Special Permit Application

195 & 211 Concord Turnpike

Cambridge, MA

Special Permit Application

Volume 3

Criterion Development Partners
1601 Trapelo Road
Waltham, MA 02451
781.890.5600

The Residences at Alewife Station

195 & 211 Concord Turnpike

Cambridge, MA

Special Permit Application

Volume 3

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Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP: 123-266
MassDEP File #

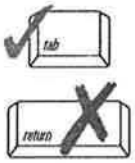
eDEP Transaction #

Cambridge
City/Town

A. General Information

Please note: this form has been modified with added space to accommodate the Registry of Deeds Requirements

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



1. From: Cambridge
Conservation Commission

2. This issuance is for (check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

a. First Name	b. Last Name
Jack	Englert

c. Organization: CPC-T Holdings, LLC

d. Mailing Address: 1601 Trapelo Road, Suite 280

e. City/Town	f. State	g. Zip Code
Waltham	MA	02451

4. Property Owner (if different from applicant):

a. First Name	b. Last Name

CAM 195 Concord Tpke, LLC; DAM 195 Concord Tpke, LLC; DAM Cambridge Ventures II, LLC; and CAM Cambridge Ventures II, LLC

d. Mailing Address

e. City/Town	f. State	g. Zip Code

5. Project Location:

a. Street Address	b. City/Town
195 & 211 Concord Turnpike	Cambridge

c. Assessors Map/Plat Number	d. Parcel/Lot Number
267.1, 267.2	22774, 22784

Latitude and Longitude, if known:

d. Latitude	e. Longitude
42d39m94s	-71d14m17s

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Middlesex South
a. County
b. Certificate Number (if registered land)
56743
240, 250, 79 and 83
c. Book
d. Page

7. Dates: 7/22/2016 (a. Date Notice of Intent Filed) 9/26/2016 (b. Date Public Hearing Closed) 11/23/2016 (c. Date of Issuance)

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
Complete NOI with Plans
a. Plan Title

b. Prepared By
c. Signed and Stamped by

d. Final Revision Date
e. Scale

f. Additional Plan or Document Title
g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

a. ☐ Public Water Supply
b. ☐ Land Containing Shellfish
c. ☒ Prevention of Pollution
d. ☐ Private Water Supply
e. ☒ Fisheries
f. ☒ Protection of Wildlife Habitat
g. ☒ Groundwater Supply
h. ☒ Storm Damage Prevention
i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

B. Findings (cont.)

Denied because:

b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**

c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) — a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. ☐ Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. ☐ Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. ☐ Land Under Waterbodies and Waterways	a. square feet	b. square feet	c. square feet	d. square feet
	e. c/y dredged	f. c/y dredged		
7. ☒ Bordering Land Subject to Flooding	66,500 a. square feet	66,500 b. square feet	103,500 c. square feet	103,500 d. square feet
Cubic Feet Flood Storage	101,196 e. cubic feet	101,196 f. cubic feet	112,644 g. cubic feet	112,644 h. cubic feet
8. ☐ Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☐ Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. ☐ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☐ Coastal Beaches	a. square feet	b. square feet	c. nourishment (cu yd)	d. nourishment (cu yd)
14. ☐ Coastal Dunes	a. square feet	b. square feet	c. nourishment (cu yd)	d. nourishment (cu yd)
15. ☐ Coastal Banks	a. linear feet	b. linear feet		
16. ☐ Rocky Intertidal Shores	a. square feet	b. square feet		
17. ☐ Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. ☐ Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. ☐ Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. ☐ Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. ☐ Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

B. Findings (cont.)

* **#23.** If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW | b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings | b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
   a. The work is a maintenance dredging project as provided for in the Act; or
   b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
   c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 3 years after date of signatures unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.

10. A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

    "Massachusetts Department of Environmental Protection" [or, "MassDEP"]

    "File Number 123-266 "

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.

12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.

13. The work shall conform to the plans and special conditions referenced in this order.

14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.

15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

19. The work associated with this Order (the "Project")
    (1) ☒ is subject to the Massachusetts Stormwater Standards
    (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

    If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

    a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

    b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
    i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
    ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
    iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement) for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.

i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.

j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.

l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):
See Attachment

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☐ Yes ☒ No

2. The _____ hereby finds (check one that applies):
   Conservation Commission

   a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

   _____ _____
   1. Municipal Ordinance or Bylaw 2. Citation

   Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

   b. ☐ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

   _____ _____
   1. Municipal Ordinance or Bylaw 2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
   The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
123-266
MassDEP File #

eDEP Transaction #

Cambridge
City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

11/23/2016
1. Date of Issuance

Please indicate the number of members who will sign this form.
This Order must be signed by a majority of the Conservation Commission.

6
2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Dorothy H. Altman
CW Pickering

☐ by hand delivery on

Date

☒ by certified mail, return receipt requested, on 11/23/2016

Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Cambridge
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Cambridge
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

195 & 211 Concord Turnpike
Project Location

123-266
MassDEP File Number

Has been recorded at the Registry of Deeds of:

County | Book | Page

for: Property Owner

and has been noted in the chain of title of the affected property in:

Book | Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

DEP File #123-266
195 and 211 Concord Turnpike
Cambridge, MA

Documents and Plans:
A Notice of Intent dated July 22, 2016 associated with the redevelopment of 195 and 211 Concord Turnpike. The complete file is available for review in the Cambridge Conservation Commission office.

Special Conditions:

18. Work shall conform to the Notice of Intent under the Massachusetts Wetlands Protection Act, M.G.L. ch. 131, sec. 40, submitted to the Cambridge Conservation Commission on **July 22, 2016** and the additional information and modifications outlined in the supplemental documents and plans provided by the applicant. Specifically, the proposed work shall conform to the most recent revisions to the Notice of Intent document and plans, received by the Commission as stated above.

19. Any further proposed or executed changes in the plans approved under this Order shall require the applicant to seek an amended Order of Conditions or to file a new Notice of Intent, or to inquire of the Cambridge Conservation Commission in writing whether the change or changes is/are substantial enough to require a new filing. Any errors in the plans or information by the applicant shall be considered changes and the above procedures shall be followed.

20. Prior to any work on the site, the applicant shall record this Order of Conditions at the Registry of Deeds pursuant to Condition 8. Failure to do so shall be deemed cause to revoke this Order.

21. The applicant shall provide to the Conservation Commission copies of all other permits, variances, licenses or determinations which may be necessary for this project by other local, state and federal agencies, such as the Chapter 91 License, NPDES permit, Water Quality Certificate, Army Corps of Engineers permit, MEPA Certificate, building permits, and zoning board approvals. The applicant shall provide copies of all applicable permits to the Commission at least 2 weeks prior to commencement of work authorized under any such permit.

22. This Order of Conditions shall be included in all construction contracts and subcontracts dealing with the work proposed and shall supersede all conflicting contract requirements that are less protective of Wetland Resource Areas.

23. The applicant is responsible for submitting the 100% construction documents to the Commission.

24. The applicant and its contractor shall keep at least one copy of this Order at the project site until a Certificate of Compliance is issued for the project. The copy of the Order shall be kept at a location mutually acceptable to the applicant and the

Commission, so that the order will be available for review during regular working hours. The sign with the DEP File Number for this project, required in condition 9, on DEP Form 5, shall remain posted at the site until a Certificate of Compliance is issued for this project.

25. All erosion control measures shall be installed before work commences and kept in working conditions until all areas are stabilized. After installation, a site visit shall be arranged with the Director to ensure that installation meets the intended standards.

26. The applicant or its agent shall specify to the Commission, prior to commencement of activity on the site, the name and telephone number of the person(s) designated by the applicant to be responsible for compliance with the conditions of this Order on the site and his/her alternate.

27. Prior to initiation of work on the site, the applicant shall convene a pre-construction site meeting with the Director of the Commission, a representative of the contractor performing the work, and the person responsible for compliance with this Order per special Condition 18.

28. The applicant shall provide 72 hours written notice to the Commission prior to commencement of activity on the site.

29. The applicant shall provide to the Conservation Commission copies of project inspectional reports during construction including but not limited to maintenance and operation and vegetation monitoring.

30. The members and agents of the Conservation Commission shall have the right to enter the site to verify compliance with this Order and to require the submittal of additional data deemed necessary by the Commission for that verification. The Commission understands that construction-site safety procedures must be followed during site visits.

31. During project construction and operations the applicant or its contractors shall provide and maintain free and safe passage by pedestrians and bicyclists along the roads or walkways adjacent to the site.

32. If some unexpected or unforeseen event occurs, that needs to be addressed, all work shall stop until the event can be brought to the attention of the Director of the Commission and a decision made by the Director as to whether it needs to be brought before the Commission.

33. Prior to the use of herbicides, pesticides and/or fertilizer to aid in the planting plan and vegetation management, the applicant and/or representative must submit a proposal to be approved by the Commission including but not limited to a delineation of the subject area, reason for proposed application, chemicals to be used (including MSDS sheets), and all applicator licenses if needed.

34. The applicant shall take appropriate steps to insure that existing trees not to be removed are adequately protected at the perimeter of their dripline to prevent injury.

35. If a workday commences with heavy rain, no work shall take place in the buffer zone or resource area that day. If heavy rain commences after start of work, all work shall cease in the buffer zone or resource area for that day, and appropriate sedimentation and erosion control shall be in place, to prevent any sedimentation to the river and other resource areas.

36. All disturbed areas shall be stabilized during and after construction to prevent erosion and sedimentation. Upon completion of construction, all disturbed areas will be immediately stabilized, with mulching, planting or other means to prevent erosion, as specified in the project's Notice of Intent and Stormwater Management Plan. The project proponents are responsible for providing semi-annual reports to the Commission. Site landscaping in accordance with the Landscape and Planting Plan and the Operation and Maintenance Plan shall commence as soon as possible after construction is complete.

37. At the completion of work and after three growing seasons, a request for a certificate of compliance may be submitted to the Conservation Commission along with the following: An as-built plan prepared, signed, stamped and dated by a registered professional engineer or land surveyor and color photographs of the site. The photographs shall be labeled, dated and keyed to the as-built plans for ready identification. A report from a botanist or certified arborist is to be submitted, certifying that all replacement trees are alive and vigorous.

38. A Long-Term Vegetation Maintenance Plan must be submitted and approved by the Commission prior to the issuance of a Certificate of Compliance if required.

39. All structures and equipment used for temporary stormwater management during construction, such as silt curtain/hay-bale fences, silt booms, debris screens, and catch basins, shall be maintained in good working condition at all times. These structures shall be inspected weekly on a regular basis, and immediately after rainstorms or snowmelt events, and repaired and/or cleaned if necessary. The existing silt curtain in the Broad Canal will be removed, inspected and re-installed in proper working condition prior to the start of work.

40. No untreated construction runoff shall be routed directly into any Wetlands Resource Area, surface water, or storm drain. Runoff and other discharges from construction areas shall be routed to sedimentation/erosion control structures or allowed to flow over land in a direction away from Wetlands Resource Areas at all times during construction.

41. The applicant, contractor, owner, successor or assignees shall be responsible for ensuring the lasting integrity of the surface cover on the site and site activities so as to

prevent erosion, siltation, sedimentation, chemical contamination or other detrimental impact to the on-site and/or off-site resource areas so as to comply with this Order and the Wetlands Protection Act.

42. All drainage structures constructed per this Order shall be inspected and maintained as described in the applicant's approved Operation and Maintenance Plan, except as outlined in this Order. This condition shall remain in effect in perpetuity and shall not expire with a Certificate of Compliance for the project.

43. All soil stockpiling shall occur as outside of resource areas, and refueling and maintenance activities during construction shall occur within a defined area outside of wetland resource areas and their buffer zones. A plan showing this defined area shall be submitted to the Commission prior to initiation of work on the site.

44. The applicant shall be prepared to effectively deal with spillage of fuel or hydraulic fluids from equipment. A quick-absorbent material, such as "Speedi Dry" or equivalent, shall be stored in a dry, readily available area and used in the event petroleum-based fluids are spilled or leaked. The spent material is then to be containerized and disposed of properly. Any release of fuel or lubricants at the work site shall be reported to the Commission immediately. There shall be no discharge or spillage of fuel, oil, or any other pollutant into any Wetland Resource Area.

45. No construction material debris, other debris or refuse from construction workers shall be allowed to enter or remain in any resource area. Any debris entering these areas must be removed immediately by hand.

46. The applicant shall take appropriate steps to control dust at the project site and prevent its spread by trucks leaving the site.

47. Trucks entering and leaving the site shall have their loads completely covered in compliance with M.G.L. Chapter 85 section 36. The applicant shall also instruct all drivers on site that vehicles shall not idle for longer than 5 minutes in compliance with M.G.L. Chapter 90 section 16A.

48. There shall be no use of sodium de-icing agents on the site. The applicant shall submit to the Commission and the DPW a plan that identifies the method of de-icing which will have the least impact on water quality and function of pervious pavement areas.

49. Prior to installing any plant material, a final landscaping plan must be submitted and reviewed by the Conservation Commission if applicable.

50. Prior to issuing a Certificate of Compliance the proponents must have re-established the vegetative cover for a minimum of 3 growing seasons.

Flood Certification & Report

BSC GROUP
Transportation ▪ Energy ▪ Land Development

803 Summer Street
Boston, MA 02127

Tel: 617-896-4300
800-288-8123

www.bscgroup.com

January 17, 2017

BSC Project No. 2.3269.00

Mr. H. Theodore Cohen, Chairman
Cambridge Planning Board
City Hall Annex
344 Broadway
Cambridge, MA 02139

RE: Residences at Alewife Station
195 & 211 Concord Turnpike
Flood Storage Mitigation Certification

Dear Mr. Cohen and Members of the Board:

As required by Section 20.75 of the Cambridge Zoning Ordinance and by the Massachusetts Wetlands Protection Act (WPA), the project site's flood storage capacity was evaluated for storm events up to and including the 100-year storm to determine if the proposed site development would reduce the available flood storage capacity at the site. Additionally, in response to the City of Cambridge Climate Change Vulnerability Assessment initial recommendations, the project will strive to prepare for anticipated 100-year storm events and associated flood elevations associated with the Vulnerability Assessment's model for the Year 2030 and the Year 2070. Per the City of Cambridge DPW, the project shall design to the projected 2030 100-year flood elevation and demonstrate how it would recover from the projected 2070 100-year storm event and associated flooding.

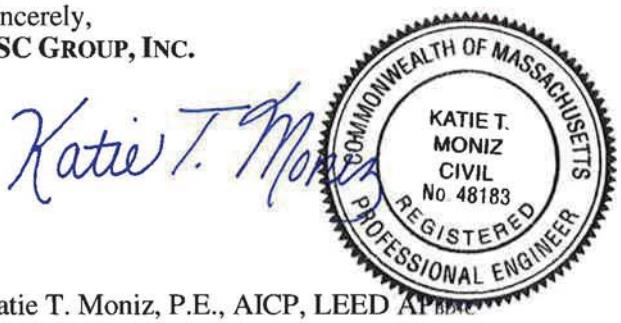
BSC determined that the construction of the Residences at Alewife Station as proposed would result in a net loss of the site's available flood storage for certain incremental flood elevations. Therefore, in accordance with the Zoning Ordinance and the WPA, the flood loss will need to be compensated, or mitigated, for the loss of flood storage for those incremental elevations where the loss took place.

To compensate for the lost available flood storage, the proposed under the building parking areas will be elevated such that the areas under the parking will mitigate the lost available flood storage at the exact flood elevations where the loss will take place for the site improvements. The Project has been designed such that the bottom of each of the buildings' parking garage slabs are elevated higher than the potential flooding associated with the anticipated 2030 100-year storm event, which for this site is expected to be Elevation 7.46. The building lobby spaces are designed at Elevation 8.50 and are set a grade on the northern portion of the site adjacent to Route 2. The Project provides compensatory flood storage up to Elevation 7.50 on site through site grading and at grade under-building flood storage areas.

The Flood Report and associated design drawings highlights the evaluation results and provides in detail the incremental and cumulative available flood storage calculations for the proposed project. The attached Flood Report has been submitted as part of a Notice of Intent Application to the Cambridge Conservation Commission. At their September 26, 2016 meeting, the Commission unanimously voted to approve the Project and the proposed flood plain impacts and mitigation measures.

In accordance with Section 20.75 of the Zoning Ordinance and with the requirements of the Wetlands Protection Act, BSC Group certifies that the Residences at Alewife Station project and the associated site improvements (as presented in the Special Permit package) provide the required compensation for the flood storage losses due to the construction of the proposed buildings, associated structured parking and site infrastructure. The site's flood storage capabilities will not be adversely affected by the construction of said improvements. Additionally, the project has been designed to meet the City of Cambridge Climate Change Vulnerability Assessment initial recommendations.

Sincerely,
BSC GROUP, INC.



Katie T. Moniz, P.E., AICP, LEED AP BD+C
Senior Associate, MA Registration Number: 48183

FLOOD REPORT

The Residences at Alewife Station

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS

JULY 22, 2016

Applicant/Developer:

CPC-T Holdings, LLC
1601 Trapelo Road Suite 172
Waltham, MA 02451

BSC Job Number: 2-3269.00

Prepared by:

BSC GROUP

803 Summer Street
Boston, MA 02127

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AVAILABLE FLOOD STORAGE PLANS
FLOOD STORAGE BUILDING CROSS-SECTIONS

SECTION 1.0

PROJECT NARRATIVE

1.01 EXISTING SITE FLOOD PLAIN CONDITIONS

Portions of the existing property at 195 & 211 Concord Turnpike are located within the limits of the 100-year floodplain as shown on the current FEMA Map dated June 4, 2010. A 100-year flood elevation of 6.8 NAVD 1988, as shown on Cross Section "12P" in the Study, was taken at a section across the river to the north of the project to define the 100-year flood elevation.

The existing conditions survey provided as part of this project and all calculations and supporting documentation have been prepared on North American Vertical Datum 1988 (NAVD88). As such, the 100-year flood elevation is at elevation 6.8' NAVD 1988

The existing site elevations within the limits of the work vary from a low point of 3.8+/-' to elevation 7.8'+/-. Generally, the northeast corner of the site is above the 100-yer flood elevation and the remainder of the site is within the floodplain. The site generally slopes from north to south towards the nearby Little River.

1.02 POST-DEVELOPMENT FLOOD PLAIN CONDITIONS

The post development site condition has been designed to lessen the impact to the existing floodplain and to provide additional flood storage onsite. A total of 128,280 +/- square feet and 3,748cubic yards of the 100-year flood plain area exist on the property. The project proposes to mitigate the impacts from the development by constructing portions of the proposed residential buildings above the existing 100-year flood plain such that available flood storage is provided at grade under the buildings and additional storage surrounding the connecting areas through site grading. The following is a summary of the proposed impacts to the 100-year flood plain;

	Existing Conditions	Post-Development Conditions
100-year Flood Plain Area	128,280 +/- sf	128,280 +/- sf sf
100-year Flood Plain Volume	3,748 cy	4,172 cy

In response to the City of Cambridge Climate Change Vulnerability Assessment initial recommendations, the project will strive to prepare for anticipated 100-year storm events and associated flood elevations associated with the Vulnerability Assessment's model for the Year 2030 and the Year 2070. Per the City of Cambridge DPW, the project shall design to the projected 2030 100-year flood elevation and demonstrate how it would recover from the projected 2070 100-year storm event and associated flooding.

The Project has been designed such that the bottom of each of the buildings' parking garage slabs are elevated higher than the potential flooding associated with the anticipated 2030 100-year storm event, which for this site is expected to be Elevation 7.46. The building lobby spaces are designed at Elevation 8.50 and are set a grade on the northern portion of the site adjacent to Route 2. The Project provides compensatory flood storage up to Elevation 7.50 on site through site grading and at grade under-building flood storage areas.

As required by the Cambridge Department of Public Works, the flood mitigation area has been designed such that after flooding events the area under the parking garage slabs, where flood storage has been designed, can be cleaned of sediments and debris left from receding flood waters. This area is to be paved and sloped such that building maintenance staff will be able to wash debris out from the under building flood storage areas. Debris can then be collected and disposed.

SECTION 2.0

FLOOD VOLUME MITIGATION CALCULATIONS

2.0 FLOOD VOLUME MITIGATION CALCULATIONS

The majority of the project site lies within Bordering Land Subject to Flooding (i.e. the flood plain), as defined by the Massachusetts Wetlands Protection Act (the "Act"). A Flood Insurance Study of the City of Cambridge was performed and dated June 4, 2010. This Study provided elevations for the 10-, 50-, 100- and 500-year floods in the area of Little River behind to the north of CambridgePark Drive.

Specifically, Cross Section "12P" in the Study was taken at a section across the river approximately to the north of the project. The flood elevations for this cross section are as follows:

Table 1 Current FEMA Flood Elevations*

	10-year	50-year	100-year	500-year
Cross Section "12P" (Little River)	3.1 NAVD 1988	4.9 NAVD 1988	6.8 NAVD 1988	10.7 NAVD 1988

* Reference: June 4, 2010 FEMA Flood Insurance Study
Datum: North American Vertical Datum (NAVD)

Flood Storage Volumes

The Act requires that no project shall displace more flood volume than what currently exists at that site. The Act further requires that any loss in flood storage shall be compensated, or mitigated, for any project that results in a loss of flood storage for each incremental elevation where the loss took place. With the construction of under building flood storage for the residential buildings, and through site grading design, flood storage has been mitigated.

Calculations to determine the amount of available flood storage due to the construction of this project have been performed for each elevation increment between existing grade and the current flood elevation of 6.8' NAVD88, as well as the anticipated 2030 100-year storm event flood elevation of 7.46'. The proposed condition available flood storage volume was then compared to the existing condition available flood storage provided for the same elevation increments.

Using Autodesk Civil 3D design software, the available flood storage volumes for the existing site were determined and the results are provided herein. The software compared the existing contours of the site to each incremental (per foot) flood elevation up to the Project's proposed 100-year flood elevation, 6.8' NAVD88 as well as the anticipated 2030 100-year storm event flood elevation of 7.46' NAVD88. The total volume per increment was calculated and tabulated (see Table 1 below). The same process was performed for the proposed grading of the site along with separate manual calculations for the area under the proposed residential buildings.

Table 1: Existing Available Flood Storage

Elevation	Existing Cumulative Available Flood Storage (CY)	Existing Incremental Available Flood Storage (CY)
4.0 to 5.0	197	197
5.0 to 6.0	1,550	1,353
6.0 to 6.8	3,748	2,198
6.8 to 7.0	4,414	666
7.0 to 7.50	6,278	1,864

Table 2: Proposed (Post-Development) Available Flood Storage

Elevation	Proposed Cumulative Available Flood Storage (CY)	Proposed Incremental Available Flood Storage (CY)
4.0 to 5.0	201	201
5.0 to 6.0	1,668	1,467
6.0 to 6.8	4,172	2,504
6.8 to 7.0	4,930	758
7.0 to 7.50	7,174	2,244

To determine the total loss (or gain) of available flood storage for the post-development conditions, the total available storage volume for the post-development was compared to the total available storage volume for the pre-development condition for *each incremental elevation*. The net result was determined and the findings are as follows (see Table 3 below):

Table 3: Net Incremental Available Flood Storage

Elevation	Existing Incremental Available Flood Storage (Table 1) (CY) a	Proposed Incremental Available Flood Storage (Table 2) (CY) b	Net Unadjusted Incremental Available Flood Storage (CY) b-a
4.0 to 5.0	197	201	4
5.0 to 6.0	1,353	1,467	114
6.0 to 6.8	2,198	2,504	306
6.8 to 7.0	666	758	92
7.0 to 7.50	1,864	2,244	380

As shown in Table 3, the proposed site improvements result in a net increase in available flood storage for the site. The increase in available flood storage can be attributed to the site re-grading and the compensatory storage area provided under the proposed residential buildings garages.

The proposed at grade spaces under the buildings provide additional flood storage volumes on site to help mitigate the project impacts. Flood waters will be able to flow unrestricted in and out of the space by gravity along sloped mud slabs under each building. A mesh screen with a minimum of 50% void openings at each incremental elevation will be installed at the perimeters of the buildings' flood storage spaces to restrict access from debris and/or unauthorized personnel or wildlife.

Conclusion

In accordance with the Wetlands Protection Act, the proposed improvements provide the required compensation to the flood storage loss due to the construction of the proposed buildings and infrastructure. Additionally, the project has been designed to meet the City of Cambridge Climate Change Vulnerability Assessment initial recommendations.

APPENDICES

FEMA Flood Plain Data

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Aberjona River North Spur								
A	130[1]	33	148	0.9	64.3	64.3	64.3	0.0
B	2,260[1]	68*	324	0.6	68.1	68.1	68.1	0.0
C	2,860[1]	152	203	0.9	68.2	68.2	68.2	0.0
D	4,400[1]	124*	713	0.5	75.8	75.8	75.8	0.0
E	6,500[1]	18	15	2.1	78.3	78.3	78.3	0.0
F	7,880[1]	47*	68	1.1	81.5	81.5	81.5	0.0
G	9,410[1]	18*	27	0.5	83.0	83.0	83.0	0.0
Alewife Brook (Little River)								
A	100[2]	77*	427	1.1	6.7	3.9[4]	4.1	0.2
B	250[2]	101*	399	1.2	6.7	3.9[4]	4.1	0.2
C	2,960[2]	74	381	1.2	6.7	4.1[4]	4.3	0.2
D	3,970[2]	56*	372	1.5	6.7	4.5[4]	4.7	0.2
E	5,220[2]	84	327	1.2	6.7	4.6[4]	4.9	0.3
F	7,330[2]	500*	1,135	0.3	6.8	4.9[4]	5.3	0.4
G	7,770[2]	1,556*	2,294	0.2	6.8	5.0[4]	5.3	0.3
H	8,010[2]	1,675*	3,477	0.1	6.8	5.0[4]	5.4	0.4
I	11,625[2]	70	569	0.8	7.4	6.4[4]	7.2	0.8
Angelica Brook								
A	500[3]	16	23	6.9	190.1	190.1	190.1	0.0
B	1,360[3]	8	25	6.4	207.1	207.1	207.9	0.8
C	2,770[3]	100	525	0.3	223.4	223.4	223.4	0.0

[1] Feet above confluence with Aberjona River

[2] Feet above confluence with Mystic River

[3] Feet above confluence with Reservoir No. 3

[4] Elevation computed without consideration of backwater effects from Mystic River

* The measured top width on the FIRM may differ due to the effects of ineffective flow, the exclusion of small pocket areas due to map scale limitations, or is estimated due to HEC-RAS modeling limitations

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

MIDDLESEX COUNTY, MA
(ALL JURISDICTIONS)

FLOODWAY DATA

ABERJONA RIVER NORTH SPUR – ALEWIFE BROOK (LITTLE RIVER) – ANGELICA BROOK

Town of Belmont 250182

City of Cambridge 250186

905000 FT

JOINS PANEL 0418

MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0419E

FIRM

FLOOD INSURANCE RATE MAP

MIDDLESEX COUNTY, MASSACHUSETTS
(ALL JURISDICTIONS)

PANEL 419 OF 656
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

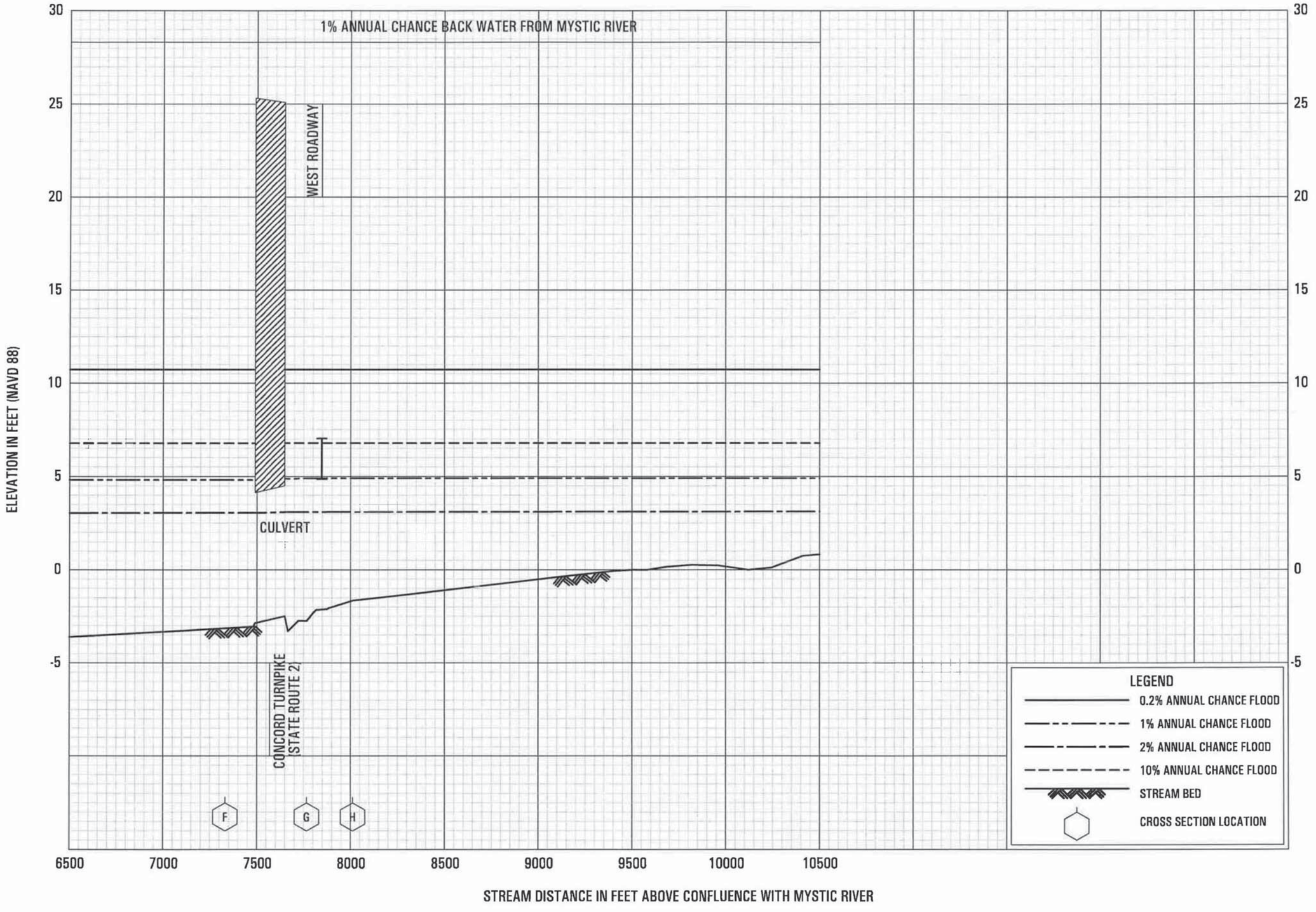
COMMUNITY	NUMBER	PANEL	SUFFIX
ARLINGTON, TOWN OF	250177	0419	E
BELMONT, TOWN OF	250182	0419	E
CAMBRIDGE, CITY OF	250186	0419	E
SOMERVILLE, CITY OF	250214	0419	E
WATERTOWN, TOWN OF	250223	0419	E

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
25017C0419E

EFFECTIVE DATE
JUNE 4, 2010

Federal Emergency Management Agency



FLOOD PROFILES

ALEWIFE BROOK (LITTLE RIVER)

FEDERAL EMERGENCY MANAGEMENT AGENCY

MIDDLESEX COUNTY, MA

(ALL JURISDICTIONS)

12P

AVAILABLE FLOOD STORAGE PLANS

Calculation Sheet

BSC GROUP

Project No.	23269.00
Subject	The Residences at Alewife Station Flood Storage Calculations
Location	195 & 211 Concord Turnpike
	Cambridge, Massachusetts

Calc By	BPP
Date	7/11/2016
Checked By	KTM
Date	7/19/2016

Elevations	Existing Cumulative Available Flood Storage (CY)	Existing Incremental Available Flood Stoage (CY)
4.0 to 5.0[1]	197	197
5.0 to 6.0	1550	1353
6.0 to 6.8[2]	3748	2198
6.8 to 7.0	4414	666
7.0 to 7.5[3]	6278	1864

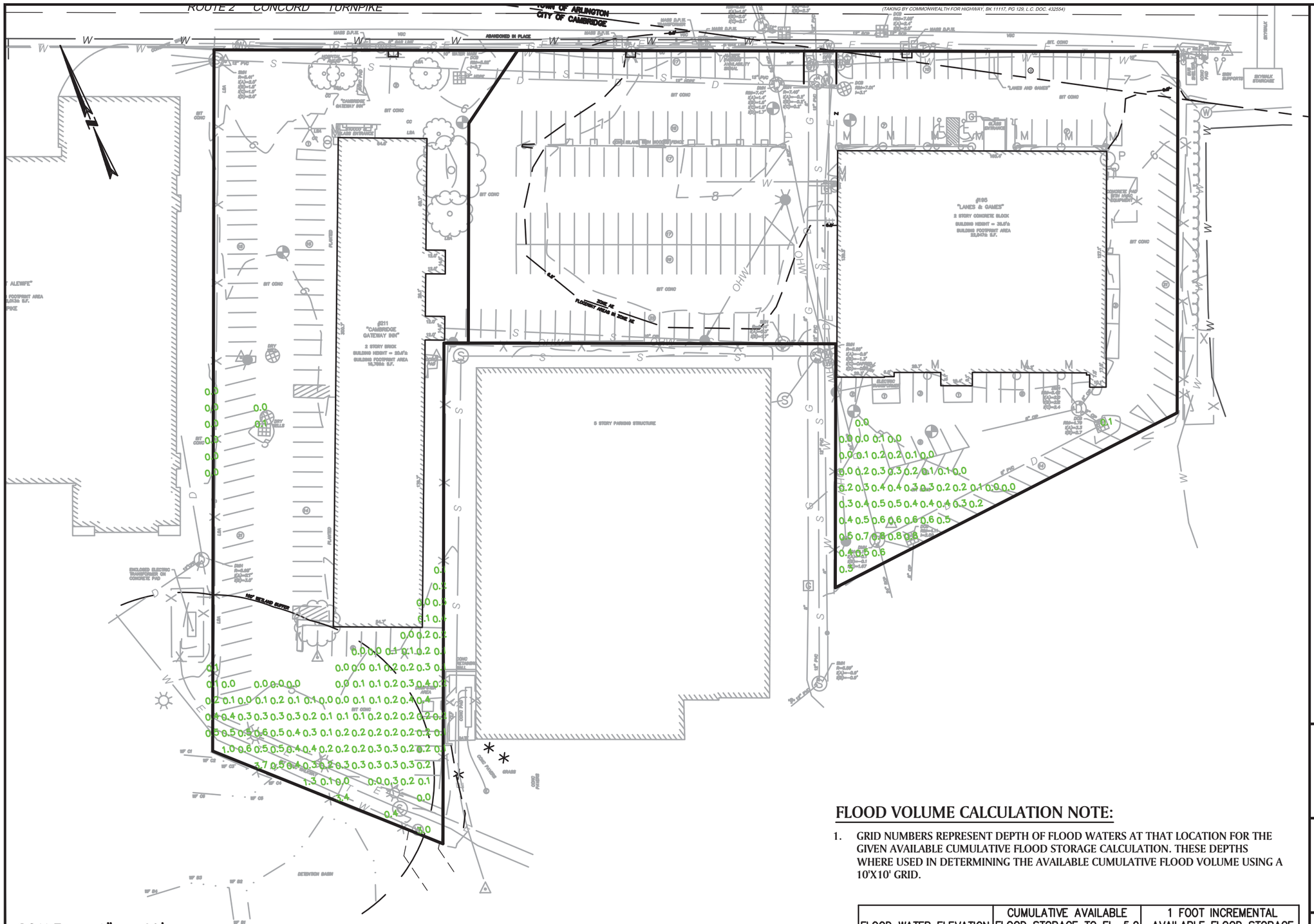
Elevations	Proposed Cumulative Available Flood Storage (CY)	Proposed Incremental Available Flood Stoage (CY)
4.0 to 5.0[1]	201	201
5.0 to 6.0	1668	1467
6.0 to 6.8[2]	4172	2504
6.8 to 7.0	4930	758
7.0 to 7.5[3]	7174	2244

Notes:

1 Starting elevation based upon existing site grades is Elevation 4.0. Proposed wet pond contours below Elevation 4.0 are anticipated to accommodate seasonal groundwater fluctuations and are not counted towards compensatory flood storage.

2 FEMA 100-Yr Flood Elevation on this site is Elevation 6.8. Compensatory flood storage is required by the Wetlands Protection Act (WPA) up to this elevation.

3 The City of Cambridge Vulnerability Assesment for this property indicates that the anticipated 2030 flood elevation for a 100 yr storm event is Elevation 7.46. Compensatory flood storage is required by the City of Cambridge Department of Public Works.



FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.

FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL. 5.0	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
EL. 4.0 TO EL. 5.0	197 CY	197 CY

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

EXISTING AVAILABLE FLOOD STORAGE PLAN FLOOD ELEVATION 5.0

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
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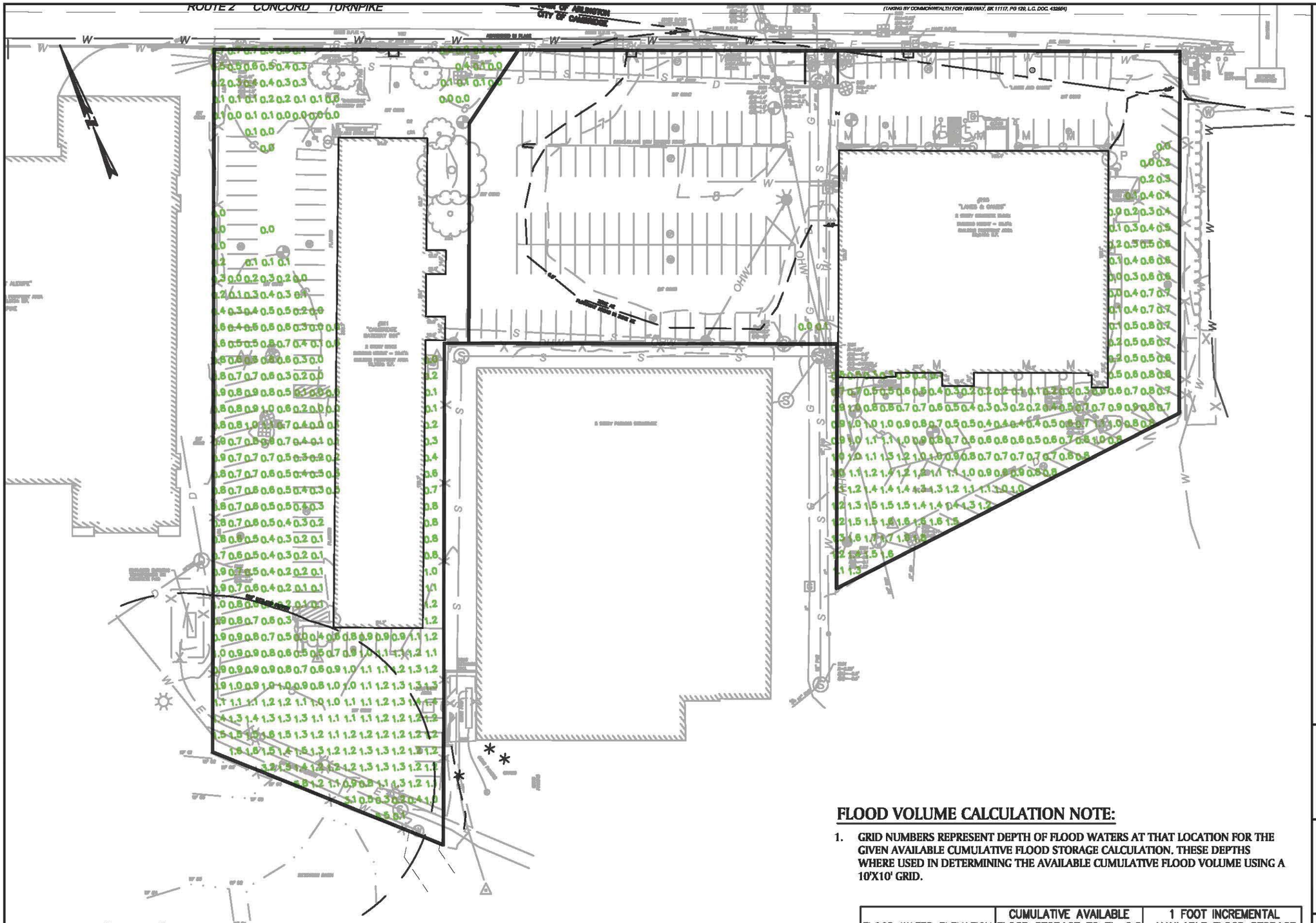

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

EXISTING AVAILABLE FLOOD STORAGE PLAN FLOOD ELEVATION 6.0

FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.

FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL. 6.0	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
ELEVATION 5.0 TO 6.0	1550 CY	1353 CY

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
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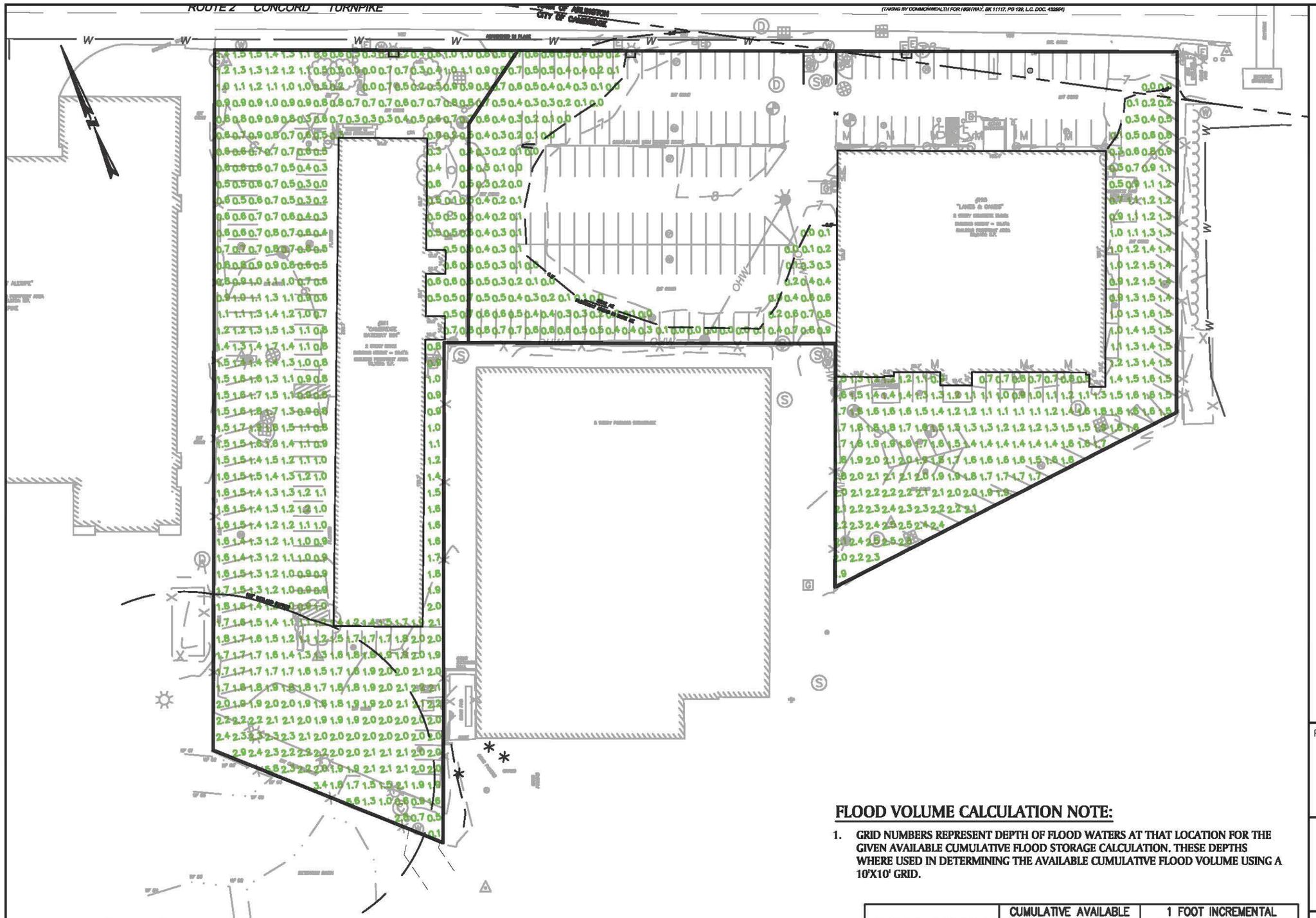

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

EXISTING AVAILABLE FLOOD STORAGE PLAN FLOOD ELEVATION 6.8

FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.

FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL 6.8	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
ELEVATION 6.0 TO 6.8	3748 CY	2198 CY

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
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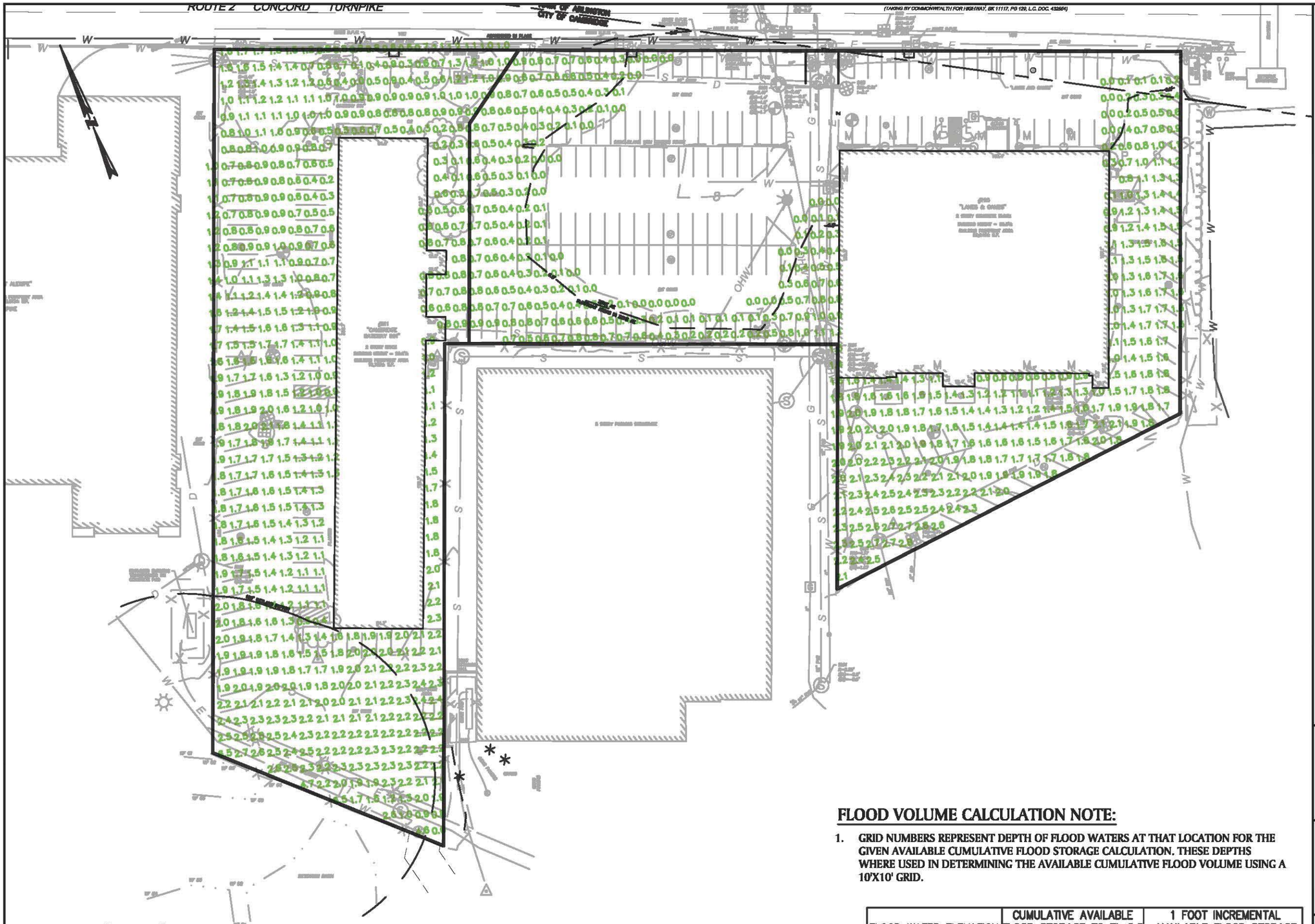

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

EXISTING AVAILABLE FLOOD STORAGE PLAN FLOOD ELEVATION 7.0

FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.

FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL 6.8	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
ELEVATION 6.8 TO 7.0	4414 CY	666 CY

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
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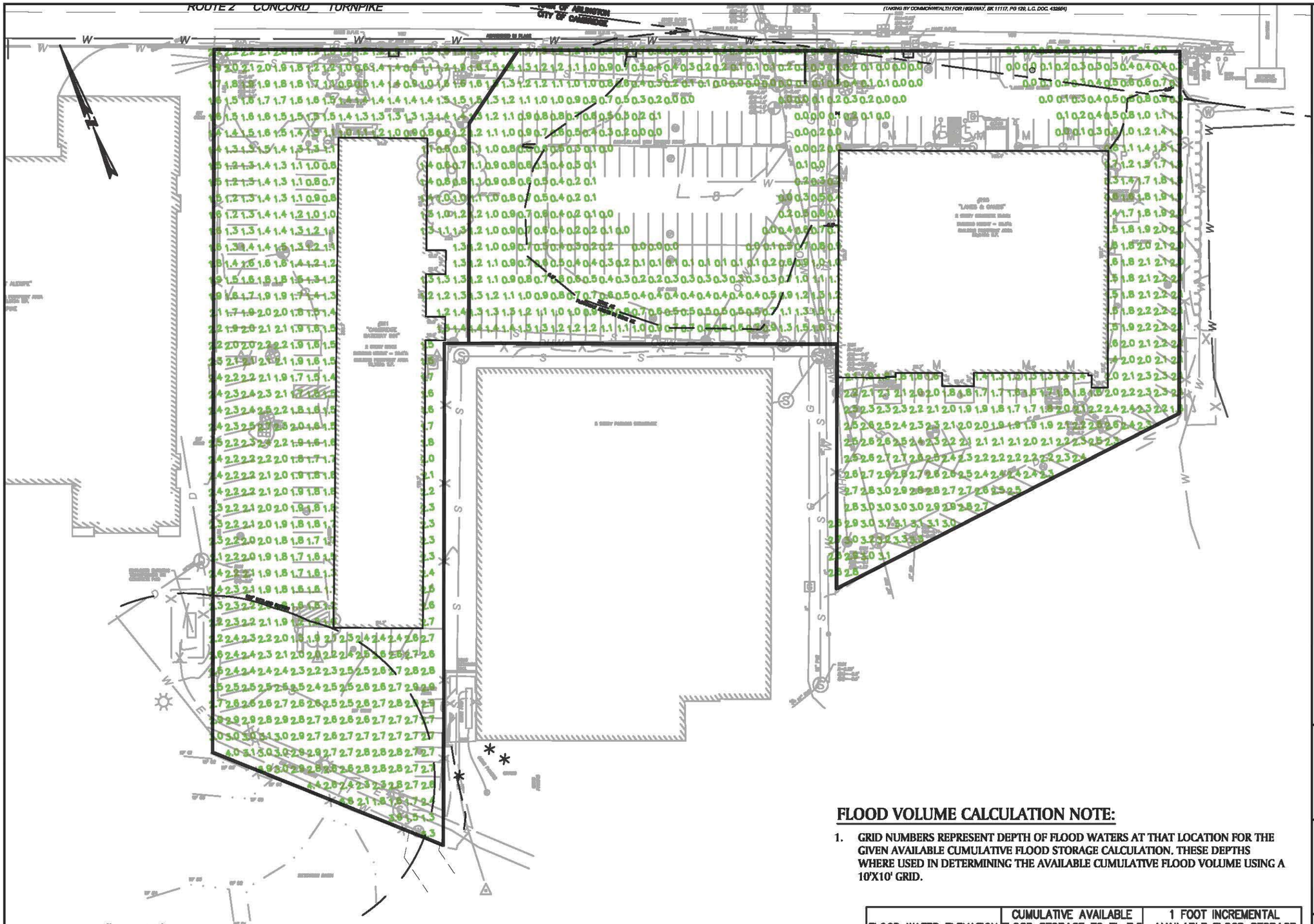


SCALE: 1" = 60'

0 30 60 120 FEET

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

EXISTING AVAILABLE FLOOD STORAGE PLAN FLOOD ELEVATION 7.5

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

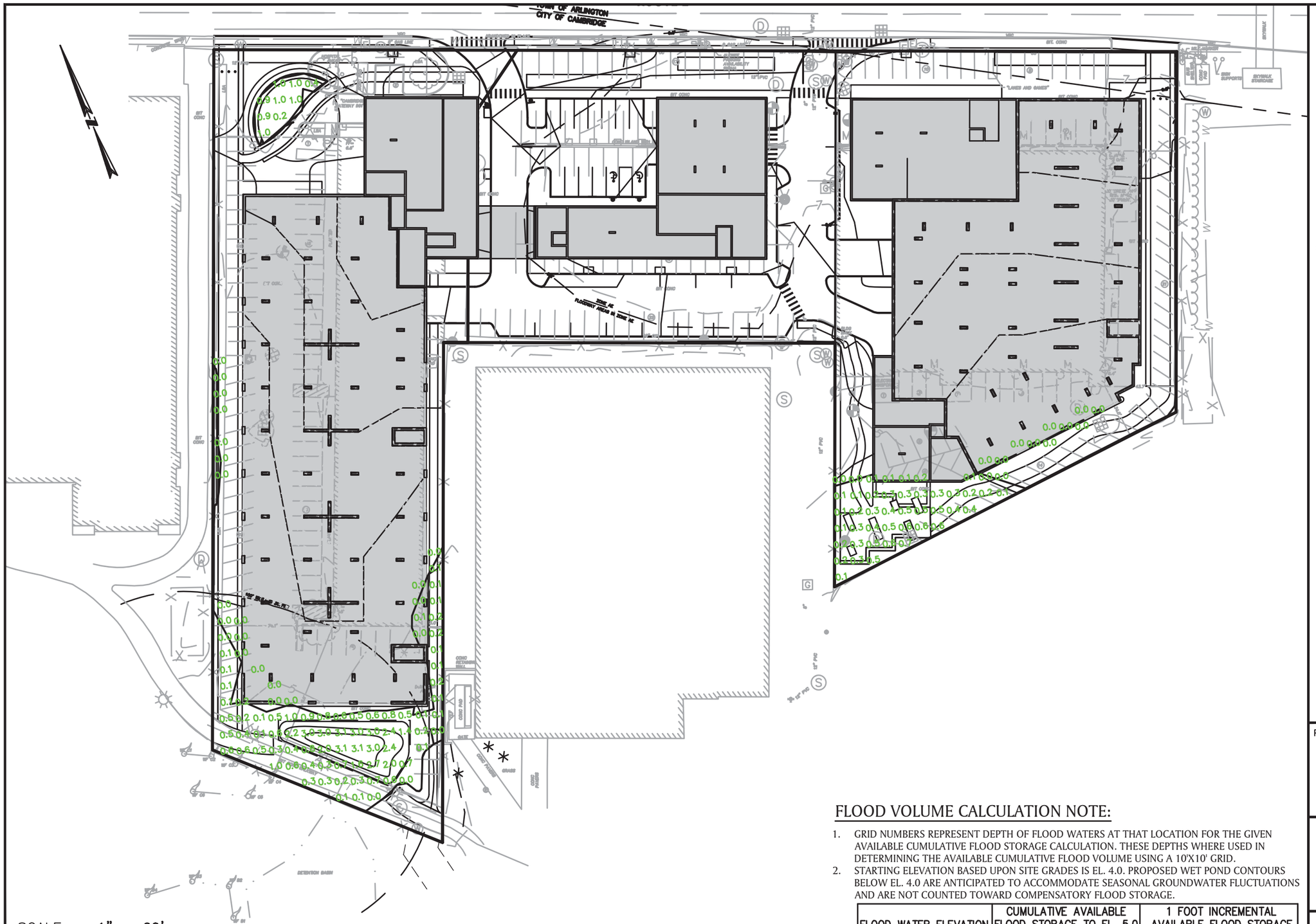
FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.

FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL 7.5	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
ELEVATION 7.0 TO 7.5	6278 CY	1864 CY

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
Scale: AS SHOWN Revised:
Dwg No:
File:



SCALE: 1" = 60'

0 30 60 120 FEET

FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.
2. STARTING ELEVATION BASED UPON SITE GRADES IS EL. 4.0. PROPOSED WET POND CONTOURS BELOW EL. 4.0 ARE ANTICIPATED TO ACCOMMODATE SEASONAL GROUNDWATER FLUCTUATIONS AND ARE NOT COUNTED TOWARD COMPENSATORY FLOOD STORAGE.

FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL. 5.0	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
EL. 4.0 TO EL. 5.0	201 CY	201 CY

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

PROPOSED AVAILABLE
FLOOD STORAGE PLAN
FLOOD ELEVATION 5.0

JULY 22, 2016

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
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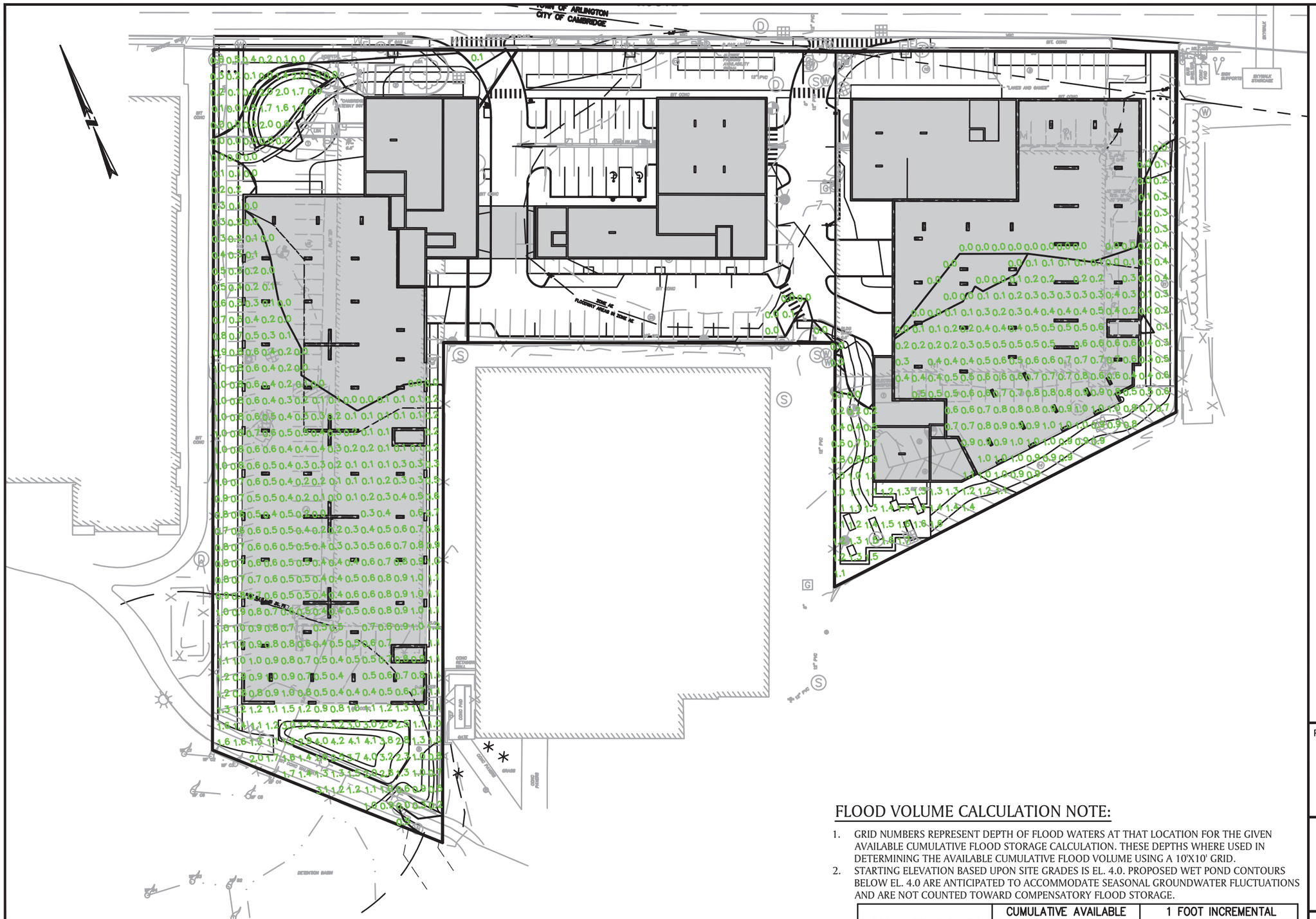

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

PROPOSED AVAILABLE
FLOOD STORAGE PLAN
FLOOD ELEVATION 6.0

JULY 22, 2016

FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.
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FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL. 5.0	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
EL. 5.0 TO 6.0	1668 CY	1467 CY

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
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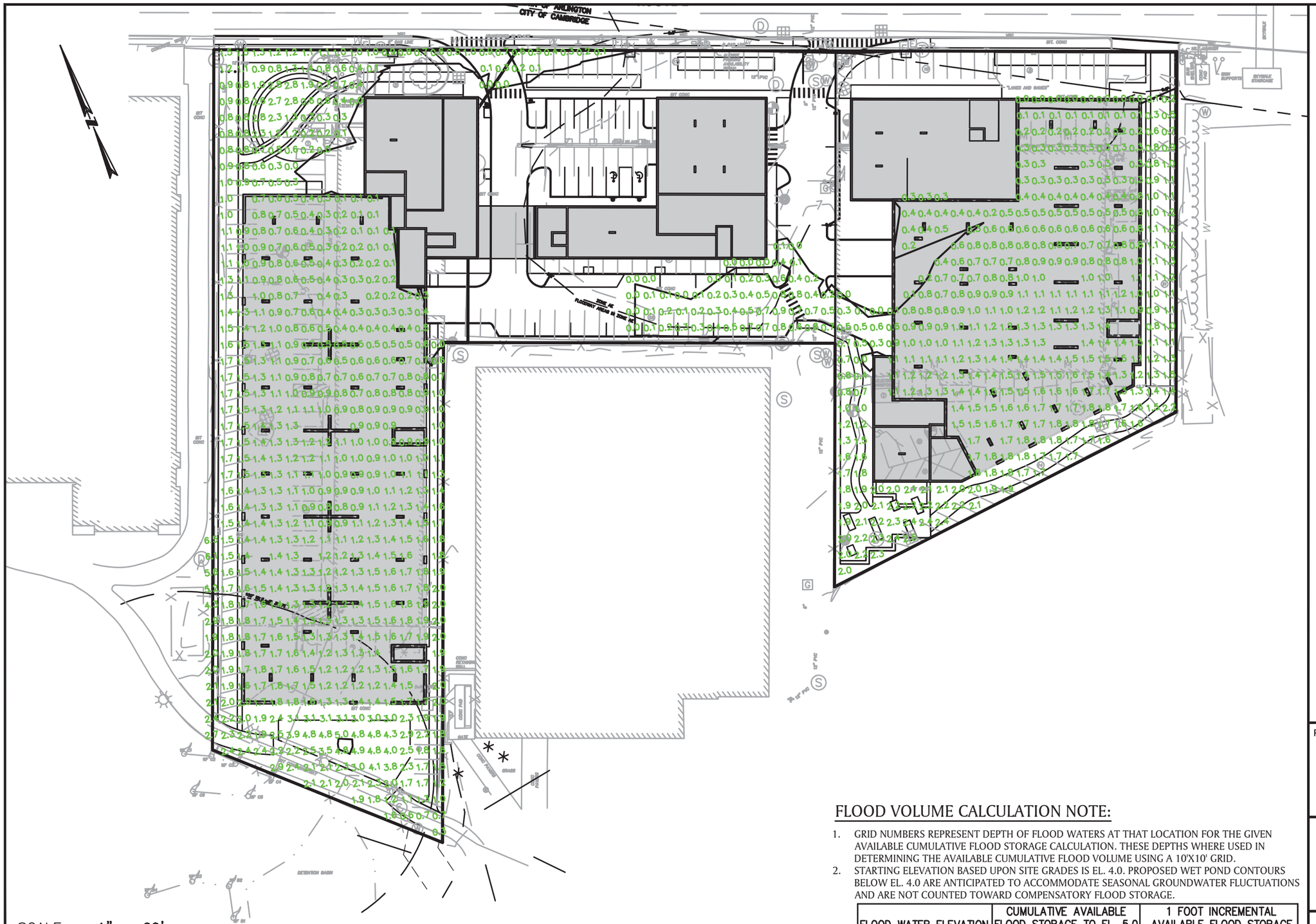

SCALE: 1" = 60'

0 30 60 120 FEET

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

PROPOSED AVAILABLE
FLOOD STORAGE PLAN
FLOOD ELEVATION 6.8

JULY 22, 2016

FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.
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FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL. 5.0	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
EL. 6.0 TO 6.8	4172 CY	2504 CY

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
Scale: AS SHOWN Revised:
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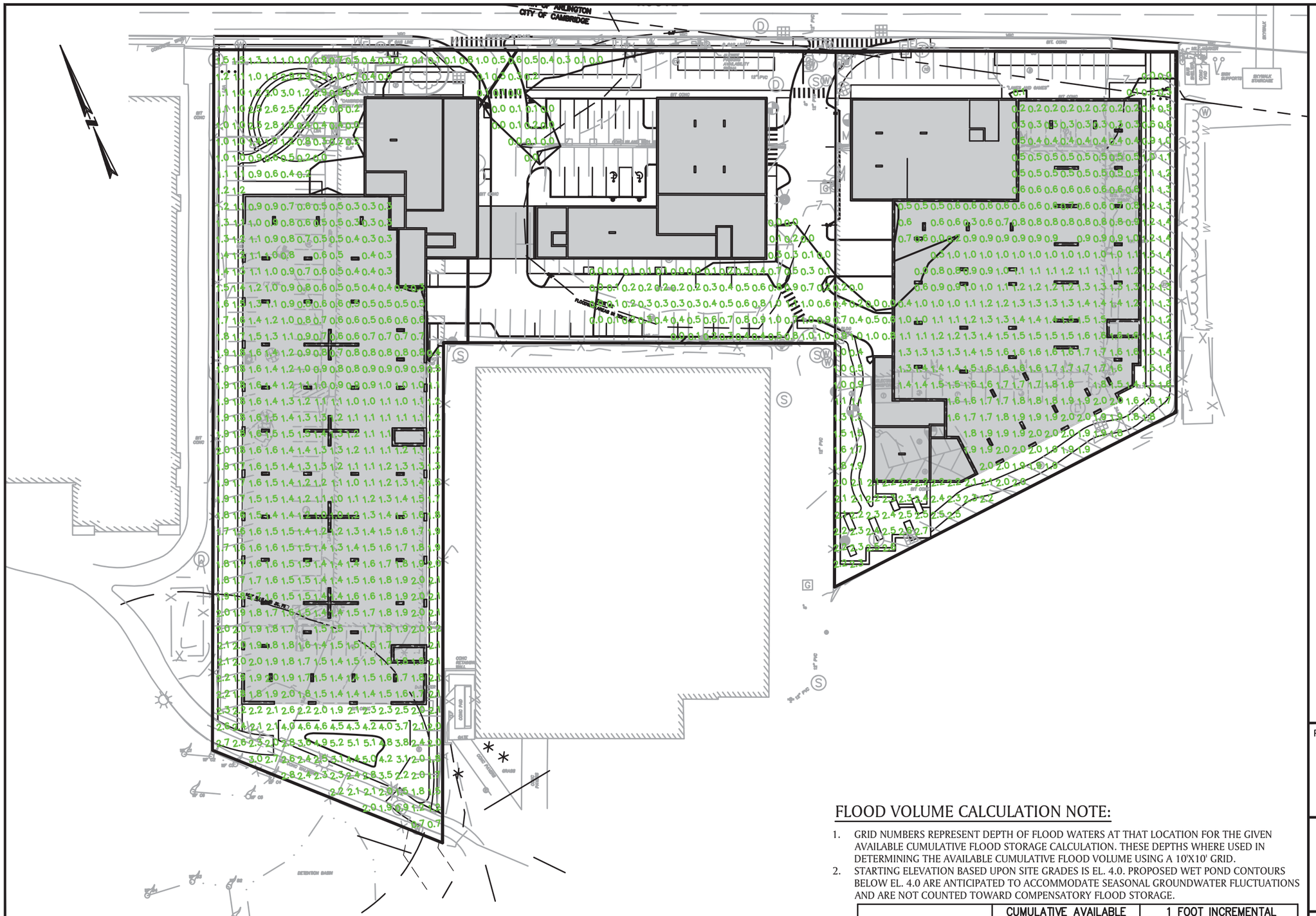

SCALE: 1" = 60'

0 30 60 120 FEET

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

PROPOSED AVAILABLE
FLOOD STORAGE PLAN
FLOOD ELEVATION 7.0

JULY 22, 2016

FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.
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FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL. 5.0	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
EL. 6.8 TO 7.0	4930 CY	758 CY

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
Scale: AS SHOWN Revised:
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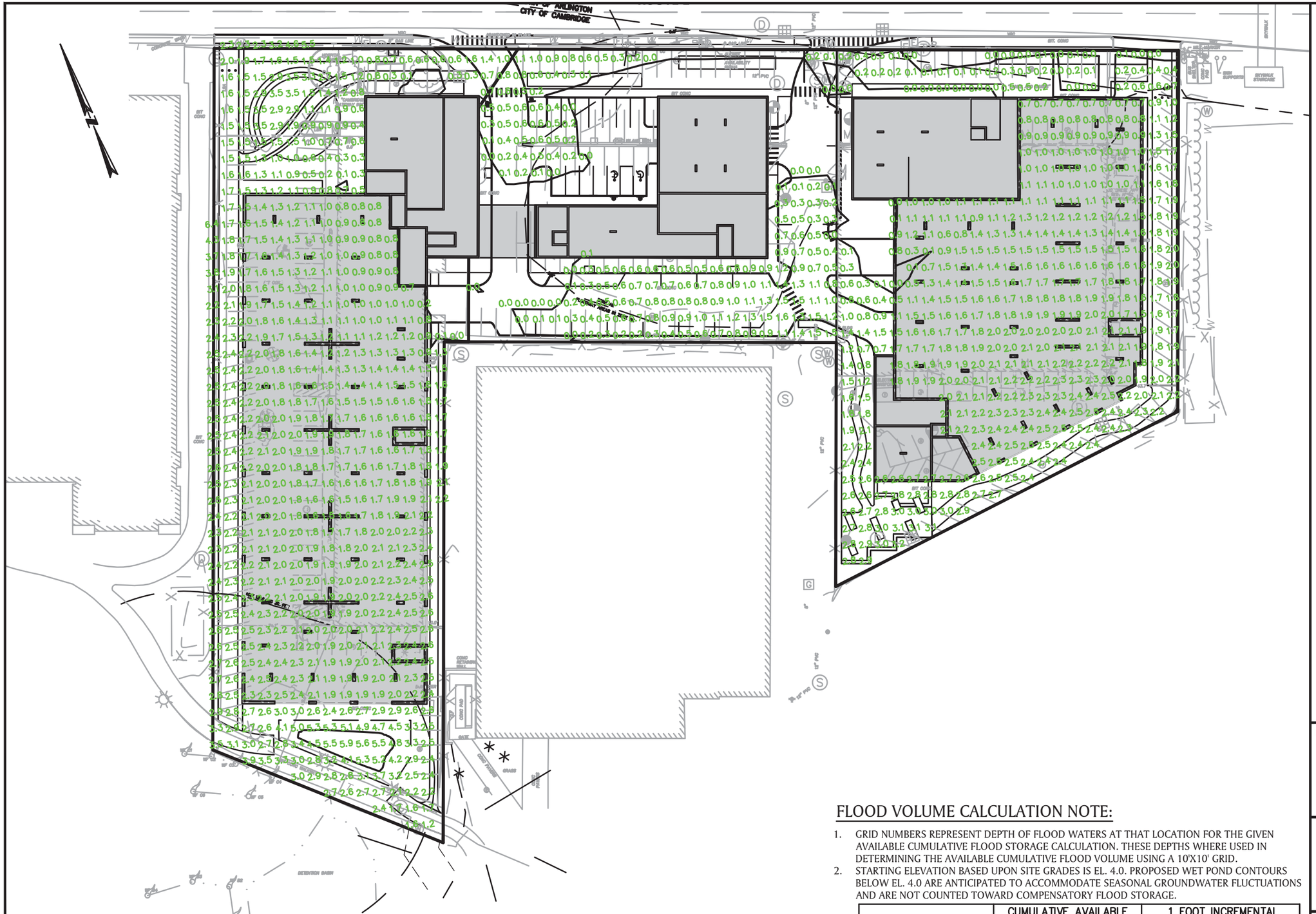

SCALE: 1" = 60'

0 30 60 120 FEET

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE
CAMBRIDGE, MASSACHUSETTS
(MIDDLESEX COUNTY)

PROPOSED AVAILABLE
FLOOD STORAGE PLAN
FLOOD ELEVATION 7.50

JULY 22, 2016

FLOOD VOLUME CALCULATION NOTE:

1. GRID NUMBERS REPRESENT DEPTH OF FLOOD WATERS AT THAT LOCATION FOR THE GIVEN AVAILABLE CUMULATIVE FLOOD STORAGE CALCULATION. THESE DEPTHS WHERE USED IN DETERMINING THE AVAILABLE CUMULATIVE FLOOD VOLUME USING A 10'X10' GRID.
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FLOOD WATER ELEVATION	CUMULATIVE AVAILABLE FLOOD STORAGE TO EL. 5.0	1 FOOT INCREMENTAL AVAILABLE FLOOD STORAGE
EL. 7.0 TO 7.50	7174 CY	2244 CY

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

Job No.: 23269.00 Date: 7/22/2016
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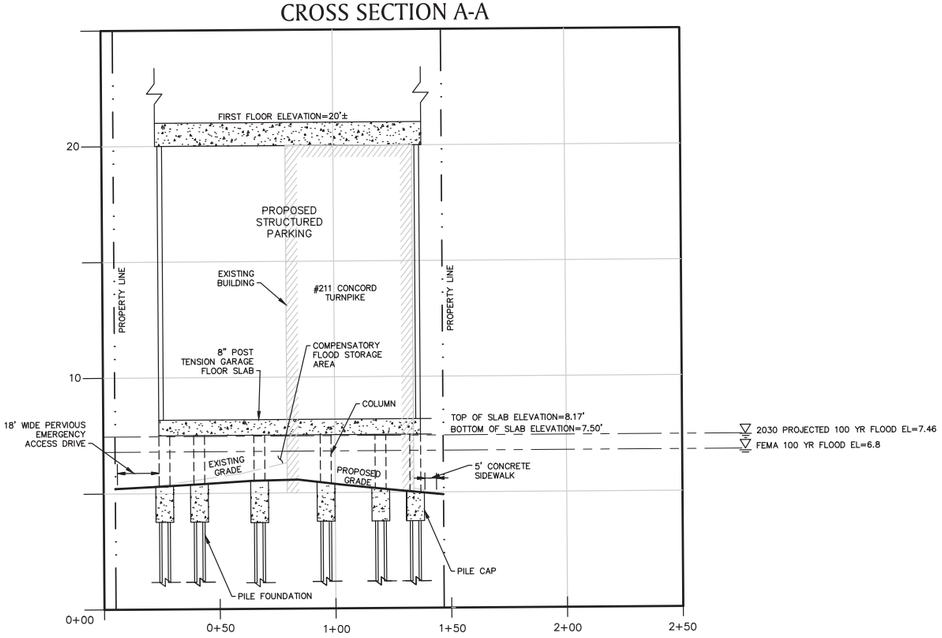
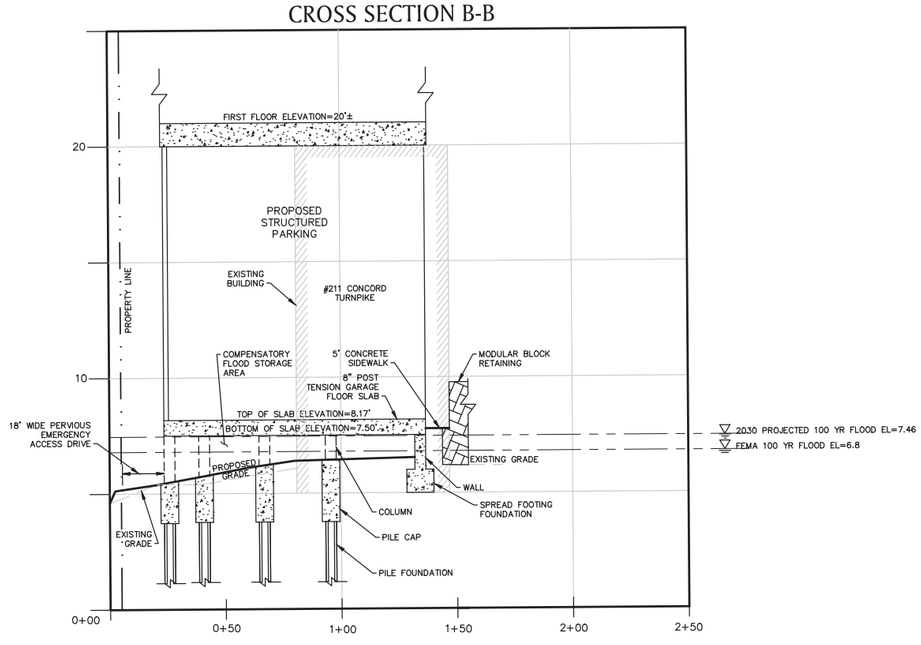
File:

FLOOD STORAGE BUILDING CROSS-SECTION

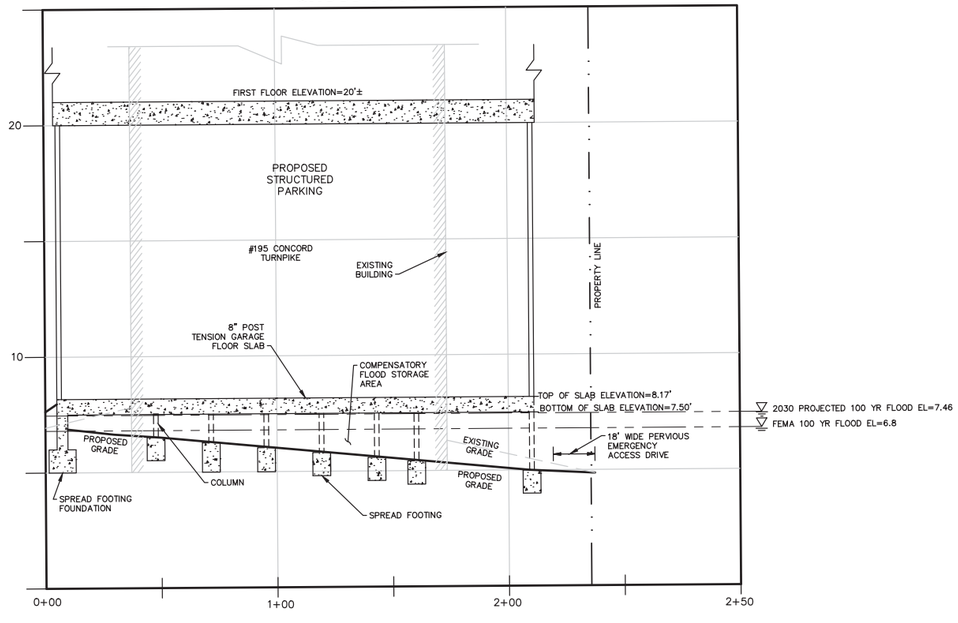
CROSS SECTION A-A



CROSS SECTION B-B



CROSS SECTION C-C



NOTE:

WEST, SOUTH & EAST SIDES OF THE BUILDING, BETWEEN THE GARAGE SLAB AND FINISHED GRADE, TO BE A MINIMUM OF 50% SCREEN TO ALLOW FLOOD WATER TO FLOW UNRESTRICTED.

SCALE: 1" = 30' HORIZONTAL
1" = 3' VERTICAL

0 15 30 60 FEET
0 1.5 3 6 FEET

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

DRAFT

DATE

PROFESSIONAL ENGINEER

THE RESIDENCES at ALEWIFE STATION

195 & 211 CONCORD TURNPIKE

IN

CAMBRIDGE
MASSACHUSETTS
(MIDDLESEX COUNTY)

CROSS SECTION PLAN

JULY 22, 2016

REVISIONS:

NO.	DATE	DESC.

PREPARED FOR:

CPC–T HOLDINGS, LLC
1601 TRAPELO ROAD, SUITE 172
WALTHAM, MA 02451

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

SCALE: AS SHOWN

FILE:P:\Prj\2326900\Civil\Drawings\

DWG. NO:

JOB. NO:2–3269.00

SHEET C-106

Traffic Study

TRANSPORTATION IMPACT STUDY

PROPOSED RESIDENCES AT ALEWIFE STATION
CAMBRIDGE, MASSACHUSETTS

Prepared for:

CRITERION DEVELOPMENT PARTNERS
WALTHAM, MASSACHUSETTS

January 2017

Prepared by:

VANASSE & ASSOCIATES, INC.
Transportation Engineers & Planners
35 New England Business Center Drive
Suite 140
Andover, MA 01810

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EXECUTIVE SUMMARY

PURPOSE OF STUDY

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Study (TIS) for a proposed residential development to be located at 195-211 Concord Turnpike (Route 2) in Cambridge. The property is currently occupied by the existing Gateway Motel and Conference Center and Lanes & Games bowling alley. This study reviews the potential transportation impacts, defines site access requirements, and recommends mitigation measures necessary to accommodate redevelopment of the site. The study also reviews the project with respect to the City of Cambridge Special Permit Criteria (SPC) regarding traffic impacts, is in accordance with the City's guidelines for TIS, and follows the scoping determination dated September 16, 2016. The following briefly summarizes the study findings.

PROJECT DESCRIPTION

The project, as currently planned, will consist of the redevelopment of an existing property into distinct residential uses. This includes the demolition of the existing buildings (former Lanes & Games bowling alley and the Gateway Motel) and construction of a building providing 320 apartment units. Access will be provided through one right-turn only entrance driveway and one right-turn only exit driveway to Route 2 eastbound. An Access Permit from the Massachusetts Department of Transportation (MassDOT) will be required for the Project. Parking will be provided for 241 vehicles and approximately 336 long-term bicycle spaces and 32 short-term bicycle spaces will also be provided. The site is bounded by Route 2 to the north, an existing residential apartment building to the west, and Discovery Park to the south and east.

EXISTING CONDITIONS

Existing Traffic Volumes

A field inventory of existing study area roadways was conducted to document traffic conditions in the existing 2016 analysis year. Items collected regarding the study area roadways and intersections include roadway geometrics, traffic control devices, traffic signal timing plans, traffic volumes, vehicle queues, pedestrian crossing volumes, bicycle volumes, and safety data for the

roadways in the vicinity of the site. Transportation information and data used in this study were collected during June and September 2016.

Existing Public Transit

The site is located within ½ mile of the Massachusetts Bay Transportation Authority (MBTA) Alewife Station, where the Red Line subway and several MBTA and private transit bus routes terminate. From the Red Line, connections to the other subway lines can be made via Park Street, Downtown Crossing, and commuter rail lines can be accessed through the South Station stop, also on the Red Line.

SITE-GENERATED TRAFFIC VOLUMES

The Project is currently proposed for 320 apartment units; however, the trip generation and analysis is based on 325 units so this analysis is conservative. To identify the trip generation of the Project, the Monitoring Report and peak-hour driveway counts for the adjacent Vox on Two residential development were utilized to develop a person trip rate per apartment unit. This rate was then applied to the unit count of 325 units and adjusted using mode splits identified in a residential mode split survey contained in the Vox Monitoring Report to develop estimates of vehicle, transit, pedestrian, and bicycle trips to be generated by the Project. This approach was discussed and approved with City officials.

The modal split assumptions for the project are approximately 35 percent drive-alone automobile trips; 4 percent rideshare automobile trips; 45 percent transit; 8 percent pedestrian; 4 percent bicycle; and 4 percent "other" trips, which may include working at home.

SPECIAL PERMIT CRITERIA

As required by the City, the project's impact has been measured against 5 criteria as indicators of the project's impact. Based upon the SPC and study area intersections, there are a total of 145 indicators which were reviewed. None of the criteria were exceeded by any of the Project's impacts. One of the indicators is exceeded by virtue of the Project location adjacent to Route 2. A total of 14 indicators related to pedestrian operations were exceeded under Existing Conditions analysis (without the project). Overall the project has satisfied 130 indicators of impact with minimal project impact expected.

RECOMMENDATIONS

The Project is expected to have a minimal impact on area transportation facilities. However, this requires Project residents to have similar characteristics as those from the adjacent Vox on Two residential development. One way to encourage similar prospective residents is through the provision of a number of the same Travel Demand Management (TDM) measures in use at the Vox development. With the Project location near the Alewife T station, the Applicant and property management team will be able to effectively promote alternative transportation for residents to reduce single-occupant vehicle (SOV) traffic, as has been documented with the adjacent Vox development. This will effectively mitigate the Project impact on road and intersection facilities in the area.

Transportation Demand Management

Reducing the amount of traffic generated by the proposed development is an important component of the transportation mitigation plan. The goal of the proposed traffic reduction strategy is to reduce the use of SOVs by encouraging car/vanpooling, bicycle commuting, the use of public transportation and pedestrian travel. This practice was utilized for the Vox on Two development and that site has significantly lower traffic generation than initially estimated, lower parking utilization than initially estimated, and is currently at approximately 98 percent occupancy. A number of measures will be implemented as a part of the Project in an effort to reduce the number of vehicle trips generated by the project, including the use of area shuttle buses for residents as well as provision of a MBTA Charlie card of equivalent value of a monthly pass to each adult member of a new household after the household has established residency, among other strategies. The Applicant will commit to the implementation of these traffic reduction strategies and will work with the City to implement these measures.

Project Access

The Project is currently designed with its own entrance and exit driveways to Route 2. This is proposed in the event that separate owners operate the Project and the Vox on Two development. If there is an opportunity to connect to the Vox on Two development to share driveways, the Applicant will proceed with this connection, but currently the development must be permitted through the City and MassDOT with its own driveways.

The vehicle site access and egress will be provided via Route 2, with separate right turn only entrance and exit driveways. A One-Way sign and "NO LEFT TURN" sign will be posted on the driveway approach at the Route 2 intersection. Details of this design will be evaluated with the District 6 Office of MassDOT.

SUMMARY

Overall, the Applicant is committed to the implementation of the above project mitigation strategies to reduce the overall project impact. Of the 145 project indicators reviewed, none were directly exceeded by the project impact.

In summary, this project is a redevelopment of existing commercial properties which reduces the net traffic impact on area road facilities. The Project is adjacent to another residential community which has a very low transportation impact due to a successful TDM program, the central tenets of which will also be implemented at the Project. This residential project is expected to have similar traffic impacts as the existing commercial uses on site, particularly during the weekday evening peak hour. The TDM measures and intentionally constrictive parking conditions will further reduce the project's traffic impacts resulting in a positive change in the area.

INTRODUCTION

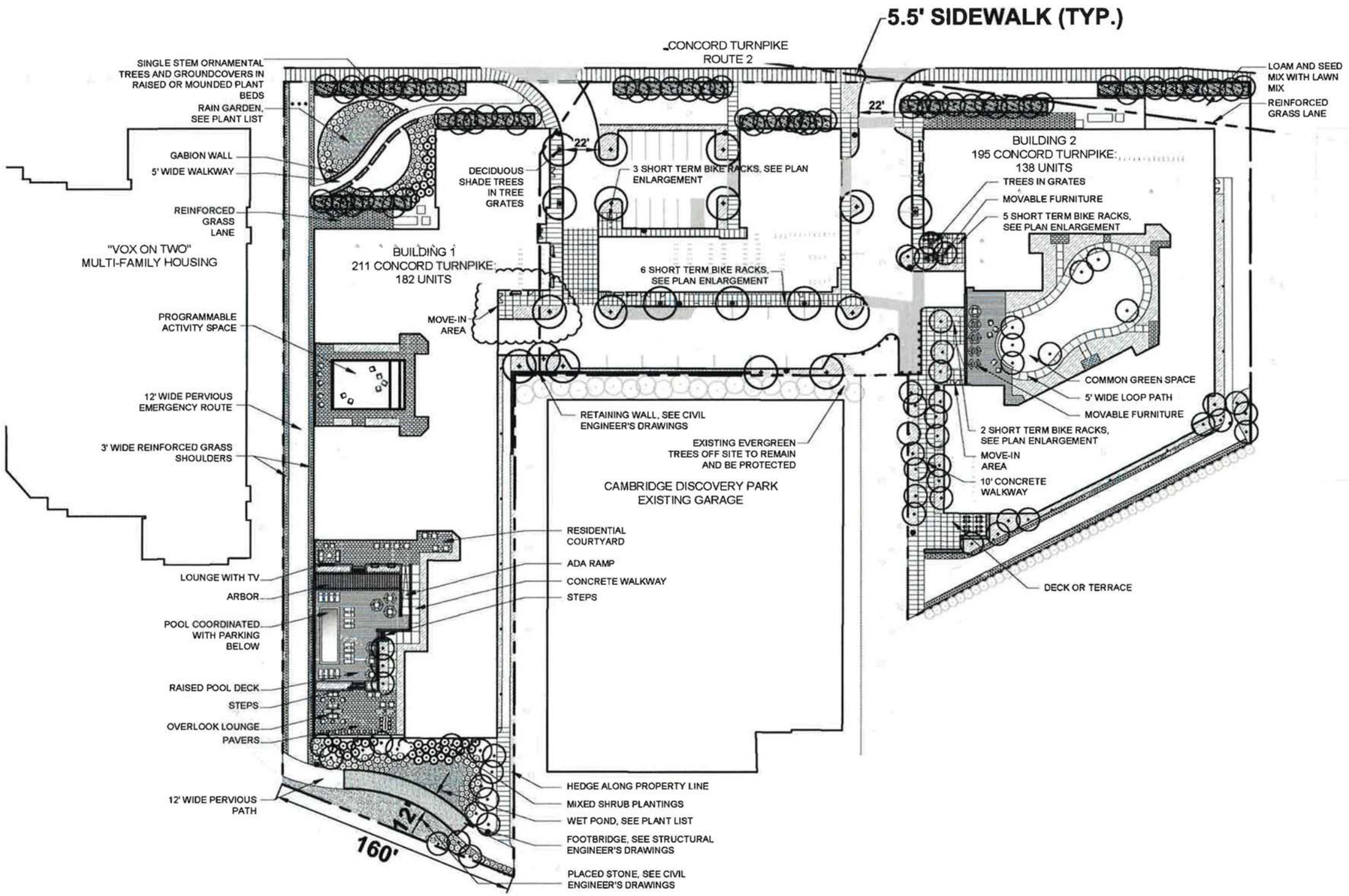
VAI has conducted a Transportation Impact Study (TIS) for a proposed residential development project located at 195-211 Concord Turnpike (Route 2) in Cambridge, Massachusetts. This study reviews the potential transportation impacts, defines site access requirements, and recommends mitigation measures necessary to accommodate redevelopment of the site. In addition, the study reviews the project with respect to the SPC ordinance. The study was completed in accordance with the City's guidelines for TIS and follows the scoping determination dated September 16, 2016.

The project, as currently planned, will consist of the redevelopment of an existing property into distinct residential uses. This includes the demolition of the existing buildings (former Lanes & Games bowling alley and the Gateway Motel) and construction of a building providing 320 apartment units. Access will be provided through one right-turn only entrance driveway and one right-turn only exit driveway to Route 2 eastbound. An Access Permit from the Massachusetts Department of Transportation (MassDOT) will be required for the Project. Parking will be provided for 241 vehicles and approximately 336 long-term bicycle spaces and 32 short-term bicycle spaces will also be provided. The site is bounded by Route 2 to the north, an existing residential apartment building to the west, and Discovery Park to the south and east. The site in relation to area transportation facilities is shown in Figure 1, while a preliminary site plan is depicted in Figure 2. An Existing Conditions Plan documenting adjacent parcels and ownership, easements, and property line information is shown in Figure 3.

Figure 1

Site Location Map

Vanasse & Associates, Inc.
Transportation Engineers & Planners



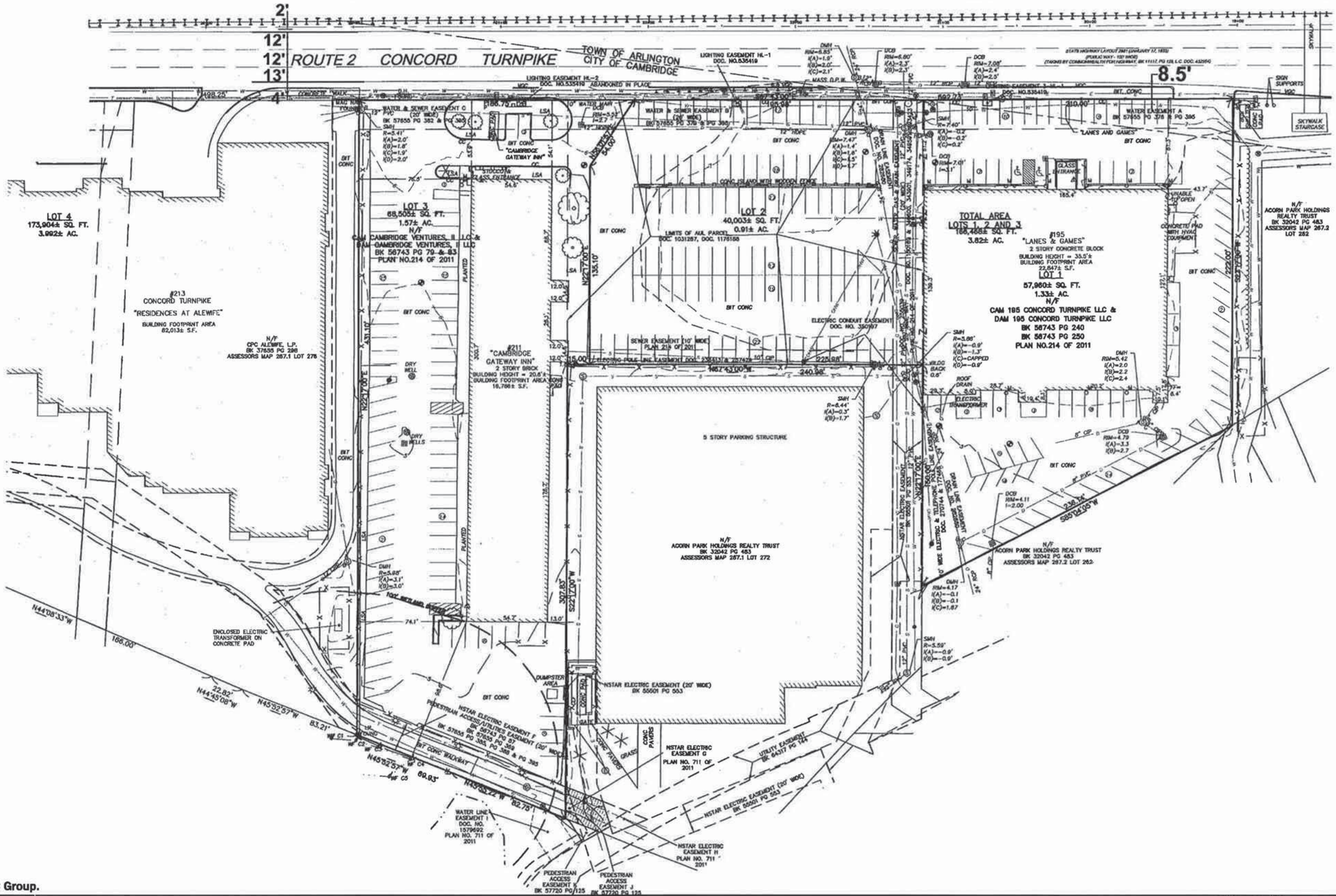
Source: Copley Wolff Design Group.

0 35 70 Scale in Feet

Figure 2

Site Plan

Vanasse & Associates, Inc.
Transportation Engineers & Planners



Source: BSC Group.

0 35 70 Scale in Feet

Figure 3

Existing Conditions Plan

Vanasse & Associates, Inc.
Transportation Engineers & Planners

EXISTING CONDITIONS

EXISTING TRAFFIC CONDITIONS

A field inventory of existing study area roadways was conducted to document baseline traffic conditions. Items collected regarding the study area roadways and intersections include roadway geometrics, traffic control devices, traffic signal timing plans, traffic volumes, vehicle queues, pedestrian crossing volumes, bicycle volumes, and safety data for the roadways in the vicinity of the site. Traffic volumes were measured by means of ATR counts and substantiated by manual intersection turning-movement and vehicle-classification counts. Other transportation-related data inventoried include area parking supply and regulations, transit stop and services, and provision of bicycle and pedestrian facilities.

DESCRIPTION OF PROJECT STUDY AREA

The project study area was determined in consultation with City transportation officials. The study area was confirmed in the September 16, 2016 Scoping Determination from the City to VAI. The study area is listed below:

1. Concord Turnpike (Route 2) at Alewife Brook Parkway (4 intersections);
2. Acorn Park Drive at Frontage Road;
3. Lake Street at Route 2 westbound ramps;
4. Lake Street at Frontage Road/Route 2 eastbound ramps;
5. Frontage Road at Route 2;
6. Acorn Park Drive at Route 2 off ramp;
7. Site driveways at Route 2;
8. Steel Place at Alewife Station Access Road at Alewife Brook Parkway on-ramp; and,
9. Massachusetts Avenue at Alewife Brook Parkway.

Transportation Network

Regional access to the area is provided via Route 2 to the west and Alewife Parkway to the east, north and south. In the immediate vicinity of the site, local access is provided from Frontage Road and Lake Street.

Geometric and Traffic Control

Intersection geometry and lane usage was obtained from field inventory and observations conducted by VAI in July and September 2016. A graphical depiction of intersection inventory for the study area intersections are shown in Figure 4 through Figure 9. Traffic signal timing and phasing for the signalized intersections was obtained from either MassDOT District 4/District 6 Traffic Operations or the City of Cambridge.

EXISTING TRAFFIC VOLUMES

Traffic Counts

To establish baseline traffic conditions within the study area, ATR counts and manual turning movement and vehicle classification counts were conducted by VAI in June and September 2016. Intersection counts were conducted on September 14 and September 29, 2016. A review of seasonal traffic data from the nearest permanent count station[1] indicates that June- and September-month volumes are 8.1 and 9.9 percent higher than average-month volumes, respectively. Consequently, the collected volumes were used without seasonal adjustment.

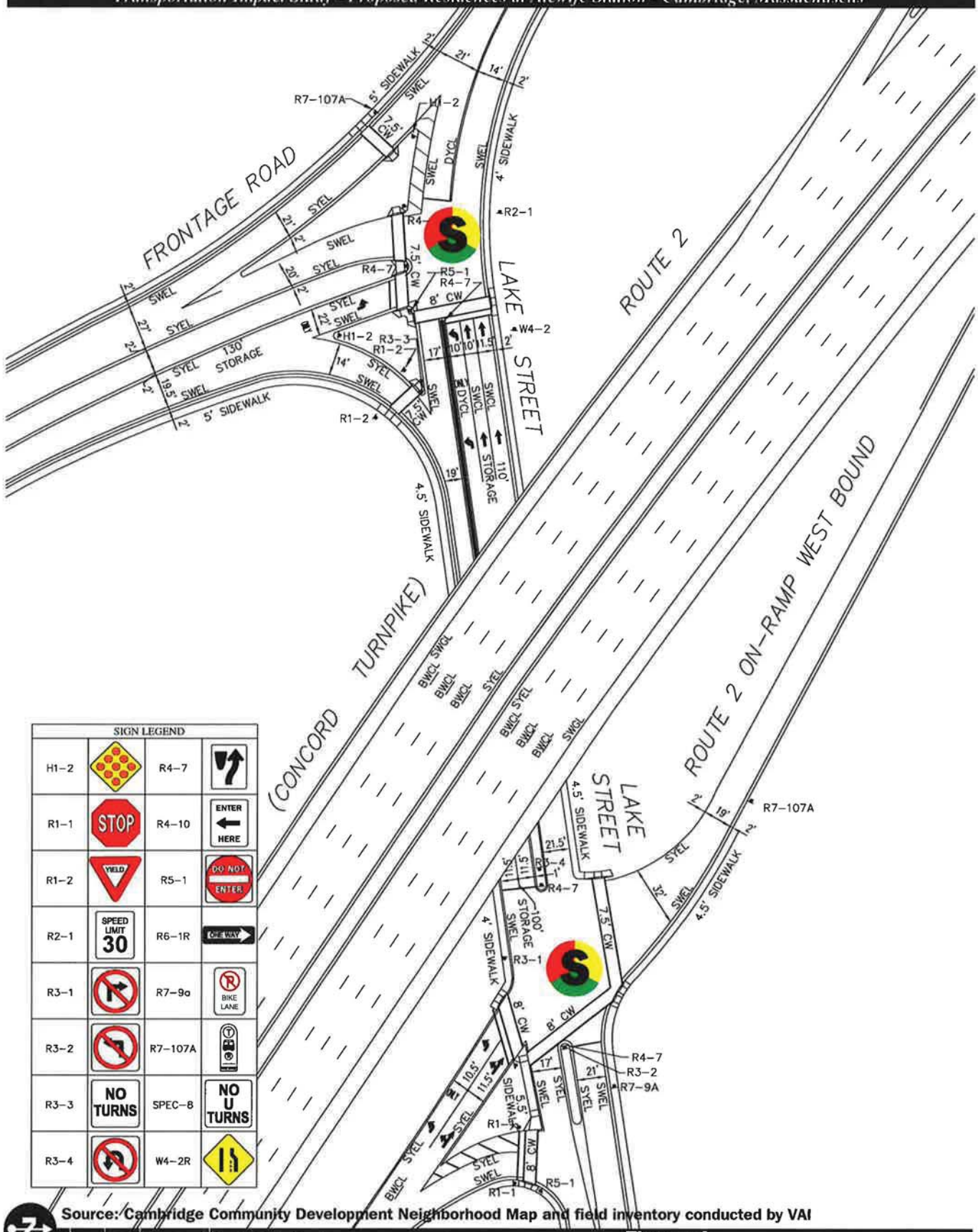
Inspection of the raw count data indicated that the overall weekday morning and evening peak hours vary. It should be noted, however, that the individual intersection peak hours were used in the analysis to present a "worst case" composite peak-hour condition. The traffic count data sheets are provided in the Appendix. The 2016 Existing condition weekday morning and evening peak-hour traffic-volume networks are depicted on Figure 10 and Figure 11 and summarized in Table 1. Table 2 summarizes the peak hour occurrence during the weekday morning and evening peak hours at the study intersections. The average hourly volumes recorded at the ATR location are summarized in Table 3.

Table 1
2016 EXISTING TRAFFIC VOLUMES[a]

		Morning Peak Hour			Evening Peak Hour		
Location	ADT[a]	Vehicles Per Hour	K Factor[b]	Directional Distribution[c]	Vehicles per Hour	K Factor	Directional Distribution
Acorn Park Drive, south of Alewife Station Access Ramp	1,290	259	20.1	93.8% NB	80	6.2	70.0% NB
Route 2, west of Acorn Park Drive	76,582	5,026	6.6	50.1% WB	5,452	7.1	54.0% WB
Acorn Park Drive, south of Frontage Road	2,984	580	19.4	82.4% SB	201	6.7	81.6% NB
Frontage Road, west of Acorn Park Drive	8,262	1,465	17.7	50.2% WB	1,005	12.2	85.7% WB

[a]Average daily traffic in vehicles per day, counted by VAI in September 2016.
[b]Percent of daily volume in peak hour.
[c]Peak-hour traffic basis. EB = eastbound; WB = westbound; NB = northbound; SB = southbound.

[1] MassDOT Permanent Count Station H8509; located on I-95, 0.6 miles north of Route 2, 2015.

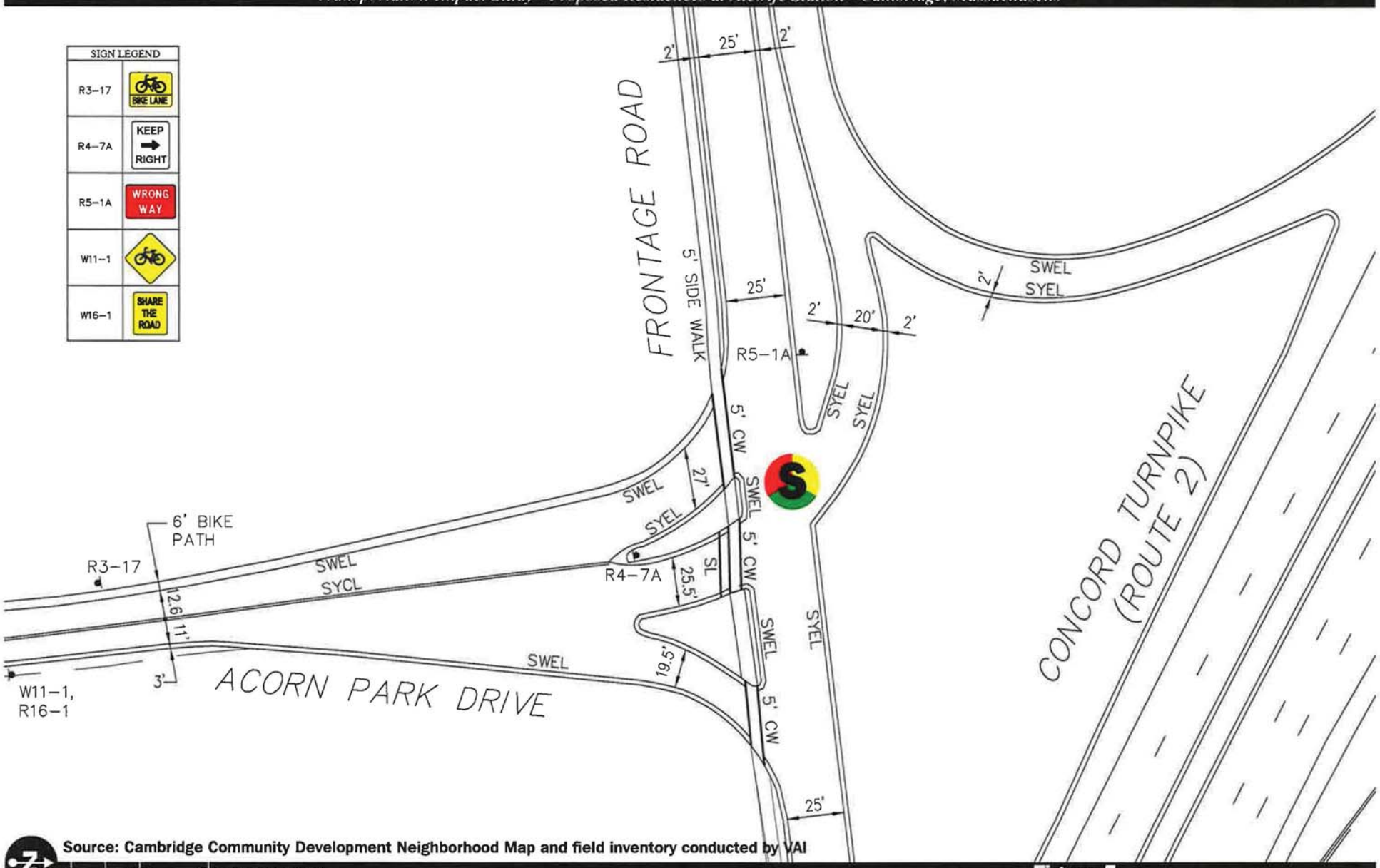


Source: Cambridge Community Development Neighborhood Map and field inventory conducted by VAI

Figure 4

Intersection Inventory
Route 2 / Frontage Road at Lake Street

Vanasse & Associates, Inc.
Transportation Engineers & Planners



Source: Cambridge Community Development Neighborhood Map and field inventory conducted by VAI

0 30 60 Scale in Feet

Figure 5

Intersection Inventory
Acorn Park Drive at
Frontage Road

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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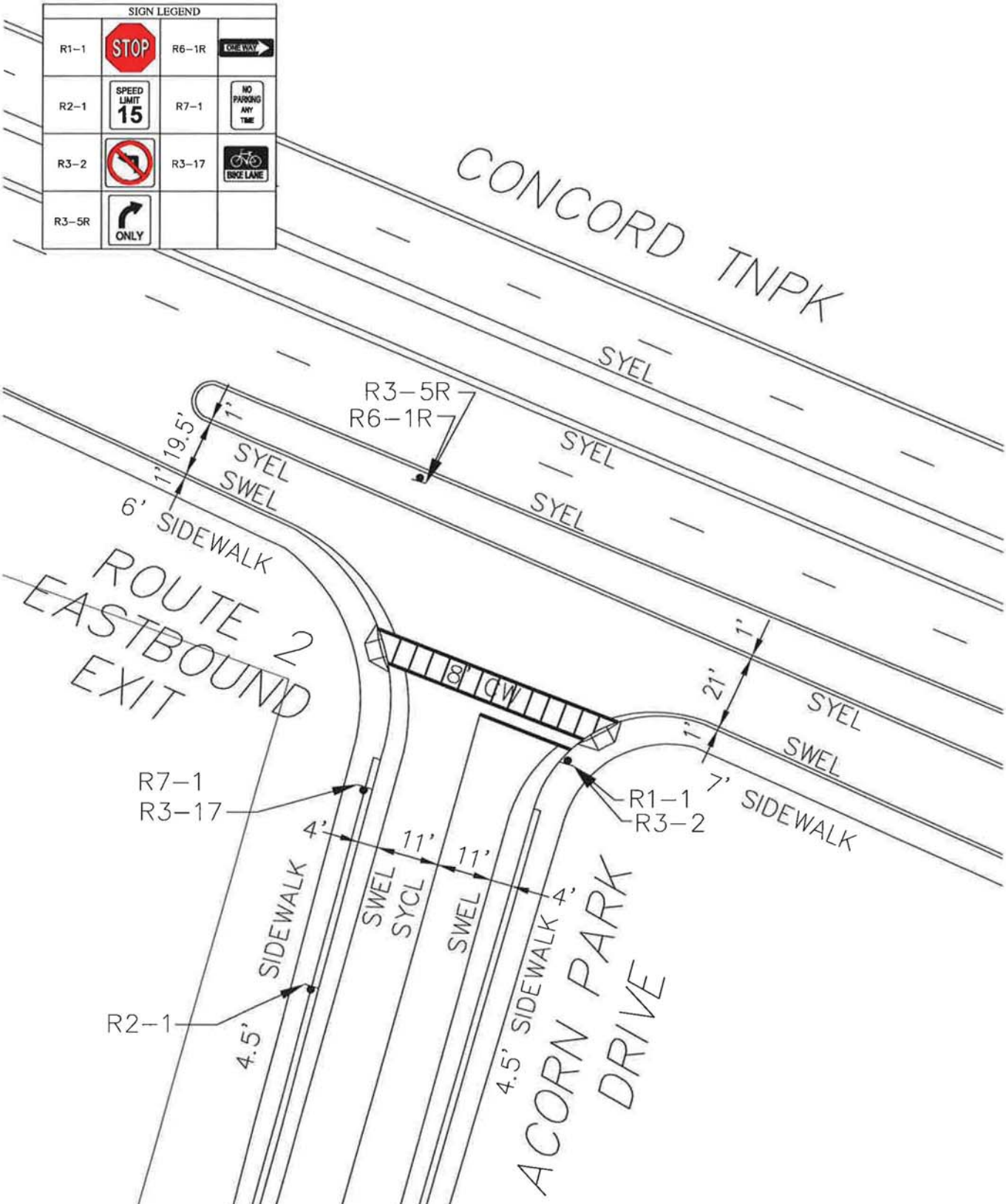


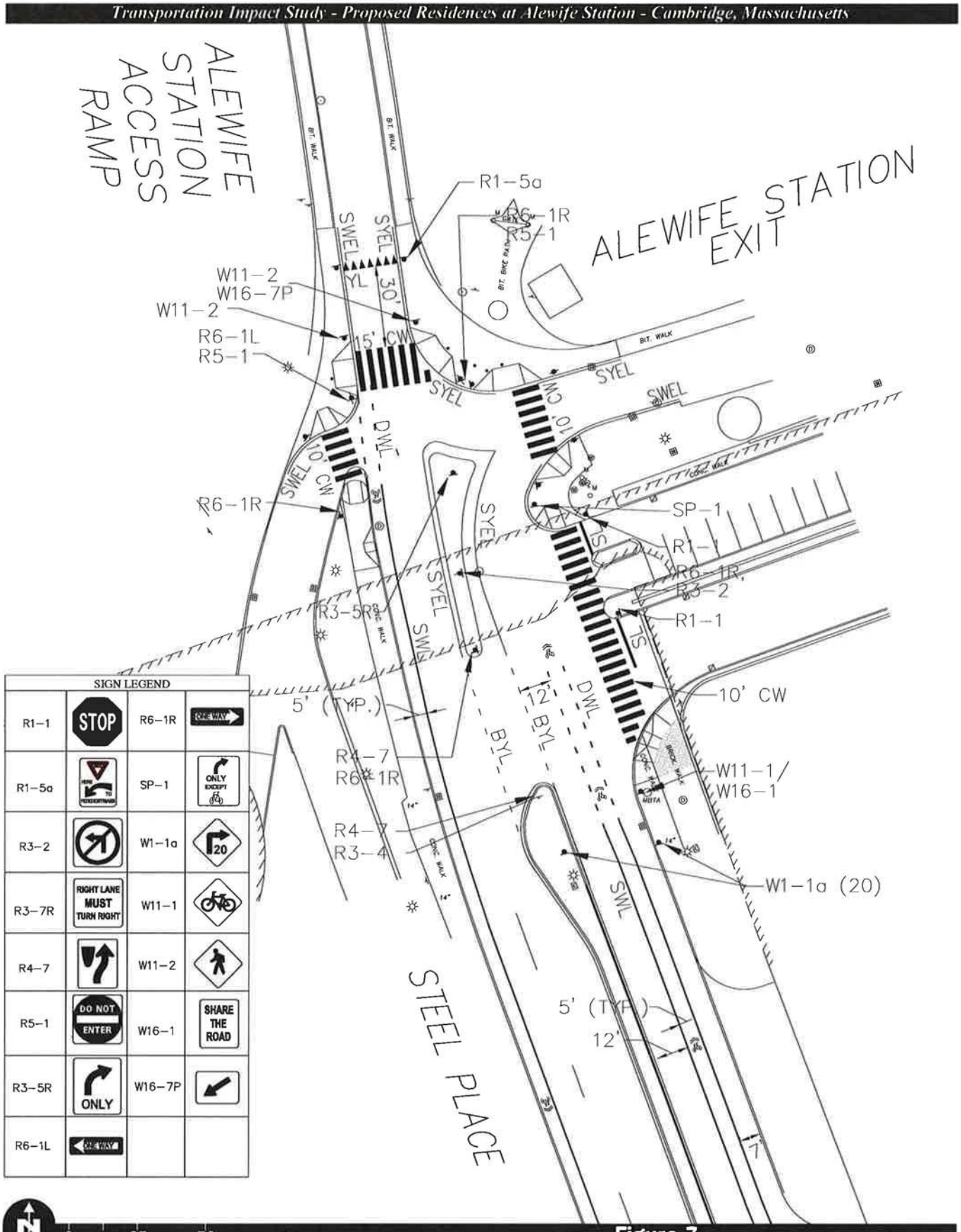
Source: Cambridge Community Development Neighborhood Map and field inventory conducted by VAI

0 20 40 Scale in Feet

Figure 6

Intersection Inventory
Alewife Station Off-Ramp at
Acorn Park Drive

Vanasse & Associates, Inc.
Transportation Engineers & Planners



SIGN LEGEND			
R1-1	STOP	R6-1R	ONE WAY
R1-5a		SP-1	ONLY EXCEPT
R3-2		W1-1a	20
R3-7R	RIGHT LANE MUST TURN RIGHT	W11-1	
R4-7		W11-2	
R5-1	DO NOT ENTER	W16-1	SHARE THE ROAD
R3-5R	ONLY	W16-7P	
R6-1L	ONE WAY		

0 25 50

Figure 7

Intersection Inventory
Alewife Station Access Ramp at Alewife Station Exit and Steel Place

Vanasse & Associates, Inc.
Transportation Engineers & Planners

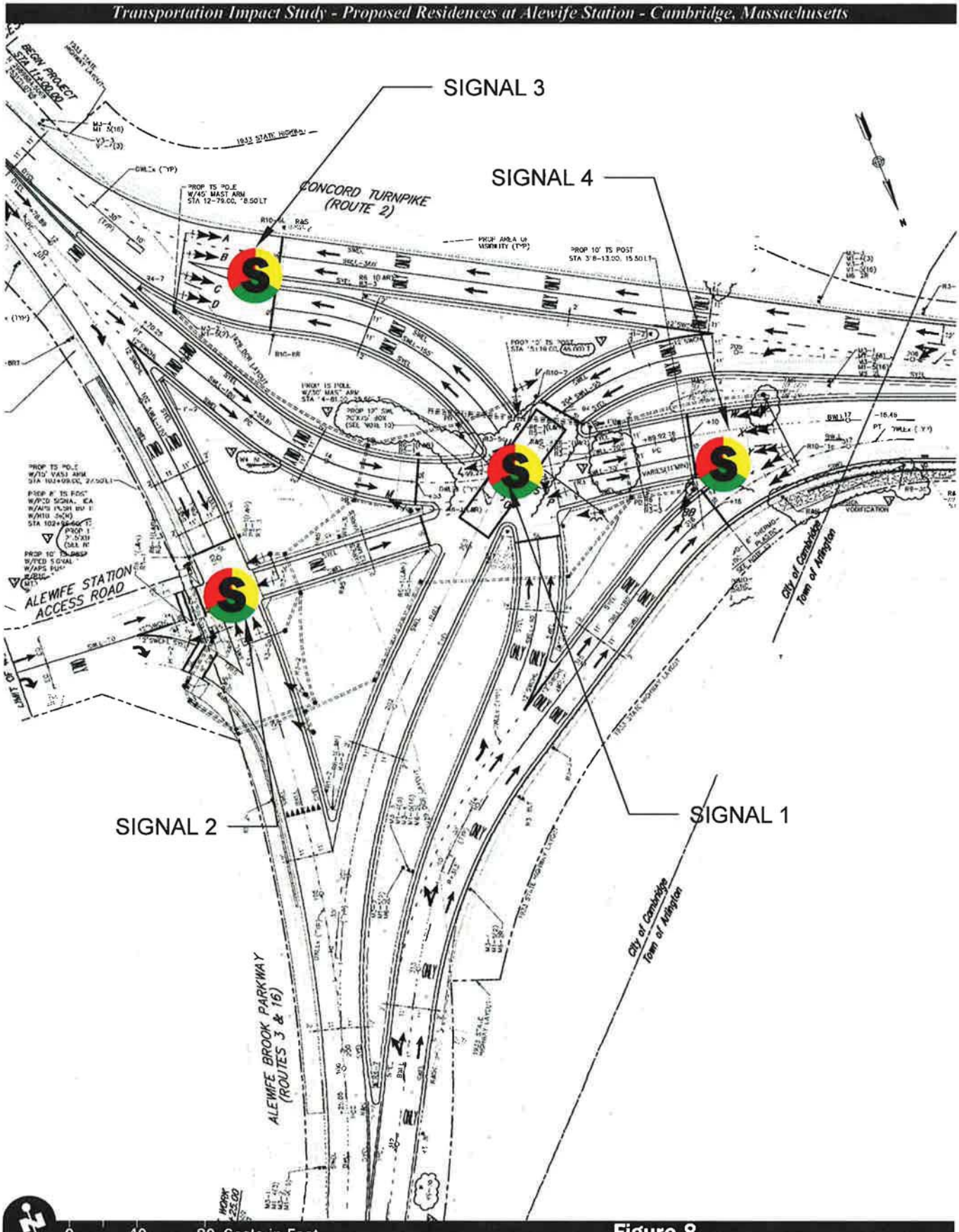
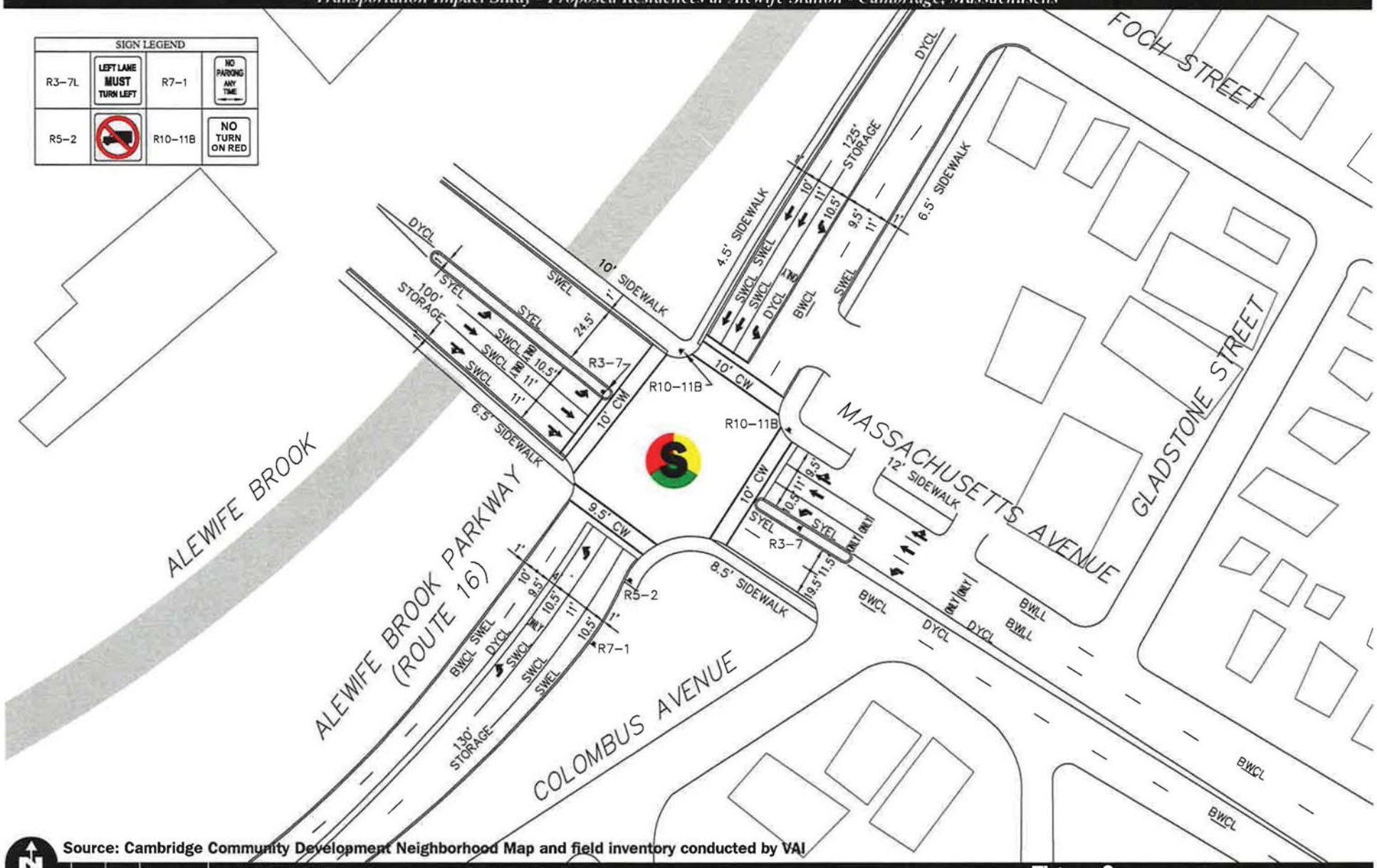


Figure 8

Intersection Inventory
Route 2 at Alewife Brook Parkway

Vanasse & Associates, Inc.
Transportation Engineers & Planners



Source: Cambridge Community Development Neighborhood Map and field inventory conducted by VAI

0 30 60 Scale in Feet

Figure 9

Intersection Inventory
Alewife Brook Parkway and
Massachusetts Avenue

Vanasse & Associates, Inc.
Transportation Engineers & Planners

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