

NEEDHAM PLANNING BOARD

Wednesday April 15, 2020

7:00 p.m.

Virtual Meeting using Zoom

Meeting ID: 394240461

(Instructions for accessing below)

Revised March 20, 2020 to Accommodate Conversion from On-Site to Remote Participation

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: **394240461**

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: **394240461**

1. Public hearing:

7:05 p.m. Article 1: Map Change to General Residence B Zoning District

Article 2: Amend Zoning By-Law – Pediatric Medical Facility in New England Business Center District

2. Minutes.

3. Correspondence.

4. 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

Revised March 20, 2020 to Accommodate Conversion from On-Site to Remote Participation

In accordance with the provisions of M.G.L., Chapter 40A, S.5, the Needham Planning Board will hold a public hearing on Wednesday, April 15, 2020 at 7:05 p.m. regarding certain proposed amendments to the Needham Zoning By-Law to be considered by the May 2020 Annual Town Meeting.

Pursuant to Governor Baker's March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law, G.L. c. 30A, Section 18, and the Governor's March 15, 2020 Order imposing strict limitations on the number of people that may gather in one place, this public hearing of the Needham Planning Board is being conducted via remote participation. No in-person attendance of members of the public will be permitted, but the public can view and participate in this meeting while in progress by remote access following the instructions detailed below. The subject hearing had previously been noticed for the Needham Town Hall, Powers Hall, 1471 Highland Avenue, Needham, MA.

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: 394240461

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: 394240461

Members of the public attending this meeting virtually will be allowed to make comments if they wish to do so, during the portion of the hearing designated for public comment through the zoom app.

Persons interested are encouraged to call the Planning Board office (781-455-7550) for more information. A copy of the complete text of the proposed article is detailed below. The article designation given has been assigned by the Planning Board for identification purposes only. An article number will subsequently be established by the Select Board for the Warrant.

ARTICLE 1: MAP CHANGE TO GENERAL RESIDENCE B ZONING DISTRICT

To see if the Town will vote to amend the Needham Zoning Bylaw by amending the Zoning Map as follows:

Place in the Single Residence B Zoning District (i) all that land now zoned Single Residence A bounded generally to the northwest by a point at the northwesterly end of Parcel 73 on Needham Assessor's Map No. 66, to the northeast by the State Circumferential Highway, to the southeast by Kendrick Street, and to the northwest by Hunting Road; said land comprising Parcels 65, 66, 67, 68, 69, 70, 71, 72 and 73 on said Map No. 66 and Parcels 25, 26 and 27 on Needham Assessor's Map No. 58; as well as (ii) all that land now zoned Single Residence A bounded generally to the northwest by Kendrick Street, to the northeast by the State Circumferential Highway, to the southeast by Cheney Street, and to the southwest by Hunting Road, said land comprising Parcels 1, 2, 3, 4, 18, 19, 20, 21, 22, 23 and 24 on said Map No. 58.

So much of said land comprising Parcels 65, 66, 67, 68, 69, 70, 71, 72 and 73 on said Map No. 66 and Parcels 25, 26 and 27 on Needham Assessor's Map No. 58 being bounded and described as follows:

Beginning at a point on the northeasterly side of Hunting Road at the northwesterly end of Parcel 73 on Needham Assessor's Map No. 66; thence running southeasterly along the southwesterly side of the State Circumferential Highway a distance of 1,792.15 feet to Kendrick Street; thence running westerly and northwesterly along the northerly side of Kendrick Street, 328.72 feet to Hunting Road; thence running northwesterly along the northeasterly line of Hunting Road, 1,359.60 feet, to the point of beginning.

And so much of said land comprising Parcels 1, 2, 3, 4, 18, 19, 20, 21, 22, 23 and 24 on Needham Assessor's Map No. 58 being bounded and described as follows: Beginning at a point on the southerly side of Kendrick Street, at the intersection with Hunting Road, thence running westerly 250.08 feet to the southwesterly side of the State Circumferential Highway; thence running generally southeasterly along the southwesterly side of the State Circumferential Highway a distance of 224.63 feet to Cheney Street; thence running southerly along the westerly line of Cheney Street a distance of 371.7 feet to the intersection with Hunting Road; thence running northwesterly along Hunting Road, a distance of 14.19 feet; thence running southerly by Hunting Road, along a curved line, a distance of 68.91 feet; thence running northwesterly along the northeasterly side of Hunting Road 444.24 feet; thence running along a curved line at the intersection of Hunting Road and Kendrick Street a distance of 95.20 to the point of beginning.

Be any or all of said measurements, more or less.

ARTICLE 2: AMEND ZONING BY-LAW – PEDIATRIC MEDICAL FACILITY IN NEW ENGLAND BUSINESS CENTER DISTRICT

To see if the Town will vote to amend the Zoning By-Law as follows:

1. In Section 1.3 Definitions, by adding the following after the existing definition of "Hospital, Community" and before the existing definition of "Hotel or Motel":

Hospital, Pediatric: A Hospital in which not less than three-quarters of its patients are Pediatric Patients as defined in 105 CMR 130.700 and which provides a broad range of ambulatory and inpatient services to children and young adults under the age of twenty-six (26).

2. In Section 1.3 Definitions, by adding the following after the existing definition of "Medical Clinic", and before the existing definition of "Medical Laboratory":

Medical Facility, Pediatric shall mean a facility with one or more of the following uses each primarily (not less than three-quarters) for children and young adults under the age of twenty-six (26), where, in each case, the uses are owned, operated or managed directly by a Pediatric Hospital or through a corporate affiliate controlled by a Pediatric Hospital (excluding any affiliate which is a hospital whose primary purpose is the provision of health care services to adults): (i) doctor's offices, dentist's offices, orthodontic services, psychiatric, psychological and other mental health services, imaging and laboratory services, sale, rental and repair of medical devices and equipment or other health care or health care services on an ambulatory or outpatient basis; (ii) professional, business or administrative office; (iii) a medical clinic or medical, surgical, psychiatric, dental, orthodontic, or psychologist group practices comprised of three or more such professionals; (iv) facility for the provision of testing, analytical, diagnostic, pharmaceutical or other health care support services, equipment or procedures; (v) Determination of Need Required Equipment or Determination of Need Required Services as each is defined in 105 CMR 100; (vi) cell generation, gene therapy, and infusion treatment; (vii) medical offices; (viii) diagnosis or medical, surgical, restorative or other treatment that is rendered within said facility on an ambulatory or outpatient basis, including, without limitation, patient and retail pharmacy, physical, speech and occupational therapy, transitional care and rehabilitation respite, palliative care and behavioral medicine, specialty clinics, radiation oncology, alternative medicine treatment, mobile diagnostic services, meeting and conference facilities, stock rooms, laundries, staff and administrative office; (ix) accessory uses customarily conducted in coordination with any of the foregoing, including, without

limitation, retail establishments, cafeteria, gift and coffee shops, indoor athletic exercise facility, and research laboratories.

3. In Section 3.2.4 Uses in the New England Business Center District, by adding a new subsection (j) to subsection 3.2.4.2 Uses Permitted by Special Permit, to read as follows:

(j) Medical Facility, Pediatric

4. In Section 5.1.2. Required Parking, by adding a new subsection (19), to read as follows:

(19) Medical Facility, Pediatric

One (1) parking space per 290 square feet of floor area

5. In Section 5.1.2. Required Parking, by renumbering existing subsection (19) “Mixed Uses” as subsection (20), and renumbering existing subsection (20) “Any use permitted by this Zoning By-Law” as a new subsection (21).

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 Times, March 26, 2020 and April 2, 2020.

RECEIVED TOWN CLERK
NEEDHAM, MA 02492

2020 JAN 31

Town of Needham

Citizens' Petition for Warrant Article

RECEIVED
TOWN OF NEEDHAM
SELECT BOARD

2020 JAN 31 P 1:17

Town Meeting for Which Petition is requested: May 2020 Annual Town Meeting

Primary Sponsor:

Name Robert T. Smart, Jr.

Address 25 Mayo Avenue, Needham, MA 02492

I certify that I am a registered voter in the Town of Needham.

Signature Robert T. Smart, Jr.

In accordance with M.G.L. c. 39 Section 10, the written requests of registered voters for insertion of subjects in town meeting warrants shall not be valid unless the required number of registered voters not only sign their names but also state their residence, with street and number, if any. The Selectmen shall submit such written requests to the Town Clerk/Registrars of Voters who shall check and forthwith certify the number of signatures so checked and certified shall be counted.

For an annual town meeting, a citizens' petition requires the certified signatures of ten or more registered voters. For a special town meeting, the signatures of 100 registered voters are required. The Selectmen shall call a special town meeting upon request, in writing, of two hundred registered voters or by four percent of the total number of registered voters, whichever number is lesser.

The deadline for submission of a petition for the Annual Town Meeting is the first Monday in February, in accordance with Section 1.15 of the General By-laws of the Town of Needham. The deadline for submission of a petition for a special town meeting will be determined by the Board of Selectmen, and will generally be the date that the warrant is closed.

Note: If properly certified, the text of the proposed citizens' petition will appear in the warrant exactly as presented. The Board of Selectmen, as the Warrant Committee, reserves the right to include a summary of the Board's understanding of the intent of the article along with the petition itself. The name of the primary sponsor will appear in the warrant.

Text of Citizens' Petition (Continue on other side or attach sheets as necessary)

The proposed zoning amendment is attached hereto.

Proposed Zoning Amendment

RECEIVED
TOWN OF NEEDHAM
SELECT BOARD

2020 JAN 31 PM 5:11

**ARTICLE ____ : AMEND ZONING BY-LAW – PEDIATRIC MEDICAL FACILITY IN
NEW ENGLAND BUSINESS CENTER DISTRICT**

To see if the Town will vote to amend the Zoning By-Law as follows:

1. In Section 1.3 Definitions, by adding the following after the existing definition of “Hospital, Community” and before the existing definition of “Hotel or Motel”:

Hospital, Pediatric: A Hospital in which not less than three-quarters of its patients are Pediatric Patients as defined in 105 CMR 130.700 and which provides a broad range of ambulatory and inpatient services to children and young adults under the age of twenty-six (26).

2. In Section 1.3 Definitions, by adding the following after the existing definition of “Medical Clinic”, and before the existing definition of “Medical Laboratory”:

Medical Facility, Pediatric shall mean a facility with one or more of the following uses each primarily (not less than three-quarters) for children and young adults under the age of twenty-six (26), where, in each case, the uses are owned, operated or managed directly by a Pediatric Hospital or through a corporate affiliate controlled by a Pediatric Hospital (excluding any affiliate which is a hospital whose primary purpose is the provision of health care services to adults): (i) doctor’s offices, dentist’s offices, orthodontic services, psychiatric, psychological and other mental health services, imaging and laboratory services, sale, rental and repair of medical devices and equipment or other health care or health care services on an ambulatory or outpatient basis; (ii) professional, business or administrative office; (iii) a medical clinic or medical, surgical, psychiatric, dental, orthodontic, or psychologist group practices comprised of three or more such professionals; (iv) facility for the provision of testing, analytical, diagnostic, pharmaceutical or other health care support services, equipment or procedures; (v) Determination of Need Required Equipment or Determination of Need Required Services as each is defined in 105 CMR 100; (vi) cell generation, gene therapy, and infusion treatment; (vii) medical offices; (viii) diagnosis or medical, surgical, restorative or other treatment that is rendered within said facility on an ambulatory or outpatient basis, including, without limitation, patient and retail pharmacy, physical, speech and occupational therapy, transitional care and rehabilitation respite, palliative care and behavioral medicine, specialty clinics, radiation oncology, alternative medicine treatment, mobile diagnostic services, meeting and conference facilities, stock rooms, laundries, staff and administrative office; (ix) accessory uses customarily conducted in coordination with any of the foregoing, including, without limitation, retail establishments, cafeteria, gift and coffee shops, indoor athletic exercise facility, and research laboratories.

3. In Section 3.2.4 Uses in the New England Business Center District, by adding a new subsection (j) to subsection 3.2.4.2 Uses Permitted by Special Permit, to read as follows:

(j) Medical Facility, Pediatric

4. In Section 5.1.2. Required Parking, by adding a new subsection (19), to read as follows:

(19) Medical Facility, Pediatric

One (1) parking space per 290 square feet of floor area

5. In Section 5.1.2. Required Parking, by renumbering existing subsection (19) "Mixed Uses" as subsection (20), and renumbering existing subsection (20) "Any use permitted by this Zoning By-Law" as a new subsection (21).

Or to take any other action relative thereto.

Town of Needham
Citizens' Petition for Warrant Article

1. Signatures to be made in person with the name substantially as registered

NOW LIVING AT
(street & number, if any)

Residence on January 1, 20¹⁹
If different (Street & number, if any

registered	
✓ Susamee Smigut	25 Mayo Ave.
✓ [unclear]	197 Brookridge Rd
✓ [unclear]	563 Chestnut St
✓ [unclear]	224 Webster St.
✓ [unclear]	64 MAYO AVENUE
✓ [unclear]	48 MELLEN ST
✓ [unclear]	98 MELLEN ST.
✓ [unclear]	12 Pine Grove St
✓ [unclear]	29 POWERS STREET
✓ [unclear]	29 Powers Street
✓ [unclear]	5 morrisside rd

Registrars of Voters check this against the name of each qualified Voter to be certified
For names not certified, use the code opposite:

N - no such registered voter at that address
S - unable to identify signature or address as that of voter.
because of form or signature or address or illegible
T - signed too many petitions.

CERTIFICATION OF SIGNATURES

We certify that the 11- eleven above
Signatures checked thus are names of qualified voters of this town.
January 31, 2020
Heedham
Town

Registrars of Voters

Board of Registrars

List of Citizen's Petition Signers:

Susanne Smart	25 Mayo Avenue
John Tully	197 Brookside Road
John Burns	563 Chestnut Street
Gregory Condon	409 Webster Street
Maurice Ringel	64 Mayo Avenue
Frank Flynn	47 Mellen Street
Janice Flynn	47 Mellen Street
Stacie Shapiro	12 Pine Grove
Stephen Frail	29 Powers Street
Heidi Frail	29 Powers Street
Laurie Udell	5 Morningside Road

Town of Needham
Citizens' Petition for Warrant Article

1. Signatures to be made in person
with the name substantially as
registered

NOW LIVING AT
(street & number, if any)

Residence on January 1, 20 19
If different (Street & number, if any)

✓ <u>MARK D. FLEMING</u> ✓ <u>Theoria K Boyd</u> ✓ <u>B. Schmidt</u> ✓ <u>EB BROWN</u> ✓ <u>Leslie Benson</u> ✓ <u>Dennis Kramer</u> ✓ <u>Michael Doctor</u> ✓ <u>Francis Smith</u> ✓ <u>ERIK FEIN</u> ✓ <u>BEN STONE</u> ✓ <u>Judith Folsch</u> ✓ <u>Debra Boyer</u> ✓ <u>Elizabeth Ross</u>	<u>828 South St.</u> <u>Wachusett Rd</u> <u>23 Smith Street</u> <u>65 Canavan Circle</u> <u>66 Briarwood Circle</u> <u>52 Walnut St</u> <u>30 Abbott St</u> <u>672 Chestnut St</u> <u>40 John Street</u> <u>638 SOUTH ST</u> <u>189 Highgate St.</u> <u>21 Sterling Road</u> <u>638 South St.</u>	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
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Registrars of Voters check this against the name of
each qualified Voter to be certified
For names not certified, use the code opposite:

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S - unable to identify signature or address as that of voter.
because of form or signature or address or illegible
T - signed too many petitions.

CERTIFICATION OF SIGNATURES

We certify that the 11- eleven above
Signatures checked thus are names of qualified voters of this town.

January 31, 2020
Needham

Town

John M. Ray
Barbara B. Doyle
Ann M. Casprowe
Theodore K. Ector
Registrars of Voters Board of Registrars

List of Citizen's Petition Signers:

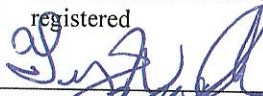
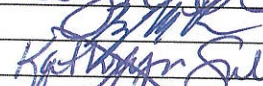
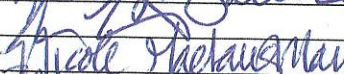
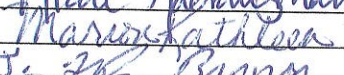
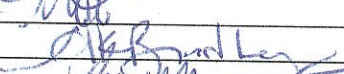
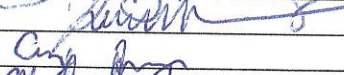
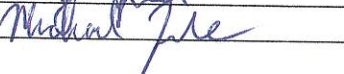
Mark Fleming	828 South Street
Theonia Boyd	65 Wachusett Road
Birgitta Schmidt	23 Smith Street
Elizabeth Blume	65 Canavan Circle
Leslie Benson	66 Briarwood Circle
Dennis Kramer	52 Walnut Street
Michael Docktor	30 Abbott Street
Francis Fynn-Thompson	672 Chestnut Street
Eric Feins	40 John Street
Ben Shore	638 South Street
Lindsey Kolinski	189 Highgate Street
Debra Boyer	21 Sterling Road
Elizabeth Ross	638 South Street

Town of Needham
Citizens' Petition for Warrant Article

1. Signatures to be made in person
with the name substantially as
registered

NOW LIVING AT
(street & number, if any)

Residence on January 1, 2019
If different (Street & number, if any)

✓ 	21 Starr Ridge Road	
✓ 	65 Yale Road, Needham	
✓ 	21 Starr Ridge Road	
✓ 	649 South St	
✓ 	23 Webster Park Needham	
✓ 	10 Woodbury St.	
✓ 	61 Jarvis Cir Needham	
✓ 	53 Homestead Park	
✓ 	57 Whiting Way	
✓ 	1376 Great Plain Ave Needham MA	
✓ 	1316 South St. Needham MA	
✓ 	15 Avon Circle Needham MA	
✓ 	15 Avon Circle Needham MA	

Registrars of Voters check this against the name of
each qualified Voter to be certified
For names not certified, use the code opposite:

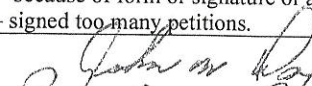
N - no such registered voter at that address
S - unable to identify signature or address as that of voter.
because of form or signature or address or illegible
T - signed too many petitions.

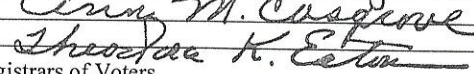
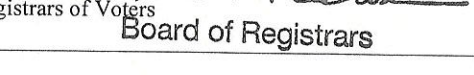
CERTIFICATION OF SIGNATURES

We certify that the 13 - thirteen above
Signatures checked this are names of qualified voters of this town.

January 31, 2020
Needham

Town





Registrars of Voters
Board of Registrars

1. Signatures to be made in person with the name substantially as registered

Residence on January 1, 2019
If different (Street & number, if any)

✓ Ala K. Stenman
Dan I Bremer

80 Meetinghouse Cr. Needham
75 Water Rd, Needham

N -- no such registered voter at that address
S -- unable to identify signature or address as that of voter.
because of form or signature or address or illegible
T -- signed too many petitions.

We certify that the -2- TWO above
Signatures checked thus are names of qualified voters of this town.

January 31, 2020
Needham

Town

T - signed too many petitions.

John M. Ray
Barbara B. Doyle
Ann M. Caspove
Theodore K. Eaton

Registrars of Voters
Board of Registrars

Timothy Sullivan

21 Starr Ridge Rd

Gary Ronan

65 Yale Road

Kathryn Sullivan

21 Starr Ridge Road

Susie Mitchell

649 South Street

Nicole MacLaughan

25 Webster Place

Marion Kathleen Zimbardo

10 Woolbury Drive

Jennifer Bannon

61 Jarvis Circle

Caitlin Moran

53 Homestead Park

Mercedith Giannotti

57 Whiting Way

Gina Bradley

1376 Great Plain Ave.

Lauren Fryburger

1316 South St.

Amy Zimbardo

15 Avon Circle

Mike Zimbardo

15 Avon Circle

Alan Stern

86 Meetinghouse Circle

David Greenes

75 Ware Road

cc: SB
→ KFC

GEORGE GIUNTA, JR.
ATTORNEY AT LAW*
281 CHESTNUT STREET
NEEDHAM, MASSACHUSETTS 02492
*Also admitted in Maryland

RECEIVED
TOWN OF NEEDHAM
SELECT BOARD

2020 JAN 30 P 3:43

TELEPHONE (781) 449-4520

FAX (781) 465-6059

January 30, 2020

Kate Fitzpatrick
Town Manager
Town of Needham
1471 Highland Avenue
Needham, Massachusetts 02492

COMPLETED
1/31/2020

Re: Bruno DiFazio
Hunting Road
Petition for Zoning Map Change

Dear Ms. Fitzpatrick,

Please be advised that this office represents Bruno and Linda J. DiFazio, individually and as Trustees of the Bruno DiFazio Living Trust, owners of the property at 176 Hunting Road, Needham, MA, relative to their desire, pursuant to M.G.L. c. 40A, Section 5, to petition the Town of Needham Town Meeting for a Zoning Map Change. Their property, and all those located generally along the easterly side of Hunting Road, are currently situated in the SRA Zoning District. However, their lot, and all the other properties south of them, down to Cheney Street, do not meet applicable requirements for SRA. Moreover, because of their smaller size, these lots are unduly restricted by the SRA setback requirements.

Therefore, the DiFazios are seeking to rezone the following properties located generally along the easterly side of Hunting Road, being all the properties in the SRA Zoning District between their property and Cheney Street to the south and between Hunting Road and Route 128 to the east (see also portions of Assessor's Map provided herewith as Exhibit A for reference):

Address	Map	Parcel
176 Hunting Road	60	73
190 Hunting Road	60	72
200 Hunting Road	60	71
210 Hunting Road	60	70
220 Hunting Road	60	69
228 Hunting Road	60	68
236 Hunting Road	60	67
244 Hunting Road	60	66
250 Hunting Road	60	65
260 Hunting Road	58	27
259 Kendrick Street	58	26
249 Kendrick Street	58	25
252 Kendrick Street	58	23

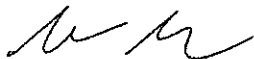
254 Kendrick Street	58	24
258 Kendrick Street	58	22
286 Hunting Road	58	21
290 Hunting Road	58	20
296 Hunting Road	58	19
304 Hunting Road	58	18
342 Greendale Avenue	58	4
35 Cheney Street	58	3
29 Cheney Street	58	2
23 Cheney Street	58	1

The DiFazios have already obtained signatures of support from most of the affected properties, including a land owner affected by the proposed change and 10 or more registered voters (see signature sheets and letters provided herewith as Exhibit B), and pursuant to M.G.L. C.40A, Section 5, and M.G.L. C. 39, Section 10, requests that the matter be brought before the upcoming Annual Town Meeting. A proposed draft warrant is provided herewith as Exhibit C.

If you or the Board of Selectmen have any questions comments or concerns relative to the foregoing, or if you require any further information, please do not hesitate to contact me.

Your attention and cooperation are appreciated.

Sincerely,



George Giunta, Jr

EXHIBIT A
Assessor's Map Selections

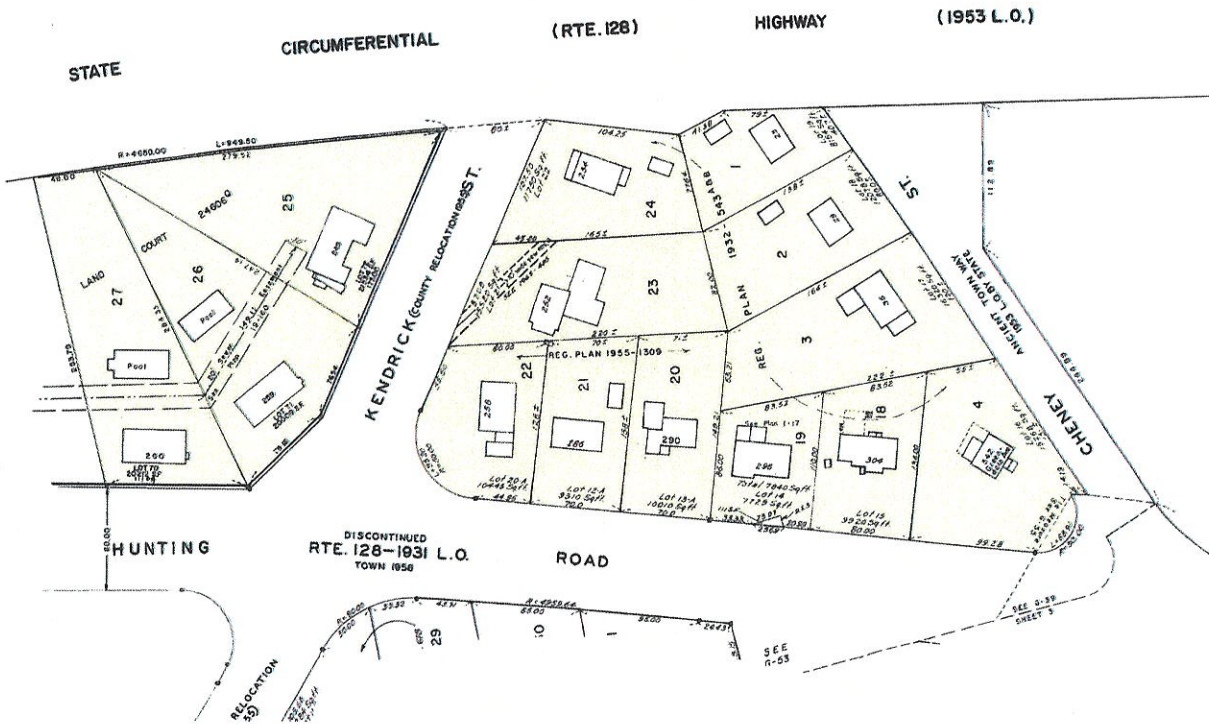
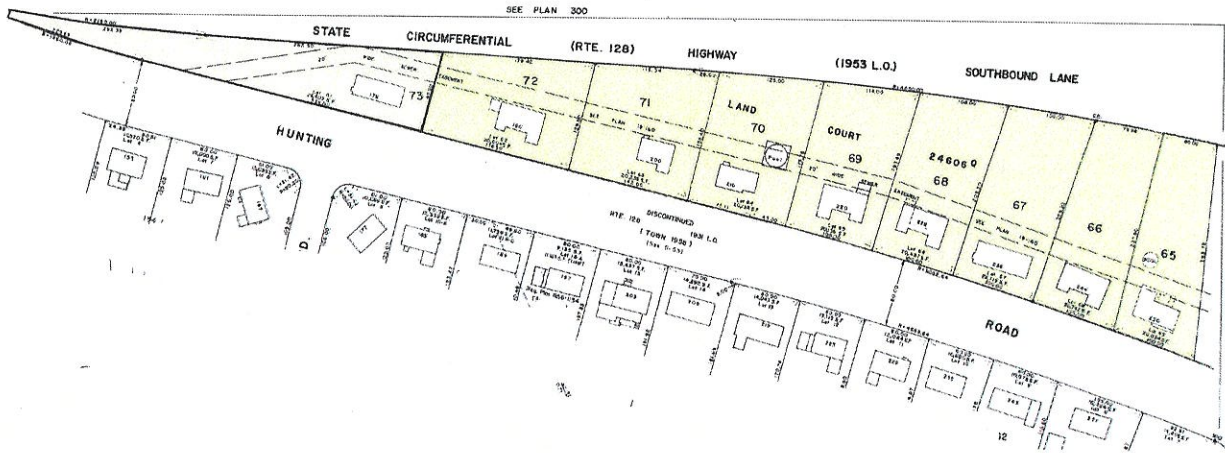


EXHIBIT B
Signatures of Support

Swapam Rahman and Lynda B. Furash
1001 Marina Dr., U703E
Quincy, MA 02171

November 8, 2019

To the Needham Zoning Board:

We are the owners of record of the property located at 228 Hunting Road, Needham, MA 02494.

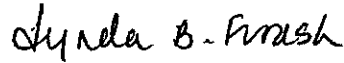
We are in favor of changing the zoning classification for Hunting Road from Single Residence A back to Single Residence B.

Thank you for your consideration.

Sincerely,



Swapam Rahman, f/k/a Mahmud Swapam Rahman



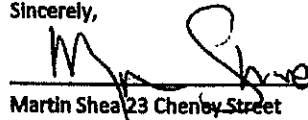
Lynda B. Furash

Town Of Needham, Ma.

To whom it may concern,

I am in favor of rezoning all the existing properties on the east side of Hunting Road, Cheney Street and Kendrick Street from *Single residence A* back to *Single residence B*.

Sincerely,


Martin Shea 23 Cheney Street

Date 10/16/19

Town Of Needham, Ma.

To whom it may concern,

I am in favor of rezoning all the existing properties on the east side of Hunting Road, Cheney Street and Kendrick Street from *Single residence A* back to *Single residence B*.

Sincerely,

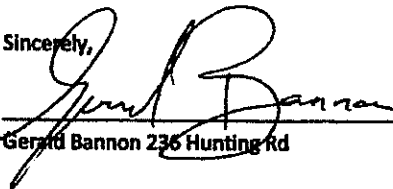
 Date 10/28/19
Audrey Cooper 234 Kendrick st

Town Of Needham, Ma.

To whom it may concern,

I am in favor of rezoning all the existing properties on the east side of Hunting Road, Cheney Street and Kendrick Street from *Single residence A* back to *Single residence B*.

Sincerely,

 Date Oct-12-2019
Gerald Bannon 236 Hunting Rd

Town Of Needham, Ma.

To whom it may concern,

I am in favor of rezoning all the existing properties on the east side of Hunting Road, Cheney Street and Kendrick Street from *Single residence A* back to *Single residence B*.

Sincerely,

 Date 10/29/19
Donald McHugh 29 Cheney Street
Ronald

Jason Kraetz & Jayne Rd Needham MA 01944 *J. Kraetz*

Ed live 281 Hunting Rd

Robert King 197 Hunting

Dennis Jones 209 Hunting

183 Hunting Rd.

Robert King 189 Hunting Rd

John 203 Hunting Rd

NR Jones 235 Hunting Rd

Name

Address

176 Bruno DiFazio 176 Hunting Rd

190 Kevin O'Connor 190 Hunting Rd

200 Fred Bowen 200 Hunting Rd.

210 Katherine Quan Thomas 210 Hunting Rd

220 Ivo Rufo 220 Hunting Rd

220 Mahmad Rahman

250 Gerald Bannon

254 John Hest 254 Hunt Rd

250 Lawrence Milesky 250 HUNTING RD

260 Irina Ratskovskaya 260 Hunting Rd
Needham MA 02494

259 Bonnie Arbel 259 Kendrick St. WASHINGTON

259 Bonnie Arbel

K234 Audrey Couper Don't Care

K 252 Donna Mahoney 252 Kendrick St.

K 258 Elaine Sweet 258 Kendrick St.

K286 Gerald Bannon

K 280 Alon Ludwig 286 Hunting Rd.

* 290 Susan Griffin

* 296 Raveen Purushotham 296 Hunting Road.

* 304 Clair Immediato 304 Hunting Rd

342 Kristopher Getez 342 Greendale Ave

EXHIBIT C
Proposed Warrant Article

AMEND ZONING BY-LAW
MAP CHANGE TO GENERAL RESIDENCE B ZONING DISTRICT

To see if the Town will vote to amend the Needham Zoning Bylaw by amending the Zoning Map as follows:

Place in the Single Residence B Zoning District (i) all that land now zoned Single Residence A bounded generally to the northwest by a point at the northwesterly end of Parcel 73 on Needham Assessor's Map No. 66, to the northeast by the State Circumferential Highway, to the southeast by Kendrick Street, and to the northwest by Hunting Road; said land comprising Parcels 65, 66, 67, 68, 69, 70, 71, 72 and 73 on said Map No. 66 and Parcels 25, 26 and 27 on Needham Assessor's Map No. 58; as well as (ii) all that land now zoned Single Residence A bounded generally to the northwest by Kendrick Street, to the northeast by the State Circumferential Highway, to the southeast by Cheney Street, and to the southwest by Hunting Road, said land comprising Parcels 1, 2, 3, 4, 18, 19, 20, 21, 22, 23 and 24 on said Map No. 58.

So much of said land comprising Parcels 65, 66, 67, 68, 69, 70, 71, 72 and 73 on said Map No. 66 and Parcels 25, 26 and 27 on Needham Assessor's Map No. 58 being bounded and described as follows: Beginning at a point on the northeasterly side of Hunting Road at the northwesterly end of Parcel 73 on Needham Assessor's Map No. 66; thence running southeasterly along the southwesterly side of the State Circumferential Highway a distance of 1,792.15 feet to Kendrick Street; thence running westerly and northwesterly along the northerly side of Kendrick Street, 328.72 feet to Hunting Road; thence running northwesterly along the northeasterly line of Hunting Road, 1,359.60 feet, to the point of beginning.

And so much of said land comprising Parcels 1, 2, 3, 4, 18, 19, 20, 21, 22, 23 and 24 on Needham Assessor's Map No. 58 being bounded and described as follows: Beginning at a point on the southerly side of Kendrick Street, at the intersection with Hunting Road, thence running westerly 250.08 feet to the southwesterly side of the State Circumferential Highway; thence running generally southeasterly along the southwesterly side of the State Circumferential Highway a distance of 224.63 feet to Cheney Street; thence running southerly along the westerly line of Cheney Street a distance of 371.7 feet to the intersection with Hunting Road; thence running northwesterly along Hunting Road, a distance of 14.19 feet; thence running southerly by Hunting Road, along a curved line, a distance of 68.91 feet; thence running northwesterly along the northeasterly side of Hunting Road 444.24 feet; thence running along a curved line at the intersection of Hunting Road and Kendrick Street a distance of 95.20 to the point of beginning.

Be any or all of said measurements, more or less.

Or take any other action relative thereto.



Boston Children's Hospital



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Boston Children's Hospital

Proposed Zoning Amendment

Needham Planning Board
April 15, 2020





- **Amendment to Zoning Use Table for the New England Business Center**
 - New special permit use
- **Parking and Traffic Analysis**
- **Questions and Comments**

New England Business Center



Proposed Zoning Amendment

NEW DEFINED TERM:

Hospital, Pediatric: A Hospital in which not less than three-quarters of its patients are Pediatric Patients as defined in 105 CMR 130.700 and which provides a broad range of ambulatory and inpatient services to children and young adults under the age of twenty- six (26).

Proposed Zoning Amendment

NEW SPECIAL PERMIT USE IN THE NEW ENGLAND BUSINESS CENTER (NEBC)

Medical Facility, Pediatric shall mean a facility with one or more of the following uses each primarily (not less than three-quarters) for children and young adults under the age of twenty-six (26), where, in each case, the uses are owned, operated or managed directly by a Pediatric Hospital or through a corporate affiliate controlled by a Pediatric Hospital (excluding any affiliate which is a hospital whose primary purpose is the provision of health care services to adults): (i) doctor's offices, dentist's offices, orthodontic services, psychiatric, psychological and other mental health services, imaging and laboratory services, sale, rental and repair of medical devices and equipment or other health care or health care services on an ambulatory or outpatient basis; (ii) professional, business or administrative office; (iii) a medical clinic or medical, surgical, psychiatric, dental, orthodontic, or psychologist group practices comprised of three or more such professionals; (iv) facility for the provision of testing, analytical, diagnostic, pharmaceutical or other health care support services, equipment or procedures; (v) Determination of Need Required Equipment or Determination of Need Required Services as each is defined in 105 CMR 100; (vi) cell generation, gene therapy, and infusion treatment; (vii) medical offices; (viii) diagnosis or medical, surgical, restorative or other treatment that is rendered within said facility on an ambulatory or outpatient basis, including, without limitation, patient and retail pharmacy, physical, speech and occupational therapy, transitional care and rehabilitation respite, palliative care and behavioral medicine, specialty clinics, radiation oncology, alternative medicine treatment, mobile diagnostic services, meeting and conference facilities, stock rooms, laundries, staff and administrative office; (ix) accessory uses customarily conducted in coordination with any of the foregoing, including, without limitation, retail establishments, cafeteria, gift and coffee shops, indoor athletic exercise facility, and research laboratories.



Proposed Zoning Amendment

NEW PARKING REQUIREMENT FOR PEDIATRIC MEDICAL FACILITY:

(19) Medical Facility, Pediatric

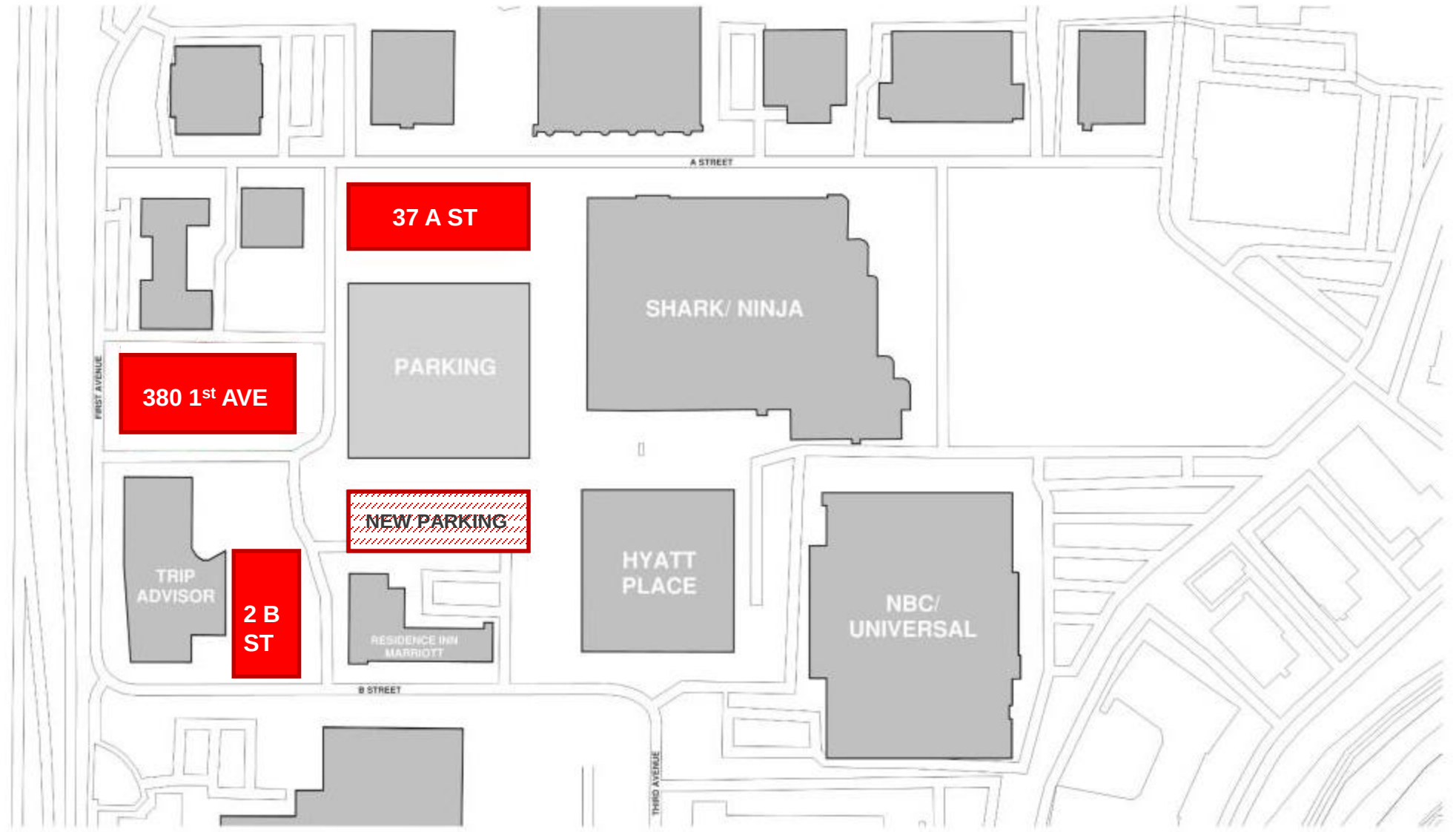
One (1) parking space per
290 square feet of floor area



New England Business Center



Site Plan



Boston Children's Hospital

Satellite Campus Parking System Summary

Building Type	Location	Parking Supply (spaces)	Building Size (ksf)	Parking Rate (spaces/ksf)
Pediatric Ambulatory Center	Brookline	674	228	2.96
	Waltham	1,132	390	2.90
	Peabody ¹	1,079	389	2.77

Note:

1. This is a shared facility. Values are inclusive of all building uses, both Boston Children's Hospital and non-Boston Children's Hospital.

Estimated Parking Requirements Based on Satellite Campus Parking

- Pediatric Ambulatory Centers within Boston Children's Hospital network have an average parking rate of **2.87** spaces/ksf
- Using these metrics, the proposed Boston Children's Hospital Needham facility would have an estimated parking need of **1,298** spaces

Estimated Parking Requirements Summary

Metric	Estimated Parking Supply ¹	
	Spaces	Rate (spaces/ksf)
Proposed Zoning Standard ²	1,559	3.45
Operational Assessment	1,484	3.28
Satellite Campus/ Comparable Assessment	1,298	2.87

Note:

1. Includes 380 1st Avenue, 37 A Street and 2 B Street, for a total development envelope of 452ksf.
2. One (1) parking space per 290 SF of floor area in a Pediatric Medical Facility

Anticipated Trip Generation Comparison

- Actual (counted) trips generated by Founder's Park (constructed buildings as of October 2019) are significantly lower than the approved trip generation estimates
- With Boston Children's Hospital in place and Founder's Park fully constructed:
 - AM Peak Hour trips will be similar to the approved trip generation estimates (1% increase)
 - PM Peak Hour trips will be slightly higher than the approved trip generation estimates (6% increase)
- Actual Project trips of Boston Children's Hospital facilities and unconstructed Founder's Park buildings are also expected to be lower than the Institute of Transportation Engineers (ITE) Trip Gen estimates used in this analysis

Prospective Needham Economic and Community Benefits



- ☐ 100% assessed real estate taxes
- ☐ Food, lodging and associated town revenues
- ☐ Needham site would be an innovation hub for Boston Children's clinical research and education
- ☐ Patient volume: attracting patients and families regionally, nationally and internationally
- ☐ Current Boston Children's employees:
250+ Needham residents work system-wide, including 50 physicians
- ☐ Strong track record of community benefits support to local partners
- ☐ Commitment to civic engagement in local youth-serving efforts
- ☐ Local health planning and funding related to state Determination of Need

Proposed Needham Satellite – Construction Impacts

- Construction for the proposed Needham location, planned to take place from 2022-2025, would mean to the town of Needham....
 - \$130M in economic impact
 - 680 jobs
 - \$1.2M in state and local tax revenue

STUDY PROFILE

Methodology: IMPLAN

Geographies: Town of Needham, Mass. (ZIP codes 02492 and 02494) and the Commonwealth of Massachusetts

Data Source: Impacts generated are based on information prepared by Tripp Umbach for Boston Children's Hospital in connection with Tripp Umbach's analysis of the economic impacts of Boston Children's plans for a location in Needham as of March 13, 2020.



Proposed Needham Satellite – Annual Operations

- Beginning in 2025, operations of the Boston Children's Needham site would mean...
- **\$52M** in increased economic activity in Needham
 - **\$28M** in direct impacts in pay, benefits, medical equipment, etc.
 - **\$24M** in indirect and induced impacts with additional spending in restaurants, hotels, rental housing, grocery stores, etc.
- **455 jobs** supported or sustained locally
 - **200 direct jobs** such as doctors, nurses and support staff, etc.
 - **255 indirect and induced jobs** such as servers, gas station attendants, real estate agents, etc.

STUDY PROFILE

Methodology: IMPLAN

Geographies: Town of Needham, Mass. (ZIP codes 02492 and 02494) and the Commonwealth of Massachusetts

Data Source: Impacts generated are based on information prepared by Tripp Umbach for Boston Children's Hospital in connection with Tripp Umbach's analysis of the economic impacts of Boston Children's plans for a location in Needham as of March 13, 2020.



Questions and Comments



Memorandum

To: Paula Quan, VP of Capital
Planning and Design
Boston Children's Hospital
300 Longwood Avenue
Boston, MA 02115

Date: January 24, 2020
Revised March 30, 2020
Project #: 14631.00

From: Sean Manning, PE
Ryan White, PE

Re: BCH Founders Park Estimated/
Comparative Parking Demand Analysis

Note:

This revised memorandum takes into account the following adjustments that have been made since the initial submission to the Town of Needham on January 24, 2020:

- **380 1st Street Building size has been increased by 10 KSF (from 235 KSF to 245 KSF).**
- **37 A St Building size has been decreased by 10 KSF (from 90 KSF to 80 KSF).**
- **Total GSF proposed by BCH has not changed and is still reflective of previously approved cumulative building envelope for these three subject sites in Founder's Park (452 KSF).**
- **380 1st Street now assumed to be 100% Pediatric Medical Center use (small office/admin component eliminated).**
- **37 A Street now assumed to be 100% Office use (consistent and unchanged assumption for this site with approved Founder's Park).**

Overview

Boston Children's Hospital (BCH) is proposing to construct, in one or more buildings, a Pediatric Medical Facility at Founders Park in Needham, Massachusetts. As currently contemplated, the Project will be constructed in phases over time with only a single building in the first phase. A key element needed to support a premier arrival experience is ensuring that adequate parking is provided to accommodate expected patient and employee demands. This assessment outlines the approach utilized to help conservatively estimate the parking needs for the proposed BCH Pediatric Medical Facility. Included herein is an operational parking needs assessment based on national benchmarked ratios and the proposed building program and a comparable facility parking assessment based on a review of similar BCH satellite campuses in eastern Massachusetts. The Project is required to accommodate all parking on-site and the goal of the study is to ensure the recommended parking ratio is appropriate to accommodate expected demands and limit any unintended parking and traffic impacts.

This memorandum refers to the Founder's Park development as described in the Supplement Draft Environmental Impact Report (SDEIR) submitted to the Massachusetts Environmental Policy Act on August 31, 2015. As illustrated in **Figure 1**, the Founder's Park site was separated into three components for filing/permitting purposes: Center 128 West, Center 128 East and the 2nd Avenue Residences. As shown in **Figure 2**, five development sites within the total Founder's Park development are still undeveloped. Three sites (all permitted as office buildings) are located in Center 128 West and two sites (one permitted as office and the other as hotel with retail) are located in Center 128 East. BCH

99 High Street
10th Floor
Boston, MA 02110-2354
P 617.728.7777

is looking to develop the three sites (380 1st 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 and general office.

Overall, this assessment recommends a proposed parking ratio for a Pediatric Medical Facility land use of one parking space per 290 SF of floor area (or 3.45 spaces per 1,000 SF).

Figure 1: Founder's Park Site



Figure 2: Undeveloped Sites within Founder's Park



Program

BCH Founders Park will contain approximately 452,000 SF of building program across three sites. **Table 1** outlines the program and land use for each site as currently proposed.

Table 1 BCH Proposed Development Program

Location	Land Use	Program Size (KSF)
380 1 st Ave	Pediatric Ambulatory Center	245
37 A St	Office	80
2 B St	Office	127
Total		452

Note: 2 B Street size and program based on DSEIR 2 B St building program, dated August 31, 2019

Operational Parking Assessment

Multiple methods were utilized to help quantify the estimated parking demand needed to support the Proposed Project. The first method involved the use of benchmarked ratios developed for various programmatic elements and applied them to the proposed BCH building program. These benchmarked ratios are based on a review conducted by



VHB of peer healthcare institution's program and parking needs to support the demand. This includes institutions from around the country but focuses on local peer facilities.

Unlike a typical office space, not every area of the pediatric medical facility will generate a parking demand at the same ratio. For example, areas for patient care will generate a higher parking demand than employee support area within the same building. Some building areas will have no real parking need. Space generator types and their associated parking metric used for this study are listed below:

- Patient Care Area: 5.0 spaces/KSF
- Office Area: 3.0 spaces/KSF
- Employee Support Area: 2.0 spaces/KSF
- Building Support Area: 0.0 spaces/KSF

A detailed review of each building's program was conducted, and spaces were classified into one of these four spaces types. A summary of the estimated parking need for the Proposed Project, based on this methodology, is presented in **Table 2**.

Table 2 Operational Parking Assessment Summary

Space Type	Size (KSF)	Parking Metric (spaces/KSF)	Parking Demand
Patient Care Area	191	5.0	955
Office Area	127	3.0	381
Employee Support Area	74	2.0	148
<u>Building Support Area</u>	<u>60</u>	0.0	<u>0</u>
Total	452		1,484

The operation parking assessment method estimates that the Proposed Project will require a parking demand of approximately 1,484 spaces. This equates to an equivalent parking ratio of 3.28 spaces/KSF.

Comparable Facility Parking Assessment

The second method utilized to estimate the BCH parking need was based on a review of comparable satellite pediatric facilities that BCH operates at other eastern Massachusetts locations, including Brookline, Waltham and Peabody. These campuses offer similar types of pediatric medical services, currently operate similar to expected operations at the Proposed Project and provide on-site parking to accommodate the associated demand. **Table 3** outlines the facilities characteristics and parking ratio.



Table 3 Estimated Demand based on Comparable Facility Assessment

Location	On-Site Parking (spaces)	Building Size (KSF)	Parking Ratio (spaces/KSF)
Brookline	674	228	2.96
Waltham	1,132	390	2.90
Peabody	1,079	389	2.77

Note: Peabody is shared facility. Values are inclusive of all building uses, both BCH and non-BCH (office use).

Based on the parking ratios presented in **Table 3**, the average parking ratio of other BCH pediatric medical facilities was determined to be 2.87 spaces/KSF. By applying this metric to the 452,000 SF Proposed Project, the comparable facility method yields a parking need of approximately 1,298 spaces.

Recommendation

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 operational parking assessment, based on national benchmarked ratios and the proposed building program, yields an estimated parking ratio of 3.28 spaces/KSF (or one space per 305 SF) and the comparable facility assessment, based on a review of similar BCH satellite campuses, yields an estimated parking ratio of 2.87 spaces/KSF (or one space per 350 SF). As a goal of the study is to ensure a recommended parking ratio is conservatively higher than these comparative assessments, it is recommended that the operational assessment ratio be used, with a 5% factor of safety applied. Following this logic, the recommended proposed parking ratio for Pediatric Medical Facility land use has been calculated to be one parking space per 290 SF of floor area (or 3.45 spaces per 1,000 SF).



Memorandum

To: Paula Quan
Vice President of Capital Planning
and Design
Boston Children's Hospital
300 Longwood Avenue
Boston, MA 02115

Date: January 24, 2020
Revised March 30, 2020

Project #: 14631.00

From: Sean M. Manning, P.E.
Samantha Lathrop, EIT

Re: Boston Children's Hospital Needham at Founders Park
Trip Generation Estimate Summary

Note:

This revised memorandum takes into account the following adjustments that have been made since the initial submission to the Town of Needham on January 24, 2020:

- **380 1st Street Building size has been increased by 10 KSF (from 235 KSF to 245 KSF).**
- **37 A St Building size has been decreased by 10 KSF (from 90 KSF to 80 KSF).**
- **Total GSF proposed by BCH has not changed and is still reflective of previously approved cumulative building envelope for these three subject sites in Founder's Park (452 KSF).**
- **380 1st Street now assumed to be 100% Pediatric Medical Center use (small office/admin component eliminated).**
- **37 A Street now assumed to be 100% Office use (consistent and unchanged assumption for this site with approved Founder's Park).**
- **Trip Generation estimates for BCH proposed Projects have been calculated using ITE Trip Generation 10th Edition**

Overview

VHB has conducted an updated estimated trip generation analysis for the Founder's Park site in Needham, MA on behalf of Boston Children's Hospital (BCH). BCH is looking to acquire three sites within the Founder's Park development and modify the approved land use from general office to a combination of pediatric medical facility and general office. This memorandum presents a comparative trip generation analysis of the Founder's Park development as previously approved and the proposed project by BCH (referred to herein as the "Project").

This memorandum refers to the Founder's Park development as described in the Supplement Draft Environmental Impact Report (SDEIR) submitted to the Massachusetts Environmental Policy Act on August 31, 2015. The Founder's Park site was separated into three components for the filing/permitting purposes: Center 128 West, Center 128 East and the 2nd Avenue Residences as depicted in **Figure 1** below. Five development sites within the total Founder's Park development are still yet to be built. Three sites (all permitted as office buildings) are located in Center 128 West and two sites (one permitted as office and the other as hotel with retail) are located in Center 128 East as shown in **Figure**

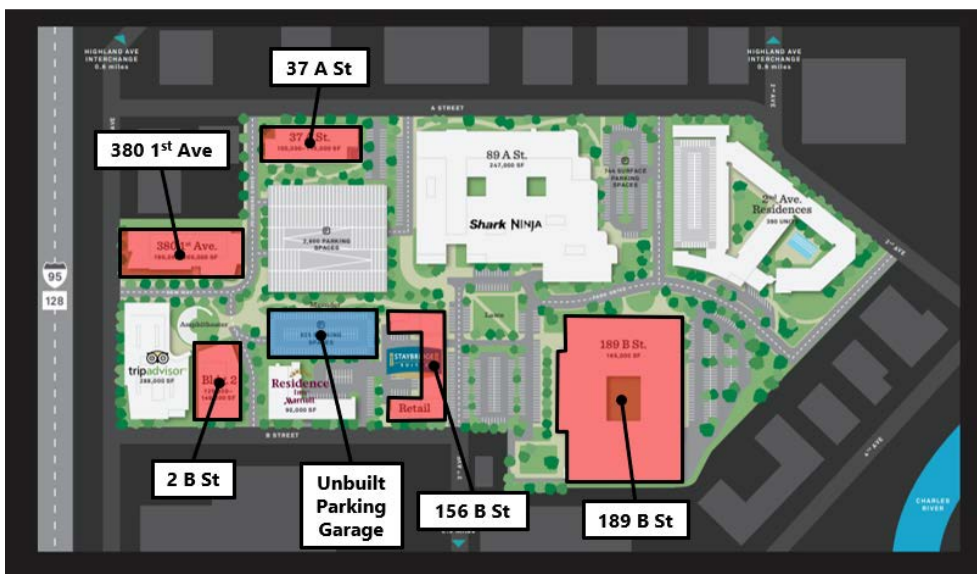
99 High Street
10th Floor
Boston, MA 02110-2354
P 617.728.7777

2. BCH is looking to acquire the three sites located within Center 128 West and modify the lane use to a combination of pediatric medical facility and general office.

Figure 1: Founder's Park Site



Figure 2: Undeveloped Sites within Founder's Park



The development sites BCH is looking to acquire include 380 1st Avenue, 37 A Street, and 2 B Street as shown in **Figure 3**. The unbuilt hotel with retail is located at 156 B Street. The unbuilt office building is located at 189 B Street. For this analysis, all other buildings within Founder's Park are assumed to be built and fully occupied.

Figure 3: BCH Development Sites



Previously Approved Development

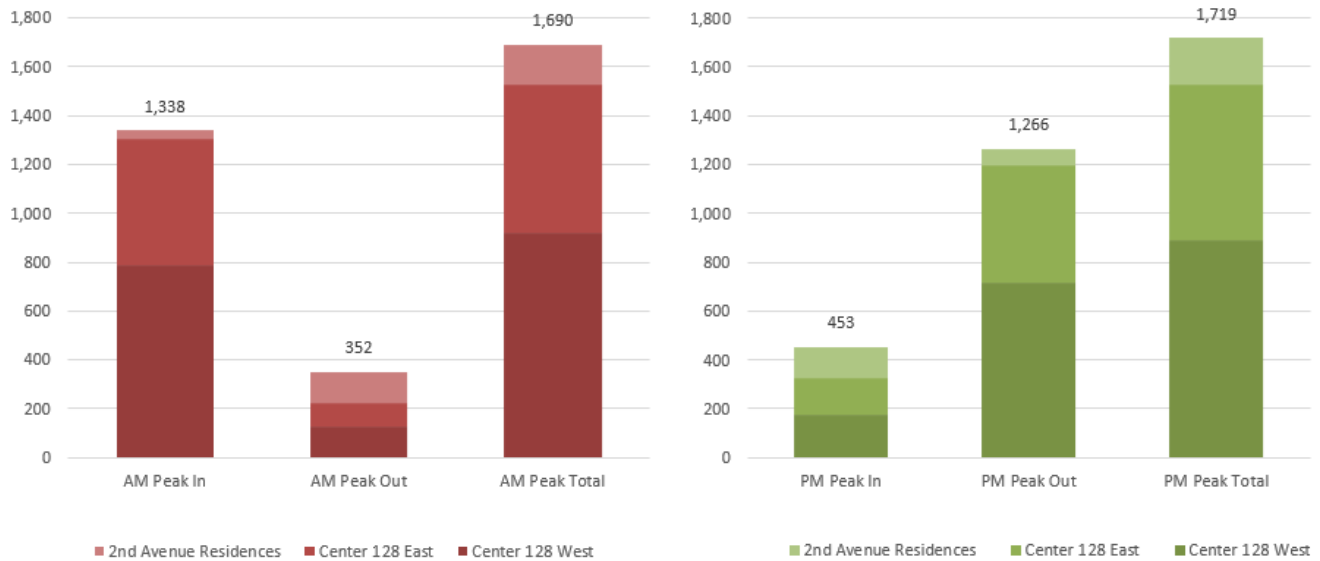
The previously approved Founder's Park trip generation for the morning and evening peak hours is presented below in **Table 1** and **Figure 4**. As described in the SDEIR, trip estimates are based on the standard Institute of Transportation Engineers (ITE) trips rates and methodology published in ITE's *Trip Generation Manual*, 9th edition.

Table 1: Previously Approved Trip Generation¹

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
2 nd Ave. Residences	32	129	161	125	67	192
Total	1,338	352	1,690	453	1,266	1,719

¹Approved Trips taken from SDEIR submitted to MEPA on August 15, 2015

Figure 4: Previously Approved Trip Generation



Trip Generation Comparison

ITE trip generation estimates are generally conservative in estimating the actual number of trips generated by a development, and thus can often times tend to result in a higher trip generation estimate versus actual volumes generated by that studied development once built and occupied. In the case of Founder's Park, as the many of the buildings are constructed/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. A summary of this comparative analysis is provided in **Table 2** and **Figure 5**.

The results of these counts indicate that the trips, as approved in the SDEIR, are an overestimation of the actual number of trips generated by Founder's Park under current 2019 conditions.

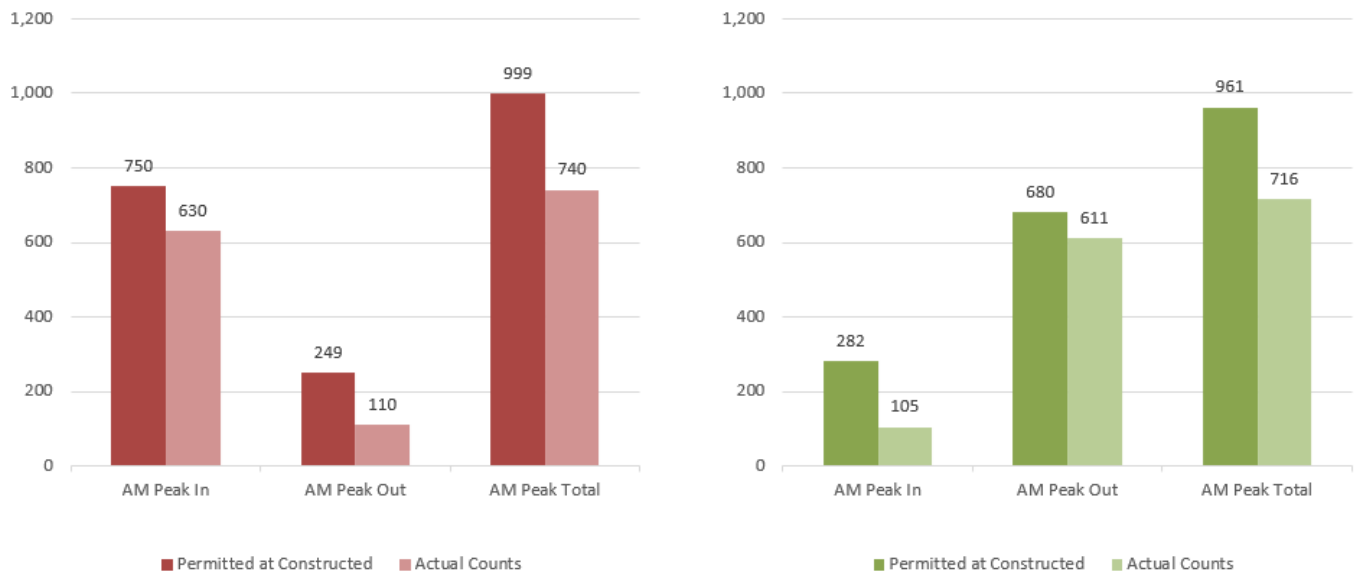
Table 2: Comparison of Actual Trips and Estimated Trips

	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)	(-105)	(-611)	(-716)

¹Estimated Trips taken from SDEIR submitted to MEPA on August 15, 2015, subtracting out trips generated by unconstructed buildings (380 1st Ave, 37 A St, 2 B St, 189 B Street, 156 B St)

²Actual trips from counted conducted on October 10, 2019

Figure 5: Comparison of Actual Trips and Estimated Trips



As summarized in **Table 2**, the results of these counts indicate that the trips, as approved in the SDEIR, are an overestimation of the actual number of trips generated by Founder's Park. During the morning 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.

Proposed Change of Use

The permitted and proposed uses and associated area for each building BCH is looking to develop is described in **Table 3**. BCH is looking to change the permitted office use into a combination of pediatric medical facility and office use. The pediatric medical facility portion of the development will consist of a variety of medical services for children including but not limited to outpatient care, day surgeries, orthopedics and sports medicine, rehabilitation center, and radiology laboratories. These spaces will be supported by the office portion of the development which will also include administrative space. The total square footage proposed by BCH for all three buildings is comparable to that previously approved in the DSEIR.

Table 3: Comparison of Permitted and Proposed Use

Address	Permitted		Proposed	
	Use	SF	Use	SF
380 1st Avenue	Office	189,509	Pediatric Medical Facility	245,000
37 A Street	Office	135,000	Office	80,000
2 B Street	Office	127,145	Office	127,000
Total		451,654		452,000

Proposed Trip Generation

the latest edition (10th Edition) of the *ITE Trip Generation Manual* will be used to calculate estimated trips for the proposed BCH Project. For consistency with the SDEIR, the 9th Edition of the *ITE Trip Generation Manual* will be used to calculate estimated trips associated with the permitted buildings that are unbuilt or unoccupied at Founder's Park. These buildings include 189 B Street (Office), and 156 B Street (Hotel and Retail). There is no pediatric medical facility use within the *ITE Trip Generation Manual*. Therefore, a 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 medical facility. 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 seem to be the best for the pediatric medical facility 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 is used (including 400 1st 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 100 1st 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 is outlined in **Table 4** below. It is assumed that all medical trips will use a 100% auto mode share and consistent with the previously approved SDEIR all office uses will assume a 90% auto mode share.

Table 4: Estimated BCH Trip Generation

Address	Proposed Use	ITE Land Use Code	SF	Estimated Auto Trips					
				AM Peak			PM Peak		
				Enter	Exit	Total	Enter	Exit	Total
380 1st Avenue	Pediatric Medical Facility	Medical-Dental Office Building	122,500	266	75	341	119	305	424
		Hospital	122,500	148	69	217	65	138	203
37 A Street	Office	General Office Building	80,000	58	9	67	12	61	73
2 B Street	Office	General Office Building	127,000	92	15	107	18	97	115
Total			452,000	563	169	732	214	601	815

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/occupied Founders Park buildings (Table 2)
- BCH Trips (Table 4)
- Unbuilt buildings in Center 128 East (189 B Street and 156 B Street) (estimate from 2015 SDEIR)

The BCH trips and unbuilt portion of Center 128 East are added to the actual counted trips to provide a comparison from the original 2015 SDEIR Forecast. **Table 5** and **Figure 6** provide a comparison of the trip generation estimates for the proposed Founders Park with BCH to the original SDEIR program.

Table 5: Trip Generation Comparison

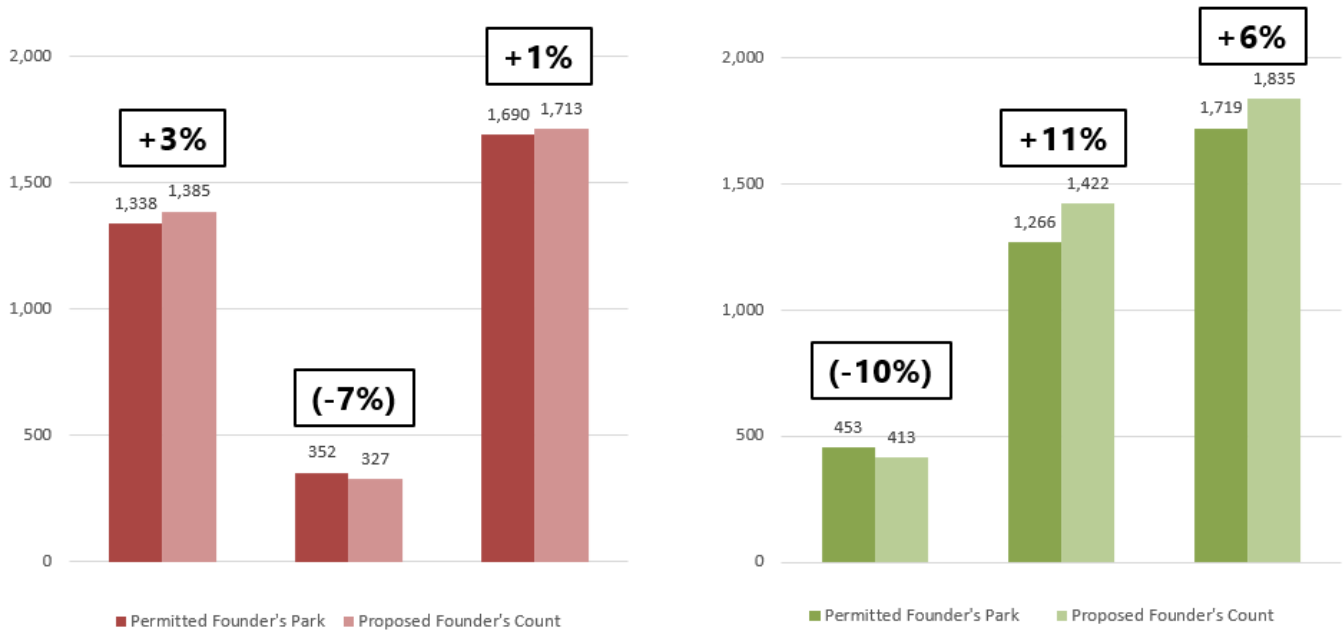
Time Period/ Direction	Permitted ¹	Proposed Project ² +Actual Trips ³	Difference
Morning Peak Hour			
Entering	1,338	1,338	47
Exiting	352	327	(-25)
Total	1,690	1,713	23
Evening Peak Hour			
Entering	453	413	(-40)
Exiting	1,266	1,422	156
Total	1,719	1,835	116

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 counted conducted on October 10, 2019, also includes estimated trips associated with the unbuilt buildings in Center 128 East

Figure 6: Approved vs. Proposed Trip Generation



As shown in **Table 5** and **Figure 6**, the Proposed Project is expected to generally have similar trip generation characteristics when compared to the 2015 SDEIR permitted estimates, dependent on the time period and directionality. During the morning peak hour, the Project is expected to generate 23 more trips than the permitted estimate in the 2015 SDEIR. During the evening peak hour, the Project has been estimated to generate 116 more trips than the permitted estimate in the 2015 SDEIR. The Proposed Project is expected to have comparable impact to the area transportation infrastructure and mitigation commitments as the permitted project in the 2015 SDEIR.

Date: March 11, 2020 Job No.: 7073
To: Lee Newman, Director of Planning and Community Development
Cc: Alex Clee, Assistant Planner
From: Jeff Maxtutis
Justin Curewitz, P.E., PTOE, RSP
Subject: Parking Generation Evaluation – Boston Children's Hospital – Needham, MA

BETA Group, (BETA) reviewed the submitted documents for parking demand 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 documents were received by BETA and will form the basis of the review:

- BCH Founder's Park Estimated/Comparative Parking Demand Analysis Memorandum, prepared by Vanasse Hangen Brustlin, Inc. (VHB), dated January 24, 2020
- Boston Children's Hospital Needham at Founder's Park Trip Generation Estimate Summary Memorandum, prepared by Vanasse Hangen Brustlin, Inc. (VHB), dated January 24, 2020
- Single Environmental Impact Report (SEIR), prepared by Epsilon Associates, Inc., submitted to the Massachusetts Environmental Policy Act on November 17, 2014
- Supplemental Draft Environmental Impact Report (SDEIR), prepared by Epsilon Associates, Inc., submitted to the Massachusetts Environmental Policy Act on August 31, 2015
- Supplemental Final Environmental Impact Report (SFEIR), prepared by Epsilon Associates, Inc., submitted to the Massachusetts Environmental Policy Act on January 15, 2016
- Town of Needham Zoning By-laws, for the existing Medical Overlay District, dated March 26, 1925 and as amended February 27, 1984 and October 2017
- Town of Needham Proposed Zoning Amendment, to amend the zoning by-law for Pediatric Medical Facility in New England Business Center District

PROJECT OVERVIEW

The project site is located within Founder's Park in Needham, Massachusetts and proposes to construct three new buildings in phases located at 380 1st Avenue, 37 A Street and 2 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 (215,000 SF) & Office (20,000 SF)
- 37 A Street – Pediatric Ambulatory Center (36,000 SF) & Office (54,000 SF)
- 2 B Street – Office (127,000 SF)
- Total = 452,000 SF

Access to the three new buildings would be provided from 1st Avenue, A Street and B Street. An existing 2,072 space parking garage (Garage B) has been constructed on the property and a new 925 space parking garage (Garage A) has been approved for the site. An addition of 528 spaces to Garage

B and 117 surface spaces have also been approved for the site. In total, 3,642 parking spaces have been approved for the Center 128 West property, of which 857 are allocated to Center 128 East. Boston Children's Hospital is proposing to modify the current approved land use to a combination of Pediatric Medical Facility and General Office and accommodate all parking on-site.

- T1. The proposed land uses for the 380 1st Avenue building in the Estimated/Comparative Parking Demand Analysis Memo lists 20,000 SF as Office space and 215,000 SF as Pediatric Ambulatory Center, while the Trip Generation Estimate Summary Memo lists 117,500 SF of Pediatric Ambulatory Center and 117,500 SF of Hospital space. Please clarify the difference in land use between documents.
- T2. The proposed total square footage of the 2 B Street building is listed as 127,000 SF in the Estimated/Comparative Parking Demand Analysis Memo, while the in the Trip Generation Estimate Summary Memo it is listed as 127,145 SF. Please clarify the difference between documents.

PARKING EVALUATION

ESTIMATED/COMPARATIVE PARKING DEMAND ANALYSIS MEMORANDUM

The Memorandum prepared by Vanasse Hangen Brustlin, Inc. (VHB) provides a general overview to the proposed project's parking generation and calculation based on benchmarked ratios of similar healthcare facilities and comparable Boston Children's Hospital (BCH) sites. The building program for the three proposed site buildings is show in Table 1.

Table 1 – BCH Proposed Development Program

Location	Land Use	Program Size (KSF)
380 1 st Avenue	Pediatric Ambulatory Center	215
	Office	20
37 A Street	Pediatric Ambulatory Center	36
	Office	54
2 B Street	Office	127
Total		452

Source: VHB Estimated/Comparative Parking Demand Memo

Based upon this development program, two methods were used to calculate estimated weekday peak parking demand for the proposed project: Benchmark Ratios and comparable BCH sites.

OPERATIONAL PARKING ASSESSMENT

The first method of estimating parking demand involved the use of benchmarked ratios based on a review, conducted by VHB, of similar healthcare institutions. This results in specific space generator types based on square footage as opposed to a general land use type to calculate the entire use. The space generator types, and their associated parking demand rates are listed below:

- Patient Care Area: 5.0 spaces/KSF
- Office Area: 3.0 spaces/KSF
- Employee Support Area: 2.0 spaces/KSF
- Building Support Area: 0.0 spaces/KSF

T3. Please provide a list of similar healthcare institutions and locations that were surveyed.

From this breakdown, each building's associated space was classified into one of these four categories and parking demand was estimated accordingly. This breakdown results in a parking demand of 1,484 total spaces (3.28 spaces/KSF) as shown in Table 2.

Table 2 – Operations Parking Assessment Summary

Space Type	Size (KSF)	Parking Metric (spaces/KSF)	Parking Demand
Patient Care Area	191	5.0	955
Office Space	127	3.0	381
Employee Support Area	74	2.0	148
Building Support Area	60	0.0	0
Total	452		1,484

Source: VHB Estimated/Comparative Parking Demand Memo

T4. Clarify/provide supporting documentation as to how these building space types were classified and why there is no rate for building support area.

T5. Please clarify what constitutes "Building Support Area" and how the size of this area was calculated.

COMPARATIVE FACILITY PARKING ASSESSMENT

The second method of estimating parking demand involved a review of comparable satellite pediatric facilities that BCH operates at other eastern Massachusetts locations, including Brookline, Waltham and Peabody. The campuses offer similar types of pediatric medical services and operate similar to the expected operations at the proposed Needham campus. These comparative facilities characteristics and their associated parking ratios result in an average parking demand ratio of 2.88 spaces/KSF and is shown in Table 3.

Table 3 – Estimated Demand based on Comparable Facility Assessment

Space Type	On-Site Parking (spaces)	Building Size (KSF)	Parking Ratio (spaces/KSF)
Brookline	674	228	2.96
Waltham	1,132	390	2.90
Peabody	1,079	389	2.77

Source: VHB Estimated/Comparative Parking Demand Memo

Based upon the above average ratio of 2.88 spaces/KSF, the proposed site would result in a weekday peak parking demand of 1,300 spaces for the combined three buildings.

VHB RECOMMENDATION

To ensure a conservative parking ratio, it was recommended that the operational assessment ratio (3.28 spaces/KSF) be used when calculating the proposed site's parking demand plus a 5% increase. This results in a 3.45 spaces/KSF ratio and when applied to the overall 452,000 SF building program, resulting in a weekday peak parking demand of 1,560 spaces.

INSTITUTE OF TRANSPORTATION ENGINEER'S, PARKING GENERATION MANUAL ANALYSIS

As a comparison to the assessment provided by VHB, parking demand was estimated based on the Institute of Transportation Engineer's (ITE) Parking Generation Manual, 5th Edition, for the proposed site's building program. The assessment was completed for two building programs: the program depicted in the Parking Demand Memo and for the program depicted in the Trip Generation Estimate Summary Memo. As stated in the Trip Generation Memo, there is no ITE land use for Pediatric Ambulatory Center and for the purposes of this assessment, the Medical-Dental Office Building land use will be used for consistency. Based upon this categorization the two building programs were 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)

PARKING DEMAND MEMO BUILDING PROGRAM

Using the Parking Demand Memo's Building Program, the following proposed development program along with its land use codes is shown in Table 4.

Table 4 – Parking Demand Memo Building Program

Location	Land Use	Program Size (KSF)	Parking Ratio* (spaces/KSF)	Parking Demand (spaces)
380 1 st Avenue	720: Medical-Dental Office Building	215	3.32	713
	710: General Office Building	20	3.90	78
37 A Street	720: Medical-Dental Office Building	36	3.19	115
	710: General Office Building	54	2.80	151
2 B Street	710: General Office Building	127	2.43	308
Total		452	3.02	1,365
* Equations were used for 710: General Office Building and 720: Medical-Dental Office Building				

Based upon the Parking Demand Memo's Building Program assessment, the total parking demand of the site would result in 1,365 spaces or a ratio of 3.02 spaces/KSF.

TRIP GENERATION MEMO BUILDING PROGRAM

Using the Trip Generation Memo's Building Program, the following proposed development program along with its land use codes is shown in Table 5.

Table 5 – Trip Generation Memo Building Program

Location	Land Use	Program Size (KSF)	Parking Ratio* (spaces/KSF)	Parking Demand (spaces)
380 1 st Avenue	720: Medical-Dental Office Building	117.5	3.29	387
	610: Hospital	117.5	2.25	264
37 A Street	720: Medical-Dental Office Building	36	3.19	115
	710: General Office Building	54	2.80	151
2 B Street	710: General Office Building	127	2.43	308
Total		452	2.71	1,225
* Equations were used for 710: General Office Building and 720: Medical-Dental Office Building				

Based upon the Trip Generation's Building Program assessment, the total parking demand of the site would result in 1,225 spaces or a ratio of 2.71 spaces/KSF.

TOWN OF NEEDHAM, ZONING BY-LAWS

In a review of the Town of Needham Zoning By-Laws, parking rates required by zone, land use and overlay district were assessed to ensure parking demand is accommodated on-site. Two documents within the Zoning By-Laws were used: the existing Medical Overlay District and the Proposed Zoning Amendment to amend the zoning by-law for Pediatric Medical Facility in New England Business Center District.

EXISTING MEDICAL OVERLAY DISTRICT BY-LAWS

The existing Medical Overlay District, as stated in the Town's By-Laws, is intended for the following allowed uses:

1. Community Hospital
2. Medical Clinic
3. Medical Services Building
4. Any of the following, but only if ancillary to and contained within a common structure with a community hospital:
 - a. Health Care Facility
 - b. Medical Laboratory
 - c. Pharmacy
5. All uses allowed by right in the underlying zoning district at that location.
6. Building and uses accessory to 1-5 above, such as parking garage, gift shop, cafeteria, and day care facilities.

As the primary land use for the proposed project is Pediatric Ambulatory Center, this would be classified as a Medical Services Building per the definition of the By-Laws. A Medical Services Building is defined as premises with occupancy limited to doctor's offices, dentist's offices, orthodontic services, psychiatric, psychological and other mental health services, radiology and laboratory services, sale, and repair of medical devices and equipment or other health care or health care services, whether or not owned or affiliated with a hospital, but not including those licensed as a clinic. As such the parking requirements for a Medical Services Building would be applied to all Pediatric Ambulatory Center uses. It should also be noted that the Hospital land use would not provide overnight stays for patients; however, there is no differentiation in the Zoning By-laws for hospital with or without overnight stays. Therefore, the parking demand rate remains unchanged. Using the requirements of the Zoning By-Laws, parking demand was assessed for both the proposed building programs in the Parking Demand Memo and for the Trip Generation Estimate Summary Memo, and are shown in Table 6 and Table 7, respectively.

Table 6 – Zoning By-Laws Parking Demand, Parking Generation Memo Land Use

Location	Zoning By-Law Use	Program Size (KSF)	Required Parking (spaces/KSF)	Parking Demand (spaces)
380 1 st Avenue	Medical Services Building	215	7	1,505
	Office Building	20	3.33	67
37 A Street	Medical Services Building	36	7	252
	Office Building	54	3.33	180
2 B Street	Office Building	127	3.33	423
Total		452	5.37	2,427

Based upon the Parking Demand Memo's Building Program assessment, the total parking demand of the site would result in 2,427 spaces or a ratio of 5.37 spaces/KSF.

Table 7 – Zoning By-Laws Parking Demand, Trip Generation Estimate Summary Memo Land Use

Location	Zoning By-Law Use	Program Size (KSF)	Required Parking (spaces/KSF)	Parking Demand (spaces)
380 1 st Avenue	Medical Services Building	117.5	7	823
	Hospital	117.5	7	823
37 A Street	Medical Services Building	36	7	252
	Office Building	54	3.33	180
2 B Street	Office Building	127	3.33	423
Total		452	5.53	2,501

Based upon the Trip Generation's Building Program assessment, the total parking demand of the site would result in 2,501 spaces or a ratio of 5.53 spaces/KSF.

T6. Hospital parking requirements per the Town's By-laws are conservative using the general description for Hospital land use as no further information was provided as to the intended use for the Hospital type (i.e. bed, employees, type of procedures/surgery). Upon providing more information, this parking ratio could be reduced; however, it has been calculated as 7 spaces/KSF for the purposes of this review.

PROPOSED ZONING AMENDMENT

The Proposed Zoning Amendment to amend the zoning by-law for Pediatric Medical Facility in New England Business Center District would result in a one parking space per 290 square feet of floor area or a ratio of 5.53 spaces/KSF for all Pediatric Medical Facilities. When using the requirements of the Zoning By-Laws, with the Proposed Zoning Amendment, parking demand was assessed for both the proposed building programs in the Parking Demand Memo and for the Trip Generation Estimate Summary Memo, and are shown in Table 8 and Table 9, respectively.

Table 8 – Zoning Amendment Parking Demand, Parking Generation Memo Land Use

Location	Zoning By-Law Use	Program Size (KSF)	Required Parking (spaces/KSF)	Parking Demand (spaces)
380 1 st Avenue	Medical Facility, Pediatric	215	3.45	742
	Office Building	20	3.33	67
37 A Street	Medical Facility, Pediatric	36	3.45	124
	Office Building	54	3.33	180
2 B Street	Office Building	127	3.33	423
Total		452	3.40	1,536

Based upon the Parking Demand Memo's Building Program assessment, the total parking demand of the site would result in 1,536 spaces or a ratio of 3.40 spaces/KSF.

Table 9 – Zoning Amendment Parking Demand, Trip Generation Estimate Summary Memo Land Use

Location	Zoning By-Law Use	Program Size (KSF)	Required Parking (spaces/KSF)	Parking Demand (spaces)
380 1 st Avenue	Medical Facility, Pediatric	117.5	3.45	405
	Hospital	117.5	7	823
37 A Street	Medical Facility, Pediatric	36	3.45	124
	Office Building	54	3.33	180
2 B Street	Office Building	127	3.33	423
Total		452	4.33	1,955

Based upon the Trip Generation's Building Program assessment, the total parking demand of the site would result in 1,955 spaces or a ratio of 4.33 spaces/KSF.

GENERAL OFFICE SPACE VS. MEDICAL OFFICE SPACE

As part of the review of the proposed site parking demand is the classification of Pediatric Ambulatory Center into Medical Office Space or a mix of General Office Space and Medical Office Space. While it can be assumed that doctors, nurses and staff would require a certain percentage of office space within the Pediatric Ambulatory Center buildings, determining that percentage is not clear and concise. ITE describes a Medical-Dental Office Building as:

“A facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care. One or more private physicians or dentists generally operate this type of facility.”

With most medical and dental offices, doctor and dentist office space is included in such parking demand rates and therefore if included, would not need a separate land use association as part of a complete building program.

When assessing parking demand based upon the two different land uses in the Memos, the parking accommodations vary. In all cases, the Medical Office Space results in a higher parking demand than General Office Space and would result in an increase in assessment of parking demand within this evaluation memorandum. Table 10 and Table 11 detail the increases in parking demand for both the proposed building programs in the Parking Demand Memo and for the Trip Generation Estimate Summary Memo, when the entirety of office space is classified as Medical Office Space.

Table 10 – Zoning By-Laws Parking Demand, Parking Generation Memo Land Use

Location	ITE Parking Generation			Town Zoning By-Laws			Prop. Zoning Amendment		
	GOS	MOS	Change	GOS	MOS	Change	GOS	MOS	Change
380 1 st Avenue	791	774	-17	1,572	1,646	+74	809	810	+1
37 A Street	266	290	+24	432	630	+198	304	310	+6
2 B Street	308	419	+111	423	889	+466	423	438	+15
Total	1,365	1,483	+118	2,427	3,165	+738	1,536	1,558	+22
GOS = Total parking demand using the original percentage of General Office Space									
MOS = Total parking demand based on all office space categorized as Medical Office Space									

Table 11 – Zoning By-Laws Parking Demand, Trip Generation Estimate Summary Memo Land Use

Location	ITE Parking Generation			Town Zoning By-Laws			Prop. Zoning Amendment		
	GOS	MOS	Change	GOS	MOS	Change	GOS	MOS	Change
380 1 st Avenue	651	651	0	1,646	1,646	0	1,228	1,228	0
37 A Street	266	290	+24	432	630	+198	304	310	+6
2 B Street	308	419	+111	423	889	+466	423	438	+15
Total	1,225	1,360	+135	2,501	2,636	+664	1,955	1,976	+21
GOS = Total parking demand using the original percentage of General Office Space									
MOS = Total parking demand based on all office space categorized as Medical Office Space									

As can be seen in the tables, when substituting land uses from a mix of General Office Space and Medical Office Space to entirely Medical Office Space, the resulting parking demand increases are significant. Based on the ITE Parking Generation Manual, the substitution would result in an increase of 135 spaces. Based on the existing zoning by-laws, the substitution would result in an increase of over 660 spaces, while the proposed zoning amendment would result in an increase of over 20 spaces.

ENVIRONMENTAL IMPACT REPORTS (SDEIR & SFEIR) REVIEW

In a review of the Supplemental Draft Environmental Impact Report (SDEIR) and the Supplemental Final Environmental Impact Report (SFEIR), parking demand was calculated based upon the Institute of Transportation Engineers (ITE) Parking Generation Manual, 4th Edition, for the previously approved building program. While the methodology used to calculate parking demand is in line with today's practices, it was based upon the previous approved land uses and square footages. These calculations would require adjustment for the newly proposed building program. In addition, the re-calculation of parking demand should include the latest edition (5th Edition) of the ITE Parking Generation Manual.

It is stated that, in total, 3,642 parking spaces have been approved for the Center 128 West property and that 857 of these spaces are allocated to the Center 128 East property. This results in 2,785 spaces remaining for use on the Center 128 West property. It is unclear how many of these remaining parking spaces are currently used by the Trip Advisor building or the Residence Inn hotel.

T7. Clarify/provide how many of the 2,785 approved parking spaces for Center 128 West are currently in use and how many remaining spaces are available for use by the three proposed buildings.

CONCLUSIONS

Based upon the review of the documents provided, a summary of all source data and parking demand information has been provided in Table 12. The data shows an average total parking demand of 1,735 spaces or an average ratio of 3.84 spaces/KSF.

Table 12 – Parking Demand Summary

Source	Weekday Parking Demand Rate	
	Required Parking (spaces/KSF)	Spaces Required
1. Benchmark	3.45	1,560
2. Comparative Method	2.88	1,300
3. ITE (Parking Memo Land Use)	3.02	1,365
4. ITE (Trip Generation Memo Land Use)	2.71	1,225
5. Zoning By-Laws (Parking Memo Land Use)	5.37	2,427
6. Zoning By-Laws (Trip Generation Memo Land Use)	5.53	2,501
7. Zoning Amendment (Parking Memo Land Use)	3.40	1,536
8. Zoning Amendment (Trip Generation Memo Land Use)	4.33	1,955
Average	3.84	1,735

Given the varying and additional information needed, conclusions could not be made. Once further information and clarifications are provided conclusions can be reported.

Date: March 11, 2020 Job No.: 7073
To: Lee Newman, Director of Planning and Community Development
Cc: Alex Clee, Assistant Planner
From: Jeff Maxtutis
Justin Curewitz, P.E., PTOE, RSP
Subject: Trip Generation Evaluation – Boston Children’s Hospital – Needham, MA

BETA Group, (BETA) reviewed the submitted documents for trip generation 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 documents were received by BETA and will form the basis of the review:

- BCH Founder’s Park Estimated/Comparative Parking Demand Analysis Memorandum, prepared by Vanasse Hangen Brustlin, Inc. (VHB), dated January 24, 2020
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PROJECT OVERVIEW

The project site is located within Founder’s Park in Needham, Massachusetts and proposes to construct three new buildings in phases located at 380 1st Avenue, 37 A Street and 2 B Street. As proposed, the buildings would consist of a mix of Pediatric Ambulatory Center and General Office Space land uses, totaling approximately 452,145 square feet (SF):

- 380 1st Avenue – Pediatric Ambulatory Center (117,500 SF) & Hospital (117,500 SF)
- 37 A Street – Pediatric Ambulatory Center (36,000 SF) & Office (54,000 SF)
- 2 B Street – Office (127,145 SF)
- Total = 452,145 SF

Access to the three new buildings would be provided from 1st Avenue, A Street and B Street. An existing 2,072 space parking garage (Garage B) has been constructed on the property and a new 925 space parking garage (Garage A) has been approved for the site. An addition of 528 spaces to Garage B and 117 surface spaces have also been approved for the site. In total, 3,642 parking spaces have been approved for the Center 128 West property, of which 857 are allocated to Center 128 East. Boston Children’s Hospital is proposing to modify the current approved land use to a combination of Pediatric Medical Facility and General Office and accommodate all parking on-site.

- T1. The proposed land uses for the 380 1st Avenue building in the Estimated/Comparative Parking Demand Analysis Memo lists 20,000 SF as Office space and 215,000 SF as Pediatric Ambulatory Center, while the Trip Generation Estimate Summary Memo lists 117,500 SF of Pediatric Ambulatory Center and 117,500 SF of Hospital space. Please clarify the difference between documents.
- T2. The proposed total square footage of the 2 B Street building is listed as 127,000 SF in the Estimated/Comparative Parking Demand Analysis Memo, while the in the Trip Generation Estimate Summary Memo it is listed as 127,145 SF. Please clarify the difference between documents.

TRIP GENERATION EVALUATION

TRIP GENERATION ESTIMATE SUMMARY MEMORANDUM

The Memorandum prepared by Vanasse Hangen Brustlin, Inc. (VHB) provides a general overview to the proposed project's trip generation and comparison to previously approved development (based upon the SDEIR, dated August 31, 2015) and actual collected trips based on traffic counts conducted on October 10, 2019.

PREVIOUSLY APPROVED DEVELOPMENT

The Founder's Park previously approved development site was separated into three components for filing/permitting purposed: Center 128 West, Center 128 East and the 2nd Avenue Residences. The previously approved development program is listed in Table 1.

Table 1 – Previously Approved Development Program

Location	Land Use	Program Size
Center 128 West	Office	740,000 SF
	Hotel	128 Rooms
Center 128 East	Office	420,429 SF
	Hotel	128 Rooms
	Retail	19,000 SF
2 nd Avenue Residences	Apartments	390 Units

Source: VHB Trip Generation Estimate Summary Memo

Using this development program and attributing a vehicle mode split of 89.75% for Office, 82.9% for Residential and 100% for Retail/Hotel, the trip generation totals were calculated by VHB using the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9th Edition. The previously approved weekday trip generation is shown in Table 2.

Table 2 – Previously Approved 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
2 nd Avenue Residences	32	129	161	125	67	192
Total	1,338	352	1,690	453	1,266	1,719

Source: VHB Trip Generation Estimate Summary Memo

The trip generation calculations result in a total of 1,690 trips in the AM peak and 1,719 in the PM peak hour, when the three components are completed.

TRIP GENERATION COMPARISON

Currently, the 2nd Avenue Residences are completed, while the Center 128 West and East components are not fully built out to the originally proposed building program. The only buildings completed within the Center 128 West component are the Trip Advisor Office Building (288,346 SF) and the Residence Inn Hotel (128 Rooms), the rest of the building program remains unbuilt. The only buildings completed within the Center 128 East component are the 77 A Street office building (260,429 SF) and the 189 B Street office building (160,000 SF), the rest of the building program remains unbuilt. The VHB memo uses the trip generation from the SDEIR and subtracts out the unbuilt portions of the Center 128 West and Center 128 East to produce an “Estimated Trips” calculation based on the currently built portion of the site. In addition, “Actual Trips” were collected using Automated Traffic Recorder (ATR) counts during October 2019. These “Estimated Trips” and “Actual Trips” were compared to show that the actual number of trips generated by the site are less than the estimated trip generation. The results of this comparison are shown in Table 3.

Table 3 – Comparison of Actual Trips and Estimated Trips

	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Estimated Trips	902	270	1,172	337	851	1,188
Actual Trips	630	110	740	105	611	716
Difference (Actual – Estimated)	-272	-160	-432	-232	-240	-472

Source: VHB Trip Generation Estimate Summary Memo

T3. Calculations do not agree with the SDEIR. Please provide calculations for Estimated trip numbers.

T4. ATR counts were taken prior to Occupancy Permit issued for 189 B Street on November 1, 2019. Counts do not reflect traffic generated by this building and should be retaken. Occupancy will increase gradually for this building and VHB should coordinate with the Town of Needham as to when this

building will be fully occupied or identify the percentage of occupancy of the building at the time of the new counts.

With the comparison in Table 3, the VHB memo determines that the actual trips to the site are approximately 37% below the permitted estimated trips.

PROPOSED CHANGE OF USE

As part of Boston Children's Hospital (BCH) development, the proponent is looking to change the permitted use of Office Space to Pediatric Ambulatory Center in the 380 1st Avenue Building and partially changing the 37 A Street building. Table 4 summarize the comparison of permitted and proposed uses for BCH's development.

Table 4 – Comparison of Permitted and Proposed Use

Location	Permitted		Proposed	
	Use	SF	Use	SF
380 1 st Avenue	Office	189,509	Pediatric Ambulatory Center	235,000
37 A Street	Office	135,000	Pediatric Ambulatory Center	36,000
			Office	54,000
2 B Street	Office	127,145	Office	127,145
Total		451,654		452,145

Source: VHB Trip Generation Estimate Summary Memo

Under the proposed change of use, the total square footage would increase slightly (491 SF) but would change approximately 271,000 SF of Office Space to Pediatric Ambulatory Center Space.

PROPOSED TRIP GENERATION

Based on the proposed change of use, 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, 9th Edition. As stated in the VHB Memo, there is no ITE land use for Pediatric Ambulatory Center and for the purposes of this assessment, the Medical-Dental Office Building will be used. In addition, the proposed use for 380 1st Avenue will be split evenly between Medical-Dental Office and Hospital. Based upon this categorization the two building programs were 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 would use a 100% vehicle trip share, while all office trips would use a 90% vehicle trip share, as previously approved in the SDEIR. The proposed uses and trip generation summary is shown in Table 5.

T5. Please provide calculations for Estimated trip numbers. It appears that the average rate was used for some of these calculations where the equation is recommended.

T6. These trip generation calculations use the ITE Trip Generation Manual, 9th Edition. It is recommended to use the latest edition (10th Edition) to account for changes in development types and expanded study locations.

Table 5 – Estimated BCH Weekday Vehicle Trip Generation

Location	Proposed Use	ITE Land Use Code	SF	Estimated Vehicle Trips					
				AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	117,500	222	59	281	117	302	419
		Hospital	117,500	81	31	112	31	78	109
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	68	18	86	36	93	129
	Office	General Office	54,000	72	10	82	13	62	75
2 B St	Office	General Office	127,145	171	23	194	30	147	177
Total			452,145	614	141	755	227	682	909

Source: VHB Trip Generation Estimate Summary Memo

The new proposed use with the added Medical-Dental Office Building land use results in a total of 755 trips in the AM Peak and 909 trips in the PM Peak.

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 program were added to the actual site trips to create the future expected trips. This comparison is shown in Table 6.

Table 6 – Trip Generation Comparison

Time Period/Direction	Permitted (SDEIR)	Proposed Project + Actual Trips	Difference
Morning Peak Hour			
Entering	1,338	1,283	-55
Exiting	352	279	-73
Total	1,690	1,563	-127
Evening Peak Hour			
Entering	453	401	-52
Exiting	1,266	1,369	+103
Total	1,719	1,770	+51

Source: VHB Trip Generation Estimate Summary Memo

Table 6 shows the proposed project + actual trips would generate 127 fewer trips than the permitted project in the AM peak hour and 51 more trips in the PM peak hour.

INSTITUTE OF TRANSPORTATION ENGINEER'S, TRIP GENERATION MANUAL ANALYSIS

As a comparison to the assessment provided by VHB, trip distribution was assessed based upon the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9th Edition and 10th Edition, for the proposed site's building program. The 9th Edition was used for a direct comparison to the SDEIR, while the 10th Edition is the latest (and current) edition and was used a further comparison to ensure changes in land use do not significantly change the projected trips. The assessment was also completed for two building programs: the program depicted in the Parking Demand Memo and for the program depicted in the Trip Generation Estimate Summary Memo. As stated previously, there is no ITE land use for Pediatric Ambulatory Center and for the purposes of this assessment, the Medical-Dental Office Building will be used for consistency. Based upon this categorization the two building programs were 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)

For consistency purposes, all medical trips would use a 100% vehicle trip share, while all office trips would use a 90% vehicle trip share, as previously approved in the SDEIR.

PROPOSED TRIP GENERATION MANUAL, 9TH EDITION

PARKING DEMAND MEMO BUILDING PROGRAM

Based upon the Parking Demand Memo's Building Program assessment and using the ITE Trip Generation Manual, 9th Edition, the new proposed use with the added Medical-Dental Office Building was calculated and is shown in Table 7.

Table 7 – 9th Edition Trip Generation Calculation – Parking Demand Memo

Location	Proposed Use	ITE Land Use Code	SF	Estimated Auto Trips					
				AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	215,000	407	108	515	163	419	582
		General Office	20,000	42	6	48	16	76	92
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	69	19	88	33	85	118
	Office	General Office	54,000	93	14	107	22	104	126
2 B St	Office	General Office	127,000	185	25	210	34	166	200
Total			452,000	796	172	968	268	850	1,118

As shown in Table 7, the new proposed use with the added Medical-Dental Office Building land use results in a total of 968 trips in the AM Peak and 1,118 trips in the PM Peak.

TRIP GENERATION MEMO BUILDING PROGRAM

Based upon the Trip Generation Memo's Building Program assessment and using the ITE Trip Generation Manual, 9th Edition, the new proposed use with the added Medical-Dental Office Building was calculated and is shown in Table 8.

Table 8 – 9th Edition Trip Generation Calculation – Trip Generation Memo

Location	Proposed Use	ITE Land Use Code	SF	Estimated Auto Trips					
				AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	117,500	222	60	282	95	243	338
		Hospital	117,500	71	42	113	42	69	111
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	69	19	88	33	85	118
	Office	General Office	54,000	93	14	107	22	104	126
2 B St	Office	General Office	127,145	185	25	210	34	166	200
Total			452,145	640	160	800	226	667	893

As shown in Table 8, the new proposed use with the added Medical-Dental Office Building land use results in a total of 800 trips in the AM Peak and 893 trips in the PM Peak.

PROPOSED TRIP GENERATION MANUAL, 10TH EDITION

PARKING DEMAND MEMO BUILDING PROGRAM

Based upon the Parking Demand Memo's Building Program assessment and using the ITE Trip Generation Manual, 10th Edition, the new proposed use with the added Medical-Dental Office Building was calculated and is shown in Table 9.

Table 9 – 10th Edition Trip Generation Calculation – Parking Demand Memo

Location	Proposed Use	ITE Land Use Code	SF	Estimated Auto Trips					
				AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	215,000	345	98	443	209	536	745
		General Office	20,000	36	6	42	4	19	23
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	71	20	91	35	90	125
	Office	General Office	54,000	61	10	71	10	49	59
2 B St	Office	General Office	127,000	113	19	132	21	109	130
Total			452,000	626	153	779	279	803	1,082

As shown in Table 9, the new proposed use with the added Medical-Dental Office Building land use results in a total of 779 trips in the AM Peak and 1,082 trips in the PM Peak.

TRIP GENERATION MEMO BUILDING PROGRAM

Based upon the Trip Generation Memo's Building Program assessment and using the ITE Trip Generation Manual, 10th Edition, the new proposed use with the added Medical-Dental Office Building was calculated and is shown in Table 10.

Table 10 – 10th Edition Trip Generation Calculation – Trip Generation Memo

Location	Proposed Use	ITE Land Use Code	SF	Estimated Auto Trips					
				AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	117,500	202	57	259	114	294	408
		Hospital	117,500	146	69	215	64	136	200
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	71	20	91	35	90	125
	Office	General Office	54,000	61	10	71	10	49	59
2 B St	Office	General Office	127,145	114	19	133	22	109	131
Total			452,145	594	175	769	245	678	923

As shown in Table 10, the new proposed use with the added Medical-Dental Office Building land use results in a total of 769 trips in the AM Peak and 923 trips in the PM Peak.

TRIP GENERATION COMPARISON

A comparison was made for the trip generation calculations from both memos produced by VHB and the ITE Trip Generation Manual, 9th and 10th Editions. The comparison for the Parking Demand Memo building program is shown in Table 11 for the AM peak hour and Table 12 for the PM peak hour. As no trip generation was calculated for the Parking Generation Memo building program, the comparison cannot be made between VHB's numbers and the ITE calculations but has been shown for consistency.

The comparison for the Trip Generation Memo building program is shown in Table 13 for the AM peak hour and Table 14 for the PM peak hour. The tables are also shaded with green and red highlights: green where ITE trips are lower than VHB's memo and red where ITE trips are higher than VHB's memo. If the values are within one trip it was assumed to be a rounding difference and is acceptable.

T7. Overall, the trip generation estimates between the VHB memo and ITE's Trip Generation Manual, 9th Edition, vary when they should be identical. This could be a result of using the Average Rate calculation as opposed to the Equation, when calculating trips based on ITE guidelines. In the AM peak hour, the comparison shows an increase in trips from VHB's memo, while in the PM peak hour the comparison shows a decrease in trips from VHB's memo.

In the comparison between VHB's memo and ITE's Trip Generation Manual, 10th Edition, many of the trips decrease, especially for General Office Space and Medical-Dental Office Space, while Hospital trips are increased. The trip generation results should be updated based on ITE's Trip Generation Manual, 10th.

Table 11 – Trip Generation Comparison – Parking Demand Memo – AM Peak Hour

Location	Proposed Use	ITE Land Use Code	SF	VHB Memo			ITE 9 th Edition			ITE 10 th Edition		
				In	Out	Total	In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	215,000	-	-	-	407	108	515	345	98	443
		General Office	20,000	-	-	-	42	6	48	36	6	42
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	-	-	-	69	19	88	71	20	91
	Office	General Office	54,000	-	-	-	93	14	107	61	10	71
2 B St	Office	General Office	127,000	-	-	-	185	25	210	113	19	132
Total			452,000	-	-	-	796	172	968	626	153	779

Table 12 – Trip Generation Comparison – Parking Demand Memo – PM Peak Hour

Location	Proposed Use	ITE Land Use Code	SF	VHB Memo			ITE 9 th Edition			ITE 10 th Edition		
				In	Out	Total	In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	215,000	-	-	-	163	419	582	209	536	745
		General Office	20,000	-	-	-	16	76	92	4	19	23
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	-	-	-	33	85	118	35	90	125
	Office	General Office	54,000	-	-	-	22	104	126	10	49	59
2 B St	Office	General Office	127,000	-	-	-	34	166	200	21	109	130
Total			452,000	-	-	-	268	850	1,118	279	803	1,082

Table 13 – Trip Generation Comparison – Trip Generation Memo – AM Peak Hour

Location	Proposed Use	ITE Land Use Code	SF	VHB Memo			ITE 9 th Edition			ITE 10 th Edition		
				In	Out	Total	In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	117,500	222	59	281	222	60	282	202	57	259
		Hospital	117,500	81	31	112	71	42	113	146	69	215
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	68	18	86	69	19	88	71	20	91
	Office	General Office	54,000	72	10	82	93	14	107	61	10	71
2 B St	Office	General Office	127,145	171	23	194	185	25	210	114	19	133
Total			452,145	614	141	755	640	160	800	594	175	769

Table 14 – Trip Generation Comparison – Trip Generation Memo – PM Peak Hour

Location	Proposed Use	ITE Land Use Code	SF	VHB Memo			ITE 9 th Edition			ITE 10 th Edition		
				In	Out	Total	In	Out	Total	In	Out	Total
380 1 st Ave	Pediatric Ambulatory Center	Medical-Dental Office	117,500	163	419	582	95	243	338	114	294	408
		Hospital	117,500	16	76	92	42	69	111	64	136	200
37 A St	Pediatric Ambulatory Center	Medical-Dental Office	36,000	33	85	118	33	85	118	35	90	125
	Office	General Office	54,000	22	104	126	22	104	126	10	49	59
2 B St	Office	General Office	127,145	34	166	200	34	166	200	22	109	131
Total			452,145	268	850	1,118	226	667	893	245	678	923

Green = ITE lower than VHB, Red = higher than VHB

GENERAL OFFICE SPACE VS. MEDICAL OFFICE SPACE

Part of the review of the proposed trip generation is the classification of Pediatric Ambulatory Center into Medical Office Space or a mix of General Office Space and Medical Office Space. While it can be assumed that doctors, nurses and staff would require a certain percentage of office space within the Pediatric Ambulatory Center buildings, determining that percentage is not clear and concise. ITE describes a Medical-Dental Office Building as:

“A facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care. One or more private physicians or dentists generally operate this type of facility.”

With most medical and dental offices, doctor and dentist office space is included in such parking demand rates and therefore if included, would not need a separate land use association as part of a complete building program.

When calculating trip generation based upon the two differing land uses, the resulting trip estimation vary. In all cases, the Medical Office Space results in a higher trip generator than General Office Space and would result in an increase in all calculations of trips within this evaluation memorandum. Table 15 through Table 18 detail the increases in trip generation for both the proposed building programs in the Parking Demand Memo and for the Trip Generation Estimate Summary Memo, when the entirety of office space is classified as Medical Office Space.

Table 15 – General Office vs. Medical Office Trip Generation, Parking Demand Memo – AM Peak Hour

Location	ITE 9 th Generation			ITE 10 th Generation		
	GOS	MOS	Change	GOS	MOS	Change
380 1 st Avenue	563	564	+1	485	498	+13
37 A Street	195	219	+24	462	222	+60
2 B Street	210	305	+95	132	278	+146
Total	968	1,088	+120	779	998	+219
GOS = Total trips using the original percentage of General Office Space						
MOS = Total trips based on all office space categorized as Medical Office Space						

Table 16 – General Office vs. Medical Office Trip Generation, Parking Demand Memo – PM Peak Hour

Location	ITE 9 th Generation			ITE 10 th Generation		
	GOS	MOS	Change	GOS	MOS	Change
380 1 st Avenue	674	652	-22	768	816	+48
37 A Street	244	287	+43	184	313	+129
2 B Street	200	363	+163	130	441	+311
Total	1,118	1,302	+184	1,082	1,570	+488
GOS = Total trips using the original percentage of General Office Space						
MOS = Total trips based on all office space categorized as Medical Office Space						

Table 17 – General Office vs. Medical Office Trip Generation, Trip Generation Memo – AM Peak Hour

Location	ITE 9 th Generation			ITE 10 th Generation		
	GOS	MOS	Change	GOS	MOS	Change
380 1 st Avenue	395	395	0	474	474	0
37 A Street	195	219	+24	162	222	+60
2 B Street	210	305	+95	133	278	+145
Total	800	919	+119	769	974	+205
GOS = Total trips using the original percentage of General Office Space						
MOS = Total trips based on all office space categorized as Medical Office Space						

Table 18 – General Office vs. Medical Office Trip Generation, Trip Generation Memo – PM Peak Hour

Location	ITE 9 th Generation			ITE 10 th Generation		
	GOS	MOS	Change	GOS	MOS	Change
380 1 st Avenue	449	449	0	608	608	0
37 A Street	244	287	+43	184	313	+129
2 B Street	200	363	+163	131	441	+310
Total	893	1,099	+206	923	1,362	+439
GOS = Total trips using the original percentage of General Office Space						
MOS = Total trips based on all office space categorized as Medical Office Space						

As can be seen in Table 15 to Table 18, when substituting land uses from a mix of General Office Space and Medical Office Space to entirely Medical Office Space, the resulting trip increases are significant.

Based on the ITE Trip Generation Manual, 9th and 10th Editions, the substitution would result in an increase of approximately 120 to 220 added trips in the AM peak hour and approximately 180 to 490 additional trips in the PM peak hour.

ENVIRONMENTAL IMPACT REPORTS (SDEIR & SFEIR) REVIEW

In a review of the Supplemental Draft Environmental Impact Report (SDEIR) and the Supplemental Final Environmental Impact Report (SFEIR), trip generation was calculated based upon the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, for the previously approved building program. While the methodology used to calculate trip generation is in line with today's practices, it was based upon the previous approved land uses and square footages. These adjustments were accounted for in the VHB memo; however, the trips presented in the memo are slightly different than the calculated values in BETA's review. BETA's calculations of previously approved trips included three trip types: overall previously approved total site trips; total trips subtracting out trips generated by unconstructed buildings; and the resulting total trips for unconstructed buildings. These calculations are summarized in Table 19.

Table 19 – Comparison of Previously Approved Trips

	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Previously Approved Trips (SDEIR)						
Center 128 West	789	130	919	177	714	891
Center 128 East	517	93	610	151	485	636
2 nd Ave Residences	32	129	161	125	67	192
Total	1,338	352	1,690	453	1,266	1,719
Constructed Building Trips ¹ (SDEIR)						
Center 128 West	332	68	400	93	302	395
Center 128 East	477	65	542	83	409	492
2 nd Ave Residences	32	129	161	125	67	192
Total	841	262	1,103	301	778	1,079
Unconstructed Building Trips ² (SDEIR)						
Center 128 West	457	62	519	84	412	496
Center 128 East	40	28	68	68	76	144
2 nd Ave Residences	0	0	0	0	0	0
Total	497	90	587	152	488	640
¹ – Previously approved trips subtracting out unconstructed building trips (380 1 st Ave, 37 A St, 2 B St, 156 B St) ² - Previously approved trips for unconstructed buildings 380 1 st Ave, 37 A St, 2 B St, 156 B St						

Table 19 shows 587 total previously approved trips in the AM peak hour and 640 trips in the PM peak hour for the unconstructed buildings remaining on site. As this project focuses on Center 128 West only, the total previously approved trips for the unconstructed buildings on Center 128 West result in 519 trips in the AM peak hour and 496 trips in the PM peak hour. These signify the additional trips that Center 128 West is currently approved for. These trips serve as a baseline for comparison between the approved trip generation for Center 128 West and the proposed project trips. For consistency purposes, all office trips would use a 90% vehicle trip share, as previously approved in the SDEIR. This trip share results in 467 total trips in the AM peak hour and 446 total trips in the PM peak hour. It should be noted that these calculations do not account for internal capture trips.

CONCLUSIONS

Based upon the review of the documents provided, a summary of all source data and trip generation information has been provided in Table 20. The data shows that trip projections range from 755 to 1,088 in the AM peak hour and 893 to 1,570 in the PM peak hour, depending on several factors and calculation methods. Furthermore, regardless of which calculation method is used, all of these projected trip totals are significantly higher than the previously approved trips for the Center 128 West unconstructed buildings.

Table 20 – Trip Generation Summary

Source	Total Weekday Trips	
	AM Peak	PM Peak
1. Previously Approved Trips for Center 128 West Unconstructed Buildings (SDEIR)	467	446
2. BCH Trip Generation (VHB Memo)	755	909
3. ITE 9 th Edition (Parking Memo Land Use)	968	1,118
4. ITE 9 th Edition (Trip Generation Memo Land Use)	800	893
5. ITE 10 th Edition (Parking Memo Land Use)	779	1,082
6. ITE 10 th Edition (Trip Generation Memo Land Use)	769	923
7. ITE 9 th Edition All Medical Office Space (Parking Memo Land Use)	1,088	1,302
8. ITE 9 th Edition All Medical Office Space (Trip Generation Memo Land Use)	919	974
9. ITE 10 th Edition All Medical Office Space (Parking Memo Land Use)	998	1,570
10. ITE 10 th Edition All Medical Office Space (Trip Generation Memo Land Use)	974	1,362

Given the varying and additional information needed, conclusions could not be made. Once further information and clarifications are provided conclusions can be reported.



To: Lee Newman
Director of Community Planning and
Development
Town of Needham, MA

Date: April 2, 2020

Memorandum

Project #: 14631.00

From: Ryan White, PE
Samantha Lathrop
Sean Manning, PE, PTOE

Re: Response to Peer Review Parking Generation Evaluation – Boston
Children's Hospital – Needham, MA

Boston Children's Hospital ("BCH" or the "Applicant") is seeking to acquire the undeveloped portions of the so-called Center 128 West project in the Town of Needham, which are identified as the Building 1 Site, the Building 2 Site, the Building 4 Site and Garage A on the plan attached hereto (each a "Building Site" and, collectively, the "Building Sites"). In connection therewith, the Applicant has proposed an amendment to the Town's Zoning Bylaw (the "Amendment"), which, if approved, would allow for a "Pediatric Medical Facility" by special permit in the New England Business Center. The Amendment also proposes a parking ratio applicable to the new special permit use.

The existing special permit governing the Center 128 West project currently allows a hotel (128 rooms), 740,000 square feet (sf) of office use and 3,642 parking spaces. The hotel, approximately 288,000 sf of office use and approximately 2,200 parking spaces have been constructed. If the Amendment is approved at Town Meeting, the Applicant will seek to amend the existing special permit to construct a Pediatric Medical Facility of approximately 245,000 sf on Building Site 1 along with Garage A (the "Project"). The remainder of the development program under the special permit (approximately 207,000 sf) would continue to remain office use, as currently approved.

We understand that BETA has been engaged as a Peer Review for the Town of Needham to review the parking ratio proposed in the Amendment. The purpose of this memorandum is to provide responses to BETA regarding the Founder's Park Estimated/Comparative Parking Demand Analysis Memorandum that was prepared by VHB on behalf of the Applicant (dated January 24, 2020) in support of the proposed parking ratio. In their Peer Review dated March 11, 2020 (and attached for reference), BETA has delineated and numbered specific questions and comments where they seek a response and/or supplemental information. The following sections reiterate those questions and comments, followed by applicant responses. Additionally, the Founder's Park Estimated/Comparative Parking Demand Analysis Memorandum has been revised and updated (dated April 2, 2020) and is included with this submission of Peer Reviewer Comment Responses.

T1. The proposed land uses for the 380 1st Avenue building in the Estimated/Comparative Parking Demand Analysis Memo lists 20,000 SF as Office space and 215,000 SF as Pediatric Ambulatory Center, while the Trip Generation Estimate Summary Memo lists 117,500 SF of Pediatric Ambulatory Center and 117,500 SF of Hospital space. Please clarify the difference in land use between documents.

Applicant Response: There are multiple challenges when attempting to accurately quantify the parking and trip generation characteristics of a less typical land use, such as Pediatric Ambulatory Center, with the support of standardized reference documents (Institute of Transportation Engineer's (ITE) *Trip Generation* and *Parking Generation* manuals). In order to address the various considerations within the Town, the applicant has proposed a "Pediatric Medical Facility" as a new defined use within the New England Business Center. A Pediatric Medical Facility is an ambulatory medical facility affiliated with a pediatric

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hospital. Accordingly, Pediatric Medical Facility/Pediatric Ambulatory Center is not a land use already defined in the Town of Needham Zoning by laws, nor is it defined in the ITE *Parking Generation Manual* or *Trip Generation Manual*.

Since the land use proposed in the Amendment is not already defined, other alternative analytical methods were devised and utilized to estimate parking demand and trip generation for the Project. Specifically, to estimate the parking demand, parking facility supply data for specific, comparable satellite BCH sites were used as data points and compared to the size and scale of the Project – and the program elements to be included within those buildings using the latest detailed program and floor plans provided by the Project Architect (Payette). Other parking ratios summarized in current Town of Needham Zoning Bylaws were determined to not be applicable for the purposes of accurately calculating an appropriate quantity of parking to support his specific component of the Project. To estimate trip generation, typical ITE methodology was used, but based on input from BCH and their goals/vision for the Project, the development program was broken down into the applicable, usable ITE land use codes with the intention to more accurately emulate the trip generating characteristics of the envisioned Pediatric Medical Facility. The Pediatric Medical Facility is intended to include and support patient visits, diagnostics and testing, ambulatory medical procedures and pre-scheduled day surgeries. The facility will not have overnight beds and will not be equipped with emergent care services. Taking all of these factors into consideration, it was determined that a measurable component of the facility would function similarly to a combination of the ITE Medical-Dental Office use and/or Hospital use. Utilization of either of these uses solely would have the effect of either significantly overestimating or underestimating the trip generating characteristics of the Project. The remaining 207,000 sf on Building Site 2 (2B street) and Building Site 4 (37A street) will remain office under the special permit, and therefore, have been modeled to function as a typical office use as defined by ITE Trip Generation (i.e., no change vs. the Approved

T2. The proposed total square footage of the 2 B Street building is listed as 127,000 SF in the Estimated/Comparative Parking Demand Analysis Memo, while the in the Trip Generation Estimate Summary Memo it is listed as 127,145 SF. Please clarify the difference between documents.

Project).

Applicant Response: The square footage of the 2 B Street building will be updated in the Trip Generation Estimate Summary Memo to match the square footage in the Estimated/Comparative Parking Demand Analysis Memo (127,000 SF).

T3. Please provide a list of similar healthcare institutions and locations that were surveyed.

Applicant Response: VHB has been retained by many prominent local and national academic medical centers to help them devise appropriate parking system strategies in connection with the planning, design and construction of large, long-term capital improvement and campus transformation programs (both pediatric and adult healthcare facilities). An identical approach has been utilized in each of these cases listed below to provide clarity and guidance as to what the most appropriate and reasonable



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parking need could be expected given the anticipated program and a deep dive assessment of those respective programs conceptually. These studies have supported respective regulatory review and approval processes – but more importantly – have served as an important tool in benchmarking and confirming appropriate parking quantities to support anticipated patient, staff and physician needs. Major hospitals and academic medical centers where this methodology has been applied and accepted over the past five years include the following:

1. Boston Children's Hospital (Main Campus)
2. Boston Children's Hospital (Waltham)
3. Massachusetts General Hospital
4. Brigham and Women' Hospital
5. Brigham and Women's Faulkner Hospital
6. Newton-Wellesley Hospital
7. Spaulding Rehabilitation Hospital
8. Dana-Farber Cancer Institute
9. Beth Israel Deaconess Medical Center (Main Campus)
10. Beth Israel Deaconess Medical Center (Lexington)
11. St Elizabeth's Medical Center
12. Boston Medical Center
13. South Shore Hospital
14. Cape Cod Hospital
15. University of Pennsylvania Health System
16. Washington University of St Louis Health System
17. St Louis Children's Hospital
18. University of Rochester Medical Center
19. Johns Hopkins Medicine
20. Dartmouth-Hitchcock Medical Center



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21. Maine Medical Center

T4. Clarify/provide supporting documentation as to how these building space types were classified and why there is no rate for building support area.

Applicant Response: The building space types were classified using the latest detailed program and floor plans provided by the Project Architect (Payette). There is no parking rate for "building support area" as it delineates space within the building that has no trip generating value on its own. A more detailed response is summarized below in response to Comment T5.

T5. Please clarify what constitutes "Building Support Area" and how the size of this area was calculated.

Applicant Response: Building Support Area is non-generating space such as mechanical support areas, back-of-house storage, a large lobby/entrance area, back-of-house circulation areas, stair wells, elevator cores, etc. These spaces do not directly generate trips and only provide support space for the other, actively generating space/uses in the building. The size of this area was calculated using the latest detailed program and floor plans provided by the Project Architect (Payette).

T6. Hospital parking requirements per the Town's By-laws are conservative using the general description for Hospital land use as no further information was provided as to the intended use for the Hospital type (i.e. bed, employees, type of procedures/surgery). Upon providing more information, this parking ratio could be reduced; however, it has been calculated as 7 spaces/KSF for the purposes of this review.

Applicant Response: During initial conversation with the Town regarding the transportation elements of this Project, the Project Team was tasked with looking at alternatives methods to calculate the estimated parking demand, separate from established Zoning By-laws. The goal of this effort was to determine what a reasonable and appropriate parking ratio should be to support a Pediatric Medical Facility land use.

If the Town's By-laws were applied, the parking ratios for Pediatric Ambulatory Center (380 1st Avenue) could potentially be based on Section 3.6.7. The previous sections (Sections 3.6.7.a and 3.6.7.b) would not be appropriate for the proposed land use, as it does not solely contain a Medical Service Building, Medical Clinic, or Health Care Facility. The proposed land use will most closely resemble a combination of Hospital use with a Medical Service Building, Medical Clinic and/or Health care Facility as defined in Section 3.6.7.c. The proposed Pediatric Ambulatory Center will not be used for short ambulatory visits and therefore the ratios under Section 3.6.7.c.1 are not applicable. Section 3.6.7.c.2.i-iii provides a possible method to reasonably determine the number of parking spaces required for the Project as it most closely represents the proposed land use. No beds will be provided at the Project (Section 3.6.7.c.2.i) therefore, one parking space will be provided for each two full-time equivalent employees (Section 3.6.7.c.2.ii) (assuming 1 employee per 1,000 sf), and 2.5 parking spaces per 1,000 sf of GFA (Section 3.6.7.c.2.iii). Table 1 below shows the parking spaces required using this method. In connection with the rezoning petition, a blended parking rate was specifically quantified for Pediatric Medical Facility taking these discrete, measurable elements of the Project into consideration. As seen in the



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table, the parking need based on a blended rate using established Zoning Bylaw rates works out to be slightly below the recommended parking supply presented in the memo of 1,560 spaces. The proposed rate for a Pediatric Medical Facility was specifically established and is proposed based on this, and other parallel analyses summarized in our January 24, 2020 memorandum.

Table 1: Parking Spaces Required by Zoning

Address		SF	Rate	Unit	Total Spaces
380 1st Avenue	MOB	245	0.5	spaces per employee	245
			2.5	spaces per ksf	612
	Subtotal	245			857
37 A St	Office	80	3.3	spaces per ksf	264
2 B St	Office	127	3.3	spaces per ksf	419
Total		452			1,540

T7. Clarify/provide how many of the 2,785 approved parking spaces for Center 128 West are currently in use and how many remaining spaces are available for use by the three proposed buildings.

Applicant Response: The special permit for Center 128 West approved 3,642 parking spaces of which 857 are allocated to the Center 128 East project, leaving 2,785 for Center 128 West. 1,101 of the 2,785 spaces are need to satisfy the zoning requirement for the hotel and office use, which leaves 1,684 approved spaces available to satisfy the zoning requirement for the 452,000 of undeveloped area approved for Building Sites 1, 2 and 4. Garage B (380R First) is constructed and contains approximately 2,070 spaces. As noted above, the Applicant intends to construct Garage A (925 spaces) in connection with the Project. These available and future spaces will provide sufficient parking on-site to accommodate the expected BCH parking demand. As described in the memo, the estimated parking demand was calculated conservatively by using a parking ratio above the highest empirical estimation method and, as described below, there are also expected to be additional parking spaces available due to the underutilization by other uses within the development.

The 380R First St parking garage, which has a capacity of about 2,070 spaces, was observed to reach a peak mid-day occupancy of approximately 60 percent based on observations made during site visits (Fall 2019). Upwards of 800 parking spaces on the upper levels of the garage are currently not used. A comparative assessment of actual parking utilization to building occupancy in Founder's Park indicates approximate utilization of about 2.5 spaces/KSF (versus a zoning-compliant allocation of 3.3 spaces/KSF). We believe the following are key reasons for the observed gap between the allocated parking supply and the observed demand:

- 3.3 spaces/KSF for an office use provides enough parking, generally, for all staff (100 percent) to drive alone to a suburban site at the same time.
- Founder's Park employs strong TDM strategies – most notably transit pass subsidies and strong shuttle bus connectivity to major nearby transit nodes.

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- Current, modern work practices provide for measurable opportunity for some staff to elect to work remotely for some percentage of the work week, work part-time, work longer days and less days per week, etc.

For reference, VHB has encountered similar parking demand outcomes at other Class A office parks on Route 128 in Waltham and Lexington.

These approximately 800 available spaces in Garage B, along with approval to add another 520-space addition to that facility, plus the aforementioned 925-space parking garage at 400R First St, will result in there being more than enough parking spaces to support the BCH Project and other components of Founder's Park that require parking.



To: Lee Newman
Director of Community Planning and
Development
Town of Needham, MA

Date: April 2, 2020

Memorandum

Project #: 14631.00

From: Ryan White, PE
Samantha Lathrop
Sean Manning, PE, PTOE

Re: Response to Peer Review Trip Generation Evaluation – Boston
Children's Hospital – Needham, MA

Boston Children's Hospital ("BCH" or the "Applicant") is seeking to acquire the undeveloped portions of the so-called Center 128 West project in the Town of Needham, which are identified as the Building 1 Site, the Building 2 Site, the Building 4 Site and Garage A on the plan attached hereto (each a "Building Site" and, collectively, the "Building Sites"). In connection therewith, the Applicant has proposed an amendment to the Town's Zoning Bylaw (the "Amendment"), which, if approved, would allow for a "Pediatric Medical Facility" by special permit in the New England Business Center. The Amendment also proposes a parking ratio applicable to the new special permit use.

The existing special permit governing the Center 128 West project currently allows a hotel (128 rooms), 740,000 square feet (sf) of office use and 3,642 parking spaces. The hotel, approximately 288,000 sf of office use and approximately 2,200 parking spaces have already been constructed. If the Amendment is approved at Town Meeting, the Applicant will seek to amend the existing special permit to construct a Pediatric Medical Facility of approximately 245,000 sf on Building Site 1 along with Garage A (the "Project"). The remainder of the development program under the special permit (approximately 207,000 sf) would remain office use. The Applicant anticipates submitting a traffic report in connection with the amendment to the existing special permit.

The purpose of this memorandum is to provide responses to questions and comments raised by the Town of Needham through their selected Peer Reviewer (BETA) regarding the Founder's Park Estimated/Comparative Trip Generation Analysis Memorandum that was prepared by VHB on behalf of Boston Children's Hospital (dated January 24, 2020). **We note that this memorandum was prepared as a planning tool in connection with the Amendment and was not intended to be a substitute for the complete transportation analysis that will be required when Children's seeks to amend the special permit to allow the Project. Using ITE's Trip Generation Manual, 10th Edition for BCH proposed uses and taking into account other approved but unconstructed/unoccupied buildings during the time of the counts, the memorandum demonstrates that, for planning purposes, the Proposed Project is expected to have generally similar trip generation characteristics as the 2015 SDEIR approved estimates. As shown in Attachment A, when compared to the previously approved project, the Proposed Project yields a one percent increase in trips during the morning peak hour and a six percent increase in trips during the evening peak hour.**

In their Peer Review dated March 11, 2020 (and attached for reference), BETA has delineated and numbered specific questions and comments where they seek a response and/or supplemental information. The following sections reiterate those questions and comments, followed by applicant responses. Where necessary and applicable, revisions to trip generation calculations have been made and are provided in **Attachment A**. Additionally, the Founder's Park

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Estimated/Comparative Trip Generation Analysis Memorandum has been revised and updated (dated April 2, 2020) and is included with this submission of Peer Reviewer Comment Responses.

T1. The proposed land uses for the 380 1st Avenue building in the Estimated/Comparative Parking Demand Analysis Memo lists 20,000 SF as Office space and 215,000 SF as Pediatric Ambulatory Center, while the Trip Generation Estimate Summary Memo lists 117,500 SF of Pediatric Ambulatory Center and 117,500 SF of Hospital space. Please clarify the difference between documents.

Applicant Response: There are multiple challenges when attempting to accurately quantify the parking and trip generation characteristics of a less typical land use, such as Pediatric Ambulatory Center, with the support of standardized reference documents (Institute of Transportation Engineer's (ITE) *Trip Generation* and *Parking Generation* manuals). In order to address the various considerations within the Town, the applicant has proposed a "Pediatric Medical Facility" as a new defined use within the New England Business Center. A Pediatric Medical Facility is an ambulatory medical facility affiliated with a pediatric hospital. Accordingly, Pediatric Medical Facility/Pediatric Ambulatory Center is not a land use already defined in the Town of Needham Zoning by laws, nor is it defined in the ITE *Parking Generation Manual* or *Trip Generation Manual*.

Since the land use proposed in the Amendment is not already defined, other alternative analytical methods were devised and utilized to estimate parking demand and trip generation for the Project. Specifically, to estimate the parking demand, parking facility supply data for specific, comparable satellite BCH sites were used as data points and compared to the size and scale of the Project – and the program elements to be included within those buildings using the latest detailed program and floor plans provided by the Project Architect (Payette). To estimate trip generation, typical ITE methodology was used, but based on input from BCH and their goals/vision for the Project, the development program was broken down into the applicable, usable ITE land use codes with the intention to more accurately emulate the trip generating characteristics of the envisioned Pediatric Medical Facility. The Pediatric Medical Facility is intended to include and support patient visits, diagnostics and testing, ambulatory medical procedures and pre-scheduled day surgeries. The facility will not have overnight beds and will not be equipped with emergent care services. Taking all of these factors into consideration, it was determined that a measurable component of the facility would function similarly to a combination the ITE Medical-Dental Office use and/or Hospital use. Utilization of either of uses solely would have the effect of either significantly overestimating or underestimating the trip generating characteristics of the Project. The remaining 207,000 sf on Building Site 2 (2B street) and Building Site 4 (37A street) will remain office under the special permit, and therefore, have been modeled to continue to function as a typical office use as define by ITE Trip Generation. (i.e., no change vs. the Approved Project).

T2. The proposed total square footage of the 2 B Street building is listed as 127,000 SF in the Estimated/Comparative Parking Demand Analysis Memo, while the in the Trip Generation Estimate Summary Memo it is listed as 127,145 SF. Please clarify the difference between documents.



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Applicant Response: The square footage of the 2 B Street building has been updated in the Trip Generation Estimate Summary Memo to match the square footage in the Estimated/Comparative Parking Demand Analysis Memo (127,000 SF).

T3. Calculations do not agree with the SDEIR. Please provide calculations for Estimated trip numbers.

Applicant Response: Calculations for the trip generation estimates are attached to this response memorandum (see **Attachment A**). Consistent with the permitting documents supporting the Approved Project, trip estimates are calculated by summing the total square footage for each unique land use within each of the three respective development areas (Center 128 East, Center 128 West, and 2nd Avenue Residences). As an example, Center 128 West, as currently approved, has four office buildings within the development area. The trip generation estimate for the office land use within Center 128 West is calculated by summing up all four buildings into one combined office area. The regression equations allow for the effect of "rate leveling" within entire development clusters containing larger components of similar land uses. When regression equations are used, total trips for the Project are estimated and then the total is then parsed/allocated to the intended individual phase/buildings. Trips should not be estimated for each phase/building individually using the regression equation as it has the un-intended effect of severely overestimating the total trips by use (i.e. the sum of the parts cannot be greater than the sum of the whole). Per BETA Comment T4, trip estimates herein have been updated to appropriately account for 189 B Street not being occupied at the time that traffic counts were conducted during the Fall of 2019. Trip generation estimates were calculated using the following technical methods for constructed and occupied building within the respective development areas. It should also be noted that regression analysis for each respective development cluster was applied to buildings not yet developed taking into consideration the regression analysis done for those buildings that are already constructed and occupied.

Development Area	Building	Land Use	ITE Trip Generation Manual Method and Edition
Center 128 West	400 1 st Avenue	Office	Regression (9 th)
	80 B Street	Hotel	Average (9 th)
Center 128 East	77 A Street	Office	Regression (9 th)
2 nd Avenue Residences	2 nd Avenue	Apartments	Regression (9 th)

T4. ATR counts were taken prior to Occupancy Permit issued for 189 B Street on November 1, 2019. Counts do not reflect traffic generated by this building and should be retaken. Occupancy will increase gradually for this building and VHB should coordinate with the Town of Needham as to when this

Applicant Response: The trip generation estimates have been updated to reflect 189 B Street as not yet being occupied at the time the counts were conducted. The trip estimates associated with the Center 128 East have been updated to only include 77 A Street (Office) which was the only building in the Center 128 East development area of Founder's Park that was constructed and occupied during the time of the counts on October 10, 2019. As outlined in the response to BETA Comment T6, trip estimates for 189 B Street have been made with ITE Trip Generation Manual (9th Edition), which is consistent with the SDEIR.



Memorandum

T5. Please provide calculations for Estimated trip numbers. It appears that the average rate was used for some of these calculations where the equation is recommended.

Applicant Response: Calculations for the trip generation estimates are attached to this response memorandum. These results are calculated using the *ITE Trip Generation Manual* (10th Edition) as addressed in comment T6. The trip generation estimates associated with the Project are calculated using a similar methodology used in the SDEIR. The total trip generation is estimated for the project (by defined development area) and then is parsed out by individual building in those respective areas. In the case of the office land use, the trips associated with the Project are an incremental increase in total office square footage within the Center 128 West development area. To calculate the trips associated with the office portion of the Project, the total office square footage of Center 128 West is used (including 400 1st Avenue, a portion of 37 A Street, and 2 B Street) to estimate trip generation. Then, to understand the number of trips associated with the BCH Project only, the trips associated with 400 1st Avenue are subtracted from the total number of office trips, leaving the incremental trips between the existing building and the proposed total development. Consistent with the SDEIR, the office trips assume a 90% auto mode share. In an effort to be conservative, the hospital and medical office building trips have been assumed to carry 100% auto mode share.

T6. These trip generation calculations use the *ITE Trip Generation Manual*, 9th Edition. It is recommended to use the latest edition (10th Edition) to account for changes in development types and expanded study locations.

Applicant Response: The latest edition (10th Edition) of the *ITE Trip Generation Manual* will be used to calculate estimated trips for the proposed BCH Project. For consistency with the SDEIR, the 9th Edition of the *ITE Trip Generation Manual* will be used to calculate estimated trips associated with the approved buildings that are unbuilt or unoccupied at Founder's Park. These buildings include 189 B Street (Office), 156 B Street (Hotel and Retail).

T7. Overall, the trip generation estimates between the VHB memo and *ITE's Trip Generation Manual*, 9th Edition, vary when they should be identical. This could be a result of using the Average Rate calculation as opposed to the Equation, when calculating trips based on ITE guidelines. In the AM peak hour, the comparison shows an increase in trips from VHB's memo, while in the PM peak hour the comparison shows a decrease in trips from VHB's memo.

In the comparison between VHB's memo and *ITE's Trip Generation Manual*, 10th Edition, many of the trips decrease, especially for General Office Space and Medical-Dental Office Space, while Hospital trips are increased. The trip generation results should be updated based on *ITE's Trip Generation Manual*, 10th.

Applicant Response: VHB has updated the proposed BCH development trip generation estimates to reflect *ITE's Trip Generation Manual* (10th Edition). The proposed trip generation will calculate the trips using the sum of the square footage for each land use, which is consistent with the methodology used in the permitting documents. The updated proposed trip generation calculations are attached.

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In Conclusion, using ITE's *Trip Generation Manual*, 10th Edition for BCH proposed uses and taking into account other approved but unconstructed/unoccupied buildings during the time of the counts, the Proposed Project is expected to have similar trip generation characteristics as compared to the 2015 SDEIR approved estimates. As shown in Attachment A, when compared to the previously approved project, the Proposed Project yields a one percent increase in trips during the morning peak hour and a six percent increase in trips during the evening peak hour.