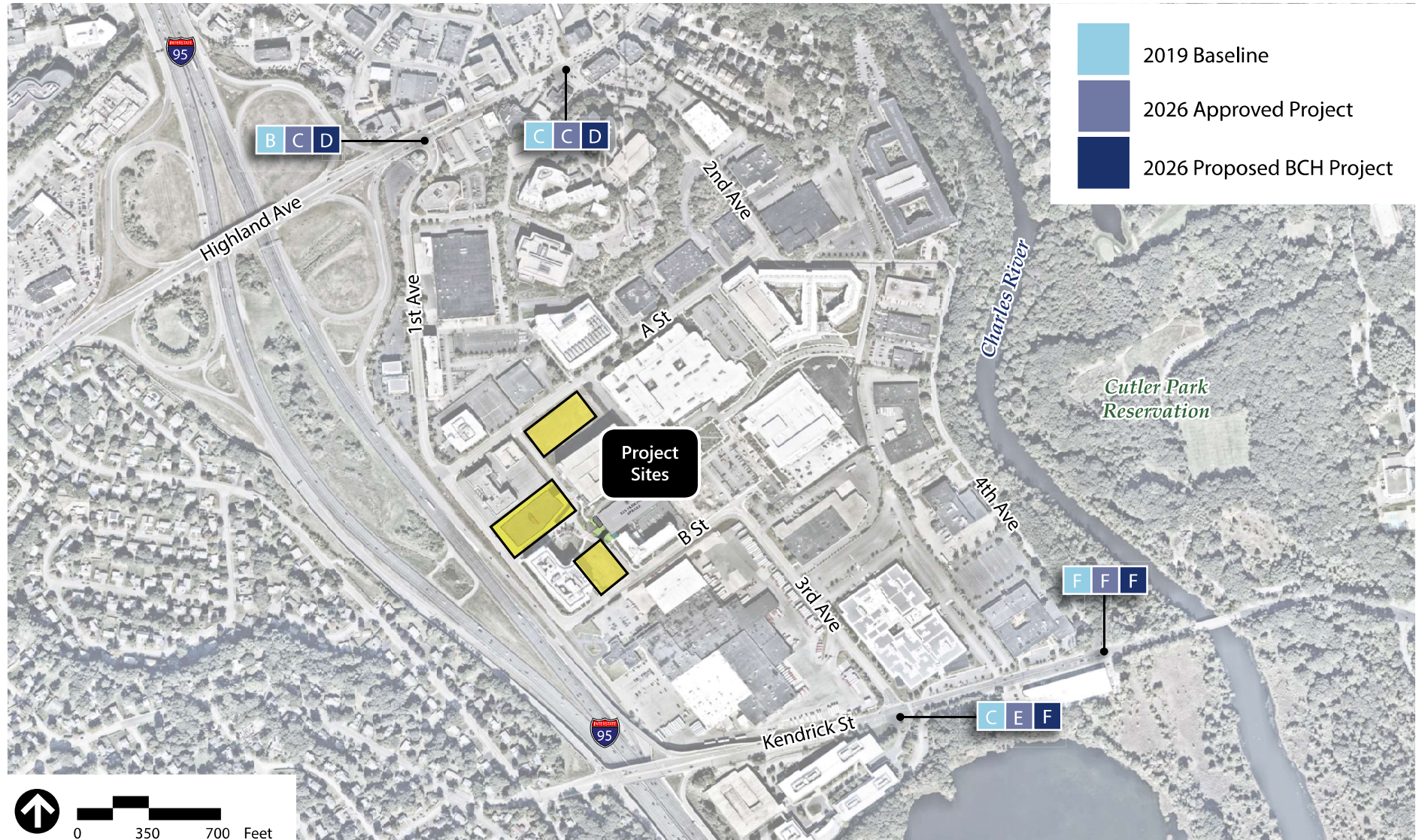


Source: Nearmap Aerial



Figure 19
Level of Service Comparison
Morning Peak Hour

BCH Needham at Founders Park Needham, Massachusetts



Source: Nearmap Aerial



Figure 20
Level of Service Comparison
Evening Peak Hour

**BCH Needham at Founders Park
Needham, Massachusetts**

Date: November 10, 2020 Job No.: 7363
To: Lee Newman, Director of Planning and Community Development
Cc: Anthony Del Gaizo, PE, Town Engineer
From: Jaklyn Centracchio, PE, PTOE
Subject: Traffic Peer Review – Boston Children’s Hospital – Needham, MA

BETA Group, Inc. (BETA) is pleased to provide transportation engineering peer review services for the transportation related components of the proposed Boston Children’s Hospital (BCH) Pediatric Medical Facility at Founder’s Park (Center 128 West) in Needham, MA. This memorandum is provided to outline evaluations, comments, and conclusions.

BASIS OF REVIEW

The following response documents were received by BETA and will form the basis of the review:

- Transportation Impact and Access Study (TIAS), Boston Children’s Hospital New Pediatric Medical Facility at Founders Park, VHB, October 7, 2020
- Boston Children’s Hospital Needham Satellite Project, Needham Special Permit Submission, Plan Set, Payette, October 7, 2020
- Supplemental Draft Environmental Impact Report (SDEIR), prepared by Epsilon Associates, Inc., submitted to the Massachusetts Environmental Policy Act on August 31, 2015

PROJECT OVERVIEW

The project site is located within Founder’s Park in Needham, Massachusetts and proposes phased construction of three new buildings located at 380 1st Avenue, 37 A Street and 2 B Street. Access to the three buildings would be provided from 1st Avenue, A Street and B Street. As proposed, the buildings would consist of a mix of Pediatric Ambulatory Center and General Office Space land uses, totaling approximately 452,000 square feet (SF):

- 380 1st Avenue – Pediatric Ambulatory Center (224,000 SF)
- 37 A Street – Office (101,000 SF)
- 2 B Street – Office (127,000 SF)
- Total = 452,000 SF

Prior to this TIAS, BETA reviewed in depth several documents prepared by the proponent’s traffic consultant involving the proposed parking demand and trip generation. It should be noted that while the estimated usage and total square footage of the three new buildings was equal to 452,000 SF, the sizes of two of the buildings were different. The proposed building sizes as of April 2020 were as follows:

- 380 1st Avenue – Pediatric Ambulatory Center (245,000 SF)
- 37 A Street – Office (80,000 SF)
- 2 B Street – Office (127,000 SF)
- Total = 452,000 SF

The building square footage differences slightly alter the individual trip generation and parking generation numbers but overall are comparable to those reviewed in April 2020.

The TIAS included an evaluation and summary of the proposed transportation elements and impacts of the project using actual collected vehicle trips based on traffic counts conducted on October 10, 2019 and comparison to previously approved development (based upon the SDEIR, dated August 31, 2015). Again, this data was previously reviewed by BETA in April 2020 and the data provided in the TIAS are similar, therefore, minimal discussion on these topics is provided within this memorandum for these topics.

2019 BASELINE CONDITIONS/EXISTING CONDITIONS

Manual turning movement counts (TMCs) were collected at seven (7) intersections on Thursday, October 10, 2019 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. Traffic volume data were also collected via automatic traffic recorder (ATR) at 16 locations over a 24-hour period on Thursday, October 10, 2019. The weekday morning and afternoon peak hours were determined to be 8:00-9:00 AM and 4:45-5:45 PM, respectively. The raw volume data is provided in the Appendix of the TIAS.

The following four intersections were analyzed within the TIAS and noted as the key project area intersections:

- Highland Avenue at 1st Avenue
 - Highland Avenue at 2nd Avenue
 - Kendrick Street at 3rd Avenue
 - Kendrick Street at 4th Avenue
1. Volume data was collected at seven intersections. Four of the intersection volumes were provided on the volume figures in the TIAS and analyzed. Explain why the remaining three intersection volumes, two of which are at site driveways, were not included on the future volume diagrams to show an understanding of the future activity at the proposed driveways.
 2. It is typical and recommended to collect ATR data for a longer period to accommodate the potential fluctuations in day to day traffic volumes to determine average daily volumes. Explain why 48-hour data was not collected.
 3. Speed data was not collected via the ATR's. Explain why speed data was not included with the ATR data collection, particularly on Kendrick Street where travelling speeds are significant, as is standard practice for a TIAS.
 4. Volume data was collected at 16 ATR locations and the raw data was provided in the Appendix. However, the data was not provided or summarized in the study itself. A summary of the ATR data is not only a standard part of a TIAS but would be helpful to understand the existing traffic volumes and patterns throughout the study area. In addition, it would provide a baseline for the post occupancy monitoring.
 5. Provide the TMC data sheets for the Kendrick Street and 3rd Avenue afternoon peak periods which are missing from the Appendix.

The proponent reviewed the need for a seasonal adjustment. Since the proponent found the traffic volumes in October were found to be average-month conditions the volumes were not adjusted. The source of the seasonal adjustment information was not provided in the TIAS. Based on historical data for from MassDOT, BETA found the volumes to be higher than average in the month of October and therefore finds not adjusting the volumes to be a conservative approach and acceptable.

The traffic volumes were collected in October 2019. Since then a few changes have occurred relative to traffic volumes. One of which is that the 189 B Street building received its occupancy permit on November 1, 2019 after the original counts were conducted. The building occupancy trips are considered “estimated” although at some point after October 2019 the trips generated by the building would have been “actual” and realized. The second change relative to traffic volumes is the COVID-19 impact on traffic volumes. The TIAS did not mention COVID-19 related impacts.

6. Due to a high percentage of people are working remotely, at least part time, it is not reasonable to collect new data at this time. However, occupancy after the October 2019 counts and prior to COVID-19 changes in traffic, and current and potential future traffic patterns and changes due to COVID-19 are important to note in the TIAS.

PROJECT CHANGE DESCRIPTION

LAND USE AND BUILDING SIZES

The changes to the permitted Founders Park development are similar to the BCH Proposed Project in terms of total building square footage, however one of the uses are different and the building sizes vary. The following table outlines the comparison of the permitted and proposed projects.

Table 1: Comparison of Permitted and Revised Proposed Use

Location	Permitted		Proposed	
	Use	SF	Use	SF
380 1 st Avenue	Office	189,509	Pediatric Ambulatory Center	224,000
37 A Street	Office	135,000	Office	101,000
2 B Street	Office	127,145	Office	127,000
Total		451,654		452,000

PROPOSED SITE PARKING

The first phase of construction consists of the 380 1st Avenue building. The interim parking plan to support this will consist of expanding the existing parking garage at 380R 1st Street (Garage B) by 530 parking spaces as currently approved. BCH will utilize 138 of the 264 existing surplus parking spaces in the existing Garage B. In addition, a temporary surface lot at 37A Street will be constructed with 105 spaces for a total of 773 spaces for interim parking.

The full build parking plan will include the previously approved 530 space addition to Garage B, and a new 925 space parking garage located at 400R 1st Avenue (Garage A) for a total of 1,455 spaces.

An extensive review of the Parking Generation Evaluation was performed by BETA in April 2020. It was noted by BETA that while 138 existing surplus parking spaces were observed to be currently unused, many of them are allocated for existing uses and could be utilized in the future if tenants change or a reduction in mode shares is seen. The proponent agreed that a review of the parking supply and utilization should be considered as part of the future traffic and parking monitoring program for the site.

7. The review of the parking supply should be added in the future traffic and parking monitoring program as part of the mitigation.

As mentioned earlier in the memorandum, this TIAS proposes slightly different building sizes than as indicated in the previous review which slightly alters the individual parking generation numbers, but the total required spaces is comparable to those reviewed in April 2020. The table below summarizes the revised parking demand per the zoning amendment to include the Pediatric Medical Facility land use.

Table 2: Revised Parking Demand

Location	Zoning By-Law Use	Program Size (KSF)	Required Parking (spaces/KSF)	Parking Demand (spaces)
380 1 st Avenue	Medical Facility, Pediatric	224	3.45	773
37 A Street	Office Building	101	3.33	337
2 B Street	Office Building	127	3.33	423
Total		452	3.39	1,533

PROPOSED SITE ACCESS & CIRCULATION

Access to the three new buildings would be provided from 1st Avenue, A Street and B Street. Patient drop off for 380 1st Avenue will be via Founders Drive and egress via a driveway along New Way. Access to 37A Street will be via A Street.

A revised walking path network has been proposed to and from the site buildings and parking garages. A raised crosswalk exists for the crossing between the amphitheater and 380 1st Avenue and a speed table exists between the amphitheater and Garage A. The proposed connection from Garage B to 380 1st Street is marked but not raised.

8. Clarify the proposed pedestrian amenities for this project versus what exists today.
9. Consideration should be given to raising the crosswalk between Garage B to 380 1st Street as it is likely that this crossing would experience significant pedestrian activity.

Two site plans were provided. One site plan shows an interim site layout and the other is a full build layout. The interim site plan shows a three-way stop sign configuration where Founders Drive, New Way, and an unnamed street intersect. The full build plan shows only one stop sign on the New Way approach to the intersection.

10. Provide discussion on how the application of the stop sign on the one approach was determined for the full build layout.

TRIP GENERATION

The trip generation calculations were performed for the new use/change in use to estimate the projected trips, using the *Institute of Transportation Engineer's (ITE) Trip Generation Manual, 10th Edition*. There is no ITE land use for Pediatric Ambulatory Center and for the purposes of this TIAS, the Medical-Dental Office Building was used. In addition, the proposed use for 380 1st Avenue was split evenly between Medical-Dental Office and Hospital, to more accurately account for its intended uses. Based upon this categorization the revised development program was assessed using the following ITE Land Use Codes:

- Land Use Code 610: Hospital
- Land Use Code 710: General Office Building
- Land Use Code 720: Medical-Dental Office Building (in lieu of Pediatric Ambulatory Center)

It should be noted that all medical trips used a 100% vehicle trip share, while all office trips used a 90% vehicle trip share, as previously approved in the SDEIR. The proposed use provided in the documents from the April 2020 review with the added Medical-Dental Office Building land use resulted in a total of 732 trips in the morning Peak and 815 trips in the afternoon Peak. The newly proposed uses and trip generation summary is shown in the following table.

Table 3: Proposed BCH Project Weekday Vehicle Trip Generation

Location	Proposed Use	ITE Land Use Code	SF	Estimated Vehicle Trips					
				Morning Peak			Afternoon Peak		
				In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	112,000	243	68	311	109	279	388
		Hospital	112,000	142	67	209	62	132	194
37 A St	Office	General Office	121,000	81	13	94	16	85	101
2 B St	Office	General Office	127,000	85	14	99	17	89	106
Total			452,000	551	162	713	204	585	789

The new proposed use with the added Medical-Dental Office Building land use results in a total of 713 trips in the weekday morning peak and 789 trips in the afternoon peak.

PERMITTED VS. PROPOSED TRIP GENERATION COMPARISON

Once the newly proposed trips were calculated, a comparison was made between the proposed trip generation and the previously approved (permitted) trip generation for the entire site. The permitted trips are taken from the SDEIR, while the proposed new project trips for BCH's development were added to the actual site trips collected in October 2019 to create the future expected trips. The permitted and revised proposed vehicle trips summary is shown in the table below and has previously been reviewed and found to be acceptable by BETA in April 2020.

Table 4: Revised Trip Generation Comparison

Time Period/Direction	Permitted (SDEIR)	Proposed Project + Actual Trips	Difference
Morning Peak Hour			
Entering	1,338	1,373	+35
Exiting	352	321	-31
Total	1,690	1,694	+4
Afternoon Peak Hour			
Entering	453	403	-50
Exiting	1,266	1,405	+139
Total	1,719	1,809	+90

The table shows the proposed project + actual trips would generate 4 more trips than the permitted project in the morning peak hour and 90 more trips in the afternoon peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

The TIAS states that the trips were distributed to the study area intersections according to the distribution and trip assignment developed in the 2015 SDEIR and the trips were separated and distributed differently between retail and office/hotel/pediatric medical office. The 2015 SDEIR gravity models and mode split data used to determine trip distribution and assignment is from the 2010 Census and other outdated documents. The information used to determine the distribution is based on data that is 10 years old and more recent Census data available.

11. Confirm that the trip distributions from 2015 are still relevant/applicable in 2020. Revise the mode split and trip distribution if needed.
12. The pediatric medical office use was not included as part of the Founders Park Development back in 2015. Clarify how the pediatric medical office distribution percentages were determined as shown on Figure 10 – Trip Distribution in the TIAS.
13. BCH patient data would be more reasonable to use in determining the trip assignment and distribution for the BCH pediatric medical use.
14. Verify the trip distributions shown on Figure 10 – Trip Distribution. The distribution percentages from west of 1st Avenue do not add up with the percentages shown at the Highland Avenue and 1st Avenue intersection. This also applies to the percentages west of the intersection of 3rd Avenue and Kendrick Street.
15. Approximately 295 vehicle trips are anticipated to turn right onto 1st Avenue from Highland Avenue and 329 turning left onto 3rd Avenue from Kendrick Street during the morning peak hour during the proposed BCH condition. Clarify why the intersections to the west of these locations were not included in the analysis with the addition of 300 vehicle trips during the peak periods.

FUTURE CONDITIONS

The future conditions were analyzed for two scenarios with a seven-year horizon to 2026. The permitted Founder's Park development project and the proposed BCH project were analyzed.

16. A No-Build future condition was not included in the TIAS; however, a No-Build condition analysis was provided in the 2015 SDEIR. A No-Build analysis should be provided in order to determine the true projects impacts. Explain why the No-Build future condition was not analyzed in the TIAS.

The future traffic volumes were determined by applying a 0.5% percent per year growth rate over seven years. A 0.5% growth rate is consistent with the growth rate used in the 2015 SDEIR. BETA finds the growth rate to be reasonable, however it is not clear what future traffic volumes, growth, and office occupancy will look like post pandemic.

Trip generation data for the following additional background developments was determined based on associated Institute for Transportation Engineers (ITE) Trip Generation data and included in the two future conditions.

- 2 Wells Avenue (trips only associated with the unoccupied expansion of the project)
 - 180 Wells Avenue
 - Newton Nexus
 - Northland Industrial (130 Charlemont)
 - Northland Newton Development
17. ITE Trip Generation data was used to determine project trips for the above-mentioned projects, however, there are traffic studies for at least some of the projects which provide the number of anticipated trips. The available traffic study data should be provided instead of determining trips based on the ITE Trip Generation for the background projects where applicable.
 18. The backup calculations and distributions used to determine the various development vehicle trips was not provided for reference and review. This information is necessary to determine the appropriateness of the future volumes.

TRAFFIC OPERATIONS

Traffic operations analyses were performed using Synchro software for the existing conditions, 2026 future approved project, and the 2026 future BCH project build conditions.

19. Provide all study area traffic signal timing and phasing plans for reference.

Capacity analysis results show that all existing signalized intersections operate at an acceptable Level of Service (LOS) D or better overall and all approaches operate at LOS E or better during the existing conditions.

The condition comparison discussions per intersection refer mainly between the existing conditions and the 2026 future BCH build conditions unless otherwise noted. It is noted that all results assume pre- and post-COVID-19 operating conditions.

1ST AVENUE & HIGHLAND AVENUE

Capacity analysis results show a degradation from LOS D during the existing afternoon peak to LOS F during the BCH project condition afternoon peak hour for the 1st Avenue northbound left-turn movement

with a minimal increase in queue length. The intersection will operate at an overall LOS D or better during both peak periods.

A comparison between the 2015 SDEIR analysis for the 2022 “Approved” build and the 2026 Approved build in the TIAS reveals a significant difference for the 1st Avenue northbound left turn volume. The 2015 SDEIR shows a volume of 365 vehicles and the TIAS shows a much lower volume of 113 during the morning peak hour.

20. Describe any known reason for the significant difference in left-turn volumes between the two analyses.

The intersection has recently been reconstructed. It is understood that limited additional improvements are available for this intersection to improve traffic operations at this time.

2ND AVENUE & HIGHLAND AVENUE

Capacity analysis results show that all movements during the morning peak operate at LOS D or better and the overall intersection would operate at LOS B. The 2nd Avenue northbound and southbound movements will continue to operate at LOS E when compared with the existing conditions, however, the northbound right-turn movement will degrade from LOS D to LOS E between the existing and build conditions. The Highland Avenue westbound shared left/through movement operates as a defacto left turn lane during all conditions the morning peak period. The defacto analysis result for the Highland Avenue westbound shared left/through movement indicates that an exclusive westbound left-turn lane is needed.

Although the overall intersection is shown to operate at LOS D during the evening peak hour BCH project conditions, the volume to capacity ratio is greater than 1.02 which is indicative of an oversaturated intersection and an operation of LOS F, which is degraded from an LOS C during existing conditions.

21. Some of the signal equipment was not updated as part of the recent roadway project along Highland Avenue. Consideration should be given to upgrading the equipment that was not updated.



Figure 1: Existing signal post of northeast corner of 2nd Avenue and Highland Avenue.

3RD AVENUE & KENDRICK STREET

The capacity analysis results show that the overall intersection operations degrade from LOS C during existing conditions to LOS E during the morning peak period and degrade from LOS C to LOS F during afternoon peak operations. The Kendrick Street eastbound left-turn movement will degrade from LOS E to a significant LOS F during both peak periods with extensive queueing during the morning for both left turn and through eastbound movements. In addition, the Kendrick Street westbound movement would experience significant queueing during the afternoon peak hour. The 3rd Avenue southbound right turn movement will experience a significant increase in delay from a LOS D to LOS F and significant queue lengths during the afternoon peak hour.

4TH AVENUE & KENDRICK STREET

The unsignalized driveway northbound and 4th Avenue southbound approaches to Kendrick Street operate at LOS F during both existing peak periods. The same movements continue to operate at LOS F under both the future Approved and BCH project conditions with significantly increased delay and queues.

The TIAS states that there is a modest increase in traffic at the intersection under the proposed BCH project and conservative gap parameters are assumed in the analysis so in actuality shorter delays would

be realized in the future than as presented in the analysis. It was also noted that no queuing was observed in the morning and a maximum queue length of six cars was observed in the evening. BETA observed very few gaps in traffic for vehicles exiting 4th Avenue. Right turn safety issues exiting 4th Avenue onto Kendrick Street westbound due to the travelling speeds combined with limited gaps on Kendrick Street, and also lack of pedestrian safety for pedestrians crossing 4th Avenue were observed as well.

22. There are safety and operational issues at this intersection. A signal warrant analysis was not performed for the intersection. Provide a signal warrant analysis to determine if the intersection meets warrant criteria for signalization.

TRANSPORTATION MITIGATION

According to the TIAS, the Approved Founders Park Development included the following mitigation commitments, and the status is “completed.”

- Add-A-Lane Project, 1-95 NB off-ramp and 1-95 SB on-ramp at Kendrick Street
- Signalization of Highland Avenue/1st Avenue
- Coordination with of timings at the intersections of 1st Avenue and 2nd Avenue along Highland Avenue
- Kendrick Street/3rd Avenue signal timing adjustments
- Upon issuance of the building permit for the first office building to be constructed, the Proponent will contribute to the Town of Needham a Traffic Improvement Fee of \$930,000
- Contribute to the Town of Needham an additional \$75,000 for use by the town to hire a traffic engineer to evaluate traffic measures that should be implemented to improve traffic conditions in the immediate area of Needham Crossing
- Contribute \$1,000,000 to the New England Business Center Owner's Association (i.e., Needham Crossing Improvement Corporation) available to be used to address traffic issues serving the New England Business Center
- Provide a bike share program for the New England Business Center
- Contribute \$100,000 to fund new ingress and egress signs for the New England Business Center

The mitigation measure options provided in the TIAS for the proposed BCH development impacts are the following:

- Signal timings and or phase changes at the Kendrick Street and 3rd Avenue intersection
- To increase the storage capacity of the 3rd Avenue southbound right-turn lane at Kendrick Street

23. Signal timing and phasing adjustment analysis was not performed for the Kendrick Street and 3rd Avenue intersection to determine that timing and/or phase changes would benefit the intersection. Provide analysis to verify that this “mitigation measure” would reduce the project-related impacts to the intersection as indicated in the TIAS.

24. Currently there are two marked southbound travel lanes on 3rd Avenue approaching Kendrick Street. Although the outer lane is not marked with right-turn only lane markings, it operates as a right-turn only lane. Therefore, this mitigation condition already exists and would not improve operations at the intersection. However, right-turn only lane markings and signage could be provided to better delineate the lanes.

25. According to the TIAS, a traffic monitoring program is proposed post-development but not outlined in the mitigation section. Verify that a post-occupancy study to monitor realized development traffic will be included in the mitigation package and all intersections will be reviewed post occupancy to determine the need for signal timing and phasing improvements at that time.

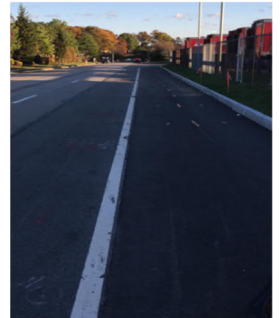


Figure 2: 3rd Avenue Southbound approach to Kendrick Street.

TRANSPORTATION DEMAND MANAGEMENT

The Approved Project also included the following TDM commitments to encourage alternative modes of transportation:

- Appointed TDM Program Coordinator to oversee the program
- Joined the 128 Business Council TMA
- Provide a commuter information website and commuter information centers in each of the buildings on campus
- Promote transit use to hotel guests on their website
- Provide a shuttle bus service for employees of TripAdvisor
- Provide 287 bicycle parking spaces.
- Provide on-site locker rooms and showers for employees
- Participate in Zagster bicycle sharing program
- Offer staggered and flexible work hours to reduce peak hour trips
- Work with MassRIDES to promote ride matching and van pool programs
- Provide information to MassRIDES in tenant's rental agreements
- Offer on-site commuter events to promote alternative travel
- Work with the 128 Business Council to facilitate on-site shuttle bus access
- Offer on-site amenities for employees and residents to reduce mid-day trip making

The BCH Project included the following TDM commitments to reduce auto use for employees:

- Providing an Employee Transportation Advisor who will coordinate with the 128 Business Council
- Providing shuttle service connectivity to nearby public transportation nodes (commuter rail and Green Line)
- 50 percent transit pass subsidy for employees
- Carpool assistance and incentives
- Emergency ride home
- Bicycling/walking incentives and amenities
- Telecommuting and compressed workweeks, when feasible
- Display in the Main Lobby transportation-related information for employees, patients, and visitors
- Promotional efforts

The proposed TDM measures are appropriate and reasonable for the development. It should be noted that a change in trips could be seen in the future if tenants change or if TDM strategies retract.

ADDITIONAL COMMENTS

Safety issues were not discussed in the TIAS at the study area intersections or within the project area.

26. The 2026 BCH proposed analysis shows that the traffic operations at the intersection of 3rd Avenue and Kendrick Street would be significantly impacted by the project and mitigation was not proposed to improve the project's impact on the intersection. Consideration should be given to providing intersection improvements to mitigate the development's anticipated impact to the intersection.
27. Crash data was not collected, compiled nor analyzed for existing conditions at the study area intersections. This is a standard part of a TIAS. A crash analysis of the latest three years available should be provided to determine safety issues at the intersections, especially the intersections along Kendrick Street.
28. The overhead signal head alignment is offset from the travel lanes on Kendrick Street at 3rd Avenue and can be confusing to drivers. See photo. The signal heads should be realigned with the travel lanes to the extent possible. Consideration should be given to realigning the signal heads as part of the mitigation to improve safety at the intersection.



Figure 3: On Kendrick Street eastbound approaching 3rd Avenue.

SUMMARY OF FINDINGS

For ease of review, the following is a summary of comments outlined within the review with the associated subject title and respective page numbers.

2019 BASELINE CONDITIONS/EXISTING CONDITIONS (PAGES 2-3)

1. Volume data was collected at seven intersections. Four of the intersection volumes were provided on the volume figures in the TIAS and analyzed. Explain why the remaining three intersection volumes, two of which are at site driveways, were not included on the future volume diagrams to show an understanding of the future activity at the proposed driveways.
2. It is typical and recommended to collect ATR data for a longer period to accommodate the potential fluctuations in day to day traffic volumes to determine average daily volumes. Explain why 48-hour data was not collected.
3. Speed data was not collected via the ATR's. Explain why speed data was not included with the ATR data collection, particularly on Kendrick Street where travelling speeds are significant, as is standard practice for a TIAS.
4. Volume data was collected at 16 ATR locations and the raw data was provided in the Appendix. However, the data was not provided or summarized in the study itself. A summary of the ATR data is not only a standard part of a TIAS but would be helpful to understand the existing traffic volumes and patterns throughout the study area. In addition, it would provide a baseline for the post occupancy monitoring.
5. Provide the TMC data sheets for the Kendrick Street and 3rd Avenue afternoon peak periods which are missing from the Appendix.
6. Due to a high percentage of people are working remotely, at least part time, it is not reasonable to collect new data at this time. However, occupancy after the October 2019 counts and prior to COVID-19 changes in traffic, and current and potential future traffic patterns and changes due to COVID-19 are important to note in the TIAS.

PROPOSED SITE PARKING (PAGES 3-4)

7. The review of the parking supply should be added in the future traffic and parking monitoring program as part of the mitigation.

PROPOSED SITE ACCESS & CIRCULATION (PAGE 4)

8. Clarify the proposed pedestrian amenities for this project versus what exists today.
9. Consideration should be given to raising the crosswalk between Garage B to 380 1st Street as it is likely that this crossing would experience significant pedestrian activity.
10. Provide discussion on how the application of the stop sign on the one approach was determined for the full build layout.

TRIP DISTRIBUTION AND ASSIGNMENT (PAGE 6)

11. Confirm that the trip distributions from 2015 are still relevant/applicable in 2020. Revise the mode split and trip distribution if needed.
12. The pediatric medical office use was not included as part of the Founders Park Development back in 2015. Clarify how the pediatric medical office distribution percentages were determined as shown on Figure 10 – Trip Distribution in the TIAS.
13. BCH patient data would be more reasonable to use in determining the trip assignment and distribution for the BCH pediatric medical use.

14. Verify the trip distributions shown on Figure 10 – Trip Distribution. The distribution percentages from west of 1st Avenue do not add up with the percentages shown at the Highland Avenue and 1st Avenue intersection. This also applies to the percentages west of the intersection of 3rd Avenue and Kendrick Street.
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FUTURE CONDITIONS (PAGE 7)

16. A No-Build future condition was not included in the TIAS; however, a No-Build condition analysis was provided in the 2015 SDEIR. A No-Build analysis should be provided in order to determine the true projects impacts. Explain why the No-Build future condition was not analyzed in the TIAS.
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18. The backup calculations and distributions used to determine the various development vehicle trips was not provided for reference and review. This information is necessary to determine the appropriateness of the future volumes.

TRAFFIC OPERATIONS (PAGE 7)

19. Provide all study area traffic signal timing and phasing plans for reference.

1ST AVENUE & HIGHLAND AVENUE (PAGES 7-8)

20. Describe any known reason for the significant difference in left-turn volumes between the two analyses.

2ND AVENUE & HIGHLAND AVENUE (PAGE 8)

21. Some of the signal equipment was not updated as part of the recent roadway project along Highland Avenue. Consideration should be given to upgrading the equipment that was not updated.

4TH AVENUE & KENDRICK STREET (PAGES 8-9)

22. There are safety and operational issues at this intersection. A signal warrant analysis was not performed for the intersection. Provide a signal warrant analysis to determine if the intersection meets warrant criteria for signalization.

TRANSPORTATION MITIGATION (PAGES 9-10)

23. Signal timing and phasing adjustment analysis was not performed for the Kendrick Street and 3rd Avenue intersection to determine that timing and/or phase changes would benefit the intersection. Provide analysis to verify that this “mitigation measure” would reduce the project-related impacts to the intersection as indicated in the TIAS.
24. Currently there are two marked southbound travel lanes on 3rd Avenue approaching Kendrick Street. Although the outer lane is not marked with right-turn only lane markings, it operates as a

right-turn only lane. Therefore, this mitigation condition already exists and would not improve operations at the intersection. However, right-turn only lane markings and signage could be provided to better delineate the lanes.

25. According to the TIAS, a traffic monitoring program is proposed post-development but not outlined in the mitigation section. Verify that a post-occupancy study to monitor realized development traffic will be included in the mitigation package and all intersections will be reviewed post occupancy to determine the need for signal timing and phasing improvements at that time.

ADDITIONAL COMMENTS (PAGE 11)

26. The 2026 BCH proposed analysis shows that the traffic operations at the intersection of 3rd Avenue and Kendrick Street would be significantly impacted by the project and mitigation was not proposed to improve the project's impact on the intersection. Consideration should be given to providing intersection improvements to mitigate the development's anticipated impact to the intersection.
27. Crash data was not collected, compiled nor analyzed for existing conditions at the study area intersections. This is a standard part of a TIAS. A crash analysis of the latest three years available should be provided to determine safety issues at the intersections, especially the intersections along Kendrick Street.
28. The overhead signal head alignment is offset from the travel lanes on Kendrick Street at 3rd Avenue and can be confusing to drivers. See photo. The signal heads should be realigned with the travel lanes to the extent possible. Consideration should be given to realigning the signal heads as part of the mitigation to improve safety at the intersection.



TOWN OF NEEDHAM

**TOWN HALL
1471 Highland Avenue
Needham, MA 02492-2669**

Design Review Board

Memo: Major Project review, Children's Hospital, 380 First Avenue

14 September 2020

The Board reviewed the design drawings for the new building proposed for this site.

The proposed building is part of an existing special permitted multi-building project. The proposed building is larger than the conceptual building proposed in the original special permit. The applicant stated they would reduce the size of a future building that is part of the special permit so the overall square footage of the development meets the original permit.

The applicant included information regarding the previously special permitted second Parking Garage, and the landscaped passage between the new and existing garages. There was some discussion of earlier DRB concerns during the original review of these two elements of the project. While imagery was included in the application package for the garage and passage, the second garage and the landscaped passage are not going to be built with the currently proposed hospital. They are a future development.

The DRB asked that the future garage and landscaped passage be presented for review when they are actually expected to be constructed. The Board did reiterate their previous concerns that the precast concrete garage addition be screened in a similar way that was requested of the developer during construction of the first garage.

The only parking construction will be an addition to the existing garage, and grade parking to meet the parking requirements of the new hospital only.
No plans of this concept were shown.

The original special permit for the multi-building project included design guidelines regarding a mix of materials and scale of buildings in order to facilitate future approvals and provide the Town with a baseline quality of building, should the original developer sell rights to various building parcels.

The proposed building is finished in a variegated grey colored roman brick. The design proposes changes in the geometry of the walls at different floor levels, as well as a varied pattern of projected brick coursing on the different building levels.

The Board commented that the building is somewhat lacking in scale, due to limited windows and the single colored masonry finish. The top level has no masonry variations or projected coursing and as such is a large masonry mass. Some members of DRB felt the building was

overly weighted to the top volume. The applicant stated they typically do a large parapet, and that they will review the scale of the upper level.

The Board asked whether the introduction of other materials or colors had been considered. The design guidelines for the overall development supported a mix of masonry, stone and metal finishes. The applicant stated that the building as presented was the final design they wanted to present as their proposal.

The landscaping was reviewed, and the consensus was that it was lushly planted, and the Board believed there was a good selection of plant materials. The Board stated concerns about the maintenance of the landscaping. The applicant stated that the landscaping will be irrigated, which will help in that regard.

The project was approved in total as presented, the Board presents these comments for the Planning Boards consideration.

End of Notes

From: [Dennis Condon](#)
To: [Alexandra Clee](#)
Subject: RE: Request for comment - Boston Children's Hospital
Date: Thursday, October 22, 2020 1:31:04 PM
Attachments: [image001.png](#)
[image002.png](#)

Hi Alex,

The Fire Department is okay with this project and will work with the developer to ensure all codes and regulations are met.

Thanks,
Dennis

Dennis Condon
Chief of Department
Needham Fire Department
Town of Needham
(W) 781-455-7580
(C) 508-813-5107
Dcondon@needhamma.gov



Follow on Twitter: Chief Condon@NeedhamFire



Watch Needham Fire Related Videos on YouTube @ Chief Condon



From: Alexandra Clee <aclee@needhamma.gov>
Sent: Tuesday, October 20, 2020 4:23 PM
To: Anthony DelGaizo <ADelgaizo@needhamma.gov>; David Roche <droche@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>
Subject: Request for comment - Boston Children's Hospital

Dear all,

The Planning Board will be holding a hearing on an Amendment to the 2012-07 Special permit issued for 66B Street, 360 First Avenue, 410 First Avenue and 37 A Street. More information is included in the submitted documents, detailed below, which can be found here:

[K:\Planning_BostonChildrensHospital](#). (some of you will receive a hard copy in the inter-office mail

as well).

The documents included on the Common Drive for your review are:

1. Application submitted by The Children's Hospital Corporation c/o Boston Children's Hospital (*also attached to this email*)
2. Letter from Tim Sullivan, Attorney, dated October 13, 2020 (*also attached to this email*)
3. Letter from Glenn Dougherty, Tetra Tech, dated September 24, 2020
4. Transportation Impact and Access Study, prepared by VHB, dated October 7, 2020
5. Plan set consisting of 37 sheets, dated October 7, 2020.

The hearing is scheduled for November 17, 2020. If you wish to comment, please submit your comment by Tuesday November 10, 2020, so that the Petitioner has time to address any concerns or questions in advance of the hearing.

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Town of Needham
500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

**** Please note: I will not be in the office on Mondays. I will reply to you on Tuesdays, Wednesdays, Thursdays and Fridays.**

From: [Tara Gurge](#)
To: [Alexandra Clee](#)
Cc: [Timothy McDonald](#)
Subject: RE: Public Health Division comments - Boston Children's Hospital
Date: Wednesday, November 4, 2020 4:21:02 PM
Attachments: [image002.png](#)
[image003.png](#)
Importance: High

Alex –

Here are the Public Health Division comments for Boston Children's Hospital, re: this Amendment to the 2012-07 Special permit issued for 66B Street, 360 First Avenue, 410 First Avenue and 37 A Street. See Below:

- Any kitchen/cafeteria areas or any retail stores or coffee areas proposed in this newly proposed medical facility, specifically for Bldgs. 1, 2 or 4, would also need a food permit and these food permit plan review applications/design plans will also need to be submitted and reviewed and approved by the Public Health Division prior to start of construction.
- Please keep in mind, if a food service or retail store permit is issued, sufficient space must be made available in the parking lot for both a solid waste (trash) dumpster and a separate recycling dumpster, along with waste oil/grease containment (if applicable.) These dumpsters must be placed in an easily accessible area, close to the kitchen.
- Both indoor and outdoor proper hazmat waste storage and disposal must be accommodated for on site in these medical buildings (where applicable.)
- No public health nuisance issues (i.e. odors, noise, light migration, etc.), to neighboring properties, shall develop on site during or after construction.

Please let us know if you need additional information or have any follow-up questions on those requirements.

Thanks,



TARA E. GURGE, R.S., C.E.H.T., M.S.
ASSISTANT PUBLIC HEALTH DIRECTOR
Needham Public Health Division
Health and Human Services Department
178 Rosemary Street
Needham, MA 02494
Ph- (781) 455-7940; Ext. 211/Fax- (781) 455-7922
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Web- www.needhamma.gov/health



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From: Alexandra Clee <aclee@needhamma.gov>

Sent: Tuesday, October 20, 2020 4:23 PM

To: Anthony DelGaizo <ADelgaizo@needhamma.gov>; David Roche <droche@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>

Subject: Request for comment - Boston Children's Hospital

Dear all,

The Planning Board will be holding a hearing on an Amendment to the 2012-07 Special permit issued for 66B Street, 360 First Avenue, 410 First Avenue and 37 A Street. More information is included in the submitted documents, detailed below, which can be found here:

[K:\Planning_BostonChildrensHospital](#). (some of you will receive a hard copy in the inter-office mail as well).

The documents included on the Common Drive for your review are:

1. Application submitted by The Children's Hospital Corporation c/o Boston Children's Hospital (*also attached to this email*)
2. Letter from Tim Sullivan, Attorney, dated October 13, 2020 (*also attached to this email*)
3. Letter from Glenn Dougherty, Tetra Tech, dated September 24, 2020
4. Transportation Impact and Access Study, prepared by VHB, dated October 7, 2020
5. Plan set consisting of 37 sheets, dated October 7, 2020.

The hearing is scheduled for November 17, 2020. If you wish to comment, please submit your comment by Tuesday November 10, 2020, so that the Petitioner has time to address any concerns or questions in advance of the hearing.

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Town of Needham

500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

**** Please note: I will not be in the office on Mondays. I will reply to you on Tuesdays, Wednesdays, Thursdays and Fridays.**

Alexandra Clee

From: John Schlittler
Sent: Tuesday, November 10, 2020 3:24 PM
To: Alexandra Clee
Subject: RE: Request for comment - Boston Children's Hospital

Alex,
I have no concerns with the proposed plan.

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Tuesday, November 10, 2020 11:03 AM
To: Anthony DelGaizo <ADelgaizo@needhamma.gov>; David Roche <droche@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>
Subject: RE: Request for comment - Boston Children's Hospital

If you have not yet submitted comments and you wish to, it would be great to receive them today (or Thursday morning) so I can include them in the Planning Board packets.

Thanks!

Alexandra Clee
Assistant Town Planner
Town of Needham
Google Voice Phone: 339-225-9522

**** Please note: Due to Covid-19, I am working primarily remotely. Email is the quickest way to reach me.**

From: Alexandra Clee
Sent: Tuesday, October 20, 2020 4:23 PM
To: Anthony DelGaizo <ADelgaizo@needhamma.gov>; David Roche <droche@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>
Subject: Request for comment - Boston Children's Hospital

Dear all,

The Planning Board will be holding a hearing on an Amendment to the 2012-07 Special permit issued for 66B Street, 360 First Avenue, 410 First Avenue and 37 A Street. More information is included in the submitted documents, detailed below, which can be found here: [K:\Planning BostonChildrensHospital](#). (some of you will receive a hard copy in the inter-office mail as well).

The documents included on the Common Drive for your review are:

1. Application submitted by The Children's Hospital Corporation c/o Boston Children's Hospital *(also attached to this email)*

2. Letter from Tim Sullivan, Attorney, dated October 13, 2020 *(also attached to this email)*
3. Letter from Glenn Dougherty, Tetra Tech, dated September 24, 2020
4. Transportation Impact and Access Study, prepared by VHB, dated October 7, 2020
5. Plan set consisting of 37 sheets, dated October 7, 2020.

The hearing is scheduled for November 17, 2020. If you wish to comment, please submit your comment by Tuesday November 10, 2020, so that the Petitioner has time to address any concerns or questions in advance of the hearing.

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Town of Needham
500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

**** Please note: I will not be in the office on Mondays. I will reply to you on Tuesdays, Wednesdays, Thursdays and Fridays.**



**TOWN OF NEEDHAM, MASSACHUSETTS
PUBLIC WORKS DEPARTMENT
500 Dedham Avenue, Needham, MA 02492
Telephone (781) 455-7550 FAX (781) 449-9023**

November 16, 2020

Needham Planning Board
Needham Public Service Administration Building
Needham, MA 02492

RE: Amendment to Major Project Special Permit No. 2012-07
37 A Street, 66 B Streets, 360 and 41 First Avenue- Children's Hospital

Dear Members of the Board,

The Department of Public Works has completed its review of the above referenced request for an Amendment to a Special Permit. The applicant requests to develop a 224,000 square foot pediatric medical facility at 380 First Avenue known as Building 1 for the facility while Building 2 and 4 are expected to be constructed at a later date. The submitted documents and plans show the proposed Building 1 will have an increase from the original proposed size by 34,491 square feet, while the future Building 4 will be reduced by the same amount for net zero increase in area. The proposed revised stormwater controls will increase the underground storage and infiltration areas and eliminate the original proposed rain gardens. The proposed infiltration units will now include a cistern storage so that rainwater may be used for lawn and garden irrigation.

The review was conducted in accordance with the Planning Board's regulations and standard engineering practice. The documents submitted for review are as follows:

1. Application submitted by Children's Hospital Corporation
2. Letter from Timothy Sullivan, Attorney, dated October 13, 2020
3. Letter from Glen Dougherty, Tetra Tech, on stormwater information dated November 6, 2020.
4. Memo from David Lee, RW Sullivan Engineering, regarding design sewerage flows dated September 21, 2020;
5. Transportation Impact and Access Study for Boston Children's Hospital, Needham MA prepared by VHB dated October 7, 2020
6. Plan set prepared by Payette, VHB, and Tetra Tech consisting of 37-sheet.

Our comments and recommendations are as follows:

- As part of the NPDES requirements, the applicant will need to comply with the Public Outreach & Education and Public Participation & Involvement control measures. The applicant shall submit a letter to the DPW identifying the measures selected and dates by which the measures will be completed in order to incorporate it into the Planning Board's decision.
- In order to determine the sewer flow impacts, the applicant should provide the design sewage flows differences from the 2-buildings (Building 2 and Building 4) that were previously proposed versus the current proposal.

- The applicant's submitted Transportation Impact and Access Study was complete with Appendix providing peer review from BETA Engineering. We agree with the findings from VHB and BETA with no comment or objection.

If you have any questions regarding the above, please contact our office at 781-455-7538.

Truly yours,

Thomas Ryder
Assistant Town Engineer



Daniel P. Dain
617.542.4850
ddain@daintorpy.com

November 11, 2020

By Electronic Mail & FedEx

Clerk's Office
Massachusetts Land Court
3 Pemberton Square
5th Floor
Boston, MA 02108

**Re: 770 Chestnut Street LLC v. Needham Planning Board, et al., Civil Action No. 20
MISC 000377 (HPS)**

Dear Sir/Madam:

Enclosed for filing in connection with the above-referenced matter:

1. Stipulation of Dismissal.

Kindly date-stamp the enclosed copy of this letter and return it in the pre-stamped envelope provided.

Thank you for your assistance with this matter.

Very truly yours,

A handwritten signature in blue ink that reads "Daniel P. Dain / amw".

Daniel P. Dain

DPD/rmf
Enclosures

cc: Paul Haverty, Esq. (by U.S. Mail & Email)
Christopher H. Heep, Esq. (by U.S. Mail & Email)

COMMONWEALTH OF MASSACHUSETTS

NORFOLK, ss

LAND COURT
DEPARTMENT

770 CHESTNUT STREET LLC,

Plaintiff

v.

NEEDHAM PLANNING BOARD AND
JEANNE S. McKNIGHT, PAUL S. ALPERT,
MARTIN JACOBS, ADAM BLOCK, TED
OWENS, as they are Members of the
Needham Planning Board AND WILLIAM
JOHN PIERSIAK, WILLIAM JOHN
PIERSIAK, AS TRUSTEE OF THE 768B
CHESTNUT STREET REALTY TRUST
AND 766 CHESTNUT LLC

Defendants.

Civil Action No. 20 MISC 000377 (HPS)

STIPULATION OF DISMISSAL

Under Massachusetts Rule of Civil Procedure 41(a)(1)(ii), the Parties stipulate to the dismissal of this action, with prejudice, without costs, and waiving all rights of appeal.

Respectfully submitted,

WILLIAM J. PIERSIAK, individually, and as
TRUSTEE OF THE 768B CHESTNUT
STREET REALTY TRUST, and 766
CHESTNUT LLC,

By their attorneys,



Daniel P. Dain, BBO# 632411
Michael J. McDermott, BBO# 685223
Dain, Torpy, Le Ray, Wiest, & Garner, P.C.
745 Atlantic Avenue, Suite 500
Boston, MA 02111
ddain@daintorpy.com
mmcdermott@daintorpy.com
P: (617) 542-4800
F: (617) 542-4808

770 CHESTNUT STREET LLC ,

By its attorneys,

*Paul Haverty / by permission
OPD*

Paul Haverty, BBO #652359
Christopher J. Alphen, BBO #691813
Blatman, Bobrowski & Haverty, LLC
9 Damon Mill Square
Suite 4A4
Concord, MA 01742
(978) 371-2226
paul@bbhlaw.net

NEEDHAM PLANNING BOARD,

By its attorney,

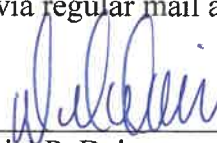
*Christopher Heep / by permission
DPD*

Christopher H. Heep, BBO# 661618
Miyares and Harrington LLP
40 Grove Street
Suite 190
Wellesley, MA 02482
cheep@miyares-harrington.com

Dated: November 11, 2020

CERTIFICATE OF SERVICE

I, Daniel P. Dain, do hereby certify that on this 11th day of November 2020 I caused a copy of the foregoing Stipulation of Dismissal to be served via regular mail and email, on counsel of record.



Daniel P. Dain

From: [Lee Newman](#)
To: [Robert Smart](#)
Cc: [Alexandra Clee](#)
Subject: RE: Heather Lane
Date: Tuesday, November 10, 2020 5:33:01 PM

Bob,

I am planning to put this project on the agenda for the Board meeting next Tuesday night. We have two public hearings scheduled for that night. You will be scheduled at the conclusion of those items.

At this meeting the Planning Board would vote to endorse the plan when certain conditions are met. A conditional vote to endorse is required in that a number of items need to be in place before the plan can be finally signed by the Board. When these items are in place the Board will be able to endorse the mylar outside of a meeting. Below is a list of the remainder items.

1. The plan as revised needs to be approved by the Engineering Department. This component is in process and should be completed by the meeting.
2. The plan will need to be revised to specifically list all documents that are to go on record with the plan. This includes the decisions as well as the documents you provided in September.
3. The plan will need to be signed by the DPW Director, Town Engineer and Town Clerk. As relates the Town Clerk her certified statement will need to be changed to read as follows: "I, Town Clerk of the Town of Needham, certify that the notice of approval of this plan by the Planning Board was appealed in Land Court Case No. 20MISC00377, and that said appeal has been finally disposed of by the filing of a stipulation of dismissal with prejudice on November __, 2020." Presently her certification on the plan indicates that no appeal was filed.
4. All subdivision documents will need to undergo a final review by myself, Town Counsel and the Town Engineer. I am starting this process currently.
5. The conservation restriction, utility easement, drainage easement and restrictive covenants will all need to be voted on and accepted by the Select Board at a posted meeting. I will facilitate scheduling this when the documents are in final form and have been appropriately signed by all parties absent the Select Board and Town Counsel.
6. The conservation restriction will need to be voted and accepted by the Conservation Commission at a posted meeting. I will facilitate scheduling this when the document is in final form and has been appropriately signed by all parties absent Town Counsel.
7. Once all approved documents are signed by the respective parties the documents will need to be signed "Approved as to Form" by Town Counsel.

Finally, are there any mortgages on this property. We will need the mortgagee assent if there are or a revision which clearly states that the property is unencumbered.

When the above items are complete the Board will sign the Mylar and I will deliver the plan and the original signed documents to you for recording. You should have the original decisions on which you will need the Town Clerk certification which certification should be as noted above for the plan. Finally, I will need 6 copies of the plan as endorsed for our records. Additionally I will need a certified copy of the plan and all recorded documents from the registry.

Let me know if you have any questions.

Lee

From: Robert Smart <bob@robertsmart.net>

Sent: Tuesday, November 10, 2020 3:58 PM

To: Lee Newman <LNewman@needhamma.gov>; Bill Piersiak <bpiersiak@icloud.com>; Koby Kempel <kobykempel@yahoo.com>

Subject: Heather Lane

Lee: Settlement agreement and Grant of easement have been signed by Piersiak, Kempel, and Bruner. We expect Brian Brown's signature shortly. Attys Dain (for Piersiak and Kempel), Haverty (for Bruner and Brown), and Chris Heep (for the Town) are hoping to file a Stipulation of Dismissal with the Land Court this afternoon or tomorrow morning. Please confirm we are on for the 17th. Bob

Robert T. Smart, Jr., Esq.
399 Chestnut Street
Needham, MA 02492
T 781-444-9344
FX 781-449-0242
bob@robertsmart.net

ROBERT T. SMART, JR., ESQ.

ATTORNEY AT LAW

399 CHESTNUT STREET

NEEDHAM, MASSACHUSETTS 02492

TEL (781) 444-9344 FAX (781) 449-0242

E-MAIL bob@robertsmart.net WEBSITE www.robertsmart.net

By E-Mail
September 9, 2020

Lee Newman
Needham Planning Board
500 Dedham Avenue
Needham, MA 02492

Re: Heather Lane Definitive Subdivision
Heather Lane Extension Residential Compound and Definitive Subdivision

Dear Lee:

Bill Piersiak has a tight window with his road construction contractor. If he cannot start road construction between October 10 and October 15, he loses the contractor until the Spring. Accordingly, I'm listing below the items which may need to be completed before road construction can commence, and hereby request your assistance and comments.

If a listed item does not need to be completed before road construction can be started, or if there are other items which need to be completed, please let me know.

1. Conservation Restriction with Plan. A copy is attached. Please confirm the text and plan are ok (I am forwarding these to Deb Anderson for her review as well). Once I have this confirmation, I will have Bill Piersiak sign, and will plan to file this document with you once the appeal period has passed (I believe Sept. 15 is the last day for an appeal to be filed).

2. Landscape Exhibit. A copy is attached for your review and comment. If acceptable, we will add this to the Heather Lane Extension plans.

3. Light Pole Exhibit. A copy is attached for your review and comment. If acceptable, we will add this to the Heather Lane Extension plans.

4. Heather Lane Homeowners Association Declaration of Trust, Heather Lane Declaration of Restrictive Covenants, and Heather Lane Subdivision Covenant. Drafts are attached. Please comment. I will incorporate your comments, and plan to file the documents once the appeal period has passed.

5. Heather Lane Extension Homeowners Association Declaration of Trust, Heather Lane Extension Declaration of Restrictive Covenants, and Heather Lane Extension Subdivision Covenant. Drafts are attached. Please comment. I will incorporate your comments, and plan to file the documents once the appeal period has passed.

6. Grant of Utility Easement, Grant of Drainage Easement. Drafts are attached. Please comment. I will incorporate your comments, and plan to file the documents once the appeal period has passed.

7. NPDES Letters. I'll plan to file these on September 16, unless you tell me otherwise.

8. Definitive Subdivision Plans for Heather Lane. I'm forwarding to you an email from Brandon Li with the latest version from Kelly Engineering. The conservation restriction easement on Lot 4 is shown, as required. Your comments, and those of the Engineering Department, are requested. Let me know which of the plan sheets will need to be endorsed and recorded prior to commencement of road construction.

9. Definitive Subdivision Plans and Residential Compound Special Permit. I'm forwarding to you an email from Brandon Li with the latest version from Kelly Engineering. The conservation restriction easement on RC Lots 3-5, and the street light detail and landscape exhibit will be added. Let me know which of the plan sheets will need to be endorsed and recorded prior to commencement of road construction.

Thank you for your consideration.

Very truly yours,



Robert T. Smart, Jr.

Cc: William Piersiak
Kelly Engineering

ROBERT T. SMART, JR., ESQ.

ATTORNEY AT LAW

399 CHESTNUT STREET

NEEDHAM, MASSACHUSETTS 02492

TEL (781) 444-9344 FAX (781) 449-0242

E-MAIL bob@robertsmart.net WEBSITE www.robertsmart.net

By E-Mail and Mail

October 22, 2020

Lee Newman
Needham Planning Board
500 Dedham Avenue
Needham, MA 02492

Re: Heather Lane Definitive Subdivision
Heather Lane Extension Residential Compound and Definitive Subdivision

Dear Lee:

The Decisions called for submission of revised plans, and NPDES letters. Accordingly, I have asked Kelly Engineering to send to you, by e-mail, the revised Plans for both subdivisions, for your review and comment before we submit them in mylar form.

Each of the specific revisions and submissions called for in the two subdivision decisions are addressed below:

Heather Lane Definitive Subdivision

2(a): "The plan shall be revised to show a Conservation Restriction Easement over the 200-foot Riverfront Area located on Lot 4".

The Conservation Restriction Easement is shown on Sheets 2, 4B and 4C of the Plan.

14: "The Petitioner shall grant a Conservation Restriction to the Town of Needham in accordance with G.L. Chapter 40, Section 8C, over the 200-foot Riverfront Area on Lot 4 ...".

I e-mailed to you the draft Conservation Restriction, with plan attached, on September 9, 2020. The Conservation Restriction draft is also attached hereto, for convenience. Please ask Deb Anderson to confirm that she is satisfied.

16. "The island in the center of the Heather Lane cul-de-sac shall be landscaped. A cul-de-sac landscaping plan shall be submitted to the Board and the Department of Public Works for review and approval prior to endorsement of the subdivision plan ..."

The cul-de-sac landscaping plan is shown on Sheet 6 of the Plan. Please ask the DPW if they are satisfied.

21: "Prior to Plan endorsement ... the Petitioner shall submit a letter indicating they are committed to providing a response under the NPDES requirement ..."

The letter is provided herewith.

Heather Lane Extension Definitive Subdivision

2(a): "The Plan shall be revised to show a Conservation Restriction Easement over the entirety of the 200-foot Riverfront Area located on Residential Compound Lots 3, 4 and 5"

The Conservation Restriction Easement is shown on Sheet 3 of the Plan.

2(b): "The plan shall be revised to show the street light detail and location.

These revisions are shown on Sheets 6 and 7 of the Plan. For convenience, I am also providing herewith 8.5 x 11 sheets showing this information.

13: "The Petitioner shall grant a Conservation Restriction to the Town of Needham in accordance with G.L. Chapter 40, Section 8C, over the 200-foot Riverfront Area located on Lot 3, Lot 4 and Lot 5..."

I e-mailed to you the draft Conservation Restriction, with plan attached, on September 9, 2020. The draft is also attached hereto, for convenience. Please ask Deb Anderson if she is satisfied.

19: "Prior to Plan endorsement ... the Petitioner shall submit a letter indicating they are committed to providing a response under the NPDES requirement ..."

The letter is provided herewith.

Your review and response are requested.

Very truly yours,



Robert T. Smart, Jr.

Cc: William Piersiak
Kelly Engineering

HEATHER LANE EXTENSION CONSERVATION RESTRICTION
TO
TOWN OF NEEDHAM, MASSACHUSETTS

William John Piersiak, of 768 Chestnut Street, Needham, Massachusetts 02492, for himself and his successors and assigns ("Grantor"), acting pursuant to Sections 31, 32 and 33 of Chapter 184 of the Massachusetts General Laws, hereby grants to the Town of Needham, a municipal corporation acting by and through its Conservation Commission, its successors and permitted assigns ("Grantee") as a gift, for conservation purposes in accordance with G.L. Chapter 40, Section 8C, with an address of 500 Dedham Avenue, Needham, Massachusetts 02492, in perpetuity and exclusively for conservation purposes, the following described Conservation Restriction on an area of land marked as "Conservation Restriction" (the "Premises") on a Plan entitled "Heather Lane Extension Residential Compound, Needham, MA, Conservation Restriction Plan", dated June 24, 2020, prepared by Kelly Engineering Group, and attached hereto as Exhibit A. The Premises are located within RC-Lot 3, RC-Lot 4, and RC-Lot 5, as shown on the Plan. For Grantor's title to said land, see deed dated April 23, 2019, recorded with the Norfolk Registry of Deeds in Book 36756, Page 532.

Purposes

This Conservation Restriction is defined in and authorized by Sections 31-33 of Chapter 184 of the Massachusetts General Laws and otherwise by law. Its purpose is to assure that the Premises will be retained in perpetuity predominantly in their natural, scenic and open condition and to prevent any use of the Premises that will significantly impair or interfere with the conservation values of the Premises. The Grantor and the Grantee acknowledge and agree that the Premises provide protection of significant scenic, aesthetic, and ecological values, comprised of wildlife habitat, groundwater supply, storm and flood prevention, and pollution attenuation. The Premises also contain wetland areas, including bordering vegetated wetlands, bank, and a Riverfront Area. The Premises border the Charles River and will protect the water quality of the Charles River, and Priority Habitat for Rare Species and Estimated Habitat, as identified by The Natural Heritage and Endangered Species Program (NHESP). The Grantor and Grantee share the common purpose of conserving the natural values of the Premises for the present generation and future generations.

I. Prohibited Acts and Uses, Exceptions Thereto, and Permitted Uses

A. Prohibited Acts and Uses

Subject to the exceptions set forth hereinafter, neither the Grantor nor the successors or assigns of the Grantor will perform or permit the following acts or uses which are prohibited on, over or under the Premises:

1. Constructing or placing of any temporary or permanent buildings, roads, signs, billboards or other advertising, utilities or other structures

(including a gazebo) on, above or below the ground (except for picnic tables);

2. Mining, excavating, dredging or removing from the Premises of soil, loam, peat, gravel, sand, rock or other mineral resources or natural deposits or otherwise making topographical changes to the area;
3. Removal, disturbance or destruction of any vegetation, except as allowed in the Permitted Uses Section B;
4. Placing, filling, storing or dumping on the Premises of soil, refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste or other substance or material whatsoever or the installation of underground storage tanks;
5. Activities detrimental to wildlife habitat, drainage, flood control, water conservation, erosion control or soil conservation; and
6. Any other use of the Premises or activity which would materially impair significant conservation interests.

B. Reserved Rights and Exceptions to Otherwise Prohibited Acts and Uses

The following acts and uses otherwise prohibited in the foregoing Section A are permitted by the Grantor, provided that they do not materially impair the purpose or conservation values of this Conservation Restriction:

1. Walking, bird-watching, photography, picknicking and other passive outdoor recreational activities;
2. The selective pruning and cutting of trees, shrubs and vegetation in accordance with written approval of the Grantee or to control or remove hazards, disease, insect damage or storm damage and the removal of invasive plant and animal species in accordance with a plan approved in writing by Grantee; and the planting of new native trees, shrubs and vegetation to further enhance the purposes of this Conservation Restriction;
3. Posting of signs prohibiting trespass where appropriate, and prohibiting public access consistent with the public access prohibitions herein set forth, and other admonitions as to use and identifying Grantee as the holder of this Conservation Restriction;
4. The selective use or application applied directly to targeted areas (not a generalized application) of any fertilizer, herbicide or pesticide or other mechanical or chemical means designed to affect only the offending target area, not the general area for the control of noxious, nuisance or invasive

plant or animal species, that will not impair the habitat or water quality, in accordance with a plan approved in writing by Grantee; and

5. Placement of picnic table(s).

The exercise of any right reserved by Grantor under this Paragraph B shall be in compliance with the zoning, Wetlands Protection Act, and all other applicable federal, state and local rules, regulations, and permits. The inclusion of any reserved right requiring a permit from a public agency does not imply that the Grantee or the Commonwealth takes any position on whether such permit should be issued.

All acts and uses not prohibited herein, are permissible, provided they do not materially impair the purposes or conservation values of this Conservation Restriction.

II. Access

The Conservation Restriction hereby conveyed does not grant to the Grantee, to the general public, or to any other person any right to enter upon the Premises, except there is granted to the Grantee and its representatives the right to enter the Premises at reasonable times and in a reasonable manner after 30 days written notice for the purpose of inspecting the same to determine compliance herewith. A representative of Grantor shall be entitled to be present during said inspection. The Grantee is also granted, subject to the notice provisions terms and conditions of this Section II, an easement over Heather Lane Extension for the purpose of accessing the Premises for inspecting the same to determine compliance with this Conservation Restriction.

III. Legal Remedies of the Grantee

The rights hereby granted shall include the right to enforce this Conservation Restriction by appropriate legal proceedings and to obtain injunctive relief and other equitable relief against any violation, including, without limitation, relief requiring restoration of the Premises to its prior condition (it being agreed that the Grantee shall have no adequate remedy at law), and shall be in addition to, and not in limitation of, any other rights and remedies available to the Grantee. The Grantor shall pay the cost of enforcement only if found guilty of a violation of this Conservation Restriction by a final decision of a court of competent jurisdiction or if Grantor agrees in writing that it has violated this Conservation Restriction.

By its acceptance, the Grantee does not undertake any liability or obligation relating to the condition of the Premises not caused by the Grantee or its agents.

Enforcement of the terms of this Conservation Restriction shall be at the discretion of the Grantee, and any forbearance by the Grantee to exercise its rights hereunder shall not be deemed or construed to be a waiver of said rights.

IV. Extinguishment

A. If circumstances arise in the future such as to render the purpose of this Conservation Restriction impossible to accomplish, this restriction can only be terminated or extinguished, whether in whole or in part, by a court of competent jurisdiction under applicable law.

B. Grantor and Grantee agree that the donation of this Conservation Restriction gives rise to a real property right immediately vested in the Grantee.

C. Grantor/Grantee Cooperation Regarding Public Action

Whenever all or any part of the Premises or any interest therein is taken by public authority under power of eminent domain or other act of public authority, then the Grantor and the Grantee shall cooperate in recovering the full value of all direct and consequential damages resulting from such action. Any related expenses shall be paid by the Grantor.

V. Subsequent Transfers

The Grantor agrees to incorporate by reference the terms of this Conservation Restriction in any deed or other legal instrument by which they divest themselves of any interest in all or a portion of the Premises, including a leasehold interest. Failure to do so shall not impair this Conservation Restriction in any way.

VI. Estoppel Certificates

Upon request by the Grantor, the Grantee shall, within twenty (20) days, execute and deliver to the Grantor any document, including an estoppel certificate, which certifies the Grantor's compliance with any obligation of the Grantor contained in this Conservation Restriction.

VII. Miscellaneous

A. Controlling Law

The interpretation and performance of this Conservation Restriction shall be governed by the laws of the Commonwealth of Massachusetts.

B. Severability

If any provision of the Conservation Restriction shall, to any extent, be held invalid, the remainder shall not be affected.

C. Effective Date

This Conservation Restriction shall be effective when the Grantor and Grantee have executed it and it has been recorded, whether or not this Conservation Restriction has been approved by the Secretary of Energy and Environmental Affairs.

VIII. Assignability

A. Running of the Burden

The burdens of this Conservation Restriction shall run with the Premises in perpetuity, and shall be enforceable against the Grantor and the successors and assigns of the Grantor holding any interest in the Premises.

B. Execution of Instruments

The Grantee is authorized to record or file any notices or instruments appropriate to assuring the perpetual enforceability of this Conservation Restriction; the Grantor, on behalf of itself and its successors and assigns, appoints the Grantee as its attorney-in-fact to execute, acknowledge and deliver any such instruments on its behalf. Without limiting the foregoing, the Grantor and its successors and assigns agree themselves to execute any such instruments upon request from the Grantee.

C. Running of the Benefit

The benefits of this Conservation Restriction shall be in gross and shall not be assignable by the Grantee, except on the following conditions:

1. As a condition of any assignment, the Grantee shall require that the purpose of this Conservation Restriction continues to be carried out;
2. the assignee, at the time of the assignment, qualifies under Section 170(h) of the Internal Revenue Code of 1986, as amended, and applicable regulations thereunder, and is a donee eligible to receive this Conservation Restriction under Section 32 of Chapter 184 of the General Laws of Massachusetts; and
3. The Grantor or his successors and assigns, consent to such assignment.

Any assignment will comply with Article 97 of the Amendments to the Constitution of the Commonwealth of Massachusetts, if applicable.

IX. Recordation

The Grantor shall record this instrument in timely fashion in the Norfolk Registry of Deeds.

EXECUTED under seal this _____ day of _____, 2020.

William John Piersiak, Grantor

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared the above-named William John Piersiak, proved to me through satisfactory evidence of identification, which was my personal knowledge of his identity, to be the person whose name is executed on the preceding document, and acknowledged to me that he executed it voluntarily for its stated purpose before me.

Robert T. Smart, Jr., Notary Public
My Commission Expires: 8/15/25

ACCEPTANCE BY CONSERVATION COMMISSION
TOWN OF NEEDHAM

We, the undersigned, being a majority of the Conservation Commission of the Town of Needham, Massachusetts, hereby certify that, at a meeting held on _____, the Commission voted to accept the foregoing Conservation Restriction.

CONSERVATION COMMISSION

By: _____

By: _____

By: _____

By: _____

By: _____

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this _____ day of _____, 2020, before me, the undersigned notary public, personally appeared the above-named _____, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is executed on the preceding document, and acknowledged to me that [he/she] executed it voluntarily for its stated purpose as a member of the Needham Conservation Commission before me.

Notary Public
My Commission Expires: _____

APPROVAL OF SELECT BOARD

We, the undersigned, being a majority of the Select Board of the Town of Needham, Massachusetts, hereby certify that, at a meeting duly held on _____, the Selectmen voted to approve the foregoing Conservation Restriction in accordance with Massachusetts General Laws Chapter 40, Section 8C.

SELECT BOARD

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this _____ day of _____, 2020, before me, the undersigned notary public, personally appeared the above-named _____, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is executed on the preceding document, and acknowledged to me that [he/she] executed it voluntarily for its stated purpose as a member of the Needham Select Board, before me.

Notary Public
My Commission Expires: _____

APPROVAL BY SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
COMMONWEALTH OF MASSACHUSETTS

The undersigned, Secretary of Executive Office of Energy and Environmental Affairs of The Commonwealth of Massachusetts, hereby certifies that the foregoing Conservation Restriction from William John Piersiak to the Town of Needham has been approved in the public interest pursuant to Massachusetts General Laws, Chapter 184, Section 32. Said approval is not to be construed as representing the existence or non-existence of any pre-existing rights of the public, if any, in and to the Premises, and any such pre-existing rights of the public, if any, are not affected by the granting of this Conservation Restriction.

Secretary of Energy and Environmental Affairs

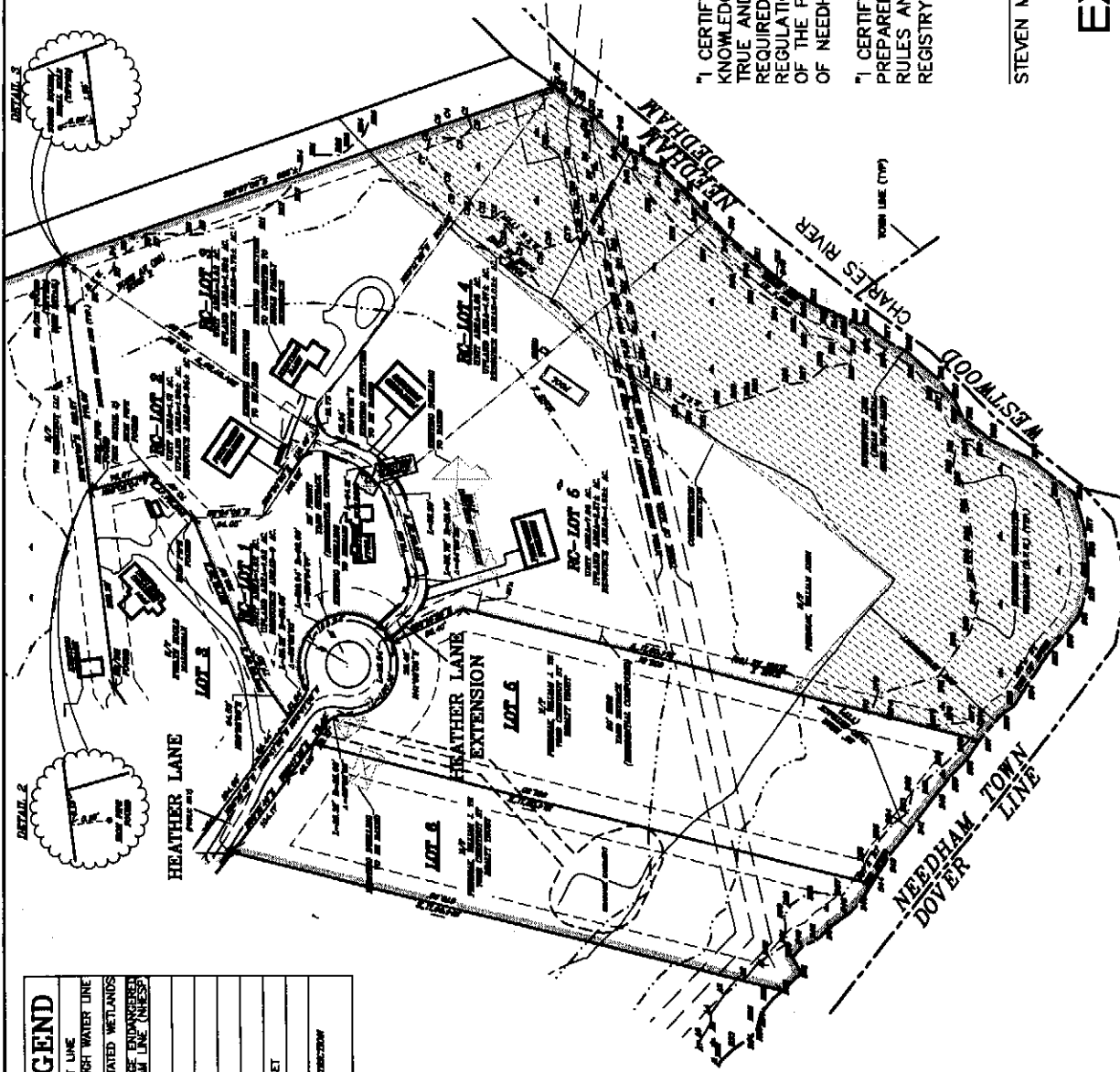
Date: _____

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this _____ day of _____, 2020, before me, the undersigned notary public, personally appeared the above-named _____, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is executed on the preceding document, and acknowledged to me that [he/she] executed it voluntarily for its stated purpose as Secretary of Energy and Environmental Affairs for the Commonwealth of Massachusetts, before me.

Notary Public
My Commission Expires: _____



EXISTING LEGEND	
200' RIVERFRONT LINE	---
MEAN ANNUAL HIGH WATER LINE	---
WETLANDS	---
WETLANDS VEGETATED WETLANDS	---
WETLANDS	---
NATIONAL HISTORIC ENGINEERING SPECIES PROGRAM LINE (IN-ES)	---
FLOOD PLAIN	---
PROPERTY LINE	---
ZONE LINE	---
TOWN LINE	---
EASEMENT	---
BOUND TO BE SET	---
WETLAND	---
CONSERVATION RESTRICTION	---

"I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION REGULATIONS AND PROCEDURAL RULES OF THE PLANNING BOARD OF THE TOWN OF NEEDHAM."

"I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS"

STEVEN M. HORSFALL, P.L.S. DATE

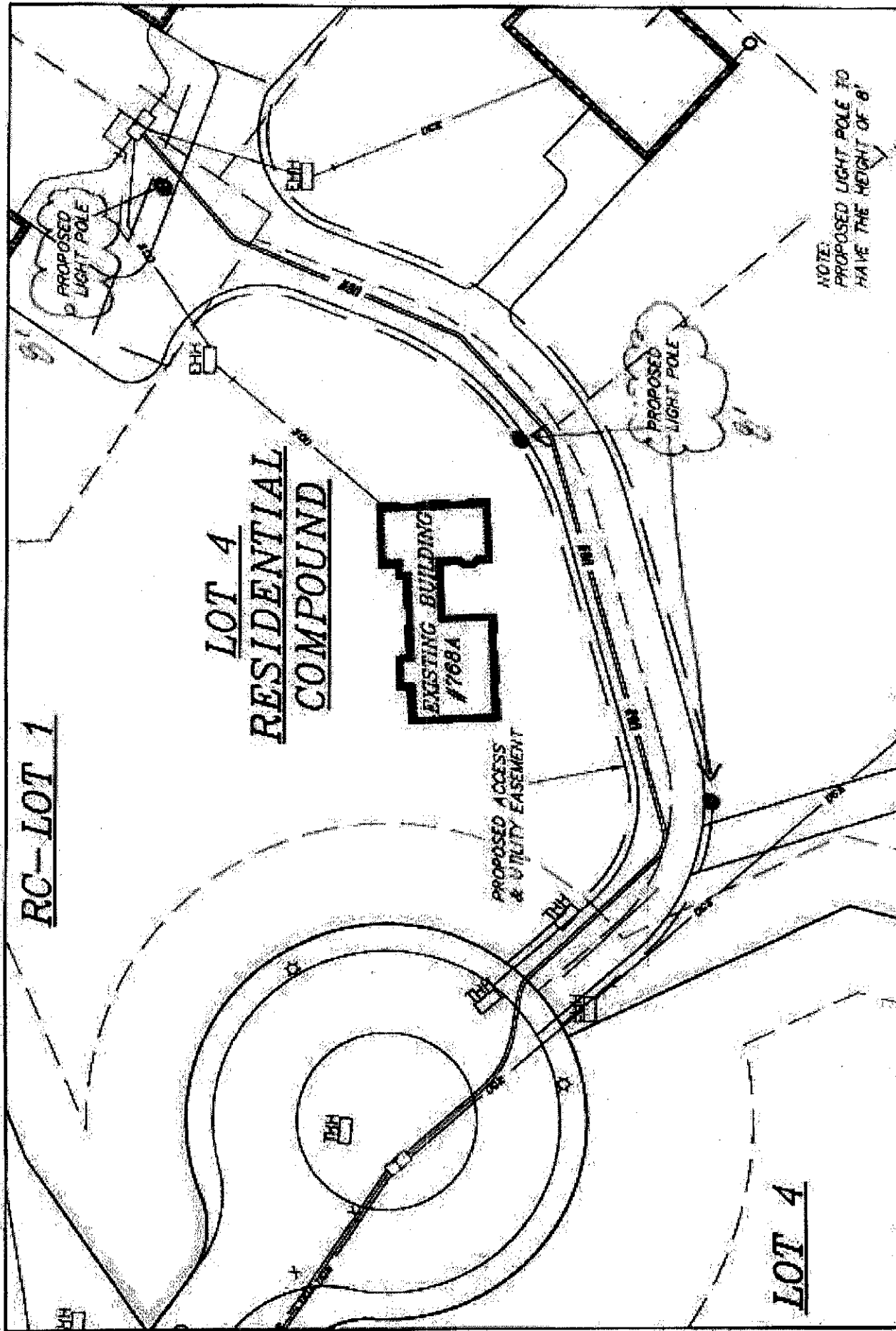
EXHIBIT A

CONSERVATION RESTRICTION PLAN

SCALE: 1" = 200'
DATE: 09/02/20

HEATHER LANE EXTENSION RESIDENTIAL COMPOUND NEEDHAM MA

KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com
2019-088-Ito3-rc



NOTE:
PROPOSED LIGHT POLE TO
HAVE THE HEIGHT OF 8'

KELLY ENGINEERING GROUP
civil engineering consultants
0 Campden Hill Drive, Braintree, MA 02184
Phone 781-461-1033 www.kellyengr.com
2019-0648-UT01-RC



LIGHT POLE EXHIBIT

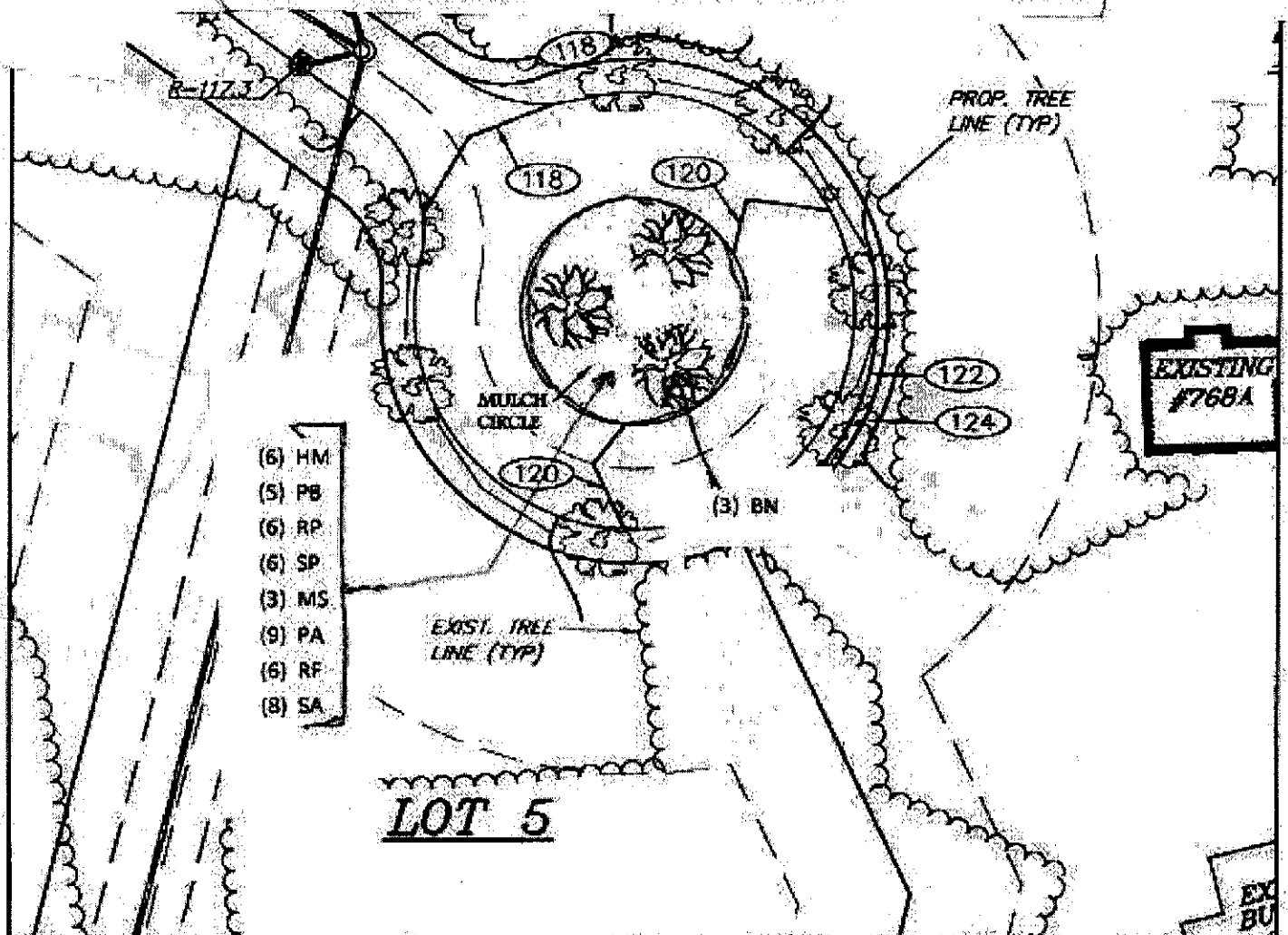
SCALE: 1" = 40'
DATE: 08/17/20

RESIDENTIAL COMPOUND
768-768A CHESTNUT ST.
(LOT 4 HEATHER LANE)
NEEDHAM, MA

LOT 4

RC-LOT 1

QTY	SYM	COMMON NAME	PLANT LIST	LATIN NAME	SIZE
TREES					
7	GB	"AUTUMN GOLD" GINKGO	GINKGO BILBOA "AUTUMN GOLD"		3 - 3 1/2" CALIPER
3	BN	"HERITAGE" RIVER BIRCH	BETULA NIGRA "HERITAGE"		14 - 16' HT. CLUMP
SHRUBS					
6	HM	"MARISSII" LACECAP HYDRANGEA	HYDRANGEA MACROPHYLLA "MARISSII"		18 - 24"
5	PB	BROUWER'S BEAUTY ANDROMEDA	PIERIS X BROUWER'S BEAUTY		2 - 2.5'
6	RP	"PIM" RHODODENDRON	RHODODENDRON "PIM"		2 - 2.5'
6	SP	"MISS KIM" LILAC	SYRINGA PALUTA "MISS KIM"		2 - 2.5'
PERENNIALS AND GRASSES					
3	MS	"GRACILIMUS" MAIDEN GRASS	MISCANTHUS SINENSIS "GRACILIMUS"		1 GALLON
9	PA	"HAMELN" FOUNTAIN GRASS	PENNISETUM ALOPECUROIDES "HAMELN"		1 GALLON
6	RF	"GOLDSTURM" BLACK EYED SUSAN	RUDBECKIA FULGIDA "GOLDSTURM"		1 GALLON
8	SA	"AUTUMN JOY" SEDUM	SEDUM X "AUTUMN JOY"		1 GALLON



DATE: 08/17/20

SCALE: 1" = 40'

HEATHER LANE
764, 766-768-768A & 768B
CHESTNUT ST.
NEEDHAM, MA

LANDSCAPE
EXHIBIT

KE KELLY ENGINEERING GROUP
civil engineering consultants
9 Campanelli Drive, Braintree, MA 02184
Phone: 781-443-4333 www.kellyengineeringgroup.com

2019-084-0002

August 6, 2020

Needham Planning Board
Needham Town Hall
500 Dedham Avenue
Needham, MA 02492
Attention: Lee Newman

RE: NPDES requirements
Heather lane & Heather Lane Extension
764, 766, 768-768A, & 768B Chestnut St.
Needham, MA

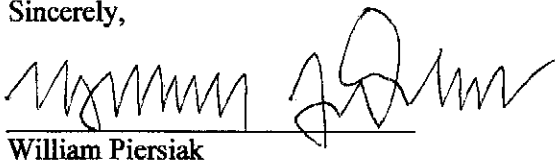
Dear Members of the Board,

As part of the NPDES requirement for Control Measure #1: Public Education and Outreach, the applicant will place an advertisement in the local newspaper to encourage environmental awareness. This advertisement will be published prior to releasing of the subdivision lots.

As part of the NPDES requirement for Control Measure #2: Public Participation and Involvement, the catch basins will include a plaque with the words "NO DUMPING - DRAINS TO RIVER" by Almetek. These plaques will be installed at prior to releasing of the subdivision lots.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'William Piersiak', written over a horizontal line.

William Piersiak

Copy: Anthony DelGaizo, Town Engineer

August 6, 2020

Needham Planning Board
Needham Town Hall
500 Dedham Avenue
Needham, MA 02492
Attention: Lee Newman

RE: NPDES requirements
Heather lane & Heather Lane Extension
764, 766, 768-768A, & 768B Chestnut St.
Needham, MA

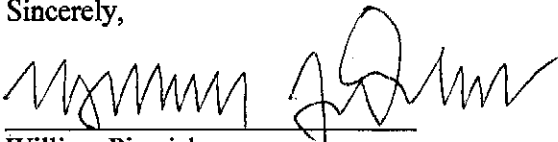
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If you have any questions, please contact me.

Sincerely,



William Piersiak

Copy: Anthony DelGaizo, Town Engineer

HEATHER LANE SUBDIVISION COVENANT
UNDER PROVISIONS OF GENERAL LAWS CHAPTER 41, SECTION 81-U

WHEREAS, **William J. Piersiak, Trustee of the 768B Chestnut Street Realty Trust**, owner of 764 and 768B Chestnut Street, Needham, MA 02492, **Koby Kempel, Manager of 766 Chestnut LLC**, owner of 766 Chestnut Street, Needham, MA 02492, and **William John Piersiak**, owner of 768 and 768A Chestnut Street, Needham, MA 02492, (hereinafter, collectively “**Owners**”), have filed with the Planning Board of the Town of Needham, hereinafter referred to as the “**Town**”, a certain subdivision plan of land in said Needham, the plan being entitled “**Site Development Plans for 768 Chestnut Street, Needham, MA prepared by Kelly Engineering Group, 0 Campanelli Drive, Braintree, MA 02184, dated March 3, 2020 (the “Plan”)**”, as listed in Exhibits 1, 17, 21 and 24 of the Decision. The Plan is being recorded herewith.

AND WHEREAS, the said Owners have agreed to subdivide the land, to construct ways and to install municipal services therein in accordance with the Plan in accordance with all approvals imposed by the Town and have elected to give a Covenant to the said Town to insure the construction of ways and installation of municipal services as shown on said Plan as authorized by Subsection (2) of Section 81-U of General Laws, including all conditions as set forth in the Board of Health letter dated June 14, 2020, which is herewith made part of this Covenant as set forth in the Planning Board’s Definitive Subdivision Decision dated August 13, 2020 (hereinafter, the “**Decision**”).

NOW THEREFORE, said Owners hereby covenant and agree with the said Town as follows:

- I. The said Owners are the owners of record of the premises shown on said Plan.
- II. This Covenant shall run with the land and shall be binding upon the executors, administrators, heirs, assigns to the respective Owners and their successors in title to the Premises, as shown on said Plan.
- III. By signing this Covenant the Owners agree to the Covenant’s requirements and to waive all rights of appeal. And further the Board of Health drainage surety referred to in the Definitive Subdivision Decision shall be in a form of surety acceptable to the Planning Board and Board of Health.
- IV. In addition to the regular requirements relative to the grading and construction of streets and the installation of municipal services, said Heather Lane and Lots 1 through 6, inclusive, shall be subject to all of the conditions and any subsequent amendments to the Decision, a copy of which is on file with the Town Clerk’s office, Needham Town Hall.
- V. Except as hereinafter provided, until the following improvements and conditions have been completed or fulfilled in accordance with the specifications and requirements referred

to or enumerated below, with respect to any of the lots in the subdivision, which in the opinion of the Town are affected by such conditions and improvements, no such lot or lots shall be built upon or conveyed, except by a mortgage deed, nor shall building permits for such lot or lots be applied for or issued:

(A) Except as to those standards that were waived by the Planning Board in the Decision, or as may be further revised through any amendment of that Decision, all streets, including walks, berms, curbing, street name signs, bounds, retaining walls, slopes, and all utilities, including but not limited to storm drains, sanitary sewers, water mains and their appurtenances such as manholes, catch basins, curb inlets, gate valves, hydrants, and headwalls, shall be constructed or installed at the expense of the Owners to the entire limits of the subdivision in strict compliance with the "Subdivision Regulations and Procedural Rules of the Planning Board of the Town of Needham, Massachusetts, as most recently amended, including the "Standard Specifications for Highways" and the "Standard Cross-Section for Street Construction" referred to therein, as most recently revised, which Subdivision Regulations and Procedural Rules and Standard Specifications are specifically incorporated herein by reference, and to the satisfaction of the Director of Public Works of the Town of Needham, including all maintenance and repairs necessary to maintain said streets and utilities in a condition satisfactory to the Town until all lots and all sureties, as provided in Section IV herein have been released by the Town upon the completion of all terms and conditions of this Covenant except as otherwise presented in said definitive plan.

(B) Street construction work shall consist of (as noted on approved plans): Excavation and fill to the surface of the sub-grade fifteen and one-half (15.5) inches below the finished surface grade for the roadway and the necessary excavation and fill for berms within the total width of the street; application of eight (8) inch depth of gravel sub-base and a four (4) inch depth of crushed bank gravel base, the surface of which shall be treated with one (1) application of bituminous; application of bituminous concrete pavement Type 1-1 to be constructed in two (2) courses top course of 1.5" bituminous concrete and bottom course of 2" bituminous concrete, including all driveway entrances; application of six (6) inch depth of loam and seeding for grass plots between the edge of the roadway and the sidelines of the street; granite or reinforced concrete curbing to be installed on all curves having a radius of sixty (60) feet or less, except for temporary turnarounds.

(C) A contractor approved by the Superintendent of the Water Division shall be engaged by the Owners at their expense for the installation of the water mains in accordance with the requirements of and to the satisfaction of the Superintendent of said Water Division.

(D) Sanitary sewers shall be constructed by an approved contractor at the expense of the Owners as shown on approved plans and profiles, in accordance with the standard specifications of the Town of Needham, and to the satisfaction of the Director of Public Works.

(i) The Town shall have the right to extend said sewer without cost to the Owners, beyond the limits of the sewer as shown on the development plans and profiles.

(E) Storm water drains shall be installed in accordance with the approved plan and profile to the satisfaction of the Director of Public Works, and all lots shall be graded in accordance with the proposed contours of land as shown on said definitive plan.

(F) Granite or concrete bounds, at least four feet long, shall be set at all points in every street or other permanent marks acceptable to and approved by the Town Engineer shall be set within the subdivision. After installation of such bounds, the Owners shall submit to the Engineer a written certification by a registered land surveyor stating that the said bounds are located as shown on the subdivision plans recorded in the Norfolk Registry of Deeds or in the Land Court.

(G) If requested in writing by the Town, the Owners shall grant to the Town of Needham a perpetual right and easement to construct, repair, replace, extend, operate, use and forever maintain all streets, water mains, sewer mains and all surface and subsurface storm water drains, in, through or under the streets and easements as indicated on definitive plans. The above shall not be construed to relieve the Owners and their successors in title to a portion of the land or a street in the subdivision, of responsibility to complete all construction, as required by the Owners' Agreements with the Town of Needham and to thereafter maintain all streets and municipal services and utilities in satisfactory condition until they are accepted by the Town. Such grant, if requested, shall be executed and delivered to the Planning Board within a reasonable time after notice is given, but in any event, prior to the transfer or conveyance of any lot or interest therein. Notwithstanding the aforesaid grants to the Town, the Owners agree for themselves that as long as they remain the Owners of said premises they will keep all catch basin inlets and access thereto clear and free of all debris and/or other materials which might interfere with the proper operation of said drains, and thereafter the owners of said premises will keep catch basin inlets and access thereto clear and free of all debris and/or other materials which might interfere with the proper operation of said drains. The Owners and the Town of Needham acknowledge and agree that the Owners intend to convey a fee interest in Heather Lane to the Heather Lane Association Trust.

(H) Permanent street name signs will be furnished and erected at all entrances, the name to be in conformity as to size and quality with signs now generally in use in the Town of Needham.

(i) Co-incident with the start of any street within a subdivision, temporary street signs shall be installed at all points where permanent signs will be required. These signs may be painted using black block lettering not less than four inches high on a light background.

(ii) Complete visibility of these signs must be maintained until they are replaced with the permanent signs specified in this Section H.

(iii) Permanent street signs and the size and other details shall be furnished and installed at no expense to the Town as directed by the Town Director of Public Works.

(I) Prior to the commencement of construction on all major phases of the subdivision including installation of the sewer, water, drains, and street construction, the Owners will notify the Director of Public Works and obtain necessary signatures on the Subdivision Inspection Form.

VI. The construction of all ways and the installation of all municipal services shall be completed in accordance with the applicable Subdivision Rules and Regulations and Procedural Rules of the Planning Board, as well as the requirements contained in Sections III and IV above, (except to the extent that applicable standards were waived by the Planning Board as described in paragraph IV (A) above within a period of two (2) years from the date of the endorsement by the Board of the approved Definitive Plan. Failure to so complete shall automatically rescind approval of the subdivision plan, unless such approval is further extended by the Planning Board on request of the Owners, their successors and/or assigns.

VII. Prior to the completion of all the work required herein, the Planning Board may, at its discretion, in accordance with the provisions of Subsection (1) of Section 81-U, Chapter 41, release any or all of said lots in the Heather Lane Subdivision, for purposes of sale or for the issuance of permits for building therein, upon the furnishing to the Town by the Owners an agreement and a surety acceptable to the Town, to secure the completion of such part or all of the work specified above, as, at the discretion of the Planning Board should be completed for the proper use of said lots in accordance with the purposes of this Covenant, said surety to be in a penal sum or amount equal to the cost, as estimated by said Director of Public Works, of completing said works. Said release by the Planning Board shall be evidenced by a certificate enumerating the lot or lots released and signed by a majority of said Planning Board, in proper form for recording in the Registry of Deeds or registration in the Registry District of the Land Court.

VIII. The enforcement of the terms herein shall be made as provided for by General Laws, Chapter 41, Section 81-X and 81-Y, in the name of the Town, and upon any breach thereof the Town shall be entitled to an injunction restraining any further sale of any of the lots included in said plans, until the said breach has been cured or security given therefore satisfactory to the then Planning Board of the said Town.

IX. Nothing herein shall be deemed to prohibit a conveyance subject to this Covenant by a single deed of the entire parcel of land shown on said subdivision plan or of all lots, subject to this Covenant, by any of the parties named herein to any other person.

X. The Owners accept all conditions as set forth in the Decision.

X. This Covenant shall take effect upon approval of said plans by a majority of signatures affixed thereto by the Planning Board.

For the Owners' titles to the property see: for 766 Chestnut LLC, Book 36038, Page 67, for William John Piersiak, Book 26628, Page 469, and for 768B Chestnut Realty Trust, Book 26628, Page 469, Book 38112, Page 280, and Book 38112, Page 577, all at the Norfolk County Registry of Deeds.

WITNESS the execution hereof under seal this _____ day of _____, 2020.

William J. Piersiak, Trustee of the
768B Chestnut Street Realty Trust

Koby Kempel, Manager of
766 Chestnut LLC

William John Piersiak, individually
and as Trustee of Heather Lane
Homeowners Association Trust

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared William J. Piersiak, also known as William John Piersiak, and Koby Kempel, proved to me through satisfactory evidence of identification, which was my personal knowledge of their identities, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose, individually and their representative capacities.

Robert T. Smart, Jr., Notary Public
My Commission Expires: 8/15/25

Approved as to Form
By Town Counsel

HEATHER LANE HOMEOWNERS ASSOCIATION DECLARATION OF TRUST

This Declaration of Trust is made this _____ day of _____, 2020, by **William J. Piersiak, Trustee of the 768B Chestnut Street Realty Trust**, owner of 764 Chestnut Street and 768B Chestnut Street, Needham, MA 02492, **Koby Kempel, Manager of 766 Chestnut LLC**, owner of 766 Chestnut Street, Needham, MA 02492, **William John Piersiak**, owner of 768 and 768A Chestnut Street, Needham, MA 02492, (hereinafter, collectively “**Declarants**”), and **William John Piersiak**, of 768 Chestnut Street, Needham, MA 02492 (hereinafter “**Initial Trustee**”). The Declarants are owners of 764, 766, 768-768A & 768B, Chestnut Street, Needham, MA 02492, which Property comprises the Heather Lane Subdivision (“Subdivision”), as more particularly described in Exhibit A attached hereto.

1. Name of Trust. The name of this Trust shall be the **Heather Lane Homeowners Association Trust** (“Trust”).
2. Initial Trustees. The Initial Trustee of this Trust shall be the William John Piersiak, who shall so serve until the later to occur of:
 - a. That date which is three (3) years following the recording hereof; or
 - b. The sale and conveyance of Lots 1, 2, 3, 5 and 6 of the Subdivision, and the sale and conveyance of all the residential compound lots created within Lot 4 of the Subdivision, other than any lot to be retained by William John Piersiak, to bona fide third parties.

Following such event, or in the event the William John Piersiak is no longer willing or able to serve as Trustee, there shall be a total of up to six (6) Trustees. Each of the Owners (as hereinafter defined) shall be entitled to appoint a Trustee to so serve, in accordance with the provisions of this Trust.

3. Purpose of Trust. The purpose of this Trust is to provide for the preservation, administration and maintenance, for the common enjoyment and benefit of the Owners, of Heather Lane, such utilities and facilities as are or may be conveyed to the Trustees, and of any other property, real or personal, which may hereafter be conveyed to or acquired by the Trustees or otherwise made subject to their administration for the benefit of the Owners (collectively, the “Trust Property”). The purpose of the Trust shall also include (a) the exercise of the powers of the Trustees set forth herein with the respect to all the land described in Exhibit A hereto (the “Property”) and the building (s) and other improvements which now exist or may hereinafter be constructed thereon, (b) the administration and enforcement of the documents set forth in section 6(f) below, and (c) all other purposes set forth herein. All the Owners shall have the right to use the Property subject to:

- a. the restrictions and obligations contained herein; and

- b. such reasonable rules and regulations as may be adopted and amended, from time to time, by the Trustees.

4. Beneficiaries. The beneficiaries of this Trust shall be the six lot Owners, who will each have an equal interest in the Trust. The word “Owners” shall mean and refer to the record holders from time to time of the legal title of any lot within the Heather Lane Subdivision and the building or other improvements, if any, constructed thereon, which constitutes all or a portion of the Property, and, at the discretion of the Trustees, any other lot that has actual private way or driveway access to Heather Lane even though not currently included in the description of the Property. The five owners of the Residential Compound lots, which are derived from Lot 4 of the Heather Lane Subdivision, shall together be considered to have a one-sixth interest in this Trust. The holder of legal title shall include the holder of the equity of redemption in the case of mortgaged land and one having a legal life or other estate in possession and excluding a lessee, tenant, mortgagee and one having a legal estate in remainder or otherwise subsequent to a legal estate in possession and also excluding the Trustees as owners of the Trust property. Two or more persons or entities holding legal title to the same parcel or parcels shall be treated as a single Owner; exercise of their rights as such owners shall be by their unanimous action and their obligations to pay any assessment shall be joint and several. If the same Owner shall hold record title to more than one lot, such Owner shall be treated as a separate Owner for each lot. Each Owner of a Lot, through this Trust, shall have joint and several responsibility to perform all maintenance, repairs and reconstruction required for or in Heather Lane in compliance with and in conformity with the requirements of the Town of Needham and other requirements imposed by law or governmental authority.

Notwithstanding anything in this Trust to the contrary, each of the Owners shall have the right to maintain, repair, reconstruct or replace the sewer line serving said Owner’s Lot, including, but not limited, to access Heather Lane and excavate within said Heather Lane to conduct said maintenance, repair or replacement. Said Owner shall be responsible for restoring all disturbed areas to the condition that existed prior to such access.

5. Powers and Duties of Trustees. For the purpose of carrying out the terms of this Trust, the Trustees shall have the powers and duties necessary for the administration of the Trust Property, including, without limitation, the following powers which may be exercised by them without any action or consent of the Owners and which shall continue after the termination of the Trust for the purpose of disposing of the Trust Property and until final disposition thereof:

- a. the maintenance, repair and reconstruction of the private way known as Heather Lane as shown on the “Definitive Subdivision Plans for Heather Lane 764, 766, 786-768A A, & 768 B Chestnut Street, Needham, MA” and designated thereon and all services the installation of which is required in connection with the documents described in section 6 of this Agreement, or which may be installed at any time, including, without limitation, maintenance, repair and reconstruction of roadways, water (except as provided in the Definitive Subdivision Decision

described in section 6 below), sewer and drainage facilities and other utilities and related equipment, curbs, monuments, sidewalks, landscaping and street signs, as and whenever necessary, and including all actions of any kind or nature necessary or appropriate in order to maintain Heather Lane in a good, safe and passable condition, including snow plowing, providing access from each Lot to a public way, as shown on the Plan, and to provide adequate services to each Lot, all in accordance with the documents set forth in section 6(f) below. Except as provided in the Drainage Easement recorded herewith, the Trust shall have no responsibility for sewage and drainage facilities and other utilities and related equipment located on individual lots, which shall be the sole responsibility of the Owner of the lot where such facilities and equipment are located;

- b. to acquire by purchase, hire or otherwise, property which is convenient to the performance of their functions as Trustees;
- c. to adopt reasonable rules and regulations governing the use and enjoyment by the Owners of the Trust Property. The Trustees shall have the power, right and authority to enforce such rules and regulations, but no obligation to any Owner to do so;
- d. to convey permanent easements and lesser interests in, upon and over any ways for the installation, maintenance, repair and replacement of utilities and other services and rights incidental thereto for the benefit of one or more Owners; or to convey a fee or lesser interest in any ways, utilities, or drainage system owned by the Trustees from time to time, for the benefit of one or more Owners;
- e. to convey to the Town of Needham or other public body the fee or any lesser interest in any way and utilities therein or in all or any portions of the drainage system serving the Property;
- f. to make such contracts as the Trustees deem convenient to the performance of their duties;
- g. to borrow money and to pledge or encumber Trust Property to secure repayment of such borrowings;
- h. to open bank accounts in the name of the Trust or the Trustees with power in any one of the Trustees to draw on such amounts;
- i. to procure insurance against damage to the Trust Property or against any liability of the Trustees or the Owners from any actions occurring on or about or on account of the Trust Property, or worker's compensation insurance or any insurance of any type, nature or description which the Trustees may deem

appropriate with respect to the Trust or the Trust Property;

- j. to pay, resist, compromise or submit to arbitration any claim or matter in dispute with respect to the Trust or any Trust Property;
- k. to determine and collect common and special charges from the Owners as provided in this Declaration of Trust and to undertake all expenses and pay all costs on account of such common and special charges;
- l. to maintain, repair and replace any or all of the Trust Property;
- m. to exercise any other powers which may be necessary or desirable for carrying out the terms of this Trust or which the Trustees may have under any present or future statute or rule of law, and to execute and deliver all appropriate instruments in connection therewith;
- n. to undertake such maintenance and other obligations as may be required under applicable permits and approvals issued for the Trust Property pursuant to G.L. c.40A and c.41, Section 81(k) et. seq., including but not limited to the obligations set forth in the Definitive Subdivision Decision, Heather Lane, dated August 13, 2020 (Definitive Subdivision Decision);
- o. to retain such counsel or accountants as the Trustees shall deem advisable and to pay the costs thereof as a common charge from funds of the Trust; and
- p. to maintain the street lighting, landscaping within the island in the center of Heather Lane cul-de-sac and the street landscaping along Heather Lane, as described in sections 15 and 16 of the Definitive Subdivision Decision; and
- q. to take such steps as are necessary to enforce the Declaration of Restrictive Covenants of even date and recorded herewith.

6. Common and Special Charges. The Trustees shall from time to time, and at least annually, prepare a budget for the Trust to determine the amount of the common charges payable by the Owners to meet the common expenses of the Trust. The Trustees shall have the power to raise such amounts of money to meet any needs of the Trust by assessing on each occasion upon all of the land (which term shall include land and improvements) of each Owner such Owner's proportionate share of the total amount to be raised. The date of each such assessment shall be the date it is voted by the Trustees. The Trustees' determination regarding the amount of the assessment shall be conclusive. Common expenses may include, without limitation, the following:

- a. all costs relating to the maintenance, repair and reconstruction of the private way

known as Heather Lane as shown on the Plan and designated thereon and all services the installation of which is required in connection with the subdivision documents described below, or which may be installed at any time, including, without limitation, maintenance, repair and reconstruction of roadways, water (except as provided in the Definitive Subdivision Decision), sewer and drainage facilities and other utilities and related equipment, curbs, monuments, landscaping and street signs, as and whenever necessary, and including all actions of any kind or nature necessary or appropriate in order to maintain Heather Lane in a good, safe and passable condition, including snow plowing, providing access from each Lot to a public way, as shown on the Plan, and to provide adequate services to each Lot, all in accordance with the documents set forth in section 6(f) below. The Trust shall also have no responsibility for sewage and drainage facilities, and other utilities and related equipment located on individual lots, except as provided in the Drainage Easement recorded herewith, which shall be the sole responsibility of the Owner of the lot where such facilities and equipment are located. The Trustees shall have the specific authority to assess special charges necessary to fulfill their responsibilities as set forth in this Declaration of Trust;

- b. all insurance premiums for the master policy for the Trust Property, fidelity bonds for the Trustee and agents and employees, any insurance purchased to protect the Trustees and such other insurance as the Trustees may deem necessary and appropriate;
- c. all expenses relating to the financing, operation, improvement, maintenance and replacement of any Trust Property;
- d. all costs of attorneys, accountants and other usual, customary or necessary professional advisors to the Trustees;
- e. the amount that the Trustees shall deem necessary and appropriate for the working capital of the Trust, for an operating reserve for expenses, a reserve fund for the replacements, and any charges for deficits from previous operating years; and
- f. all expenses relating to the Trustees' enforcement and administration of the subdivision documents, including the following:
 - i. Definitive Subdivision Decision, recorded with the Norfolk County Registry of Deeds, Book _____, Page _____;
 - ii. Heather Lane Declaration of Restrictive Covenants, dated _____, 2020, recorded with the Norfolk County Registry of Deeds, Book _____, Page _____;

- iii. Heather Lane Subdivision Covenant Under the Provisions of General laws, Chapter 41, Section 81-U, recorded with the Norfolk County Registry of Deeds, Book _____, Page _____;
- iv. Drainage Easement recorded with the Norfolk County Registry of Deeds, Book _____, Page _____;
- v. Utility Easement recorded with the Norfolk County Registry of Deeds, Book _____, Page _____.

In addition, the Trustees shall have the power to assess individual Owners for special charges in connection with repairs, improvements or replacements caused or necessitated solely by the actions or omissions of such Owner.

The Trustees shall upon reasonable request render certificates suitable for recording indicating that no payments are due to the Trust with respect to any common or special charges, which certificates shall be conclusive as to the facts stated therein. While he is sole Trustee, William John Piersiak shall have sole authority to sign such certificates. Thereafter, the signatures of two Trustees shall be required on such certificates.

Notwithstanding anything in this Agreement to the contrary, the sole cost and responsibility for maintenance, repair, improvement, operation and replacement of streetlights and associated equipment in the Subdivision shall be with the Owner from whose property power or electricity is supplied.

7. Payment of Common and Special Charges. All Owners shall pay the common charges assessed by the Trustees in installments as determined by the Trustees. Special charges shall be paid within thirty days after notice from the Trustees, or as the Trustees in their sole discretion may otherwise require.

8. Lien for Common Charges. Each assessment so made upon an Owner shall constitute and remain a charge and lien upon such Owner's land and every portion thereof from the date of the assessment until paid in full, and shall also constitute a personal debt of the Owner who is the Owner of such land on the date of assessment by the Trustees. Such charge, lien or personal debt may be enforced or collected by the Trustees by any available process including, without limitation, collection proceedings in a court and foreclosure of the charge or lien against the land under processes comparable to processes provided in Massachusetts G.L. c. 254 to the extent lawful. All costs and expenses incurred by the Trustees in enforcing or collecting any assessment, including reasonable attorney's fees shall be paid by the Owner responsible for the assessment and shall constitute a further lien or charge on said land and a personal debt of said Owner. Notwithstanding the above provisions, such charge and lien shall be junior to each bona-fide mortgage to an institutional mortgage lender outstanding upon such land on the date of the assessment, whether the mortgage be given before or after this Trust takes effect and its provisions become restrictions and servitudes upon such land, but foreclosure of the mortgage shall not impair the power of the Trustees thereafter to make further assessments upon such land nor otherwise impair such restrictions and servitudes thereon. If any assessment is not paid when due, such assessment shall bear interest at the rate of eighteen percent (18%) per year from the due date. The Trustees may, in addition to the other rights herein reserved, accelerate the payment of the reasonable estimate of common charges for the twelve-month period following any default and such sum shall serve as security for the payment of future common and special charge obligations.

9. Liability of Trustee. All persons extending credit to or contracting with or having any claim against the Trustees hereunder shall look only to the Trust Property for any such contract of claim, so that neither the Trustees nor the Owners shall be personally liable therefor. No Trustee hereunder shall be liable to this Trust or to the Owners for the default of any other Trustee or for leaving property in the hands of another Trustee, or for any error in judgment of law on his or her own part, but shall be liable only for his or her own willful default. Any Trustee hereunder shall be reimbursed in full for any loss or expense incurred or suffered by him or her, or his or her estate, as a result of acting as Trustee hereunder, excluding only such loss or expense resulting from his own willful default.

10. Reliance by Third Parties. No person dealing with any Trustee shall be bound to inquire concerning the validity of any act purporting to be done by him or her or be bound to see to the application of any money paid or property transferred to him or her upon his or her order. Any Trustee may at any time or times by written power of attorney delegate all or any of his or her powers and authorities, except the power to make assessments as provided in section above, whether discretionary or otherwise, to any other Trustee in each case for a period of not more than six (6) months at a time, but any such delegation may be renewed by successive powers of attorney and may be revoked.

11. Financial Records. The Trustees shall keep proper records and accounts of the affairs of the Trust which shall be open to inspection by any Owner at all reasonable times. At least once a

year the Trustees shall render a written report and financial statement to the Owners. The approval by a majority of the Owners of any report or financial statement by the Trustees shall be, as to all matters and transaction stated in said report or statement or shown thereby, a complete discharge of the Trustees and final and binding upon all Owners.

12. Trustees in Number and Terms. There shall always be at least one Trustee hereunder, and never more than six (6) Trustees. No Trustee need be an Owner. Trustees may be persons, firms, or other legal entities. Except for the Initial Trustee, Trustees shall serve for a period of three (3) years and until their successors and appointed and duly qualified.

13. Appointment of Trustee. At each annual meeting of the Owners commencing with the annual meeting to be held after the third anniversary of the recording of this Declaration of Trust, and the sale and conveyance of Lots 1, 2, 3, 5 and 6 of the Subdivision, and the sale of all the residential compound lots created within Lot 4 of the Subdivision, other than any lot to be retained by William John Piersiak, to bona fide third parties as provided in section 2 above, whichever occurs later, each Owner of Lots 1, 2, 3, 5 and 6, may appoint one Trustee, and the owners of the residential compound lots created within Lot 4 of the Subdivision may appoint one Trustee for all of them.

14. Vacancies and Removals. Any Trustee may at any time resign as Trustee by a written instrument signed by him or her, acknowledged and delivered to the remaining Trustee or Trustees. Upon the death or resignation of any Trustee, a vacancy in the office of Trustee shall be deemed to exist, and a new Trustee shall be elected for the unexpired term by the remaining Trustee or Trustees. Any successor Trustee shall qualify as a Trustee by written acceptance, signed and acknowledged by him. Pending any appointment of a successor Trustee, the remaining Trustee or Trustees shall have and may exercise all powers, authority and discretion conferred by this Trust. Upon election of a successor Trustee, the Trust Property shall vest in successor Trustee and the continuing Trustees, as applicable, without further action.

15. Fidelity Bonds and Surety. The Trustees may obtain fidelity bonds in amount which they deem reasonably sufficient to cover Trustees and employees of the Trust handling or responsible for the funds. The cost of any such bond shall be a common charge as provided in Section 6 above.

16. Owner's Annual and Special Meetings. Any action or consent by the Owners shall be taken or given at the annual meeting or at any special meeting of the Owners. The annual meeting of the Owners shall be held on the first Wednesday in October of each and every year (or if that be a legal holiday on the next succeeding full business day) at the hour and place to be fixed by the Trustees. If no annual meeting has been held on the date fixed above, a special meeting in lieu thereof may be held. Special meetings of Owners may be called by the Trustees on their own motion and, after the annual meeting following the third anniversary after recording the Declaration of Trust or the sale of lots 1, 2, 3, 5 and 6 of the Subdivision, and the sale of all the residential compound lots created within Lot 4 of the Subdivision, to bona fide third parties,

as provided in section 2 above, whichever occurs later, shall be called by the Trustees upon written application to the Trustees of at least 50% of the Owners. A written notice of the place, date and hour of all meetings of Owners shall be given by the Trustees at least seven days before the meeting to each Owner. Notice need not be given to an Owner if a written waiver of notice, executed before or after the meeting by such owner or this attorney thereunto authorized, is filed with the records of the meeting. Notwithstanding the above, no annual meeting of the Owners shall be held so long as the Initial Trustee remains in office, except with the assent of said Initial Trustee.

17. Quorum. A majority of the Owners shall constitute a quorum, but if a quorum is not present, a lesser number may adjourn the meeting from time to time and the meeting may be held as adjourned without further notice.

18. Voting. Each Owner shall be entitled to one vote for each lot within the Property owned. Such vote may be cast in person or by proxy. Any instrument dated not more than six months before the meeting purporting to grant authority to another to cast such vote, duly executed by the Owner and acknowledged before a notary public, shall be deemed a proxy. A proxy shall be revocable at any time by written notice to the Trustees. When a quorum is present, any matter before the meeting shall be decided by the unanimous vote of the Owners if two, and otherwise by a majority vote, except where a larger vote is required by this Trust. Provided further, however, that so long as the Initial Trustee continues to serve, no Owner shall have any voting authority.

19. Termination or Amendment by Consent. This Trust may be terminated or amended at any time by an instrument in writing signed by the Trustees and assented to by the unanimous action of the Owners. Provided further, however, that so long as the Initial Trustee continues to serve, this Trust may be terminated or amended at any time by an instrument in writing signed by the Initial Trustee. No assent to such action from Owners shall be required.

20. Disposition of Trust Property. Upon termination of the Trust, the Trust Property shall be conveyed as directed by a unanimity of the Owners either (i) to a Trust for the benefit of the Owners for the same or similar purposes as the trust herein created, or (ii) to the Owners as tenant in common, subject to all matters of record which henceforth shall be enforceable by and against the Owners, joint and severally.

21. Notices. All notices to the Owners shall be in writing and shall be sent to the Owners or to such one of them as they may designate in writing from time to time, at the last address of such Owner as it appears in the records of the Trust. Changes in the Owners or their addresses shall be noted in the records of the Trust only upon written notice filed with the Trustees. Notice shall be deemed given as of the date of mailing

22. Termination by Law. This Trust unless sooner terminated as herein provided, shall terminate on the last day permitted by law.

23. Incumbency of Trustees. A certificate signed by three Trustees and acknowledged before a Notary Public shall be conclusive evidence in favor of any person, firm, corporation, trust or association acting in good faith in reliance thereon as to the truth of any matter or facts stated therein relating to:

- a. the death, resignation, removal or appointment of a Trustee or to the delegation by a Trustee to another Trustee of his or her powers, authorities and discretions;
- b. compliance by the Trustees and Owners with any requirement of this Trust;
- c. the terms of this instrument and any amendment or termination of this Trust;
- d. the fact of the validity of any action taken by the Trustees or Owners and to the authority of the Trustees or Owners to take such action; the numbers of Owners acting in favor of any matters; or
- e. any other matter pertaining to the Trustees, Owners or the Trust Property.

Provided, however, that so long as William John Piersiak continues to act as Initial Trustee, the signature of the one Initial Trustee on a certificate and acknowledged before a Notary Public shall be deemed to satisfy the provisions of this section and all other provisions requiring or authorizing Trustee action.

When recorded with the Norfolk County Registry of the land Court, such certificate shall be conclusive evidence to all persons regardless of whether they have notice thereof or act in reliance thereon.

24. Recording. The termination and all amendments of this Trust and resignations and appointments of Trustees shall be filed with said Registry of Deeds, and any person shall be entitled to rely on the records of said Registry with respect to the termination of the Trust, any amendment thereto and the identity of the Trustees, the identity of the Owners and to any other matter pertaining to the Trust, the Trustees, the Owners of the Trust Property.

25. Disputes. Any Owner aggrieved by any failure or refusal to act by a quorum of the Trustees or by a deadlock among the Trustees, may, within thirty (30) days of such failure, refusal to act, or deadlock, appoint an arbitrator who shall be a member of the American Arbitration Association with not less than seven (7) years' experience as an arbitrator. Within ten (10) days after written notice of such appointment, the Trustees shall appoint another such arbitrator, and the two so chosen shall within ten (10) days thereafter choose a third such arbitrator. A majority of such arbitrators shall be entitled to decide any such matter, and their decision shall be rendered within thirty (30) days of the appointment of the third arbitrator. Such decision, subject to Chapter 251 of the General Laws of Massachusetts, as from time to time

amended, shall be final and conclusive on all persons. The cost of such arbitration shall be a common charge as provided in Section 6 above. In the event that any party elects to be represented by counsel, all counsel fees shall be the sole responsibility of the party retaining such counsel.

26. Construction and Interpretation. In the construction hereof, whether so expressed, words used in the singular or in the plural, respectively, include both the plural and singular; words denoting males include females, and words denoting persons include individuals, firms, associations, companies (joint, stock or otherwise), trusts and corporations, unless a contrary intention is to be inferred from or required by the subject matter or context. The captions of Articles and Sections are inserted only for the convenience of reference and are not to be taken to be any part hereof or to control or affect the meaning, construction, interpretation, or effect hereof.

All the trusts, powers and provisions herein contained shall take effect and be construed according to the laws of the Commonwealth of Massachusetts.

27. Waiver. No restriction, condition, obligation or provision contained in the Declaration of Trust or any of the documents set forth in Section 6(f) above, shall be deemed to have been abrogated or waived by reason of any failure to enforce the same, irrespective of the number of violations or breaches thereof which occur.

28. Conflict. In case any of the provisions of this Declaration of Trust or of any Rules and Regulations adopted by the Trustees shall be in conflict with any of the provision of the documents set forth in Section 6(f) above, or the provisions of any statute, then the provisions of said documents or statute, as the case may be, shall control.

WITNESS the execution hereof under seal this ____ day of _____, 2020.

William J. Piersiak, Trustee of the
768B Chestnut Street Realty Trust

Koby Kempel, Manager of
766 Chestnut LLC

William John Piersiak, individually
and as Trustee of Heather Lane
Homeowners Association Trust

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared William J. Piersiak, also known as William John Piersiak, and Koby Kempel, proved to me through satisfactory evidence of identification, which was my personal knowledge of their identities, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose, individually and their representative capacities.

Robert T. Smart, Jr., Notary Public
My Commission Expires: 8/15/25

Approved as to Form
By Town Counsel

EXHIBIT A: HEATHER LANE SUBDIVISION PROPERTY

The 26.904 acre parcel of land described in the second paragraph of the Definitive Subdivision Decision, Heather Lane, dated August 13, 2020.

HEATHER LANE DECLARATION OF RESTRICTIVE COVENANTS

KNOW ALL MEN BY THESE PRESENTS that **William J. Piersiak, Trustee of the 768B Chestnut Street Realty Trust**, owner of 764 and 768B Chestnut Street, Needham, MA 02492, **Koby Kempel, Manager of 766 Chestnut LLC**, owner of 766 Chestnut Street, Needham, MA 02492, and **William John Piersiak**, owner of 768 and 768A Chestnut Street, Needham, MA 02492, (hereinafter, collectively “**Declarants**”), being the owners of record of certain real estate situated in Needham, Norfolk County, Massachusetts, described on Exhibit A.

The Declarant’s titles, see: for 766 Chestnut LLC, Book 36038, Page 67, for William John Piersiak, Book 26628, Page 469, and for 768B Chestnut Realty Trust, Book 26628, Page 469, Book 38112, Page 280, and Book 38112, Page 577, all at the Norfolk Registry of Deeds.

The Declarants hereby impose upon said premises the restrictions listed below in accordance with the Decision of the Planning Board of the Town of Needham dated August 13, 2020 entitled Definitive Subdivision Decision, Heather Lane (the “Decision”), in which the Planning Board approved the subdivision as shown on the plan to be recorded herewith subject to the conditions and waivers therein set forth for construction of the private way known as Heather Lane.

The subdivision approval is based on the plans entitled “Definitive Subdivision Plans for Heather Lane, 764, 766, 768-768A, & 768B Chestnut Street, Needham, MA”, prepared by Kelly Engineering Group, 0 Campanelli Drive, Braintree, MA 02184, dated March 3, 2020 (the “Plan”), as listed in Exhibits 1, 17, 21 and 24 of the Decision. The Plan is being recorded herewith.

Said premises are shown on said Plan as Lot 1, Lot 2, Lot 3, Lot 4, Lot 5 and Lot 6 **Heather Lane**, a private way. The Owners hereby impose the restrictions on said Lots 1 through 6 and the private way (Private Way” or “Heather Lane”), for the benefit of the Town of Needham and each other record owner or owners of Lots 1 through 6 on said Plan, their successors and assigns, said restrictions and covenants to be covenants running with said Lots 1 through 6 and the Private Way, and to be binding on the record owners, their successors and assigns, in perpetuity.

1. The waiver of street construction requirements, as fully set forth in Paragraphs 1.a, 1.b, 1.c, 1.d, 1.e and 1.f of the Decision is expressly conditioned upon and subject to the restriction that neither the owner nor any successor owner or owners of Lot 1, Lot 2, Lot 3, Lot 4, Lot 5, Lot 6 and the Private Way as shown on the Plan (hereinafter in paragraphs 3 through 12 inclusive referred to individually as a Lot or collectively as the Lots) shall use the Lots for any purpose other than single-family residential use, as shown on the Plan, as approved by the Board and recorded herewith.

2. Each and every owner or owners of any Lot served by the Private Way shall be jointly and severally responsible and liable through the **Heather Lane Homeowners Association Trust** (“Trust”) for the costs of the maintenance, repair and reconstruction of the

Private Way shown on the Plan and designated thereon and all services the installation of which is required in connection with the documents described in Section 6(f) of said Trust, or which may be installed at any time, including, without limitation, maintenance, repair and reconstruction of roadways, water, sewer and drainage facilities and other utilities and related equipment, curbs, monuments, landscaping and street signs, as and whenever necessary, and including all actions of any kind or nature necessary or appropriate in order to maintain the Private Way in a good, safe, and passable condition, including snow plowing, providing access from each Lot to a public way, as shown on the Plan, and to provide adequate services to each Lot, all in accordance with these conditions. For purposes hereof, Owner shall mean the record owner of the Lot or Lots, as of the date that the maintenance, repair, or reconstruction work, as the case may be, is begun. The Trust shall have no responsibility for sewage and drainage facilities and other utilities and related equipment located on individual lots.

3. Each owner of a Lot through the Heather Lane Association Trust shall perform all maintenance, repairs and reconstruction required for or on the Private Way in compliance with and in conformity with requirements of the Town of Needham and other requirements imposed by law or governmental authority. The within requirement shall be included in all deeds of the Lots.

4. The respective owner or owners of any Lot, and/or the Trustees under the Heather Lane Association Trust, shall not use or permit use of the Private Way for any purpose other than ingress and egress from the lots by the residents of the Lots and their guests and invitees, such use to be limited to pedestrian and private passenger vehicular traffic, and such other vehicular traffic as are necessary from time to time in cases of emergency, delivery of customary and usual household services and equipment or in connection with the maintenance, repair or reconstruction of the Private Way and services installed thereon, or thereunder. No owner or owners of any Lot shall park or cause to be parked any motor vehicle on the Private Way in such a way as to impede or obstruct the passage of pedestrian or vehicular traffic on the Private Way.

5. Any and all maintenance, repair or reconstruction work performed on or to the Private Way or in connection with services installed thereon or thereunder by or at the direction of any owner or owners of any Lot as provided herein shall be carried out so as to ensure that no fill material nor any products or excavation or erosion resulting from or arising in connection with such work shall be discharged into any storm drainage system, and soil and other material or debris shall be removed from the site only to the extent necessary in connection with such work.

6. Neither the Declarants nor any successor owner or owners of any Lot shall at any time request that the Private Way be laid out or accepted as a public way in the Town of Needham unless such owner or owners at its or their sole expense, perform and complete such work as is necessary to cause the Private Way to comply with all standards and regulations of the Town of Needham, and obtain all permits and approvals required by law in connection therewith. If the Private Way is accepted by the Town of Needham as a public way at any time, then the

provisions hereof applicable to ownership and maintenance of the Private Way shall thereupon terminate.

7. Neither the Declarants nor any successor owner or owners of any Lot shall at any time request or petition that any drainage system, water or sewer pipes or related equipment of any other improvement within the subdivision, for which design or improvement requirements have been waived by the Board as provided in the Board's subdivision approval, be accepted or maintained by the Town of Needham.

8. The Town of Needham and its designees shall have the right to enter upon the Private Way for all appropriate purposes for which public ways are used in the Town of Needham.

9. In any sale or transfer by the owners or any successor owner or owners of any of the Lots, the deed or other instrument shall refer to and incorporate conditions 1 through 12 inclusive, and any conveyance shall include transfer of a fee interest or the perpetual right and easement to use the Private Way in common with others lawfully entitled thereto for all purposes for which public ways in the Town of Needham may now or hereafter be used consistent with the provisions hereof, and the subsurface areas, equipment, and facilities, used and maintained in connection with the provision of water, sewer, drainage and other utility services provided to the conveyed premises. Any deed or other instrument purporting to transfer or convey any interest in any Lot or Lots which does not expressly refer to and incorporate these conditions shall, nevertheless, be deemed to contain the same and all events shall be subject thereto.

10. Lots 1 through 6 inclusive as shown on the Plan shall be accessed solely from Heather Lane.

11. Street lighting shall be provided in the subdivision. The light sources shall be on posts at least 12 feet high and shall be controlled by photovoltaic switches. Maintenance and electricity shall be supplied by the abutting lots. Post lighting shall be supplied for each lot in the Subdivision.

12. This Restrictive Covenant incorporating the conditions of the Decision will be recorded in the Registry of Deeds and shall run with the land and shall be enforceable by the Town of Needham. This Restrictive Covenant shall be referenced on the Plan and shall be recorded therewith. This Restrictive Covenant shall be enforceable in perpetuity or for the longest period permitted by law and in any event for 100 years.

Executed this ____ day of _____, 2020.

William J. Piersiak, Trustee of the
768B Chestnut Street Realty Trust

Koby Kempel, Manager of
766 Chestnut LLC

William John Piersiak, individually
and as Trustee of Heather Lane
Homeowners Association Trust

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared William J. Piersiak, also known as William John Piersiak, and Koby Kempel, proved to me through satisfactory evidence of identification, which was my personal knowledge of their identities, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose, individually and their representative capacities.

Robert T. Smart, Jr., Notary Public
My Commission Expires: 8/15/25

Approved as to Form
By Town Counsel

EXHIBIT A: HEATHER LANE SUBDIVISION PROPERTY

The 26.904 acre parcel of land described in the second paragraph of the Definitive Subdivision Decision, Heather Lane, dated August 13, 2020.

ACCEPTANCE BY THE TOWN OF NEEDHAM

The foregoing Declaration of Restrictive Covenants hereby is accepted by the Town of Needham, subject to the terms and conditions set forth therein.

TOWN OF NEEDHAM
By Its Select Board

By: _____
Name: _____
Title: _____

COMMONWEALTH OF MASSACHUSETTS

_____ County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared _____, Select Board member of the Town of Needham, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires:

**GRANT OF DRAINAGE EASEMENT
FROM
768B CHESTNUT STREET REALTY TRUST
TO
THE TOWN OF NEEDHAM, MASSACHUSETTS, HEATHER LANE
HOMEOWNERS ASSOCIATION TRUST, AND HEATHER LANE EXTENSION
HOMEOWNERS ASSOCIATION TRUST**

WHEREAS, **768B Chestnut Street Realty Trust, William J. Piersiak, Trustee**, having an address of 768 Chestnut Street, Needham, MA 02492, hereinafter referred to as the “Owner”, has, along with other Owners, filed with the Planning Board of the Town of Needham, hereinafter referred to as the “Town”, a certain subdivision plan of land in said Needham, the plan entitled “Definitive Subdivision Plans for Heather Lane 764, 766, 768 – 768A, and 768B Chestnut Street, Needham, MA prepared by Kelly Engineering Group, 0 Campanelli Drive, Braintree, MA 02184, dated March 3, 2020 (the “Plan”), as listed in Exhibits 1, 17, 21 and 24 of the Decision. The Plan is being recorded herewith.

WHEREAS there is shown on the Plan a certain drain easement, to wit: that certain area marked “Drain Easement”, as shown on Sheet 4B of the Plan;

WHEREAS the Planning Board for the Town of Needham, Massachusetts has required that the Owner shall deliver to the Planning Board for its approval a duly executed Grant of Drain Easement for the Drain Easement shown on the Plan in favor of the Town of Needham, the Heather Lane Homeowners Association Trust and the Heather Lane Extension Homeowners Association Trust (hereinafter, collectively, the Grantees”); and

WHEREAS the Declarations of Trust for the two Trusts mentioned above are recorded herewith; and

WHEREAS, the grant of easement herein by the Owner is intended to comply with the aforesaid requirement of the Planning Board for the Town of Needham, Massachusetts;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties hereto;

The Owner does hereby grant to the Grantees the right and perpetual easement and right of way over, across, under and through said Easement on said Plan for the direction or re-direction of storm water drainage, for the purpose of grading and re-grading for the said purpose, and for the purpose of laying, relaying, constructing, reconstructing, altering, maintaining and operating within, under and through the same, drain lines and conduits for the direction or re-direction of storm water, together with the right of ingress to and egress from the same for the said purposes.

Prior to exercising such easement, each of the Grantees agrees to give notice to the Owner, or its successors to Lots 5 and 6, of the fact that it desires to commence such exercise. The Grantees shall each, acting singly or collectively, have the right to perform such activities in exercise of such easement, provided that they shall use reasonable care not to intrude upon any portion of the lots in the subdivision lying outside the Grant of Drainage Easement and not to damage any structures, landscaping or other improvements which may exist on the remainder of the lots in the subdivision outside the Easement. The above shall not be construed to relieve the Owner and its successors in title of responsibility to complete all activities within the subdivision as are required by the Owner's agreements with the Town of Needham.

Grantees shall use their best efforts to cause the minimal amount of interference with the use of the property of the Owner, its successors and assigns (including, without limitation, the Owners from time to time of the individual lots) during the exercise of rights hereunder. Upon completion of any work which disturbs the surface of the above referenced Easement area indicated on the Plan, such Grantee or Grantees shall promptly re-grade, recover, repair, and in connection therewith repave, re-loam or reseed the area as needed. Grantees shall not have any obligation to take any further action to re-vegetate beyond initial reseeding and re-loaming nor shall Grantees have any obligation to replant any flowers, bushes, shrubs or trees. The Owner, its successors, or assigns shall not construct any structures or plant any trees which will interfere with the use or maintenance of the aforesaid easement, without the prior approval of the Heather Lane Homeowners Association Trust.

All work performed by the Owner or any of the Grantees in the Drain Easement shall be in good and workmanlike manner. In performing the permitted work hereunder, the Grantees shall not do any work which is inconsistent with the intent and purpose of this easement or which will create any nuisance, nor shall Grantees commit any act or waste which will be harmful or which will interfere with the Owner's adjoining land and premises.

The Owner agrees to hold the Grantees harmless from and to indemnify the Grantees against all claims, losses or damage for property damage or bodily injury, or either, resulting in any way by reason of the activities of the Owner in the Drain Easement.

The Grantees each agree to hold the Owner harmless from and to indemnify the Owner against all claims, losses or damage for property damage or bodily injury, or either, resulting in any way by reason of the activities of the Grantee in the Drain Easement, up to a maximum limit of \$100,000 per occurrence.

The Owner hereby reserves the right for itself, its heirs, successors and assigns, to use and enjoy the Drain Easement area for all legal purposes not inconsistent with the rights and easements granted hereby and specifically reserves the right to landscape or to pave the Drain Easement area, subject to local building and zoning regulations and subject to the terms of this Grant of Drainage Easement.

The within grant of easement shall be binding upon the Owner and all respective successors and assigns and shall inure to the benefit of the Grantees, and the benefits and burdens hereof shall run with the land described in and subject to the Plan.

For the Owner's title to the property see the Deed recorded in the Norfolk County Registry of Deeds in Book 26628, Page 469.

Witness our hands and seals as of this _____ day of _____, 2020.

768B Chestnut Street Realty Trust, by:

Heather Lane Homeowners
Association Trust, by:

William J. Piersiak, Trustee

William John Piersiak, Trustee

Heather Lane Extension
Homeowners Association
Trust, by:

William John Piersiak, Trustee

COMMONWEALTH OF MASSACHUSETTS

Norfolk, ss

Then personally appeared the above-named William J. Piersiak, also known as William John Piersiak, known to me, and acknowledged the foregoing instrument to be the duly authorized act of the Trusts referred to herein.

Robert T. Smart, Jr., Notary Public
My commission expires: 8/15/25

GRANT OF UTILITY EASEMENT

This is a grant of a utility easement from 766 Chestnut LLC, William John Piersiak, and the 768B Chestnut Street Realty Trust to the Town of Needham, Heather Lane Homeowners Association Trust, and Heather Lane Extension Homeowners Association Trust.

WHEREAS, **William J. Piersiak, Trustee of the 768B Chestnut Street Realty Trust**, owner of 764 and 768B Chestnut Street, Needham, MA 02492, **Koby Kempel, Manager of 766 Chestnut LLC**, owner of 766 Chestnut Street, Needham, MA 02492, **William John Piersiak**, owner of 768 and 768A Chestnut Street, Needham, MA 02492, and (hereinafter, collectively “**Owners**”) have filed with the Planning Board of the Town of Needham, hereinafter referred to as the “**Town**”, a certain subdivision plan of land in said Needham, the plan entitled “Definitive Subdivision Plans for Heather Lane 764, 766, 768 – 768A, and 768B Chestnut Street, Needham, MA prepared by Kelly Engineering Group, 0 Campanelli Drive, Braintree, MA 02184, dated March 3, 2020 (the “**Plan**”), as listed in Exhibits 1, 17, 21 and 24 of the Decision. The Plan is being recorded herewith; and

WHEREAS, **William John Piersiak**, owner of 768 and 768A Chestnut Street, Needham, MA 02492, (hereinafter, the “**Declarant**”), has filed with the Planning Board of the Town, a subdivision and residential compound plan entitled “Definitive Subdivision Plans and Residential Compound Special Permit, 768-768A Chestnut Street, Lot 4 Heather Lane, Needham, MA”, prepared by Kelly Engineering Group, 0 Campanelli Drive, Braintree, MA 02184, dated March 3, 2020 (the “**Residential Compound Plan**”), as listed in Exhibits 1, 15, 20 and 23 of the Decision. The Plan is being recorded herewith; and

WHEREAS utilities in Heather Lane are shown on the Utility Plan, Sheet 7 of the Plan; and utilities in Heather Lane Extension are shown on the Layout Plan, Sheet 3 of the Residential Compound Plan; and

WHEREAS the Planning Board for the Town of Needham, Massachusetts has required that the Owners and Declarant shall deliver to the Planning Board for its approval a duly executed Grant of Utility Easement in favor of the Heather Lane Homeowners Association Trust and the Heather Lane Extension Homeowners Association Trust, recorded herewith; and

WHEREAS, the grant of easement herein by the Owners and Declarant is intended to comply with the aforesaid requirement of the Planning Board for the Town of Needham, Massachusetts;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties hereto;

The Owners and Declarant do hereby grant to the **Heather Lane Homeowners Association Trust** and to the **Heather Lane Extension Homeowners Association Trust** (hereinafter “**Grantees**”) the right and perpetual easement and right of way over, across, under and through the utility easement area which is located within the Heather Lane right of way as

shown on the Plan, Sheets 2, 4A, 4B and 4C, and over, across and under the utility easement area which is located within the Heather Lane Extension right of way as shown on the Residential Compound Plan, Sheet 3, and, upon completion of construction by the Owners and Declarant of the proposed water and sewer lines situated therein, for the purpose of laying, relaying, constructing, reconstructing, altering, maintaining and operating within, under and through the same, sewer, water, electrical, cable and other utilities, , together with the right of ingress to and egress from the same for the said purposes.

Prior to exercising such easement, the Grantees each agree to give notice to the Owners or their successors to any portion of the land or a street in the subdivision of the fact that they desire to commence such exercise. Each Grantee shall have the right to perform such activities in exercise of such easement, provided that such Association shall use reasonable care not to intrude upon any portion of the lots in the subdivision lying outside the areas where utilities are located and not to damage any structures, landscaping or other improvements which may exist on the remainder of the lot areas in the subdivision. The above shall not be construed to relieve the Owners and their successors in title to a portion of the land or a street in the subdivision, of responsibility to complete all activities within the subdivision as are required by the Owners' agreements with the Town of Needham.

The Grantees shall use their best efforts to cause the minimal amount of interference with the Owners' and Declarant's use of their property during the exercise of their rights hereunder. Upon completion of any work which disturbs the surface of the roadway or other areas where utilities are located as indicated on the Plan and Residential Compound Plan, Grantees shall promptly re-grade, recover, repair, and in connection therewith repave, re-loam or re-seed the area as needed. Grantees shall not have any obligation to take any further action to re-vegetate beyond initial reseeding and re-loaming nor shall Grantees have any obligation to replant any flowers, bushes, shrubs, or trees. The Owners and Declarant, and their heirs, successors, or assigns, shall not construct any structures or plant any trees which will interfere with the use or maintenance of the aforesaid easement, without the prior approval of the Heather Lane Homeowners Association Trust and the Heather Lane Extension Homeowners Association Trust.

All work by or on behalf of the Owners, Declarant, or the Grantees in the areas where utilities are shown shall be performed in good and workmanlike manner. In performing the permitted work hereunder, the Grantees shall not do any work which is inconsistent with the intent and purpose of this easement or which will create any nuisance, nor shall Grantees commit any act or waste which will be harmful or which will interfere with the Owners' or Declarant's adjoining land and premises.

The Owners and Declarant agree to hold the Grantees harmless from and to indemnify the Grantees against all claims, losses or damage for property damage or bodily injury, or either, resulting in any way by reason of the activities of the Owners and Declarant in exercising their rights and obligations hereunder.

The Grantees agree to hold the Owners and Declarant harmless from and to indemnify

the Owners and Declarant against all claims, losses or damage for property damage or bodily injury, or either, resulting in any way by reason of the activities of the Grantees in exercising their rights hereunder.

The Owners and Declarant hereby reserves the right for themselves, their heirs, successors and assigns, to use and enjoy the areas where utilities are shown for all legal purposes not inconsistent with the rights and easements granted hereby and specifically reserves the right to landscape or to pave, subject to local building and zoning regulations and subject to the terms of this Grant of Utility Easement.

The grant of Easement shall be binding upon the Owners and Declarant and all respective successors and assigns and shall inure to the benefit of the Grantees, and the benefits and burdens hereof shall run with the land described in and subject to the Plan and Residential Compound Plan.

For the Owners' and Declarant's titles to the property see: for 766 Chestnut LLC, Book 36038, Page 67, for William John Piersiak, Book 26628, Page 469, and for 768B Chestnut Realty Trust, Book 26628, Page 469, Book 38112, Page 280, and Book 38112, Page 577, all at the Norfolk County Registry of Deeds.

WITNESS the execution hereof under seal this ____ day of _____, 2020.

William J. Piersiak, Trustee of the
768B Chestnut Street Realty Trust

Koby Kempel, Manager of
766 Chestnut LLC

William John Piersiak, individually
and as Trustee of Heather Lane
Homeowners Association Trust
and as Trustee of Heather Lane
Extension Homeowners
Association Trust

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this ___ day of _____, 2020, before me, the undersigned notary public, personally appeared William J. Piersiak, also known as William John Piersiak, and Koby Kempel, proved to me through satisfactory evidence of identification, which was my personal knowledge of their identities, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose, individually and their representative capacities.

Robert T. Smart, Jr., Notary Public
My Commission Expires: 8/15/25

Approved as to Form
By Town Counsel

HEATHER LANE EXTENSION SUBDIVISION COVENANT
UNDER PROVISIONS OF GENERAL LAWS CHAPTER 41, SECTION 81-U

WHEREAS, **William John Piersiak**, owner of **768 and 768A Chestnut Street, Needham, MA 02492**, has filed with the Planning Board of the Town of Needham, hereinafter referred to as the “Town”, a certain subdivision plan of land in said Needham, the plan being entitled “Definitive Subdivision Plans and Residential Compound Special Permit, 768-768A Chestnut Street, Lot 4 Heather Lane, Needham, MA”, prepared by Kelly Engineering Group, 0 Campanelli Drive, Braintree, MA 02184, dated March 3, 2020 (the “Plan”), as listed in Exhibits 1, 15, 20 and 23 of the Decision. The Plan is being recorded herewith.

AND WHEREAS, the said Owner has agreed to subdivide the land, to construct ways and to install municipal services therein in accordance with the Residential Compound Plan in accordance with all approvals imposed by the Town and have elected to give a Covenant to the said Town to insure the construction of ways and installation of municipal services as shown on said Plan as authorized by Subsection (2) of Section 81-U of General Laws, including all conditions as set forth in the Board of Health letter dated June 14, 2020, which is herewith made part of this Covenant as set forth in the Planning Board’s Definitive Subdivision Decision dated August 13, 2020 (hereinafter, the “Decision”).

NOW THEREFORE, said Owner hereby covenants and agrees with the said Town as follows:

- I. The said Owner is the owner of record of the premises shown on the Plan.
- II. This Covenant shall run with the land and shall be binding upon the executors, administrators, heirs, assigns of the Owner and his successors in title to the Premises, as shown on the Plan.
- III. By signing this Covenant the Owner agrees to the Covenant’s requirements and to waive all rights of appeal. The Board of Health drainage surety referred to in the Decision shall be in a form of surety acceptable to the Planning Board and Board of Health.
- IV. In addition to the regular requirements relative to the grading and construction of streets and the installation of municipal services, said **Heather Lane Extension** and **RC-Lot 1, RC-Lot 2, RC-Lot 3, RC-Lot 4, and RC-Lot 5**, inclusive, shall be subject to all of the conditions and any subsequent amendments to the Decision, , 2020, a copy of which is on file with the Town Clerk’s office, Needham Town Hall.
- V. Except as hereinafter provided, until the following improvements and conditions have been completed or fulfilled in accordance with the specifications and requirements referred to or enumerated below, with respect to any of the lots in the subdivision, which in the opinion of the Town are affected by such conditions and improvements, no such lot or lots shall be built

upon or conveyed, except by a mortgage deed, nor shall building permits for such lot or lots be applied for or issued:

(A) Except as to those standards that were waived by the Planning Board in the Decision, , or as may be further revised through any amendment of that Decision, all streets, including walks, berms, curbing, street name signs, bounds, retaining walls, slopes, and all utilities, including but not limited to storm drains, sanitary sewers, water mains and their appurtenances such as manholes, catch basins, curb inlets, gate valves, hydrants, and headwalls, shall be constructed or installed at the expense of the Owners to the entire limits of the subdivision in strict compliance with the “Subdivision Regulations and Procedural Rules of the Planning Board of the Town of Needham, Massachusetts, as most recently amended, including the “Standard Specifications for Highways” and the “Standard Cross-Section for Street Construction” referred to therein, as most recently revised, which Subdivision Regulations and Procedural Rules and Standard Specifications are specifically incorporated herein by reference, and to the satisfaction of the Director of Public Works of the Town of Needham, including all maintenance and repairs necessary to maintain said streets and utilities in a condition satisfactory to the Town until all lots and all sureties, as provided in Section IV herein have been released by the Town upon the completion of all terms and conditions of this Covenant except as otherwise presented in said definitive plan.

(B) Street construction work shall consist of (as noted on approved plans): Excavation and fill to the surface of the sub-grade fifteen and one half (15.5) inches below the finished surface grade for the roadway and the necessary excavation and fill for berms within the total width of the street; application of eight (8) inch depth of gravel sub-base and a four (4) inch depth of crushed bank gravel base, the surface of which shall be treated with one (1) application of bituminous; application of bituminous concrete pavement Type 1-1 to be constructed in two (2) courses top course of 1.5” bituminous concrete and bottom course of 2” bituminous concrete, including all driveway entrances; application of six (6) inch depth of loam and seeding for grass plots between the edge of the roadway and the sidelines of the street; granite or reinforced concrete curbing to be installed on all curves having a radius of sixty (60) feet or less, except for temporary turnarounds.

(C) A contractor approved by the Superintendent of the Water Division shall be engaged by the Owners at their expense for the installation of the water mains in accordance with the requirements of and to the satisfaction of the Superintendent of said Water Division.

(D) Sanitary sewers shall be constructed by an approved contractor at the expense of the Owners as shown on approved plans and profiles, in accordance with the standard specifications of the Town of Needham, and to the satisfaction of the Director of Public Works.

(i) The Town shall have the right to extend said sewer without cost to the Owners, beyond the limits of the sewer as shown on the development plans and profiles.

(E) Storm water drains shall be installed in accordance with the approved plan and profile to the satisfaction of the Director of Public Works, and all lots shall be graded in accordance with the proposed contours of land as shown on the Plan.

(F) If requested in writing by the Town, the Owners shall grant to the Town of Needham a perpetual right and easement to construct, repair, replace, extend, operate, use and forever maintain all streets, water mains, sewer mains and all surface and subsurface storm water drains, in, through or under the streets and easements as indicated on definitive plans. The above shall not be construed to relieve the Owners and their successors in title to a portion of the land or a street in the subdivision, of responsibility to complete all construction, as required by the Owners' Agreements with the Town of Needham and to thereafter maintain all streets and municipal services and utilities in satisfactory condition until they are accepted by the Town. Such grant, if requested, shall be executed and delivered to the Planning Board within a reasonable time after notice is given, but in any event, prior to the transfer or conveyance of any lot or interest therein. Notwithstanding the aforesaid grants to the Town, the Owners agree for themselves that as long as they remain the Owners of said premises they will keep all catch basin inlets and access thereto clear and free of all debris and/or other materials which might interfere with the proper operation of said drains, and thereafter the owners of said premises will keep catch basin inlets and access thereto clear and free of all debris and/or other materials which might interfere with the proper operation of said drains. The Owners and the Town of Needham acknowledge and agree that the Owners intend to convey a fee interest in Heather Lane Extension to the Heather Lane Extension Homeowners Association Trust.

(G) Permanent street name signs will be furnished and erected at all entrances, the name to be in conformity as to size and quality with signs now generally in use in the Town of Needham.

(i) Co-incident with the start of any street within a subdivision, temporary street signs shall be installed at all points where permanent signs will be required. These signs may be painted using black block lettering not less than four inches high on a light background.

(ii) Complete visibility of these signs must be maintained at all times until they are replaced with the permanent signs specified in this Section H.

(iii) Permanent street signs and the size and other details shall be furnished and installed at no expense to the Town as directed by the Town Director of Public Works.

(H) Prior to the commencement of construction on all major phases of the subdivision including installation of the sewer, water, drains, and street construction, the Owners will notify the Director of Public Works and obtain necessary signatures on the Subdivision Inspection Form.

VI. The construction of all ways and the installation of all municipal services shall be completed in accordance with the applicable Subdivision Rules and Regulations and Procedural Rules of the Planning Board, as well as the requirements contained in Sections III and IV above, (except to the extent that applicable standards were waived by the Planning Board as described in paragraph IV (A) above within a period of two (2) years from the date of the endorsement by the Board of the approved Plan. Failure to so complete shall automatically rescind approval of the subdivision plan, unless such approval is further extended by the Planning Board on request of the Owners, their successors and/or assigns.

VII. Prior to the completion of all the work required herein, the Planning Board may, at its discretion, in accordance with the provisions of Subsection (1) of Section 81-U, Chapter 41, release any or all of said lots shown on the Plan, for purposes of sale or for the issuance of permits for building therein, upon the furnishing to the Town by the Owners an agreement and a surety acceptable to the Town, to secure the completion of such part or all of the work specified above, as, at the discretion of the Planning Board should be completed for the proper use of said lots in accordance with the purposes of this Covenant, said surety to be in a penal sum or amount equal to the cost, as estimated by said Director of Public Works, of completing said works. Said release by the Planning Board shall be evidenced by a certificate enumerating the lot or lots released and signed by a majority of said Planning Board, in proper form for recording in the Registry of Deeds or registration in the Registry District of the Land Court.

VIII. The enforcement of the terms herein shall be made as provided for by General Laws, Chapter 41, Section 81-X and 81-Y, in the name of the Town, and upon any breach thereof the Town shall be entitled to an injunction restraining any further sale of any of the lots included in said plans, until the said breach has been cured or security given therefore satisfactory to the then Planning Board of the said Town.

IX. Nothing herein shall be deemed to prohibit a conveyance subject to this Covenant by a single deed of the entire parcel of land shown on said subdivision plan or of all lots, subject to this Covenant, by any of the parties named herein to any other person.

X. The Owners accept all conditions as set forth in the Definitive Subdivision and Decision.

Y. This Covenant shall take effect upon approval of said plans by a majority of signatures affixed thereto by the Planning Board.

For the Owner's title to the property see: Book 26628, Page 469 at the Norfolk County Registry of Deeds.

WITNESS the execution hereof under seal this ____ day of _____, 2020.

William John Piersiak, individually
and as Trustee of Heather Lane
Extension Homeowners Association
Trust

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared William John Piersiak, proved to me through satisfactory evidence of identification, which was my personal knowledge of his identity, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose, individually and as Trustee.

Robert T. Smart, Jr., Notary Public
My Commission Expires 8/15/25

**HEATHER LANE EXTENSION HOMEOWNERS ASSOCIATION
DECLARATION OF TRUST**

This Declaration of Trust is made this _____ day of _____, 2020, by **William John Piersiak**, of 768 Chestnut Street, Needham, MA 02492 (hereinafter “**Declarant**” and “**Initial Trustee**”). The Declarant is the owner of 768 and 768A Chestnut Street, Needham, MA 02492, which Property comprises the Heather Lane Extension Subdivision (“Subdivision”), as more particularly described in Exhibit A attached hereto.

1. Name of Trust. The name of this Trust shall be the **Heather Lane Extension Homeowners Association Trust** (“Trust”).
2. Initial Trustee. The Initial Trustee of this Trust shall be the William John Piersiak, who shall so serve until the later to occur of:
 - a. That date which is three (3) years following the recording hereof; or
 - b. The sale and conveyance of **RC-Lot 1, RC-Lot 2, RC-Lot 3, RC-Lot 4, and RC-Lot 5** of the Subdivision, other than any lot to be retained by William John Piersiak, to bona fide third parties.

Following such event, or in the event the William John Piersiak is no longer willing or able to serve as Trustee, there shall be a total of up to five (5) Trustees. Each of the Owners (as hereinafter defined) shall be entitled to appoint a Trustee to so serve, in accordance with the provisions of this Trust.

3. Purpose of Trust. The purpose of this Trust is to provide for the preservation, administration and maintenance, for the common enjoyment and benefit of the Owners, of Heather Lane Extension, such utilities and facilities as are or may be conveyed to the Trustees, and of any other property, real or personal, which may hereafter be conveyed to or acquired by the Trustees or otherwise made subject to their administration for the benefit of the Owners (collectively, the “Trust Property”). The purpose of the Trust shall also include (a) the exercise of the powers of the Trustees set forth herein with the respect to all the land described in Exhibit A hereto (the “Property”) and the building (s) and other improvements which now exist or may hereinafter be constructed thereon, (b) the administration and enforcement of the documents set forth in section 6(f) below, and (c) all other purposes set forth herein. All the Owners shall have the right to use the Property subject to:
 - a. the restrictions and obligations contained herein; and
 - b. such reasonable rules and regulations as may be adopted and amended, from time to time, by the Trustees.

4. Beneficiaries. The beneficiaries of this Trust shall be the five lot Owners, who will each have an equal interest in the Trust. The word “Owners” shall mean and refer to the record holders from time to time of the legal title of any lot within the Heather Lane Extension Subdivision and the building or other improvements, if any, constructed thereon, which constitutes all or a portion of the Property, and, at the discretion of the Trustees, any other lot that has actual private way or driveway access to Heather Lane Extension even though not currently included in the description of the Property. The holder of legal title shall include the holder of the equity of redemption in the case of mortgaged land and one having a legal life or other estate in possession and excluding a lessee, tenant, mortgagee and one having a legal estate in remainder or otherwise subsequent to a legal estate in possession and also excluding the Trustees as owners of the Trust property. Two or more persons or entities holding legal title to the same parcel or parcels shall be treated as a single Owner; exercise of their rights as such owners shall be by their unanimous action and their obligations to pay any assessment shall be joint and several. If the same Owner shall hold record title to more than one lot, such Owner shall be treated as a separate Owner for each lot. Each Owner of a Lot, through this Trust, shall have joint and several responsibility to perform all maintenance, repairs and reconstruction required for or in Heather Lane Extension in compliance with and in conformity with the requirements of the Town of Needham and other requirements imposed by law or governmental authority.

Notwithstanding anything in this Trust to the contrary, each of the Owners shall have the right to maintain, repair, reconstruct or replace the sewer line serving said Owner’s Lot, including, but not limited, to access Heather Lane Extension and excavate within said Heather Lane Extension to conduct said maintenance, repair or replacement. Said Owner shall be responsible for restoring all disturbed areas to the condition that existed prior to such access.

5. Powers and Duties of Trustees. For the purpose of carrying out the terms of this Trust, the Trustees shall have the powers and duties necessary for the administration of the Trust Property, including, without limitation, the following powers which may be exercised by them without any action or consent of the Owners and which shall continue after the termination of the Trust for the purpose of disposing of the Trust Property and until final disposition thereof:

- a. the maintenance, repair and reconstruction of the private way known as Heather Lane Extension as shown on the plans entitled “Definitive Subdivision Plans and Residential Compound Special Permit, 768-768A Chestnut Street, Lot 4 Heather Lane, Needham, MA”, prepared by Kelly Engineering Group, 0 Campanelli Drive, Braintree, MA 02184, dated March 3, 2020 (hereinafter the “**Residential Compound Plan**”) and designated thereon and all services the installation of which is required in connection with the documents described in section 6 of this Agreement, or which may be installed at any time, including, without limitation, maintenance, repair and reconstruction of roadways, water (except as provided in the Definitive Subdivision Decision described in section 6 below), sewer and drainage facilities and other utilities and related equipment, curbs, monuments,

sidewalks, landscaping and street signs, as and whenever necessary, and including all actions of any kind or nature necessary or appropriate in order to maintain Heather Lane Extension in a good, safe and passable condition, including snow plowing, providing access from each Lot to a public way, as shown on the Plan, and to provide adequate services to each Lot, all in accordance with the documents set forth in section 6(f) below. Except as provided in the Drainage Easement recorded herewith, the Trust shall have no responsibility for sewage and drainage facilities and other utilities and related equipment located on individual lots, which shall be the sole responsibility of the Owner of the lot where such facilities and equipment are located;

- b. to acquire by purchase, hire or otherwise, property which is convenient to the performance of their functions as Trustees;
- c. to adopt reasonable rules and regulations governing the use and enjoyment by the Owners of the Trust Property. The Trustees shall have the power, right and authority to enforce such rules and regulations, but no obligation to any Owner to do so;
- d. to convey permanent easements and lesser interests in, upon and over any ways for the installation, maintenance, repair and replacement of utilities and other services and rights incidental thereto for the benefit of one or more Owners; or to convey a fee or lesser interest in any ways, utilities, or drainage system owned by the Trustees from time to time, for the benefit of one or more Owners;
- e. to convey to the Town of Needham or other public body the fee or any lesser interest in any way and utilities therein or in all or any portions of the drainage system serving the Property;
- f. to make such contracts as the Trustees deem convenient to the performance of their duties;
- g. to borrow money and to pledge or encumber Trust Property to secure repayment of such borrowings;
- h. to open bank accounts in the name of the Trust or the Trustees with power in any one of the Trustees to draw on such amounts;
- i. to procure insurance against damage to the Trust Property or against any liability of the Trustees or the Owners from any actions occurring on or about or on account of the Trust Property, or worker's compensation insurance or any insurance of any type, nature or description which the Trustees may deem appropriate with respect to the Trust or the Trust Property;

- j. to pay, resist, compromise or submit to arbitration any claim or matter in dispute with respect to the Trust or any Trust Property;
- k. to determine and collect common and special charges from the Owners as provided in this Declaration of Trust and to undertake all expenses and pay all costs on account of such common and special charges;
- l. to maintain, repair and replace any or all of the Trust Property;
- m. to exercise any other powers which may be necessary or desirable for carrying out the terms of this Trust or which the Trustees may have under any present or future statute or rule of law, and to execute and deliver all appropriate instruments in connection therewith;
- n. to undertake such maintenance and other obligations as may be required under applicable permits and approvals issued for the Trust Property pursuant to G.L. c.40A and c.41, Section 81(k) et. seq., including but not limited to the obligations set forth in the Decision on the Residential Compound Plan;
- o. to retain such counsel or accountants as the Trustees shall deem advisable and to pay the costs thereof as a common charge from funds of the Trust; and
- p. to take such steps as are necessary to enforce the Declaration of Restrictive Covenants of even date and recorded herewith, and
- q. to coordinate with the Trustees of the Heather Lane Homeowners Association Trust with regard to use, maintenance and repair of Heather Lane.

6. Common and Special Charges. The Trustees shall from time to time, and at least annually, prepare a budget for the Trust to determine the amount of the common charges payable by the Owners to meet the common expenses of the Trust. The Trustees shall have the power to raise such amounts of money to meet any needs of the Trust by assessing on each occasion upon all of the land (which term shall include land and improvements) of each Owner such Owner's proportionate share of the total amount to be raised. The date of each such assessment shall be the date it is voted by the Trustees. The Trustees' determination regarding the amount of the assessment shall be conclusive. Common expenses may include, without limitation, the following:

- a. all costs relating to the maintenance, repair and reconstruction of the private way known as Heather Lane Extension as shown on the Residential Compound Plan and designated thereon, and the one-sixth share of all costs due from the residential compound lot owners for the maintenance, repair and reconstruction of

the private way known as Heather Lane, and all services the installation of which is required in connection with the subdivision documents described below, or which may be installed at any time, including, without limitation, maintenance, repair and reconstruction of roadways, water (except as provided in the Definitive Subdivision Decision), sewer and drainage facilities and other utilities and related equipment, curbs, monuments, landscaping and street signs, as and whenever necessary, and including all actions of any kind or nature necessary or appropriate in order to maintain Heather Lane Extension and Heather Lane in a good, safe and passable condition, including snow plowing, providing access from each Lot to a public way, as shown on the Plan, and to provide adequate services to each Lot, all in accordance with the documents set forth in section 6(f) below. The Trust shall also have no responsibility for sewage and drainage facilities, and other utilities and related equipment located on individual lots, except as provided in the Drainage Easement recorded herewith, which shall be the sole responsibility of the Owner of the lot where such facilities and equipment are located. The Trustees shall have the specific authority to assess special charges necessary to fulfill their responsibilities as set forth in this Declaration of Trust;

- b. all insurance premiums for the master policy for the Trust Property, fidelity bonds for the Trustee and agents and employees, any insurance purchased to protect the Trustees and such other insurance as the Trustees may deem necessary and appropriate;
- c. all expenses relating to the financing, operation, improvement, maintenance and replacement of any Trust property;
- d. all costs of attorneys, accountants and other usual, customary or necessary professional advisors to the Trustees;
- e. the amount that the Trustees shall deem necessary and appropriate for the working capital of the Trust, for an operating reserve for expenses, a reserve fund for the replacements, and any charges for deficits from previous operating years; and
- f. all expenses relating to the Trustees' enforcement and administration of the subdivision documents, including the following:
 - i. Definitive Subdivision Decision, Heather Lane Extension, dated August 13, 2020, recorded with the Norfolk County Registry of Deeds, Book _____, Page _____;
 - ii. Heather Lane Extension Declaration of Restrictive Covenants, recorded with the Norfolk County Registry of Deeds, Book _____, Page _____;

- iii. Heather Lane Extension Subdivision Covenant Under the Provisions of General Laws, Chapter 41, Section 81-U, recorded with the Norfolk County Registry of Deeds, Book _____, Page _____;
- iv. Drainage Easement recorded with the Norfolk County Registry of Deeds, Book _____, Page _____;
- v. Utility Easement recorded with the Norfolk County Registry of Deeds, Book _____, Page _____.

In addition, the Trustees shall have the power to assess individual Owners for special charges in connection with repairs, improvements or replacements caused or necessitated solely by the actions or omissions of such Owner.

The Trustees shall upon reasonable request render certificates suitable for recording indicating that no payments are due to the Trust with respect to any common or special charges, which certificates shall be conclusive as to the facts stated therein. While he is sole Trustee, William John Piersiak shall have sole authority to sign such certificates. Thereafter, the signatures of two Trustees shall be required on such certificates.

Notwithstanding anything in this Agreement to the contrary, the sole cost and responsibility for maintenance, repair, improvement, operation and replacement of streetlights and associated equipment in the Subdivision shall be with the Owner from whose property power or electricity is supplied.

7. Payment of Common and Special Charges. All Owners shall pay the common charges assessed by the Trustees in installments as determined by the Trustees. Special charges shall be paid within thirty days after notice from the Trustees, or as the Trustees in their sole discretion may otherwise require.

8. Lien for Common Charges. Each assessment so made upon an Owner shall constitute and remain a charge and lien upon such Owner's land and every portion thereof from the date of the assessment until paid in full, and shall also constitute a personal debt of the Owner who is the Owner of such land on the date of assessment by the Trustees. Such charge, lien or personal debt may be enforced or collected by the Trustees by any available process including, without limitation, collection proceedings in a court and foreclosure of the charge or lien against the land under processes comparable to processes provided in Massachusetts G.L. c. 254 to the extent lawful. All costs and expenses incurred by the Trustees in enforcing or collecting any assessment, including reasonable attorney's fees shall be paid by the Owner responsible for the assessment and shall constitute a further lien or charge on said land and a personal debt of said Owner. Notwithstanding the above provisions, such charge and lien shall be junior to each bona-fide mortgage to an institutional mortgage lender outstanding upon such land on the date of the assessment, whether the mortgage be given before or after this Trust takes effect and its provisions become restrictions and servitudes upon such land, but foreclosure of the mortgage shall not impair the power of the Trustees thereafter to make further assessments upon such land nor otherwise impair such restrictions and servitudes thereon. If any assessment is not paid when due, such assessment shall bear interest at the rate of eighteen percent (18%) per year from the due date. The Trustees may, in addition to the other rights herein reserved, accelerate the payment of the reasonable estimate of common charges for the twelve-month period following any default and such sum shall serve as security for the payment of future common and special charge obligations.

9. Liability of Trustee. All persons extending credit to or contracting with or having any claim against the Trustees hereunder shall look only to the Trust Property for any such contract of claim, so that neither the Trustees nor the Owners shall be personally liable therefor. No Trustee hereunder shall be liable to this Trust or to the Owners for the default of any other Trustee or for leaving property in the hands of another Trustee, or for any error in judgment of law on his or her own part, but shall be liable only for his or her own willful default. Any Trustee hereunder shall be reimbursed in full for any loss or expense incurred or suffered by him or her, or his or her estate, as a result of acting as Trustee hereunder, excluding only such loss or expense resulting from his own willful default.

10. Reliance by Third Parties. No person dealing with any Trustee shall be bound to inquire concerning the validity of any act purporting to be done by him or her or be bound to see to the application of any money paid or property transferred to him or her upon his or her order. Any Trustee may at any time or times by written power of attorney delegate all or any of his or her powers and authorities, except the power to make assessments as provided in section above, whether discretionary or otherwise, to any other Trustee in each case for a period of not more than six (6) months at a time, but any such delegation may be renewed by successive powers of attorney and may be revoked.

11. Financial Records. The Trustees shall keep proper records and accounts of the affairs of the Trust which shall be open to inspection by any Owner at all reasonable times. At least once a

year the Trustees shall render a written report and financial statement to the Owners. The approval by a majority of the Owners of any report or financial statement by the Trustees shall be, as to all matters and transaction stated in said report or statement or shown thereby, a complete discharge of the Trustees and final and binding upon all Owners.

12. Trustees in Number and Terms. There shall always be at least one Trustee hereunder, and never more than five (5) Trustees. No Trustee need be an Owner. Trustees may be persons, firms, or other legal entities. Trustees, other than the Initial Trustee, shall serve for a period of three (3) years and until their successors and appointed and duly qualified.

13. Appointment of Trustee. At each annual meeting of the Owners commencing with the annual meeting to be held after the third anniversary of the recording of this Declaration of Trust, and the sale and conveyance of RC-Lot 1, RC-Lot 2, RC-Lot 3, RC-Lot 4, and RC-Lot 5, other than any lot to be retained by William John Piersiak, to bona fide third parties as provided in section 2 above, whichever occurs later, each Owner of Lots RC-Lot 1, RC-Lot 2, RC-Lot 3, RC-Lot 4, and RC-Lot 5 may appoint one Trustee for the Heather Lane Extension Homeowners Association, and the five residential compound owners may appoint among them one Trustee for the Heather Lane Homeowners Association.

14. Vacancies and Removals. Any Trustee may at any time resign as Trustee by a written instrument signed by him or her, acknowledged and delivered to the remaining Trustee or Trustees. Upon the death or resignation of any Trustee, a vacancy in the office of Trustee shall be deemed to exist, and a new Trustee shall be elected for the unexpired term by the remaining Trustee or Trustees. Any successor Trustee shall qualify as a Trustee by written acceptance, signed and acknowledged said Trustee. Pending any appointment of a successor Trustee, the remaining Trustee or Trustees shall have and may exercise all powers, authority and discretion conferred by this Trust. Upon election of a successor Trustee, the Trust Property shall vest in successor Trustee and the continuing Trustees, as applicable, without further action.

15. Fidelity Bonds and Surety. The Trustees may obtain fidelity bonds in amount which they deem reasonably sufficient to cover Trustees and employees of the Trust handling or responsible for the funds. The cost of any such bond shall be a common charge as provided in Section 6 above.

16. Owner's Annual and Special Meetings. Any action or consent by the Owners shall be taken or given at the annual meeting or at any special meeting of the Owners. The annual meeting of the Owners shall be held on the first Wednesday in October of each and every year (or if that be a legal holiday on the next succeeding full business day) at the hour and place to be fixed by the Trustees. If no annual meeting has been held on the date fixed above, a special meeting in lieu thereof may be held. Special meetings of Owners may be called by the Trustees on their own motion and, after the annual meeting following the third anniversary after recording the Declaration of Trust or the sale of lots RC-Lot 1, RC-Lot 2, RC-Lot 3, RC-Lot 4, and RC-Lot 5 to bona fide third parties, as provided in section 2 above, whichever occurs later, shall be called

by the Trustees upon written application to the Trustees of at least 50% of the Owners. A written notice of the place, date, and hour of all meetings of Owners shall be given by the Trustees at least seven days before the meeting to each Owner. Notice need not be given to an Owner if a written waiver of notice, executed before or after the meeting by such owner or this attorney thereunto authorized, is filed with the records of the meeting. Notwithstanding the above, no annual meeting of the Owners shall be held so long as the Initial Trustee remains in office, except with the assent of said Initial Trustee.

17. Quorum. A majority of the Owners shall constitute a quorum, but if a quorum is not present, a lesser number may adjourn the meeting from time to time and the meeting may be held as adjourned without further notice.

18. Voting. Each Owner shall be entitled to one vote for each lot within the Property owned. Such vote may be cast in person or by proxy. Any instrument dated not more than six months before the meeting purporting to grant authority to another to cast such vote, duly executed by the Owner and acknowledged before a notary public, shall be deemed a proxy. A proxy shall be revocable at any time by written notice to the Trustees. When a quorum is present, any matter before the meeting shall be decided by the unanimous vote of the Owners if two, and otherwise by a majority vote, except where a larger vote is required by this Trust. Provided further, however, that so long as the Initial Trustee continues to serve, no Owner shall have any voting authority.

19. Termination or Amendment by Consent. This Trust may be terminated or amended at any time by an instrument in writing signed by the Trustees and assented to by the unanimous action of the Owners. Provided further, however, that so long as the Initial Trustee continues to serve, this Trust may be terminated or amended at any time by an instrument in writing signed by the Initial Trustee. No assent to such action from Owners shall be required.

20. Disposition of Trust Property. Upon termination of the Trust, the Trust Property shall be conveyed as directed by a unanimity of the Owners either (i) to a Trust for the benefit of the Owners for the same or similar purposes as the trust herein created, or (ii) to the Owners as tenant in common, subject to all matters of record which henceforth shall be enforceable by and against the Owners, joint and severally.

21. Notices. All notices to the Owners shall be in writing and shall be sent to the Owners or to such one of them as they may designate in writing from time to time, at the last address of such Owner as it appears in the records of the Trust. Changes in the Owners or their addresses shall be noted in the records of the Trust only upon written notice filed with the Trustees. Notice shall be deemed given as of the date of mailing

22. Termination by Law. This Trust unless sooner terminated as herein provided, shall terminate on the last day permitted by law.

23. Incumbency of Trustees. A certificate signed by three Trustees and acknowledged before a Notary Public shall be conclusive evidence in favor of any person, firm, corporation, trust or association acting in good faith in reliance thereon as to the truth of any matter or facts stated therein relating to:

- a. the death, resignation, removal or appointment of a Trustee or to the delegation by a Trustee to another Trustee of his or her powers, authorities and discretion;
- b. compliance by the Trustees and Owners with any requirement of this Trust;
- c. the terms of this instrument and any amendment or termination of this Trust;
- d. the fact of the validity of any action taken by the Trustees or Owners and to the authority of the Trustees or Owners to take such action; the numbers of Owners acting in favor of any matters; or
- e. any other matter pertaining to the Trustees, Owners or the Trust Property.

Provided, however, that so long as William John Piersiak continues to act as Initial Trustee, the signature of the one Initial Trustee on a certificate and acknowledged before a Notary Public shall be deemed to satisfy the provisions of this section and all other provisions requiring or authorizing Trustee action.

When recorded with the Norfolk County Registry of the Land Court, such certificate shall be conclusive evidence to all persons regardless of whether they have notice thereof or act in reliance thereon.

24. Recording. The termination and all amendments of this Trust and resignations and appointments of Trustees shall be filed with said Registry of Deeds, and any person shall be entitled to rely on the records of said Registry with respect to the termination of the Trust, any amendment thereto and the identity of the Trustees, the identity of the Owners and to any other matter pertaining to the Trust, the Trustees, the Owners of the Trust Property.

25. Disputes. Any Owner aggrieved by any failure or refusal to act by a quorum of the Trustees or by a deadlock among the Trustees, may, within thirty (30) days of such failure, refusal to act, or deadlock, appoint an arbitrator who shall be a member of the American Arbitration Association with not less than seven (7) years' experience as an arbitrator. Within ten (10) days after written notice of such appointment, the Trustees shall appoint another such arbitrator, and the two so chosen shall within ten (10) days thereafter choose a third such arbitrator. A majority of such arbitrators shall be entitled to decide any such matter, and their decision shall be rendered within thirty (30) days of the appointment of the third arbitrator. Such decision, subject to Chapter 251 of the General Laws of Massachusetts, as from time to time

amended, shall be final and conclusive on all persons. The cost of such arbitration shall be a common charge as provided in Section 6 above. If any party elects to be represented by counsel, all counsel fees shall be the sole responsibility of the party retaining such counsel.

26. Construction and Interpretation. In the construction hereof, whether so expressed, words used in the singular or in the plural, respectively, include both the plural and singular; words denoting males include females, and words denoting persons include individuals, firms, associations, companies (joint, stock or otherwise), trusts and corporations, unless a contrary intention is to be inferred from or required by the subject matter or context. The captions of Articles and Sections are inserted only for the convenience of reference and are not to be taken to be any part hereof or to control or affect the meaning, construction, interpretation, or effect hereof.

All the trusts, powers and provisions herein contained shall take effect and be construed according to the laws of the Commonwealth of Massachusetts.

27. Waiver. No restriction, condition, obligation or provision contained in the Declaration of Trust or any of the documents set forth in Section 6(f) above, shall be deemed to have been abrogated or waived by reason of any failure to enforce the same, irrespective of the number of violations or breaches thereof which occur.

28. Conflict. In case any of the provisions of this Declaration of Trust or of any Rules and Regulations adopted by the Trustees shall be in conflict with any of the provision of the documents set forth in Section 6(f) above, or the provisions of any statute, then the provisions of said documents or statute, as the case may be, shall control.

WITNESS the execution hereof under seal this ____ day of _____, 2020.

William John Piersiak, individually
and as Trustee of Heather Lane
Extension Homeowners Association
Trust

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared William John Piersiak, proved to me through satisfactory evidence of identification, which was my personal knowledge of his identity, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose, individually and as Trustee.

Robert T. Smart, Jr., Notary Public
My Commission Expires 8/15/25

Approved as to Form
By Town Counsel

EXHIBIT A: HEATHER LANE EXTENSION SUBDIVISION PROPERTY

The 13.26 acre parcel of land described in the second paragraph of the Definitive Subdivision, Heather Lane Extension, dated August 13, 2020.

HEATHER LANE EXTENSION
DECLARATION OF RESTRICTIVE COVENANTS

KNOW ALL MEN BY THESE PRESENTS that **William John Piersiak**, owner of 768 and 768A Chestnut Street, Needham, MA 02492, (hereinafter, the “**Declarant**”), being the owner of record of certain real estate situated in Needham, Norfolk County, Massachusetts, described on Exhibit A (hereinafter the “premises”)

For the Declarant’s title to the premises, see Book 26628, Page 469, at the Norfolk County Registry of Deeds.

The Declarant hereby imposes upon said premises the restrictions listed below in accordance with the Decision of the Planning Board of the Town of Needham dated august 13, 2020, entitled Definitive Subdivision Decision, Heather Lane Extension (the “Decision”), in which the Planning Board approved the subdivision and residential compound application as shown on the plans to be recorded herewith, subject to the conditions and waivers therein set forth for construction of the private way known as Heather Lane Extension.

The subdivision and residential compound approval is based on the plans entitled “Definitive Subdivision Plans and Residential Compound Special Permit, 768-768A Chestnut Street, Lot 4 Heather Lane, Needham, MA”, prepared by Kelly Engineering Group, 0 Campanelli Drive, Braintree, MA 02184, dated March 3, 2020 (the “Plan”), as listed in Exhibits 1, 15, 20 and 23 of the Decision. The Plan is being recorded herewith.

Said premises are shown on said Residential Compound Plan as **RC-Lot 1, RC-Lot 2, RC-Lot 3, RC-Lot 4, and RC-Lot 5** on Heather Lane Extension, a private way. The Owners hereby impose the restrictions on said five Lots and the private way (Private Way” or “Heather Lane Extension”), for the benefit of the Town of Needham and each other record owner or owners of each of said five Lots on said Plan, their successors and assigns, said restrictions and covenants to be covenants running with said Lots and the Private Way, and to be binding on the record owners, their successors and assigns, in perpetuity.

1. The waiver of street construction requirements, as fully set forth in Paragraphs 1.a, 1.b, 1.c, 1.d, 1.e and 1.f of the Decision is expressly conditioned upon and subject to the restriction that neither the owner nor any successor owner or owners of any of said Lots and the Private Way as shown on the Plan (hereinafter in paragraphs 3 through 12 inclusive referred to individually as a Lot or collectively as the Lots) shall use the Lots for any purpose other than single-family residential use, as shown on the Plan, as approved by the Board and recorded herewith.

2. Each and every owner or owners of any Lot served by the Private Way shall be jointly and severally responsible and liable through the **Heather Lane Extension Homeowners Association Trust (“Trust”)** for the costs of the maintenance, repair and reconstruction of the Private Way known as Heather Lane Extension, which is shown on the Plan and designated thereon, all costs for the maintenance repair and reconstruction of the Private Way known as

Heather Lane to the extent required by the Trust, and all services the installation of which is required in connection with the documents described in Section 6(f) of said Trust, or which may be installed at any time, including, without limitation, maintenance, repair and reconstruction of roadways, water, sewer and drainage facilities and other utilities and related equipment, curbs, monuments, landscaping and street signs, as and whenever necessary, and including all actions of any kind or nature necessary or appropriate in order to maintain the Private Way in a good, safe, and passable condition, including snow plowing, providing access from each Lot to a public way, as shown on the Plan, and to provide adequate services to each Lot, all in accordance with these conditions. For purposes hereof, Owner shall mean the record owner of the Lot or Lots, as of the date that the maintenance, repair, or reconstruction work, as the case may be, is begun. The Trust shall have no responsibility for sewage and drainage facilities and other utilities and related equipment located on individual lots.

3. Each owner of a Lot shown on the Plan shall perform all maintenance, repairs and reconstruction required for or on the Private Way in compliance with and in conformity with requirements of the Town of Needham and other requirements imposed by law or governmental authority. The within requirement shall be included in all deeds of the Lots.

4. The respective owner or owners of any Lot, and/or the Trustees under the Trust, shall not use or permit use of the Private Way for any purpose other than ingress and egress from the lots by the residents of the Lots and their guests and invitees, such use to be limited to pedestrian and private passenger vehicular traffic, and such other vehicular traffic as are necessary from time to time in cases of emergency, delivery of customary and usual household services and equipment or in connection with the maintenance, repair or reconstruction of the Private Way and services installed thereon, or thereunder. No owner or owners of any Lot shall park or cause to be parked any motor vehicle on the Private Way in such a way as to impede or obstruct the passage of pedestrian or vehicular traffic on the Private Way.

5. Any and all maintenance, repair or reconstruction work performed on or to the Private Way or in connection with services installed thereon or thereunder by or at the direction of any owner or owners of any Lot as provided herein shall be carried out so as to ensure that no fill material nor any products or excavation or erosion resulting from or arising in connection with such work shall be discharged into any storm drainage system, and soil and other material or debris shall be removed from the site only to the extent necessary in connection with such work.

6. Neither the Declarant nor any successor owner or owners of any Lot shall at any time request that the Private Way be laid out or accepted as a public way in the Town of Needham unless such owner or owners at its or their sole expense, perform and complete such work as is necessary to cause the Private Way to comply with all standards and regulations of the Town of Needham, and obtain all permits and approvals required by law in connection therewith. If the Private Way is accepted by the Town of Needham as a public way at any time, then the provisions hereof applicable to ownership and maintenance of the Private Way shall thereupon terminate.

7. Neither the Declarant nor any successor owner or owners of any Lot shall at any time request or petition that any drainage system, water or sewer pipes or related equipment of any other improvement within the subdivision, for which design or improvement requirements have been waived by the Board as provided in the Board's subdivision approval, be accepted or maintained by the Town of Needham.

8. The Town of Needham and its designees shall have the right to enter upon the Private Way for all appropriate purposes for which public ways are used in the Town of Needham.

9. In any sale or transfer by the owners or any successor owner or owners of any of the Lots, the deed or other instrument shall refer to and incorporate conditions 1 through 12 inclusive, and any conveyance shall include transfer of a fee interest or the perpetual right and easement to use the Private Way in common with others lawfully entitled thereto for all purposes for which public ways in the Town of Needham may now or hereafter be used consistent with the provisions hereof, and the subsurface areas, equipment, and facilities, used and maintained in connection with the provision of water, sewer, drainage and other utility services provided to the conveyed premises. Any deed or other instrument purporting to transfer or convey any interest in any Lot or Lots which does not expressly refer to and incorporate these conditions shall, nevertheless, be deemed to contain the same and all events shall be subject thereto.

10. Each of the Lots as shown on the Plan shall be accessed solely from Heather Lane and Heather Lane Extension.

11. This Restrictive Covenant incorporating the conditions of the Decision will be recorded in the Registry of Deeds and shall run with the land and shall be enforceable by the Town of Needham. This Restrictive Covenant shall be referenced on the Plan and shall be recorded therewith. This Restrictive Covenant shall be enforceable in perpetuity or for the longest period permitted by law and in any event for 100 years.

WITNESS the execution hereof under seal this ____ day of _____, 2020.

William John Piersiak, individually
and as Trustee of Heather Lane
Extension Homeowners Association
Trust

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared William John Piersiak, proved to me through satisfactory evidence of identification, which was my personal knowledge of his identity, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose, individually and as Trustee.

Robert T. Smart, Jr., Notary Public
My Commission Expires 8/15/25

Approved as to Form
By Town Counsel

EXHIBIT A: HEATHER LANE EXTENSION SUBDIVISION PROPERTY

The 13.26 acre parcel of land described in the second paragraph of the Definitive Subdivision, Heather Lane Extension, dated August 13, 2020.

ACCEPTANCE BY THE TOWN OF NEEDHAM

The foregoing Declaration of Restrictive Covenants hereby is accepted by the Town of Needham, subject to the terms and conditions set forth therein.

TOWN OF NEEDHAM
By Its Select Board

By: _____
Name:
Title:

COMMONWEALTH OF MASSACHUSETTS

_____ County, ss

On this ____ day of _____, 2020, before me, the undersigned notary public, personally appeared _____, Select Board member of the Town of Needham, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires:

DEFINITIVE SUBDIVISION PLANS

FOR
HEATHER LANE
764, 766, 768-768A, & 768B CHESTNUT STREET
NEEDHAM, MA

MARCH 03, 2020

SHEET INDEX						
SHEET No.	DESCRIPTION	LATEST REVISED DATE	CONSTRUCTION	REVISIONS		
1	COVER SHEET	09/01/20				
2	KEY SHEET	09/01/20				
3A	EXISTING CONDITIONS PLAN	03/03/20				
3B	EXISTING CONDITIONS PLAN	03/03/20				
3C	EXISTING CONDITIONS PLAN	03/03/20				
4A	LOTTING & ZONING PLAN	07/22/20				
4B	LOTTING & ZONING PLAN	09/01/20				
4C	LOTTING & ZONING PLAN	09/01/20				
5	PLAN & PROFILE PLAN	07/22/20				
6	GRADING PLAN	09/01/20				
7	UTILITY PLAN	07/22/20				
8	DETAIL SHEET	03/03/20				
9	DETAIL SHEET	03/03/20				

OWNER/APPLICANT:

WILLIAM JOHN PIERSIAK
768-768A CHESTNUT ST.
NEEDHAM, MA

WILLIAM J. PIERSIAK, TR
768B CHESTNUT STREET REALTY TRUST
768B CHESTNUT ST.
NEEDHAM, MA

766 CHESTNUT LLC, KOBY KEMPEL, MANAGER
766 CHESTNUT ST.
NEEDHAM, MA

CIVIL ENGINEERS:

KELLY ENGINEERING GROUP, INC.
0 CAMPANELLI DRIVE
BRAINTREE, MA 02184

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND
IN THE TOWN OF NEEDHAM, SITUATED OFF
CHESTNUT STREET

"I CERTIFY THAT, TO THE BEST OF MY
KNOWLEDGE AND BELIEF, THIS PLAN IS
TRUE AND CORRECT TO THE ACCURACY
REQUIRED BY THE SUBDIVISION
REGULATIONS AND PROCEDURAL RULES
OF THE PLANNING BOARD OF THE TOWN
OF NEEDHAM."

DAVID N. KELLY, P.E.

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

DATE TOWN CLERK

"APPROVED IN ACCORDANCE WITH
SECTION 81-U OF CHAPTER 41 OF THE
GENERAL LAWS AS AMENDED"

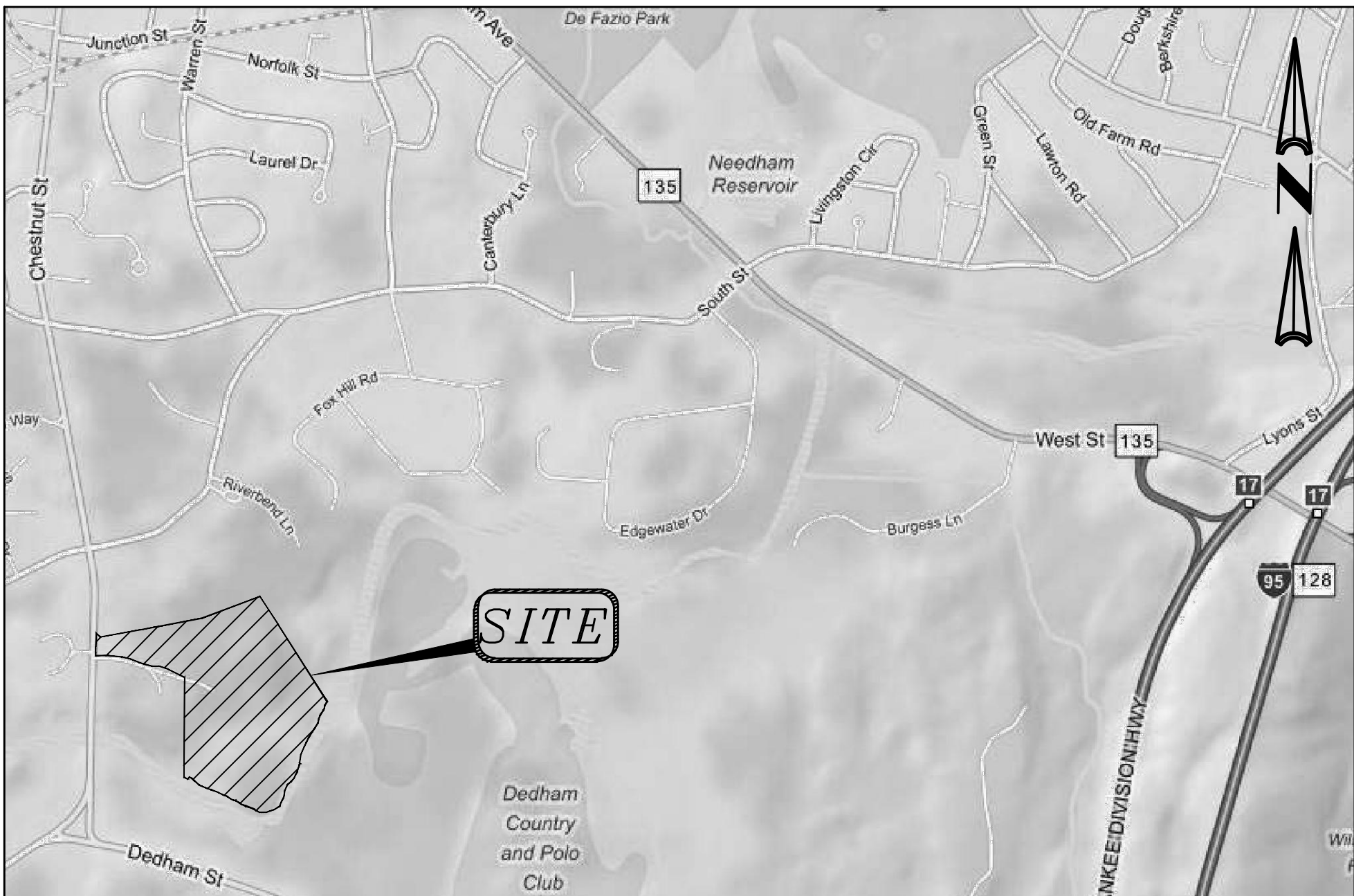
APPROVED SUBJECT TO TERMS AND
CONDITIONS OF A COVENANT GIVEN IN
ACCORDANCE WITH SECTION 81-U,
CHAPTER 41 OF THE GENERAL LAWS AS
AMENDED.

APPROVED DATE

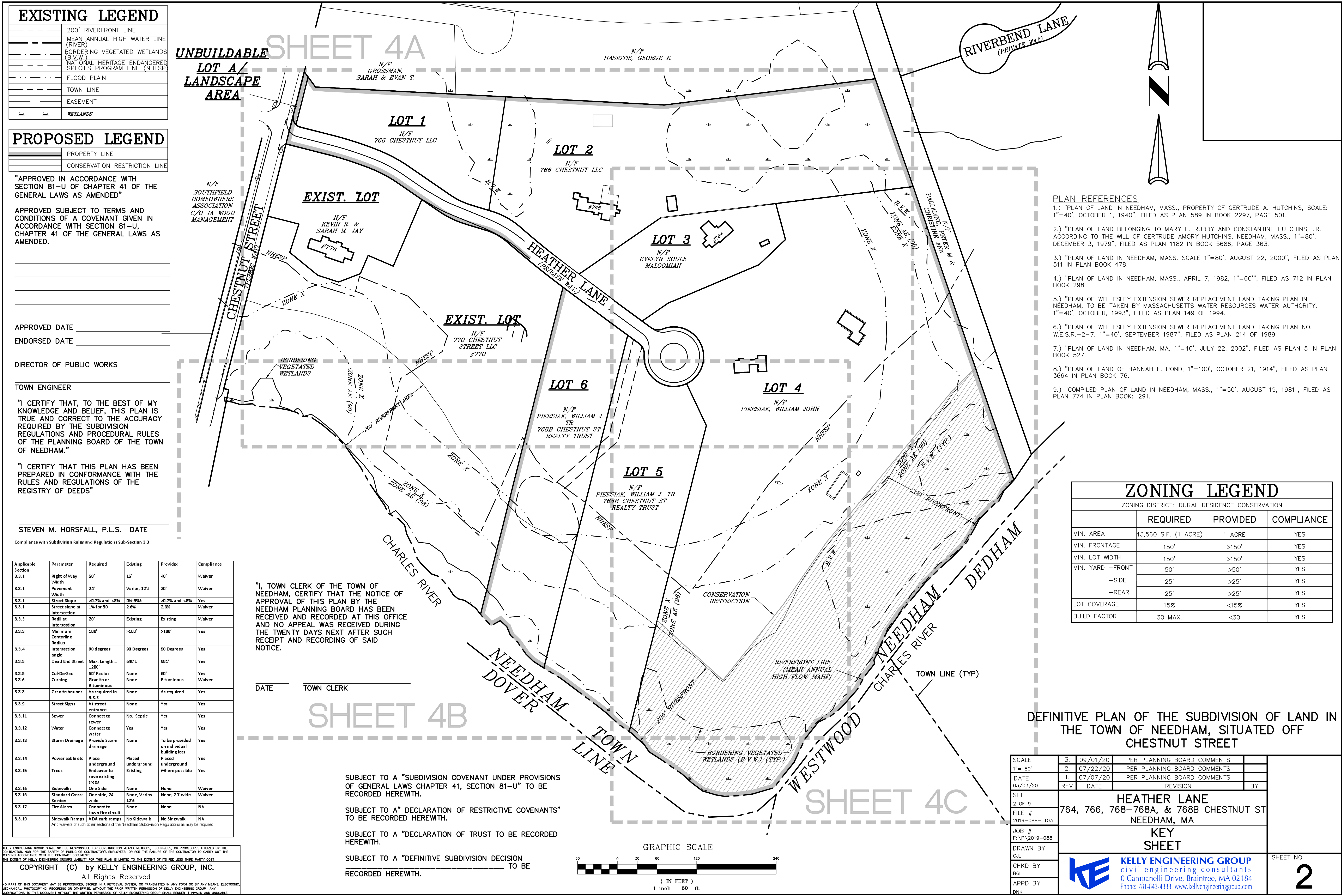
ENDORSED DATE

DIRECTOR OF PUBLIC WORKS

TOWN ENGINEER



LOCATION MAP



EXISTING LEGEND	
	200' RIVERFRONT LINE
	MEAN ANNUAL HIGH WATER LINE (RIVER)
	BORDERING VEGETATED WETLANDS (B.V.W.)
	NATIONAL HERITAGE ENDANGERED SPECIES PROGRAM LINE (NHESP)
	FLOOD PLAIN
	TOWN LINE
	EASEMENT
	WETLANDS

PROPOSED LEGEND	
	PROPERTY LINE
	CONSERVATION RESTRICTION LINE

"APPROVED IN ACCORDANCE WITH SECTION 81-U OF CHAPTER 41 OF THE GENERAL LAWS AS AMENDED"

APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COVENANT GIVEN IN ACCORDANCE WITH SECTION 81-U, CHAPTER 41 OF THE GENERAL LAWS AS AMENDED.

APPROVED DATE _____
ENDORSED DATE _____

DIRECTOR OF PUBLIC WORKS _____

TOWN ENGINEER _____

"I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION REGULATIONS AND PROCEDURAL RULES OF THE PLANNING BOARD OF THE TOWN OF NEEDHAM."

"I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS"

STEVEN M. HORSFALL, P.L.S. DATE _____
Compliance with Subdivision Rules and Regulations Sub-Section 3.3

Applicable Section	Parameter	Required	Existing	Provided	Compliance
3.3.1	Right of Way Width	50'	15'	40'	Waiver
3.3.1	Pavement Width	24'	Varies, 12'±	20'	Waiver
3.3.1	Street Slope	>0.7% and <8%	0%-9%	>0.7% and <8%	Yes
3.3.1	Street slope at Intersection	1% for 50'	2.6%	2.6%	Waiver
3.3.3	Radius at Intersection	20'	Existing	Existing	Waiver
3.3.3	Minimum Centerline Radius	100'	>100'	>100'	Yes
3.3.4	Intersection angle	90 degrees	90 Degrees	90 Degrees	Yes
3.3.5	Dead End Street	Max. Length = 1200'	640'±	981'	Yes
3.3.5	Cul-De-Sac	60' Radius	None	60'	Yes
3.3.6	Curbing	Granite or Bituminous	None	Bituminous	Waiver
3.3.8	Granite bounds	As required in 3.3.8	None	As required	Yes
3.3.9	Street Signs	At street entrance	None	Yes	Yes
3.3.11	Sewer	Connect to sewer	No. Septic	Yes	Yes
3.3.12	Water	Connect to water	Yes	Yes	Yes
3.3.13	Storm Drainage	Provide Storm drainage	None	To be provided on individual building lots	Yes
3.3.14	Power cable etc	Place underground	Placed underground	Placed underground	Yes
3.3.15	Trees	Endeavor to save existing trees	Existing	Where possible	Yes
3.3.16	Sidewalks	One Side	None	None	Waiver
3.3.16	Standard Cross-Section	One side, 24' wide	None, Varies 12'±	None, 20' wide	Waiver
3.3.17	Fire Alarm	Connect to town fire circuit	None	None	NA
3.3.19	Sidewalk Ramps	ADA curb ramps	No Sidewalk	No Sidewalk	NA
And waivers of such other sections of the Needham Subdivision Regulations as may be required					

KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST

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All Rights Reserved

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF KELLY ENGINEERING GROUP. ANY VIOLATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF KELLY ENGINEERING GROUP SHALL BE PUNISHABLE BY LAW AND UNLAWFUL.

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

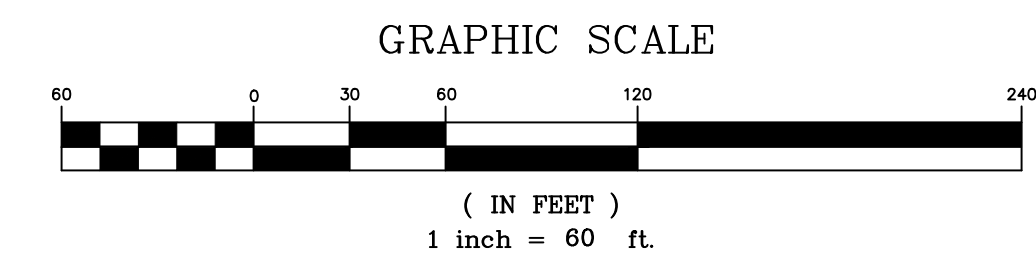
DATE _____ TOWN CLERK _____

SUBJECT TO A "SUBDIVISION COVENANT UNDER PROVISIONS OF GENERAL LAWS CHAPTER 41, SECTION 81-U" TO BE RECORDED HEREWITH.

SUBJECT TO A "DECLARATION OF RESTRICTIVE COVENANTS" TO BE RECORDED HEREWITH.

SUBJECT TO A "DECLARATION OF TRUST TO BE RECORDED HEREWITH.

SUBJECT TO A "DEFINITIVE SUBDIVISION DECISION TO BE RECORDED HEREWITH.

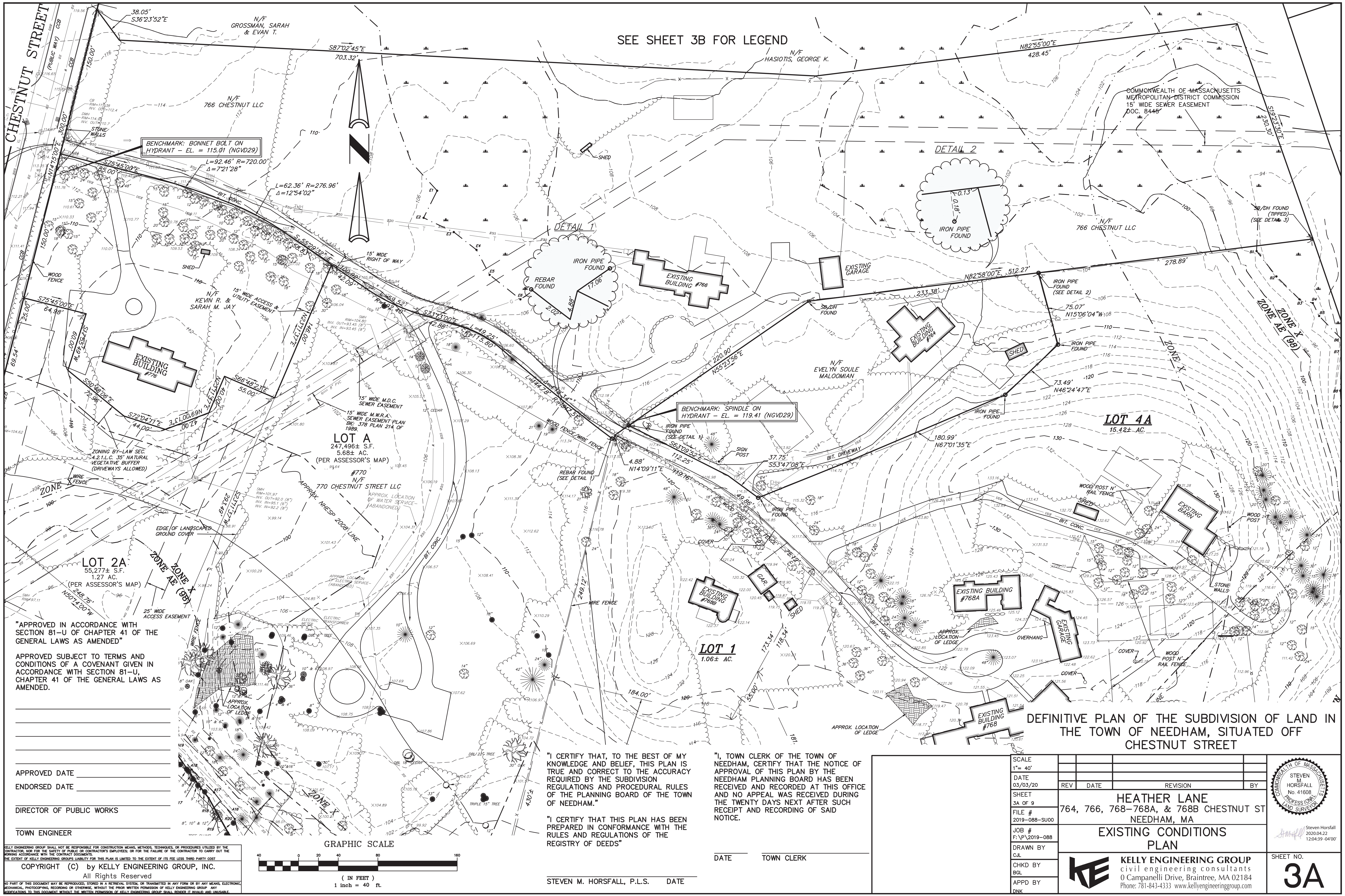


- PLAN REFERENCES
- 1.) "PLAN OF LAND IN NEEDHAM, MASS., PROPERTY OF GERTRUDE A. HUTCHINS, SCALE: 1"=40', OCTOBER 1, 1940", FILED AS PLAN 589 IN BOOK 2297, PAGE 501.
 - 2.) "PLAN OF LAND BELONGING TO MARY H. RUDDY AND CONSTANTINE HUTCHINS, JR. ACCORDING TO THE WILL OF GERTRUDE AMORY HUTCHINS, NEEDHAM, MASS., 1"=80', DECEMBER 3, 1979", FILED AS PLAN 1182 IN BOOK 5686, PAGE 363.
 - 3.) "PLAN OF LAND IN NEEDHAM, MASS. SCALE 1"=80', AUGUST 22, 2000", FILED AS PLAN 511 IN PLAN BOOK 478.
 - 4.) "PLAN OF LAND IN NEEDHAM, MASS., APRIL 7, 1982, 1"=60", FILED AS 712 IN PLAN BOOK 298.
 - 5.) "PLAN OF WELLESLEY EXTENSION SEWER REPLACEMENT LAND TAKING PLAN IN NEEDHAM, TO BE TAKEN BY MASSACHUSETTS WATER RESOURCES WATER AUTHORITY, 1"=40', OCTOBER, 1993", FILED AS PLAN 149 OF 1994.
 - 6.) "PLAN OF WELLESLEY EXTENSION SEWER REPLACEMENT LAND TAKING PLAN NO. W.E.S.R.-2-7, 1"=40', SEPTEMBER 1987", FILED AS PLAN 214 OF 1989.
 - 7.) "PLAN OF LAND IN NEEDHAM, MA, 1"=40', JULY 22, 2002", FILED AS PLAN 5 IN PLAN BOOK 527.
 - 8.) "PLAN OF LAND OF HANNAH E. POND, 1"=100', OCTOBER 21, 1914", FILED AS PLAN 3664 IN PLAN BOOK 76.
 - 9.) "COMPILED PLAN OF LAND IN NEEDHAM, MASS., 1"=50', AUGUST 19, 1981", FILED AS PLAN 774 IN PLAN BOOK: 291.

ZONING LEGEND			
ZONING DISTRICT: RURAL RESIDENCE CONSERVATION			
	REQUIRED	PROVIDED	COMPLIANCE
MIN. AREA	43,560 S.F. (1 ACRE)	1 ACRE	YES
MIN. FRONTAGE	150'	>150'	YES
MIN. LOT WIDTH	150'	>150'	YES
MIN. YARD -FRONT	50'	>50'	YES
-SIDE	25'	>25'	YES
-REAR	25'	>25'	YES
LOT COVERAGE	15%	<15%	YES
BUILD FACTOR	30 MAX.	<30	YES

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN OF NEEDHAM, SITUATED OFF CHESTNUT STREET

SCALE 1"= 80'	3. 09/01/20	PER PLANNING BOARD COMMENTS	
	2. 07/22/20	PER PLANNING BOARD COMMENTS	
DATE 03/03/20	1. 07/07/20	PER PLANNING BOARD COMMENTS	
	REV	DATE	REVISION
SHEET 2 OF 9			
FILE # 2019-088-LT03	HEATHER LANE 764, 766, 768-768A, & 768B CHESTNUT ST NEEDHAM, MA		
JOB # F:\P\2019-088	KEY SHEET		
DRAWN BY CUL	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com		
CHKD BY BGL			
APPD BY DNK			
SHEET NO.			2



SEE SHEET 3B FOR LEGEND

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN OF NEEDHAM, SITUATED OFF CHESTNUT STREET

"APPROVED IN ACCORDANCE WITH SECTION 81-U OF CHAPTER 41 OF THE GENERAL LAWS AS AMENDED"

APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COVENANT GIVEN IN ACCORDANCE WITH SECTION 81-U, CHAPTER 41 OF THE GENERAL LAWS AS AMENDED.

APPROVED DATE _____

ENDORSED DATE _____

DIRECTOR OF PUBLIC WORKS _____

TOWN ENGINEER _____

"I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION REGULATIONS AND PROCEDURAL RULES OF THE PLANNING BOARD OF THE TOWN OF NEEDHAM."

"I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS"

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

DATE _____ TOWN CLERK _____

STEVEN M. HORSFALL, P.L.S. DATE _____

SCALE 1" = 40'				
DATE 03/03/20	REV	DATE	REVISION	BY
SHEET 3A OF 9	HEATHER LANE 764, 766, 768-768A, & 768B CHESTNUT ST NEEDHAM, MA			
FILE # 2019-088-SU00	EXISTING CONDITIONS PLAN			
JOB # F:\P\2019-088	DRAWN BY C.J.L.			
CHKD BY BGL	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com			
APPD BY DNK				

STEVEN M. HORSFALL
No. 41608
PROFESSIONAL
LAND SURVEYOR

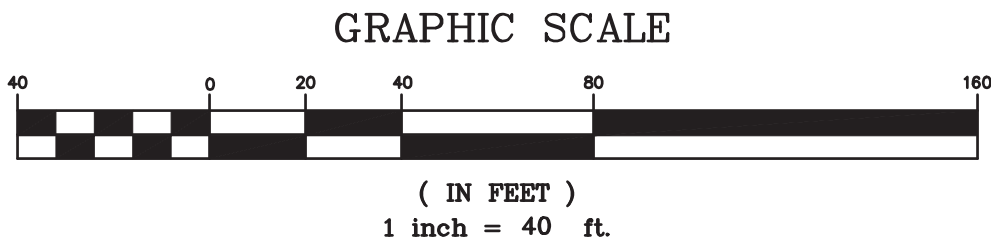
Steven Horsfall
2020.04.22
12:04:39 -04'00'

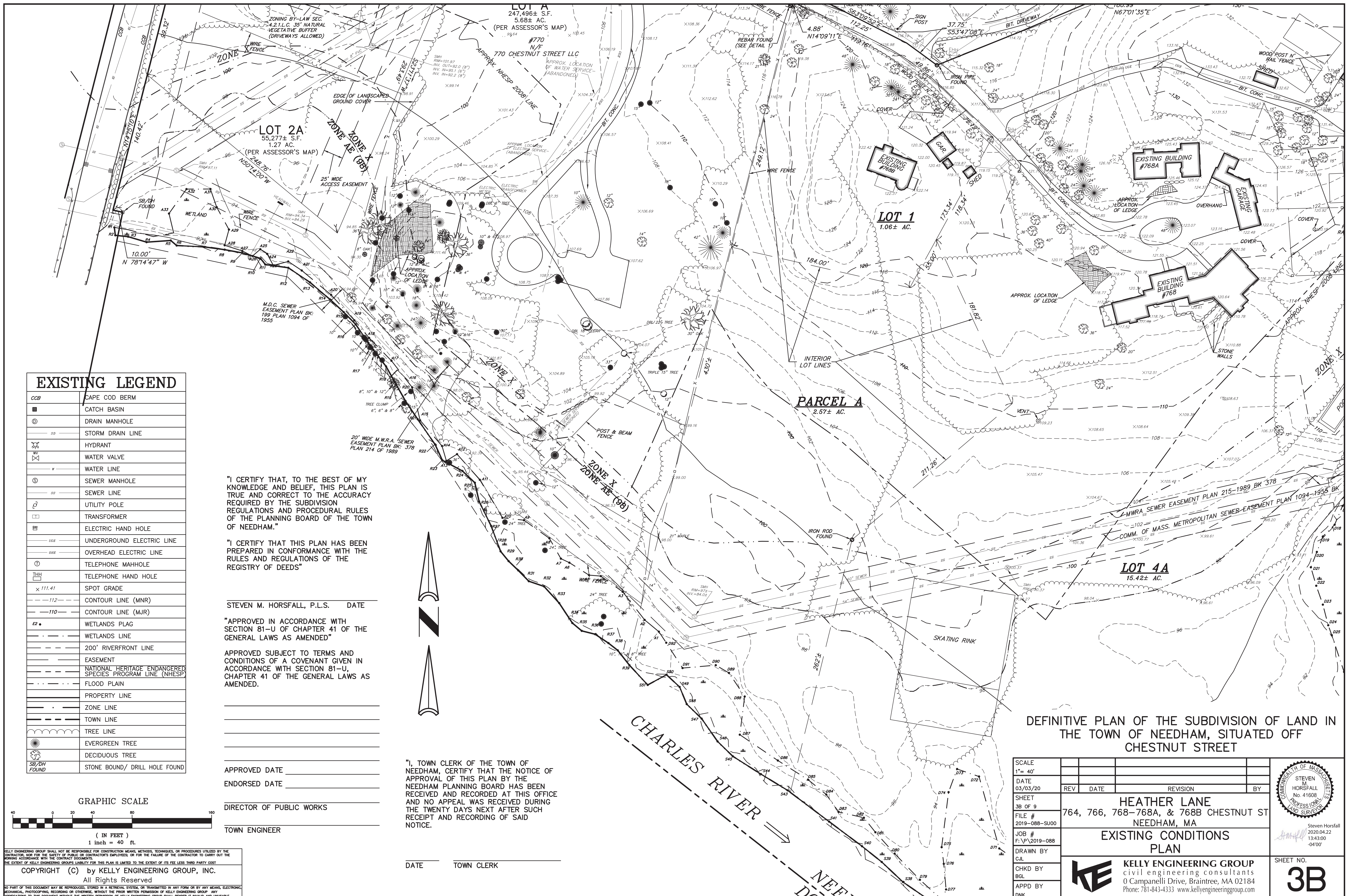
SHEET NO.
3A

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"APPROVED IN ACCORDANCE WITH SECTION 81-U OF CHAPTER 41 OF THE GENERAL LAWS AS AMENDED"

APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COVENANT GIVEN IN ACCORDANCE WITH SECTION 81-U, CHAPTER 41 OF THE GENERAL LAWS AS AMENDED.

APPROVED DATE _____

ENDORSED DATE _____

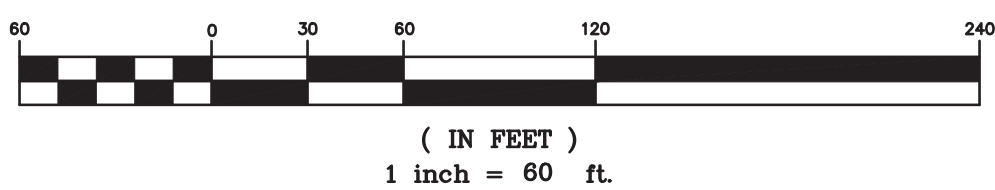
DIRECTOR OF PUBLIC WORKS _____

TOWN ENGINEER _____

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

DATE _____ TOWN CLERK _____

GRAPHIC SCALE



KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST
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SEE SHEET 3B FOR LEGEND

"I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION REGULATIONS AND PROCEDURAL RULES OF THE PLANNING BOARD OF THE TOWN OF NEEDHAM."

DAVID N. KELLY, P.E.

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN OF NEEDHAM, SITUATED OFF CHESTNUT STREET

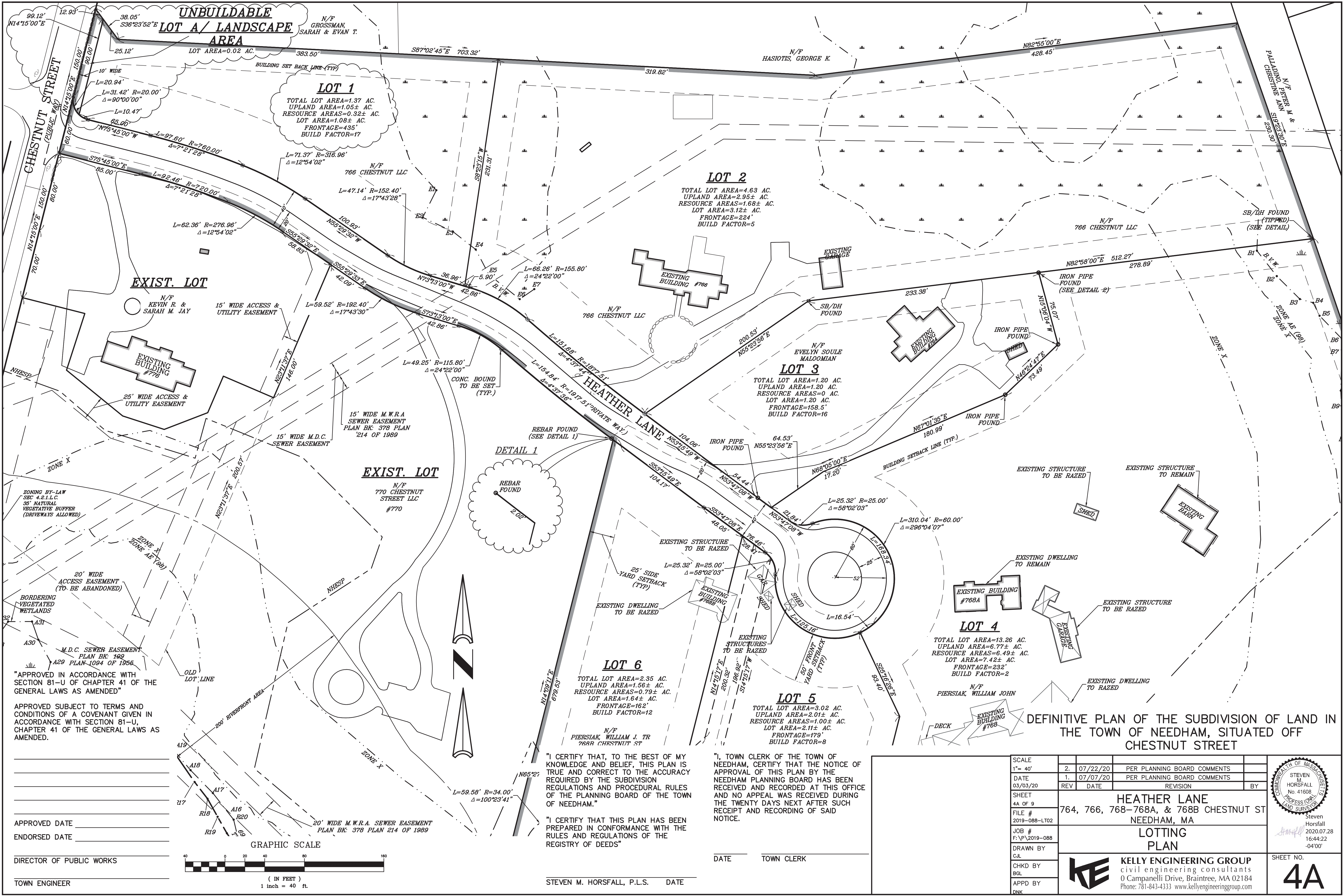
SCALE 1" = 60'				
DATE 03/03/20	REV	DATE	REVISION	BY
SHEET 3C OF 9	HEATHER LANE 764, 766, 768-768A, & 768B CHESTNUT ST NEEDHAM, MA			
FILE # 2019-088-SU00	EXISTING CONDITIONS PLAN			
JOB # F:\P\2019-088	DRAWN BY CUL			
CHKD BY BGL	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com			
APPD BY DNK	SHEET NO. 3C			



Steven Horsfall
2020.04.22
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SHEET NO.

3C



"APPROVED IN ACCORDANCE WITH SECTION 81-U OF CHAPTER 41 OF THE GENERAL LAWS AS AMENDED"

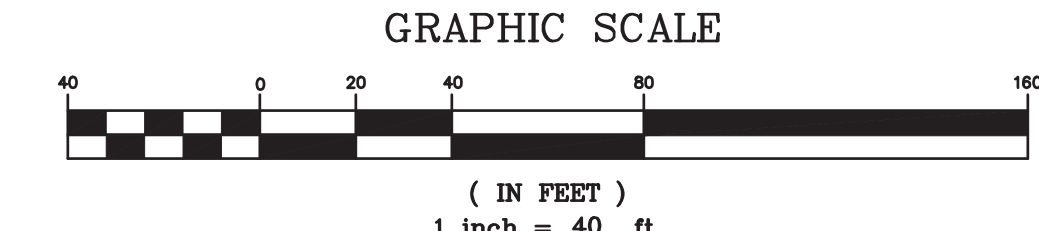
APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COVENANT GIVEN IN ACCORDANCE WITH SECTION 81-U, CHAPTER 41 OF THE GENERAL LAWS AS AMENDED.

APPROVED DATE _____

ENDORSED DATE _____

DIRECTOR OF PUBLIC WORKS _____

TOWN ENGINEER _____



"I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION REGULATIONS AND PROCEDURAL RULES OF THE PLANNING BOARD OF THE TOWN OF NEEDHAM."

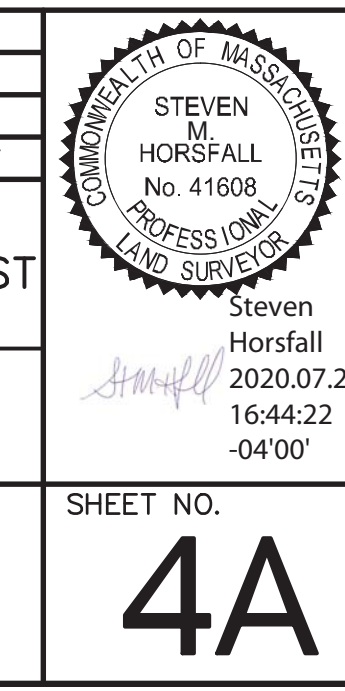
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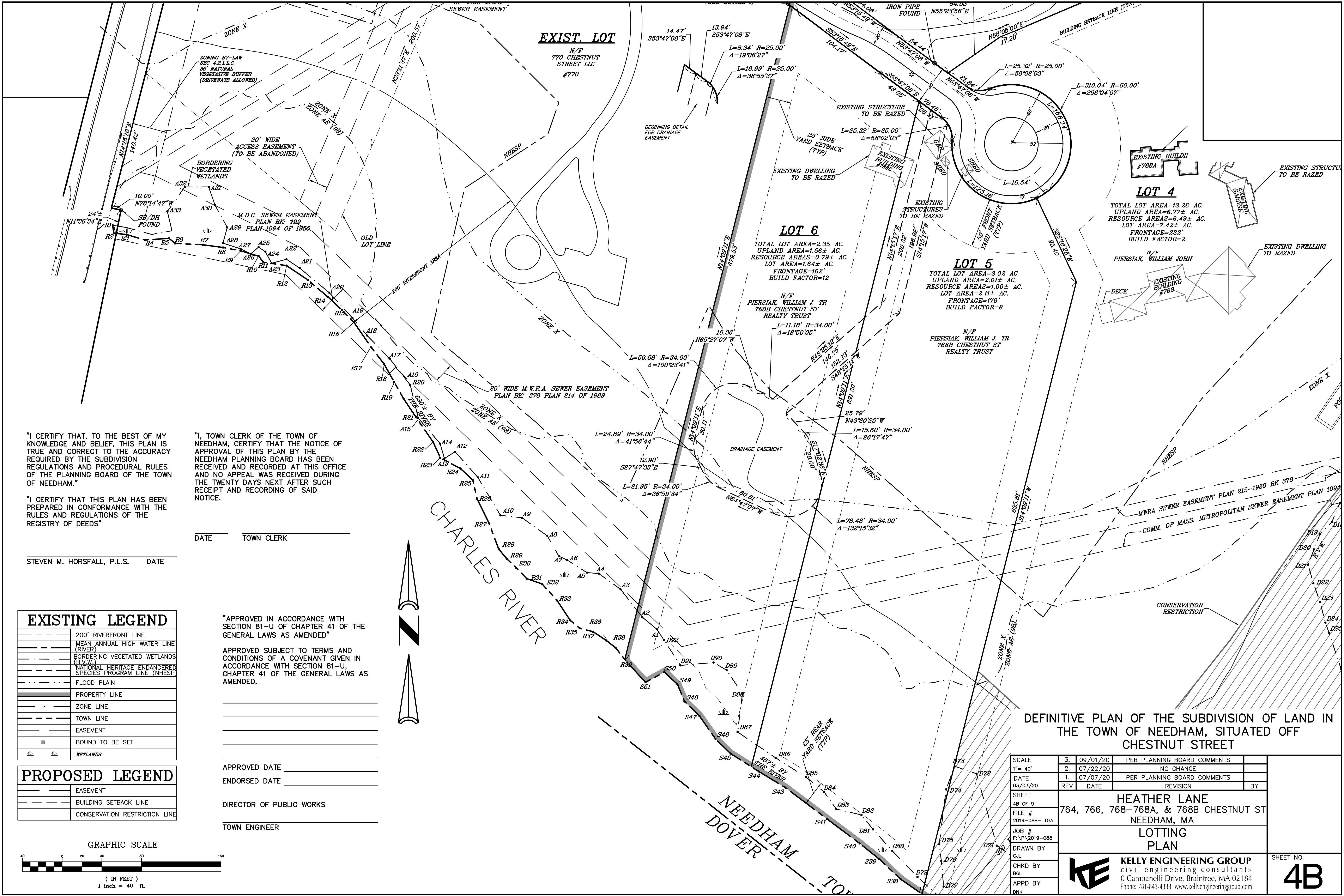
"I, TOWN CLERK OF THE TOWN OF NEEDHAM, CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE NEEDHAM PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE."

DATE _____ TOWN CLERK _____

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN OF NEEDHAM, SITUATED OFF CHESTNUT STREET

SCALE 1"= 40'	2. 07/22/20	PER PLANNING BOARD COMMENTS	
DATE 03/03/20	1. 07/07/20	PER PLANNING BOARD COMMENTS	
SHEET 4A OF 9	REV	DATE	REVISION
FILE # 2019-088-LT02			
JOB # F:\P\2019-088			
DRAWN BY C.L.			
CHKD BY BGL			
APPD BY DNK			
HEATHER LANE 764, 766, 768-768A, & 768B CHESTNUT ST NEEDHAM, MA			
LOTING PLAN			
KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com			
SHEET NO. 4A			





"I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION REGULATIONS AND PROCEDURAL RULES OF THE PLANNING BOARD OF THE TOWN OF NEEDHAM."

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STEVEN M. HORSFALL, P.L.S. DATE

DATE TOWN CLERK

EXISTING LEGEND	
	200' RIVERFRONT LINE
	MEAN ANNUAL HIGH WATER LINE (RIVER)
	BORDERING VEGETATED WETLANDS (B.V.W.)
	NATIONAL HERITAGE ENDANGERED SPECIES PROGRAM LINE (NHESP)
	FLOOD PLAIN
	PROPERTY LINE
	ZONE LINE
	TOWN LINE
	EASEMENT
	BOUND TO BE SET
	WETLANDS

PROPOSED LEGEND	
	EASEMENT
	BUILDING SETBACK LINE
	CONSERVATION RESTRICTION LINE

"APPROVED IN ACCORDANCE WITH SECTION 81-U OF CHAPTER 41 OF THE GENERAL LAWS AS AMENDED"

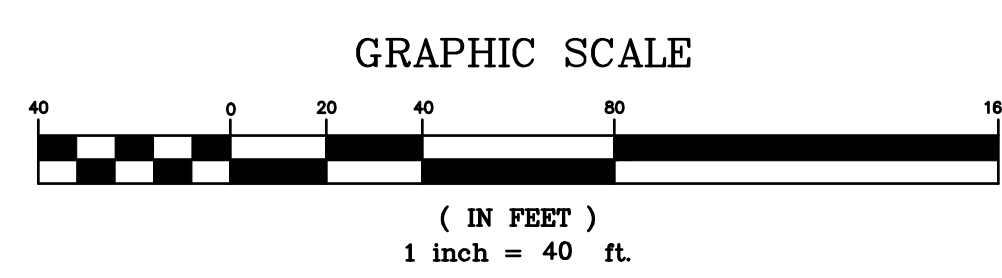
APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COVENANT GIVEN IN ACCORDANCE WITH SECTION 81-U, CHAPTER 41 OF THE GENERAL LAWS AS AMENDED.

APPROVED DATE

ENDORSED DATE

DIRECTOR OF PUBLIC WORKS

TOWN ENGINEER



DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN OF NEEDHAM, SITUATED OFF CHESTNUT STREET

SCALE 1" = 40'	3. 09/01/20 PER PLANNING BOARD COMMENTS	
	2. 07/22/20 NO CHANGE	
DATE 03/03/20	1. 07/07/20 PER PLANNING BOARD COMMENTS	
	REV DATE REVISION BY	
SHEET 4B OF 9	HEATHER LANE	
FILE # 2019-088-LT03	764, 766, 768-768A, & 768B CHESTNUT ST NEEDHAM, MA	
JOB # F:\P\2019-088	LOTING PLAN	
DRAWN BY C.J.L.	KELL ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com	
CHKD BY BGL		
APPD BY DNK		
	SHEET NO.	4B

	200' RIVERFRONT LINE
	MEAN ANNUAL HIGH WATER LINE (RIVER)
	BORDERING VEGETATED WETLANDS (B.V.W.)
	NATIONAL HERITAGE ENDANGERED SPECIES PROGRAM LINE (NHESP)
	FLOOD PLAIN
	PROPERTY LINE
	ZONE LINE
	TOWN LINE
	EASEMENT
	BOUND TO BE SET
	WETLANDS

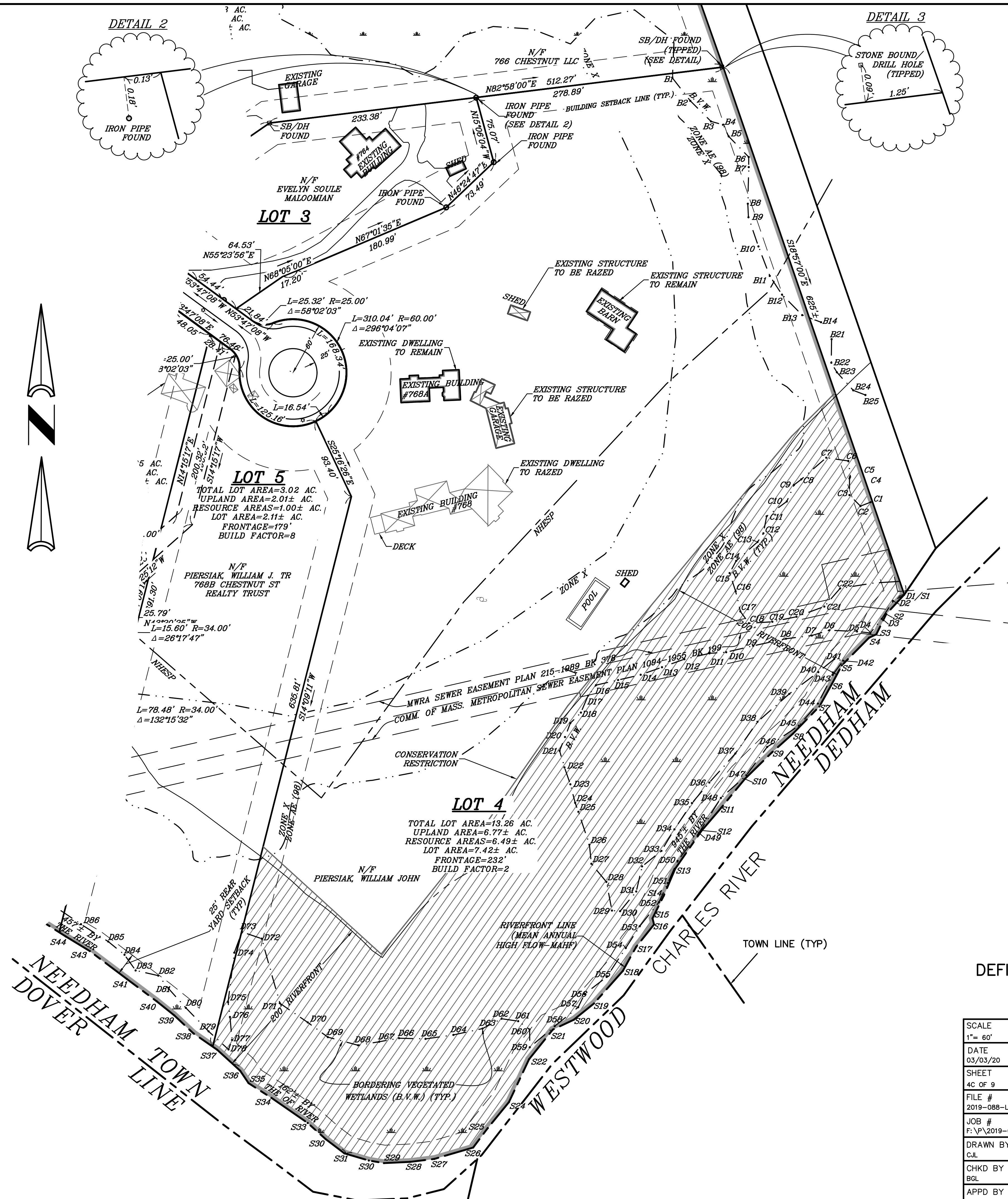
	EASEMENT
	BUILDING SETBACK LINE
	CONSERVATION RESTRICTION LINE

TOWN ENGINEER

STEVEN M. HORSFALL, P.L.S. DATE

DATE _____ TOWN CLERK _____

(IN FEET)
1 inch = 60 ft.



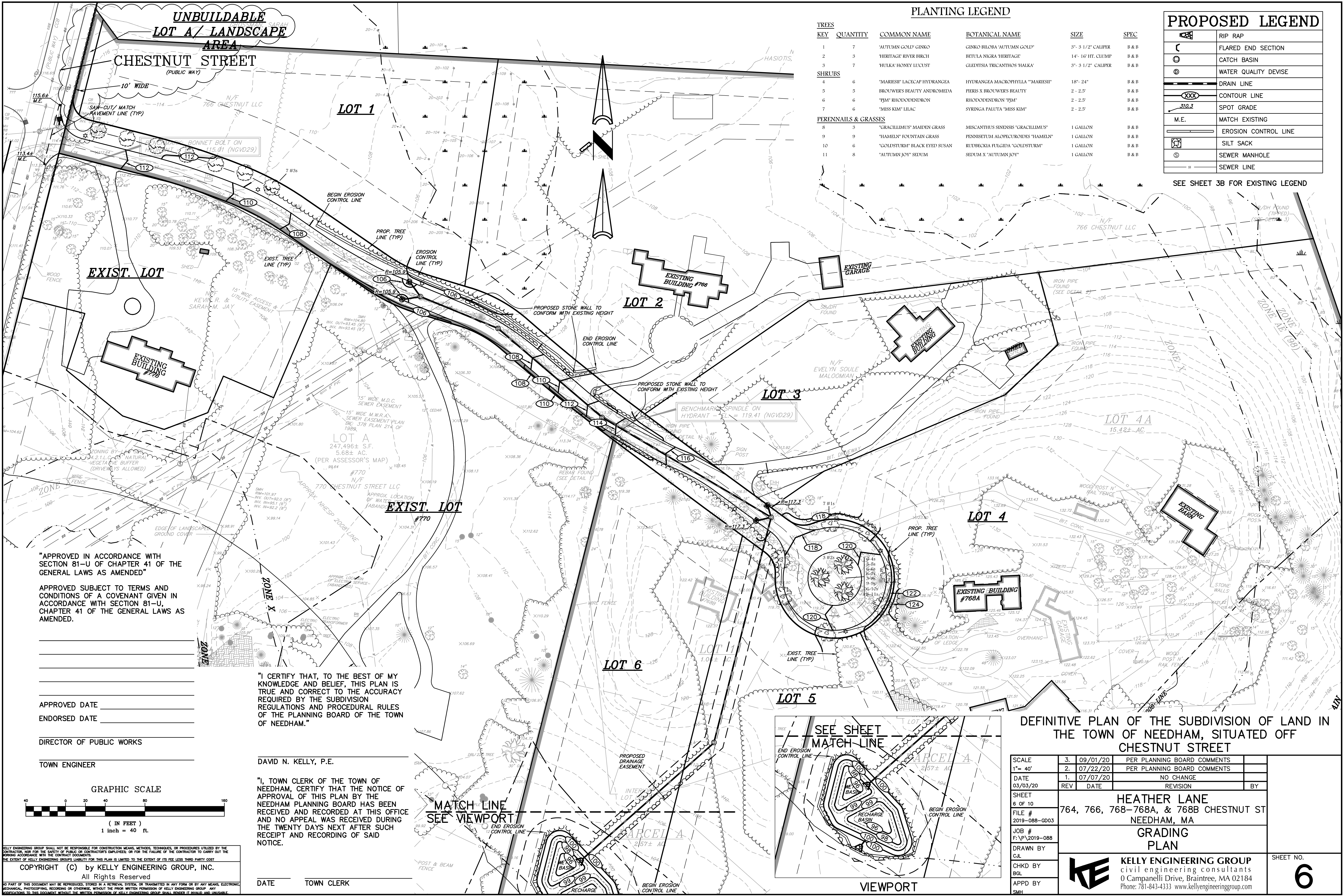
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1"= 60'	2.	07/22/20	NO CHANGE	
DATE	1.	07/07/20	PER PLANNING BOARD COMMENTS	
03/03/20	REV	DATE	REVISION	BY
SHEET	HEATHER LANE 764, 766, 768-768A, & 768B CHESTNUT ST NEEDHAM, MA LOTING PLAN			
4C OF 9				
FILE #				
2019-088-LT03				
JOB #				
F:\P\2019-088				
DRAWN BY				
CUL				
CHKD BY				
BGL				
APPD BY				

SHEET NO.

4C



DATE _____ TOWN CLERK _____



PLANTING LEGEND

TREES	KEY	QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE	SPEC
	1	7	'AUTUMN GOLD' GINKGO	GINKGO BILOBA 'AUTUMN GOLD'	3"- 3 1/2" CALIPER	B & B
	2	3	'HERITAGE' RIVER BIRCH	BETULA NIGRA 'HERITAGE'	14"- 16" HT. CLUMP	B & B
	3	7	'HULKA' HONEY LUCIST	GLIEDISIA TRICANTHOS 'HULKA'	3"- 3 1/2" CALIPER	B & B
SHRUBS	4	6	'MARESHI' LACINAP HYDRANGEA	HYDRANGEA MACROPHYLLA "MARESHI"	18"- 24"	B & B
	5	5	BROUWER'S BEAUTY ANDROMEDA	PERIS X BROUWER'S BEAUTY	2 - 2.5'	B & B
	6	6	'PJM' RHODODENDRON	RHODODENDRON 'PJM'	2 - 2.5'	B & B
	7	6	'MISS KIM' LILAC	SYRINGA PALUTA 'MISS KIM'	2 - 2.5'	B & B
PERENNIALS & GRASSES	8	3	'GRACILLIMUS' MAIDEN GRASS	MISCANTHUS SINENSIS 'GRACILLIMUS'	1 GALLON	B & B
	9	9	'HAMELIN' FOUNTAIN GRASS	PENNISETUM ALOPECUROIDES 'HAMELIN'	1 GALLON	B & B
	10	6	'GOLDSTURM' BLACK EYED SUSAN	RUDBECKIA FULGIDA 'GOLDSTURM'	1 GALLON	B & B
	11	8	'AUTUMN JOY' SEDUM	SEDUM X 'AUTUMN JOY'	1 GALLON	B & B

PROPOSED LEGEND

	RIP RAP
	FLARED END SECTION
	CATCH BASIN
	WATER QUALITY DEVISE
	DRAIN LINE
	CONTOUR LINE
	SPOT GRADE
	MATCH EXISTING
	EROSION CONTROL LINE
	SILT SACK
	SEWER MANHOLE
	SEWER LINE

SEE SHEET 3B FOR EXISTING LEGEND

"APPROVED IN ACCORDANCE WITH SECTION 81-U OF CHAPTER 41 OF THE GENERAL LAWS AS AMENDED"

APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COVENANT GIVEN IN ACCORDANCE WITH SECTION 81-U, CHAPTER 41 OF THE GENERAL LAWS AS AMENDED.

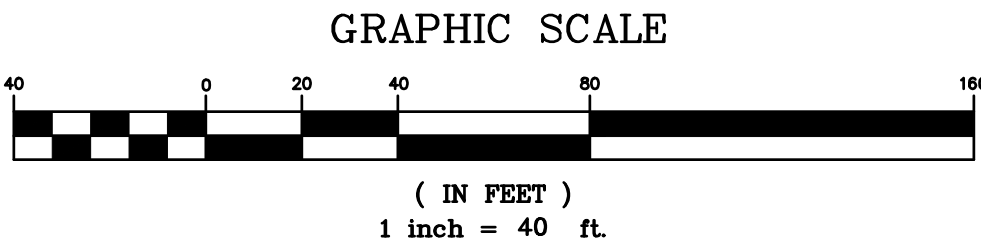
APPROVED DATE
ENDORSED DATE
DIRECTOR OF PUBLIC WORKS
TOWN ENGINEER

"I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION REGULATIONS AND PROCEDURAL RULES OF THE PLANNING BOARD OF THE TOWN OF NEEDHAM."

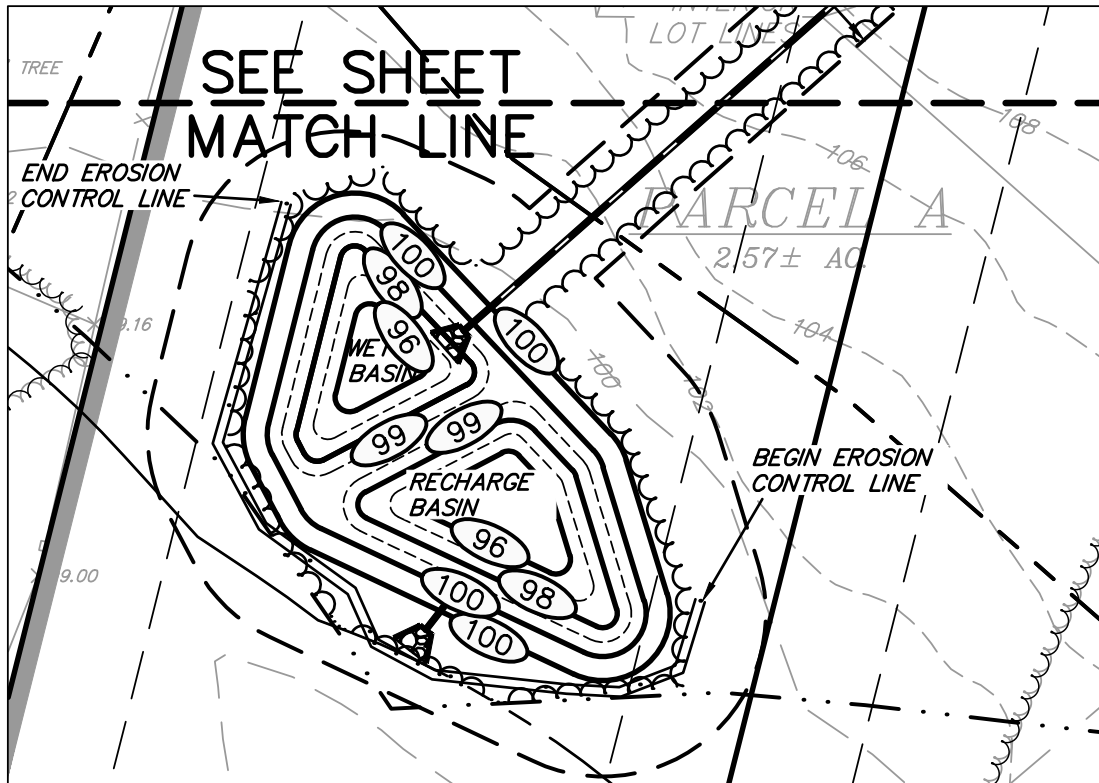
DAVID N. KELLY, P.E.

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

DATE TOWN CLERK



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DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN OF NEEDHAM, SITUATED OFF CHESTNUT STREET

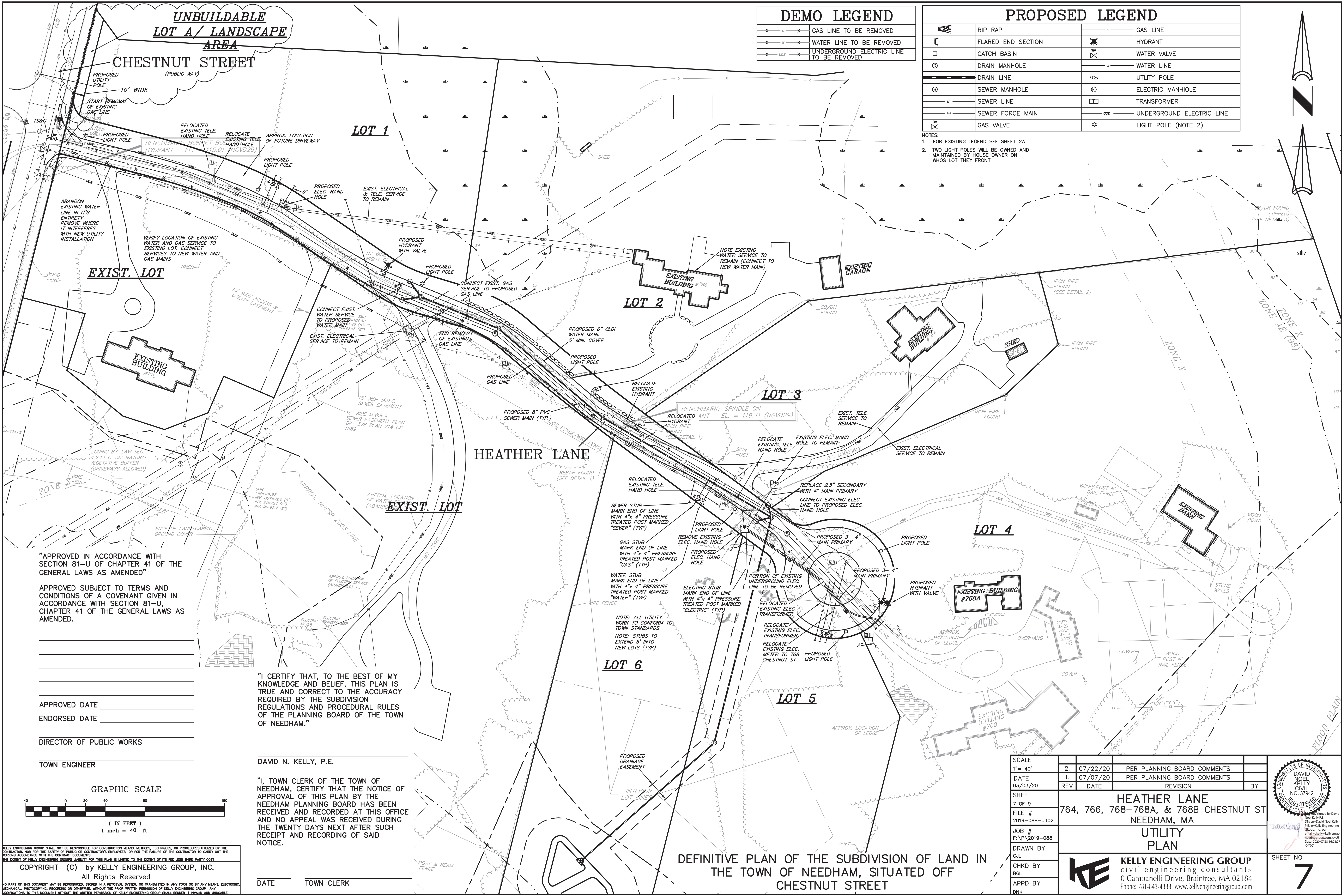
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1"= 40'	2.	07/22/20	PER PLANNING BOARD COMMENTS	
DATE	1.	07/07/20	NO CHANGE	
03/03/20	REV	DATE	REVISION	BY
SHEET	HEATHER LANE			
6 OF 10	764, 766, 768-768A, & 768B CHESTNUT ST			
FILE #	NEEDHAM, MA			
2019-088-GD03	GRADING PLAN			
JOB #				
F:\P\2019-088				
DRAWN BY				
C.J.L.				
CHKD BY				
BGL				
APPD BY				
SMH				



KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

SHEET NO.

6



DEMO LEGEND	
X - - - X	GAS LINE TO BE REMOVED
X - - - X	WATER LINE TO BE REMOVED
X - - - X	UNDERGROUND ELECTRIC LINE TO BE REMOVED

PROPOSED LEGEND	
	RIP RAP
	FLARED END SECTION
	CATCH BASIN
	DRAIN MANHOLE
	DRAIN LINE
	SEWER MANHOLE
	SEWER LINE
	SEWER FORCE MAIN
	GAS VALVE
	GAS LINE
	HYDRANT
	WATER VALVE
	WATER LINE
	UTILITY POLE
	ELECTRIC MANHOLE
	TRANSFORMER
	UNDERGROUND ELECTRIC LINE
	LIGHT POLE (NOTE 2)

NOTES:
1. FOR EXISTING LEGEND SEE SHEET 2A
2. TWO LIGHT POLES WILL BE OWNED AND MAINTAINED BY HOUSE OWNER ON WHOS LOT THEY FRONT

"APPROVED IN ACCORDANCE WITH SECTION 81-U OF CHAPTER 41 OF THE GENERAL LAWS AS AMENDED"

APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COVENANT GIVEN IN ACCORDANCE WITH SECTION 81-U, CHAPTER 41 OF THE GENERAL LAWS AS AMENDED.

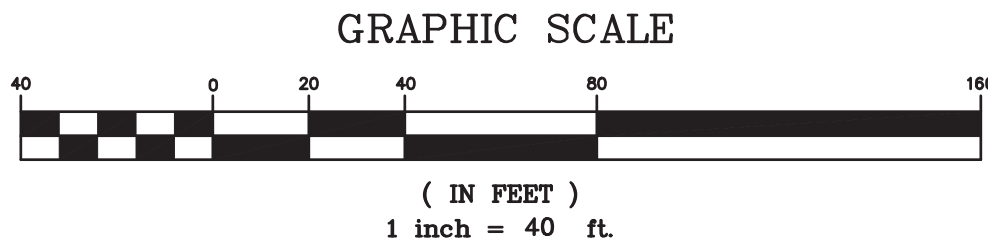
APPROVED DATE
ENDORSED DATE
DIRECTOR OF PUBLIC WORKS
TOWN ENGINEER

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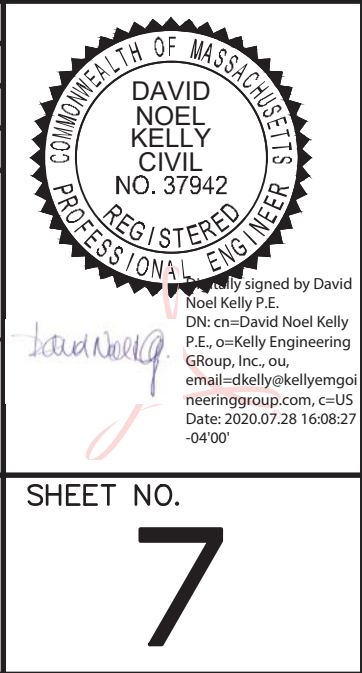
DATE TOWN CLERK



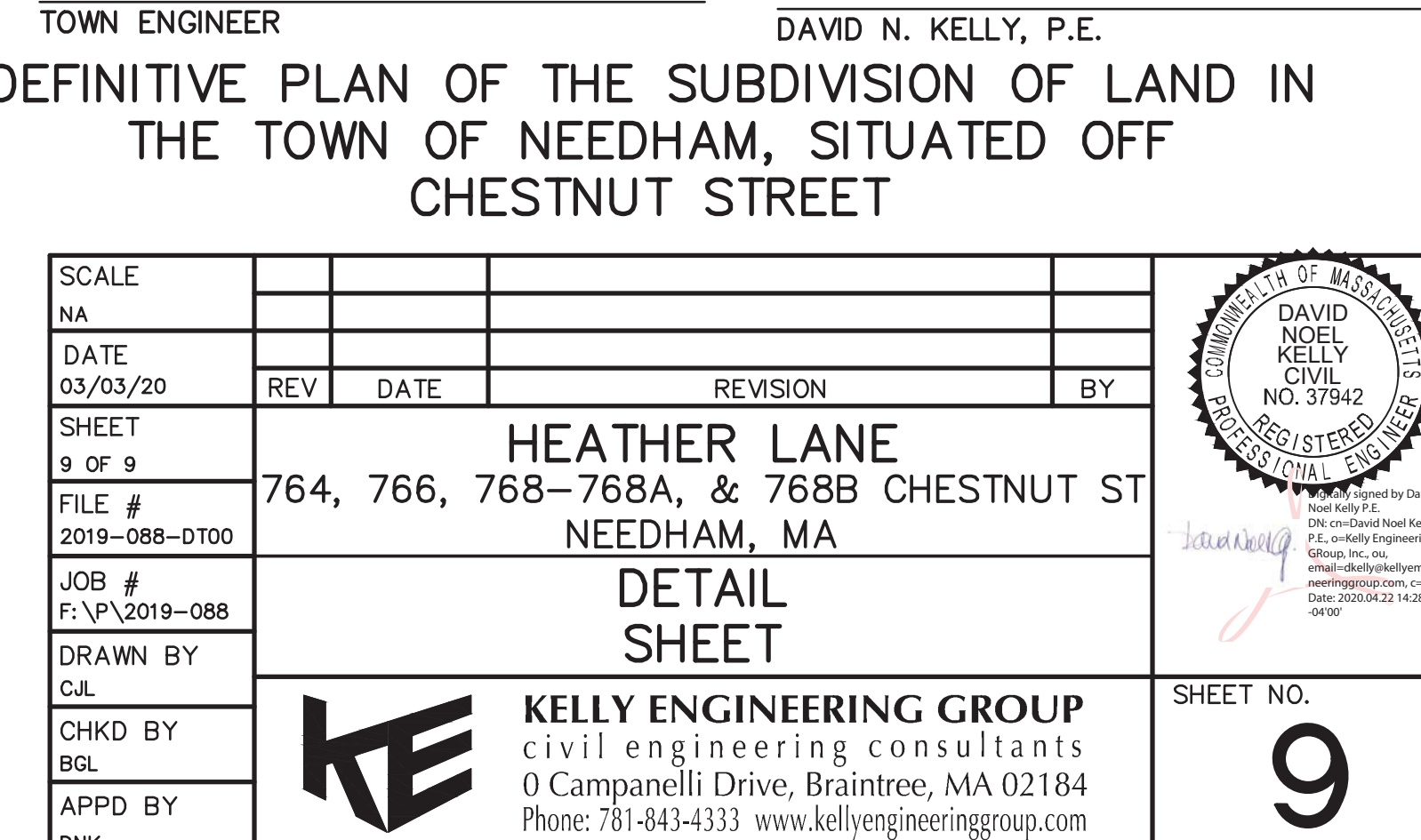
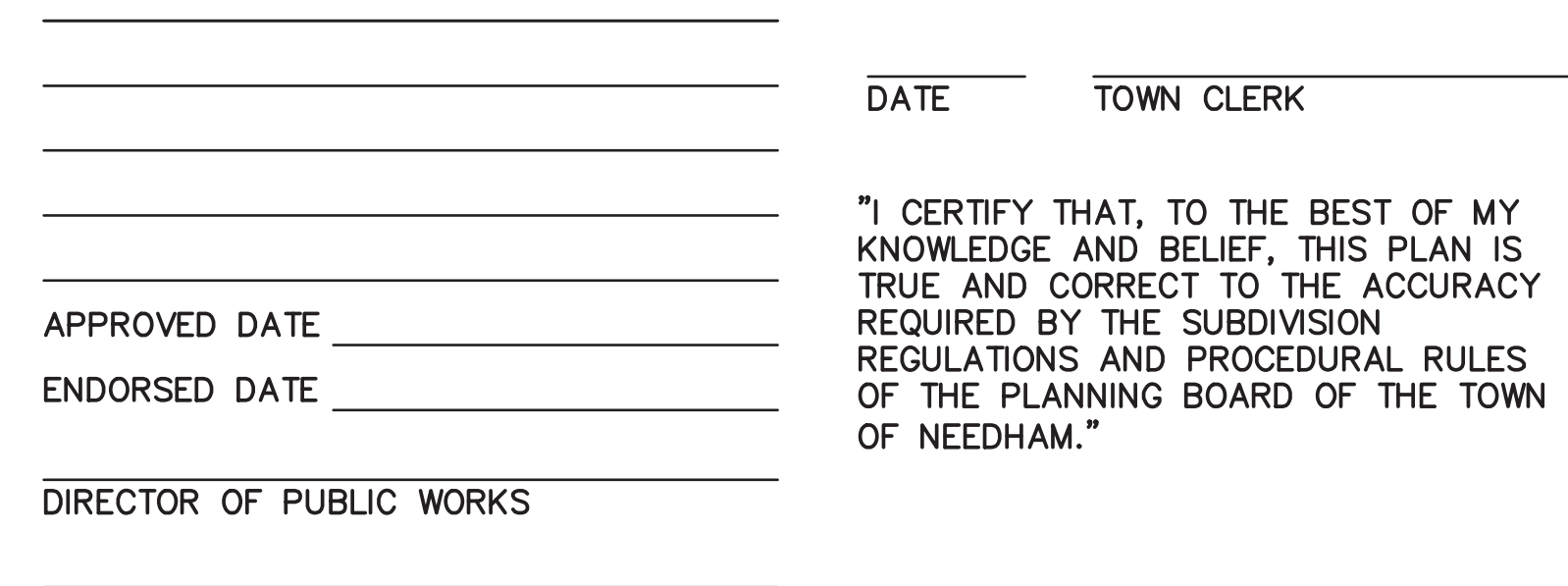
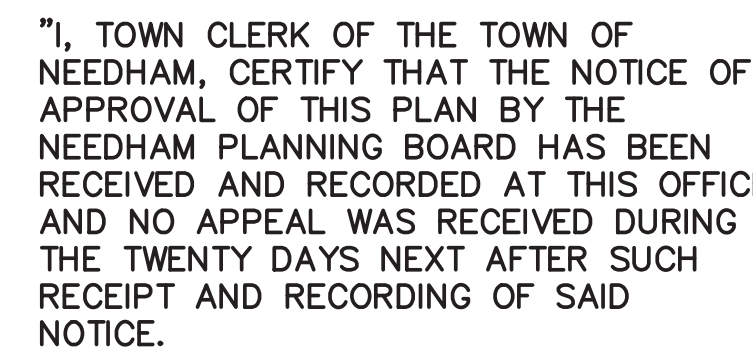
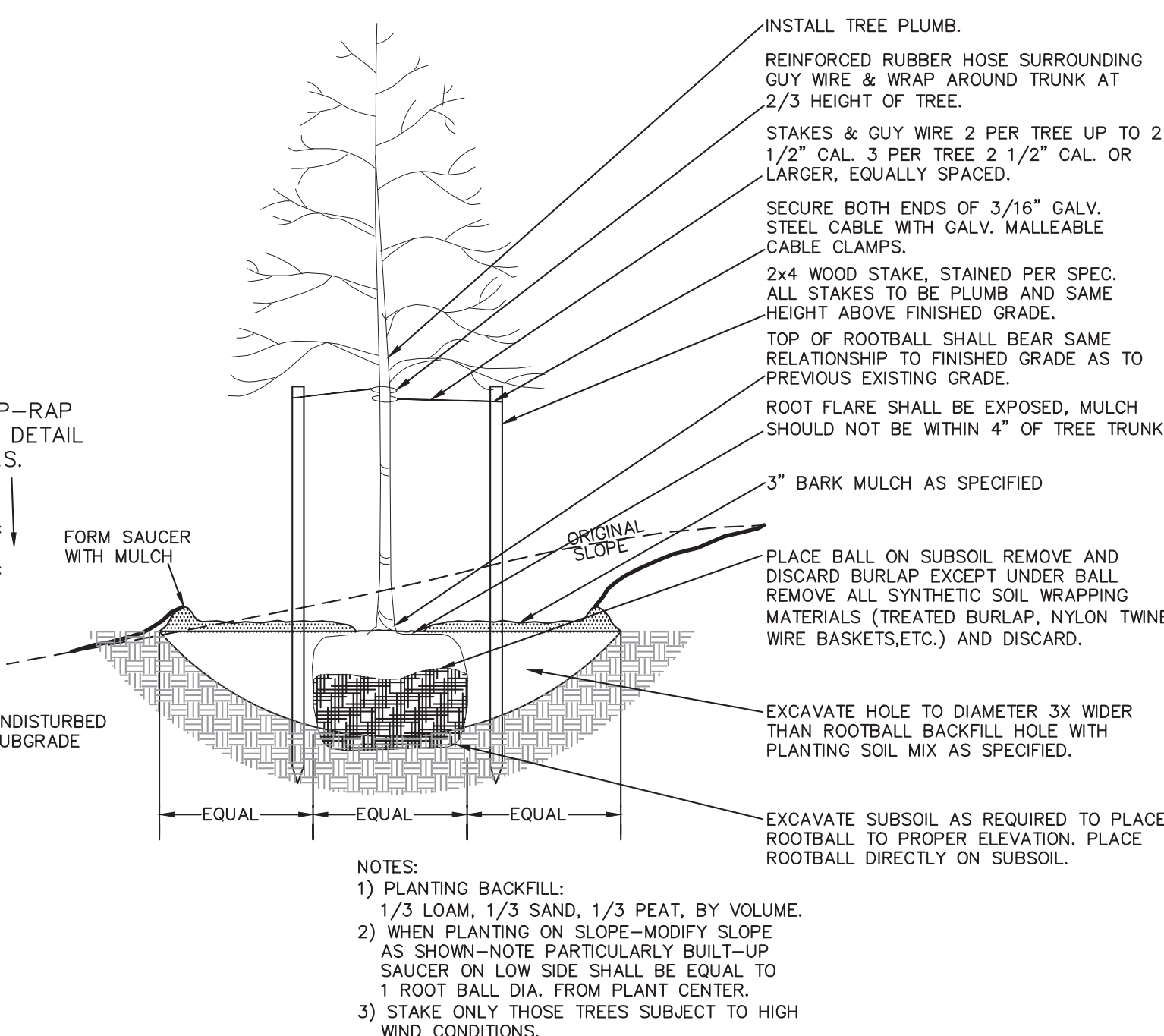
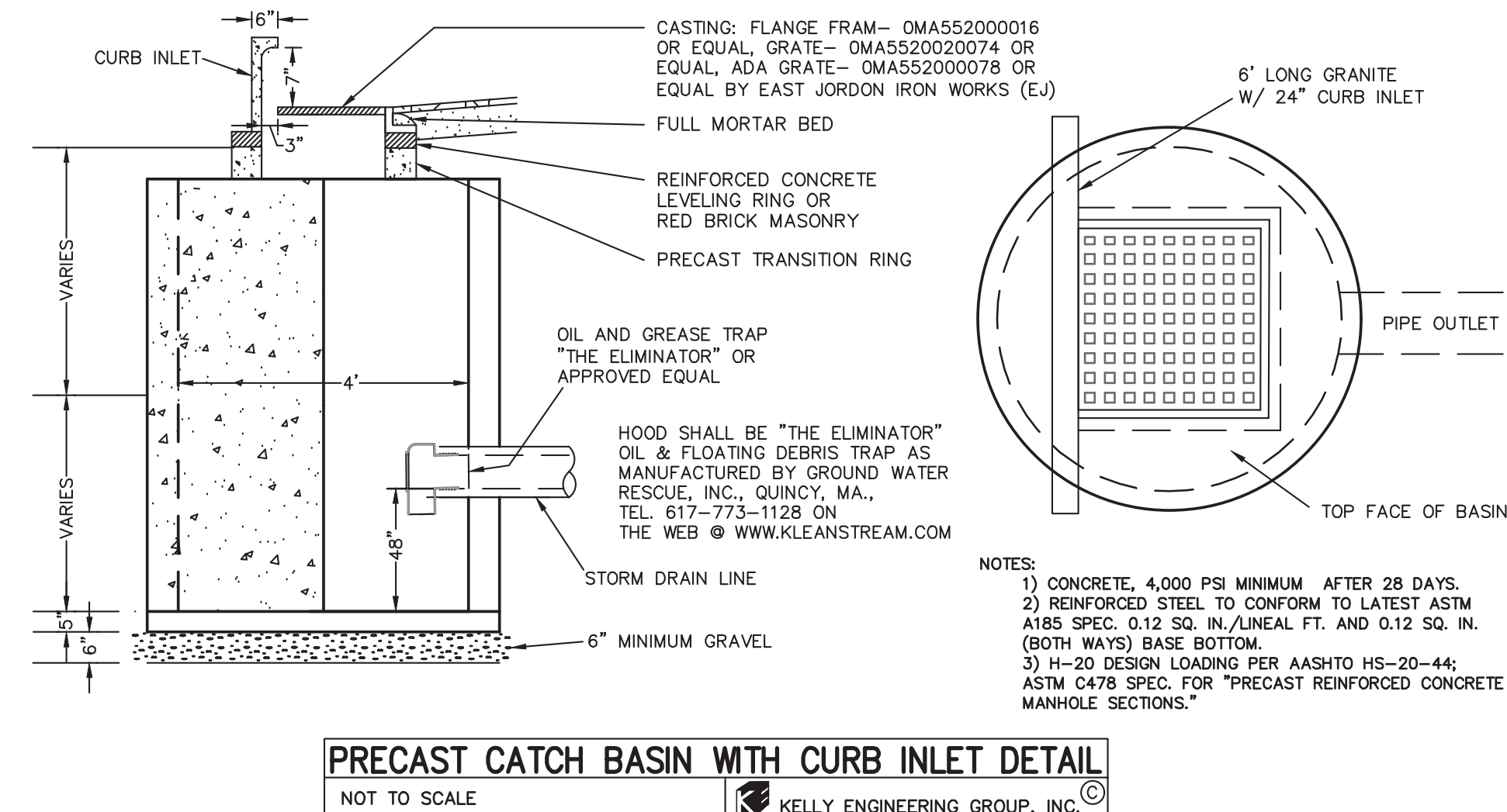
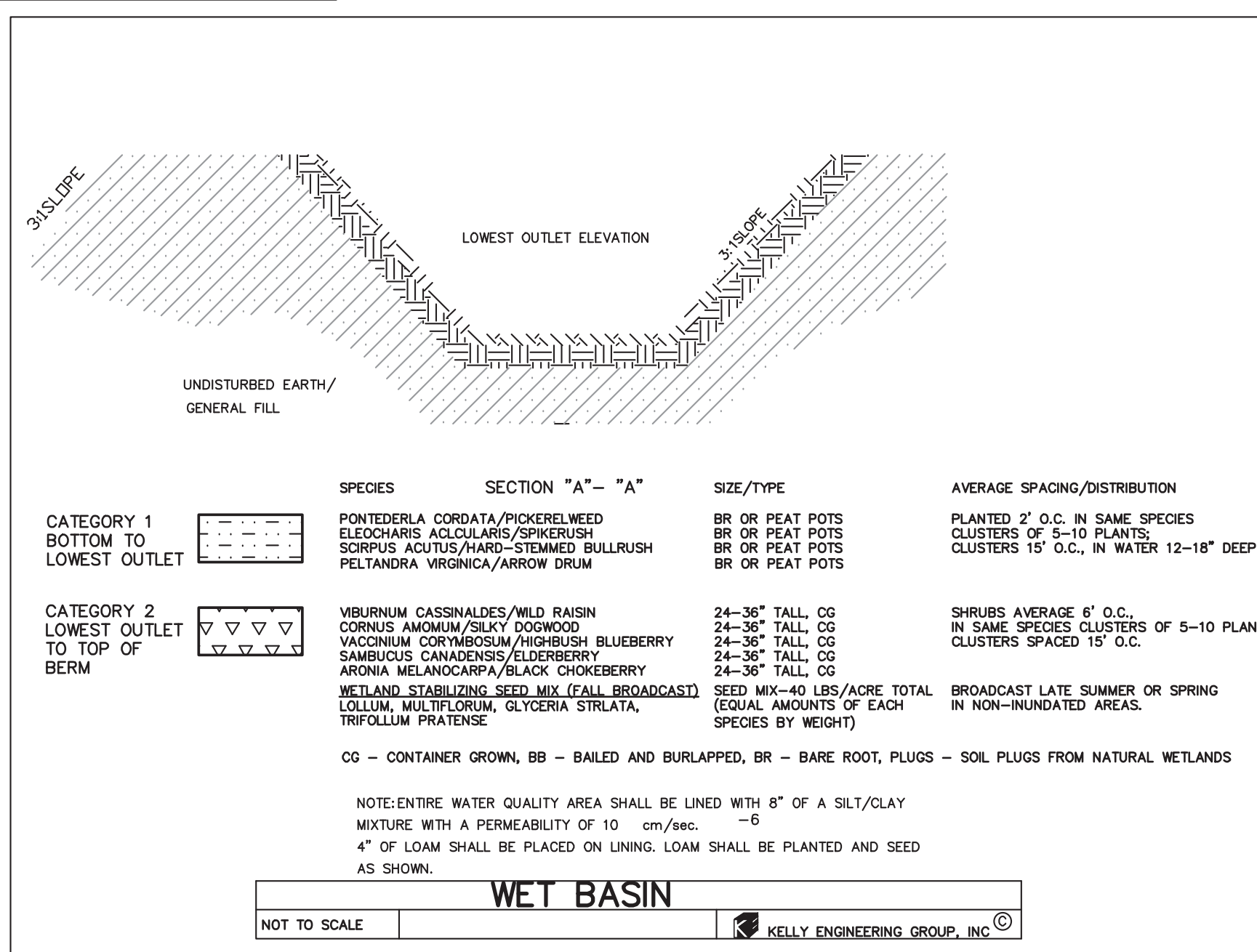
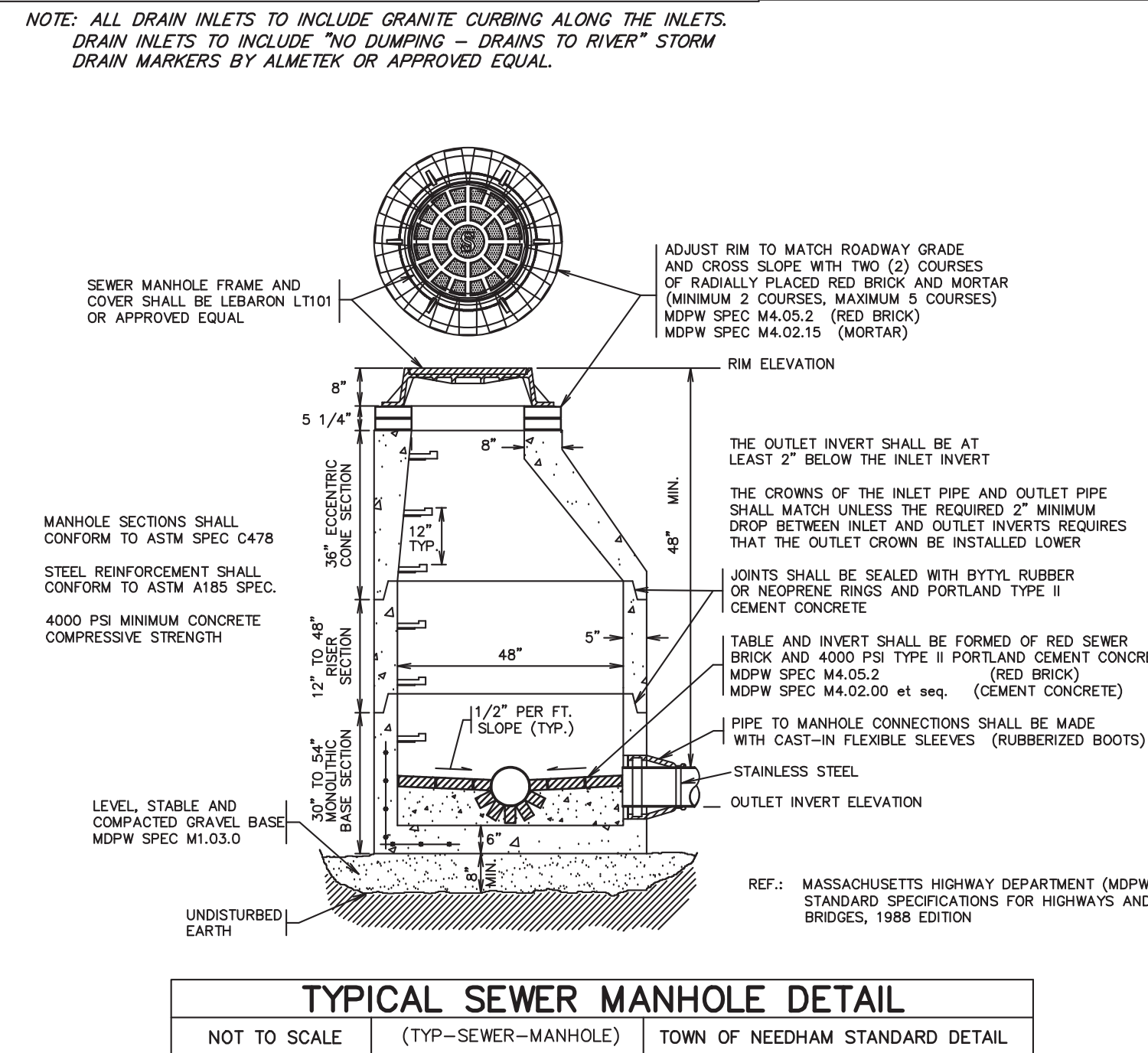
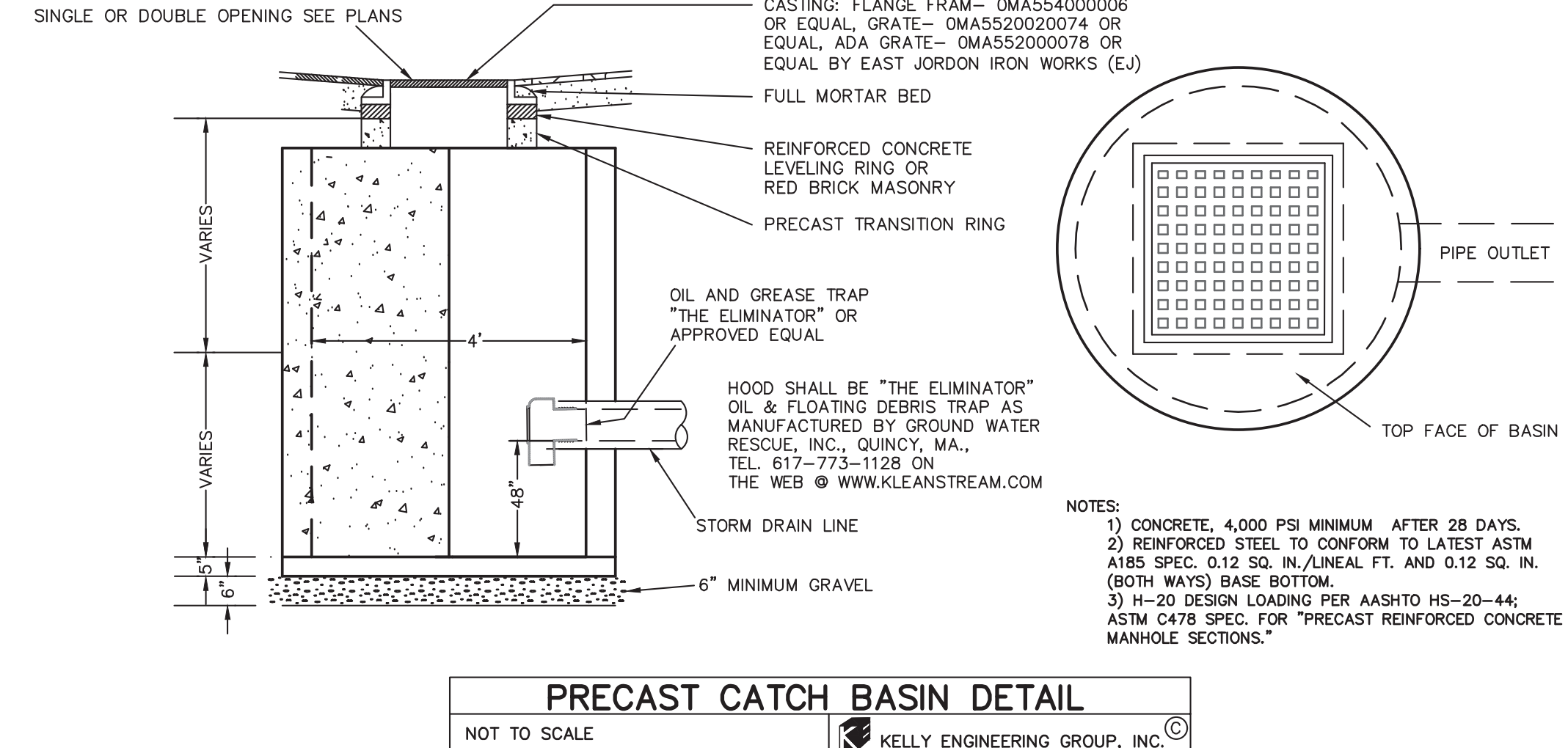
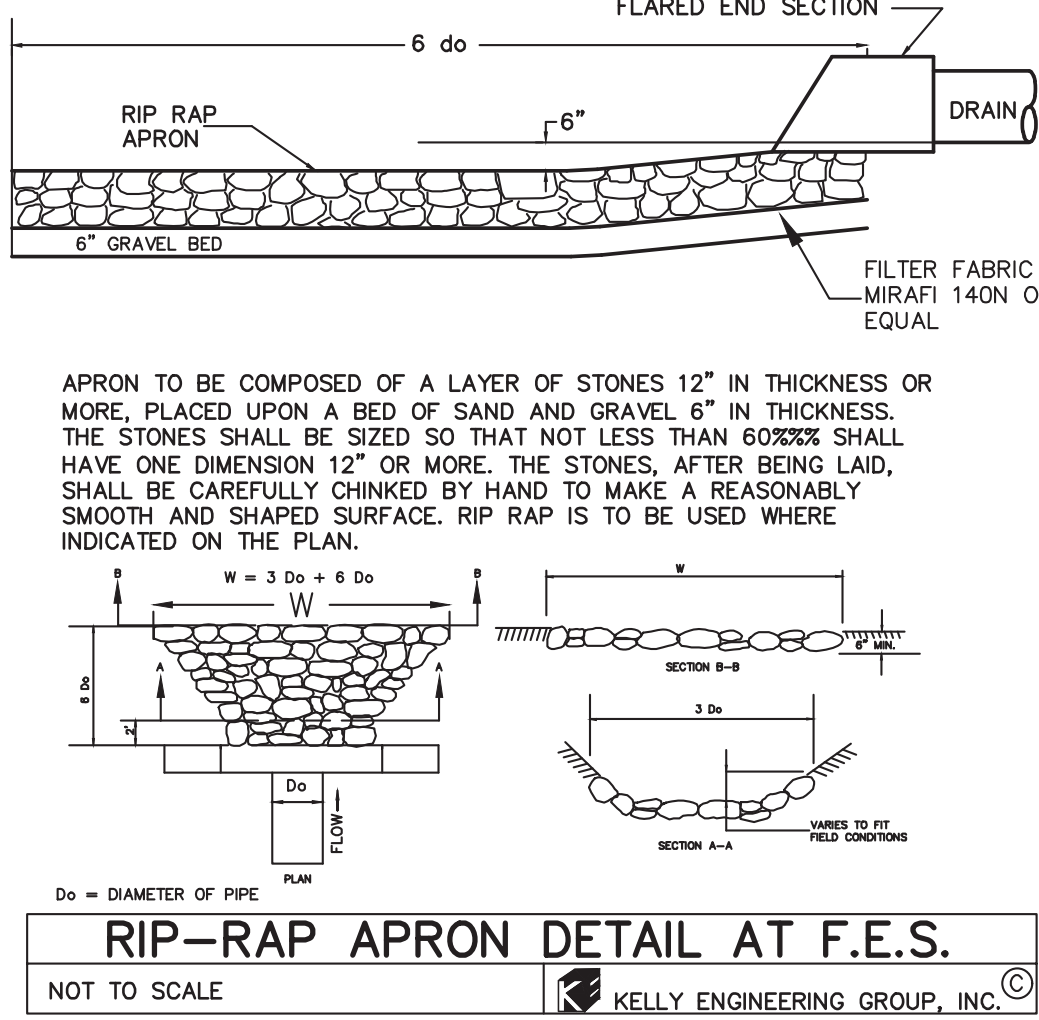
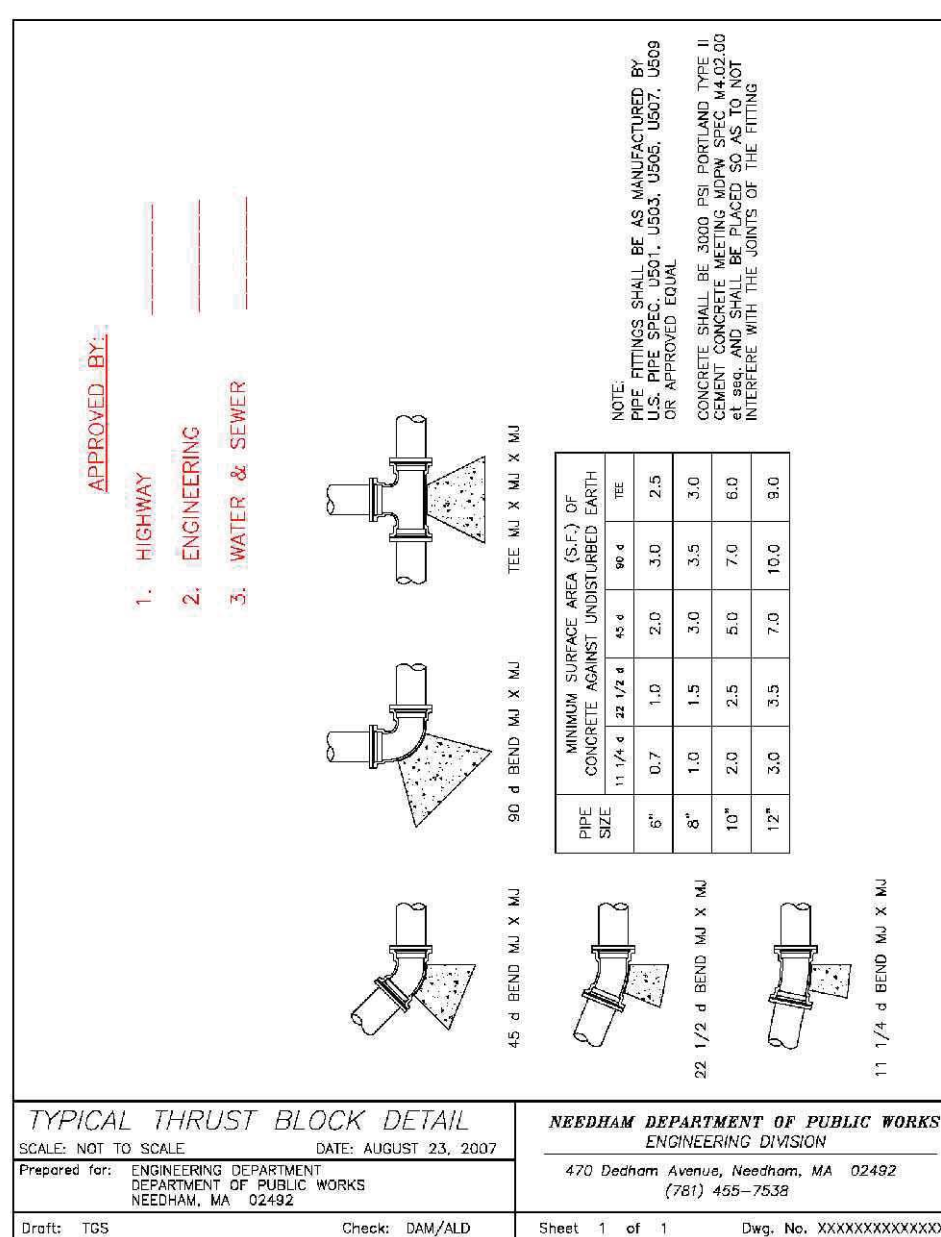
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DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN OF NEEDHAM, SITUATED OFF CHESTNUT STREET

SCALE 1"= 40'	2. 07/22/20	PER PLANNING BOARD COMMENTS	
DATE 03/03/20	1. 07/07/20	PER PLANNING BOARD COMMENTS	
SHEET 7 OF 9	REV	DATE	REVISION
FILE # 2019-088-UT02	HEATHER LANE 764, 766, 768-768A, & 768B CHESTNUT ST NEEDHAM, MA		
JOB # F:\P\2019-088	UTILITY PLAN		
DRAWN BY C/L			
CHKD BY BGL			
APPD BY DNK			
KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com		SHEET NO. 7	







DEFINITIVE SUBDIVISION PLANS AND RESIDENTIAL COMPOUND SPECIAL PERMIT

768-768A CHESTNUT STREET
LOT 4 HEATHER LANE
NEEDHAM, MA

MARCH 03, 2020

SHEET INDEX						
SHEET No.	DESCRIPTION	LATEST REVISED DATE	CONSTRUCTION	REVISIONS		
1	COVER SHEET	09/01/20				
2	EXISTING CONDITIONS PLAN	03/03/20				
3	LAYOUT PLAN	09/01/20				
4	GRADING PLAN	07/07/20				
5	SEWER & DRAIN PLAN	07/07/20				
6	UTILITY PLAN	09/01/20				
7	DETAIL SHEET	09/01/20				

OWNER/APPLICANT:

WILLIAM JOHN PIERSIK
768-768A CHESTNUT ST.
NEEDHAM, MA

CIVIL ENGINEERS:

KELLY ENGINEERING GROUP, INC.
0 CAMPANELLI DRIVE
BRAINTREE, MA 02184

"APPROVED IN ACCORDANCE WITH
SECTION 81-U OF CHAPTER 41 OF THE
GENERAL LAWS AS AMENDED"

APPROVED SUBJECT TO TERMS AND
CONDITIONS OF A COVENANT GIVEN IN
ACCORDANCE WITH SECTION 81-U,
CHAPTER 41 OF THE GENERAL LAWS AS
AMENDED.

APPROVED DATE _____
ENDORSED DATE _____

DIRECTOR OF PUBLIC WORKS

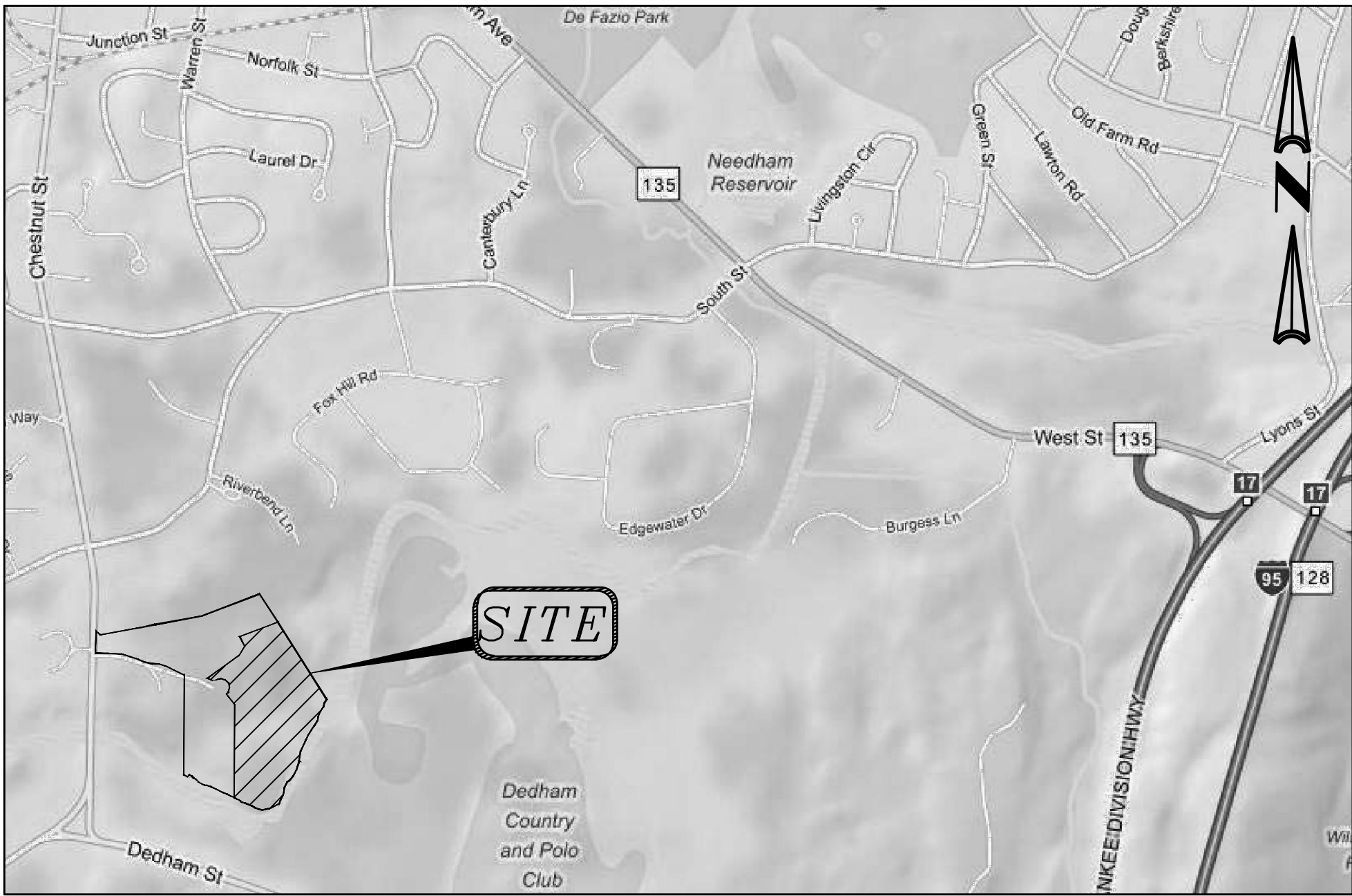
TOWN ENGINEER

"I CERTIFY THAT, TO THE BEST OF MY
KNOWLEDGE AND BELIEF, THIS PLAN IS
TRUE AND CORRECT TO THE ACCURACY
REQUIRED BY THE SUBDIVISION
REGULATIONS AND PROCEDURAL RULES
OF THE PLANNING BOARD OF THE TOWN
OF NEEDHAM."

DAVID N. KELLY, P.E.

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

DATE _____ TOWN CLERK _____



LOCATION MAP

THESE PLANS ARE FILED IN CONJUNCTION
WITH DEFINITIVE SUBDIVISION PLANS FOR
HEATHER LANE

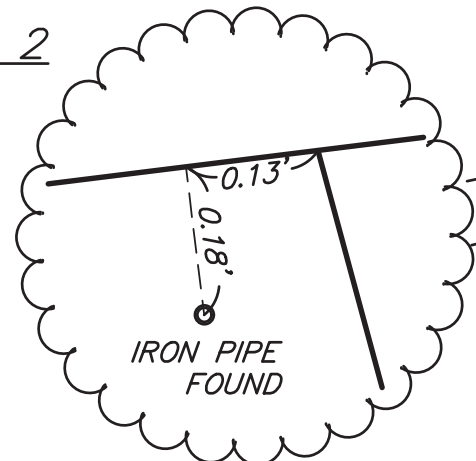
SCALE	DISK REF NO.
NA	F:\P\2019-088
DATE	DRAWN BY
03/03/20	C.L.
SHEET	CHKD BY
1 OF 7	DAM
PLAN NO.	APPD BY
2019-088-TS02-RC	DNK

768-768A CHESTNUT STREET NEEDHAM, MA	
 KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com	

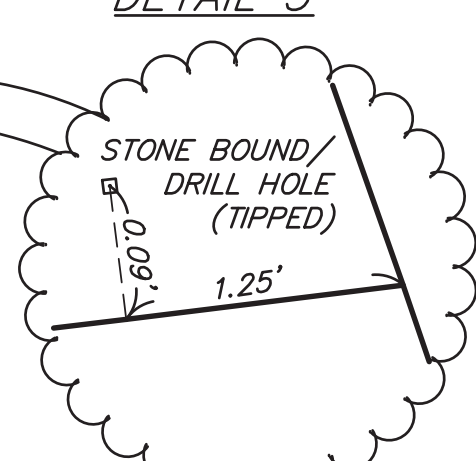
SHEET NO.

1

DETAIL 2



DETAIL 3



EXISTING LEGEND

---	200' RIVERFRONT LINE
---	EASEMENT
---	NATIONAL HERITAGE ENDANGERED SPECIES PROGRAM LINE (NHESP)
---	FLOOD PLAN
---	PROPERTY LINE
---	ZONE LINE
---	TOWN LINE
---	TREE LINE

PLAN REFERENCES

- 1.) "PLAN OF LAND IN NEEDHAM, MASS., PROPERTY OF GERTRUDE A. HUTCHINS, SCALE: 1"=40', OCTOBER 1, 1940", FILED AS PLAN 589 IN BOOK 2297, PAGE 501.
- 2.) "PLAN OF LAND BELONGING TO MARY H. RUDDY AND CONSTANTINE HUTCHINS, JR. ACCORDING TO THE WILL OF GERTRUDE AMORY HUTCHINS, NEEDHAM, MASS., 1"=80', DECEMBER 3, 1979", FILED AS PLAN 1182 IN BOOK 5686, PAGE 363.
- 3.) "PLAN OF LAND IN NEEDHAM, MASS. SCALE 1"=80', AUGUST 22, 2000", FILED AS PLAN 511 IN PLAN BOOK 478.
- 4.) "PLAN OF LAND IN NEEDHAM, MASS., APRIL 7, 1982, 1"=60", FILED AS 712 IN PLAN BOOK 298.
- 5.) "PLAN OF WELLESLEY EXTENSION SEWER REPLACEMENT LAND TAKING PLAN IN NEEDHAM, TO BE TAKEN BY MASSACHUSETTS WATER RESOURCES WATER AUTHORITY, 1"=40', OCTOBER, 1993", FILED AS PLAN 149 OF 1994.
- 6.) "PLAN OF WELLESLEY EXTENSION SEWER REPLACEMENT LAND TAKING PLAN NO. W.E.S.R.-2-7, 1"=40', SEPTEMBER 1987", FILED AS PLAN 214 OF 1989.
- 7.) "PLAN OF LAND IN NEEDHAM, MA, 1"=40', JULY 22, 2002", FILED AS PLAN 5 IN PLAN BOOK 527.
- 8.) "PLAN OF LAND OF HANNAH E. POND, 1"=100', OCTOBER 21, 1914", FILED AS PLAN 3664 IN PLAN BOOK 76.
- 9.) "COMPILED PLAN OF LAND IN NEEDHAM, MASS., 1"=50', AUGUST 19, 1981", FILED AS PLAN 774 IN PLAN BOOK: 291.

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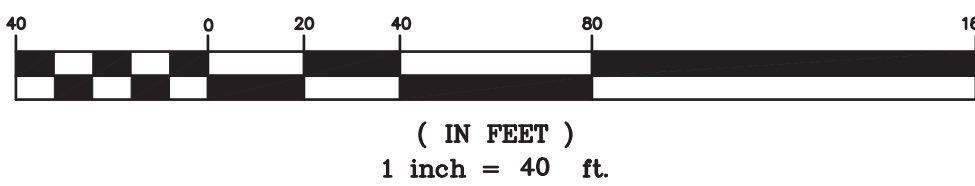
APPROVED DATE

ENDORSED DATE

DIRECTOR OF PUBLIC WORKS

TOWN ENGINEER

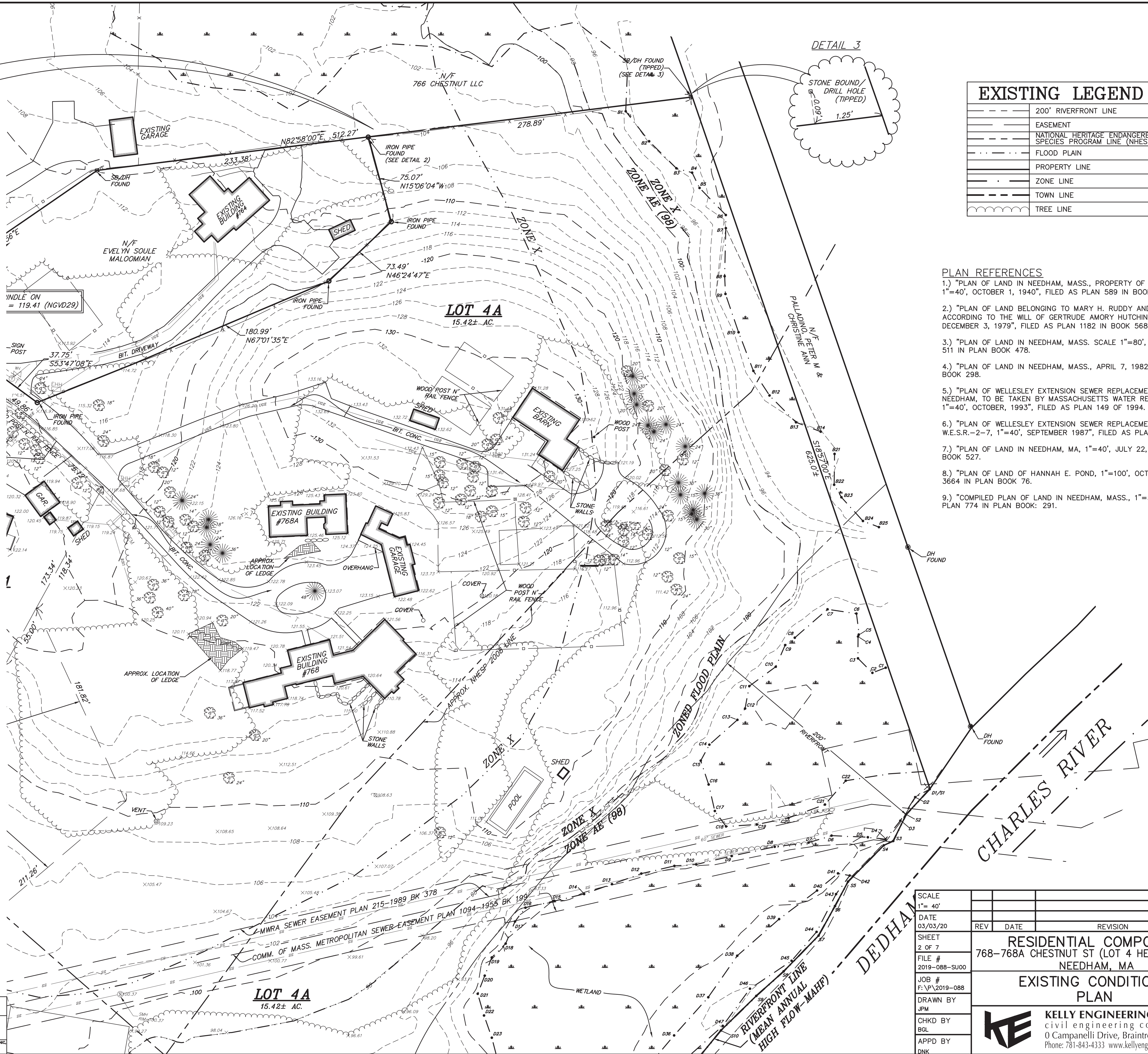
GRAPHIC SCALE



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SCALE 1"= 40'	DATE 03/03/20	REV	DATE	REVISION	BY
SHEET 2 OF 7	FILE # 2019-088-SU00	JOB # F:\P\2019-088	DRAWN BY JPM	CHKD BY BGL	APPD BY DNK
RESIDENTIAL COMPOUND 768-768A CHESTNUT ST (LOT 4 HEATHER LANE) NEEDHAM, MA					
EXISTING CONDITIONS PLAN					
KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com					

STEVEN M. HORSFALL No. 41608 PROFESSIONAL LAND SURVEYOR	Steven M. Horsfall 2020.04.22 12:11:14 -04'00"
SHEET NO.	2

EXISTING LEGEND	
	200' RIVERFRONT LINE
	MEAN ANNUAL HIGH WATER LINE (RIVER)
	BORDERING VEGETATED WETLANDS (B.V.W.)
	NATIONAL HERITAGE ENDANGERED SPECIES PROGRAM LINE (NHESP)
	FLOOD PLAIN
	PROPERTY LINE
	ZONE LINE
	TOWN LINE
	EASEMENT
	BOUND TO BE SET
	WETLANDS

PROPOSED LEGEND	
	EASEMENT
	BUILDING SETBACK LINE
	CONSERVATION RESTRICTION LINE



HEATHER LANE
(PUBLIC WAY)

HEATHER LANE
EXTENSION

HEATHER LANE
EXTENSION

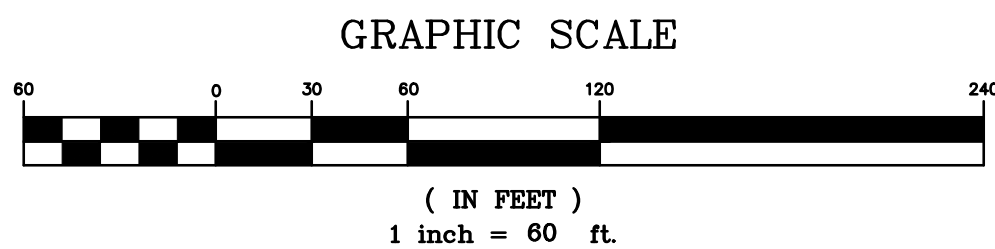
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DATE TOWN CLERK

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"I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS"

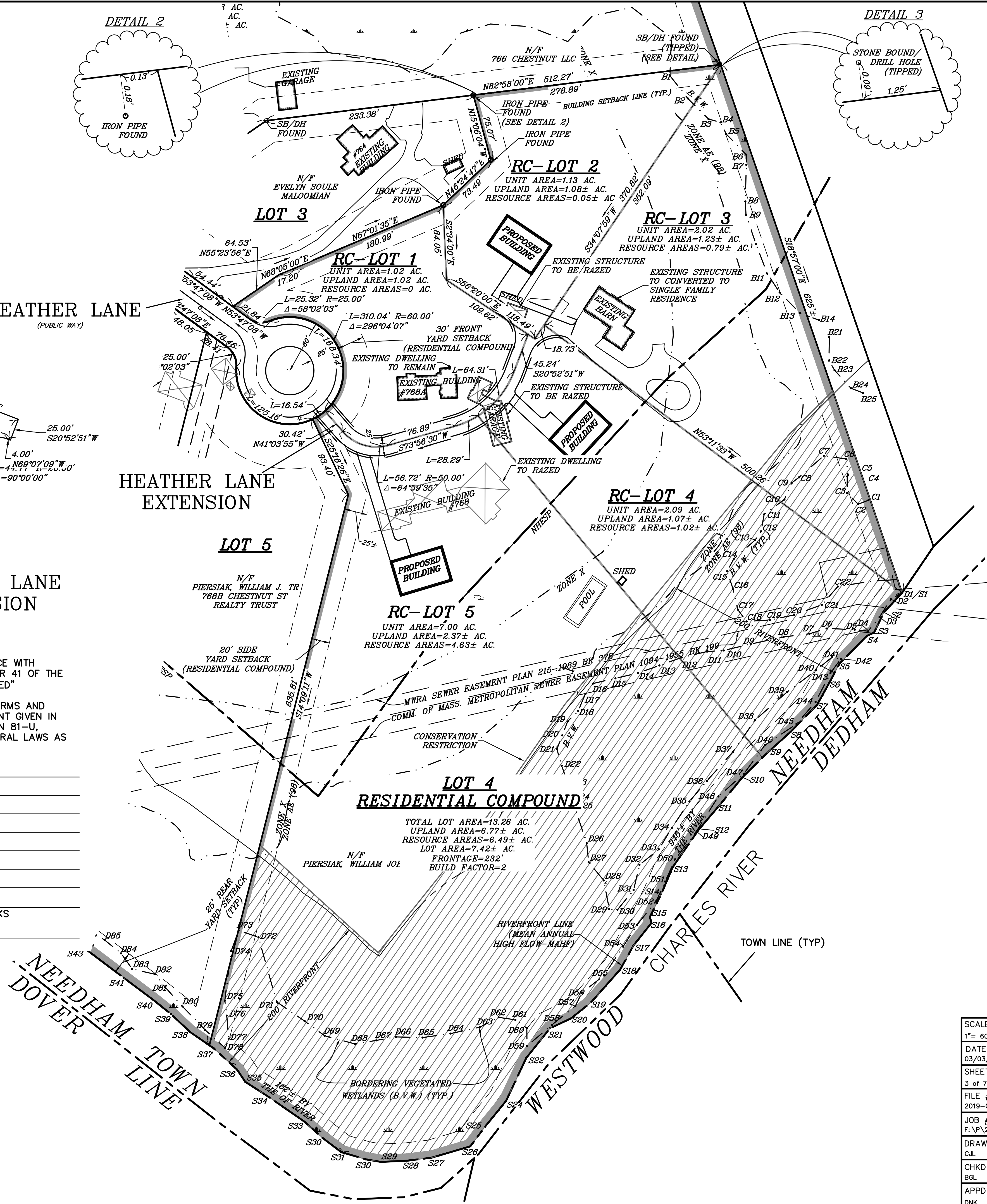
STEVEN M. HORSFALL, P.L.S. DATE



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ZONING LEGEND RESIDENTIAL COMPOUND

ZONING DISTRICT: RURAL RESIDENCE CONSERVATION

	REQUIRED	PROVIDED	COMPLIANCE
MAX. # OF DWELLINGS	5	5	YES
MIN. DENSITY	10 ACRES (NOTE 1)	13.26 ACRES	YES
MIN. TRACK FRONTAGE	150'	232'	YES
MIN. DISTANCE BETWEEN STRUCTRES	30'	>30'	YES
MIN. DIST. FROM STRUCTURE TO TRACT BOUNDARY LINE	20'	>20'	YES
MIN. UNIT AREA	1 ACRE	>1 ACRE	YES

NOTES:

1. MINIMUM OF 2 ACRES PER DWELLING UNIT.

RESIDENTIAL COMPOUND

NO RESIDENTIAL COMPOUND FOR WHICH A SPECIAL PERMIT HAS BEEN ISSUED UNDER THIS SECTION MAY BE SUBDIVIDED OR FURTHER DEVELOPED.

THAT THE LAND LIES WITHIN AN APPROVED RESIDENTIAL COMPOUND;

THAT DEVELOPMENT OF THE LAND IS PERMITTED ONLY IN ACCORDANCE WITH THE LAND USES INDICATED THEREON;

THAT THE TOWN WILL NOT BE REQUESTED TO ACCEPT OR MAINTAIN THE PRIVATE ACCESS, DRAINAGE, OPEN SPACE OR ANY OTHER IMPROVEMENTS WITHIN THE COMPOUND.

FURTHER, ALL DEED RESTRICTIONS WITH RESPECT TO OWNERSHIP, USE AND MAINTENANCE OF PERMANENT OPEN SPACE SHALL BE REFERENCED ON, AND RECORDED WITH, THE PLAN.

Per Section 4.2.12 (a) (1) Site Plans shall meet to the extent applicable the requirements set forth for a Definitive Plan in the Subdivision Regulations and Procedural Rules of the Planning Board. The following table lists those requirements.

Applicable Section	Parameter	Required	Provided	Compliance
3.3.1	Right of Way Width	50'	20'	Waiver
3.3.1	Pavement Width	24'	20'	Waiver
3.3.1	Street Slope	>0.7% and <8%	2%-8%	Yes
3.3.1	Street slope at intersection	1% for 50'	2%	Waiver
3.3.3	Radius at Intersection	20'	0'	Waiver
3.3.3	Minimum Centerline Radius	100'	50'	Waiver
3.3.4	Intersection angle	90 degrees	90 Degrees	Yes
3.3.5	Dead End Street	Max. Length = 1200'	329'	Yes
3.3.5	Cul-De-Sac	60' Radius or Hammerhead	Hammerhead	Yes
3.3.6	Curbing	Granite or Bituminous	No Curbing	Waiver
3.3.8	Granite bounds	As required in 3.3.8	None	Waiver
3.3.9	Street Signs	At street entrance	Yes	Yes
3.3.11	Sewer	Connect to sewer	Yes	Yes
3.3.12	Water	Connect to water	Yes	Yes
3.3.13	Storm Drainage	Provide Storm drainage	To be provided on individual building lots	Yes
3.3.14	Paver cable etc	Place underground	Placed underground	Yes
3.3.15	Trees	Endeavor to save existing trees	Where possible	Yes
3.3.16	Sidewalks	One Side	None	Waiver
3.3.16	Standard Cross-Section	One side, 24' wide	None, 20' wide	Waiver
3.3.17	Fire Alarm	Connect to town fire circuit	None	NA
3.3.18	Sidewalk Ramps	ADA curb ramps	No Sidewalk	NA

And waivers of such other sections of the Needham Subdivision Regulations as may be required.

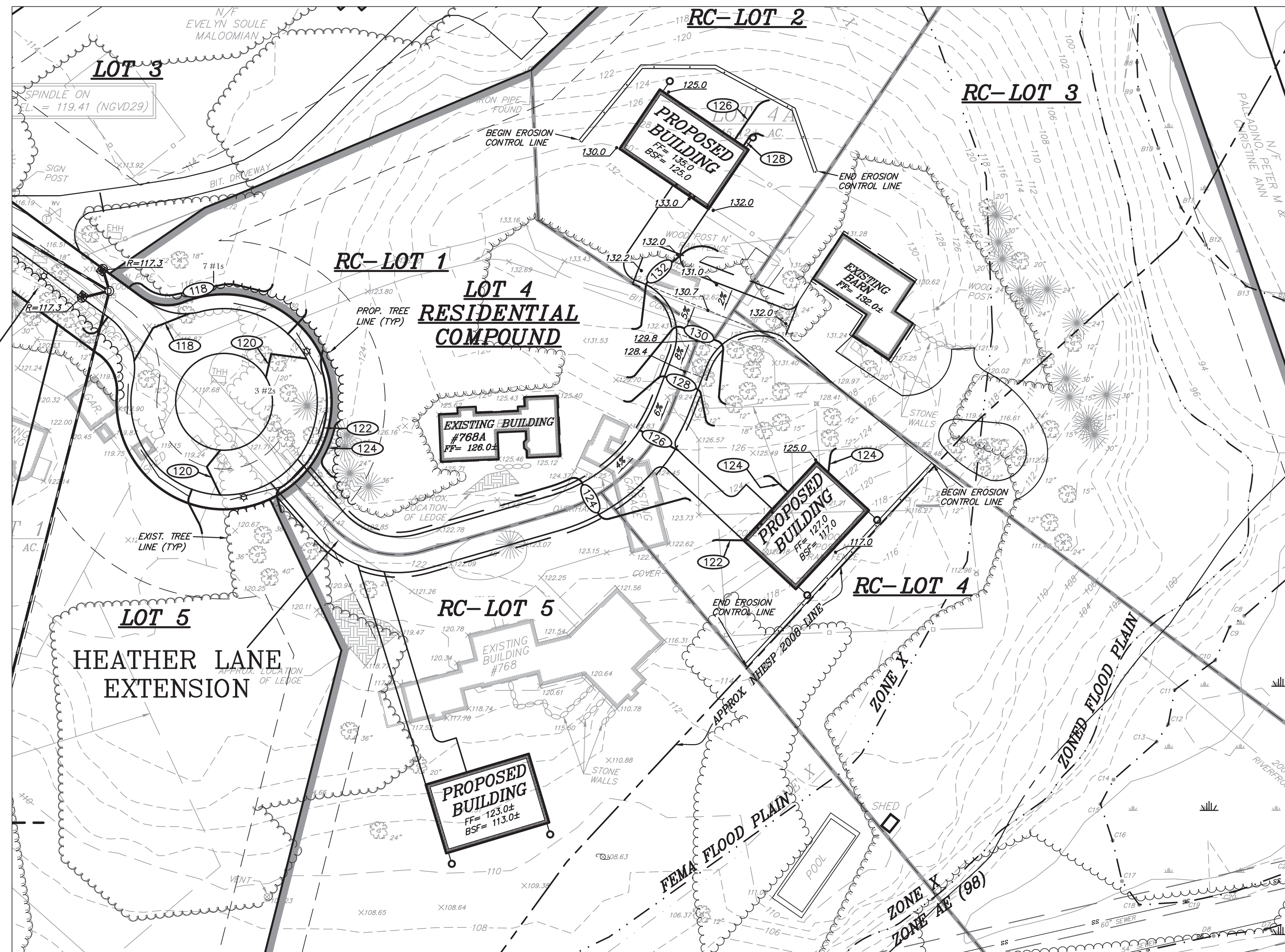
SCALE	3.	09/01/20	PER PLANNING BOARD COMMENTS	
1"= 60'	2.	07/22/20	PER PLANNING BOARD COMMENTS	
DATE	1.	07/07/20	PER PLANNING BOARD COMMENTS	
03/03/20	REV	DATE	REVISION	BY
SHEET	RESIDENTIAL COMPOUND			
3 of 7	768-768A CHESTNUT ST (LOT 4 HEATHER LANE)			
FILE #	NEEDHAM, MA			
2019-088-LT03-RC	LOT 4			
JOB #	DRAWN BY			
F:\P\2019-088	CUL			
DRAWN BY	CHKD BY			
CUL	BGL			
CHKD BY	APPD BY			
BGL	DNK			
APPD BY	DNK			

SHEET NO.

3

PROPOSED LEGEND	
	RIP RAP
	FLARED END SECTION
	CATCH BASIN
	WATER QUALITY DEVICE
	DRAIN LINE
	CONTOUR LINE
	SPOT GRADE
	EROSION CONTROL LINE
	SILT SACK

SEE SHEET 3B FOR EXISTING LEGEND



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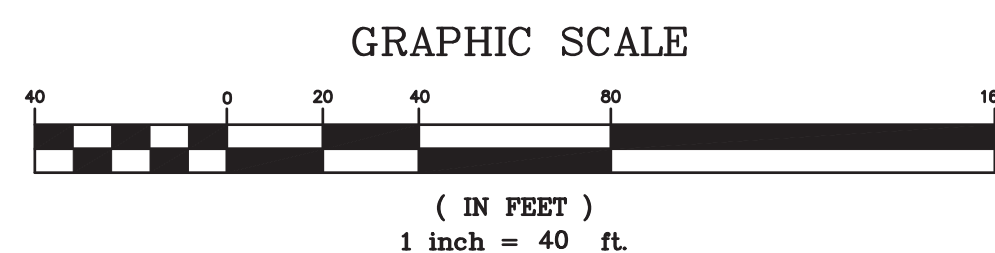
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DATE TOWN CLERK

APPROVED DATE
ENDORSED DATE
DIRECTOR OF PUBLIC WORKS
TOWN ENGINEER

NOTE: PROPOSED BUILDINGS ARE SHOWN IN APPROXIMATE LOCATIONS AND SIZES. FINAL BUILDING LAYOUT WILL BE DETERMINED AT BUILDING PERMIT STAGE.



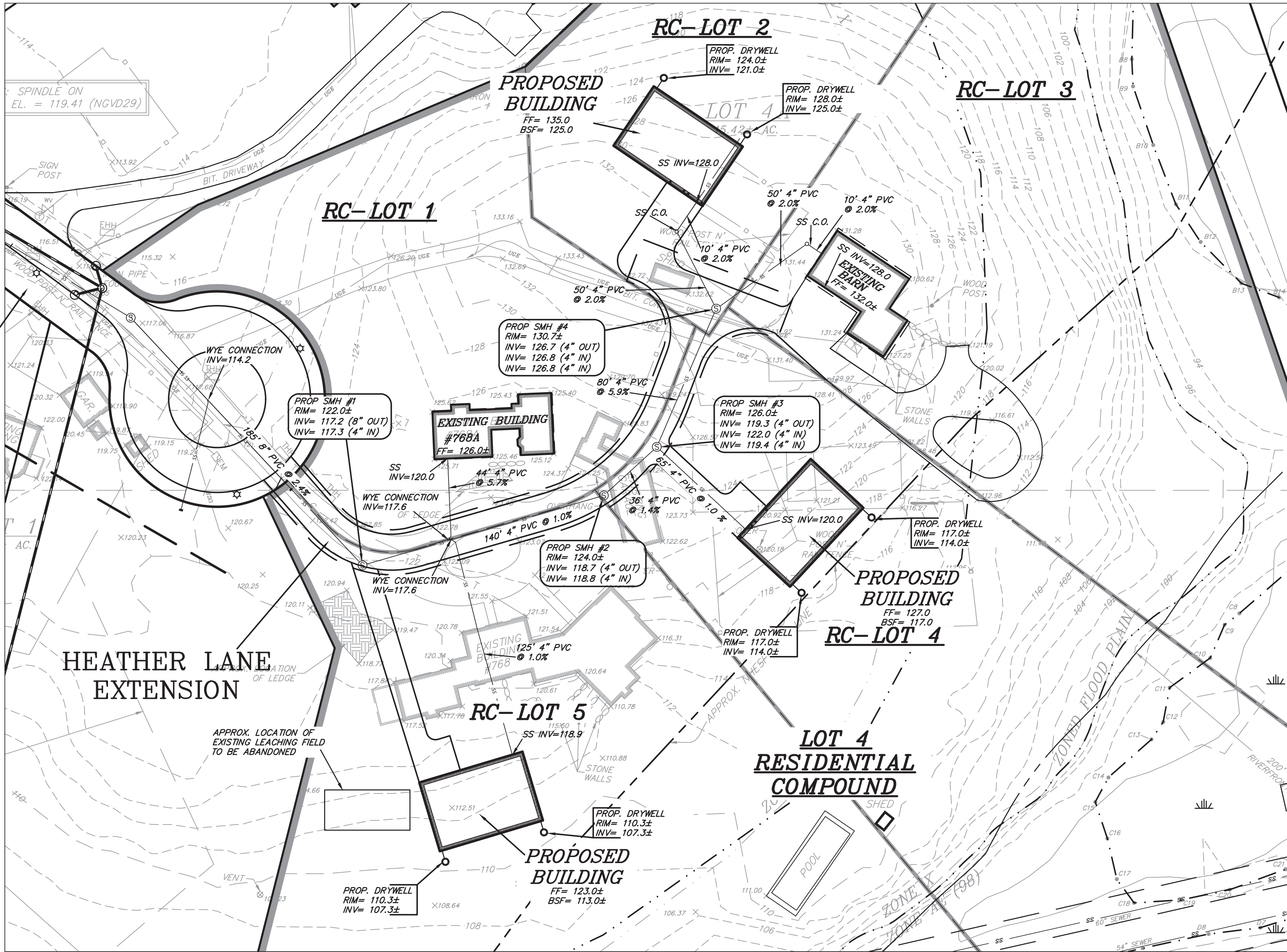
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SCALE 1" = 40'	1. 07/07/20	PER PLANNING BOARD COMMENTS	
DATE 03/03/20	REV DATE	REVISION	BY
SHEET 4 OF 9	RESIDENTIAL COMPOUND 768-768A CHESTNUT ST (LOT 4 HEATHER LANE) NEEDHAM, MA		
FILE # GD01-RC	GRADING PLAN		
JOB # F:\P\2019-088	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com		
DRAWN BY CJL	SHEET NO. 4		
CHKD BY BGL			
APPD BY SMH			

EXISTING LEGEND	
	200' RIVERFRONT LINE
	MEAN ANNUAL HIGH WATER LINE (RIVER)
	BORDERING VEGETATED WETLANDS (B.V.W.)
	NATIONAL HERITAGE ENDANGERED SPECIES PROGRAM LINE (NHESP)
	FLOOD PLAIN
	PROPERTY LINE
	ZONE LINE
	TOWN LINE
	EASEMENT
	BOUND TO BE SET
	WETLANDS

PROPOSED LEGEND	
	EASEMENT
	SEWER MANHOLE
	SEWER LINE
	DRY WELL

HEATHER LANE
(PUBLIC WAY)



NOTE: ALL SEPTIC SYSTEMS TO BE ABANDONED PER TITLE V REQUIREMENTS. RESIDENTIAL COMPOUND DRAINAGE SYSTEMS TO BE DESIGNED TO COMPLY WITH THE TOWN OF NEEDHAM STORMWATER REGULATIONS.

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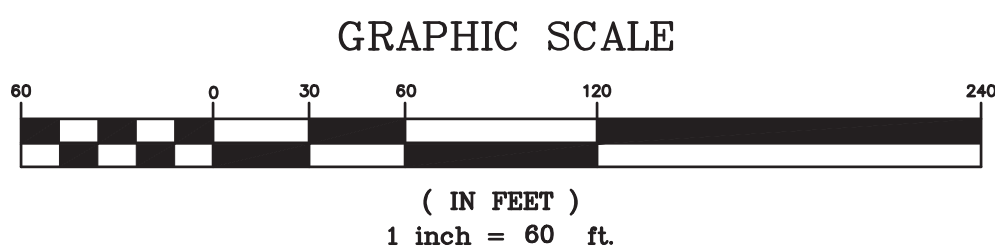
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TOWN ENGINEER



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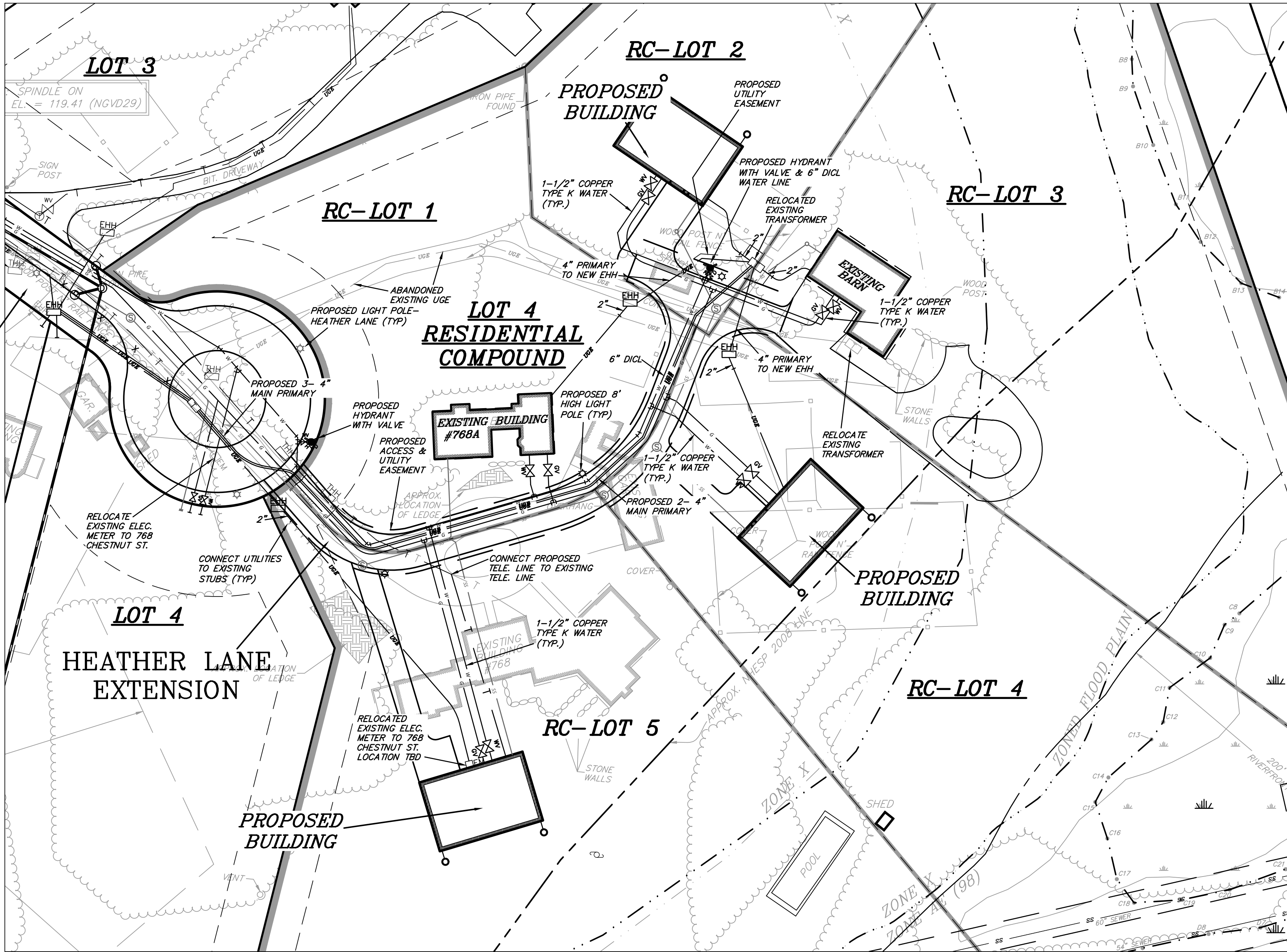
SCALE 1"= 40'				
DATE 03/03/20	1.	07/07/20	PER PLANNING BOARD COMMENTS	
SHEET 5 of 9	REV	DATE	REVISION	BY
FILE # 2019-088-PP02	RESIDENTIAL COMPOUND 768-768A CHESTNUT ST (LOT 4 HEATHER LANE) NEEDHAM, MA			
JOB # F:\2019-088	SEWER & DRAIN PLAN			
DRAWN BY C.B.L.	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com			
CHKD BY B.G.L.				
APPD BY DNK				

DAVID NOEL KELLY CIVIL NO. 37942 REGISTERED PROFESSIONAL ENGINEER	SHEET NO. 5
---	-----------------------

EXISTING LEGEND	
	200' RIVERFRONT LINE
	MEAN ANNUAL HIGH WATER LINE (RIVER)
	BORDERING VEGETATED WETLANDS (B.V.W.)
	NATIONAL HERITAGE ENDANGERED SPECIES PROGRAM LINE (NHESP)
	FLOOD PLAIN
	PROPERTY LINE
	ZONE LINE
	TOWN LINE
	EASEMENT
	BOUND TO BE SET
	WETLANDS

PROPOSED LEGEND	
	EASEMENT
	SEWER MANHOLE
	SEWER LINE
	DRY WELL
	CATCH BASIN
	DRAIN MANHOLE
	DRAIN LINE
	SEWER MANHOLE
	SEWER LINE
	GAS VALVE
	GAS LINE
	HYDRANT
	WATER VALVE
	WATER LINE
	UNDERGROUND ELECTRIC LINE
	ELECTRIC LINE
	LIGHT POLE (HEATHER LANE)
	LIGHT POLE (8' HIGH)

HEATHER LANE
(PUBLIC WAY)



"APPROVED IN ACCORDANCE WITH SECTION 81-U OF CHAPTER 41 OF THE GENERAL LAWS AS AMENDED"

APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COVENANT GIVEN IN ACCORDANCE WITH SECTION 81-U, CHAPTER 41 OF THE GENERAL LAWS AS AMENDED.

"I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION REGULATIONS AND PROCEDURAL RULES OF THE PLANNING BOARD OF THE TOWN OF NEEDHAM."

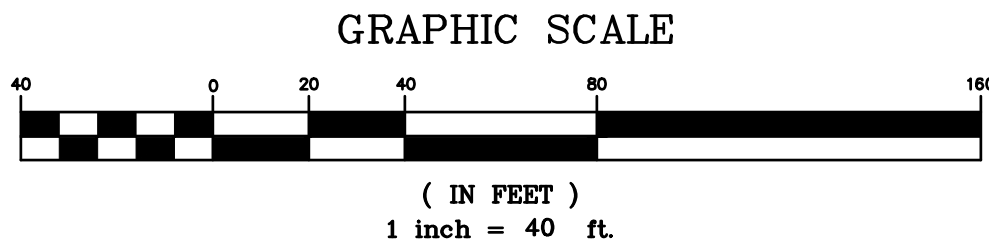
DAVID N. KELLY, P.E.

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

DATE

TOWN CLERK

APPROVED DATE
ENDORSED DATE
DIRECTOR OF PUBLIC WORKS
TOWN ENGINEER



KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST.

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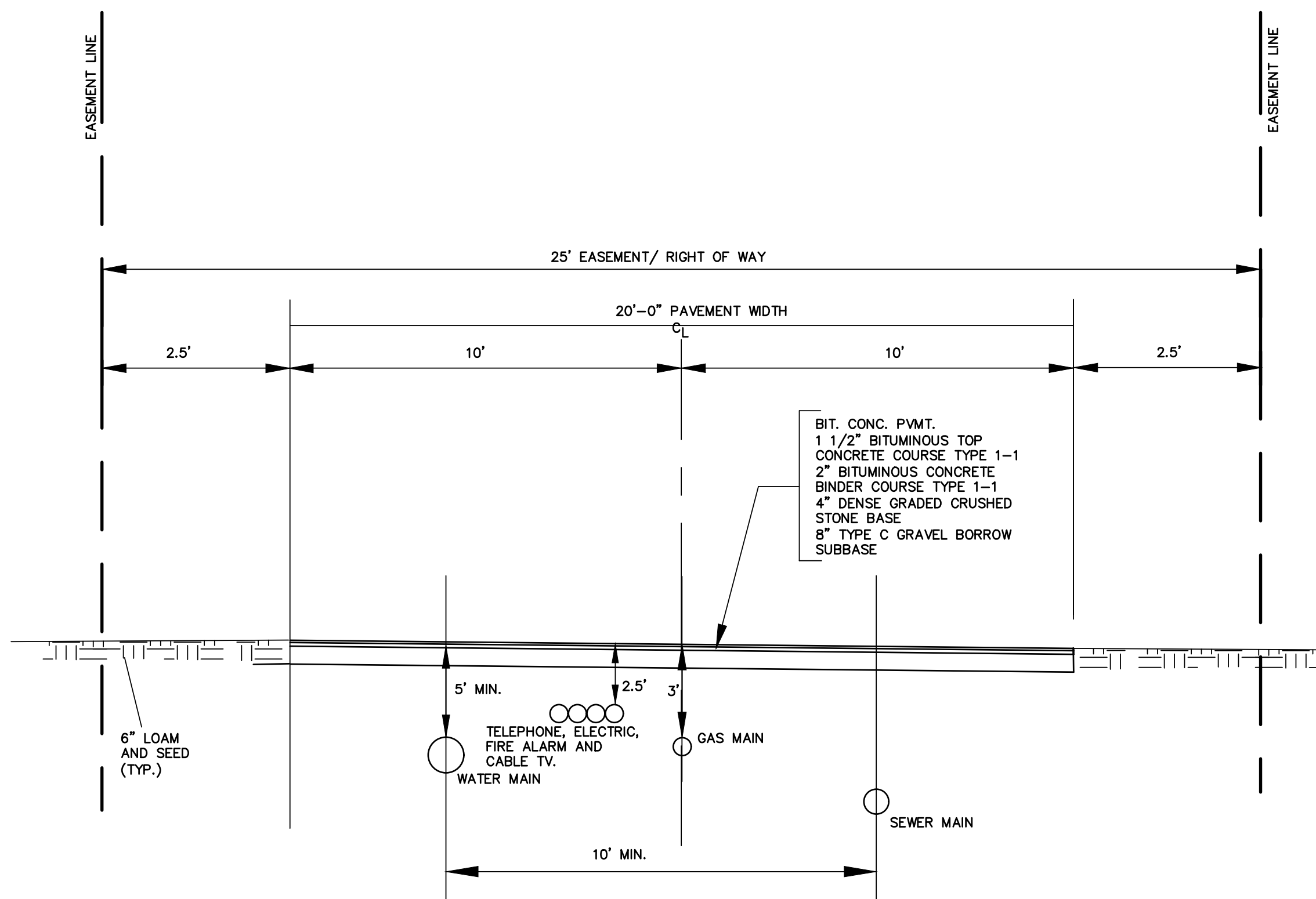
SCALE	3.	09/01/20	PER PLANNING BOARD COMMENTS	
1"= 40'	2.	07/22/20	NO CHANGE	
DATE	1.	07/07/20	PER PLANNING BOARD COMMENTS	
03/03/20	REV	DATE	REVISION	BY
SHEET	RESIDENTIAL COMPOUND			
6 of 7	768-768A CHESTNUT ST (LOT 4 HEATHER LANE)			
FILE #	NEEDHAM, MA			
UT03-RC	UTILITY PLAN			
JOB #				
F:\P\2019-088				
DRAWN BY				
C.L.				
CHKD BY				
BGL				
APPD BY				
DNK				



KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

SHEET NO.

6



HEATHER LANE EXTENSION CROSS SECTION		
(STREET- CROSS-SECTION)	NOT TO SCALE	 KELLY ENGINEERING GROUP, INC. ©

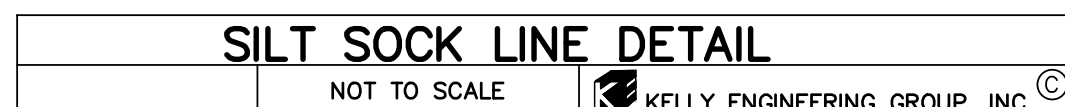
- F1. ALL MAINS, VALVES AND APPURTENANCES INSTALLED MUST BE IN STRICT ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE TOWN OF NEEDHAM AND MEET THE APPROVAL OF THE WATER SUPERINTENDENT.
- F2. SPECIFICATIONS FOR MATERIAL, EQUIPMENT AND INSTALLATION MUST BE REVIEWED BY THE WATER SUPERINTENDENT AND THE TOWN CONSULTANT PRIOR TO THE START OF CONSTRUCTION.
- F3. NO WATER MAIN MAY BE COVERED UNTIL THE WATER SUPERINTENDENT OR HIS REPRESENTATIVE HAS INSPECTED THE INSTALLATION AND GIVEN HIS APPROVAL.
- F4. ALL INSTALLED PIPING SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AWWA C600.
- F5. A REPRESENTATIVE OF THE WATER DEPARTMENT SHALL WITNESS ALL REQUIRED TESTS AND INSPECTIONS.
- F6. ALL NEW MAINS SHALL BE FLUSHED AT A VELOCITY TO BE SPECIFIED BY THE WATER DEPARTMENT BEFORE AND AFTER DISINFECTION.
- F7. ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651.
- F8. ALL WATER MAINS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWER. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
- F9. CHLORINATION TAPS MUST BE PROVIDED AT LOCATIONS TO BE SPECIFIED BY THE WATER SUPERINTENDENT.



APPROVED SUBJECT TO TERMS AND
CONDITIONS OF A COVENANT GIVEN IN
ACCORDANCE WITH SECTION 81-U,
CHAPTER 41 OF THE GENERAL LAWS AS
AMENDED.

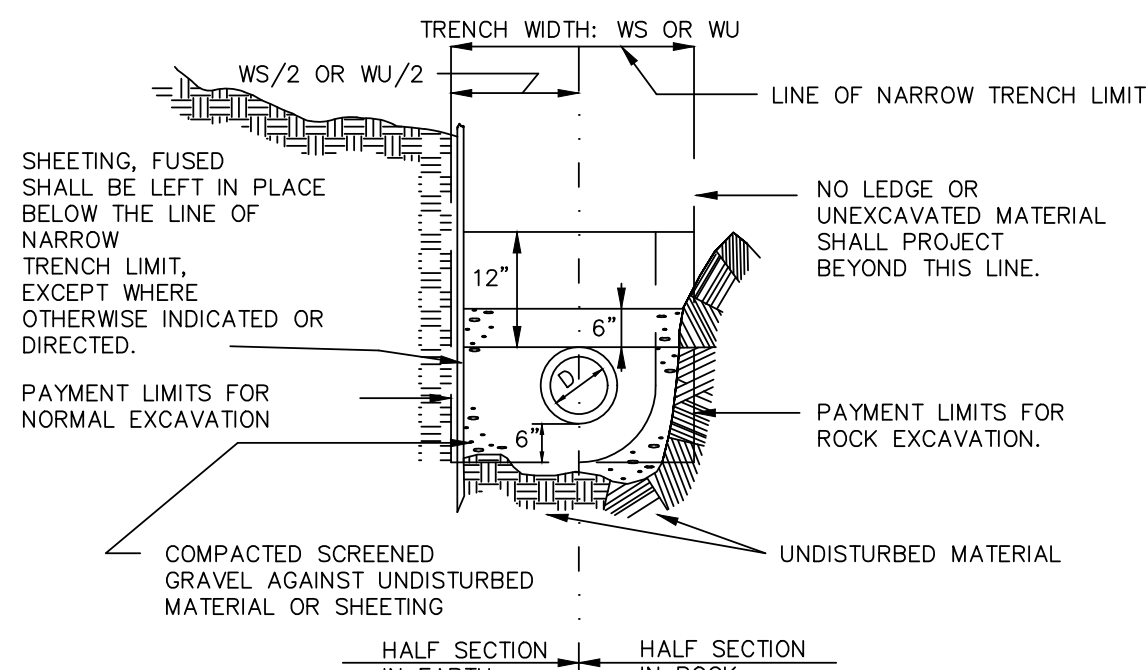
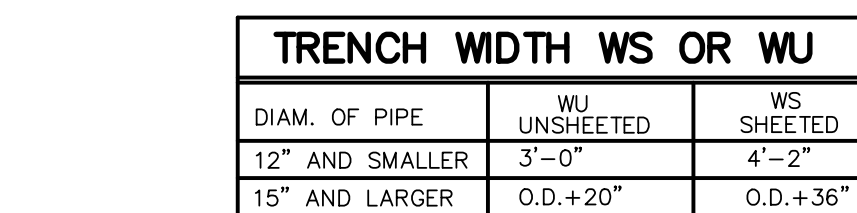
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DATE _____ TOWN CLERK _____



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WATER AND SEWER TRENCH SECTION		
NOT TO SCALE	(WTR&SEWER-TRENCH-SECTION)	KELLY ENGINEERING GROUP [©]



WATER AND SEWER TRENCH SECTION		
NOT TO SCALE	(WTR&SEWER-TRENCH-SECTION)	KELLY ENGINEERING GROUP [©]

E1. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEANUP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO A LEGAL DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.

E2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXPOSURE OF SOIL EROSION DOES NOT OCCUR. MEASURES SHALL INCLUDE HAY BALE BARRIERS AROUND DRAINAGE INLETS, MULCHING AND PLANTING OF DISTURBED AREAS.

E3. AFTER INSTALLATION OF EACH DRAINAGE INLET SILT SACKS SHALL BE INSTALLED AROUND EACH DRAINAGE INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.

E4. AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.

E5. DURING CONSTRUCTION THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.

SCALE	3.	09/01/20	PER PLANNING BOARD COMMENTS	
NA	2.	07/22/20	NO CHANGE	
DATE	1.	07/07/20	PER PLANNING BOARD COMMENTS	
03/03/20	REV	DATE	REVISION	BY
SHEET 7 of 7	RESIDENTIAL COMPOUND 768-768A CHESTNUT ST (LOT 4 HEATHER LANE) NEEDHAM, MA			
FILE # 2019-088-DT01				
JOB # F:\P\2019-088				
DRAWN BY CJL	DETAIL SHEET			
CHKD BY BGL	 KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com			
APPD BY				
DATE				
				SHEET NO. 7

This draft Agenda is for the PB Use Only

**NEEDHAM
ZONING BOARD OF APPEALS
AGENDA**

MONDAY, November 19, 2020 - 7:30PM

Zoom Meeting ID Number: 81007196060

To view and participate in this virtual meeting on your computer, at the above date and time, go to [www.zoom.us](https://us02web.zoom.us/j/81007196060), click “Join a Meeting” and enter the Meeting ID: 81007196060
Or joint the meeting at link: <https://us02web.zoom.us/j/81007196060>

AGENDA

- | | |
|-------------------|--|
| Minutes | Review and approve Minutes from September 17, 2020 meeting. |
| Case #1 – 7:30PM | 926 Greendale Avenue – Mary DeMaio, applicant, has made application to the Board of Appeals for a Special Permit under Sections 3.1.5, 7.5.2 and any other applicable Sections of the By-Law to allow the addition of an Accessory Dwelling Unit. The property is located at 926 Greendale Avenue , Needham, MA in the Single Residential A District. |
| Case #2 – 7:30 PM | 27 Warren Street – Cathy L. Livingston, owner, has made application to the Board of Appeals for a Special Permit under Sections 1.4.6, 7.5.2 and any other applicable Sections of the By-Law to allow the change, extension, alteration, and enlargement to a lawful, pre-existing, non-conforming building associated with the addition of a first-floor bathroom. The property is located at 27 Warren Street , Needham, MA in the Single Residential B District. |
| Case #3 – 7:45PM | 11 Gatewood Drive – Lawrence A. Gordon 2019 Trust, applicant, has made application to the Board of Appeals for a Variance under Section 7.5.3 and/or MGL 40A, Section 10 from applicable minimum lot area requirement of 4.2.3 of the Zoning By-Law or in the alternative a Special Permit under Sections 1.4.6, 7.5.2 and 7.5.3 and any other applicable Sections of the By-Law and a Finding pursuant MGL 40A, Section 6, to permit the demolition, extension, alteration, enlargement and reconstruction of the lawful, pre-existing, non-conforming single-family dwelling to a new single-family dwelling. The property is located at 11 Gatewood Drive , Needham, MA in the Single Residential A District. |
| Case #4 – 8:00 PM | 1 Wellesley Avenue – Donald W. Hollings, applicant, has made application to the Board of Appeals for a Special Permit under Sections 1.4.7, 7.5.3 and any other applicable Sections of the By-Law as well as a Finding pursuant to Section 6 of M.G.L Chapter 40A to permit the demolition, extension, alteration, enlargement and reconstruction of the lawful, pre-existing, non-conforming two-family dwelling and multiple accessory buildings to a new two-family dwelling with an accessory garage. The property is located at 1 Wellesley Avenue , Needham, MA in the Single Residential B District. The property is numbered as 323 Oakland Street, Wellesley, MA. |

Case #5 – 8:15PM

182 and 190 Edgewater Drive – David M. Nectow Revocable Trust, applicant, has made application to the Board of Appeals for a Special Permit under Sections 3.3.3 (d) (e) (i), 7.5.2 and any other applicable Sections of the By-Law to allow the demolition of the existing house on 182 Edgewater Drive and to combine the land with 190 Edgewater Drive and construct a pool and associated decking, a cabana, a tennis court and walking paths. The property is located at **182 and 190 Edgewater Drive**, Needham, MA in the Single Residential A District.

Next Zoom Meeting: **Thursday, November 19, 7:30pm**

Next Meeting: **Thursday, December 19, 2019, 7:30pm, Charles River Room**



**TOWN OF NEEDHAM
MASSACHUSETTS
BOARD OF APPEALS**

APPLICATION FOR HEARING

IT IS STRONGLY RECOMMENDED THAT APPLICANTS CONSULT WITH THE BUILDING INSPECTOR PRIOR TO FILING THIS APPLICATION.

Note: Application must be complete, with certified plot plan attached, and application fee included, or application will not be accepted.

Date: 10-21-2020

Name of Applicant or Appellant: Mary DeMaio

Address: 926 Greendale Ave
Needham, MA. 02492

E-mail address: mdemaio111@hotmail.com

Daytime telephone: 781-449-6975

Cell phone: 781-726-0544

Additional contact information, (ie: contractor ☐, architect ☐, builder ☐, attorney ☐):

Address/Location of Property 926 Greendale Ave

Assessor map/parcel number 199-014.0-0052-0000.0

Zone of property: SRA

Is property within 100 feet of wetlands, 200 ft. of stream or in flood plain? ☐ Yes ☒ no

Applicant is: ☒ owner ☐ tenant ☐ prospective tenant ☐ licensee ☐ prospective purchaser

Type of Permit requested: ☒ residential or ☐ commercial

If residential renovation, will renovation constitute "new construction"? ☒ yes ☐ no

If commercial, please consult with building inspector regarding parking issues

Select one: ☐ Special Permit ☐ Variance ☐ Comprehensive Permit, M.G. L Ch. 40B

☐ Amendment

☐ Appeal Building Inspector Decision*

*(For an appeal from decision of Building Inspector, attach copy of the decision or other written notice received from the Building Inspector.)

Existing Conditions: _____

Statement of relief sought: Adding addition for my brother
who is a Vietnam Disabled Veteran. He lived
with my mom who passed away last year.
I am his caretaker.

Applicable Section(s) of Zoning By-Law: 3.1.5, 7.5.2

If application under Zoning Section 1.4, listed immediately above:

List nonconformities related to lot/structure(s) in application: _____

Date structure(s) on lot constructed (including any additions): 1908

Date lot created: _____

A certified plot plan, prepared by a registered surveyor, must be attached to this application at time of filing. An application will be returned if a copy of the plot plan is not attached to the application.

•Applications for Comprehensive permits under M.G.L. Ch. 40B require a copy of plot plan.

Please feel free to attach any additional information/photos relative to the application.

Additional information may be requested by the Board at any time during the application or hearing process.

A hearing before the Board of Appeals, with reference to the above noted application or appeal, is requested by

Signed Mary Donlin

Title Owner

An application must be submitted to the Town Clerk's Office at townclerk@needhamma.gov and to the ZBA Office at dcollins@needhamma.gov



ADU – ZBA Special Permit Application

Owner's Name	Mary DenMaio			
Address	926 Greendale Ave Needham			
Phone	781-449-6975	E-mail	mdenmaio111@hotmail.com	
ADU's Resident Name	Paul E. Hoban Jr.			
Phone	617-964-7372	E-mail		
ADU Resident Relationship to Owner (Select one)	☐ spouse ☐ parent ☒ sibling ☐ child ☐ grandchild	Spouse of: ☐ parent ☐ sibling ☐ child ☐ grandchild	Child of: ☐ parent ☐ sibling ☐ child ☐ grandchild	☐ Caregiver. If caregiver, select type of caregiver: ☐ Elderly ☐ Chronically Ill ☐ Disable Owner
Total Occupants in Principal Dwelling Unit and ADU	3	Total Occupants not related to Owner (not to exceed five)	—	Owner to occupy: ☒ Principal Unit ☐ ADU

ADU Information

Map & Page ID	14.52	Zoning District	SRA
Size of ADU (not to exceed 850 sq. feet)	872	Location of ADU: ☐ basement, ☐ attic, ☒ 1 st floor, ☐ 2 nd floor	
Does ADU have separate provisions for (ADU limited to one bedroom): Living ☒ Yes ☐ No; Sleeping ☒ Yes ☐ No; Cooking ☒ Yes ☐ No; Eating ☒ Yes ☐ No			
Number and location of Means of Egress:			
Describe where the interior door access between ADU and Principal Dwelling Unit is? In the garage			
Total number of off-street parking for Principal Dwelling Unit and ADU: 4 plus 2 inside			

I attest that the information in this application is true and accurate to the best of my knowledge and understanding:

Mary DenMaio

Owner's Signature/Date

TOWN OF NEEDHAM, MASSACHUSETTS

Building Inspection Department

Assessor's Map & Parcel No. 199/014.0-0052-0000.0

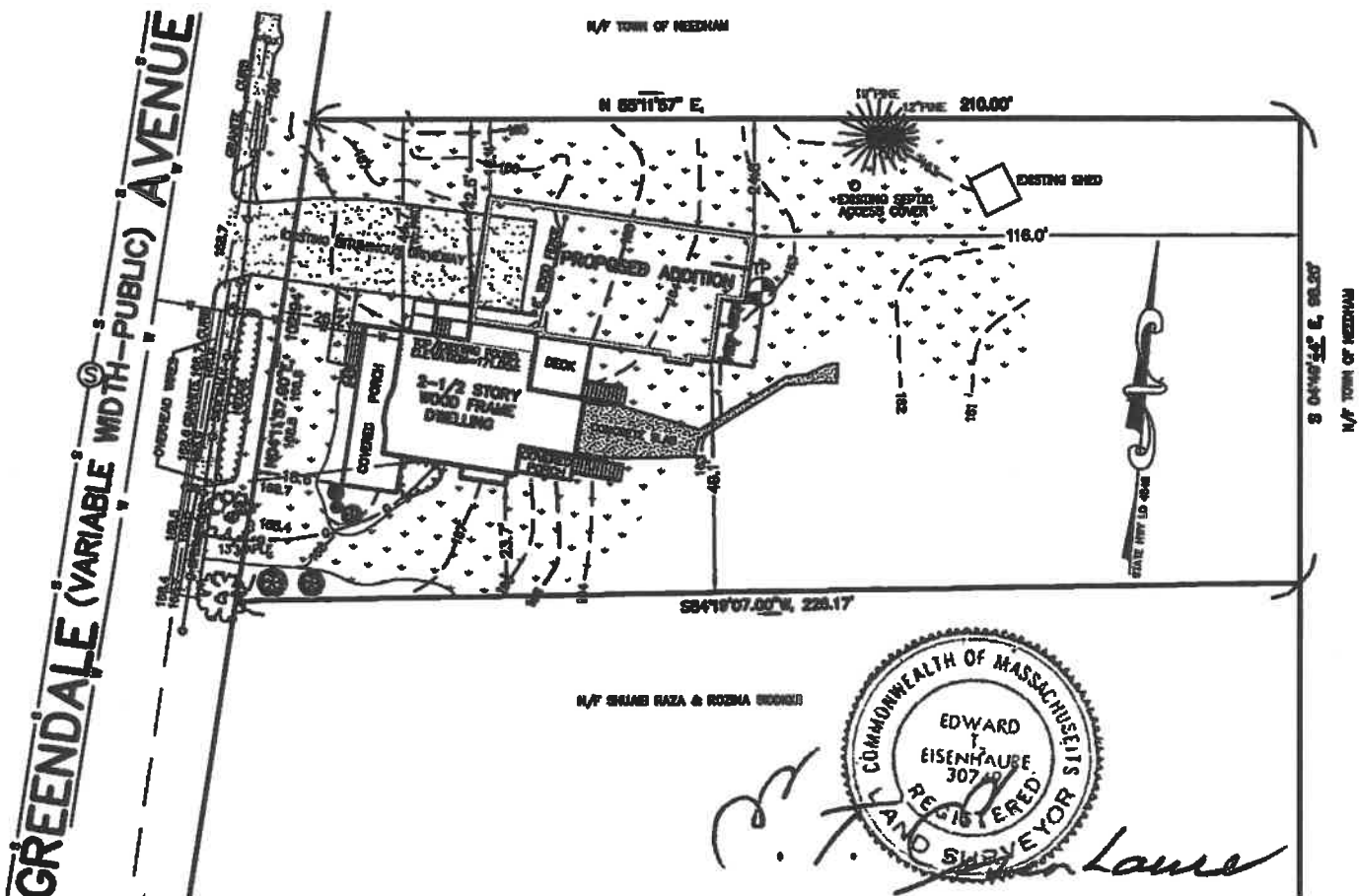
Building Permit No. _____ Zoning District RESIDENCE "A"

Lot Area 21,779SF± Address 926 GREENDALE AVENUE

Owner MARY E DEMAIO Builder RONALD DEMAIO

PROPOSED PLOT PLAN / FOUNDATION ASBUILT / FINAL ASBUILT
CIRCLE ONE THAT APPLIES

40' Scale



GREENDALE AVE RESIDENCE

926 GREENDALE AVENUE, NEEDHAM, MA 02492

BUILDING PERMIT SET

PROJECT DESCRIPTION

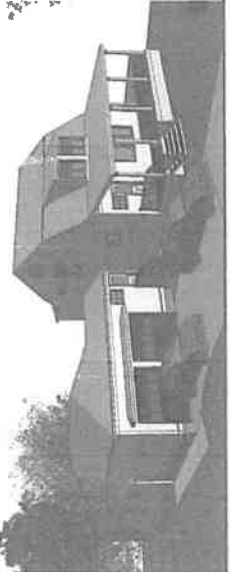
OWNER: MARY EDGARD
528 GREENDALE AVE
NEEDHAM - MA 02452

PROFESSIONAL DESIGNER:

531 COMMONWEALTH AVE - SUITE 210
NEEDHAM - MA 02459

ARCHITECT:

RONALD F. JAREK
487 WINTERTOWN ST
NEEDHAM, MA 02450



F.A.R. CALCULATIONS

EXISTING AREA STATE SUMMARY

COMMON DISTRICT (FAR)	PERCENTAGE	AREA (SQ FT)	PERCENTAGE	AREA (SQ FT)
RECREATION	10.00%	1,469.00	10.00%	1,469.00
RESIDENTIAL	80.00%	11,775.00	80.00%	11,775.00
TOTAL AREA	90.00%	13,244.00	90.00%	13,244.00

NOTES: 1. CALCULATIONS FOR F.A.R. OF 1.00 PER 1,000 SQ FT OF LOT AREA.
2. CALCULATIONS FOR F.A.R. OF 1.00 PER 1,000 SQ FT OF LOT AREA.
3. CALCULATIONS FOR F.A.R. OF 1.00 PER 1,000 SQ FT OF LOT AREA.



1469 SF

7.01 - First Floor - Proposed Area
WTR = 1.00

TYPICAL EXTERIOR LEGEND

ITEM	DESCRIPTION
1.00	Asph/Flt Shingles
2.00	Asph/Flt Shingles
3.00	Asph/Flt Shingles
4.00	Asph/Flt Shingles
5.00	Asph/Flt Shingles
6.00	Asph/Flt Shingles
7.00	Asph/Flt Shingles
8.00	Asph/Flt Shingles
9.00	Asph/Flt Shingles
10.00	Asph/Flt Shingles

PERMIT LOCATION

ITEM	DESCRIPTION
1.00	Asph/Flt Shingles
2.00	Asph/Flt Shingles
3.00	Asph/Flt Shingles
4.00	Asph/Flt Shingles
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8.00	Asph/Flt Shingles
9.00	Asph/Flt Shingles
10.00	Asph/Flt Shingles

GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE, THE CITY OF NEEDHAM, AND ALL OTHER APPLICABLE REGULATIONS, LAWS, ORDINANCES, ETC. GOVERNING THIS WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF NEEDHAM, MASSACHUSETTS, AND ALL OTHER APPLICABLE AGENCIES.
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GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE, THE CITY OF NEEDHAM, AND ALL OTHER APPLICABLE REGULATIONS, LAWS, ORDINANCES, ETC. GOVERNING THIS WORK.
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PERMIT SET

PROJECT NUMBER: 19-0009
DATE: 01/14/20
DRAWN BY: RFL
CHECKED BY: RFL
SCALE: AS SHOWN

PERMIT SET

PROJECT NUMBER: 19-0009
DATE: 01/14/20
DRAWN BY: RFL
CHECKED BY: RFL
SCALE: AS SHOWN

PERMIT SET

PROJECT NUMBER: 19-0009
DATE: 01/14/20
DRAWN BY: RFL
CHECKED BY: RFL
SCALE: AS SHOWN

PERMIT SET

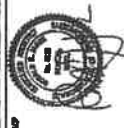
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DATE: 01/14/20
DRAWN BY: RFL
CHECKED BY: RFL
SCALE: AS SHOWN

PERMIT SET

PROJECT NUMBER: 19-0009
DATE: 01/14/20
DRAWN BY: RFL
CHECKED BY: RFL
SCALE: AS SHOWN

PERMIT SET

PROJECT NUMBER: 19-0009
DATE: 01/14/20
DRAWN BY: RFL
CHECKED BY: RFL
SCALE: AS SHOWN



PERMIT SET

No.	Description	Date
1	Foundation	
2	First Floor	
3	Second Floor	
4	Roof	
5	MEP	
6	Exterior	
7	Site	
8	Other	

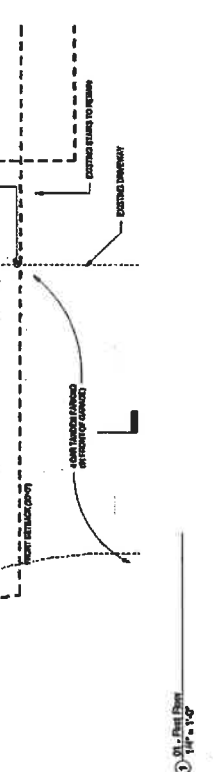
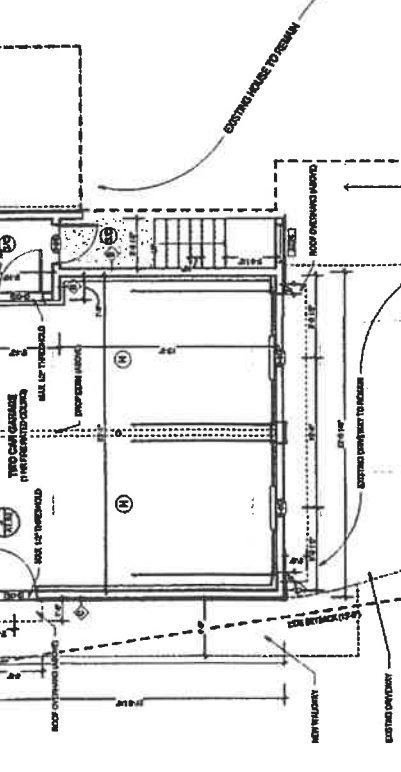
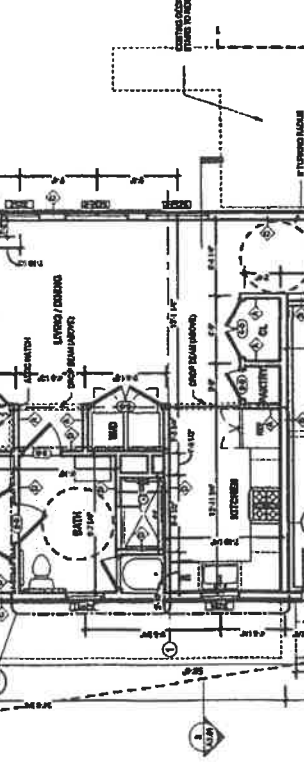
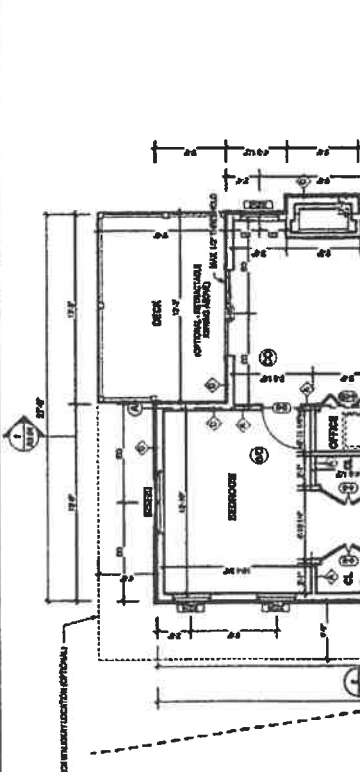
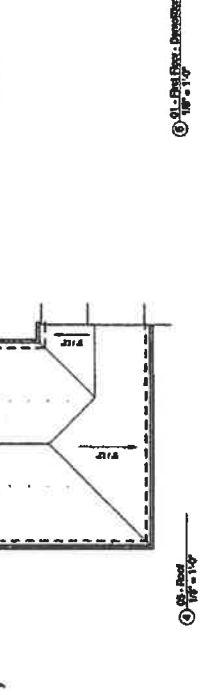
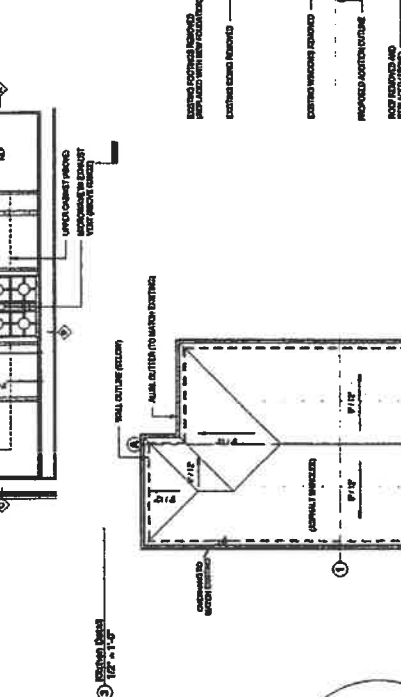
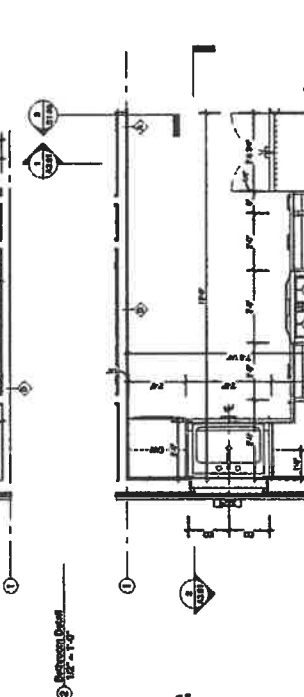
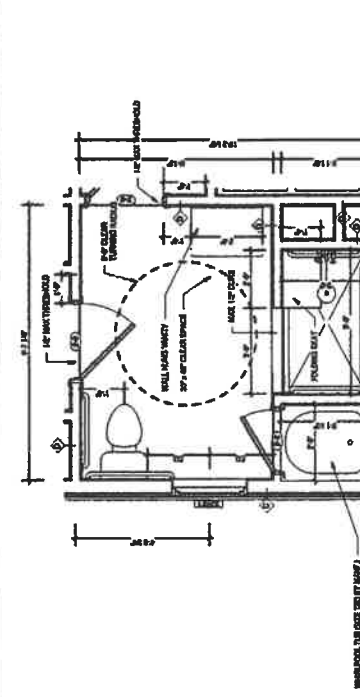
GREENDALE AVE RESIDENCE	
FLOOR PLANS	
Project Number	10-0000
Client	Greenway LLC
Drawn by	RJ
Quantity	100
Rev	01
A1.02	
24x36	

FINISH SCHEDULE

NO.	FINISH	LOCATION	QTY	UNIT	REMARKS
1	1/2" x 6" x 8" Solid Pine	Living Room	100	Sq. Ft.	
2	1/2" x 6" x 8" Solid Pine	Dining Room	100	Sq. Ft.	
3	1/2" x 6" x 8" Solid Pine	Kitchen	100	Sq. Ft.	
4	1/2" x 6" x 8" Solid Pine	Bedroom	100	Sq. Ft.	
5	1/2" x 6" x 8" Solid Pine	Bathroom	100	Sq. Ft.	
6	1/2" x 6" x 8" Solid Pine	Hallway	100	Sq. Ft.	
7	1/2" x 6" x 8" Solid Pine	Staircase	100	Sq. Ft.	
8	1/2" x 6" x 8" Solid Pine	Front Porch	100	Sq. Ft.	
9	1/2" x 6" x 8" Solid Pine	Rear Porch	100	Sq. Ft.	
10	1/2" x 6" x 8" Solid Pine	Garage	100	Sq. Ft.	

NOTES:

- ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE NATIONAL FINISHES GUIDE.
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① 1st Floor Plan - Foundation Plan
1/8" = 1'-0"

② 2nd Floor Plan - Foundation Plan
1/8" = 1'-0"

③ 3rd Floor Plan - Foundation Plan
1/8" = 1'-0"



PERMIT SET

[illegible]

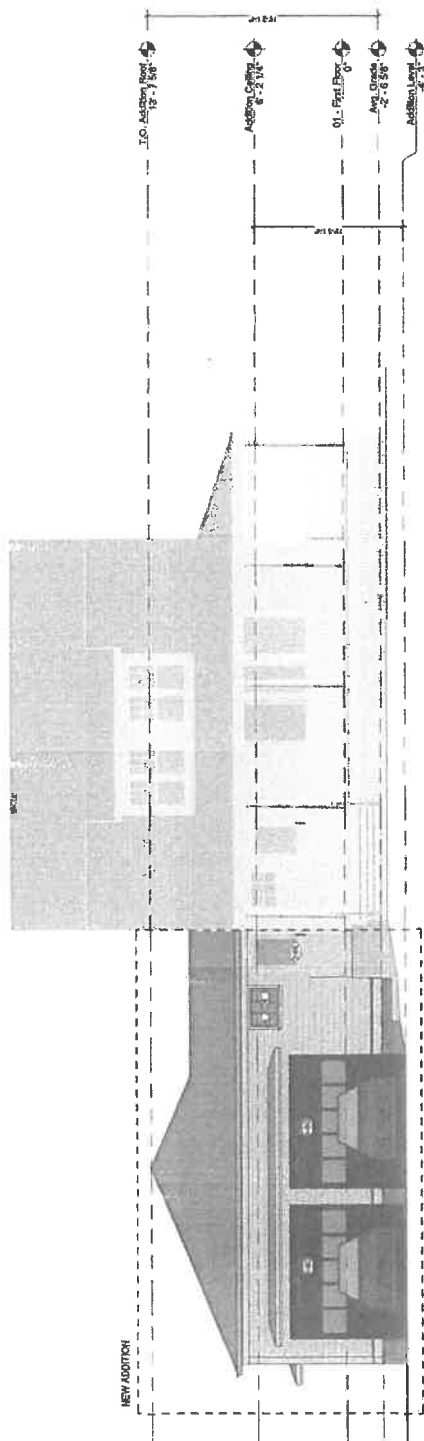
**GREENDALE AVE
RESIDENCE**

FRONT & LEFT ELEVATIONS

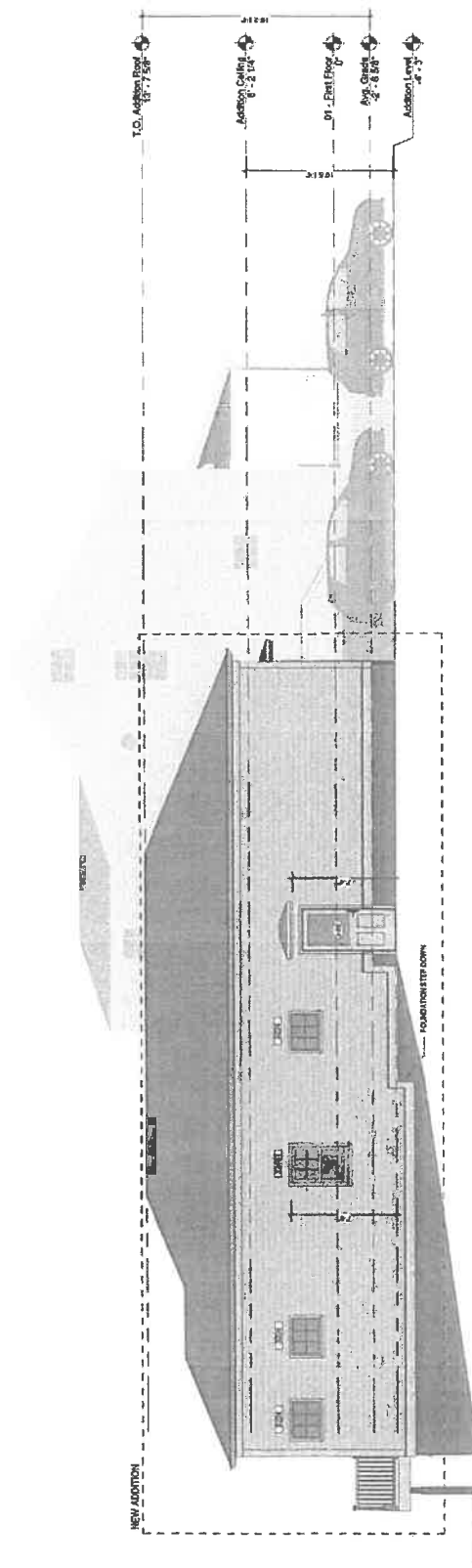
Project number	18-2809
Date	5/16/20
Drawn by	TCO
Checked by	RFJ

A2.01

497



① Front Elevation
1 1/4" = 1'-0"



② Let Elevation $1\frac{1}{4}'' = 1'-0''$

PERMIT SET

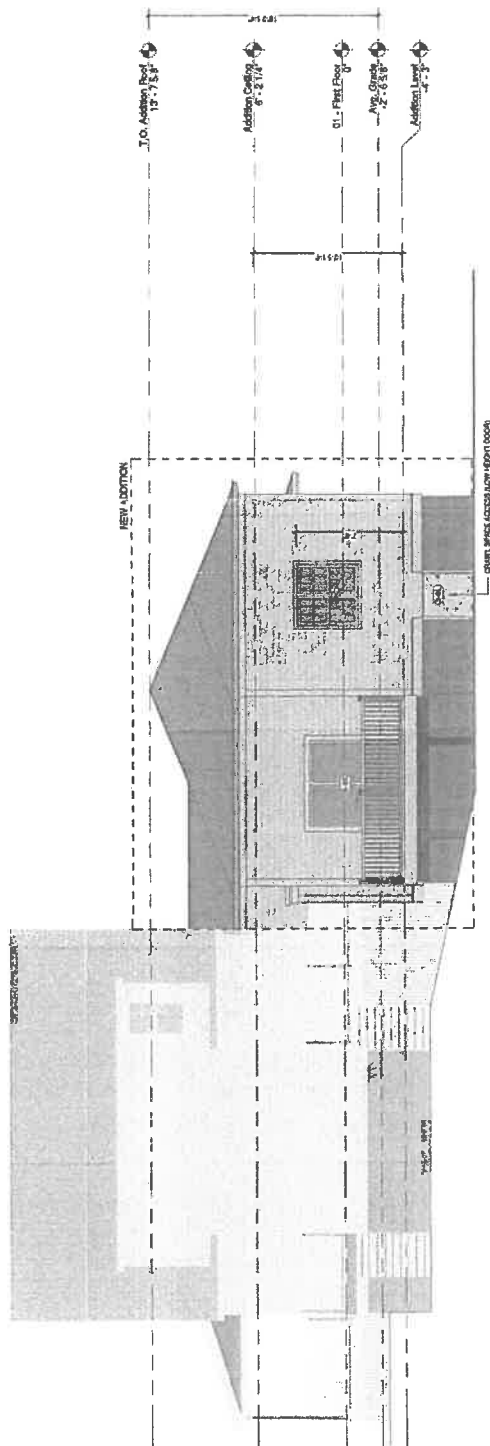
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GREENDALE AVE
RESIDENCE

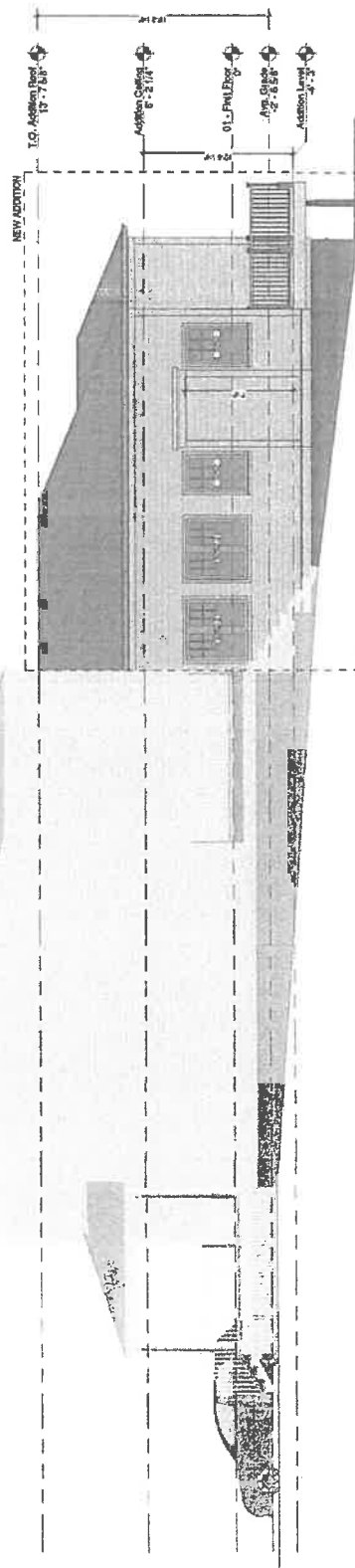
REAR & RIGHT ELEVATIONS

Product by	RFJ
Print by	TCO
Date	5/14/20
Project number	10-0909

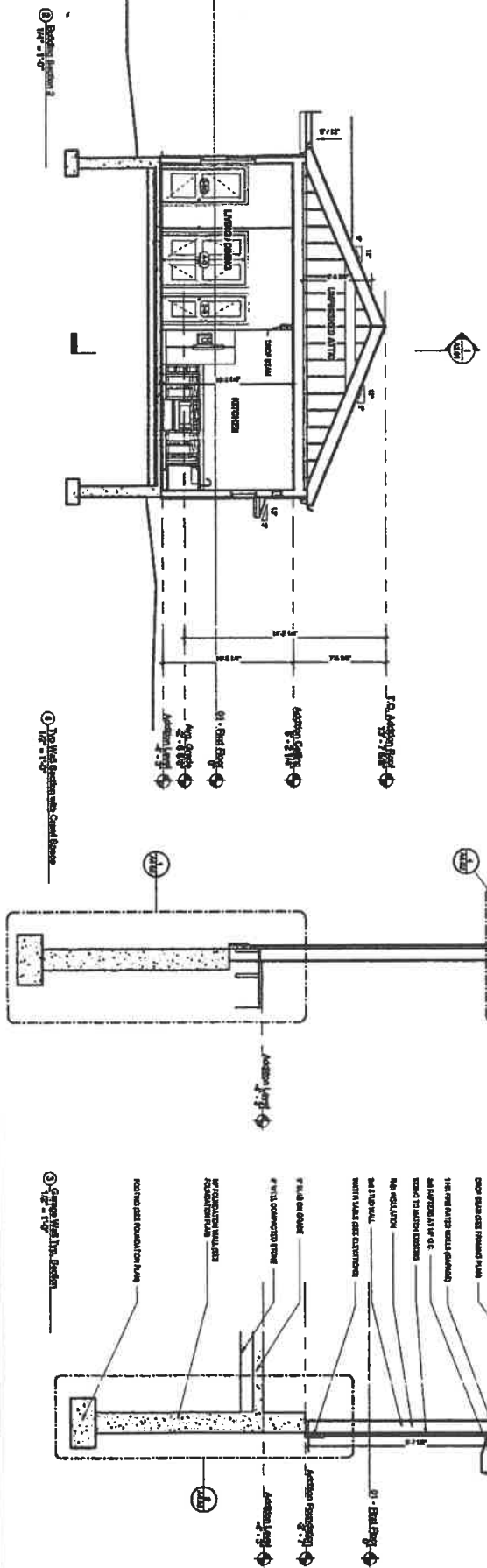
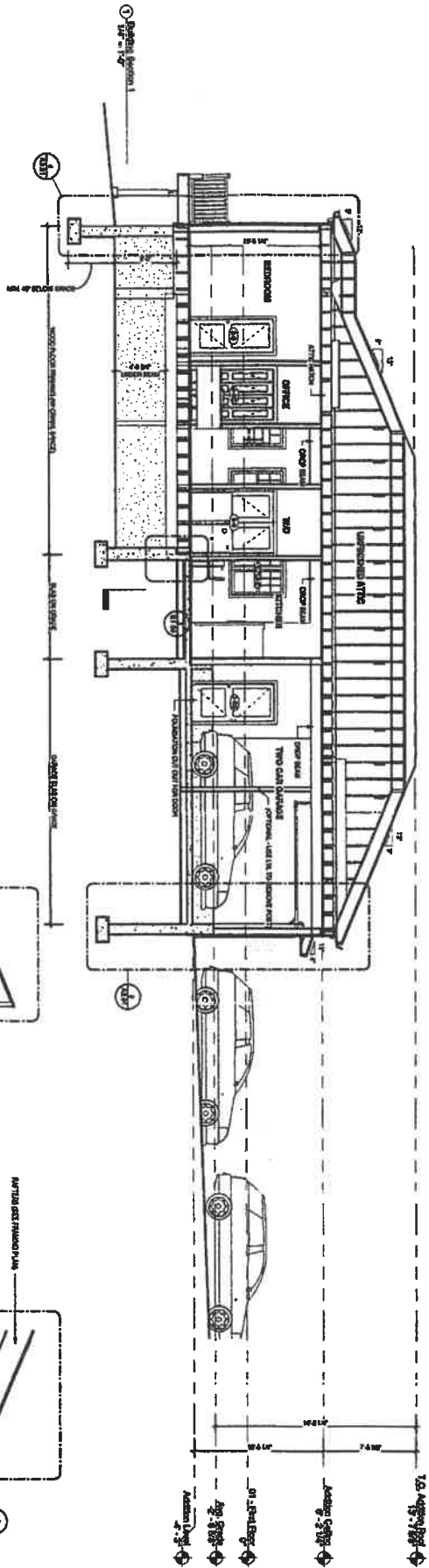
A2.02

$$1/6^{\circ} = 1' 3''$$


① Final Elevation
 $\frac{1}{4} \times 1' = 1'-0"$



2 Right Elevation
 $1\frac{1}{4}" = 1'-0"$



PERMIT SET

Project Number	13-0000
City	Greenville
County	Greenville
Owner	MGD+ LLC
Contract	100
Scale	1/8" = 1'-0"

Greendale Ave Residence

SECTION 1

1. Living Room

2. Kitchen

3. Dining Room

4. Two Car Garage

5. Rear Porch

Ronald F. Jarek

ARCHITECT

407 West Street, Greenville, SC 29601 (864) 686-4300 Fax (864) 686-4301

MGD+ LLC

[DESIGN + CONSULTANTS]

204 COMMERCE STREET, SUITE 200, GREENVILLE, SC 29601 (864) 686-4301 Fax (864) 686-4302



PERMIT SET

GREENDALE AVE RESIDENCE

CONSTRUCTION SCHEDULE

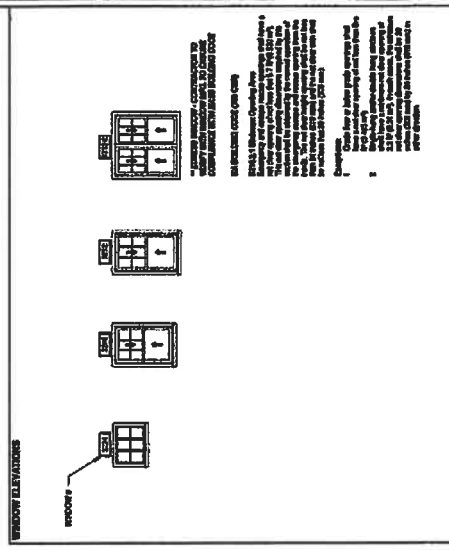
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 Date: 8/1/20
 Drawn by: TJO
 Checked by: JFJ

A4.01

Scale: As Shown

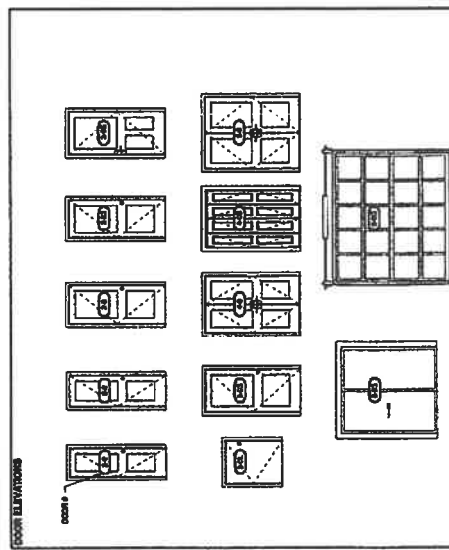
DETAILED WINDOW SCHEDULE

Window	Unit	Material	Finish	Notes
1	1	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
2	2	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
3	3	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
4	4	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
5	5	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
6	6	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
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8	8	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
9	9	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
10	10	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
11	11	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
12	12	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
13	13	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
14	14	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
15	15	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
16	16	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
17	17	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
18	18	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
19	19	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
20	20	1/2" x 6" x 10"	White	1/2" x 6" x 10" White



DETAILED DOOR SCHEDULE

Door	Unit	Material	Finish	Notes
1	1	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
2	2	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
3	3	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
4	4	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
5	5	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
6	6	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
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10	10	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
11	11	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
12	12	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
13	13	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
14	14	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
15	15	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
16	16	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
17	17	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
18	18	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
19	19	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
20	20	1/2" x 6" x 10"	White	1/2" x 6" x 10" White



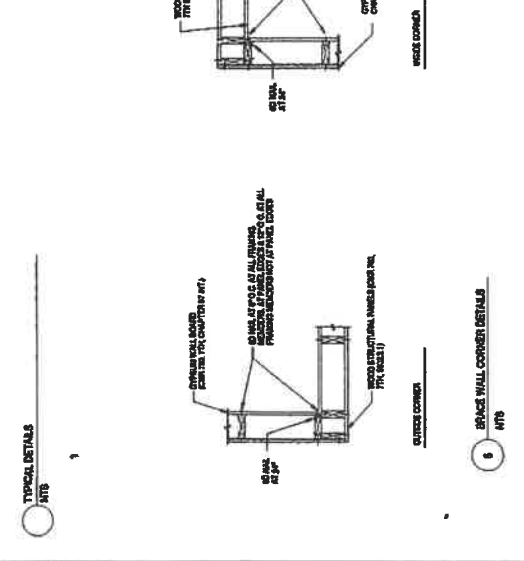
WALL SCHEDULE

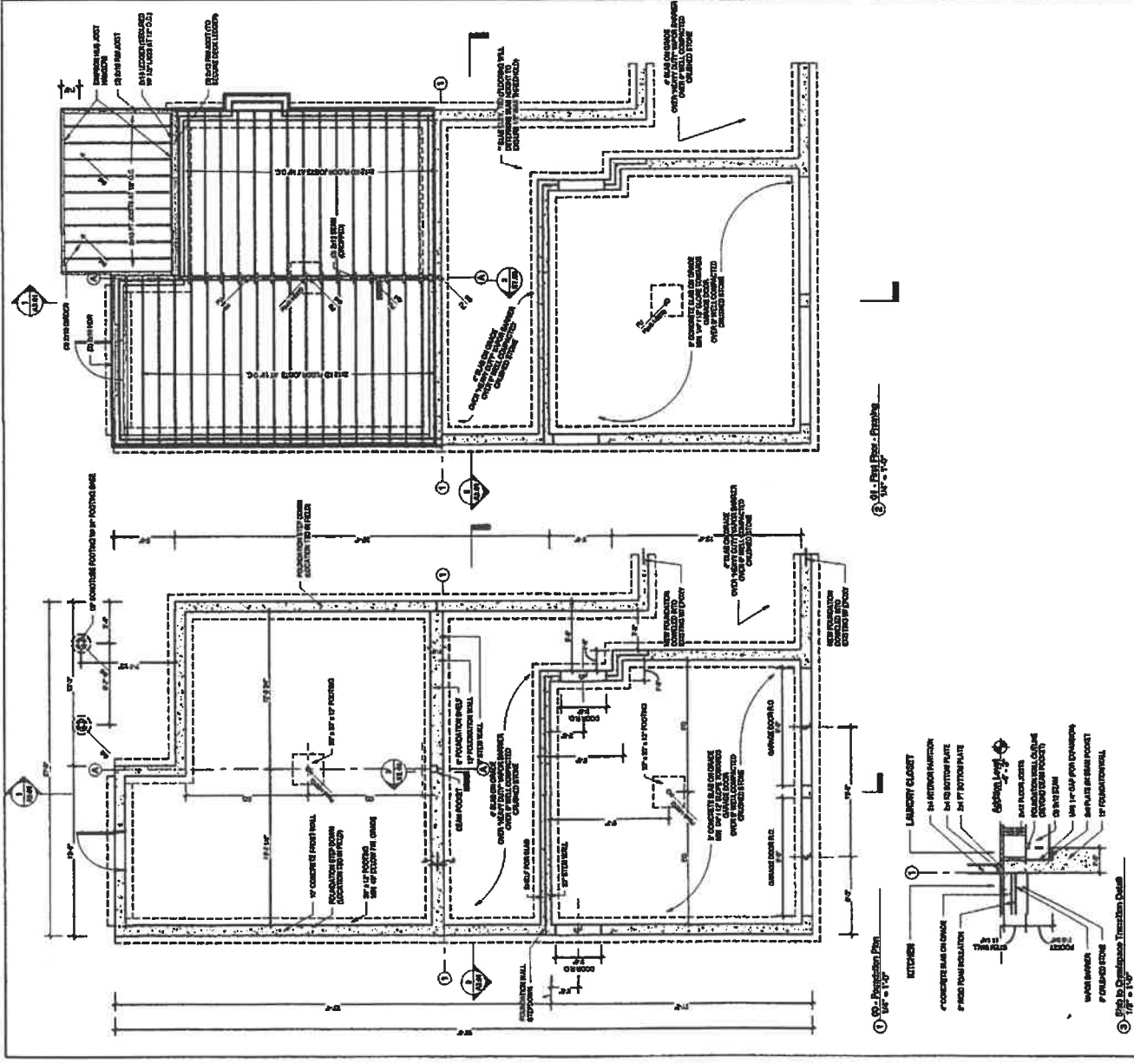
Wall	Unit	Material	Finish	Notes
1	1	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
2	2	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
3	3	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
4	4	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
5	5	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
6	6	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
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18	18	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
19	19	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
20	20	1/2" x 6" x 10"	White	1/2" x 6" x 10" White

CEILING SCHEDULE

Ceiling	Unit	Material	Finish	Notes
1	1	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
2	2	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
3	3	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
4	4	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
5	5	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
6	6	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
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8	8	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
9	9	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
10	10	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
11	11	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
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13	13	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
14	14	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
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16	16	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
17	17	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
18	18	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
19	19	1/2" x 6" x 10"	White	1/2" x 6" x 10" White
20	20	1/2" x 6" x 10"	White	1/2" x 6" x 10" White

[illegible]



[illegible]

Q AND HOW DO YOU FEEL ABOUT THE FACT THAT THE
CITY OF LOS ANGELES HAS BEEN ORDERED TO
REPAIR THE DAMAGE TO THE WALLS OF THE
CITY OF LOS ANGELES? A I FEEL THAT THE
CITY OF LOS ANGELES HAS BEEN ORDERED TO
REPAIR THE DAMAGE TO THE WALLS OF THE
CITY OF LOS ANGELES.





**TOWN OF NEEDHAM
MASSACHUSETTS
BOARD OF APPEALS**

RECEIVED TOWN CLERK
NEEDHAM, MA 02492

2020 OCT 26 AM 11:38

APPLICATION FOR HEARING

IT IS STRONGLY RECOMMENDED THAT APPLICANTS CONSULT WITH THE BUILDING INSPECTOR PRIOR TO FILING THIS APPLICATION.

Note: Application must be complete, with certified plot plan attached, and application fee included, or application will not be accepted.

Date: October 20, 2020

Name of Applicant or Appellant: Cathy L. Livingston

Address: 27 Warren Street

Needham, MA 02492

(Optional) E-mail address: crazycat4@comcast.net

Daytime telephone: 781.444.5228

(Optional) Cell phone: 781.864.5343

(Optional) additional contact information, (ie: ☐ contractor ☒ architect ☐ builder or ☐ attorney):

Architect: David Michael Johnson 39 West Plain Street Wayland MA
617.733.2861 s262x4@aol.com

Address/Location of Property 27 Warren Street Needham, MA 02492

Assessor map/parcel number 19905300024

Zone of property: SRB

Is property within 100 feet of wetlands, 200 ft. of stream or in flood plain? ☐ Yes ☐ no

Applicant is ☒ owner, ☐ tenant, ☐ prospective tenant, ☐ licensee ☐ prospective purchaser

Type of Permit requested: ☒ residential or ☐ commercial

If residential renovation, will renovation constitute "new construction"? ☐ yes ☐ no

If commercial, please consult with building inspector regarding parking issues

Select one: ☒ Special Permit ☐ Variance ☐ Comprehensive Permit, M.G. L Ch. 40B

☐ Amendment

☐ Appeal Building Inspector Decision*

*(For an appeal from decision of Building Inspector, attach copy of the decision or other written notice received from the Building Inspector.)

Existing Conditions:

Owner purchased her home in 1981 and has lived in the home since then. The attached Quitclaim Deed (Attachment F) registered and recorded in the Norfolk County Registry of Deeds, Dedham, MA indicates that the deed was first recorded in 1888. Information from the Needham Treasurer's Office (Attachment G) indicates that the current structure existed as of 1915, establishing that the home was built before the existing setback requirements were put in place.

Attachment H, a copy of the Needham MuniMapper, provides an excellent visual of the lot configurations in this section of Needham. The owner's lot is a long narrow lot, with virtually one choice for adding a small full bath on the first floor.

Statement of relief sought:

To build a bathroom addition in the existing setback.

The existing structure is 3.1 feet from the property line, and the proposed structure will be 5.0 feet from the property line as illustrated on the attached Survey/Plot Plan. (Attachment A)

The existing structure has a full bath on the second floor and a ½ bath on the first floor. Ms. Livingston has been a Needham resident since 1977 and has lived in her home for nearly 40 years. During this time, she has invested in improvements that enhance the quality and beauty of the residence. Conscious of the aesthetics and beauty of Needham, she hired a local architect, David Michael Johnson, to design a small addition that would add to the neighborhood. Mr. Johnson is known for the artistic quality of his renovations to older homes, and in fact, he has worked with several homeowners in the surrounding neighborhood. An avid gardener, Ms. Livingston has been invited to be part of the Needham Garden Tour in previous years.

The owner, having first visited Needham in the 1970s when she finished her doctorate at the University of Illinois, chose the town as her future home. Dr. Livingston is an active member of the Needham Community and has served as a Town Meeting member when her schedule permitted her to attend evening meetings in May. She supports many of the local businesses. She thoroughly enjoys living in Needham and being close to the town center. Part of her decision to remain in her long-time residence is the location of her current home that offers easy and walking access to running errands in town, including grocery shopping.

She is undertaking this project now because she has made a decision to age-in-place, and is anticipating that having a full bath on the first floor will make it more likely that she will be able to remain in her long-time home.

Applicable Section(s) of Zoning By-Law: *1.4.6; 7.5.2 and any other applicable sections of the By-Law.* _____

If application under Zoning Section 1.4, listed immediately above:

List nonconformities related to lot/structure(s) in application: Lot size: frontage and side setbacks are non-conforming

Date structure(s) on lot constructed (including any additions): House built sometime between 1888 and 1915

A certified plot plan, prepared by a registered surveyor, must be attached to each of the thirteen (13) copies of this application at time of filing. Application will be returned if a copy of the plot plan is not attached to each application.

•Applications for Comprehensive permits under M.G.L. Ch. 40B require thirteen (13) copies of plot plan (two reduced to 8 ½ by 11), plus additional submissions.

Please feel free to attach any additional information/photos relative to the application.

Additional information may be requested by the Board at any time during the application or hearing process.

A hearing before the Board of Appeals, with reference to the above noted application or appeal, is requested by

Signed Cathy L. Livingston

Title Owner

Application Packets must be delivered to the Town Clerk's Office.

TOWN OF NEEDHAM, MASSACHUSETTS

Building Inspection Department

Assessor's Map & Parcel No. 19905300024

Building Permit No. _____ Zoning District SRB

Lot Area 9,809± S.F. Address 27 WARREN STREET, NEEDHAM, MA

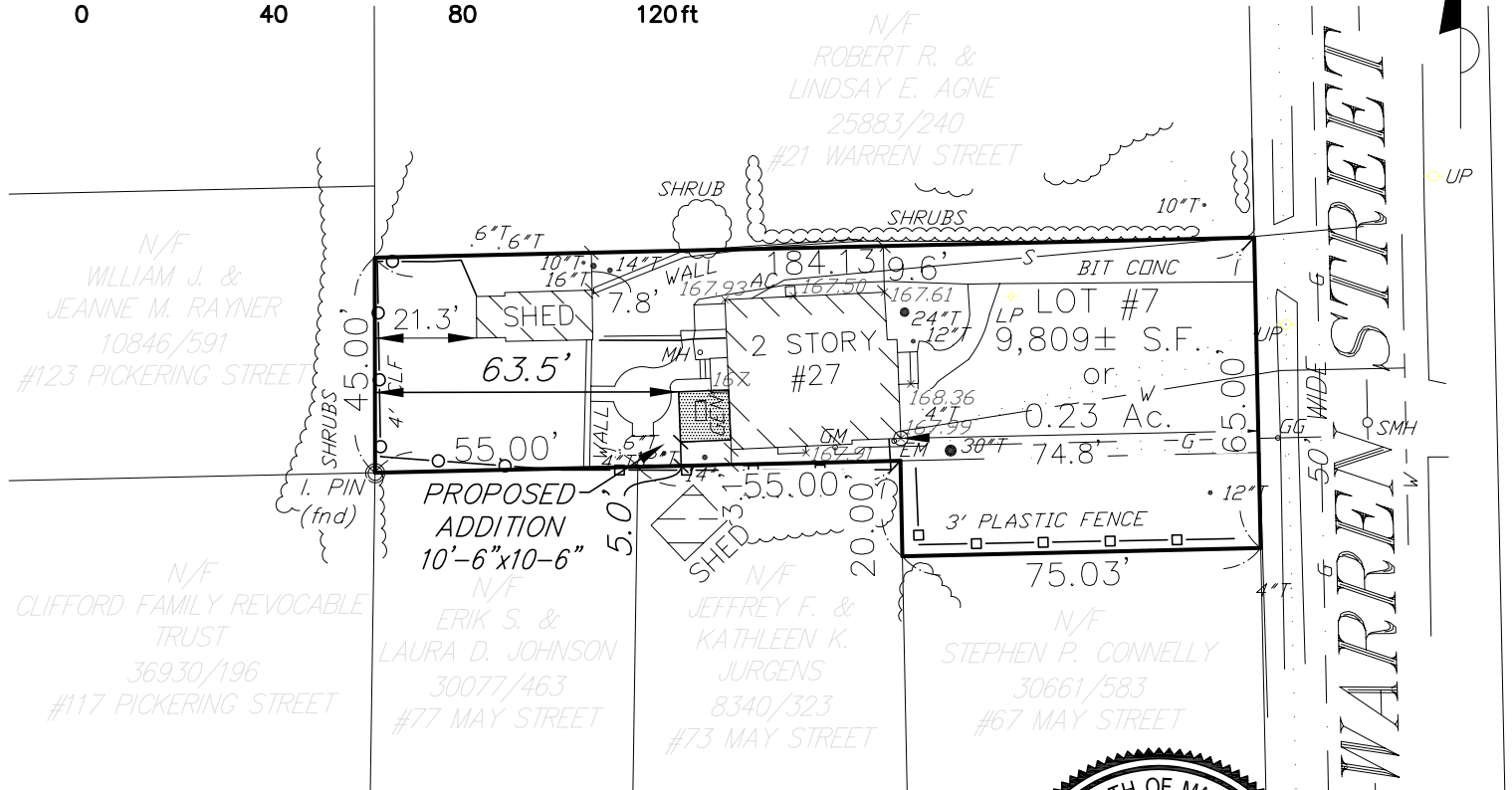
Owner CATHY LIVINGSTON Builder _____

PROPOSED PLOT PLAN / FOUNDATION ASBUILT/FINAL ASBUILT

CIRCLE ONE THAT APPLIES

SCALE: 1" = 40'

40' Scale



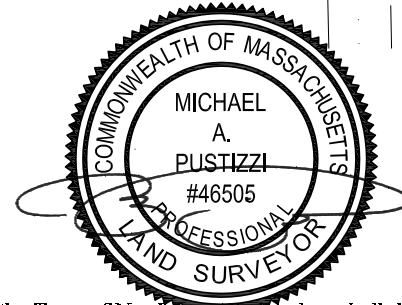
Precision Land Surveying, Inc.

32 Turnpike Road

Southborough, Massachusetts 01772

TELE NO.: (508) 460-1789 FAX NO.: (508) 970-0096

4827TP1.DWG



Note: Plot Plans shall be drawn in accordance with Sections 7.2.1 and 7.2.2 of the Zoning By-Laws for the Town of Needham. All plot plans shall show existing structures and public & private utilities, including water mains, sewers, drains, gas lines, etc.; driveways, septic systems, wells, Flood Plain and Wetland Areas, lot dimensions, lot size, dimensions of proposed structures, sideline, front and rear offsets and setback distances, (measured to the face of structure) and elevation of top of foundations and garage floor. For new construction, lot coverage, building height calculations proposed grading and drainage of recharge structures. For pool permits, plot plans shall also show fence surrounding pool with a gate, proposed pool and any accessory structures*, offsets from all structures and property lines, existing elevations at nearest house corners and pool corners, nearest storm drain catch basin (if any) and, sewage disposal system location in areas with no public sewer. (*Accessory structures may require a separate building permit — See Building Code)

I hereby certify that the information provided on this plan is accurately shown and correct as indicated.

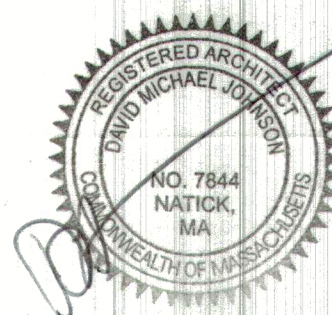
The above is subscribed to and executed by me this 15TH day of JULY 20 20

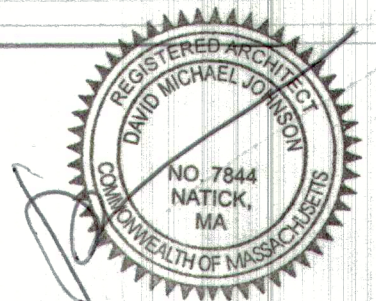
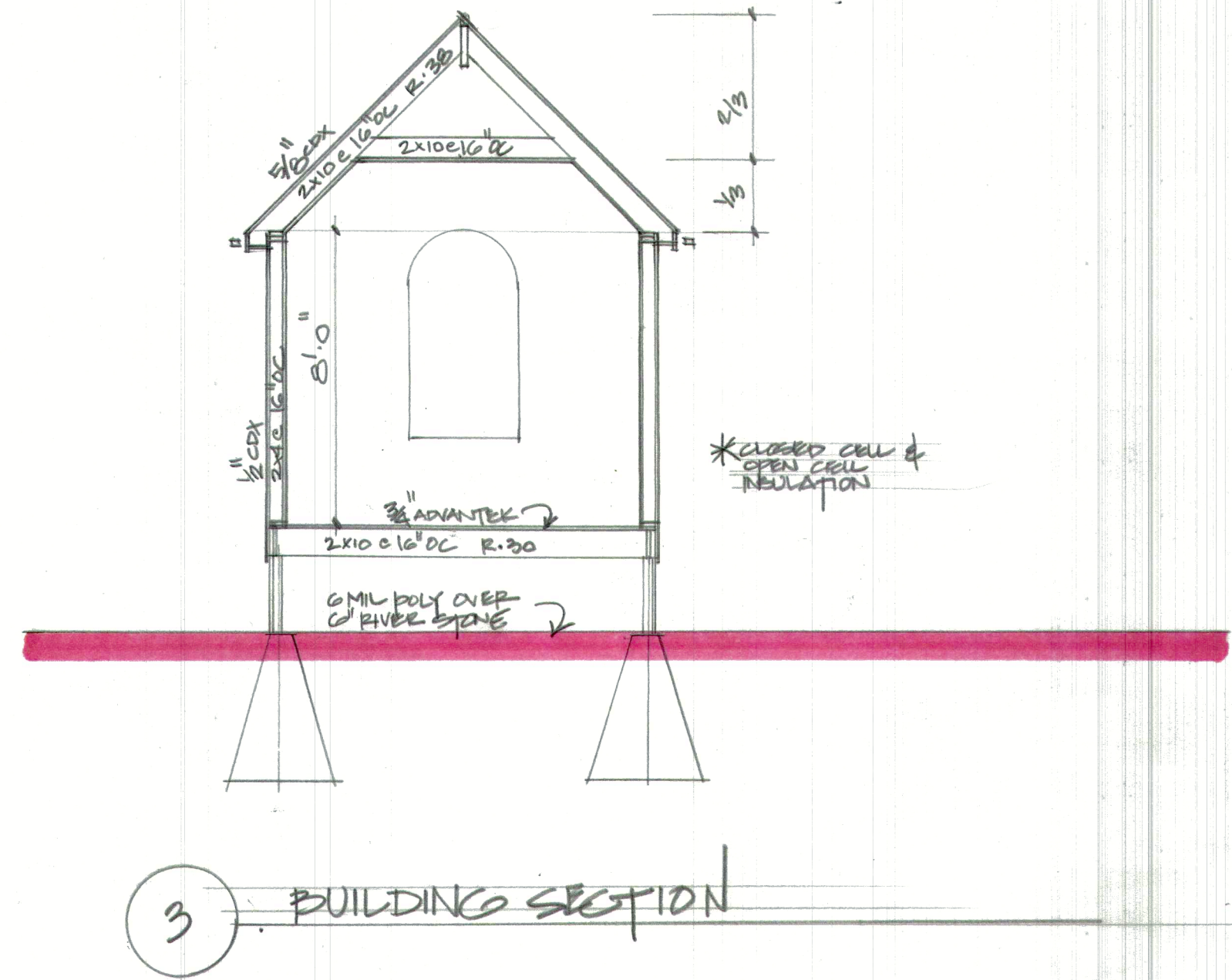
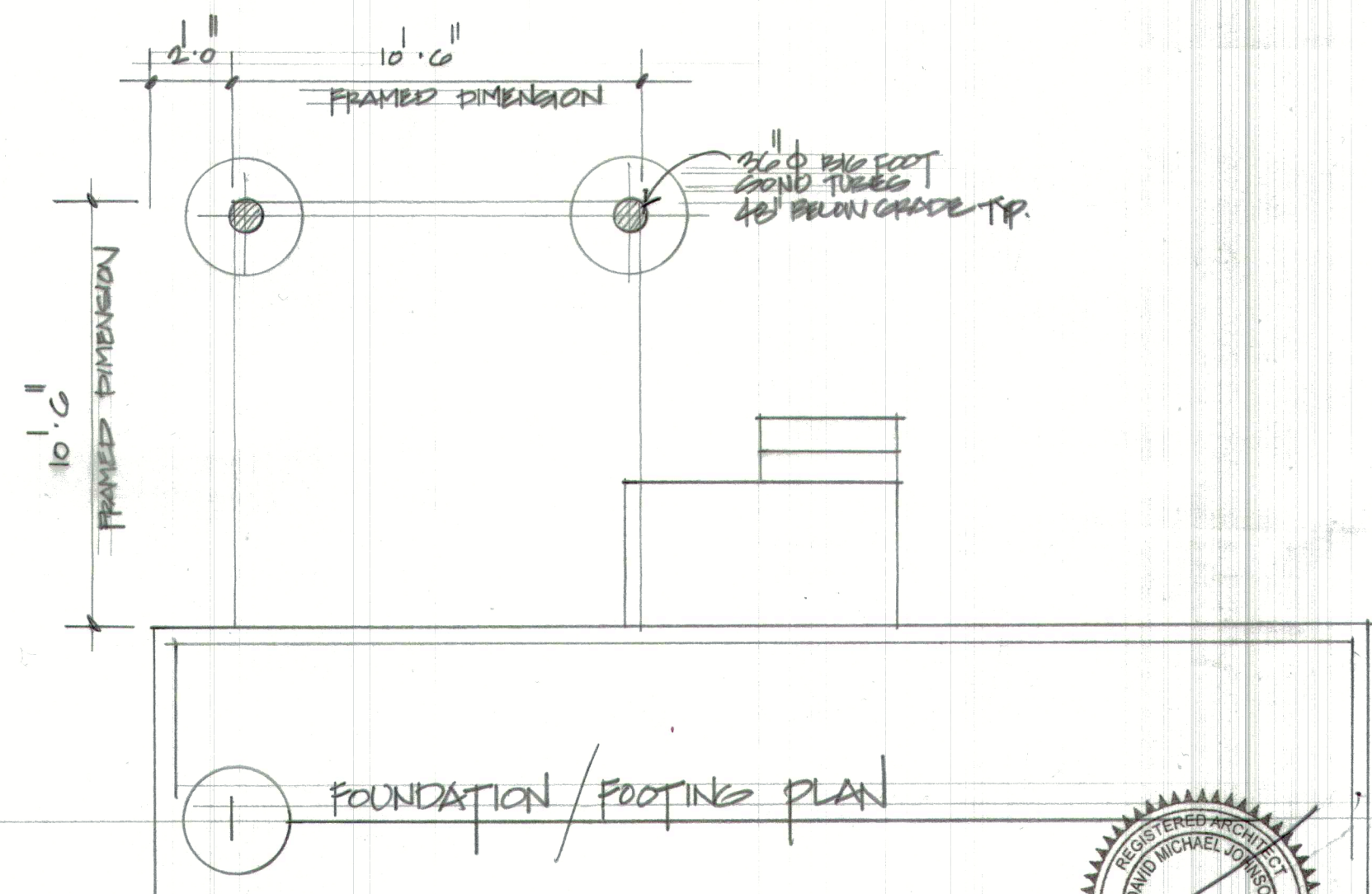
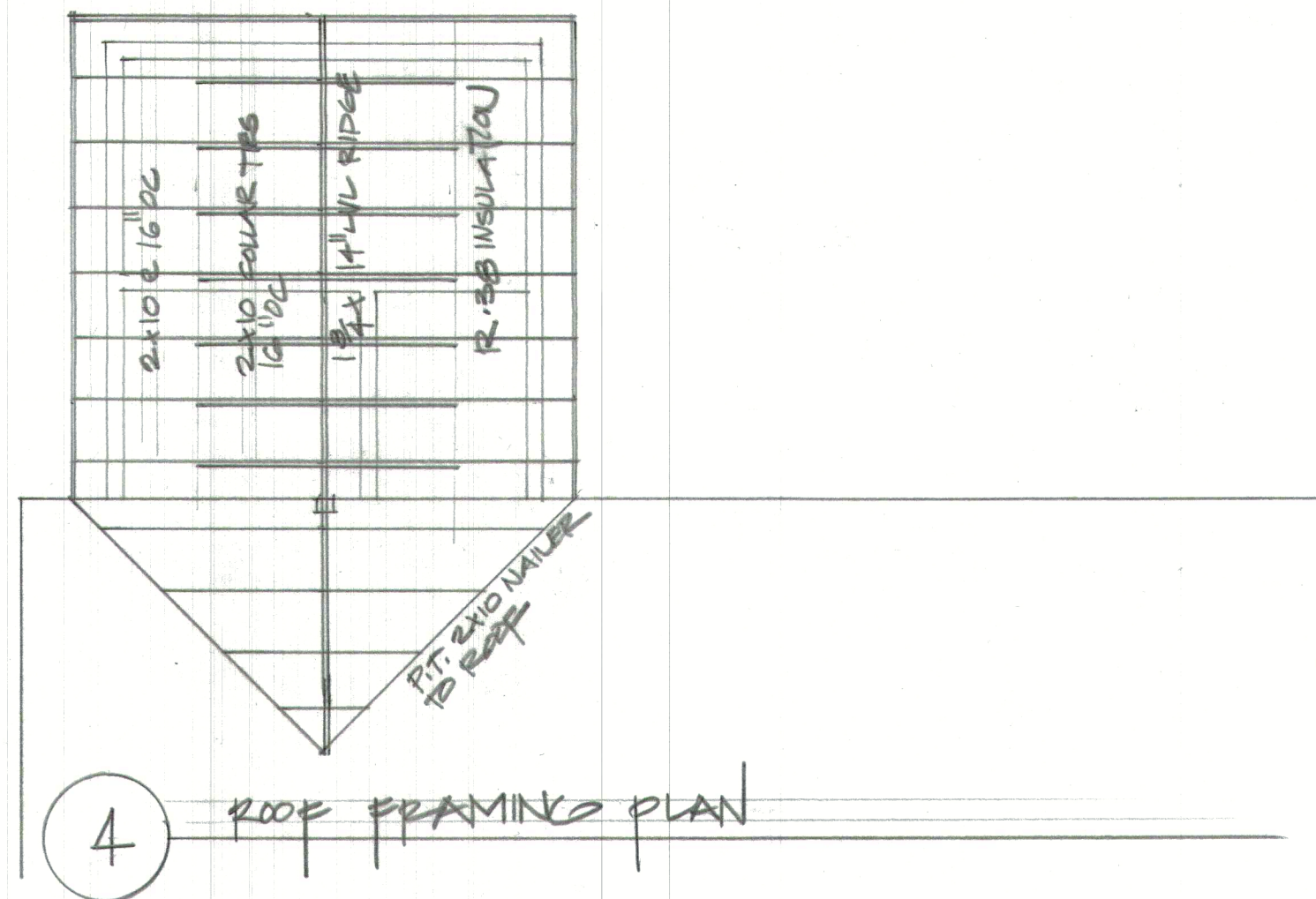
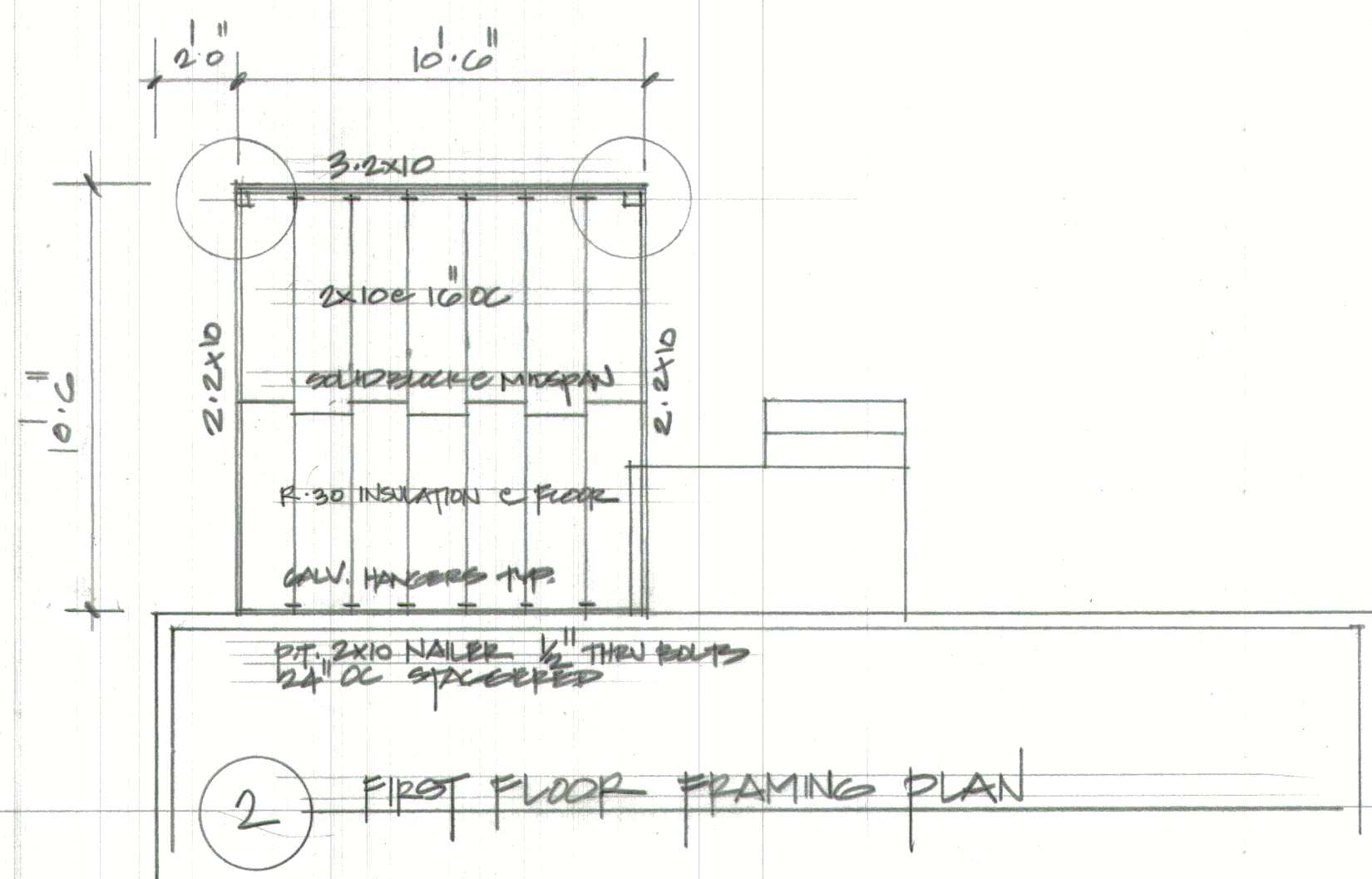
Name PRECISION LAND SURVEYING, INC. Registered Land Surveyor MICHAEL PUSTIZZI No. 46505

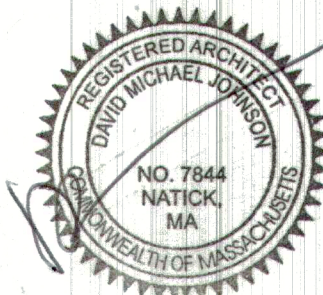
Address 32 TURNPIKE ROAD City SOUTHBOROUGH MA Zip 01772 Tel. No. (508) 460-1789

Approved _____ Director of Public Works Date _____

Approved _____ Building Inspector Date _____



[illegible]

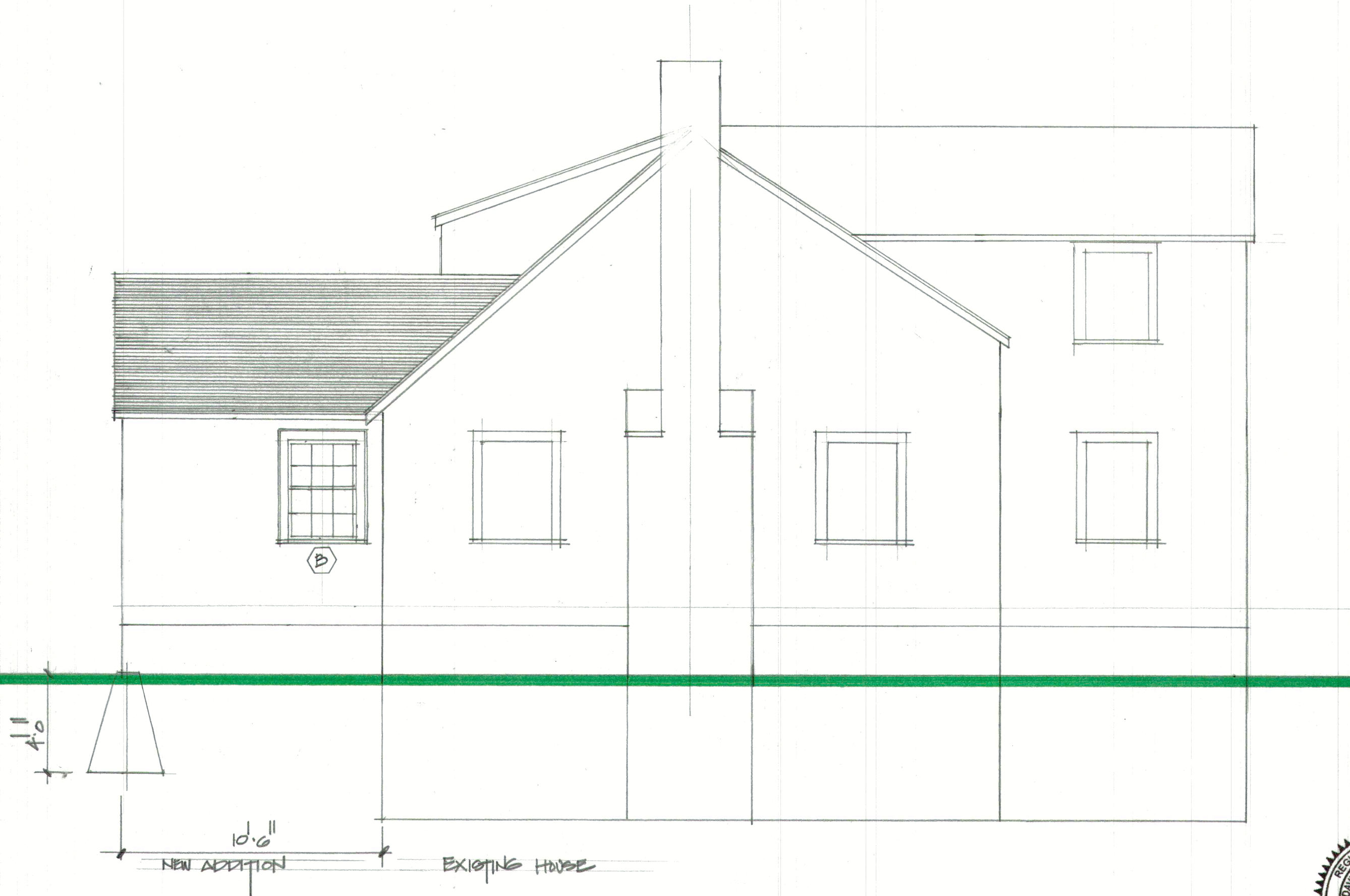


REVISIONS	BY

THE LIVINGSTON RESIDENCE
20 June • 2020
REAR EXTERIOR ELEVATION A•3
27 WARREN STREET NEEDHAM, MA

STUDIO ♦ TWENTY ♦ SIX
Architecture • Interiors • Urban Design • Planning
39 West Plain Street • Wayland, MA 01778 • www.StudioTwentySix.com
phone (617) 733-2861 email S26 2x4@aol.com

Date
Scale
Drawn
Job
Sheet
A3
Of Sheets



THE LIVINGSTON RESIDENCE
1/4" = 1' - 0"
20 June • 2020
SIDE EXTERIOR ELEVATION
A • 4
27 WARREN STREET NEEDHAM, MA

STUDIO ♦ TWENTY ♦ SIX
Architecture • Interiors • Urban Design • Planning
39 West Plain Street • Wayland, MA 01778 • www.StudioTwentySix.com
phone (617) 733•2861 email S26 2x4@aol.com

Date
Scale
Drawn
Job
Sheet
A4
Of Sheets

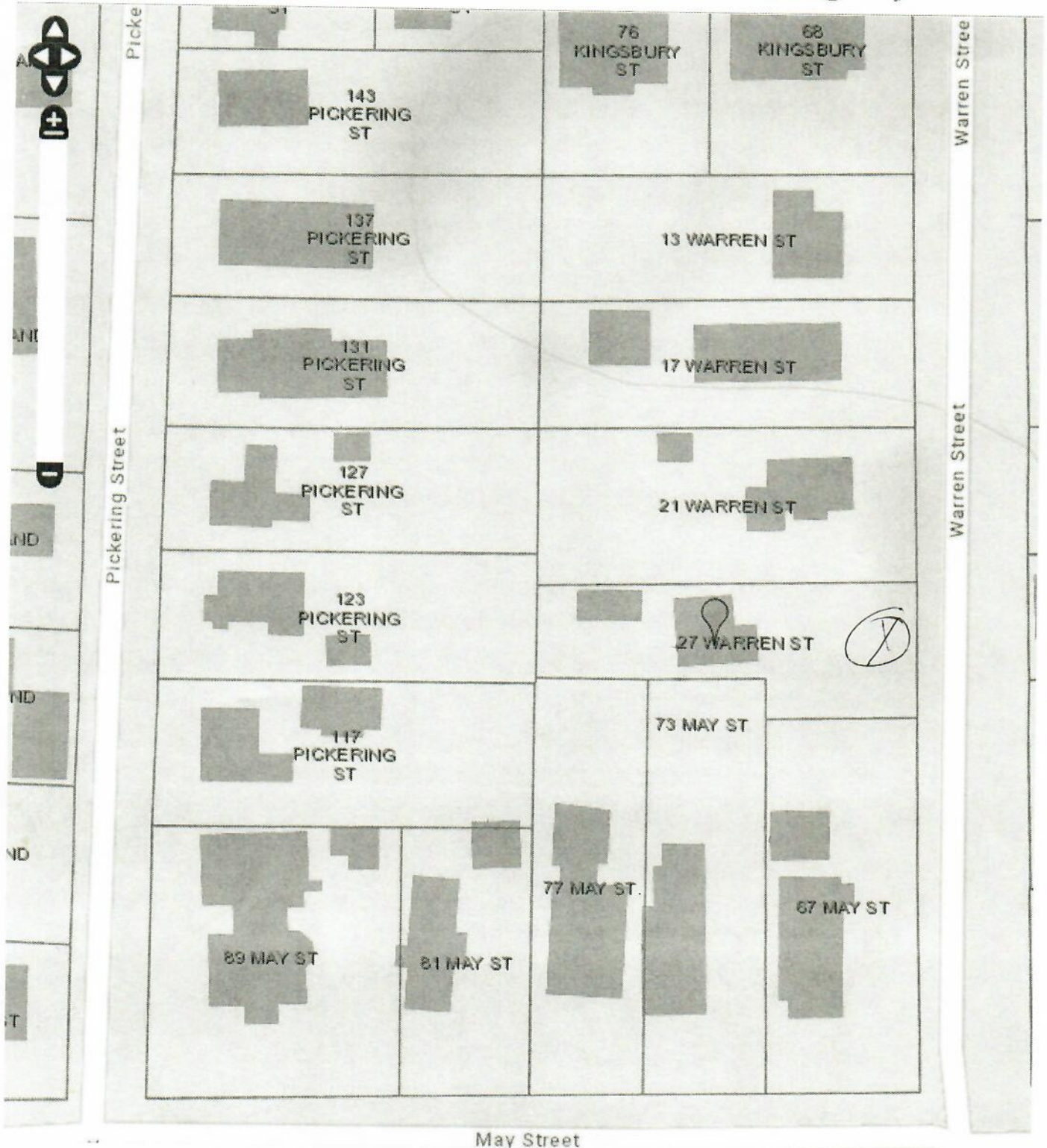
REVISIONS	BY



MuniMapper: Needham, MA

[Town of Needham Web Site](#)

[Disclaimer](#)



RECEIVED AND RECORDED
NORFOLK COUNTY
REGISTRY OF DEEDS
DEDHAM, MA

N O T
A N

N O T
A N

O F F I C I A L

O F F I C I A L

CERTIFY

C O P Y

C O P Y

William P. O'Donnell
WILLIAM P. O'DONNELL, REGISTER

QUITCLAIM DEED

I, **CATHY L. LIVINGSTON**, of Needham, Massachusetts, for consideration of One Dollar and 00/100 (\$1.00)

GRANT TO: myself, **CATHY L. LIVINGSTON**, as Trustee of the **CATHY L. LIVINGSTON REVOCABLE TRUST**, dated March 25, 2019, a Trust Certificate for which is to be recorded herewith, of 27 Warren Street, Needham, Massachusetts

with Quitclaim Covenants

That certain parcel of land situated in Needham, Norfolk County, Massachusetts, consisting of two parcels, the first parcel being a portion of Lot 11 shown on a "Plan of Land in Needham belonging to C.M. Ayer et al," C. Atherton Hicks, C.E., dated 1888 and recorded with Norfolk Deeds as Plan No. 507, and the second parcel being a portion of Lot 7 shown on said plan, the two parcels being bounded and described as follows:

- FIRST Beginning at a point on Warren Street at the division line between said Lot 11 and Lot 7 on said plan, and thence running Westerly along the division line of said Lots 11 and 7 and Lot 8 on said plan, One hundred eighty-five (185) feet to Lot 10 on said plan; Thence turning and running Easterly on said Stevenson land, One hundred eighty-five (185) feet to said Warren Street; Thence turning and running Southerly on said Warren Street, Forty-five (45) feet to said Lot 7 and the point of beginning, be any or all of said measurements more or less;
- SECOND Beginning at a point on the Westerly side of Warren Street, at the boundary of the said Lot 7 and Lot 11 as shown on said plan, said point being approximately Two hundred (200) feet from the Northerly side of May Street;
- Thence running Westerly on the land now or formerly of Ralph E. Bailey, Seventy-five (75) feet to a bound;
- Thence turning and running Southerly in a straight line for a distance of twenty (20) feet, said line being bounded by land now or formerly of James E. Tisdale;

Thence ~~Running~~ Easterly to ~~road~~ Warren Street at a point Twenty (20) feet South of the point of beginning; Thence ~~turning~~ Northerly and turning a distance of Twenty (20) feet along the said Warren Street to the point of beginning. The above described Land is rectangular in shape

Second Lot
Containing fifteen hundred (1500) square feet of land, all of being more or less.

For my title, see deed of Dennis M. Bailen and Cathy L. Livingston dated April 11, 1986, recorded with Norfolk Registry of Deeds in Book 7018, page 2.

WITNESS my hand and seal this 25th day of March, 2019.

Cathy L. Livingston

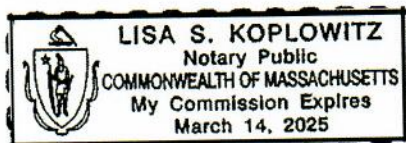
CATHY L. LIVINGSTON

THE COMMONWEALTH OF MASSACHUSETTS

Norfolk, ss:

March 25, 2019

Before me, the undersigned Notary Public, personally appeared CATHY L. LIVINGSTON, proved to me through satisfactory evidence of identification, which was - a Massachusetts driver's license - to be the person whose name is signed on the preceding document and acknowledged to me that she signed it voluntarily for its stated purpose.



Lisa S. Koplowitz

Lisa S. Koplowitz, Notary Public
My commission expires: 3/14/2025

ADDRESS OF PREMISES: 27 Warren Street, Needham, MA

CERTIFY

William P. O'Donnell
WILLIAM P. O'DONNELL, REGISTER

N O T
A N
Discharge of Mortgage
N O T
A N

O F F I C I A L O F F I C I A L

Needham Bank, formerly known by change of name as The Needham Cooperative Bank, and successor by merger to The Dedham Cooperative Bank, of Needham, Massachusetts, the mortgagee named in a certain mortgage given by

Cathy L. Livingston

to The Needham Cooperative Bank

dated **March 27, 2006** and recorded with **Norfolk County Registry of Deeds, Book 23525, Page 479** and recorded with Registry District of the Land Court, and noted as **Document No. _____ on Certificate No. _____, Book _____ Page _____** hereby acknowledges that it has received full payment and satisfaction of the same, and in consideration thereof it hereby cancels and **Discharges** said mortgage.

In witness whereof, the Needham Bank has caused its corporate seal to be hereunto affixed and these presents to be signed, acknowledged, and delivered in its name and behalf by **Mark R. Whalen, President** this 1st day of February, 2013 A.D.

NEEDHAM BANK

By

Mark R. Whalen
Mark R. Whalen, President

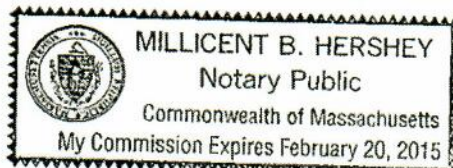


Commonwealth of Massachusetts

Norfolk ss:

February 1, 2013

Before me, the undersigned Notary Public, personally appeared Mark R. Whalen, President of the Needham Bank, proved to me through satisfactory evidence of identification, which was a driver's license, to be the person whose name is signed on the preceding document, and acknowledged to me that he signed it voluntarily for its stated purpose.



Millicent B. Hershey
Notary Public
My Commission expires: **2.20.2015**

Property Address: 27 Warren Street, Needham, MA 02492



October 10, 2020

To Whom It May Concern,

I'm writing in support of the small renovation project Cathy Livingston is proposing for her property located at 27 Warren Street. I'm a direct abutter at 21 Warren Street, have seen and discussed the plans with her, and think it would be a very reasonable and tasteful addition. I believe it would blend in well with the surrounding landscape, and offer my full support to move forward.

Regards,
Rob Agne
21 Warren Street

October 12, 2020

Dear Zoning Board of Appeals Needham,

My name is Kathleen Jurgens and my family and I have lived at 73 May Street since 1989. Our property abuts in the rear that of Ms. Cathy Livingston of Warren St. She is in the process of constructing a single-story bathroom addition that per the plans would be 5 feet from our lot line. Most of the homes in our neighborhood are nonconforming as the lots were developed more than 100 years ago. She has employed the professional services of architect David Johnson who is well known to me as we also used his services years ago, as did other direct neighbors. He has drawn a wonderful addition and we are fully supportive of their project going forward as drawn. In my estimation there is no down side to this project.

If there is any clarification or questioning that you have please don't hesitate to contact me. It is quite amazing the amount of change and redesign our neighborhood has gone through in the last 10 years! Needham continues to be a very desirable place to live!

Sincerely,

Kathleen Kenney Jurgens

617-571-7259

kathleenjurgens@gmail.com

GEORGE GIUNTA, JR.
ATTORNEY AT LAW*
281 Chestnut Street
Needham, MASSACHUSETTS 02492
*Also admitted in Maryland

TELEPHONE (781) 449-4520

FAX (781) 465-6059

October 26, 2020

Town of Needham
Zoning Board of Appeals
Needham, Massachusetts 02492

Attn: Daphne M. Collins, Administrative Specialist

Re: Lawrence A. Gordon, Trustee
Lawrence A. Gordon 2019 Trust
11 Gatewood Drive, Needham, MA
Variance / Special Permit Request

Dear Mrs. Collins,

Please be advised that I represent Lawrence A. Gordon, Trustee, Lawrence A. Gordon 2019 Trust (hereinafter, the "Applicant") relative to the property at 11 Gatewood Drive, Needham, MA (the "Premises"), which he owns. In connection therewith, submitted herewith pursuant to the Covid-19 virtual application procedure, please find the following:

1. A Completed Application for Hearing
2. One copy of architectural plans titled "New Residence, 11 Gatewood Rd, Needham, MA", prepared by McKay Architects, 35 Bryant Street, Dedham, MA 02026, consisting of seven sheets, as follows: Sheet A-1.1 "Basement Floor Plan", dated 10/23/20, Sheet A-1.2 "First Floor Plan", dated 10/23/20, Sheet A-1.3 "Second Floor Plan", dated 10/23/20, Sheet A-2.1 "Front Elevation", dated 9/28/20, Sheet A-2.2 "Right Side Elevation", dated 9/28/20, Sheet A-2.3 "Rear Elevation", dated 9/28/20, Sheet A-2.4 "Left Side Elevation", dated 9/28/20;
3. One copy of Topographic Site Plan, dated October 21, 2020, prepared by VTP Associates, Inc., 132 Adamas Street, 2nd Floor, Suite 3, Newton, MA 02458; and
5. Check no. 1035 in the amount of \$200 for the applicable filing fee.

The Premises is identified as Parcel 68 on Town of Needham Assessor's Map No. 211. It is located in the Single Residence A (SRA) Zoning District, which requires 43,560 square feet of area and 150 feet of frontage. While the Premises has well over 150 feet of frontage on Gatewood Drive, it consists of only approximately 41,171 square feet of area, and therefore is non-conforming.

The lot was created by a subdivision plan, approved by the Needham Planning Board on October 4, 1966, endorsed by the Board the following month, and duly recorded at the Norfolk County Registry of Deeds as Plan No. 1130 of 1966 in Plan Book 221. Shortly thereafter, a single-family house was built upon the Premises.

The aforementioned subdivision plan indicates that the Premises contained approximately 44,127 square feet of area. However, a recent instrument survey conducted on behalf of the new owner has determined that the plan contained an error, and that the Premises actually contains only 41,171 square feet of land. As a result, the lot is non-conforming, as was the house that was built upon it.

The Applicant purchased the property with the intention to demolish the existing house and construct a new single-family home in its place. However, due to the aforescribed nonconformity, the construction of the new house now requires zoning relief; either in the form of a variance from the minimum lot area requirements, or a special permit to change, extend, alter, enlarge and reconstruct the dwelling. Such is the purpose of the application filed herewith.

Please schedule this matter for the next available hearing of the Board, whether in person or via Zoom or other electronic format. In the meantime, if you have any questions, comments or concerns relative to the foregoing, please do not hesitate to contact me so that I may be of assistance.

Your courtesy and attention are appreciated.

Sincerely,

A handwritten signature in dark ink, appearing to read 'George Giunta, Jr.', with a stylized, cursive script.

George Giunta, Jr.



**TOWN OF NEEDHAM
MASSACHUSETTS
BOARD OF APPEALS**

APPLICATION FOR HEARING

IT IS STRONGLY RECOMMENDED THAT APPLICANTS CONSULT WITH THE BUILDING INSPECTOR PRIOR TO FILING THIS APPLICATION.

Note: Application must be complete, with certified plot plan attached, and application fee included, or application will not be accepted.

Date: October 26, 2020

Name of Applicant or Appellant Lawrence A. Gordon, Trustee, Lawrence A. Gordon 2019 Trust

Address: 264 Country Way, Needham, MA 02942

(Optional) E-mail address: lagordon100@gmail.com

Daytime telephone: 508-922-5661

(Optional) Cell phone: same as above

(Optional) additional contact information, (ie: ☐ contractor ☐ architect, ☐ builder or ☒ attorney):

George Giunta, Jr., Esq. – 281 Chestnut Street, Needham, MA 02492

781-449-4520

Address/Location of Property 11 Gatewood Drive, Needham, MA

Assessor Map / Parcel Number Map 211, Parcel 68

Zone for property: Single Residence A (SRA)

Is property within 100 feet of wetlands, 200 ft. of stream or in flood plain? ☐ Yes ☒ No

Applicant is ☒ owner, ☐ tenant, ☐ prospective tenant, ☐ licensee ☐ prospective purchaser

Type of Permit requested: ☒ residential or ☐ commercial

If residential renovation, will renovation constitute “new construction”? ☒ yes ☐ no

If commercial, please consult with building inspector regarding parking issues

Select one: ☒ Special Permit ☒ Variance ☐ Comprehensive Permit, M.G. L Ch. 40B

☐ Amendment

☐ Appeal Building Inspector Decision*

*(For an appeal from decision of Building Inspector, attach copy of the decision or other written notice received from the Building Inspector.)

Statement of relief sought:

Statement of relief sought:

1. Variance, pursuant to Section 7.5.3 and / or M.G.L. c. 40A, Section 10, from applicable minimum lot area requirement of Section 4.2.3 of the Zoning By-Law; or, in the alternative,
2. Special permit pursuant to Section 1.4.6 of the Zoning By-Law, and a finding pursuant to M.G.L. c.40A, Section 6, for the change, extension, alteration, enlargement and reconstruction of a lawful, pre-existing, non-conforming structure, and
3. All other relief that is or may be necessary and proper to permit the construction of a single-family dwelling at the Premises.

Applicable Section (s) of Zoning By-Law 1.4.6, 4.2.3, 7.5.2, 7.5.3 and any other applicable Section or By-Law

If application under Zoning Section 1.4, listed immediately above

List nonconformities related to lot/structure(s) in application:

Less than required lot area (Premises consists of approx. 41,171 square feet v 43,560 square feet required);

Date structure(s) on lot constructed (including any additions):

1972

Date lot created:

1966

Additional information may be requested by the Board at any time during the application or hearing process.

A hearing before the Board of Appeals, with reference to the above noted application or appeal, is requested by

Lawrence A. Gordon, Trustee
Lawrence A. Gordon 2019 Trust
By his attorney,



Signed _____
George Giunta, Jr., Esq.

New Residence

11 Gatewood Rd
Needham, MA

OWNER

architects
mckay

110 River Street
Needham, MA 02462
TEL: 617.552.0000
WWW.MCKAYARCHITECTS.COM



REVISIONS		DATE	DESCRIPTION
1	1/1/20	10/22/20	10/22/20
2	1/1/20	10/22/20	10/22/20
3	1/1/20	10/22/20	10/22/20
4	1/1/20	10/22/20	10/22/20
5	1/1/20	10/22/20	10/22/20
6	1/1/20	10/22/20	10/22/20
7	1/1/20	10/22/20	10/22/20
8	1/1/20	10/22/20	10/22/20
9	1/1/20	10/22/20	10/22/20
10	1/1/20	10/22/20	10/22/20

DISCLAIMER: AIA CEU DECLARATION
I have drawn and specifications for this project and I am a duly licensed architect in the State of Massachusetts. I have not been convicted of any crime involving moral turpitude and I have not been disciplined by any professional body. I have not been convicted of any crime involving moral turpitude and I have not been disciplined by any professional body. I have not been convicted of any crime involving moral turpitude and I have not been disciplined by any professional body.

Basement
Floor Plan

JOB NO.

DATE

DWG. BY

CHECKED BY

SCALE

A-1.1

**11 Gatewood Rd
Needham, MA**

architects
mckay

A circular official stamp from the Registrar General's Office, Madras. The outer ring contains the text "REGISTERED ASSISTANT REGISTRAR GENERAL'S OFFICE MADRAS". Inside the ring, it says "NO. 10847" and "MADRAS". A diagonal line crosses through the center of the stamp.

[illegible]

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These *drawings* and specifications are the property and copyright of McKoy Architects and shall not be used in whole or in part, or shall be assigned to a third party, without the express written permission of McKoy Architects.

Contractor to verify all information and dimensions in the field prior to start of construction in order to verify McKoy Architects of any discrepancies.

JOH NO	
DATE	10.22.20
DWG BY	JR
CED BY	MM
SCALE	

14" = 1'-0"

A-1.2

New Residence

11 Gateway Rd
Needham, MA

OWNER

brothers
mckay

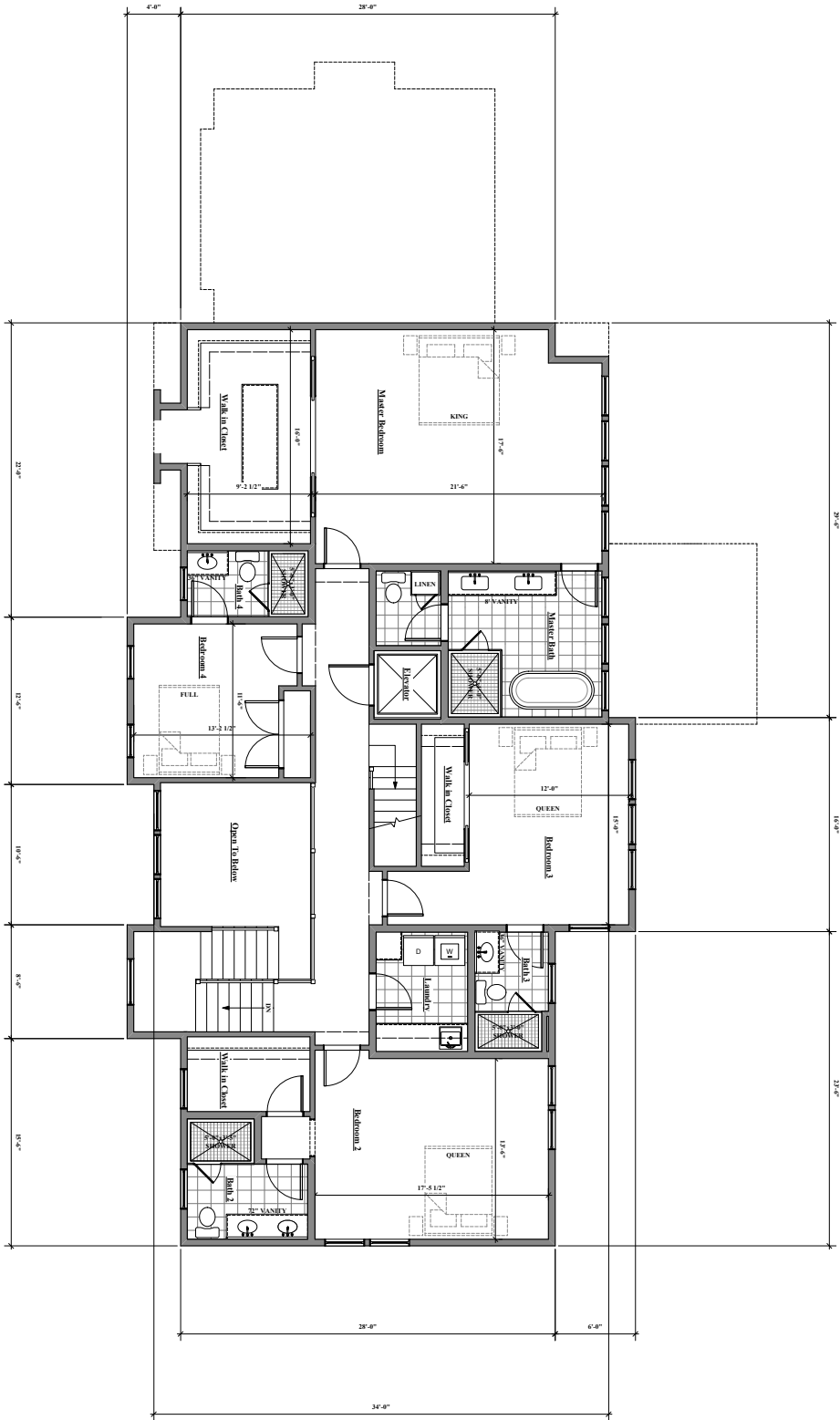
1250 Beacon Street
Boston, MA 02116
Tel: 617.267.0000
Fax: 617.267.0000



DISCLAIMER: AIA CE REQUIREMENTS
This drawing and specifications are the property of the architect and are to be used only for the project and site specified herein. No part of this drawing may be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the architect. The architect assumes no responsibility for construction methods or materials not specified herein. The architect is not responsible for construction methods or materials not specified herein. The architect is not responsible for construction methods or materials not specified herein.

Second Floor Plan

JOB NO.		A-1.3
DATE	10.22.20	
DWG. BY	JH	
CAD. BY	MAI	
SCALE	1/4" = 1'-0"	



1 Second Floor Plan (2250 sf)
A-1.3 1/4" = 1'-0"

**11 Gatewood Rd
Needham, MA**

OWNER



25 Bryant Street
Dedham, MA 01936
Tel 781.326.5400
www.mckaynathedirect

[illegible]

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Contractor to verify all information and dimensions in the field prior to making any construction and to notify Mr. & Mrs. Architects of any discrepancies.

Front Elevation

JO# NO	
DATE	09/28/20
DWG BY	JM
CADD BY	MM
SCALE	

BA = 1'-0"

A-2.1

11 Gatewood Rd
Needham, MA

mckay architects

[illegible]

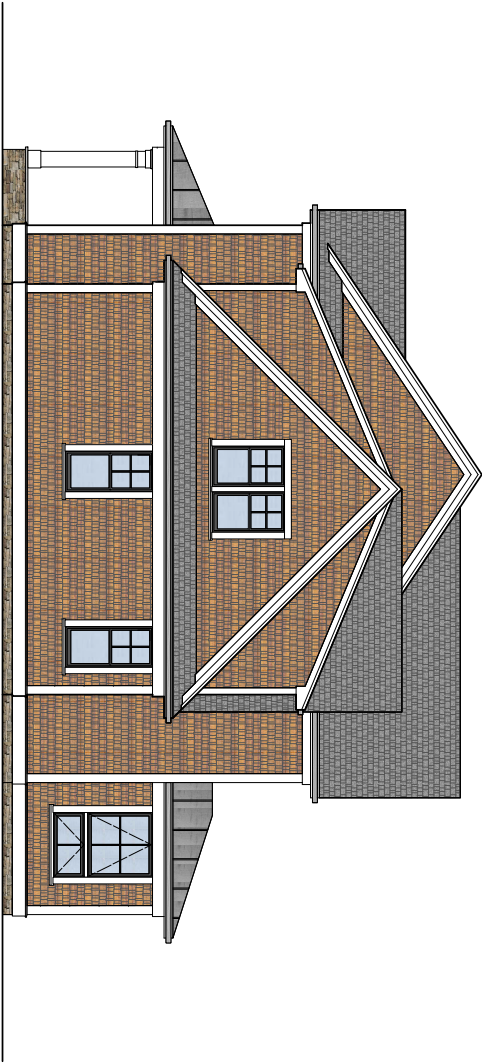
The so-called legal and specification issues are the proprietary and copyright of the McKay Architects and shall not be used in whole or in part, nor shall be assigned to a third party without the express written permission of McKay Architects.

Contractors to verify all information and assumptions in the fields prior to start of construction and is to notify McKay Architects of any discrepancies.

Right Side Elevation

JOB NO	
DATE	09.28.20
DWG BY	JB
CSD BY	MM
SCALE	

A-2.2



1	Right Side Elevation
A-2.21	1/4" = 1'-0"

**11 Gatewood Rd
Needham, MA**

OWNER

architects
mckay

35 Bryant Street
Dedham, MA 01935
Tel: 781.326.5400
www.melbourntheatret.com

[illegible]

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Contractor to verify all information and dimensions used in the field prior to making any corrections and to notify Mr. & Mrs. Architects of any discrepancies.

Rear Elevation

JOB NO	
DATE	09.28.20
DWG BY	JH
CAD BY	MLAI
SCALE	

A-2.3

New Residence

11 Gateway Rd
Needham, MA

OWNER

architects
mckay

125 Boston Avenue
Boston, MA 02116
www.mckayarchitects.com



DATE: 08/28/2018
DRAWN BY: JH
CHECKED BY: JH
SCALE: 1/4" = 1'-0"

DISCLAIMER: ALL THE DOCUMENTS
have been prepared and specifications are the
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document shall be reproduced or transmitted
in any form or by any means electronic or
mechanical, including photocopying, recording,
or by any information storage and retrieval
system, without permission in writing from the
architect.

Left Side
Elevation

JOB NO.

DATE: 08/28/2018

DRAWN BY: JH

CHECKED BY: JH

SCALE

A-2.4



1
A-2.4
Left Side Elevation
1/4" = 1'-0"

- LEGEND**
- BUILDING
- PROPERTY LINE W/ BEARING DISTANCE
- SHRUBS
- CONTOUR
- STOCKADE FENCE
- CHAINLINK FENCE
- POCKET FENCE
- SEWER LINE
- DRAIN LINE
- WATER LINE
- GAS LINE
- GAS VALVE
- WATER VALVE
- PAVED DRIVE
- SEWER MANHOLE
- CATCH BASIN
- UTILITY POLE
- UTILITY PILE
- DECIDUOUS TREE
- CONIFEROUS TREE
- FIRE HYDRANT
- 8" x 8" 2"
- 6" x 6" 1"
- 4" x 4" 1"
- 3" x 3" 1"
- 2" x 2" 1"
- 1" x 1" 1"
- 1/2" x 1/2" 1"
- 1/4" x 1/4" 1"
- 1/8" x 1/8" 1"
- 1/16" x 1/16" 1"
- 1/32" x 1/32" 1"
- 1/64" x 1/64" 1"
- 1/128" x 1/128" 1"
- 1/256" x 1/256" 1"
- 1/512" x 1/512" 1"
- 1/1024" x 1/1024" 1"
- 1/2048" x 1/2048" 1"
- 1/4096" x 1/4096" 1"
- 1/8192" x 1/8192" 1"
- 1/16384" x 1/16384" 1"
- 1/32768" x 1/32768" 1"
- 1/65536" x 1/65536" 1"
- 1/131072" x 1/131072" 1"
- 1/262144" x 1/262144" 1"
- 1/524288" x 1/524288" 1"
- 1/1048576" x 1/1048576" 1"
- 1/2097152" x 1/2097152" 1"
- 1/4194304" x 1/4194304" 1"
- 1/8388608" x 1/8388608" 1"
- 1/16777216" x 1/16777216" 1"
- 1/33554432" x 1/33554432" 1"
- 1/67108864" x 1/67108864" 1"
- 1/134217728" x 1/134217728" 1"
- 1/268435456" x 1/268435456" 1"
- 1/536870912" x 1/536870912" 1"
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- 1/4294967296" x 1/4294967296" 1"
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GEORGE GIUNTA, JR.
ATTORNEY AT LAW*
281 Chestnut Street
Needham, MASSACHUSETTS 02492
*Also admitted in Maryland

TELEPHONE (781) 449-4520

FAX (781) 465-6059

October 26, 2020

Town of Needham
Zoning Board of Appeals
Needham, Massachusetts 02492

Attn: Daphne M. Collins, Administrative Specialist

Re: Donald W. Hollings
1 Wellesley Avenue, Needham, MA

Dear Ms. Collins,

Please be advised this office represents Donald W. Hollings (hereinafter the "Applicant") with respect to his property located at 1 Wellesley Avenue, Needham, MA, but currently known and numbered 323 Oakland Street, Wellesley, MA (hereinafter the "Premises"). In connection therewith, submitted herewith please find:

1. A Completed Application for Hearing
2. One copy of Architectural Plans, prepared by Joseph Tatone & Associates, LLC, 2 Kings Row, North Reading, MA 01864, dated 9/30/20, consisting of six sheets, as follows: A102, Duplex Design, 323 Oakland St., Wellesley MA, 1 Wellesley Ave, Needham, MA, First Floor Plan; A103, Duplex Design, 323 Oakland St., Wellesley MA, 1 Wellesley Ave, Needham, MA, Second Floor Plan; A301, Duplex Design, 323 Oakland St., Wellesley MA, 1 Wellesley Ave, Needham, MA, Front Elevation; A302, Right and Left Side Elevations; A303, Duplex Design, 323 Oakland St., Wellesley MA, 1 Wellesley Ave, Needham, MA, Rear Elevation; A102, Detached Garage, Floor Plan; and A302, Detached Garage, Exterior Elevations.
3. One copy of "Site Development Plan" and one copy of "Stormwater Report, both prepared by The Jillson Company, Inc., 32 Fremont Street, Needham, MA 02494, and both dated 10/23/20; and
4. Check no. 1036 in the amount of \$500 for the applicable filing fee.

The Premises is currently occupied by a two-family house as well as several additional structures, previously used for various commercial purposes. The house, which appears to have been constructed prior to 1925, is located partially in Needham, and partially in Wellesley. As indicated in the application and shown on the plans submitted herewith, the Applicant is requesting permission to demolish the existing dwelling (as well as the other structures), and replace it with a new two-family dwelling and detached garage, located entirely in Needham.

In 2018 the Premises was the subject of an application for zoning relief pursuant to Section 1.4.10 of the By-Law, to substitute all of the existing structures (as pre-existing non-conforming) with four dwelling units in two new structures. That application was denied by Decision dated July 19, 2018, filed with the Town Clerk on January 16, 2019. Since those proceedings, the Applicant has worked diligently to develop a redevelopment plan for the Premises that addresses the concerns of the neighborhood and garner their support. As evidenced by the multiple letters of support submitted herewith, it would appear that he has been successful in that endeavor.

Moreover, in as much as the prior application was put forth pursuant to Section 1.4.10 and the current application pursuant to Section 1.4.7, the two applications request legally separate and distinct relief, and the restriction on so-called "repetitive petitions" set forth in M.G.L. c.40A, Section 16 does not apply.

Please schedule this matter for the next available hearing of the Board, whether in person, via Zoom or other electronic format. In the meantime, if you have any questions, comments or concerns relative to the foregoing, please do not hesitate to contact me so that I may be of assistance.

Your courtesy and attention are appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "George Giunta, Jr.", with a stylized, cursive script.

George Giunta, Jr.



**TOWN OF NEEDHAM
MASSACHUSETTS
BOARD OF APPEALS**

APPLICATION FOR HEARING

IT IS STRONGLY RECOMMENDED THAT APPLICANTS CONSULT WITH THE BUILDING INSPECTOR PRIOR TO FILING THIS APPLICATION.

Note: Application must be complete, with certified plot plan attached, and application fee included, or application will not be accepted.

Date: October 26, 2020

Name of Applicant or Appellant Donald W. Hollings

Address: 75 Glenridge Road

Dedham MA 02026

(Optional) E-mail address: dwholl305@gmail.com

Daytime telephone: 781-956-6713

(Optional) Cell phone: _____

(Optional) additional contact information, (ie: ☐ contractor ☐ architect, ☐ builder or ☒ attorney):

George Giunta, Jr., Esq. – 281 Chestnut Street, Needham, MA 02492

781-449-4520; george.giuntajr@needhamlaw.net

Address/Location of Property 1 Wellesley, Needham, MA 02494 & 323 Oakland Street, Wellesley, MA 02481

Assessor Map/Parcel Number Map 106, Parcels 45 & 49

Zone for property: Single Family Residential B (SRB)

Is property within 100 feet of wetlands, 200 ft. of stream or in flood plain? ☐ Yes ☒ no

Applicant is ☒ owner, ☐ tenant, ☐ prospective tenant, ☐ licensee ☒ prospective purchaser

Type of Permit requested: ☒ residential or ☐ commercial

If residential renovation, will renovation constitute “new construction”? ☒ yes ☐ no

If commercial, please consult with building inspector regarding parking issues

Select one: ☒ Special Permit ☐ Variance ☐ Comprehensive Permit, M.G. L Ch. 40B

☐ Amendment ☐ Appeal Building Inspector Decision*

*(For an appeal from decision of Building Inspector, attach copy of the decision or other written notice received from the Building Inspector.)

Existing Conditions:

Lawful, pre-existing, two-family dwelling, which is non-conforming as to use and multiple accessory structures.

Statement of relief sought:

Special Permit pursuant to Section 1.4.7.4 of the Needham Zoning By-Law, and a finding pursuant to Section 6 of M.G.L. Chapter 40A, to permit the demolition, extension, alteration, enlargement and reconstruction of the lawful, pre-existing, non-conforming two-family dwelling, located partially in Needham and partially in Wellesley, currently known and numbered as 323 Oakland Street, Wellesley, MA, and construction of accessory garage, as shown on the plans submitted herewith, and all other relief as may be necessary and appropriate therefor.

Applicable Section (s) of Zoning By-Law 1.4.7.4, 3.2, 7.5.3 and any other applicable Section or By-Law

If application under Zoning Section 1.4, listed immediately above:

List nonconformities related to lot/structure(s) in application:

Non-conforming two-family use in single-family zoning district

Date structure(s) on lot constructed (including any additions):

Exact date unknown, but prior to 1925

Date lot created:

N/A

A certified plot plan, prepared by a registered surveyor, must be attached to each of the thirteen (13) copies of this application at time of filing. Application will be returned if a copy of the plot plan is not attached to each application.

•Applications for Comprehensive permits under M.G.L. Ch. 40B require thirteen (13) copies of plot plan (two reduced to 8 ½ by 11), plus additional submissions.

Please feel free to attach any additional information/photos relative to the application.

Additional information may be requested by the Board at any time during the application or hearing process.

A hearing before the Board of Appeals, with reference to the above noted application or appeal, is requested by

Donald W. Hollings,
By his attorney,



Signed _____
By George Giunta, Jr., Esq.



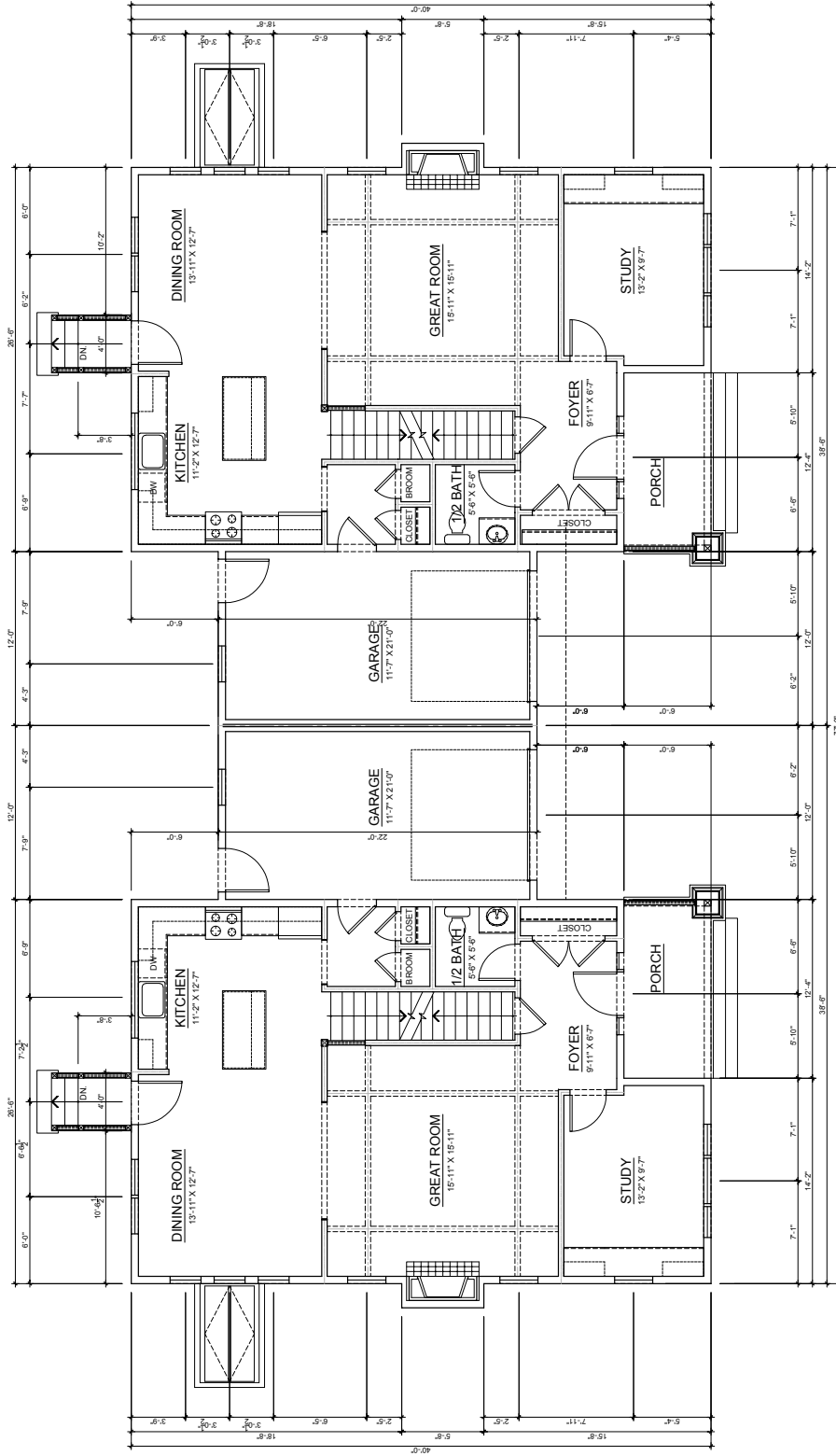
JOSEPH TATONE & ASSOCIATES, LLC
ARCHITECTURE PLANNING INTERIOR DESIGN
2 Kings Hwy, North Reading, Massachusetts 01864
VOICE (978) 276-1969 FAX (978) 276-1961



DUPLEX DESIGN
FIRST FLOOR PLAN
323 OAKLAND ST., WELLESLEY, MA
1 WELLESLEY AVE., NEEDHAM, MA

20-009-PLAN
09/30/20
1/8" = 1' - 0"

A102



FIRST FLOOR PLAN
986 S.F.
1,250 S.F. FOOTPRINT

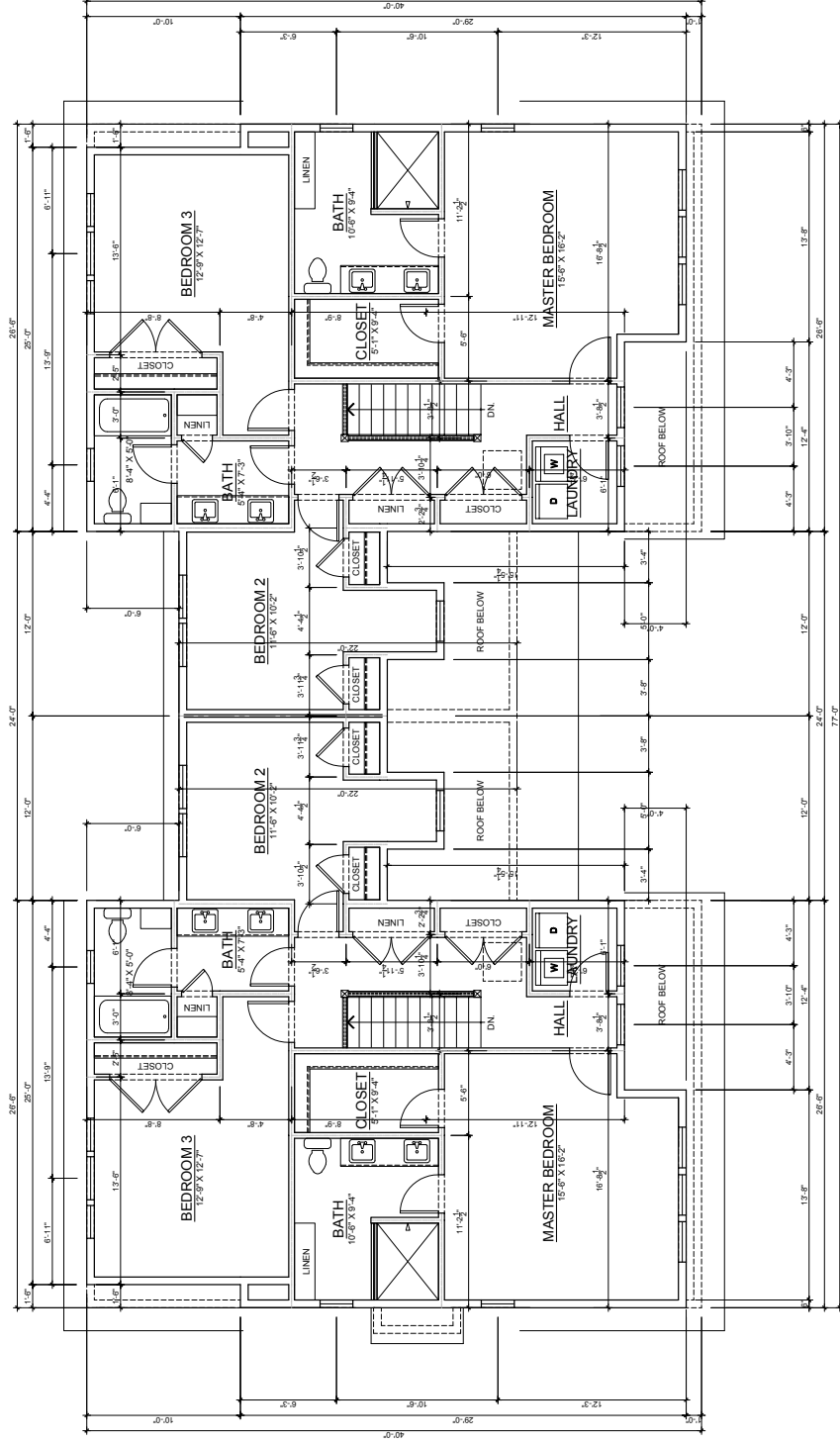


JOSEPH TATONE & ASSOCIATES, LLC
ARCHITECTURAL PLANNING INTERIOR DESIGN
2 Kings Hwy, North Reading, Massachusetts 01864
VOICE: (978) 276-1969 FAX: (978) 276-1961

DUPLEX DESIGN
SECOND FLOOR PLAN
323 OAKLAND ST., WELLESLEY, MA
1 WELLESLEY AVE., NEEDHAM, MA

20-009-PLAN
09/30/20
1/8" = 1'-0"

A105



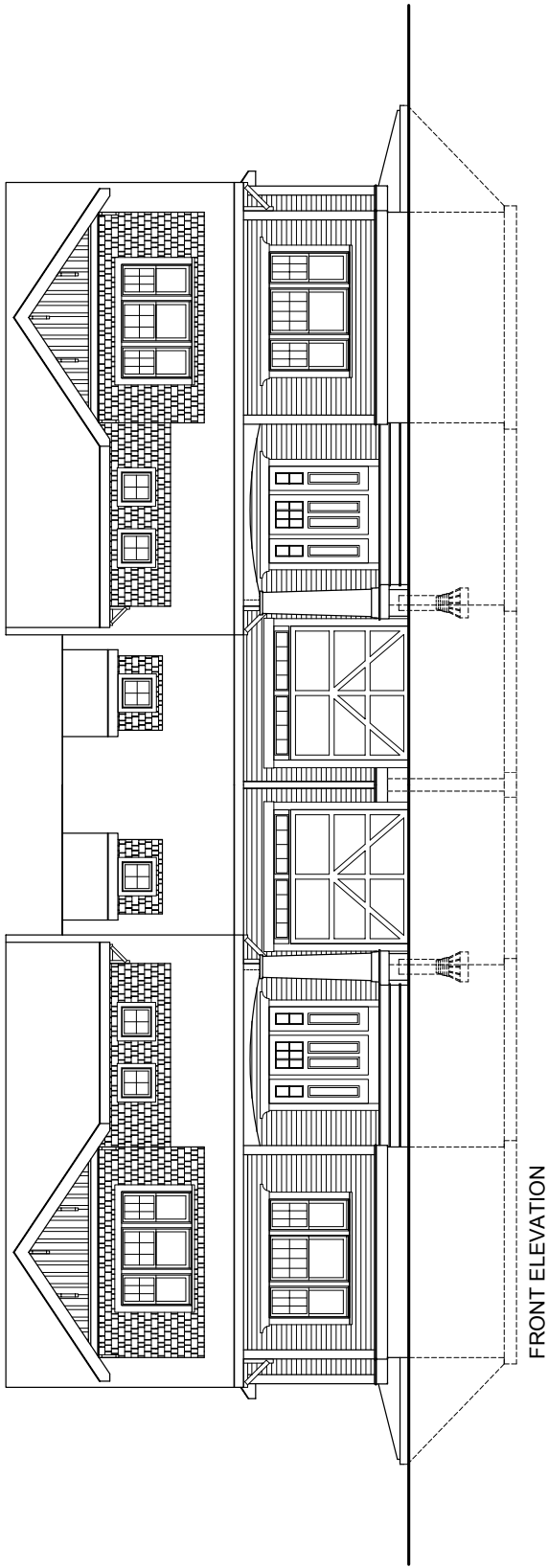
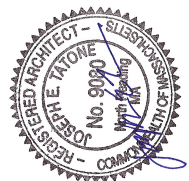
SECOND FLOOR PLAN
1,150 S.F.

A501

20-009-ELEV
09/30/20
1/8" = 1' - 0"

DUPLEX DESIGN
FRONT ELEVATION
323 OAKLAND ST., WELLESLEY, MA
1 WELLESLEY AVE., NEEDHAM, MA

JOSEPH TATONE & ASSOCIATES, LLC
ARCHITECTURE PLANNING INTERIOR DESIGN
2 Kings River, North Reading, Massachusetts 01864
VOICE (978) 276-1969 FAX (978) 276-1961





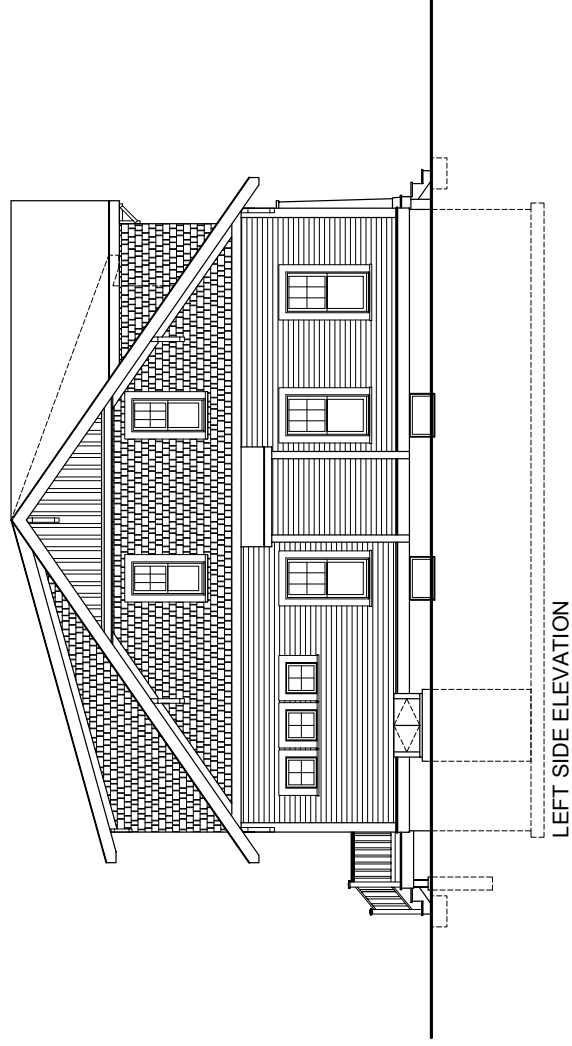
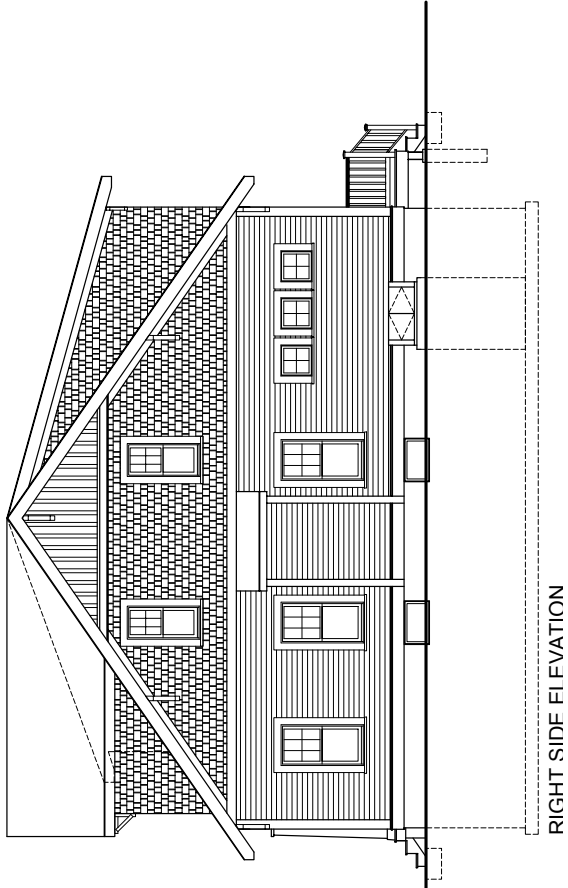
JOSEPH TATONE & ASSOCIATES, LLC
ARCHITECTURE PLANNING DESIGN
2 Kings Row, North Reading, Massachusetts 01864
VOICE: (978) 276-1949 FAX: (978) 276-1941



DUPLEX DESIGN
RIGHT AND LEFT SIDE ELEVATIONS
323 OAKLAND ST., WELLESLEY, MA
1 WELLESLEY AVE., NEEDHAM, MA

20-009-ELEV
09/30/20
1/8" = 1' - 0"

A502





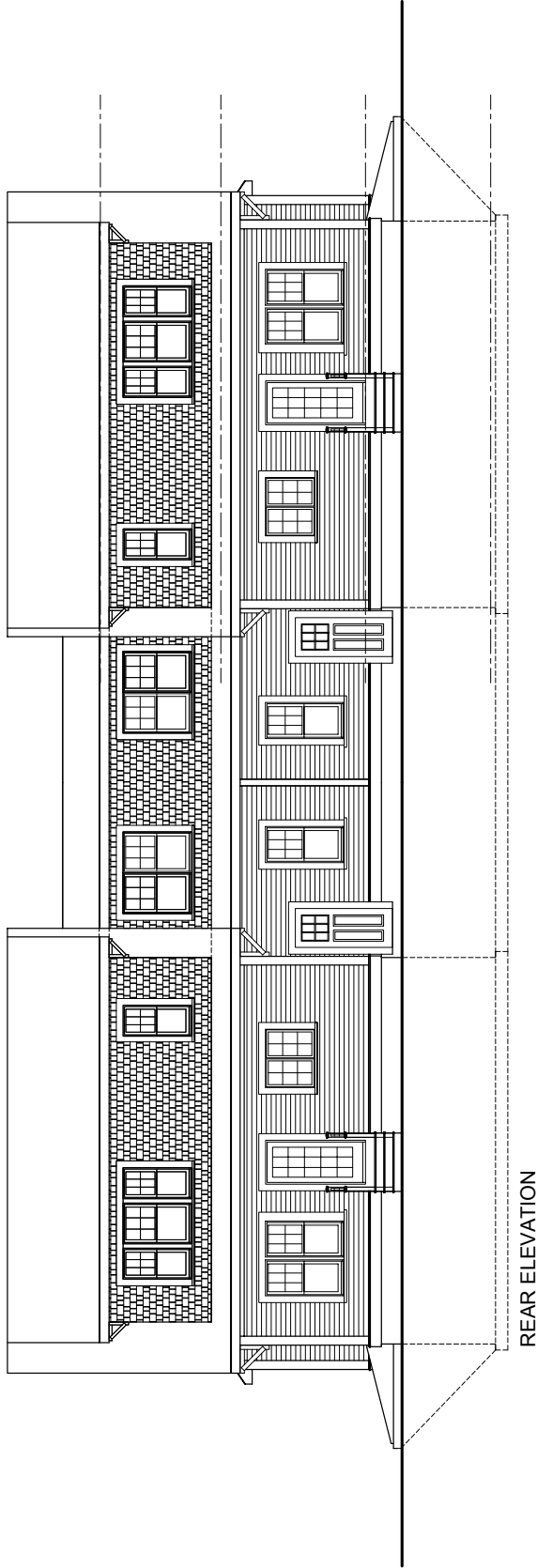
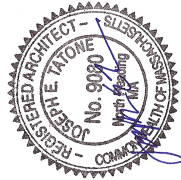
JOSEPH TATONE & ASSOCIATES, LLC
ARCHITECTURE PLANNING INTERIOR DESIGN
2 Kings Run, North Reading, Massachusetts 01864
VOICE (978) 276-1968 FAX (978) 276-1961



DUPLEX DESIGN
REAR ELEVATION
323 OAKLAND ST., WELLESLEY, MA
1 WELLESLEY AVE., NEEDHAM, MA

20-009-ELEV
09/30/20
1/8" = 1' - 0"

A505



REAR ELEVATION



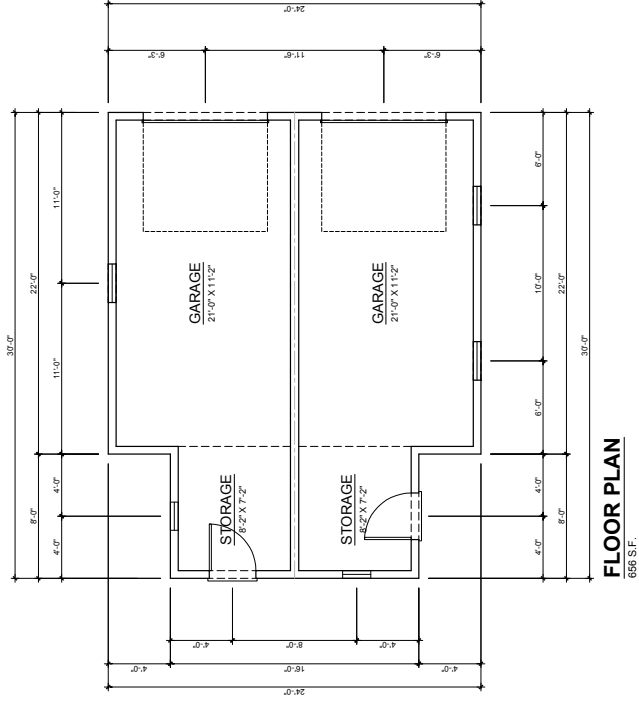
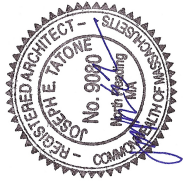
JOSEPH TATONE & ASSOCIATES, LLC
ARCHITECTURE PLANNING INTERIOR DESIGN
2 Ridge Road, North Reading, Massachusetts 01864
VOICE: (978) 276-1968 FAX: (978) 276-1961



DETACHED GARAGE
FLOOR PLAN
323 OAKLAND ST., WELLESLEY, MA
1 WELLESLEY AVE., NEEDHAM, MA

20-009-GPLAN
09/30/20
1/8" = 1' - 0"

A102





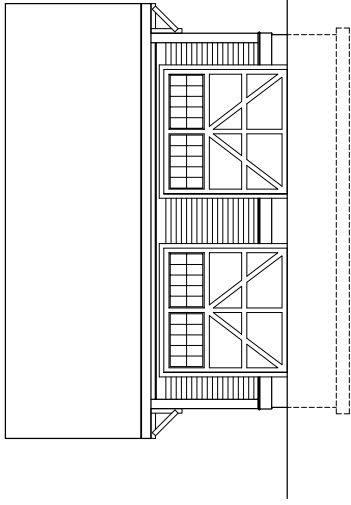
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ARCHITECTURE PLANNING ENGINEERING DESIGN
2 Kings Hwy, North Reading, Massachusetts 01864
VOICE (978) 276-1969 FAX (978) 276-1961



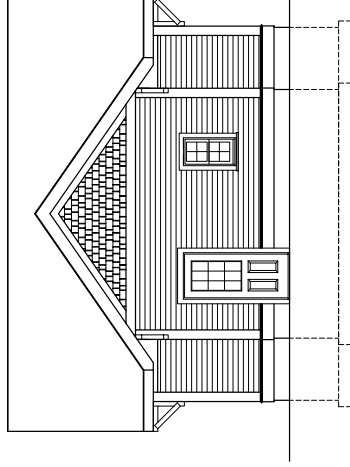
DETACHED GARAGE
EXTERIOR ELEVATIONS
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1 WELLESLEY AVE., NEEDHAM, MA

20-009-ELEV
09/30/20
1/8" = 1' - 0"

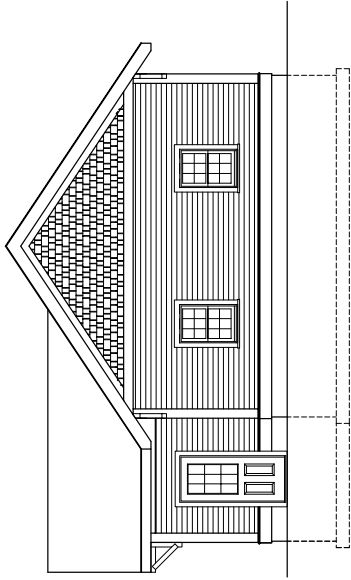
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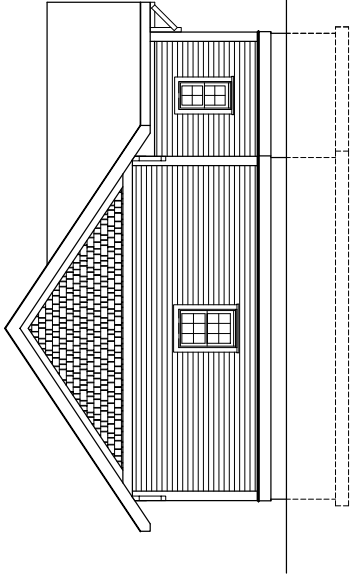
RIGHT SIDE ELEVATION



LEFT SIDE ELEVATION



FRONT ELEVATION

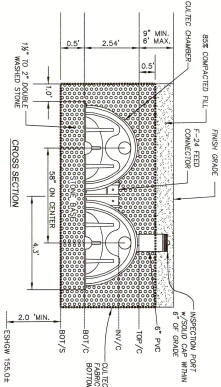


REAR ELEVATION

CULTEC RECHARGER 330-XLHD

CULTEC CHARGERS MANUFACTURED BY CULTEC, INC.
OF BROOKFIELD, CONNECTICUT

(R&B#1)



RECHARGE BASIN SCHEDULE OF ELEVATIONS & DIMENSIONS

DESCRIPTION	MIN	MAX
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8
TOP OF CHARGE	164.8	164.8

CULTEC (R&B) NOTES

- THE CHARGERS WILL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CONNECTICUT.
- CONDUCT CULTEC INC. PRE-INSTALLATION PACKAGES AND TO DISCUSS PRODUCT, INSTALLATION, AND MAINTENANCE REQUIREMENTS.
- THE STANDARD DUTY DESIGN OF THE CHARGER COULD VARY WITH A 1/2" OVER DIG.
- HEAVY DUTY CHARGERS ARE DESIGNED TO WITHSTAND MAJOR IMPACTS AND ARE NOT DESIGNED TO BE USED AS A TRUCK STOP.
- TO AVOID DAMAGE TO THE CHARGER, HEAVY DUTY CHARGERS MUST BE USED TO RECHARGE BATTERIES.
- THE CHARGER MUST BE USED TO RECHARGE BATTERIES ONLY.
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LEGEND

- EXISTING TREE (TYPE & DIAMETER)
- EXISTING LOT CENTERLINE
- EXISTING WATER SERVICE
- EXISTING WATER GATE
- EXISTING GAS SERVICE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING CHALKING FENCE
- EXISTING CHALKING FENCE
- EXISTING RETAINING WALL
- EXISTING HVAC UNIT

SOIL TEST RESULTS:

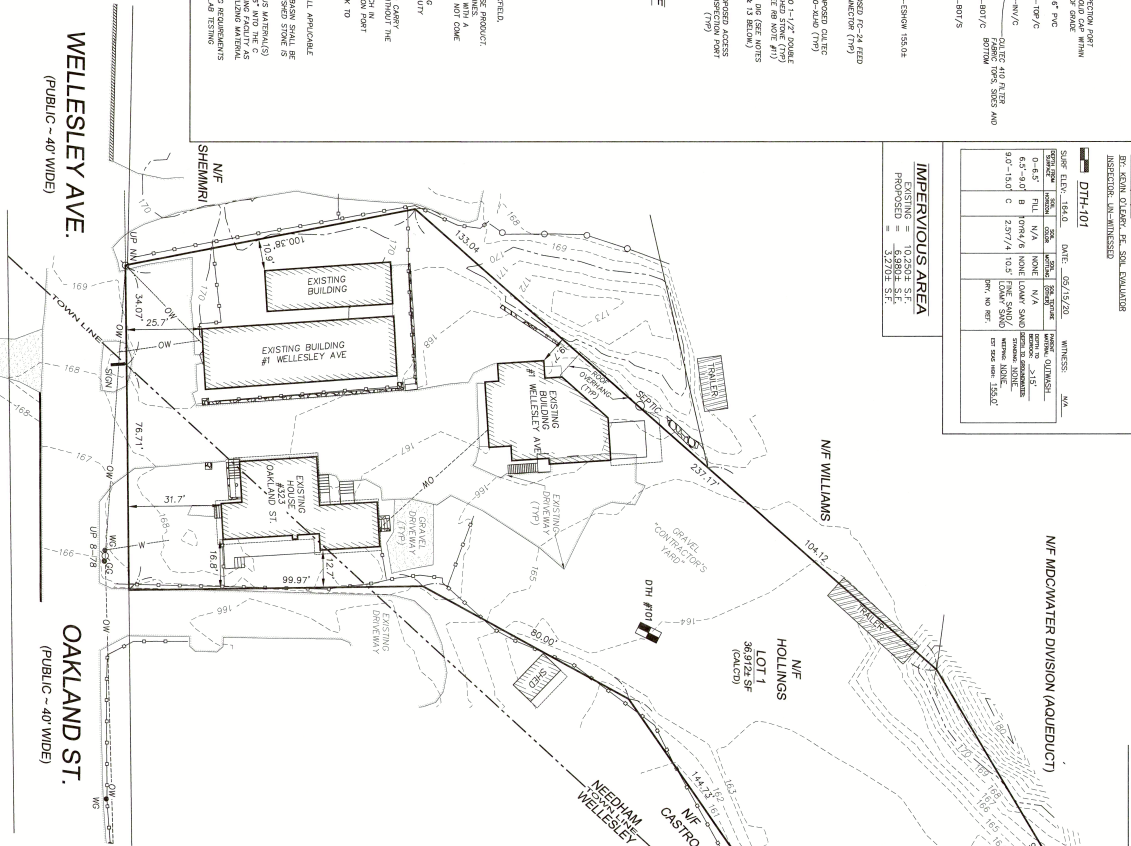
DATE: 05/12/18
BY: KEN O'LEARY, PE, SOIL EVALUATOR
INSTRUMENT: LUN-1000

DEPTH (FT)	TEST	RESULT	REMARKS
0.0 - 1.0	GRAVITY	1.0	GRAVITY
1.0 - 2.0	GRAVITY	1.0	GRAVITY
2.0 - 3.0	GRAVITY	1.0	GRAVITY
3.0 - 4.0	GRAVITY	1.0	GRAVITY
4.0 - 5.0	GRAVITY	1.0	GRAVITY
5.0 - 6.0	GRAVITY	1.0	GRAVITY
6.0 - 7.0	GRAVITY	1.0	GRAVITY
7.0 - 8.0	GRAVITY	1.0	GRAVITY
8.0 - 9.0	GRAVITY	1.0	GRAVITY
9.0 - 10.0	GRAVITY	1.0	GRAVITY

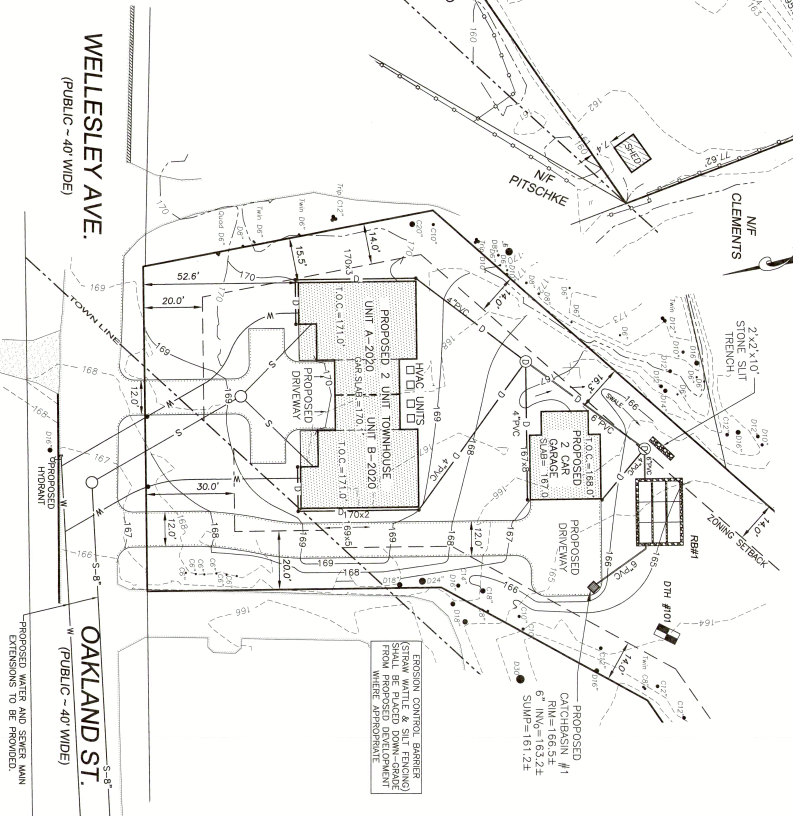
IMPERVIOUS AREA

PROPOSED = 6,580.5 S.F.
EXISTING = 3,279.2 S.F.

EXISTING CONDITIONS



SITE DEVELOPMENT PLAN



NOTES

- THIS PLAN SHALL NOT BE USED TO RECHARGE PROPERTY LINES.
- THIS PLAN REFERS TO THE FOLLOWING ASSUMPTIONS:
 - TOWN OF WELLESLEY MAP 17, LOT 1 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 2 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 3 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 4 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 5 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 6 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 7 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 8 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 9 (S. 433 OAKLAND STREET)
 - TOWN OF WELLESLEY MAP 17, LOT 10 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 11 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 12 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 13 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 14 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 15 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 16 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 17 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 18 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 19 (S. 433 OAKLAND STREET)
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- TOWN OF WELLESLEY MAP 17, LOT 98 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 99 (S. 433 OAKLAND STREET)
- TOWN OF WELLESLEY MAP 17, LOT 100 (S. 433 OAKLAND STREET)

"SITE DEVELOPMENT PLAN"
LAND IN
WELLESLEY &
NEEDHAM &
WELLESLEY, MASS.

PROJECT LOCATION: 1 WELLESLEY AVE. - NEEDHAM
323 OAKLAND ST. - WELLESLEY
PREPARED FOR: 75 GLEN RIDGE ROAD
DEBHAM, MA 02026

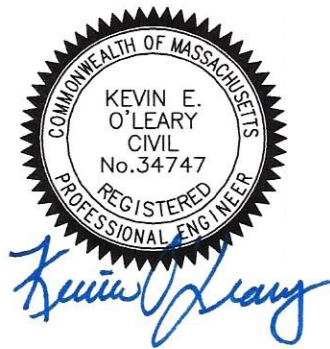
SCALE: 1" = 20'
DATE: 23 OCTOBER 2020
PREPARED BY: THE JILLSON COMPANY, INC.
32 FENDON STREET
WELLESLEY, MA 02158
(781) 400-5946
WWW.JILLSONCOMPANY.COM

JOB #2762

The Jillson Company, Inc.
32 Fremont Street
Needham, MA 02494
(781) 400-5946
koleary@jillsoncompany.com

October 23, 2020

Stormwater Report



Project Site:
1 Wellesley Avenue, Needham, Mass.
323 Oakland Street, Wellesley, Mass.

Prepared For:
Donald Hollings
25 Glen Road
Dedham, MA 02026
dwholl305@gmail.com

Table of Contents

- A. Development Summary**
- B. Stormwater Summary**
 - Drainage Structure Summary Tables
 - Hydrological Analysis Methodology
 - Proposed Development Hydrological Sub-Area Map
- C. Proposed Development HydroCAD Printouts**
 - 10 Year Storm Event

A. Development Summary

Project Site: 1 Wellesley Avenue, Needham, Mass.

323 Oakland Street, Wellesley, Mass.

Lot Area: 36,912± S.F.

Sub-Catchment Area: 5,665± ft²

Buildings & Infrastructure: The existing development consists of a residential home as well as 4 accessory buildings. An expansive paved driveway of approximately 165' in length provides access to all existing buildings. Beyond the paved driveway is compacted gravel parking areas for contractor's vehicles and equipment. The impervious area of the existing development is approximately 10,250 s.f.

The proposed development consists of the removal of all existing buildings and infrastructure, and construction of a proposed 2-unit townhouse as well as a detached garage behind the primary residence building. Two driveways are proposed, one is approximately 65' in length providing access and parking for the primary residence building and the second is approximately 150' in length to providing access to the detached garage. The impervious area of the proposed development is approximately 6,980 s.f., reducing the total impervious area of the existing development by approximately 3,270 s.f.

Sewer and water service will be provided to this development from Wellesley.

Drainage Summary: In the existing development, surface stormwater flows uncontrolled in two general directions. A portion in the front of the property flows towards the front property line and a majority of the property flows towards the rear of the property. All existing stormwater flows generated are uncontrolled. There are no known structural stormwater measures, within the existing development, beyond roof drain downspouts which discharge onto the ground surface.

The proposed development includes collection of stormwater runoff generated on both building roofs as well as a portion of the rear driveway area, which will be collected and piped to a subsurface Recharge Basin for storage and infiltration. Post-development uncontrolled runoff will mimic existing conditions with a reduced volume and flow rate for all storm events due to the above described stormwater system and the significant impervious area reduction.

B. Stormwater Summary

Drainage Structure Summary Tables

Recharge Basin #1

Storm Event	Proposed Conditions Runoff to Recharge Basin		Proposed Conditions Infiltration at Recharge Basin		Proposed Conditions Overflow at Recharge Basin	
	(cfs)	(ft ³)	(cfs)	(ft ³)	(cfs)	(ft ³)
One Inch	0.0845	249.0	0.0677	249.0	0.0000	0.0
2 Year	0.3762	1,210.4	0.0704	1,210.4	0.0000	0.0
10 Year	0.6321	2,082.9	0.0704	2,082.9	0.0000	0.0

Total Available Storage = 743.4± ft³

Recharge Basin drains fully in 2.9± hours

Drainage Structures Exfiltration Rates & Groundwater Elevations

Structure	Footprint	Permeability of Soil*		Exfiltration Rate** Cubic Feet Per Second	Bottom of System	Groundwater ***
		Inches per Hour	Feet Per Second			
RB#1	23.0' x 16.0' 368 ft ²	8.27 in/hr	0.000191 ft/sec	0.07045 ft ³ /sec	160.56±	158.5± or deeper

**Permeability of soil derived from the Hydrologic Soils Properties Classified By Soil Texture table (Rawls, Brakensiek and Saxton, 1982) and on site soil testing*

(If the percolation rate obtained during on site soil testing (2 MPI) is used to calculate the permeability of the soil (30 in/hr), then the recharge basin may be reduced by approximately 1/3)

*** Exfiltration rate through bottom area only*

**** Groundwater Elevation estimated from on site soil testing.*

Hydrological Analysis Methodology

The portion of the property analyzed in the hydrological analysis includes the entirety of the proposed development roofs and a portion of the rear driveway area. It excludes all other lands.

<i>Runoff Coefficients (Post-Development)</i>		
Description	Hydrologic Group	CN
Impervious Area	---	98.0
Lawn, >75% Grass cover	B	61.0

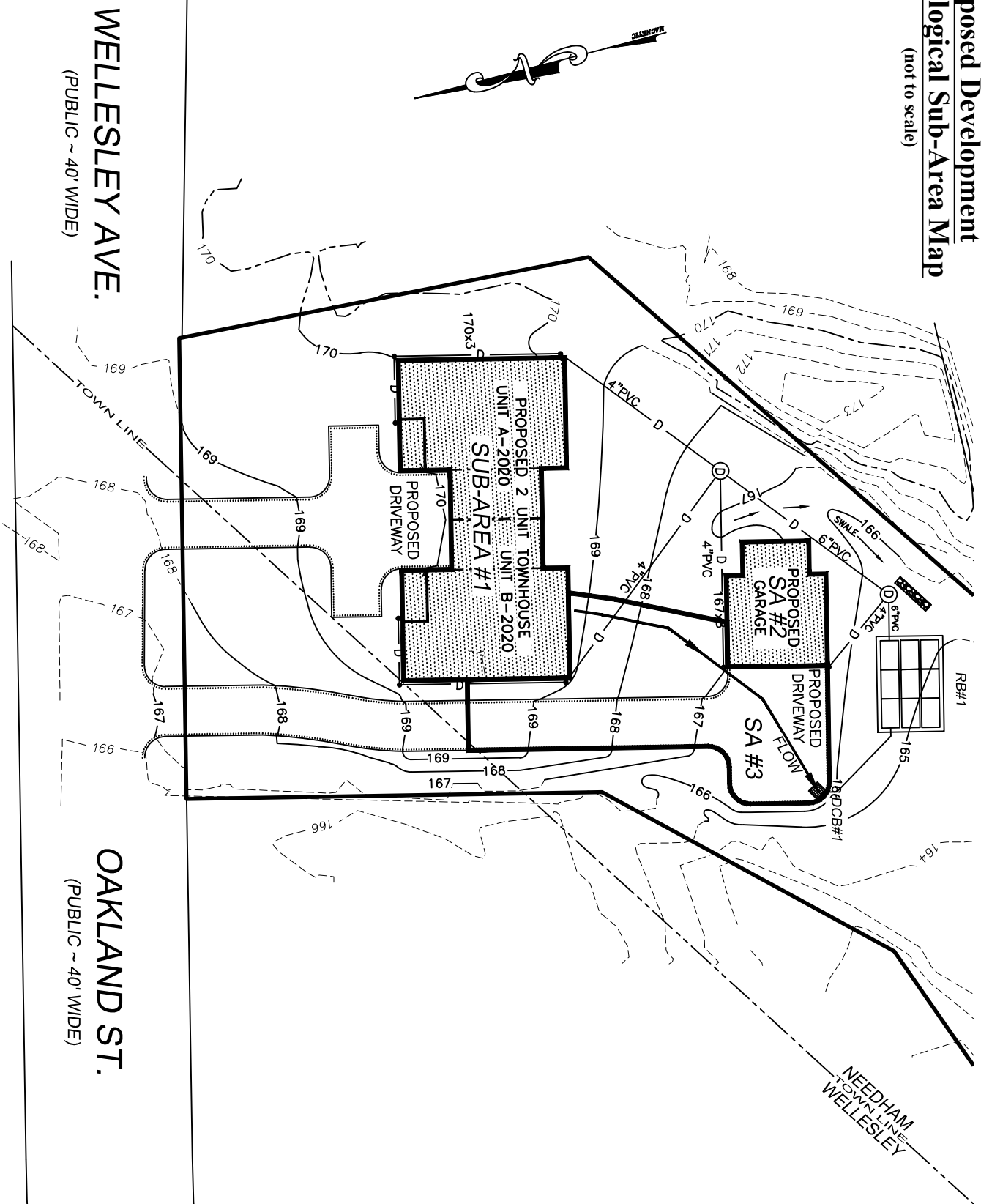
The hydrological analysis for estimating stormwater runoff for the proposed conditions of the property was performed using HydroCAD which employs Technical Release 20 (TR-20) for computations and the Natural Resource Conservation Service (NRCS) guidelines for analytical procedures. All of the measured and calculated input values to compute runoff rates and volumes, such as impervious area, time of concentration, weighted curve numbers are provided herein.

Per the Town of Needham Stormwater Bylaw §7.7.3.3, "the Stormwater Management and Erosion Control Plan shall include provisions for post-construction measures to provide a minimum combined volumetric capacity to recharge a minimum of one (1) inch of rainfall depth over the total impervious area of the property (buildings and impervious surfaces)." Based on the included tables, the proposed stormwater system satisfies the above requirement.

Proposed Impervious Area	Volume of 1" rainfall depth over Impervious area	Total Available Storage in RB#1	Infiltration at RB #1 (10-Year Storm)
6,570 ± ft ²	547.5± ft ³	743.4± ft ³	2,020.4± ft ³

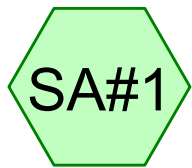
Proposed Development Hydrological Sub-Area Map

(not to scale)

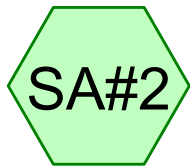


D. Proposed Conditions HydroCAD Printouts

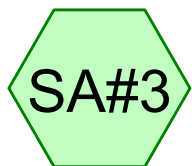
10 Year Storm Event



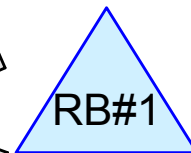
Sub-Area #1 -
Townhouse



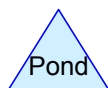
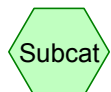
Sub-Area #2 - Detached
Garage



Sub-Area #3 - Rear
Driveway Area



Recharge Basin #1



Routing Diagram for #2762 - HOLLINGS DSN3 2020

Prepared by Microsoft, Printed 10/20/2020

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#2762 - HOLLINGS DSN3 2020

Prepared by Microsoft

Printed 10/20/2020

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Page 2

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
950.0	61.0	>75% Grass cover, Good, HSG B (SA#3)
655.0	98.0	Detached Garage Roof (SA#2)
1,545.0	98.0	Driveway (SA#3)
2,650.0	98.0	Townhouse Roof (SA#1)
5,800.0	91.9	TOTAL AREA

Summary for Subcatchment SA#1: Sub-Area #1 - Townhouse

Runoff = 0.3759 cfs @ 12.00 hrs, Volume= 1,096.0 cf, Depth= 4.96"

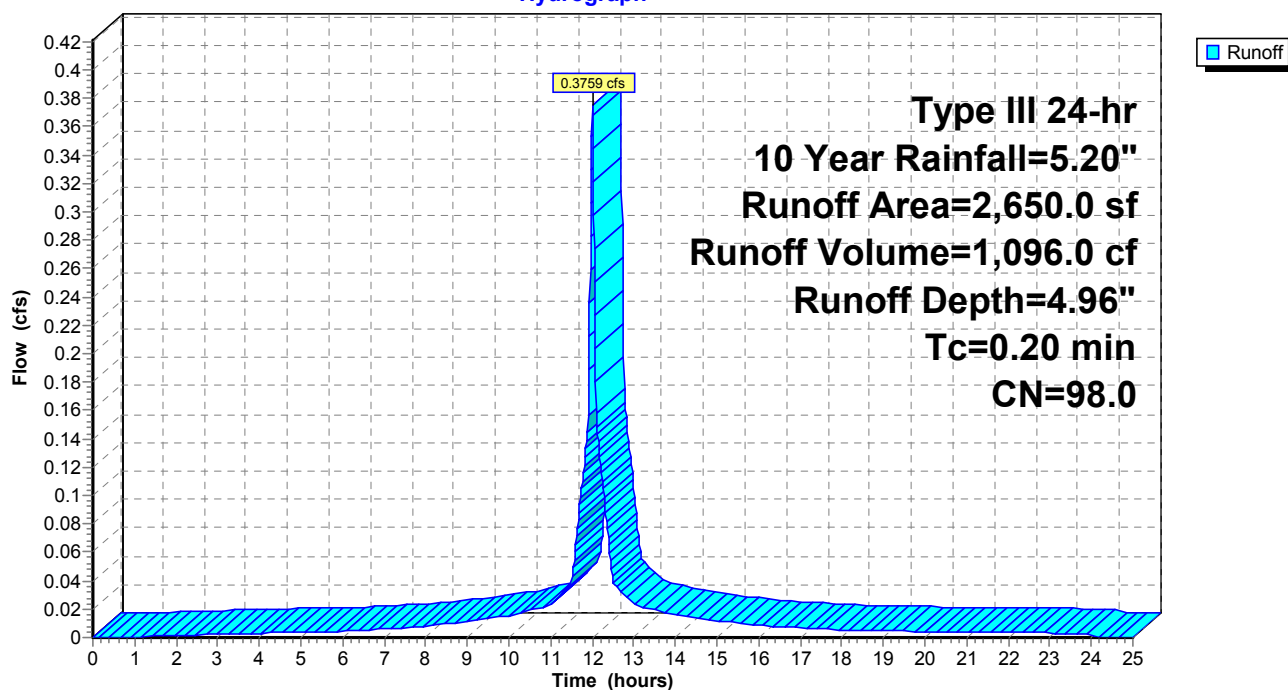
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 Year Rainfall=5.20"

	Area (sf)	CN	Description
*	2,650.0	98.0	Townhouse Roof
	2,650.0		100.00% Impervious Area

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

Subcatchment SA#1: Sub-Area #1 - Townhouse

Hydrograph



Summary for Subcatchment SA#2: Sub-Area #2 - Detached Garage

Runoff = 0.0929 cfs @ 12.00 hrs, Volume= 270.9 cf, Depth= 4.96"

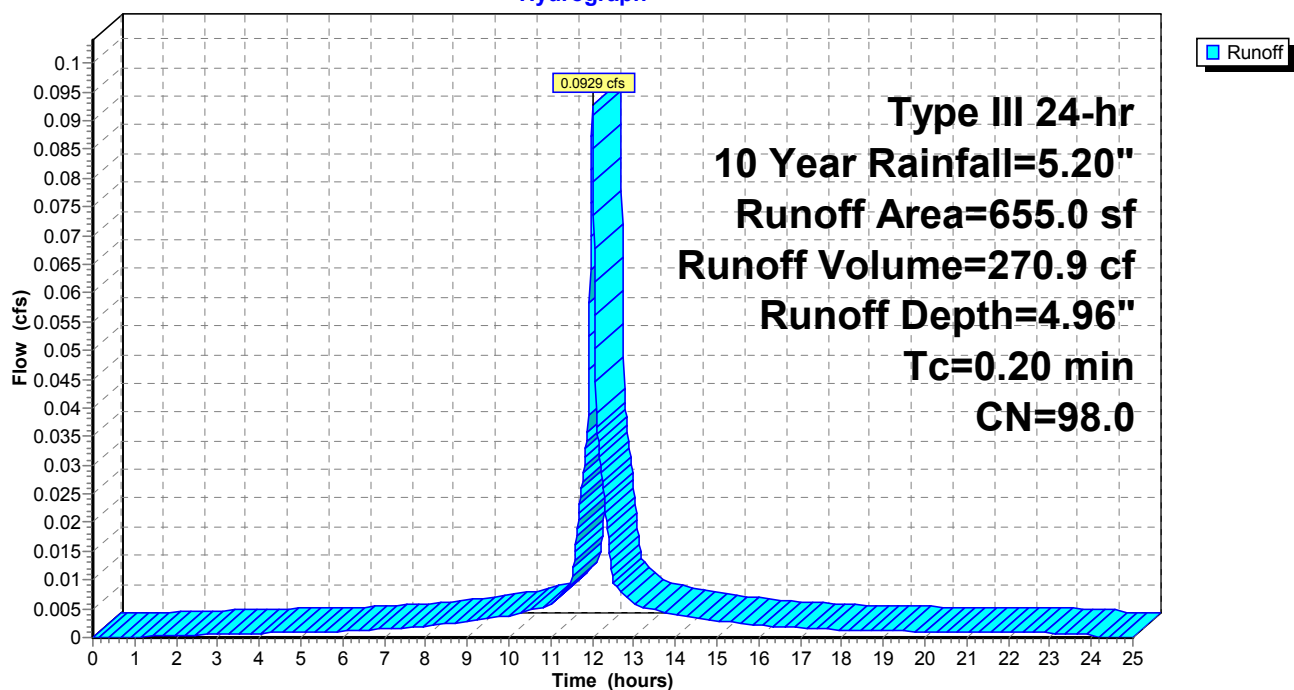
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 Year Rainfall=5.20"

Area (sf)	CN	Description
* 655.0	98.0	Detached Garage Roof
655.0		100.00% Impervious Area

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

Subcatchment SA#2: Sub-Area #2 - Detached Garage

Hydrograph



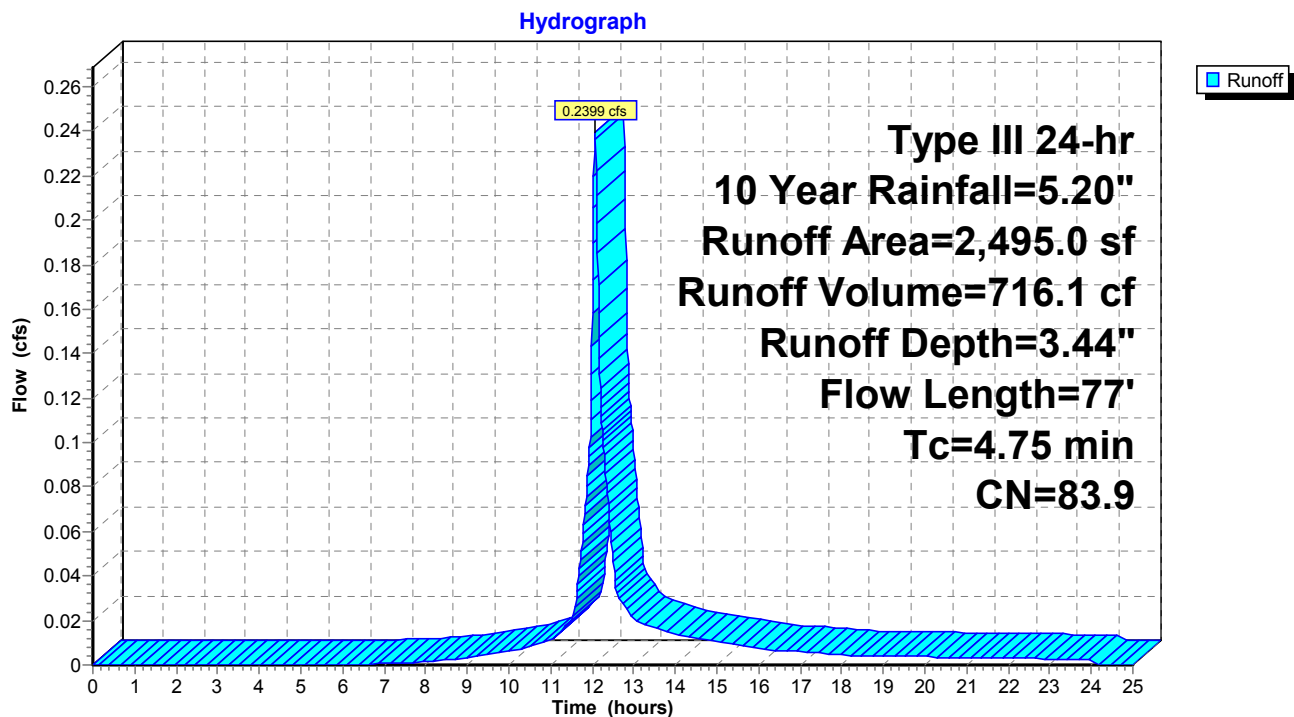
Summary for Subcatchment SA#3: Sub-Area #3 - Rear Driveway Area

Runoff = 0.2399 cfs @ 12.07 hrs, Volume= 716.1 cf, Depth= 3.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 Year Rainfall=5.20"

	Area (sf)	CN	Description
*	1,545.0	98.0	Driveway
	950.0	61.0	>75% Grass cover, Good, HSG B
	2,495.0	83.9	Weighted Average
	950.0		38.08% Pervious Area
	1,545.0		61.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.55	41	0.0585	0.2		Sheet Flow, Segment 1 - Lawn
					Grass: Dense n= 0.240 P2= 3.20"
0.20	36	0.0225	3.0		Shallow Concentrated Flow, Segment 2 - Driveway
					Paved Kv= 20.30 fps
4.75	77	Total			

Subcatchment SA#3: Sub-Area #3 - Rear Driveway Area

Summary for Pond RB#1: Recharge Basin #1

Inflow Area = 5,800.0 sf, 83.62% Impervious, Inflow Depth = 4.31" for 10 Year event
 Inflow = 0.6321 cfs @ 12.01 hrs, Volume= 2,082.9 cf
 Outflow = 0.0704 cfs @ 11.59 hrs, Volume= 2,082.9 cf, Atten= 89%, Lag= 0.0 min
 Discarded = 0.0704 cfs @ 11.59 hrs, Volume= 2,082.9 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Peak Elev= 163.17' @ 12.66 hrs Surf.Area= 368.0 sf Storage= 671.3 cf

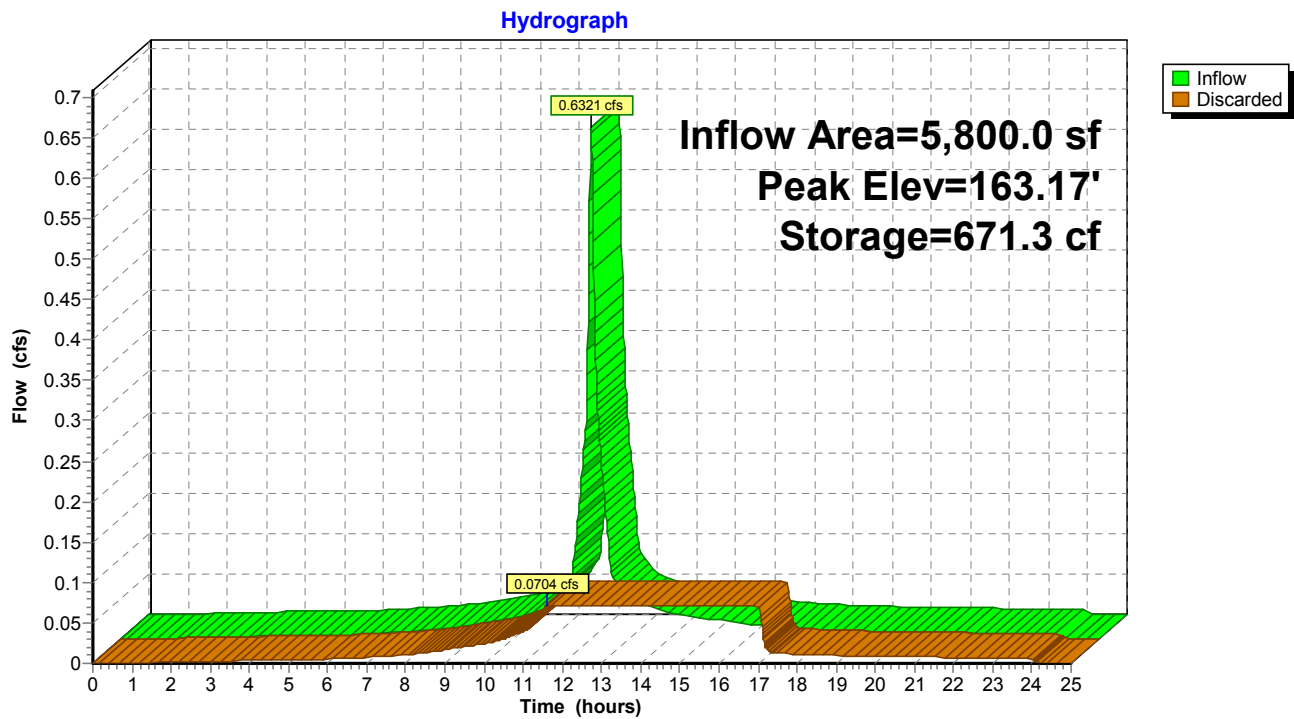
Plug-Flow detention time= 64.2 min calculated for 2,082.1 cf (100% of inflow)
 Center-of-Mass det. time= 64.2 min (828.9 - 764.7)

Volume	Invert	Avail.Storage	Storage Description
#1	160.56'	240.4 cf	16.00'W x 23.00'L x 3.00'H Prismatic 1,104.0 cf Overall - 502.9 cf Embedded = 601.1 cf x 40.0% Voids
#2	161.06'	502.9 cf	Cultec R-330XLHD x 9 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 3 rows
		743.4 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	160.56'	0.0704 cfs Exfiltration when above 160.56' Phase-In= 0.10'

Discarded OutFlow Max=0.0704 cfs @ 11.59 hrs HW=160.68' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.0704 cfs)

Pond RB#1: Recharge Basin #1



Date: October 13, 2020
To: Needham ZBA
Cc: Gary Lesanto
Don Hollings

From: Andy & Trish Mirsky
309 Oakland Street
Wellesley, MA 02481

Re: Updated Proposal for 1 Wellesley Avenue, Needham, MA

Dear Needham ZBA,

Our names are Trish and Andy Mirsky and we reside at 309 Oakland St. in Wellesley. We are writing this letter in regards to the proposed project application for ZBA located at 1 Wellesley Ave in Needham.

Based on the final architectural drawings and site plan to be presented to the ZBA for a **single 2-unit building near the front of the property with direct driveway access from the street**, we are in full support of this project.

Thank you very much for your time, and should you wish to speak further with us in this regard please feel free to contact us.

Best regards,

Handwritten signatures of Andy and Trish Mirsky. The signature on the left is 'Andy' and the signature on the right is 'Trish'.

Andy & Trish Mirsky

781-710-4584; tabamirsk@verizon.net

October 5, 2020

Zoning Board of Appeals

Town of Needham

Charles River Room, Public Services Administration Building

500 Dedham Avenue

Needham, MA 02492

Re: 1 Wellesley Ave Needham-323 Oakland Street Wellesley

To Whom it may concern,

We are writing this letter to express our support of the proposed duplex design at 1 Wellesley Ave, Needham – 323 Oakland Street Wellesley. We believe that this project will enhance and improve the neighborhood and existing lot.

As abutting neighbors we are in favor of the proposed project and fully support your favorable decision in this matter.

SINCERELY,

Clint and Carolyn Clements

74 Hunnewell St

Wellesley, MA 02481

October 19, 2020

To: Needham ZBA
cc:/Gary Lesanto, Don Hollings

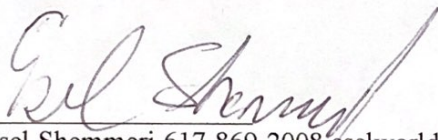
From: Esel and Noor Shemmeri

Dear Needham ZBA,

Our name is Esel and Noor Shemmeri and we reside at 11 Wellesley Ave. We have been residents here for over seven years. We are writing this letter in regard to the proposed project application for ZBA located at 1 Wellesley Ave in Needham. Over the course of the last couple years we have been having discussions with the owner and developer of 1 Wellesley Ave. They approached the entire neighborhood by way of meet and greets and have shared with all of us their proposal. During this period some opinions were shared, and concerns raised and answered.

The owner has been very forthright with us all and has incorporated into their design all the things that were important to us. As they approach their filing for ZBA I wanted to write this letter of full support. We believe that the project as proposed is less dense than what would be allowable by right if a single family were to be constructed on the lot. We greatly prefer the sizing of this proposal and its location at the front of the lot, while keeping a majority of open space to the rear as it abuts its neighbors. We believe the other neighbors in the area feel likewise, and we hope the Needham Zoning Board of Appeals will take our wishes into consideration as the project proposal is considered. Thank you very much for your time, and should you wish to speak further with us in this regard please feel free to contact us.

Best regards,

A handwritten signature in dark ink, appearing to read 'Esel Shemmeri', with a long, sweeping flourish extending to the right.

Esel Shemmeri 617-869-2008 eselworld@hotmail.com

Date: 13 October 2020
To: Needham ZBA
Cc: Gary Lesanto
Don Hollings
From: Abutters to 1 Wellesley Avenue, Needham, MA
Pam Reid and Steven Pitschke
313 Oakland Street
Wellesley, MA 02481
Re: Updated Proposal for 1 Wellesley Avenue, Needham, MA

Our understanding is that Don Hollings (owner), Gary Lesanto (contractor) and George Giunta (attorney) are preparing a proposal for 1 Wellesley Avenue to be submitted to the Needham ZBA.

As you may recall, we were not in support of the earlier proposal by Don Hollings/Evans Huber in 2018. We had issues with the type of development being proposed and lot line issues that had arisen from a survey done for Don Hollings that conflicted with recorded plans at the Norfolk Registry and the current fences.

We believe that both of our issues have been resolved in the current proposal.

1. The new proposal is for a single 2-unit building near the front of the property with direct driveway access from the street. We believe this use would be less objectionable and detrimental to the neighborhood than the existing use. And, would very likely be more in keeping with the neighborhood than if a single-family unit was constructed on the rear of the lot.
2. Don Hollings has had the property resurveyed by Applewood Survey Company. Terry Ryan, owner of Applewood Survey Company, has assured us that the new survey does not conflict with any of the current filings at the Norfolk Registry. I have attached a proposed plot plan that reflects that the lot lines now match the existing fences.

In summary, we support the current proposal.

Best regards,




Pam Reid and Steve Pitschke

781.772.1090

**MICHAEL A. CROWE
ATTORNEY AT LAW
200 HIGHLAND AVENUE
SUITE 306
NEEDHAM, MA 02494
781-444-5855
MICHAELACROWEESQ@GMAIL.COM**

October 21, 2020

Via email: TownClerk@needhamma.gov

Dcollins@needhamma.gov

RE: Property: 182 and 190 Edgewater Drive, Needham, MA 02492
Application for Special Permit

Dear Sir/Madam:

Attached please find the following:

Needham Zoning Board of Appeals Application for Hearing.

Redacted Purchase and Sale Agreement for 182 Edgewater Drive.

Schematic Landscape and Planting Plans from Thomas Wirth Associates Pages L1 & L2 dated 10/7/20 and 10/9/20.

Site Plan by Cheney Engineering Co., Inc. dated 10/6/2020.

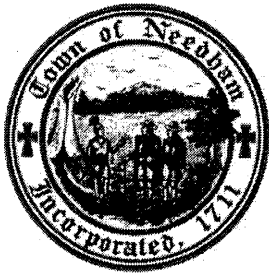
Copy of Check for the Application fee in the amount of \$200.00 that is being mailed to the ZBA today.

Please schedule this matter for hearing at the November 19, 2020 Board meeting. Thank you for your assistance in the regard, and please call me if you require anything else or if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael A. Crowe', with a long horizontal line extending to the right.

Michael A. Crowe



**TOWN OF NEEDHAM
MASSACHUSETTS
BOARD OF APPEALS**

APPLICATION FOR HEARING

IT IS STRONGLY RECOMMENDED THAT APPLICANTS CONSULT WITH THE BUILDING INSPECTOR PRIOR TO FILING THIS APPLICATION.

Note: Application must be complete, with certified plot plan attached, and application fee included, or application will not be accepted.

Date: 10/21/20

Name of Applicant or Appellant: David M. Nectow, Trustee of the David M. Nectow, Revocable Trust of 2011 as owner of 190 Edgewater Drive Needham, MA and as prospective Purchaser of 182 Edgewater Drive.

Address: _____

190 Edgewater Drive, Needham, MA 02492

E-mail address: _____

Daytime telephone: _____

Cell phone: _____

Additional contact information, (ie: contractor ☐, architect ☐, builder ☐, attorney ☒):

Michael A. Crowe, 200 Highland Avenue, Suite 306, Needham, MA 02494, 781-248-8645
michaelacroweesq@gmail.com

Address/Location of Property 182 and 190 Edgewater Drive, Needham, MA 02492

Assessor map/parcel number Map 201 lot 18 and Map 201 lot 17

Zone of property: SRA

Is property within 100 feet of wetlands, 200 ft. of stream or in flood plain? ☒ Yes ☐ no

Applicant is: ☒ owner ☐ tenant ☐ prospective tenant ☐ licensee ☒ prospective purchaser

Type of Permit requested: ☒ residential or ☐ commercial

If residential renovation, will renovation constitute "new construction"? ☐ yes ☒ no

If commercial, please consult with building inspector regarding parking issues

Select one: ☒ Special Permit ☐ Variance ☐ Comprehensive Permit, M.G. L Ch. 40B
☐ Amendment ☐ Appeal Building Inspector Decision*

*(For an appeal from decision of Building Inspector, attach copy of the decision or other written notice received from the Building Inspector.)

Existing Conditions: Both lots have existing single-family homes, as well as previously developed areas such as a basketball court, patios, and existing lawn areas. Together the lots contain approximately 2.7 acres of land. The Charles River is located to the south of the site, and the Riverfront Area extends onto the site. Bordering Land Subject to Flooding (BLSF) is also located on site at FEMA Base Flood Elevation of 95 feet. Bordering Vegetated Wetland (BVW) is also on a portion of the site. The 190 Edgewater Drive property has been the subject of previous Special Permit Applications approved by this Board in 2014 and 2015. The Special Permit in 2015 approved the construction of a swimming pool that was never built.

Statement of relief sought: _____

Applicant is planning to demolish the existing house at 182 Edgewater, combine the land with 190 Edgewater Drive and construct a pool with associated decking, a cabana, a tennis court and walking paths all substantially as shown on the attached plans.

Applicable Section(s) of Zoning By-Law: 7.5.2; 3.3.3 (d) (e) and (i) and any other applicable section of the Zoning By-law.

If application under Zoning Section 1.4, listed immediately above:

List nonconformities related to lot/structure(s) in application: _____

Date structure(s) on lot constructed (including any additions): _____

Date lot created: _____

A certified plot plan, prepared by a registered surveyor, must be attached to this application at time of filing. An application will be returned if a copy of the plot plan is not attached to the application.

•Applications for Comprehensive permits under M.G.L. Ch. 40B require a copy of plot plan.

Please feel free to attach any additional information/photos relative to the application.

Additional information may be requested by the Board at any time during the application or hearing process.

A hearing before the Board of Appeals, with reference to the above noted application or appeal, is requested by

Signed _____

Title Michael A. Crowe, Attorney for Applicant

An application must be submitted to the Town Clerk's Office at townclerk@needhamma.gov and to the ZBA Office at dcollins@needhamma.gov

PURCHASE AND SALE AGREEMENT
(hereinafter referred to as the "Agreement")

This 27th day of July, 2020

1. PARTIES AND MAILING ADDRESSES

R. Steven Rhodes and Cara Jo Rhodes, with an address of 182 Edgewater Drive, Needham, Massachusetts (hereinafter referred to as the "SELLER") agrees to sell and **David M. Nectow**, or his assignee or nominee, with an address of 190 Edgewater Drive, Needham, Massachusetts (hereinafter referred to as the "BUYER") (SELLER and BUYER sometimes hereinafter collectively referred to as the "Parties"), agree to buy, upon the terms hereinafter set forth, the following described premises:

2. DESCRIPTION

The land and the buildings thereon known and numbered as **182 Edgewater Drive, Needham, Massachusetts 02492**, as more particularly described on a deed filed/recorded with the Norfolk County Registry of Deeds/District of the Land Court at Book No. 26118, Page 462 (the "Premises").

3. FIXTURES AND PERSONAL PROPERTY

Included in the sale as a part of said Premises are the buildings, structures, and improvements now thereon, and the fixtures belonging to the SELLER and used in connection therewith including, if any, all wall-to-wall carpeting, drapery rods, automatic garage door openers, venetian blinds, window shades, screens, screen doors, storm windows and doors, awnings, shutters, furnaces, heaters, heating equipment, stoves, ranges, oil and gas burners and fixtures appurtenant thereto, hot water heaters, plumbing and bathroom fixtures, garbage disposers, electric and other lighting fixtures, mantels, outside television antennas, fences, gates, trees, shrubs, and plants, including all appliances, washer and dryer, and all window treatments and fixtures, excluding. Specifically excluded from the sale are the tin mirror in the living room, the two sconce lights in the foyer, the mirror in the first floor bathroom, and all mounted televisions.

4. TITLE DEED

Said Premises are to be conveyed by a good and sufficient quitclaim deed running to the BUYER, or to the nominee designated by BUYER by written notice to SELLER at least seven (7) days before the deed is to be delivered as herein provided, and said deed shall convey a good and clear record and marketable title thereto, free from encumbrances, except:

- (a) Provisions of existing building and zoning laws;
- (b) Such taxes for the then current year as are not due and payable on the date of the delivery of such deed;
- (c) Any liens for municipal betterments assessed after the date of this Agreement;
- (d) Easements, restriction and reservations of record, if any, so long as the same do not prohibit or materially interfere with the current use of said Premises.

5. PLANS

If said deed refers to a plan necessary to be recorded therewith the SELLER shall deliver such plan with the deed in form adequate for recording or registration.

6. REGISTERED TITLE

ASR CJP

In addition to the foregoing, if the title to said Premises is registered, said deed shall be in form sufficient to entitle the BUYER to a Certificate of Title to said Premises.

7. PURCHASE PRICE

The agreed to purchase price for said Premises is _____
dollars, of which

\$
\$

have been paid as a deposit this day, and
are to be paid at the time of the delivery and recording of
the deed by wire transfer in immediately available funds
drawn on a Massachusetts clearing house bank or check
drawn on Buyer's counsel's IOLTA account, at seller's
election.

\$

TOTAL

8. TIME FOR PERFORMANCE; DELIVERY OF DEED

Such deed is to be delivered at 12:00 noon on the 16th day of October, 2020, at the Office of Buyer's counsel or by mutual escrow agreement, unless otherwise agreed upon in writing. It is agreed that time is of the essence of this Agreement.

9. POSSESSION AND CONDITION OF PREMISES

Full possession of said Premises free of all tenants and occupants, is to be delivered at the time of the delivery of the deed, said Premises to be then (a) in the same condition as they now are, reasonable use and wear thereof excepted, and (b) in compliance with provisions of any instrument referred to in Paragraph Four (4) hereof. The BUYER shall be entitled personally to inspect said Premises prior to the delivery of the deed in order to determine whether the condition thereof complies with the terms of this Paragraph.

10. EXTENSION TO PERFECT TITLE OR MAKE PREMISES CONFORM

If the SELLER shall be unable to give title or to make conveyance, or to deliver possession of the premises, all as herein stipulated, or if at the time of the delivery of the deed the premises do not conform with the provisions hereof, then the SELLER shall use reasonable efforts to remove any defects in title, or to deliver possession as provided herein, or to make the said premises conform to the provisions hereof, as the case may be in which event the SELLER shall give written notice thereof to the BUYER at or before the time for performance hereunder, and thereupon the time for performance hereof shall be extended for a period of thirty (30) days. SELLER shall not be obligated to expend more than \$5,000 (which amount shall be deemed to include attorney's fees and costs) to meet its obligation to use "reasonable efforts" to remove any defects in title, make premises conform, or to deliver possession as herein provided, except for mortgages and other voluntary liens granted by Seller.

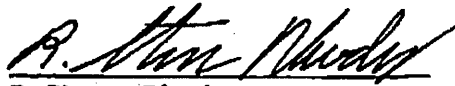
11. FAILURE TO PERFECT TITLE OR MAKE PREMISES CONFORM, etc.

If at the expiration of the extended time the SELLER shall have failed so to remove any defects in title, deliver possession, or make the Premises conform, as the case may be, all as herein agreed, or if at

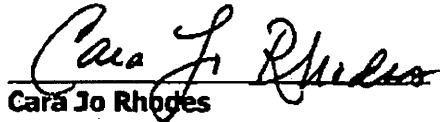
ASR CJR

NOTICE: THIS IS A LEGAL DOCUMENT THAT CREATES BINDING OBLIGATIONS. IF NOT UNDERSTOOD, CONSULT AN ATTORNEY.

SELLER:

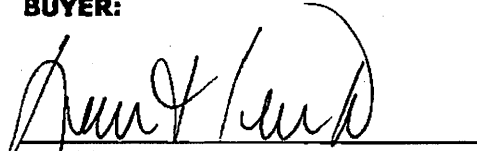


R. Steven Rhodes



Cara Jo Rhodes

BUYER:



David M. Nectow

RIDER "A" TO PURCHASE AND SALE AGREEMENT
Rhodes to Nectow

Dated: July 27, 2020

1. INSPECTION CONTINGENCY

BUYER at his sole cost and expenses shall have the right to have the Premises inspected by a qualified commercial inspection firm to ascertain the condition of the Premises. In the event BUYER determines that the Premises are not in satisfactory condition, BUYER may terminate this Agreement by written notice to the SELLER within thirty (30) days of the date of this Agreement, whereupon any Deposit made by the BUYER shall be forthwith refunded and this Agreement shall become null and void and without further recourse to either party. In the event SELLER has not received such notice within thirty (30) days of the date of this Agreement, BUYER shall be deemed to have waived all rights under this Paragraph, and this Agreement shall continue in full force and effect.

2. Due Diligence

The BUYER acknowledges that BUYER intends to demolish all or part of the current residence, combine the Premises with BUYER's adjacent property, and construct on the Premises, or on the combined properties, all or some of the following: a new ancillary structure, a garage, a cabana, a tennis court, a swimming pool, drainage and water retention systems, landscaping and plantings and fencing, on all or part of the Premises (the "Proposed Project"). The BUYER will have until September 30, 2020 to complete any and all due diligence related to the Proposed Project, including, but not limited to the conduct of all surveys, engineering, site plans, environmental review and testing, and any other inspections, reviews or studies, including, but not limited, to a review of and/or compliance with any and all requirements for the Proposed Project with the Town of Needham including, but not limited to, the Planning Board, Building Department, Public Works, Conservation Commission and Zoning Board of Appeals, and such work as may be required on or within the Premises to complete an instrument survey of the Premises, for the filing of an Order of Conditions with the Conservation Commission or any other permit license or approval, and for the siting and identification of any and all protected or restricted, flood plain wetlands, conservation or other areas located on, within or adjacent to the Premises, including, without limitation, conservation areas, wetlands, river protection and the like. SELLER agrees to provide copies of any, and all, plans, surveys and reports in SELLER's, or in their consultants', possession and relating to the Premises or any residence, buildings, structures, oil tanks or other improvements located thereon. In the event the BUYER determines, in BUYER's reasonable discretion, that BUYER will be unable to obtain all necessary permits and approvals for the Proposed Project, or that the Proposed Project cannot be accomplished to his satisfaction then BUYER may terminate this Agreement by providing written notice, along with reasonable evidence of BUYER's determination as to why he would be unable to obtain any such permits

AMENDMENT TO PURCHASE AND SALE AGREEMENT

THIS AMENDMENT TO PURCHASE AND SALE AGREEMENT, is entered into and made effective as of the 22nd day of September by and between R. STEVEN RHODES and CARA JO RHODES, with an address of 182 Edgewater Drive, Needham, Massachusetts (the "Seller"), and DAVID M. NECTOW, or his assignee or nominee, with address of 190 Edgewater Drive, Needham, Massachusetts ("Buyer), and hereby amends that certain Purchase and Sale Agreement dated July 27, 2020 (the "Agreement") for the purchase and sale of the premises located at 182 Edgewater Drive, Needham, Massachusetts (the "Premises").

1. Time for Performance: Delivery of Deed. Section 8 of the Agreement is hereby amended by extending the time for performance and delivery of deed from 12:00 noon on October 16, 2020 to 12:00 noon on November 30, 2020.

2. Due Diligence. Buyer and Seller hereby agree to extend the expiration date of the period during which Buyer is to conduct any and all due diligence, and obtain any permits and approvals for the Proposed Project, as is described in Section 2 of Rider "A" of the Agreement, from September 30, 2020 to November 20, 2020.

3. Forfeiture of Deposit. In the event Buyer fails to complete the purchase of the Premises by the extended deadline of November 30, 2020, the Buyer shall forfeit the deposit of \$100,000.00 to the Seller, which shall be applied to the purchase price of the Premises. If the Buyer fails to complete the purchase of the Premises by the extended deadline of November 30, 2020, the Seller shall be entitled to resell the Premises at a price of its choosing, and the Buyer shall be liable for any loss incurred by the Seller in connection with the resale of the Premises.

4. Except as modified by this Amendment, the Agreement and all terms, covenants and conditions thereof not specifically amended are hereby ratified and confirmed and shall remain unmodified and in full force and effect.

5. This Amendment may be executed in several counterparts, each of which shall be deemed to be an original and all of which, collectively, shall be deemed to constitute one and the same instrument. Further, the Parties hereby confirm and agree that this Amendment may be (i) executed electronically, with such electronic signature deemed to constitute an original signature, and (ii) delivered by facsimile or other electronic transmission.

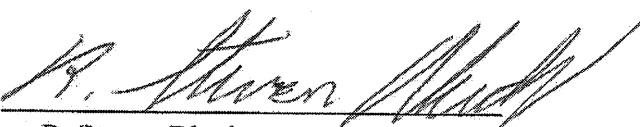
[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this Amendment as a sealed instrument under the laws of the Commonwealth of Massachusetts as of the Effective Date.

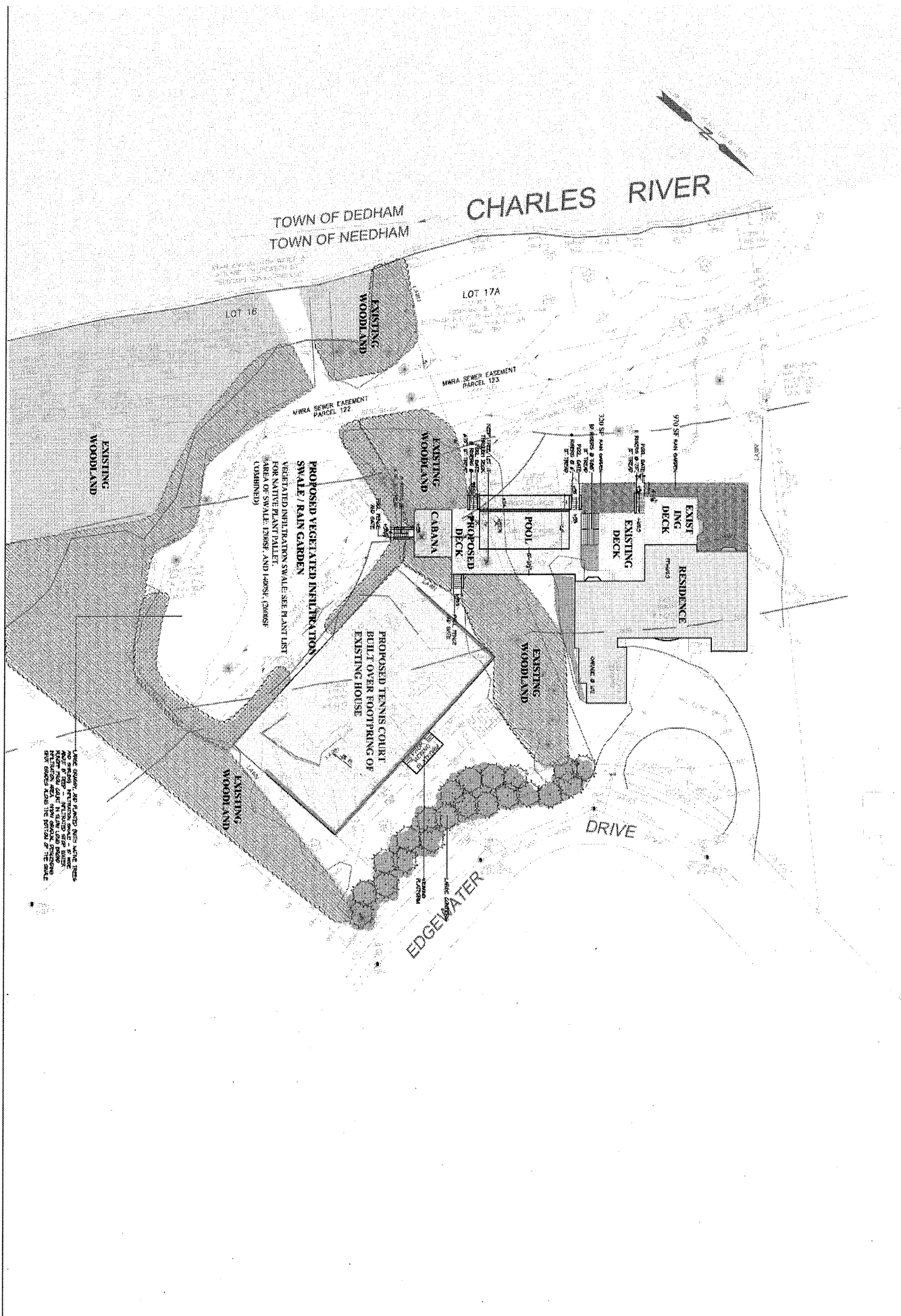
BUYER:

By: _____
David M. Nectow, or his nominee

SELLER:

By: 
R. Steven Rhodes

By: 
Cara Jo Rhodes



DATE: 10/6/2020 JOB # 5808A

REV.	
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September 22, 2020

The Planning Board Virtual Meeting using Zoom was remotely called to order by Jeanne McKnight, Chairman, on Tuesday, September 22, 2020, at 7:15 p.m. with Messrs. Jacobs, Alpert, Owens and Block, as well as Planning Director, Ms. Newman and Assistant Planner, Ms. Clee.

Ms. McKnight took a roll call attendance of people expected to be on the agenda. She noted this is an open meeting that is being held remotely because of Governor Baker's executive order on March 12, 2020 due to the COVID Virus. All attendees are present by video conference. She reviewed the rules of conduct for zoom meetings. This meeting has no public hearings and she does not expect public participation. She noted if any votes are taken at the meeting the vote will be conducted by roll call.

Upon a motion made by Mr. Block, and seconded by Mr. Jacobs, it was by a roll call vote of the five members present unanimously:

VOTED: to automatically continue the meeting to 10/6/20 at 7:15 p.m. with the same zoom ID number if any technical difficulties arise that keep the Planning Board from continuing this meeting tonight.

Request to discuss changes to the approved plan as well as request for Temporary Occupancy: Amendment to Major Project Site Plan Special Permit No. 2016-01: 57 Dedham Ave LLC, 471 Hunnewell Street, Needham, MA, Petitioner (Property located at 15 & 17 Oak Street, Needham, MA).

George Giunta Jr, representative for the applicant, noted this is a 12,000 plus square foot mixed use building with commercial on the first floor and 5 residential units on the second floor and the half story above. The project was approved for 30 underground parking spaces. The project is nearly complete. The building is complete and the infrastructure is essentially done. Landscaping needs to be put in and a handicap ramp. As part of construction there were a couple of deviations from the approved plan. He showed the approved plan. There were 13 parking spaces behind the building and a proposed transformer at the right front corner of the property line. NStar disagreed with the location, put the transformer on the other side and required a utility pole. The applicant had hoped to put the electrical underground but NStar did not like that and did not allow it. The applicant was made to put in a pole and the electrical will run across the street to the pole.

Mr. Giunta Jr. noted there are 14 parking spaces in the back of the building today as some spaces were reconfigured. The spaces start at the beginning of the building where the sidewalk would have been that connected the rear to the front of the building. With the location NStar put the transformer there is room to put landscaping. Some arborvitae has already been put in to help screen ~~it~~the transformer. This is a deviation from the original plan. Ms. McKnight stated she walked around the site with Mr. Tedoldi today. The decision says the first floor is exclusively commercial and the second and third floors are residential. The second floor is partially commercial and partially residential. This seems to be a discrepancy. Michael Tedoldi, Applicant, noted that was the plan that was always in front of the Planning Board. Ms. Clee, Assistant Planner, noted an amendment was ~~done~~approved previously that completely replaced the first decision and has commercial on the second floor.

Mr. Owens stated he has no questions or objections to the changes. Mr. Jacobs and Mr. Block agreed. Mr. Block commented the project looks good and is well designed. Mr. Alpert stated his only question is the removal of the sidewalk. There are 14 spaces above ground and 30 spaces underground. He asked who will use the 14 above ground spaces. If they are for patients he is a little concerned with no sidewalk along the side of the building, particularly at night. It is ok if it is only for the residents. Mr. Tedoldi noted the main entrance is in the rear with the parking area. The ramp in front is superfluous and misleading to handicapped people. There is no place for them to go from the front entrance. He would prefer to remove the ramp and put in more landscaping. Everyone should come in the back of the building where the ramp, main lobby and elevator are.

Ms. Newman asked if there would be issues with ADA compliance if the ramp is removed. Mr. Tedoldi stated no, the project was all set with the access in the back. The front will be egress for first floor tenants only. The project will meet building code and the ramp could always be put in at a later date if necessary. Mr. Alpert suggested the Planning Director and applicant consult with the Building Inspector about building code and ADA requirements.

If the Building Inspector is ok with it and determines the ramp is not needed, the applicant can come back for a minor modification to remove the ramp. Mr. Alpert asked if the purpose of the ramp on Oak Street was to allow for people getting dropped off and picked up. Mr. Tedoldi noted he does not anticipate anyone being dropped off or picked up on Oak Street. Ms. McKnight stated it is a nice building and an enhancement to the neighborhood and town. The sidewalk within the Oak Street right-of-way is an issue with the Town. The Town does not even know where the sidewalk should be on Oak Street so it has been difficult for this developer. Ms. McKnight reviewed the requested changes.

Upon a motion made by Mr. Alpert, and seconded by Mr. Jacobs, it was by a roll call vote of the five members present unanimously:

VOTED: to consider the movement of the transformer, the installation of a utility pole, the increase of above ground parking from 13 spaces to 14 spaces and the removal of the sidewalk next to the building as de minimis changes.

Upon a motion made by Mr. Alpert, and seconded by Mr. Jacobs, it was by a roll call vote of the five members present unanimously:

VOTED: to approve the change of relocation of the transformer as shown on the As-Built plan, relocation of the utility pole as shown on the As-Built plan, removal of the sidewalk on the side of the building and the addition of a 14th parking space in the rear of the building.

Ms. Newman asked if the Board wanted to see a landscape plan if the ramp in front is eliminated. Ms. McKnight stated the Board would like to see a plan. The applicant should get assurance from the Building Inspector then come back with a landscape plan for a de minimis change. Mr. Giunta Jr. stated there is one residential tenant for one spot on the second floor. They are asking for a partial Occupancy Permit for the residential units only. Ms. Newman clarified the applicant is looking for approval for a temporary partial Occupancy Permit. She is still waiting for the As-Built landscaping plan and an estimate of unfinished and work items, inspection by engineering, sign off from the Building Inspector that the garage and elevator are available and certifications from architects. When she has those components, and the needed money to guarantee the remaining items, she can issue the temporary.

Mr. Tedoldi stated he does not know how long he will need. Things have been tabled with COVID. He is not sure how the Building Inspector will deal with this. He noted the site work will be 100% done before he asks for the inspection and 95% of the landscaping is done. The only thing not done is the sidewalks. Mr. Giunta Jr. stated the only question of time is the sidewalk on Oak Street and that is on the Town. He feels within 30 days the site work will be done. He believes maybe a 6 month extension with an option to extend may be best. Mr. Alpert asked if one condition is a deposit of funds. Ms. Newman noted, in the event all is not done, the Board should authorize her to get an estimate of the cost for the remaining items and add 1.35% on top of that.

Upon a motion made by Mr. Alpert, and seconded by Mr. Jacobs, it was by a roll call vote of the five members present unanimously:

VOTED: to authorize the Planning Director to issue a temporary Occupancy Permit for up to 6 months upon her satisfaction that the requirements set forth in the Special Permit have been fulfilled.

Special Town Meeting Zoning Articles: Town Meeting Preparation.

Mr. Block noted he sent all members a copy of an early draft of his presentation without slides and has received comments. He will rebuild the presentation. He stated it seems to be consensus that although this is re-zoning one spot parcel of land, ~~but it~~ is not spot zoning. Do we address this up front? The consensus seems to be no need to address this issue in the presentation, but ~~he waits~~ to see if it comes up. He also asked if the origination of a zoning article from a developer taints the process. He will address this if it comes up. He will restructure his outline and will focus on what they are doing and why. Mr. Owens stated he needs to hit the salient points in the beginning. He gave his feedback to Mr. Block. Mr. Alpert agreed with Mr. Owens. He feels he should say that the Planning Board supports this unanimously. He needs to add "unanimously."

Mr. Jacobs will look at the next draft and give comments. He would deemphasize spot zoning. He feels he should not talk about the developer involvement aspect at the beginning or maybe not at all. The same issue happened at

the Transit Oriented site. He would [not?] deal with it within the presentation. Some people will think it is a problem but it is not relevant. The key is if the changes are good for the town. Mr. Block is talking about zoning changes that would allow the project and that the project is subject to Special Permit requirements. Ms. McKnight feels there is no need to bring up spot zoning or talk about the developers. The project has been through hearings and been reviewed with the applicant by the Finance Committee. The Select Board supports this. She feels it is worth verbalizing this. She feels Mr. Block should also note the 4th story will be set back and not visible from the street. Mr. Block intends to show renderings of the 4th story.

Ms. McKnight noted the number of affordable units should be mentioned and Mr. Jacobs agreed. Evans Huber, attorney for the applicant, noted Margaret Murphy will put together a taped presentation but he is not sure when that would be used. Ms. Newman stated any such presentation~~that~~ would come out of the Planning Board's 15 minutes. Mr. Owens advised against Ms. Murphy speaking if she is on the payroll of the developer and a Town Meeting member. This is a Planning Board article that we are sponsoring and presenting. He would not give any of our time to the developer. Ms. Newman explained how the setup would be for this Town Meeting. The Planning Board will sit in the front row with Mr. Jacobs at the aisle as a non-Town Meeting member. She will post a meeting prior to Town Meeting in case there are issues. There will be a specific area for the developer in case questions come up. Mr. Huber stated he will not be attending the meeting in person but will be watching remotely.

Mr. Owens stated nothing should be referred to the developer if questions arise. Mr. Jacobs agreed. Ms. Newman will not be at Town Meeting but will be watching and available by text and phone. Mr. Block will confer with colleagues if questions arise and he does not know how to respond. Mr. Jacobs will not be attending but will be watching on tv and be available by phone. The Board had a short discussion regarding questions that may arise and how to deal with them.

Minutes

Ms. McKnight noted a typo on the 7/7/20 minutes on page 5. Retail is missing the "l" at the end.

Upon a motion made by Mr. Block, and seconded by Mr. Jacobs, it was by a roll call vote of the five members present unanimously:

VOTED: to accept the minutes of 7/7/20 with the typo correction.

Upon a motion made by Mr. Block, and seconded by Mr. Alpert, it was by a roll call vote of the five members present unanimously:

VOTED: to accept the minutes of 7/21/20.

Correspondence

Mr. Alpert asked if the minutes could be finalized and sent to him via email for his signature as Vice Chair. Ms. Clee stated she has not been having things signed during this time.

Ms. Newman noted Century Bank is going into the Anton Cleaner's space. They were going to have an ATM but now there will only be a window for a teller. She asked how this would be permitted. Is it an accessory use needing ~~with~~ a special permit? The transactions are being done inside the building. People will walk up to the window and it is not accessible by motor vehicle. Mr. Jacobs noted it is part of the principal use, not an accessory use. Mr. Owens agreed.

Ms. McKnight noted correspondence from the Planning Director regarding 225 Highland Avenue. A different tenant is coming in to where Gymboree used to be. There are slightly different hours and services with more staff. This will impact parking requirements and need a waiver of more parking. Could this be a minor modification? Ms. Newman noted the applicant was trying to get the permit transferred saying it was similar but the increased staff would need increased parking and a waiver. Mr. Alpert stated this needs to be a formal process. His question is if the applicant needs to start from scratch for a special permit. Ms. Newman feels the applicant would be better served doing that. Mr. Jacobs stated he would advise them to start fresh but if they want to go the other route he would listen. Ms. Newman noted a straight transfer would trigger a special permit. All members agreed the applicant should be given the choice.

Ms. Newman informed the Board the Zoning Board of Appeals denied the third garage case and granted Baker's Best eating place a permit for 2 years.

Upon a motion made by Mr. Alpert, and seconded by Mr. Jacobs, it was by a roll call vote of the five members present unanimously:

VOTED: to adjourn the meeting at 9:20 p.m.

Respectfully submitted,
Donna J. Kalinowski, Notetaker

NEEDHAM PLANNING BOARD MINUTES

October 4, 2020

The Planning Board Virtual Meeting using Zoom was remotely called to order by Jeanne McKnight, Chairman, on Sunday, October 4, 2020, at 11:30 a.m. with Messrs. Jacobs, Alpert, Owens and Block, as well as Planning Director, Ms. Newman and Assistant Planner, Ms. Clee.

Ms. McKnight noted they are preparing for the Special Town Meeting. There is a seating chart provided with the location of the seats. Ms. Newman will be available by conference call as will Mr. Jacobs. She has not heard of any amendments proposed to the zoning articles. Mr. Owens stated he is not aware of any requests for adding an affordable units requirement for the assisted living or memory care units. Ms. McKnight noted that can be addressed during the special permit process. Ms. McKnight noted she wants to have the 2 articles considered together. Ms. Newman stated the Chair needs to ask the Moderator to discuss the articles together and vote separately. Ms. Newman spoke to him about it.

Mr. Alpert stated Mr. Block feels the Finance Committee seemed to focus more on the developers than the zoning article. ~~He~~Mr. Block should deflect those questions. He could say this is a zoning article and the developer may apply for a special permit, but ~~there are no guarantees~~ of issuance. Mr. Block stated that is correct. The Finance Committee referred more to the developers than the Article itself. The By-Law change has been on 5 Planning Board meeting agendas since May so there has been ample opportunity for input and questions. Mr. Owens understood the recommendation from the Finance Committee is that the 2 Articles be adopted. He does not anticipate questions.

Mr. Block noted the Article 17 resolution. It is a Citizen's Petition dealing with racism in town. He hears it will be referred back to the ~~Selectboard~~Select Board and part of the text refers to-is systemic racism with regard to zoning. Mr. Jacobs stated he understands the ~~Selectboard~~Select Boards request was only partially stated by Mr. Block. They want questions referred to the ~~Selectboard~~Select Board with the understanding the ~~Selectboard~~Select Board will bring it back to the next Town Meeting in May. Ms. McKnight fears the vote to refer back would be perceived as a negative vote and feels they should just support the article. Mr. Owens stated the reference to planning is that there is a certain segment of opinion that the whole issue of single family housing zoning is racist. They [who is "they" —the article proponents?] feel it is a social issue not a zoning issue. Personally he feels it is an extreme position and he does not believe the best way to establish racial equity and tolerance is through zoning. He feels the hidden agenda is they really want to fund the police. Some things are not given a proper airing and a proper vetting. The town needs to think about the consequences and trust the ~~Selectboard~~Select Board to have a broad outreach to all parts of town.

Mr. Jacobs asked if the Planning Board wants to take a position on Article 17. He doubts the Board wants to take a position now. If it is referenced back he wants to be able to study it. Mr. Alpert agreed with Mr. Jacobs. There is a meeting scheduled for 10/15/20 for the Chairs and Vice-Chairs to meet. They could bring up the zoning portion of this so the ~~Selectboard~~Select Board should consult with them. His understanding is this is just a resolution for the Planning Board to look at. Mr. Block suggested the Planning Board take a position that they unanimously oppose any form of racial discrimination and support an effort to ensure equity throughout the town. Mr. Alpert disagreed the Planning Board should take any position today. He does not feel they should speak as a Board. Ms. McKnight agreed.

Ms. McKnight noted they should discuss Articles 11 and 12. CPA funds are being requested for the Baptist Church porch and cornice and for the Unitarian Church bell tower. This is supported by the CPA and ~~Selectboard~~Select Board. The Finance Committee has come out against both. They are questioning if this is the proper use of CPA funds. It came out they would only support CPA funding for historic preservation of buildings if open to the general public. Both churches do welcome~~have the~~ general public ~~welcome~~. She feels the Board should support both articles. The historic structures are on the state and local lists of historic buildings and rooms are used for community uses and that will continue. Both are the fabric of the center of the town. Mr. Block stated the Finance Committee opposes using CPA funds for private uses on private land.

| Mr. Alpert noted he is the Planning Board representative on the CPA Committee. He recused himself on the Baptist Church Article. They were discussing use of CPA funds in general. Selectman Moe Handel's presentation was carefully worded. He disagrees with the Finance Committee's position. The statute is clear CPA funds can be used for private building renovation that meets the definition of historic and the Planning Board should support the use of CPA funds that meet the definition for CPA purposes. He feels the Board should support these 2 Articles.

Mr. Owens stated the Planning Board should not take a position. They have not discussed this at all. He would not volunteer a position. Mr. Alpert agreed. It is too rushed. Mr. Jacobs agreed.

Upon a motion made by Mr. Jacobs, and seconded by Mr. Alpert, it was by a roll call vote of the five members present unanimously:

VOTED: at 12:25 p.m. to continue to the Special Town Meeting at Memorial Field site and reconvene.

Respectfully submitted,
Donna J. Kalinowski, Notetaker

Paul Alpert, Vice-Chairman and Clerk

To: Jeanne McKnight, Planning Board Chair
Cc: Town Manager and Planning Director
From: Dan Matthews, Select Board Member
Re: 40B Guidelines
November 12, 2020

Having watched the tape of your Board's discussion of the draft 40B Guidelines, I wanted to write to clarify a couple of points.

The submitted materials were a draft intended to initiate discussion. There has been no formal review by the Select Board at this point, although it will probably be a discussion item on an upcoming agenda. I asked to have the draft submitted to a number of boards and committees so that all could have information and opportunity to comment at the outset of this process. The requested date for comment was not intended as a hard deadline, but to help move this forward as the participants are able.

I thought the Board and staff comments in the discussion were very helpful, particularly about including clear language about the obligations of affordable unit owners at resale, outlining the LIP process now that the Town has exceeded 10% SHI, and others.

It was also important to note that 40B is only one element of local housing policy and program, and that the draft guidelines are accordingly limited in scope.

Thanks for taking the time to speak with me earlier this week, and thank you for your efforts on this.



City of Newton

Legal Notice

Thursday, November 5, 2020

Public hearings will be held on Thursday, November 5, 2020, at 7:00 PM, before the **Land Use Committee** of the **Newton City Council** and the **Planning and Development Board*** for the purpose of hearing the following petitions at which time all parties interested in the items shall be heard. Notice will be published Thursday, October 22, 2020 and Thursday, October 29, 2020 in The Boston Globe and Wednesday, October 28, 2020 in the Newton Tab, with a copy posted on the city's website at www.newtonma.gov and in a conspicuous place at Newton City Hall.

Please Note: Due to the COVID-19 state of emergency, this meeting will be virtual and can be attended by desktop, laptop, tablet or phone by visiting the following link:

<https://us02web.zoom.us/j/82812866469> or by calling +1 646 558 8656 US (New York) and using the Meeting ID: 828 1286 6469 a final agenda will be posted on Friday, October 30, 2020

<http://www.newtonma.gov/gov/aldermen/committees/landuse/2020.asp>. If the State of Emergency is terminated or if the Governor's Order suspending certain provisions of open meeting law is rescinded, this meeting will be held on the Second Floor of City Hall, 1000 Commonwealth Avenue, Newton. Please call the Clerk's office at 617-796-1210 for more information.

- #319-20*** **Request to Rezone two parcels from BU-2 to MU-4 at 1149-1151 Walnut Street**
NEWTON WALNUT LLC petition for SPECIAL PERMIT/SITE PLAN APPROVAL to rezone two parcels; 1149 Walnut Street (Section 52 Block 08 Lot 13) and 1151 Walnut Street (Section 52 Block 08 Lot 14) from BUSINESS USE 2 to MIXED USE 4.
- #320-20*** **Petition to allow 26-unit mixed use development at 1149-1151 Walnut Street**
NEWTON WALNUT LLC petition for SPECIAL PERMIT/SITE PLAN APPROVAL to raze the existing buildings and construct a four-story mixed-use building up to 48' in height, containing 26 units and 23 parking stalls, to waive the minimum lot area per unit, to reduce the side setback requirement, to waive the requirement to use A-B+C formula to determine the parking requirement, to waive 24 parking stalls, to allow 1.25 parking stalls per unit, to allow parking in the side setback, to waive dimensional requirements for parking stalls, to allow restricted end stalls, to allow reduced aisle width, to waive perimeter landscaping requirements, to waive interior landscaping requirements and to waive lighting requirements at 1149-1151 Walnut Street, Ward 6, Newton Highlands, on land known as Section 52 Block 08 Lots 13 and 14, containing 13,200 sq. ft. in a district to be zoned MIXED USE 4 (currently zoned BUSINESS USE 2). Ref: Sec. 7.3.3, 7.4, 4.2.2.B.1, 4.2.2.A.2, 4.2.5.A.3, 4.2.2.B.3, 4.2.5.A.2, 4.2.5.A.4.b, 4.2.5.A.4, 5.1.3.B, 5.1.13, 5.1.4, 5.1.4.A, 5.1.8.A.1, 5.1.8.B.1, 5.1.8.B.2, 5.1.8.B.6, 5.1.8.C.1, 5.1.9.A, 5.1.9.B, 5.1.10 of the City of Newton Rev Zoning Ord, 2017.
- #399-20** **Petition to extend nonconforming FAR at 91 Lenox Street**
CHRISTOPHER AND LISA WYETT petition for SPECIAL PERMIT/SITE PLAN APPROVAL to further extending the nonconforming FAR by razing the existing 366 sq. ft. detached garage and replace it with a new 699 sq. ft. detached garage, creating an FAR of .37 where .34 exists and .28 is allowed at 91 Lenox Street, Ward 3, West Newton, on land known as Section 32 Block 48 Lot 03,

containing approximately 19,284 sq. ft. in a district zoned SINGLE RESIDENCE 1. Ref: Sec. 7.3.3, 7.4, 3.1.3, 3.1.9, 7.8.2.C.2, 7.8.2.2 of Chapter 30 of the City of Newton Rev Zoning Ord, 2017.

#387-20

Petition to exceed FAR and extend nonconformities at 101-103 Warwick Road

JOSEPH DeNUCCI petition for SPECIAL PERMIT/SITE PLAN APPROVAL to construct a rear addition to the existing dwelling, creating an FAR of .72 where .57 exists and .48 is allowed, extending the nonconforming three-story structure and extending the nonconforming two-family use at 101-103 Warwick Road, Ward 3, West Newton, on land known as Section 31 Block 28 Lot 55 containing approximately 6,377 sq. ft. of land in a district zoned SINGLE RESIDENCE 3. Ref: Sec. 7.3.3, 7.4, 3.1.3, 3.1.9, 7.8.2.C.2 of Chapter 30 of the City of Newton Rev Zoning Ord, 2017.
